PART 2 OF 2 (STARTING - AGENDA ITEM 3.2)

**PUBLIC**

| | |
|---|---|
| HUTT VALLEY DHB / Capital & Coast District Health Board Ūpoko ki te Uru Hauora | **AGENDA**<br>Held on Wednesday 22 June 2022<br>Time: 9:00am<br>Zoom Meeting ID: 835 0269 8434 |

## 2DHB CONCURRENT BOARD MEETING

| | Item | Action | Presenter | Pg |
|---|---|---|---|---|
| **1.** | **PROCEDURAL BUSINESS** | | | |
| 1.1. | Karakia | | All members | 1 |
| 1.2. | Apologies | **NOTE** | Chair | |
| 1.3. | Public Participation | **NOTE** | Chair | |
| 1.4. | Continuous Disclosure<br>1.4.1 Board Interest Register<br>1.4.2 ELT Interest Register | **NOTE** | Chair | 3<br>7 |
| 1.5. | Minutes of Previous Concurrent Meeting<br>• 13 May 2022<br>• 2 June 2022 | **APPROVE** | Chair | 9<br>16 |
| 1.6. | Matters Arising | **NOTE** | Chair | 21 |
| 1.7. | Chair's Report and Correspondence<br>• Letter from iHNZ Chair dated 2 June 2022 | **NOTE** | Chair | 22 |
| 1.8. | Chief Executive's Report | **NOTE** | Chief Executive | 24 |
| 1.9. | Wellington Hospitals Foundation | **NOTE** | Chair | 34 |
| **2.** | **STRATEGIC PRIORITIES** | | | |
| 2.1. | HVDHB and CCDHB Board Handover Document to Health New Zealand | **NOTE** | Chief Executive | 41 |
| **3.** | **DHB PERFORMANCE AND ACCOUNTABILITY** | | | |
| 3.1. | HVDHB Financial and Operational Performance Report –May 2022 | **NOTE** | Director Provider Services<br>Acting Chief Financial Officer<br>Acting Director Strategy, Planning and Performance | 57 |
| 3.2. | CCDHB Financial and Operational Performance Report – May 2022 | **NOTE** | Director Provider Services<br>Acting Chief Financial Officer<br>Acting Director Strategy, Planning and Performance | 108 |
| 3.3. | Non-Financial Performance Report for HVDHB and CCDHB - 2021/22 Quarter 3 | **NOTE** | Acting Director Strategy, Planning and Performance | 160 |
| **4.** | **DECISION** | | | |
| 4.1. | Regional Application Asset Write off Capital & Coast and Hutt Valley DHB | **APPROVE** | Acting Chief Financial Officer | 173 |
| 4.2. | Delegations to from 23 June 2022 to 30 June 2022 | **APPROVE** | Acting Chief Financial Officer<br>Board Secretary | 176 |
| 4.3. | Heretaunga Building at Hutt Hospital – Update | **APPROVE** | Chief Executive<br>Acting Chief Financial Officer | 177 |
| **5.** | **OTHER** | | | |
| 5.1. | General Business | **NOTE** | Chair | |
| 5.2. | Resolution to Exclude the Public | **APROVE** | Chair | 255 |

**No paper – presentation on the day only*

# Board Information – Public

**22 June 2022**

| **CCDHB Financial and Operational Performance Report – May 2022** | |
|---|---|
| **Action Required**<br>**The CCDHB Board notes:**<br>(a) The DHB had a $9.5m deficit for the month of May 2022, being $207k unfavourable to budget;<br>(b) the total Case Weighted Discharge (CWD) Activity was 0.38% behind plan year to date;<br>(c) At the end of May 2022, the DHB had a year to date surplus of $21.1m, $5.1m favourable to the agreed budget. | |
| **Strategic Alignment** | Financial Sustainability |
| **Presented by** | 2DHB Chief Financial Officer (acting), Mathew Parr<br>2DHB Director of Provider Services, Joy Farley<br>2DHB Director Strategy Planning and Performance (acting), Peter Guthrie |
| **Endorsed by** | 2DHB Chief Executive - Fionnagh Dougan |
| **Purpose** | To update the Board in relation to the financial performance and delivery against target performance for the DHB |
| **Contributors** | Finance Team, Mental Health and 2DHB Hospital Services, GM MHAIDS. |

## Executive Summary

We are incurring significant additional cost due to the COVID-19 response in the 2021/22 fiscal year. The DHB is being reimbursed for all direct DHB COVID-19 response costs in 2021/22, although some indirect costs remain and are being worked through. The Ministry has asked DHBs to separately report 'unfunded' COVID-19 impacts for 2021/22.

- For the eleven months to 31 May 2022 the overall DHB year to date result, including COVID-19 costs is $21.1m surplus, $5.1m favourable to the agreed $16m surplus budget.
- In April $16.5m was recognised due to Fair Value increase in the New Children's Hospital Donation.
- The May month included Planned Care revenue assumptions updated based on the latest guidance from MoH; July, October, November and December are based on actual work performed against the agreed plan and budget for the months of August, September, and January to June. This change increased the anticipated revenue for planned care by $2.9m.
- The DHB has submitted an Annual baseline budget of $7m surplus, excluding the $60m Donation for the Children's Hospital the underlying deficit is ($53m).
- Capital Expenditure including equity funded capital projects was $79.4m year to date.
- The DHB has a negative cash Balance at month-end of ($629k) and a positive "Special Funds" of $13.8m, net $13.2m. There are certain financial impacts of the COVID-19 response that are being worked through with the Ministry at this time and have a cash impact on the DHB. Overall the DHB cash balance is better than budget due to additional revenue and delayed capital expenditure. Deficit support of $65m was received in January.

**Hospital:**

- Services across both DHBs have been impacted by unprecedented levels of staff absence due to general illness (14%), the needed for staff to isolate or care for isolating or ill dependents, and the long tail of COVID-19 (between 25- 40 patients across out three hospitals at any given time), all coupled with a very high level of vacancies across many staff groups (clinical staff 14%, with turnover of 18%).
- CCDHB continues to face a significant capacity issue as demonstrated by the consistently high occupancy rate and the bed blockage experienced across hospital flow as a consequence. Bed occupancy continues to be one of the most significant contributing factors to SSiED non-compliance. The occupancy percentage utilisation for May 2022 was 94%. The ambitious timeline of the Front of Whare project continues to be a focus to ensure delivery.
- We continue to protect our planned care funding schedule as much as we can but all of these patient makeup and workforce factors place substantial pressure on our services, particularly our ability to carry out planned care. Acute care, non-deferrable surgery and cancer care remains the focus of most activity this month.
- Continued turnover and vacancies across midwifery and nursing, allied health (in particular sonographer, social work, radiographers and now anaesthetists) remain at critical levels in some areas; we are continually refining and reviewing processes to manage demand during busy periods and continue to work closely with our staff and union partners on workforce planning across the region noting this issue as requiring national solutions. The 2DHB Nursing and Midwifery Recruitment and Retention Strategy, written to assist with the drive we need right now to fill vacancies in both workforces, at both DHBs and seek to retain our existing staff is being led by our Chief Nurse.
- Our cardiac surgery wait list still remains well above the target waitlist size set by the Ministry programme. Factors impacting on our waitlist is the reduction in surgery due to COVID related additional cancellations due to insufficient ICU capacity. We have been utilising as much private capacity as we can but this is insufficient to reduce the waitlist; we are considering what other options may support sector capacity. This is a national issue.

**Funder**:

In this report we have also highlighted key areas of performance with a focus on our core services and achieving equity. It is recognised that these highlight significant need for improved service delivery and a pro-equity commissioning approach which is being led out by the Community Commissioning Forum as part of the 2DHBs Strategic Priorities
The four main work streams are:

- Complex Care and Long Term Conditions
  - Improve access and reduce inequities for Māori and Pacific
- Locality Services Integration
  - We are working with HNZ and Mana Whenua on an implementation plan for the Porirua prototype. The current focus is on ensuring inclusion for Pacifica.
  - We have agreed with Wainuiomata Māori that the area should develop as a locality and are working with Mana Whenua on locality development for the Hutt Valley including analysing health need categorised by people, place and investment.
  - Plans for the allocation of Health Care Home funding to support Locality Development are being worked on and discussed with localities.

- 2DHB Community Health Networks
  - Strengthen Kāpiti Community Health Network. New members have been appointed and work is under way to understand how to refresh District Council involvement with localities.
  - Develop Community Health Networks in Wellington and the Hutt Valley
  - Allied Health Integration
  - Community Accident and Medical/Community Radiology redesign. We are in the final stages of engaging with community and provider leaders to understand its implications.
- Intersectoral Priorities
  - Disability – World of Difference implementation is underway
  - Strengthen our response to family violence

## Strategic Considerations

| | |
|---|---|
| **Service** | Financial performance and funding is a key to delivering the services for the Wellington population and Tertiary services for the region. |
| **People** | Staff numbers for CCDHB are 102 FTE below plan year to date |
| **Financial** | Planned surplus including the children's hospital donation for CCDHB is $20 million. |
| **Governance** | This monthly report enables the Board to scrutinise the financial and operational performance of the DHB. |

## Engagement/Consultation

| | |
|---|---|
| **Patient/Family** | N/A |
| **Clinician/Staff** | N/A |
| **Community** | N/A |

## Identified Risks

| Risk ID | Risk Description | Risk Owner | Current Control Description | Current Risk Rating | Projected Risk Rating |
|---|---|---|---|---|---|
| N/A | Financial outturn | Mat Parr, Acting Chief Financial Officer | Currently on track but will be impacted by current events | Major (but no payment impacts) | Major (no operational impacts) |

## Attachment

- CCDHB Financial and Operational Performance Report – May 2022

Capital & Coast District Health Board

# Monthly Financial and Operational Performance Report


For the period ending 31 May 2022

Presented in June 2022

Capital & Coast District Health Board
Ūpoko ki te Uru Hauora

# Contents

# Section 1

## Financial and Performance Overview and Executive Summary

# Executive Summary

- There is ongoing significant cost due to the COVID-19 response into the 2021/22 fiscal year. The DHB is being reimbursed for the large portion of the DHB COVID-19 response costs in 2021/22.
- The DHB's result for the 11 month's to 31 May 2022 is $21.1m surplus, versus a budget surplus of $16m.
- In April $16.5m was recognised due to Fair Value increase in the New Children's Hospital Donation.
- The May month included Planned care revenue assumptions updated based on the latest guidance from MoH; July, October, November and December are based on actual work performed against the agreed plan and budget for the months of August, September, and January to June. This change increased the anticipated revenue for planned care by $2.9m.
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- Capital Expenditure including equity funded capital projects was $79.4m year to date.
- The DHB has a negative cash Balance at month-end of ($629k) and a positive "Special Funds" of $13.8m, net $13.2m. It should be noted that there are certain financial impacts of the COVID-19 response that remains unfunded by the Ministry at this time and this has a cash impact on the DHB. Overall the DHB cash balance is better than budget due to additional revenue and delayed capital expenditure. The deficit support of $46.5m signalled in the 2021/22 Annual Plan will be requested for the 3rd quarter of the year.

# Executive Summary continued

**Hospital:**

- Services across both DHBs have been impacted by unprecedented levels of staff absence due to general illness (14%), the needed for staff to isolate or care for isolating or ill dependents, and the long tail of COVID-19 (between 25- 40 patients across out three hospitals at any give time), all coupled with a very high level of vacancies across many staff groups (clinical staff 14%, with turnover of 18%) .
- CCDHB continues to face a significant capacity issue as demonstrated by the consistently high occupancy rate and the bed blockage experienced across hospital flow as a consequence. Bed occupancy continues to be one of the most significant contributing factor to SSiED compliance. The occupancy percentage utilisation for May 2022 was 94%. The ambitious timeline of the Front of Whare project continues to be a focus to ensure delivery.
- We continue to protect our planned care funding schedule as much as we can but all of these patient makeup and workforce factors place substantial pressure on our services, particularly our ability to carry out planned care. Acute care, non deferrable surgery and cancer care remains the focus of most activity this month.
- Continued turnover and vacancies across midwifery and nursing, allied health in particular sonographer, social work, radiographers and now anaesthetists remain at critical levels in some areas; we are continually refining and reviewing processes to manage demand during busy periods and continue to work closely with our staff and union partners on workforce planning across the region noting this issue as requiring national solutions. The 2DHB Nursing and Midwifery Recruitment and Retention Strategy, written to assist with the drive we need right now to fill vacancies in both workforces, at both DHBs and seek to retain our existing staff is being led by our Chief Nurse.
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**Funder:**

- In this report we have highlighted key areas of performance with a focus on our core services and achieving equity. These highlight significant need for improved service delivery and a pro-equity commissioning approach being led by the Community Commissioning Forum as part of the 2DHBs Strategic Priorities. The four main work streams are:
  - Complex Care and Long Term Conditions
    - Improve access and reduce inequities for Māori and Pacific
  - Locality Services Integration
    - We are working with HNZ and Mana Whenua on an implementation plan for the Porirua prototype. The current focus is on ensuring inclusion for Pacifica.
    - We have agreed with Wainuiomata Māori that the area should develop as a locality and are working with Mana Whenua on locality development for the Hutt Valley including analysing health need categorised by people, place and investment.
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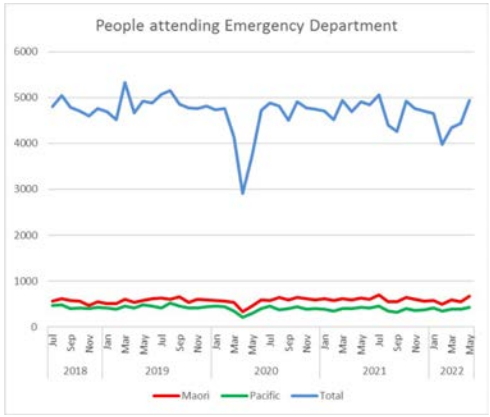
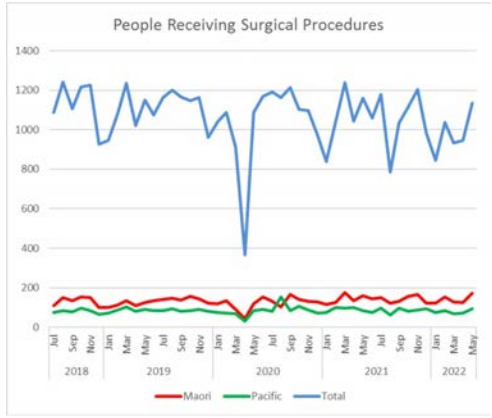
    - Strengthen Kāpiti Community Health Network. New members have been appointed and work is under way to understand how to refresh District Council involvement with localities.
    - Develop Community Health Networks in Wellington and the Hutt Valley
    - Allied Health Integration
    - Community Accident and Medical/Community Radiology redesign. We are in the final stages of engaging with community and provider leaders to understand its implications.
  - Intersectoral Priorities
    - Disability – World of Difference implementation is underway
    - Strengthen our response to family violence

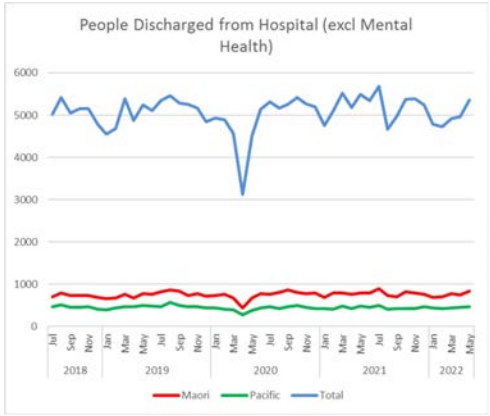
# Performance Overview: Activity Context (People Served)

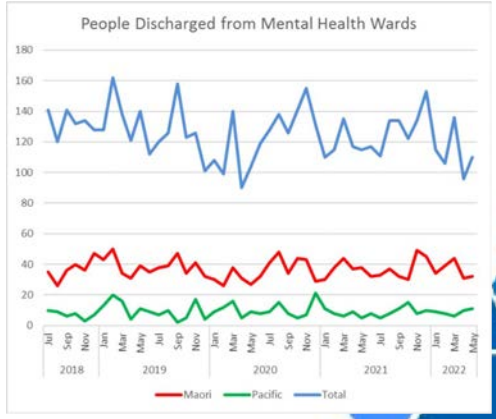
CCDHB funds services that touch thousands of people in our community every month. Unless otherwise indicated, the numbers below count individuals once and are based on CCDHB being the DHB of Service. Our services have returned to delivering services to our population without the restrictions due to COVID-19. Services continue to take necessary precautions.

| | | |
|---|---|---|
| People attending ED | **4,933** | 669 Maori, 436 Pacific |
| People receiving Surgical Procedures (in main theatres) | **1,134** | 174 Maori, 95 Pacific |
| People discharged from Kenepuru Community Hospital or Wellington Regional Hospital (excl Mental Health) | **5,360** | 839 Maori, 467 Pacific |
| People discharged from Mental Health Wards | **110** | 32 Maori, 11 Pacific |



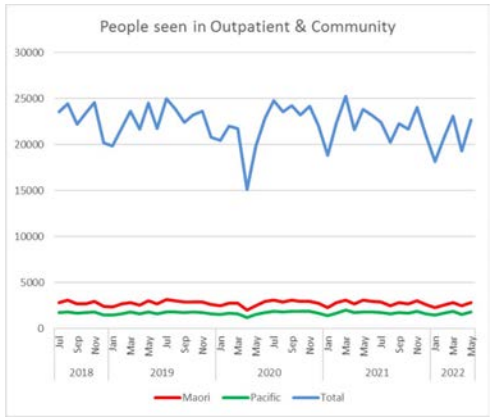



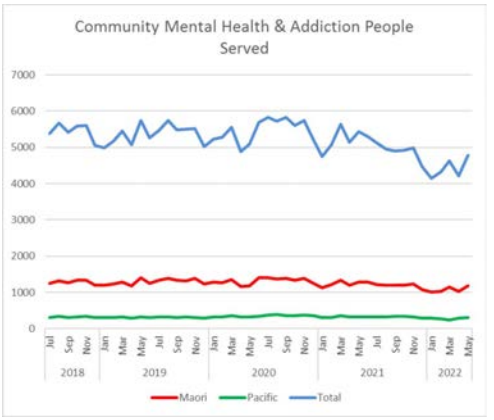



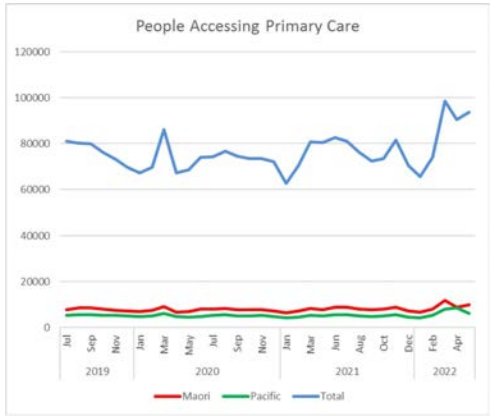



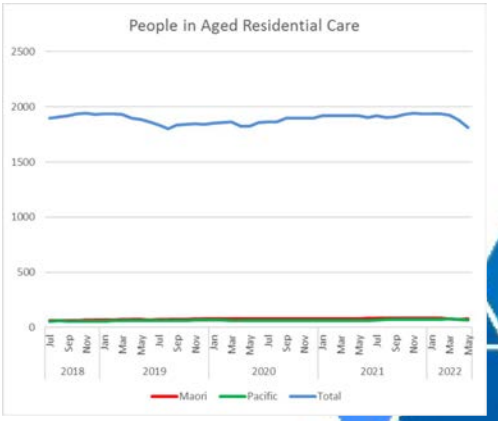
# Performance Overview: Activity Context (People Served)

| | |
|---|---|
| People seen in Outpatient & Community | **22,671**<br>2,835 Maori, 1,819 Pacific |
| Community Mental Health & Addiction People Served | **4,773**<br>1,184 Maori, 299 Pacific |
| People accessing primary care | **93,886**<br>9,846 Maori, 6,217 Pacific |
| People in Aged Residential Care | **1,813**<br>75 Maori, 69 Pacific |



# Financial Overview – May 2022

| YTD Operating Position | YTD Provider Position | YTD Funder Position | YTD Capital Exp |
|---|---|---|---|
| $21.1m surplus | $30.5m surplus | ($11.9m) deficit | $79.4m spend<br>Incl. $32.3m strategic capex |
| Against a budgeted YTD surplus of $16.0m. Month result was ($731k) unfavourable. YTD $5.1m favourable variance. | Against a budgeted YTD surplus of $26.0m. Month result was ($1.9m) unfavourable. YTD $7.5m favourable variance. | Against a budgeted YTD Deficit of $9m. Month result was $1.7m favourable result. YTD ($2.9m) unfavourable variance. | Against a KPI of a budgeted baseline (non-strategic) spend of $38.8m. Strategic incorporates funded project such as Children's Hospital & ISU |

| YTD Activity vs Plan (CWDs) | YTD Paid FTE | Annual Leave Taken |
|---|---|---|
| 0.38% behind[1] | 5,934[3] | ($11.9m) annualised[4] |
| -2521 CWDs behind PVS plan (-985 IDF CWDs , but -443 Hutt behind). Month result -385 CWDs excluding work in progress. | YTD 102 FTE below annual budget of 6,037 FTE. There is 885 FTE vacancies at end of May | Underlying YTD annual leave taken is under by 4 days per FTE and Lieu leave taken for public holidays is short by 3.4 days. |

[1] Note that the PVS (Price volume schedule for HHS/MHAIDS) is not total Surgical/Medical case-weight throughput largely due to Non-Residents & ACC. Also Outsourced PVS cases within this result cannot yet be compared to target, however a total of 2,100 cwd outsourced (968 events) ~$12.8m dollars at WEIS price. This is largely Cardiothoracic sent to Wakefield and Orthopaedics sent to Southern Cross.

[3] Paid FTE ignores leave balance movement which is YTD 10FTE worse than budgeted growth, Outsourced staff are also not counted in this metric which is currently $6.5m adverse to budget.

CWD – Case weights (also known as WEIS for a year) WEIS – Weighted Inlier Equivalent Separations

4 – Only annual leave & Lieu excludes long service, LILO & other types, note that public holidays build up the Lieu leave in the second half of the financial year. This assumes the YTD continues for 12 months

# Hospital Performance Overview – May 2022

| ED (SSIED) 6 Hour rule | ESPI 5 Long Waits | Specialist Outpatient Long Waits | Serious Safety Events[2] |
|---|---|---|---|
| 57.1% | 910 | 1,309** | 6 |
| 37.9% below the ED target of 95% Monthly +1.2% | Against a target of zero long waits a monthly movement of -110 | Against a target of zero long waits, a monthly movement of -262 .**internal figures | An expectation is for nil SSEs at any point. |

| YTD Activity vs Plan (CWDs) | YTD Paid FTE | YTD Cost per WEIS |
|---|---|---|
| 0.38% behind[1] | 3,837[3] | $7,074* |
| -2521 CWDs behind PVS plan (-985 IDF CWDs , but -443 Hutt behind). Month result -385 CWDs excluding work in progress. | YTD 8 ahead of annual budget of 3,827 FTE. 447 FTE vacancies at the end of April. | Against a national case-weight price per WEIS of $6,100.*to Apr 2022 |

[1] Note that the PVS (Price volume schedule for HHS/MHAIDS) is not total Surgical/Medical case-weight throughput largely due to Non-Residents & ACC. Also Outsourced PVS cases within this result cannot yet be compared to target, however a total of 2,100 cwd outsourced (968 events) ~$12.8m dollars at WEIS price. This is largely Cardiothoracic sent to Wakefield and Orthopaedics sent to Southern Cross.
[2] An SSE is classified as SAC1 or SAC2 serious adverse events per HQSC
[3] Paid FTE ignores leave balance movement which is YTD 12 FTE worse than budgeted, Outsourced staff are also not counted in this metric which is currently $1.3m adverse

ELOS – Emergency Dept 6 hour length of stay rule of 95%
CWD – Case weights (also known as WEIS for a year) WEIS – Weighted Inlier Equivalent Separations

# Section 2.1

## Funder Performance

# Executive Summary – Funder Performance

- The net unfavourable YTD variance in the Funder Arm of (**$2.9m)** consists of a favourable revenue variance of $134.1m offset by an unfavourable cost variance of ($137m) mainly due to unbudgeted COVID revenue & costs as set out below plus unachieved IDF and planned care volumes in the Provider Arm due to COVID.

- COVID-19 accrued and paid revenue of $105m is offset by COVID-19 costs of ($105m). MoH has agreed to a full cost recovery for the COVID-19 response. The demand for vaccination sites and community isolation surveillance is starting to reduce. The COVID-19 Care in the Community (CitC) delivery phase will continue alongside the COVID-19 testing and vaccination programmes The booster injection continues to support reducing the impact of Omicron spread into the community. The programmes are managed using community sites across the CCDHB and Hutt region, some with drive through options, which can be ramped up or down at short notice. Equity priorities for Māori, Pacific and vulnerable communities are part of all the programmes to make sure vaccinations and community care is delivered promptly and that those communities are not at risk. All MOH COVID revenue contracts have been extended to 31 December 2022.

- The additional cost of funding BAU community services (excl Pharms) is ($2.1m) unfavourable to budget. Some of these costs have offsetting revenue. Additional Age Residential Care costs reflect the impact of stronger homecare support services. These are offset by lower costs in Primary Care demand driven services such as immunisations (excl COVID) and child dental services. Pharmaceutical additional cost variance of ($4.3m) is partly due to COVID plus there has been an increase in 'high cost drugs' used in the Provider Arm and funded by the Community Pharmaceuticals budget.

- The volume throughput in HHS is still below target due to COVID related lockdowns and the Omicron wave. The funder paid $4m less to the Provider Arm for services and received ($3.2m) less IDF revenue from other DHBs. The Ministry and iHealthNZ have set up a taskforce to manage the long Planned Care waiting lists impacted by delays mainly created by COVID waves.

- In this report we have also highlighted key areas of performance with a focus on our core services and achieving equity. It is recognised that these highlight significant needs for improved service delivery and a pro-equity commissioning approach which is being led out by the Community Commissioning Forum as part of the 2DHBs Strategic Priorities. The four main work streams are:
  - Complex Care and Long Term Conditions
    - Improve access and reduce inequities for Māori and Pacific
  - Locality Services Integration
    - We are working with HNZ and Mana Whenua on an implementation plan for the Porirua prototype. The current focus is on ensuring inclusion for Pacifica.
    - We have agreed with Wainuiomata Māori that the area should develop as a locality and are working with Mana Whenua on locality development for the Hutt Valley including analysing health need categorised by people, place and investment.
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  - Intersectoral Priorities
    - Disability – World of Difference implementation is underway
    - Strengthen our response to family violence

# Funder Financial Statement of Performance

| Month | | | Variance | | Capital & Coast DHB Funder Result - $000 May 2022 | Year to Date | | | Variance | |
|---|---|---|---|---|---|---|---|---|---|---|
| Actual | Budget | Last year | Actual vs Budget | Actual vs Last year | | Actual | Budget | Last year | Actual vs Budget | Actual vs Last year |
| 76,176 | 76,176 | 72,885 | 0 | 3,291 | - Base Funding | 837,934 | 837,934 | 728,850 | 0 | 109,083 |
| 9,285 | 5,292 | 5,866 | 3,993 | 3,419 | - Other MOH Revenue - Funder | 62,959 | 58,214 | 52,278 | 4,745 | 10,680 |
| 1,200 | 0 | 0 | 1,200 | 1,200 | - Other MOH Revenue - MECA | 26,110 | 0 | 0 | 26,110 | 26,110 |
| 13,007 | 0 | 1,352 | 13,007 | 11,655 | - COVID Revenue from MOH | 104,996 | 0 | 12,768 | 104,996 | 92,228 |
| 46 | 46 | 81 | (0) | (35) | - Other Revenue | 588 | 508 | 1,297 | 81 | (709) |
| 2,893 | 2,892 | 3,119 | 1 | (227) | - IDF Revenue Inflows PHOs | 32,464 | 31,811 | 30,192 | 653 | 2,271 |
| 23,065 | 23,133 | 17,562 | (68) | 5,503 | - IDF 2021-2022 wash-up provision | 252,024 | 254,458 | 181,817 | (2,434) | 70,207 |
| **125,671** | **107,539** | **100,864** | **18,133** | **24,807** | **Total Revenue** | **1,317,075** | **1,182,924** | **1,007,203** | **134,150** | **309,872** |
| | | | | | **Internal Provider Payments** | | | | | |
| 839 | 839 | 824 | 0 | (15) | - DHB Governance & Administration | 9,228 | 9,228 | 8,236 | 0 | (991) |
| 60,804 | 60,909 | 46,079 | 106 | (14,724) | - DHB Provider Arm Costs - HHS | 641,780 | 644,721 | 521,042 | 2,941 | (120,738) |
| 11,627 | 11,558 | 7,767 | (69) | (3,860) | - DHB Provider Arm Costs - MHAIDS | 127,887 | 127,137 | 77,675 | (751) | (50,213) |
| (204) | (204) | 2,056 | 0 | 2,260 | - DHB Provider Arm costs - Corporate | (1,523) | (1,614) | 15,067 | (91) | 16,590 |
| 1,200 | 0 | 0 | (1,200) | (1,200) | - DHB Provider Arm costs - MECA | 26,110 | 0 | 0 | (26,110) | (26,110) |
| 9,702 | 0 | 2,850 | (9,702) | (6,852) | - DHB Provider Arm costs - COVID | 44,829 | 0 | 2,850 | (44,829) | (41,979) |
| **83,968** | **73,102** | **59,576** | **(10,866)** | **(24,392)** | **Total Internal Provider** | **848,311** | **779,471** | **624,869** | **(68,840)** | **(223,442)** |
| | | | | | **External Provider Payments:** | | | | | |
| 7,262 | 6,571 | 6,215 | (691) | (1,047) | - Pharmaceuticals | 76,553 | 72,277 | 64,608 | (4,275) | (11,945) |
| 6,684 | 6,550 | 6,732 | (134) | 48 | - Capitation | 73,532 | 72,055 | 67,030 | (1,478) | (6,503) |
| 7,897 | 7,454 | 7,257 | (443) | (640) | - Aged Care and Health of Older Persons | 82,538 | 81,993 | 72,039 | (545) | (10,499) |
| 3,350 | 3,184 | 2,947 | (166) | (403) | - Mental Health | 36,762 | 35,023 | 29,675 | (1,739) | (7,087) |
| 684 | 879 | 892 | 195 | 208 | - Child, Youth, Families | 9,109 | 9,672 | 8,530 | 563 | (580) |
| 1,295 | 662 | 746 | (633) | (549) | - Demand driven Primary Services | 5,938 | 7,279 | 5,680 | 1,342 | (258) |
| 3,320 | 3,005 | 2,153 | (315) | (1,167) | - Other services | 34,041 | 33,053 | 22,944 | (989) | (11,098) |
| 4,011 | 4,002 | 3,845 | (10) | (167) | - IDF Outflows Patients to other DHBs | 43,674 | 44,020 | 38,187 | 346 | (5,488) |
| 5,255 | 5,190 | 5,284 | (65) | 30 | - IDF Outflows Other | 57,622 | 57,088 | 52,973 | (534) | (4,649) |
| **39,759** | **37,496** | **36,072** | **(2,262)** | **(3,687)** | **Total External Providers** | **419,769** | **412,460** | **361,664** | **(7,309)** | **(58,105)** |
| 3,265 | 0 | 194 | (3,265) | (3,071) | - Community COVID Testing & Vax | 55,294 | 0 | 10,084 | (55,294) | (45,210) |
| 40 | 0 | 0 | (40) | (40) | - Community COVID Pharmacy | 513 | 0 | 0 | (513) | (513) |
| 0 | 0 | 554 | 0 | 554 | - Community COVID Maori & Pacific | 4,360 | 0 | 1,905 | (4,360) | (2,455) |
| 0 | 0 | 0 | 0 | 0 | - IDF Wash-up 2020-2021 | 696 | 0 | 0 | (696) | (696) |
| **127,031** | **110,598** | **96,396** | **(16,433)** | **(30,636)** | **Total Expenditure** | **1,328,943** | **1,191,931** | **998,521** | **(137,012)** | **(330,422)** |
| **(1,360)** | **(3,060)** | **4,469** | **1,700** | **(5,829)** | **Net Result** | **(11,868)** | **(9,007)** | **8,682** | **(2,861)** | **(20,550)** |

# Funder Financials – Variance Explanations

## Revenue

| SPP Funder Revenue Variances | Mth $000's | YTD $000's |
|---|---|---|
| COVID-19 MIQ and Vaccine rollout | 407 | 11,559 |
| COVID-19 Community Testing | 3,265 | 59,654 |
| COVID-19 CitC NGO & Pharms | 7,616 | 23,970 |
| COVID-19 HHS Funding | 1,719 | 9,814 |
| MECA - Additional Funding | 1,200 | 27,311 |
| PHOs volume variances offset | 123 | 2,153 |
| Mental Health, Aged Care, Family CFAs | 6,177 | 5,050 |
| Planned Care adj 2021 and 2022 | (2,169) | (2,169) |
| CWD IDF 2021/22 below target | (205) | (3,191) |
| **Year to Date Revenue Variances** | **18,133** | **134,150** |

**External Revenue Variances**

- COVID-19 actual funding and accrued provision of **$105m** in support of GP assessment testing, vaccine rollout, Care in the Community & response funding for Maori and Pacific groups.
- PHO additional wash-ups and volume funding variance of **$2.1m**. There are increased costs of ($1.5m) offsetting this revenue.
- New funding for Mental Health and Child & Youth services of **$5m** has been contracted to NGO Providers.

**Internal Revenue Variances**

- The Provider Arm has not achieved IDF CWD targets by **($3.2m)** and Planned Care **($2.2m)** due to COVID impact. MECA pay equity funding of **$27.3m** passed through to Provider Arm,

**Total CCDHB Funder Arm NET year to date May 22 variance is unfavourable by ($2.9m).**

## Payments to External and Internal Providers

| SPP Funder Payment Variances | Mth $000's | YTD $000's |
|---|---|---|
| COVID-19 MIQ & Vaccine | (407) | (11,559) |
| COVID-19 Community Testing | (3,265) | (59,654) |
| COVID-19 CitC NGO & Pharms | (7,616) | (23,970) |
| COVID-19 HHS Funding | (1,719) | (9,814) |
| MECA - Additional Funding | (1,200) | (27,311) |
| PHOs volume variances offset revenue | (134) | (1,570) |
| Pharmaceuticals higher claims | (691) | (4,275) |
| Volume driven costs | (827) | 704 |
| Aged Care and Mental Health - revenue offset | (674) | (2,866) |
| HHS PVS services reduced due to COVID | 100 | 3,998 |
| 2020/21 IDF and Planned Care washup | 0 | (696) |
| **Year to Date Payment Variances** | **(16,433)** | **(137,012)** |

**External Provider Payments:**

- COVID-19 response costs **($105m)** due to ongoing GP test assessment claims, vaccination and Care in the Community programmes as directed by the Ministry. All COVID response costs are fully funded
- PHO Capitation expenses are **($1.6m)** unfavourable. Additional costs due to volume changes are offset by additional revenue $2.1m.
- Other Community NGO contracts have a net YTD unfavourable variance of (**$6.4m)**. Increased Aged Care volumes in home support and Pharmacy claims offsets favourable volumes in demand driven services such as immunisations (excl COVID) & child dental.

**Internal Provider Payments:**

- Provider Arm was paid **$4m** less due to lower IDF and Planned Care volumes achieved . **M**ECA pay equity Ministry funding of (**$27.3m)** passed through to Provider Arm,

**IDF 2020-21 wash-up Payment**

2020-21 unachieved IDF and planned care wash-up **has resulted in an added cost of ($0.7m).**

# Inter District Flows (IDF)

| IDF Inflow Categories Variance to Budget Target | YTD May 2022 $000's |
|---|---|
| Inpatient CWD | (2,208) |
| Outpatient Non DRG | (367) |
| Uncoded & PCT | (615) |
| Mental Health Providers | 797 |
| PHO Volume changes | 653 |
| Other IDF Inflows | (41) |
| **Total per Financials** | **(1,781)** |

**Inter District Revenue Inflows**

We have recognised changes in IDF inflows which has resulted in an unfavourable variance of ($1.8m) YTD. Breakdown of the variance commented below:

- The majority of the lower IDF inflows (actuals) are caused by Acute inpatient lower volumes:
  - Acute: ($4.3m): Cardiology ($2.5m), General Surgery ($1.4m), Spec Paediatric Surgery Neonates ($908k), Vascular Surgery ($873k), Haematology ($842k), Oncology ($634k), Respiratory Medicine ($395k), Gen Med ($366k), Urology ($323k), Paediatric Medicine ($164k), Paediatric Surgical Services ($119k), Renal ($117k), Neurosurgery ($77k), and Offset by Orthopaedic Surgery $2.0m, Neurology $605k, Maternity Service $436k, Otorhinolaryngology (ENT) $397k, Cardiothoracic Surgery 272k, Gynaecology $208k, Ophthalmology $125k, Gastroenterology $114k
  - Planned Care: ($1.6m); Cardiology ($915k), Neurosurgery ($775k), General Surgery ($723k) , Vascular Surgery ($379k), Gynaecology ($189k), Paediatric Surgical Services ($164k) Cardiothoracic ($139k), and offset by Orthopaedic Surgery $911k, Otorhinolaryngology (ENT) $464k, Ophthalmology $192k, Urology $140k,
  - There is a $3.8m COVID adjustment for undelivered IDF CWD due to the Sep /Oct 21 lockdown, on the expectation that this will be funded by MOH at year end.
- Outpatient Non DRG inflow relates to all IDF patient visits that do not require a overnight stay
- PHO Volume change inflows relates to a increase in PHO enrolments through a quarterly wash-up by the Ministry
- Non DRG inflow relates to all IDF patient visits that do not require a overnight stay

Note: negative is CCDHB not delivering services to other DHBs therefore unfavourable from both a patient treatment and P&L perspective

# Commissioning: Families & Wellbeing

**What is this measure?**

*Youth health and wellbeing (15-24 years)*

- Rate of youth enrolled in a PHO per 1,000 population
- Rate of youth enrolled in a PHO who have had a consultation in the last quarter per 1,000 population
- Rate of youth presenting to Emergency Departments per 1,000 population

**Why is this important?**

- Compared to other age groups, young people are less likely to be enrolled in a PHO and have access to core primary care services to maintain their health wellbeing. Some benefits associated with belonging to a PHO include cheaper doctors' visits and reduced costs of prescription medicines.
- Compared to other age groups, young people are also less likely to be engaged with primary care services and more likely to present to ED for reasons that could be managed in a primary care setting.

**How are we performing?**

- The rate of youth enrolled in a PHO per 1,000 is 912 for Māori, 998 for Pacific and 798 for non-Māori, non-Pacific.
- The rate of youth enrolled in a PHO per 1,000 and who have had a consultation in the last quarter is 689 for Māori, 577 for Pacific, and 712 for non-Māori, non-Pacific.
- The rate of youth presenting to ED per 1,000 is 65 for Māori, 57 for Pacific, and 40 for non-Māori, non-Pacific.

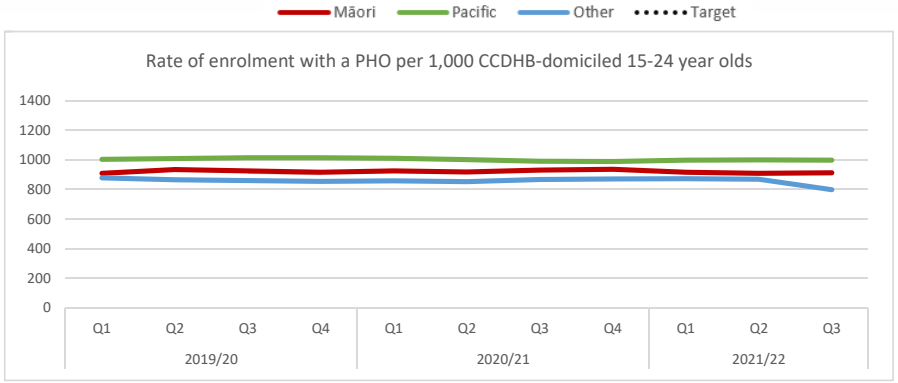
**What is driving performance?**

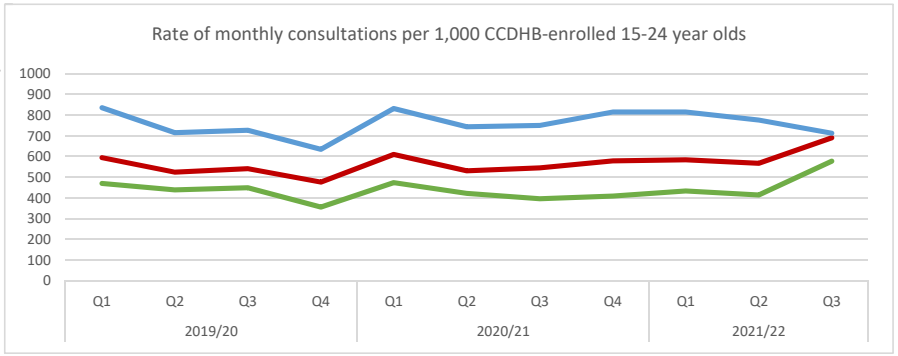
- Māori and Pacific youth are more likely to be enrolled in a PHO, however do not access or engage with their primary care services at the same rate as 'Other' ethnicities. Māori and Pacific youth present to ED at higher rates compared to non- Māori, non-Pacific.
- Young people require a unique mix of social and health services which traditional and mainstream primary care services are not always best equipped to respond to. In particular, Māori and Pacific youth require culturally appropriate services.

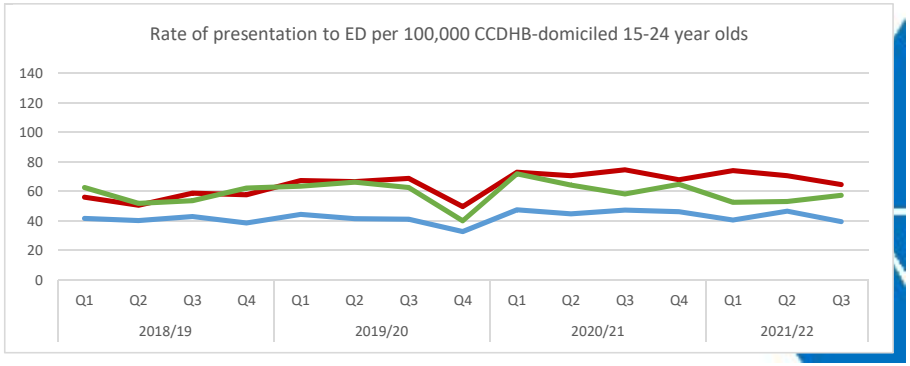
**Management comment**

CCDHB is progressing a range of initiatives that provide more choice and options for young people to engage in primary care. These include:

- The youth one stop shop (YOSS) for Rangatahi in Porirua (the 502) run Ngati Toa and Partners Porirua is open enrolling people. Our other YOSS practices continue to reach young people in need of youth appropriate access to primary care services on site and via school based health services.
- Tū Ora Compass Health continue to lead the roll out of digital solutions across the DHB for young people to engage with health services. For example, Piki for mental health and SXT for sexual health.



# Commissioning: Primary & Complex Care

**What is this measure?**

*End of life*

- % of clients assessed by InterRAI with an Enduring Power of Attorney (EPOA) in place
- % of clients assessed by InterRAI having funded Advanced Care Plan (ACP) in place

**Why is this important?**

- An EPOA appoints someone to make decisions about an individual's personal care and welfare on their behalf.
- Advance Care Planning is a voluntary process of discussion and shared planning for future health care. The process assists the individual to identify their personal beliefs and values, and incorporates them into plans for future health care. An ACP often also includes an advance directive. This documents their healthcare wishes for a time in the future when they are not able to speak for themselves. An ACP may indicate who the EPOA is. The 2DHB ACP aligns with the Heath Quality and Safety Committee's national ACP overarching vision to "Empower New Zealanders to participate in planning their future care." This has a particular focus on removing inequities in healthcare and outcomes for Māori.

**How are we performing?**

There are no national or local targets for these performance measures.

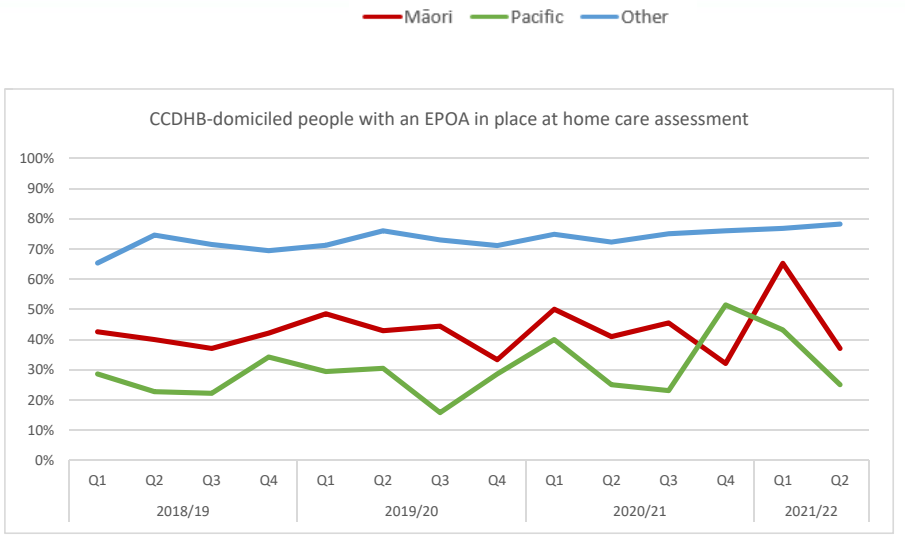
- Performance for Home Care Assessments where an EPOA was in place is 37% for Māori, 25% for Pacific, and 78% for non-Māori, non-Pacific.
- Performance for Home Care Assessments with a completed ACP is 8% for Māori, 3% for Pacific, and 5% for non-Māori, non-Pacific.

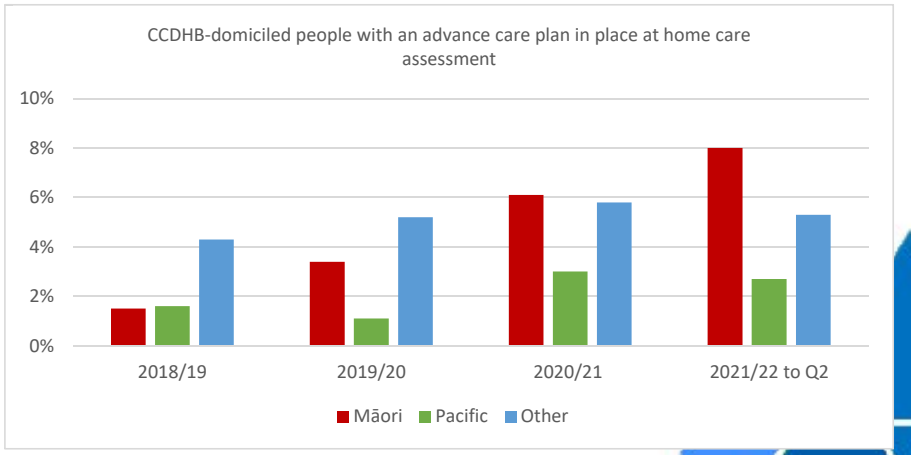
**What is driving performance?**

- At the end of 2020, Tū Ora Compass Health was funded to reimburse NGOs for completion of ACPs with clients. This investment took place because NGOs are ideally placed to undertake ACP conversations and support clients to complete ACPs, having and trusted relationships within communities with clients who could benefit from ACP. Additionally, NGOs often have a strong equity lens and serve diverse communities.

**Management comment:**

- The NGO-incentivised scheme for ACP completion recognises the valuable work of NGOs and provides financial support to undertake what can be challenging, lengthy and rich ACP conversations.
- The key benefits include: more ACPs completed and uploaded; client wishes are more accessible and can be followed by clinicians; further ACP promotion, support and socialisation to clients, whānau and staff.
- ACP is a 3DHB role. Promotion, support and education are provided to health and social care providers across DHBs, primary health, ARC, NGOs, and tertiary education.



# Commissioning: Mental Health & Addictions

**What is this measure?**

- Rate of access to primary care mental health and addictions services per 100,000
- Rate of access to specialist mental health and addiction services per 100,000 (DHB and NGO)
- Rate of Māori under the Mental Health Act: section 29 community treatment orders

**Why is this important?**

- Enrolment in a PHO and engagement with primary care supports access to specialist services. It also generates opportunities for early intervention; and integration across primary, community and specialist services.
- Better access to a broad range of services improves people's mental health and wellbeing. This includes access to specialist mental health services for people with severe mental illness.
- Reducing the rate of Māori under s29 aims to support independent/high-quality of life for Māori under compulsory community treatment, and improve equity.

**How are we performing?**

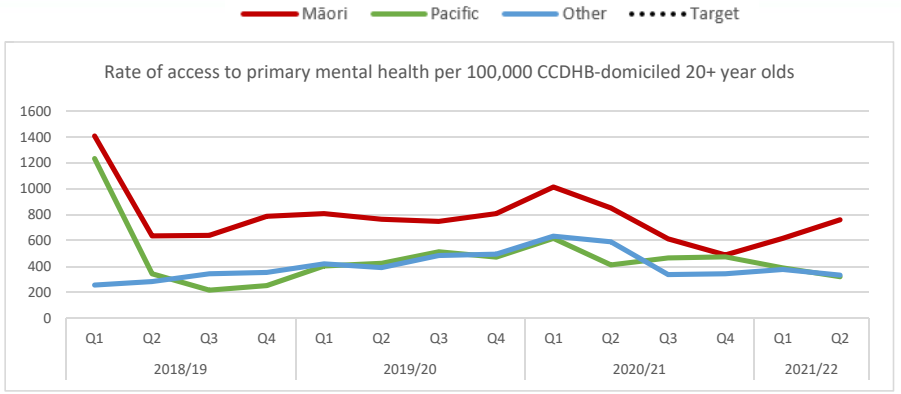
- Access rates to primary mental health care is 759 for Māori, 319 for Pacific, and 332 for non-Māori, non-Pacific.
- Access rates to specialist mental health services is 8,517 for Māori, 4,747 for Pacific, and 3,371 for non-Māori.
- The rate of Māori under s29 per 100,000 is 621; the rate of non-Māori is 174.

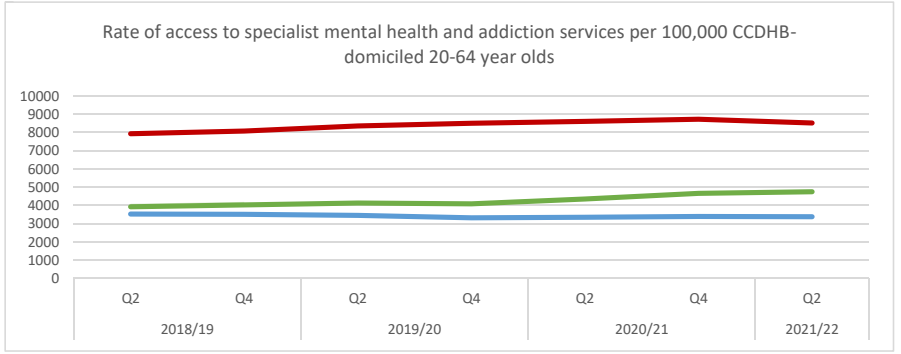
**What is driving performance?**

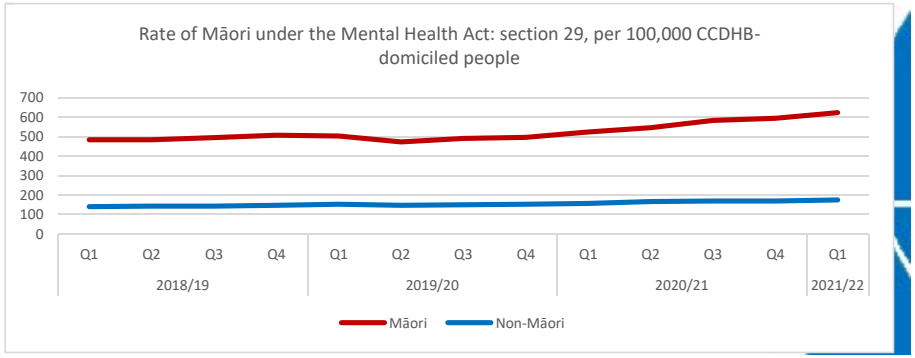
- All ethnicities, but in particular Māori, have much higher access rates to specialist mental health services provided by NGOs and DHBs. This is driven by how our mental health system has evolved over time and has resulted in a concentration of services in specialist care. Under-investment in primary mental health services means populations, and in particular Māori are unable to access and engage in prevention, early detection and management services. This is resulting in an acceleration of Māori through our system and reflected in higher rates of compulsory treatment.

**Management comment**

- As part of the strategic priorities work programme, we are partnering with community leaders and providers to co-develop community mental health and addiction services in localities with high levels of unmet need (Porirua) that are inclusive, accessible and well-connected. This includes support for whānau ora and culturally appropriate models of care. Our key partner in Porirua is Ngāti Toa.
- In line with Te Rau Matatini best practice framework, we are implanting Kaupapa Māori mental health and addiction services in Te Awaikarangi, that support whānau Māori in a manner that preserves their unique cultural heritage, spirituality and wellbeing.
- We are implementing the new Kaupapa Māori Forensic Step Down service, in partnership with Te Waka Whaiora, by March 2022.



# Commissioning: Hospital & Speciality Services

**What is this measure?**
Wellington Regional Hospital occupancy and the flow on effect on acute care and ED occupancy.

**Why is this important?**
**Acute flow** at an individual level describes the journey a person takes through our health system to receive care for urgent or unplanned events. **Acute flow** at a system level describes the flow of all acute patients through our system. **Acute demand** measures how many people require acute care in a period of time.

Our hospitals are running at high occupancy levels due to increasing demand and the shortage of inpatient beds in our region. High occupancy impedes flow through the system.

**How are we performing?**
- As at the 1st of June average hospital occupancy was at 104%.
- For the week ending 29 May, 59% of people presenting to ED were seen in under 6 hours
- For the week ending 29 May, ED occupancy was above 90% most of the time.

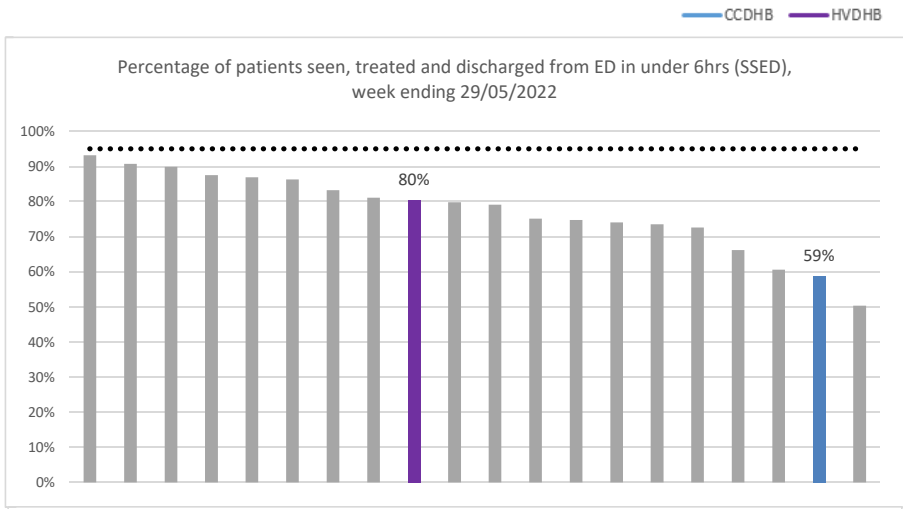
**What is driving performance?**
Hospital capacity is a fixed value, as acute demanded increases there is no flex within the system to allow for the increased admissions. As a result we see people who need inpatient beds waiting longer in ED, as well as waiting in inappropriate spaces such as corridors.

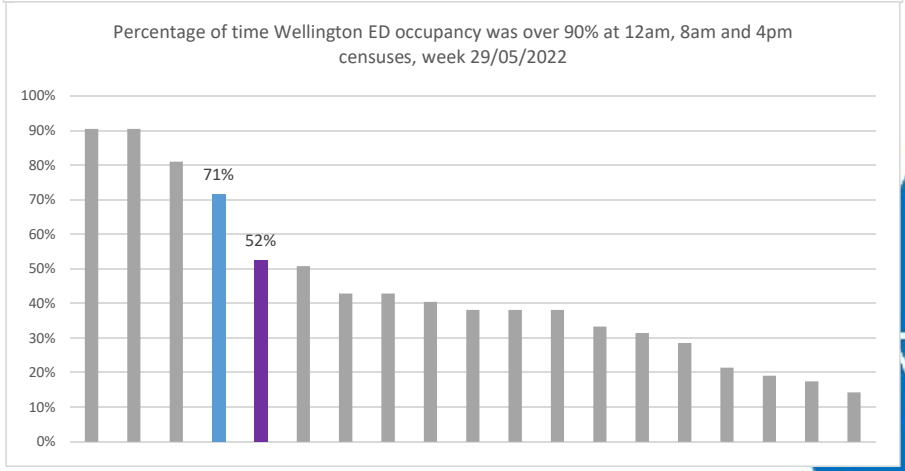
People are presenting to ED in much higher numbers than the ED was designed to handle. There were 64,067 ED presentations in 2020/21 compared to 36,682 in 2001 when the building was commissioned. Physical ED capacity has not increased at a rate to meet demand. As a result, patients are waiting longer, and in inappropriate spaces for treatment.

**Management comment:**
Service managers have been engaged to provide robust planning for winter as we know there is an increase in acute medical admissions during this time. We need to work efficiently with the spaces we have available to manage this.

The **Front of Whare** project has identified options for increasing Wellington ED capacity and is in the process of completing the indicative business case. However, this will not relieve any immediate pressure on the system.

| 2021/22 | Jan | Feb | Mar | Apr | May | June |
|---|---|---|---|---|---|---|
| Hospital occupancy at 1st of the month | 77% | 98% | 94% | 96% | 102% | 104% |



# 2DHB COVID-19 Response

**What is this measure?**

- COVID-19 vaccination programme - Boosters and Children

**Why is this important?**

- The 2DHB COVID-19 response aims to protect our localities and priority population by ensuring Care in the Community is 'Equity Driven – Locality Led – Manaaki Focussed'. This includes, testing and vaccination, welfare and psychosocial support, preparing additional capacity for surges and a continuum of clinical care: care in the community, safely managing care in the home, and escalation to hospital when required.

**How are we performing?**

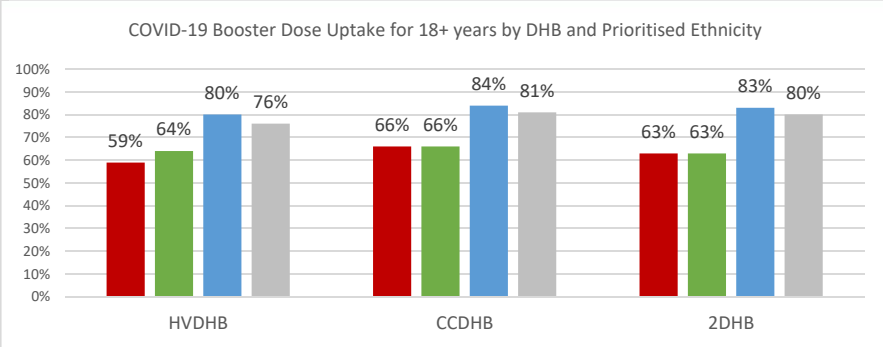
- 282,808 eligible people 18+ years in the 2DHB region have received a booster dose (80% of eligible)
  - 23,257 Māori (63%), 15,671 Pacific Peoples (65%), 243,880 'Other' (83%)
- 15,200 children 5-11 years in the 2DHB region are fully vaccinated (36%)
  - 1,661 Māori (20%), 721 Pacific Peoples (17%), 12,818 'Other' (44%)
- 27,872 children 5-11 years in the 2DHB region have received their 1st dose (66%)
  - 4,044 Māori (48%), 2,275 Pacific Peoples (52%), 21,553 'Other' (74%)
- 389,624 people 12+ years in the 2DHB region are fully vaccinated (97%)
  - 42,921 Māori (93%), 27,588 Pacific Peoples (95%), 319,115 'Other' (98%)

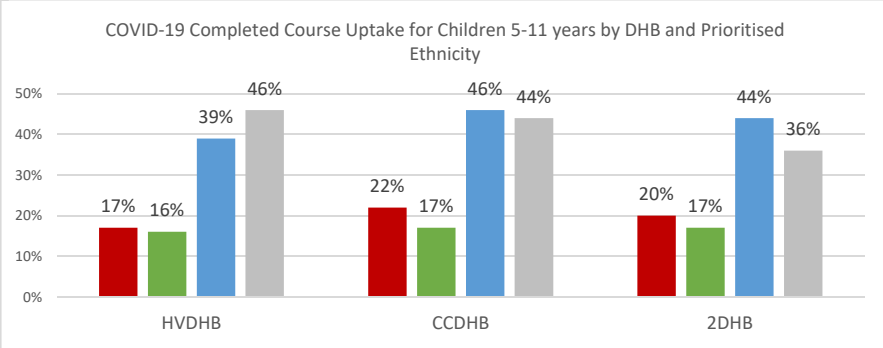
**What is driving performance?**

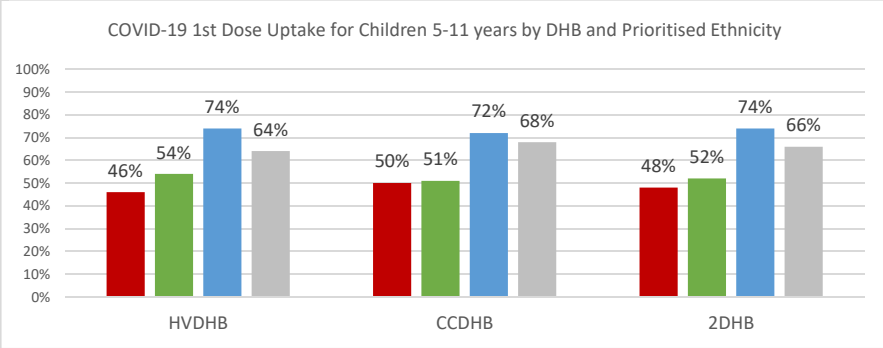
- Our vaccination coverage has been achieved through whānau ora solutions owned by communities and delivered through provider networks in our localities. To coordinate and respond to the needs of our communities, CCDHB and HVDHB have established a hub and spoke approach for the local delivery of care. The central coordinating hub includes staff from other social agencies and locality based provider networks (iwi and Māori providers, Pacific providers and Disability providers) working together
- The current vaccination programme has been impacted by the Omicron outbreak and the clinical 'stand down' for people who have had COVID and would otherwise be eligible for first, second, additional or booster doses.

**Management comment:**

- As we exit the peak of the Omicron outbreak and our vaccination programme is impacted by the 'stand down' period we are building our 2DHB operating model for winter 2022. This has included a COVID-19 Response Debrief Workshop with community providers to identify the things we have started that would be useful to continue or adapt in some way; things that we should do differently; things we have learnt from our COVID response and should take forward into business as usual.
- Our 2022 winter operating model involves whānau ora solutions owned by communities, delivered through locality based provider networks to protect priority population.




Data Source: MOH Covid-19 Vaccine Data
Date Range: 22/02/2021 to 02/06/2022. Data current at: 03/06/2022 @1.30pm

# Section 2.2

## Hospital Performance

# Executive Summary – Hospital Performance

- Services across both DHBs have been impacted by unprecedented levels of staff absence due to general illness (14%), the needed for staff to isolate or care for isolating or ill dependents, and the long tail of COVID-19 (between 25- 40 patients across out three hospitals at any give time), all coupled with a very high level of vacancies across many staff groups (clinical staff 14%, with turnover of 18%).
- CCDHB continues to face a significant capacity issue as demonstrated by the consistently high occupancy rate and the bed blockage experienced across hospital flow as a consequence. Bed occupancy continues to be one of the most significant contributing factor to SSiED compliance. The occupancy percentage utilisation for May 2022 was 94%. The ambitious timeline of the Front of Whare project continues to be a focus to ensure delivery.
- We continue to protect our planned care funding schedule as much as we can but all of these patient makeup and workforce factors place substantial pressure on our services, particularly our ability to carry out planned care. Acute care, non deferrable surgery and cancer care remains the focus of most activity this month.
- Continued turnover and vacancies across midwifery and nursing, allied health in particular sonographer, social work, radiographers and now anaesthetists remain at critical levels in some areas; we are continually refining and reviewing processes to manage demand during busy periods and continue to work closely with our staff and union partners on workforce planning across the region noting this issue as requiring national solutions. The 2DHB Nursing and Midwifery Recruitment and Retention Strategy, written to assist with the drive we need right now to fill vacancies in both workforces, at both DHBs and seek to retain our existing staff is being led by our Chief Nurse.
- Our cardiac surgery wait list still remains well above the target waitlist size set by the Ministry programme. Factors impacting on our waitlist is the reduction in surgery due to COVID related additional cancellations due to insufficient ICU capacity. We have been utilising as much private capacity as we can but this is insufficient to reduce the waitlist; we are considering what other options may support sector capacity. This is a national issue.
- We are approaching budget YTD

# CCDHB Contract Activity Performance

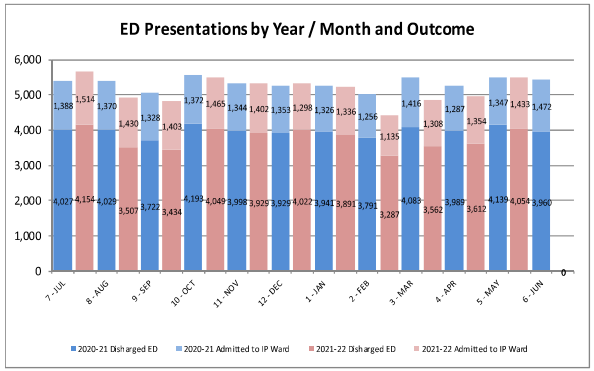
## Capital and Coast DHB: May 2022

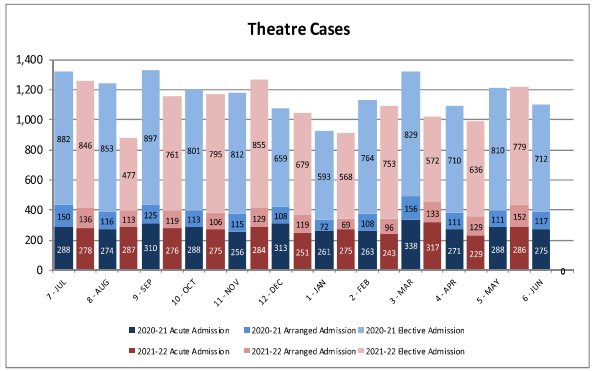
**ED Presentations**

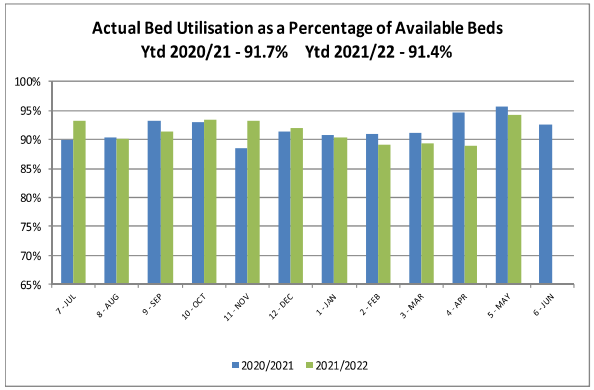
| | 2020/21 | 2021/22 |
|---|---|---|
| YTD Totals | 58,628 | 56,579 |
| Change | | -2,049 |
| % Change | | -3% |

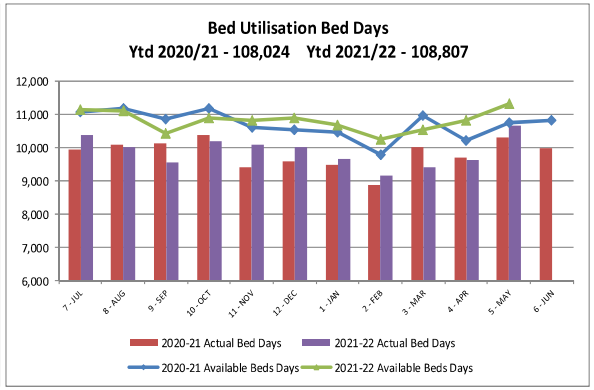
**Theatre Cases**

| | 2020/21 | 2021/22 |
|---|---|---|
| YTD Totals | 13,045 | 12,023 |
| Change | | -1,022 |
| % Change | | -8% |




### ED

- The total number of presentations to ED in May 2020 was 4,149 (this includes 144 DNWs)
- The total number of presentations to ED in May 2021 was 5,481 (this includes 407 DNWs)
- The total number of presentations to ED in May 2022 was 5,488 (this includes 488 DNWs)
- The average number of daily presentations in May 2022 was 177, this is the same as the average of 177 presentations per day in May 2021.

### ED Covid-19

- During the month of May 2022 there were 314 presentations (6% of total presentations) where the patient was found to be either positive for COVID-19 when presenting or diagnosed shortly after presenting to ED.
- Out of the 314 presentation a total of 70 of the patients presented with symptoms related to COVID-19, the remaining 244 presenting with other non-COVID-19 diagnosis such as Trauma / Abdominal Pain / Mental Health etc.
- Out of the 314 presentation, a total of 115 of the patients were admitted, 20 did not wait and the remaining 179 were discharged home.

### Bed Utilisation

- The utilisation of available of adult beds in core wards in May 2022 was 94.3% which is slightly lower than the rate of 95.7% recorded in May 2021. The number of available beds in May 2022 (365) is higher than in April 2021 (347) and can be attributed largely to closure of AFU/W03 in May 2021 and more beds open at Kenepuru.
- The number of Elective theatre cases has decreased for the month of May 2022 by 3.8% (-31) when compared to May 2021.

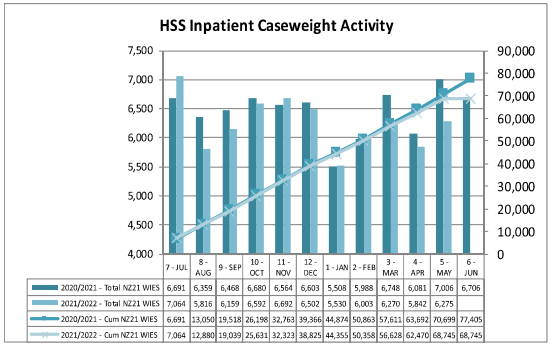
# CCDHB Activity Performance

Capital and Coast DHB: May 2022

**HSS Inpatient Caseweight Activity**

| | 2020/21 | 2021/22 |
|---|---|---|
| YTD Totals | 70,699 | 68,745 |
| Change | | -1,953 |
| % Change | | -2.8% |

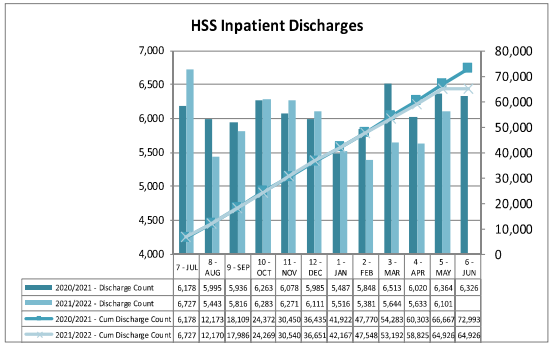
** This includes all Hospital Acitivty including ACC, Non Resident, Non-Casemix but excludes Mental Health*




**HSS Inpatient Discharges**

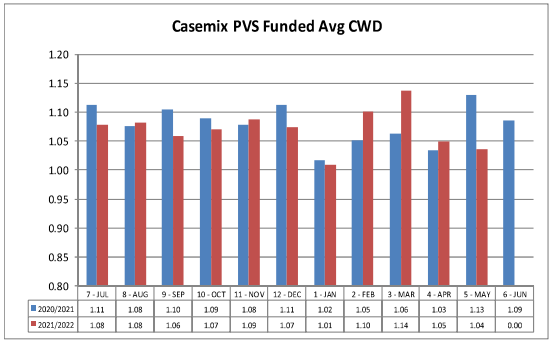
| | 2020/21 | 2021/22 |
|---|---|---|
| YTD Totals | 66,667 | 64,926 |
| Change | | -1,741 |
| % Change | | -2.6% |

** This includes all Hospital Acitivty including ACC, Non Resident, Non-Casemix but excludes Mental Health*



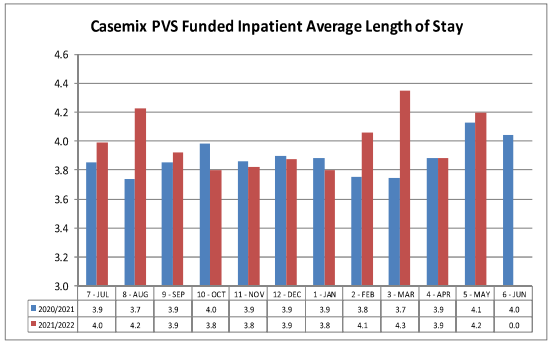

**Casemix PVS Funded Avg CWD**

| | 2020/21 | 2021/22 |
|---|---|---|
| YTD Totals | 1.08 | 1.07 |
| Change | | -0.01 |
| % Change | | -1% |




**Casemix PVS Funded Inpatient Average Length of Stay**

| | 2020/21 | 2021/22 |
|---|---|---|
| YTD Totals | 3.89 | 3.99 |
| Change | | 0.10 |
| % Change | | 2.6% |




## Comparisons with same period last year:

- Local acute CWDs are lower than then previous financial year (-190 CWDs) with an increase in discharges; a similar ALOS and a similar average CWD. The discharge increase is driven primarily by Emergency Medicine, Paediatric Medicine and Cardiology. The CWD decrease is driven primarily by General Surgery, Vascular Surgery, Obstetrics and Neurology.
- Local Elective CWDs are lower than the previous financial year (-1,698 CWDs) with a decrease in discharges; a similar ALOS and average CWD. The discharge decrease is driven primarily by Orthopaedics, General Surgery, Cardiology, and ENT. The CWD decrease is driven primarily by Orthopaedics, Cardiology, General Surgery and Gynaecology.
- IDF acute CWDs are higher than the than the previous financial year (24 CWDs) with a decrease in discharges; a similar ALOS and a similar average CWD. The discharge decrease is driven primarily by Haematology, Respiratory and Neonatal. The CWD increase is driven primarily by Orthopaedics, Neurosurgery and ENT.
- IDF Elective CWDs are lower than the previous financial year (-320 CWDs) with less discharges; a higher ALOS and a higher average CWD. The discharge decrease is driven primarily by Cardiology, Paediatric Surgery and Vascular Surgery. The CWD decrease is driven by General Surgery, Vascular Surgery and Paediatric Surgery.
- In combination these four admission groups equate to a decrease of (-2,185, CWDs) compared to the previous year. The services that most significantly impact this shift are General Surgery (-835), Cardiology (-312), Haematology (-337) and Vascular Surgery (-227) countered by increases in General Medicine (334), Paediatric Medicine (169) and Emergency Medicine (118).
- The decrease in General Surgery can be partly attributed to a significant acute outlier discharged in November 2020 which had a CWD value of 112.
- The decrease in Haematology can be largely attributed to a number of significant outliers discharged in 2020/2021 which saw a far greater mix of Bone Marrow Transplant and complex Leukaemia cases which have not been evident in 2021/2022.
- The increases in both General Medicine (334) and Paediatric Medicine (169) were realised predominantly in July 2021 and August 2021 and relate to significant number of patient presenting with RSV.

## Discharges:

- The number of publicly funded casemix discharges for the month of April 2022 has decreased by 212 (-3.6%) in comparison to the number of discharges recorded in May 2021. The total of 212 comprised of 8 less acute discharges and 204 less elective discharges. In terms of specialties the decrease in the number of discharges is most evident in Obstetrics (-72 Mother, -46 Babies), Gynaecology (-34 Acute, -35 Elective), Orthopaedics (-46 Elective), Urology (-9 Acute, -41 Elective), ENT (-29 Acute, -5 Elective) and Cardiology (-1 Acute, -29 Elective).The overall decrease was countered by an increase in Emergency Medicine (163 Acute), Orthopaedics (37 Acute) and Paediatric Medicine (34 Acute).
- The number of outsourced discharges recorded in May 2022 was 59 which is 100 lower than May 2021. This decrease largely accounts for the reductions in Orthopaedic and Ophthalmology Elective activity and partly accounts for both, Gynaecology, Vascular Surgery and Urology. In May 2022 Ophthalmology had 25 less outsourced discharges, Orthopaedics had 31 less outsourced discharges, Gynaecology had 23 less outsourced discharges, Vascular Surgery has 13 less discharges and Urology had 10 less outsourced

# HHS Operational Performance Scorecard – period May 21 to May 22

| Domain | Indicator | 2021/22 Target | 2021-May | 2021-Jun | 2021-Jul | 2021-Aug | 2021-Sep | 2021-Oct | 2021-Nov | 2021-Dec | 2022-Jan | 2022-Feb | 2022-Mar | 2022-Apr | 2022-May | 16/05/22 | 23/05/22 | 30/05/22 | 6/06/22 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Care | Serious Safety Events | TBD | 8 | 8 | 10 | 3 | 11 | 8 | 10 | 9 | 5 | 10 | 9 | 7 | 6 | | | | |
| | Total Reportable Events | TBD | 1,541 | 1,370 | 1,487 | 1,260 | 1,172 | 1,445 | 1,462 | 1,384 | 1,125 | 1,110 | 1,188 | 981 | 1,175 | 247 | 250 | 313 | 289 |
| Patient and Family Centred | Complaints Resolved within 35 calendar days | TBD | 93.3% | 87.9% | 77.1% | 89.5% | 88.4% | 87.0% | 82.9% | 65.9% | 79.8% | 71.0% | 71.7% | 80.9% | 92.2% | 100.0% | 100.0% | 100.0% | 100.0% |
| | % Discharges with an Electronic Discharge summary | TBD | | | | | | | | | | | | | | | | | |
| Access | Emergency Presentations | | 5,486 | 5,432 | 5,668 | 4,937 | 4,837 | 5,514 | 5,331 | 5,320 | 5,227 | 4,422 | 4,870 | 4,966 | 5,487 | 1,256 | 1,258 | 1,196 | 1,261 |
| | Emergency Presentations Per Day | | 177 | 181 | 183 | 159 | 161 | 178 | 178 | 172 | 169 | 158 | 157 | 166 | 177 | 179 | 180 | 171 | 180 |
| | Emergency Length of Stay (ELOS) % within 6hrs | ≥95% | 66.8% | 64.0% | 56.2% | 66.6% | 64.8% | 61.9% | 61.8% | 65.7% | 65.9% | 68.0% | 61.8% | 56.4% | 57.6% | 59.4% | 59.0% | 51.8% | 52.2% |
| | ELOS % within 6hrs - non admitted | TBD | 78.3% | 75.2% | 66.4% | 79.3% | 75.9% | 72.5% | 72.0% | 75.5% | 74.8% | 78.0% | 72.6% | 66.2% | 69.6% | 69.9% | 71.4% | 63.3% | 63.7% |
| | ELOS % within 6hrs - admitted | TBD | 45.6% | 45.3% | 39.6% | 44.0% | 41.4% | 43.2% | 44.9% | 48.3% | 50.4% | 50.7% | 43.4% | 40.9% | 36.2% | 40.2% | 36.8% | 33.3% | 33.4% |
| | Total Elective Surgery Long Waits | Zero Long Waits | 344 | 363 | 428 | 552 | 695 | 702 | 687 | 682 | 798 | 781 | 930 | 988 | TBC | | | | |
| | Additions to Elective Surgery Wait List | | 1,458 | 1,355 | 1,245 | 944 | 1,128 | 1,043 | 1,395 | 1,062 | 769 | 1,077 | 1,270 | 978 | 1,136 | 274 | 263 | 185 | 93 |
| | % Elective Surgery treated in time | TBD | 75.0% | 82.4% | 83.2% | 81.5% | 72.4% | 71.1% | 75.5% | 78.7% | 79.5% | 76.0% | 77.6% | 75.4% | 74.5% | 73.8% | 79.1% | 81.9% | 82.1% |
| | No. surgeries rescheduled due to specialty bed availability | TBD | 13 | 21 | 16 | 6 | 0 | 9 | 7 | 2 | 13 | 7 | 1 | 6 | 14 | 1 | 5 | 3 | 7 |
| | Total Elective and Emergency Operations in Main Theatres | TBD | 1,190 | 1,085 | 1,209 | 807 | 1,062 | 1,144 | 1,229 | 1,001 | 869 | 1,071 | 960 | 974 | 1,159 | | | | |
| | Faster Cancer Treatment 31 Day - Decision to Treat to Treat | 85% | 83.0% | 96.0% | 84.0% | 83.0% | 84.0% | 87.0% | 93.0% | 96.0% | 83.0% | 82.0% | 88.0% | 88.0% | 82.0% | | | | |
| | Faster Cancer Treatment 62 Day - Referral to Treatment | 90% | 84.0% | 91.0% | 76.0% | 81.0% | 85.0% | 67.0% | 93.0% | 90.0% | 95.0% | 82.0% | 81.0% | 91.0% | 92.0% | | | | |
| | Specialist Outpatient Long Waits | Zero Long Waits | 211 | 265 | 295 | 412 | 607 | 735 | 697 | 775 | 1,177 | 1,431 | 1,573 | 1,571 | TBC | | | | |
| | % Specialist Outpatients seen in time | Zero Long Waits | 90.5% | 90.2% | 89.1% | 88.4% | 82.1% | 80.0% | 79.8% | 82.7% | 84.0% | 78.9% | 77.1% | 78.0% | 78.1% | 79.0% | 76.9% | 81.7% | 84.2% |
| | Outpatient Failure to Attend % | TBD | 7.4% | 7.0% | 7.3% | 7.1% | 6.2% | 7.0% | 7.0% | 6.9% | 7.2% | 7.7% | 8.0% | 7.9% | 7.8% | 8.0% | 7.3% | 7.6% | 6.8% |
| | Maori Outpatient Failure to Attend % | TBD | 15.0% | 15.1% | 16.8% | 14.6% | 15.0% | 14.6% | 15.8% | 15.3% | 15.5% | 16.3% | 16.3% | 15.5% | 17.3% | 17.7% | 15.4% | 18.2% | 14.2% |
| | Pacific Outpatient Failure to Attend % | TBD | 16.3% | 15.5% | 15.6% | 16.7% | 15.2% | 17.5% | 17.7% | 17.3% | 17.3% | 18.1% | 19.0% | 18.4% | 17.6% | 17.7% | 17.0% | 17.5% | 16.1% |
| Financial Efficiency | Forecast full year surplus (deficit) ($million) | | ($62.4m) | ($46.5m) | $1.0m | $1.0m | $1.0m | $7.0m | $3.2m | $3.2m | $3.2m | $3.2m | $3.2m | $7.0m | $7.0m | | | | |
| | Contracted FTE (Internal labour) | | 5,364 | 5,340 | 5,336 | 5,364 | 5,386 | 5,412 | 5,434 | 5,456 | 5,463 | 5,528 | 5,536 | 5,538 | 5,537 | | | | |
| | Paid FTE (Internal labour) | | 5,784 | 5,746 | 5,767 | 5,837 | 5,810 | 5,871 | 5,881 | 5,949 | 6,115 | 6,031 | 6,001 | 5,990 | 5,987 | | | | |
| | % Main Theatre utilisation (Elective Sessions only) | 85.0% | 81.0% | 80.0% | 79.0% | 79.0% | 81.0% | 79.0% | 80.0% | 80.0% | 80.0% | 81.0% | 80.0% | 79.0% | 78.0% | | | | |
| Discharge and Occupancy | % Patients Discharged Before 11AM | TBD | 23.6% | 25.3% | 20.7% | 21.8% | 20.5% | 22.6% | 23.0% | 21.2% | 18.4% | 21.9% | 21.4% | 20.4% | 19.5% | 20.1% | 19.7% | 19.9% | 16.8% |
| | Adult Long Stay Patients Not Yet Discharged (>14 days) WLG | TBD | 35 | 38 | 43 | 40 | 30 | 40 | 38 | 34 | 29 | 43 | 33 | 43 | 45 | 52 | 52 | 43 | 47 |
| | Adult Overnight Beds - Average Occupied WLG | TBD | 386 | 387 | 383 | 355 | 349 | 362 | 367 | 363 | 353 | 367 | 347 | 352 | 371 | 368 | 370 | 375 | 382 |
| | Adult Long Stay Patients Not Yet Discharged (>14 days) KEN | TBD | 22 | 17 | 32 | 34 | 21 | 26 | 25 | 25 | 19 | 22 | 20 | 26 | 27 | 34 | 28 | 32 | 25 |
| | Adult Overnight Beds - Average Occupied KEN | TBD | 73 | 73 | 79 | 83 | 80 | 82 | 81 | 76 | 69 | 76 | 63 | 71 | 80 | 85 | 74 | 73 | 76 |
| | Child Overnight Beds - Average Occupied | TBD | 22 | 25 | 30 | 23 | 19 | 24 | 22 | 22 | 21 | 20 | 19 | 17 | 24 | 25 | 24 | 21 | 23 |
| | NICU Beds - ave. beds occupied | 36 | 42 | 36 | 40 | 38 | 32 | 35 | 29 | 35 | 37 | 37 | 31 | 28 | 27 | 29 | 27 | 30 | 32 |
| ALOS | Overnight Patients - Average Length of Stay (days) | TBD | 4.13 | 4.04 | 4.09 | 4.23 | 3.92 | 3.80 | 3.82 | 3.87 | 3.80 | 4.06 | 4.23 | 3.88 | 4.17 | 4.31 | 3.63 | 4.22 | 4.13 |
| Care | Rate of Presentations to ED within 48 hours of discharge | TBD | 4.6% | 4.0% | 4.0% | 4.3% | 4.0% | 4.2% | 4.3% | 4.7% | 4.2% | 3.6% | 4.1% | 4.3% | 3.4% | 2.9% | 3.7% | 3.3% | 5.1% |
| | Presentations to ED within 48 hours of discharge | TBD | 253 | 218 | 224 | 211 | 194 | 231 | 228 | 252 | 219 | 161 | 202 | 211 | 186 | 37 | 46 | 39 | 64 |
| Staff Experience | Staff Reportable Events | TBD | 149 | 159 | 157 | 130 | 144 | 170 | 197 | 161 | 130 | 96 | 123 | 121 | 143 | 32 | 22 | 36 | 32 |
| | % sick Leave v standard | TBD | 3.6% | 3.8% | 4.3% | 3.9% | 2.7% | 3.2% | 3.6% | 3.5% | 2.0% | 2.7% | 3.2% | 3.0% | 3.4% | | | | |
| | Nursing vacancy | TBD | 250 | 266 | 295 | 374 | 422 | 508 | 527 | 528 | 556 | 484 | 493 | 502 | 511 | | | | |
| | % overtime v standard (medical) | TBD | 2.1% | 2.0% | 2.5% | 2.3% | 2.3% | 2.2% | 2.3% | 2.2% | 2.1% | 2.2% | 2.5% | 2.1% | 2.5% | | | | |

*Refer to later pages for more details on CCDHB performance. Highlighted where an identified target.*

# Shorter Stays in ED (SSIED)

**What is this measure?**

- The Ministry of Health (MoH) Target: 95% of patients presenting to ED will be seen, treated, and discharged or seen, assessed and admitted or transferred from the Emergency Department within six hours.

**Why is this important?**

- Target: 95% of patients will be admitted, discharged, or transferred from the Emergency Department within six hours.
- During the month of May 2022 there were 314 presentations (6% of total presentations) where the patient was found to be either positive for COVID-19 when presenting or diagnosed shortly after presenting to ED.
- Out of the 314 presentation a total of 70 of the patients presented with symptoms related to COVID-19, the remaining 244 presenting with other non-COVID-19 diagnosis such as Trauma / Abdominal Pain / Mental Health etc.
- Out of the 314 presentation, a total of 115 of the patients were admitted, 20 did not wait and the remaining 179 were discharged home.

**How are we performing?**

- CCDHB performance for April 2022 was 56.3% which is lower than April 2021 (63.2%).
- CCDHB SSiED performance for April 2022 is 38.7% lower than the Target for SSiED. The count of breaches in ED 1,983 in April 2022 is higher than the 1,766 recorded in April 2021.
    - The total number of presentations to ED in May 2020 was 4,149 (this includes 144 DNWs)
    - The total number of presentations to ED in May 2021 was 5,481 (this includes 407 DNWs)
    - The total number of presentations to ED in May 2022 was 5,488 (this includes 488 DNWs)
- The average number of daily presentations in May 2022 was 177, this is the same as the average of 177 presentations per day in May 2021.
- CCDHB SSIED performance for May 2022 was 57.8%. This result is an increase on the 56.3% recorded last month in April 2022.

**What is driving performance?**

- CCDHB performance for May 2022 was 57.8% which is lower than May 2021 (67.0%).
- CCDHB SSiED performance for May 2022 is 37.2% lower than the Target for SSiED. The count of breaches in ED 2,108 in May 2022 is higher than the 1,673 recorded in May 2021.

| Performance | MAR | APR | MAY |
|---|---|---|---|
| 2019-20 | 79% | 84% | 83% |
| 2020-21 | 66% | 63% | 67% |
| 2021-22 | 62% | 56% | 58% |

| Breaches | MAR | APR | MAY |
|---|---|---|---|
| 2019-20 | 919 | 498 | 680 |
| 2020-21 | 1,687 | 1,766 | 1,673 |
| 2021-22 | 1,693 | 1,986 | 2,108 |

| ED Volumes | MAR | APR | MAY |
|---|---|---|---|
| 2019-20 | 4,285 | 3,211 | 4,005 |
| 2020-21 | 5,012 | 4,798 | 5,074 |
| 2021-22 | 4,473 | 4,546 | 5,000 |

**Management Comment**

- CCDHB continues to face a significant capacity issue as demonstrated by the consistently high occupancy rate and the bed blockage experienced across hospital flow as a consequence. Bed occupancy continues to be one of the most significant contributing factor to SSiED compliance. The occupancy percentage utilisation for May 2022 was 94%.
- According to Capplan the number of available beds in May 2022 (365) which is higher than May 2021 (347) and can be attributed to more beds being available at Kenepuru.
- The average number of daily presentations in May 2022 was 177, this is the same as the average of 177 presentations per day in May 2021.
- The average bed days utilised by acute admissions in May 2022 (251) has increased by 16 bed per day compared to May 2021 (235).
- In view of addressing bed blocks, the Complex Care Forum is working closely with Clinicians to facilitate supported discharge at an early stage in order to vacate beds and facilitate flow of patients from ED.
- Clinicians are encouraged to do early rounding and nurse-led discharge processes are being reinforced.
- Charge Nurse Managers from General Medicine are still meeting on a daily basis at 8am in view of assessing planned discharges and ensuring that a proper follow up is in place with the Medical Team.
- Our Medical Assessment and Planning Unit (MAPU) is working in partnership with our Emergency Department to drive the flow of patients from ED to MAPU through early assessment and referral.
- During the month of May 2022 there has been some progress on the construction of the new Minor Care Zone which in the future will free up 6 bed space in EDOU. This work is inextricably linked to other ongoing work to assess and address overall hospital capacity.

# Planned Care – Inpatient Surgical Discharges/Minor Procedures

**What is this measure?**

- There is a requirement that DHBs manage the Planned Care programme through the monitoring framework in line with the principles of equity, access, quality, timeliness and experience. Planned Care is measured by a performance framework which includes ESPIs (Elective Services Performance Indicators).

**Why is this important?**

- Providing timely access to Planned Care services is important to improve the health of our population and maintain public confidence in the health system.

**How are we performing?**

- Year to date we are reporting 1,678 discharges behind our target of 9,814.
- Total Planned care results for May month end show us 165 adverse to the 938 target.
- Our in-house elective surgical PUC results show 32 discharges adverse to the planned 549,
- Outsourcing 115 adverse to the planned 154. Elective non-surgical PUC adverse 7 to the planned 14, arranged surgical PUC adverse 9 ahead of month plan and arranged non-surgical 1 behind for May.
- IDF outflow results are 19 adverse to the planned 91 for May.
- Minor procedures in-house reporting 67 over the planned 506 for May.

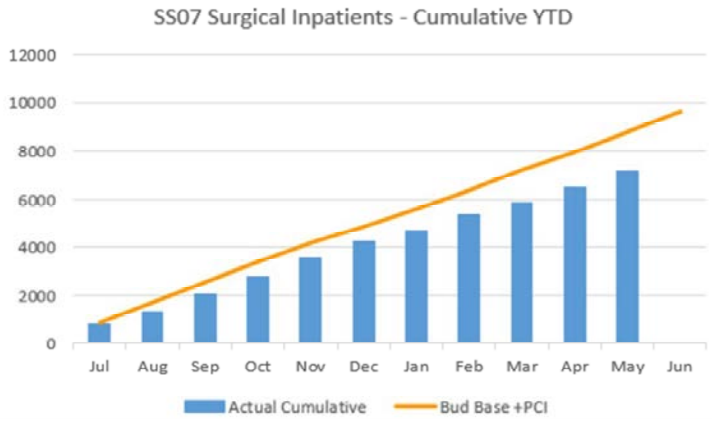
**What is driving performance?**

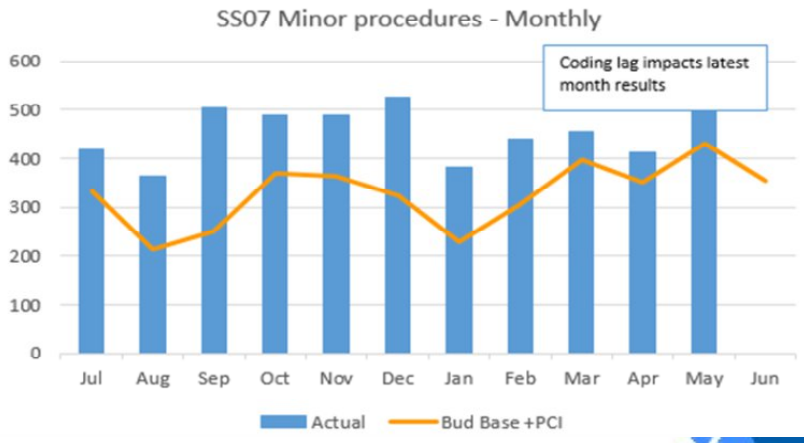
- May in-house results were in line with the previous months results, however not enough to improve our overall position.
- Our private providers are not able to provide the usual volume due to their own staffing restraints currently.

**Management Comment**

- During May we continue to monitor staffing and theatre capacity on a daily basis to ensure we use all resources available to us. Panel agreements with our private providers will be extended therefore giving them more certainty of volume, this will enable them to increase capacity with confidence of work available to them. We anticipate with this change to increase our outsource volume.

- SMOs continue to be involved with planning surgery based on those with greatest clinical urgency and long waiting times.



# Planned Care – Waiting Times

**What is this measure?**

- ESPI 2 – patients waiting longer than four months for their first specialist assessment.
- ESPI 2 will be Green if 0 patients, Yellow if greater than 0 patients and less than or equal to 10 patients or less than 0.39%, and Red if 0.4% or higher.

**Why is this important?**

- The goal is to assess all patients accepted for an FSA within 4 months. This improves the health outcome and ensures patients receive advice or are referred for treatment in a timely way.

**How are we performing?**

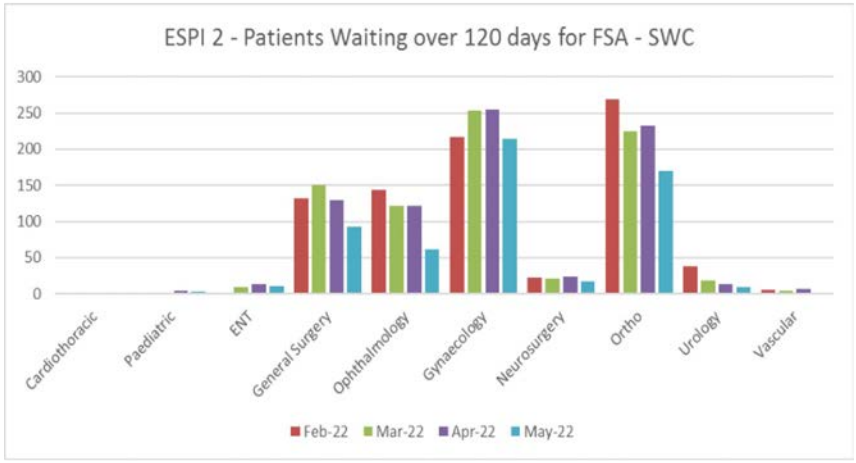
- May EPSI 2 results shows an improvement on the April results, General Surgery, Ophthalmology and Orthopaedics showing the greatest improvements. All specialties will work on addressing the back log waiting and longest waiting patients.

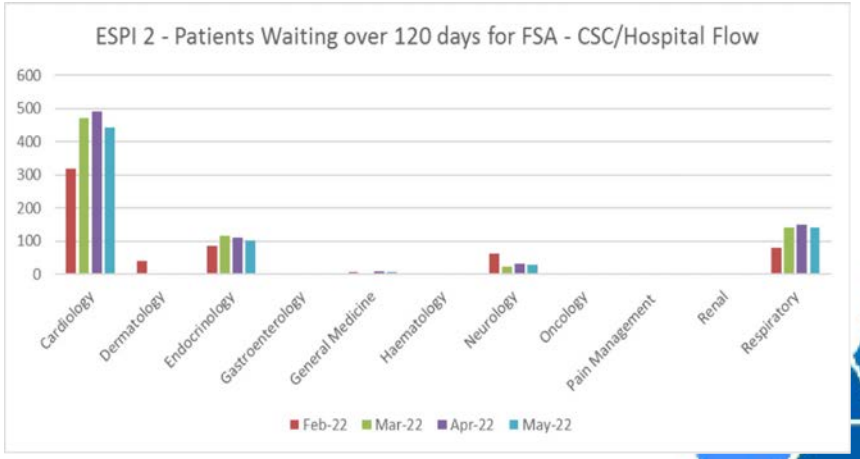
**What is driving performance?**

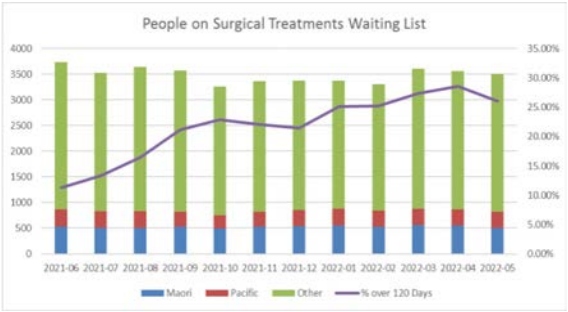
- While we have reinstated face to face consultations for FSA's there is still a back log to address.

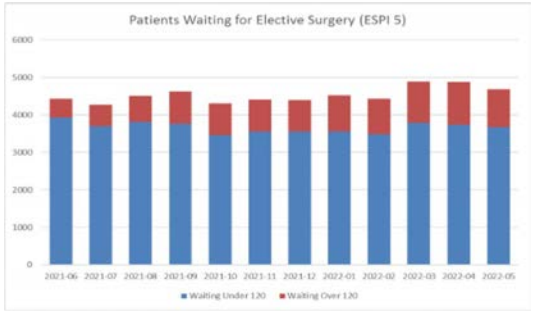
**Management Comment**

- We continue to prioritisation those with clinical urgency and encourage face to face consultations as well as support zoom and telephone call contact if that is what the patient prefers in this COVID climate.



# Planned Care – Waiting Times

**What is this measure?**

- ESPI 5 - patients given a commitment to treat but not treated within four months.
- ESPI 5 will be Green if 0 patients, Yellow if greater than 0 patients and less than or equal to 11 patients or less than 0.99%, and Red if 1% or higher.

**Why is this important?**

- Providing surgical procedures within 4 months from the FSA improves the health outcome and lifestyle to our population.

**How are we performing?**

- CCDHB performance in ESPI 5 is shown in the table below. We have been non-compliant at an organisational level since January 2019. May is reporting 842 non-compliant, an improvement from the April result. General Surgery making the most headway into their non-compliant volume this month. We continue to be experiencing staffing and capacity shortages into June.

- Currently Maori are experiencing slightly longer delays in accessing treatment compared to Pacifica and others. We are currently investigating long waiting patients to identify reasons for this and ways to mitigate any barriers to accessing treatment.

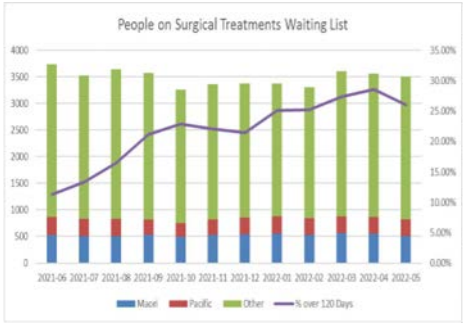
**What is driving performance?**

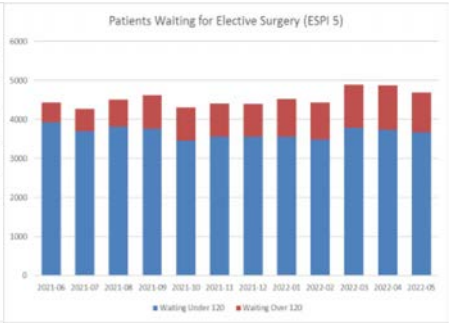
- Cancellation of theatres session is the main driver of our results, staff illness on wards and in theatres continue to the driving factor in our performance.

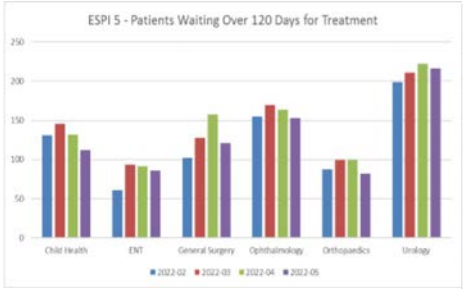
**Management Comment**

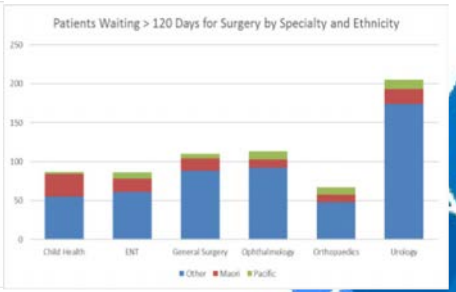
- Currently we are managing our session on a daily basis, treating those most clinically urgent and long waiting, while ensuring those having been deferred are offered the next available date.

| ESPI 5 monitoring 21/22 | July | Aug | Sept | Oct | Nov | Dec | Jan | Feb | Mar | Apr |
|---|---|---|---|---|---|---|---|---|---|---|
| **Organisation wide** | **-427** | **-550** | **-693** | **-700** | **-685** | **-678** | **-793** | **-776** | **-910** | **-958** |
| Cardiology | -4 | -4 | -8 | -5 | -5 | -4 | -6 | -6 | -6 | -6 |
| Cardiothoracic | -7 | -12 | -22 | -23 | -31 | -35 | -34 | -37 | -41 | -45 |
| Dental | -15 | -29 | -44 | -39 | -37 | -36 | -27 | -31 | -57 | -53 |
| ENT | -34 | -40 | -52 | -56 | -49 | -44 | -62 | -56 | -87 | -70 |
| General Surgery | -34 | -42 | -47 | -56 | -52 | -53 | -74 | -89 | -115 | -140 |
| Gynaecology | -16 | -22 | -25 | -14 | -13 | -7 | -11 | -12 | -27 | -34 |
| Neurosurgery | -4 | -5 | -12 | -13 | -9 | -15 | -29 | -20 | -27 | -34 |
| Ophthalmology | -95 | -134 | -155 | -125 | -103 | -82 | -99 | -97 | -113 | -109 |
| Orthopaedics | -65 | -89 | -98 | -96 | -72 | -57 | -64 | -54 | -68 | -75 |
| Paediatric Surgical | -24 | -28 | -39 | -64 | -85 | -99 | -93 | -100 | -107 | -97 |
| Urology | -120 | -129 | -164 | -166 | -173 | -175 | -202 | -183 | -193 | -205 |
| Vascular Surgery | -9 | -16 | -27 | -43 | -56 | -71 | -92 | -91 | -89 | -90 |



# Coronary

## Coronary Angiography Waiting Times

**What is this measure?**

- DHBs are required to collect, measure and monitor how long people are waiting for Coronary angiography – 95% of accepted referrals for elective coronary angiography will receive their procedure within 3 months (90 days)

**Why is this important?**

- Diagnostics are a vital step in the pathway to access appropriate treatment. Improving waiting times for diagnostics can reduce delays to a patient's episode of care and improve DHB demand and capacity management.

**How are we performing?**

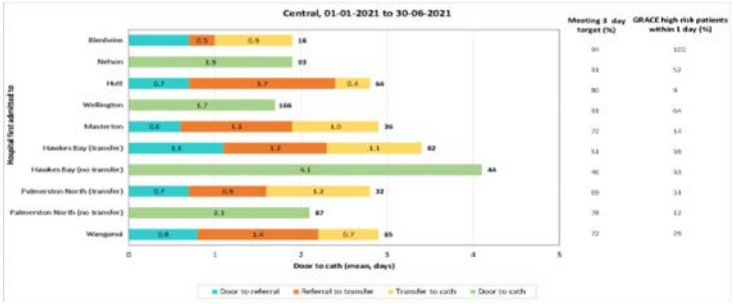
- The proportion of patients waiting less than 90 days for angiography is 96.6% this month.

**What is driving performance?**

- 8 patients did not meet target this month. Acute demand, and clinical reasons for delay were main contributors to these patients not meeting the target this month

**Management Comment**

- The impact of insufficient Nursing staff and cancellation of elective procedures as a result will impact the ability to meet targets over the next month




## Acute Coronary Syndrome

*Key clinical quality improvement indicators*

**What is this measure?**

- We are required to report agreed indicators from ANZACS-QI data for acute heart services.

**Why is this important?**

- Long-term conditions comprise the major health burden for New Zealand now and into the foreseeable future. This group of conditions is the leading cause of morbidity in New Zealand, and disproportionately affects Maori and Pacific peoples and people who experience mental illness and addiction. As the population ages and lifestyles change these conditions are likely to increase significantly. Cardiovascular disease, including heart attacks and strokes, are substantially preventable with lifestyle advice and treatment for those at moderate or higher risk.

**How are we performing?**

Door to cath. <= 3 days April results (Target is ≥70%):

| | |
|---|---|
| National Performance | 69.6% (524/753) |
| Central Region | 70.9% (117/165) |
| CCDHB | 79.1% (34/43) |
| Hawkes Bay | 68.4% (13/19) |
| Hutt Valley | 42.9% (6/14) |
| Mid Central | 67.5% (27/40) |

As a region and CCDHB achieved the target this month. Hawkes Bay, Mid Central did not meet target, with Hutt Valley DHB being significantly below target

**What is driving performance?**

- Achievement of the target differs for each centre. The table below provides a breakdown (Please note this data is updated 6 monthly). The referral to transfer is directly influenced by CCDHB, ultimately this relates to access to beds. Elective cases requiring beds are regularly deferred to meet the acute demand. Demand for acute beds has been consistently high and will only increase over the winter months. Other factors include regional decision making timeframes, and timing of presentation.

**Management Comment**

- Door to Cath results for the month are down for regional transfers, as explained above. Angio wait time are still on track however with recent deferrals of elective procedures due to acute demand and staffing, Angio wait lists have been increasing, and with this the risk of targets being missed. Beds are still an issue however will not be a solution without adequate nursing staffing which is an acute issue currently.

# MRI and CT Waiting Times

**What is this measure?**

- A percentage measure that shows the proportion of CT or MRI outpatient referrals that are scanned within of a 42-day time period. The 'clock' begins from the date Radiology receives the referral for imaging.

**Why is this important?**

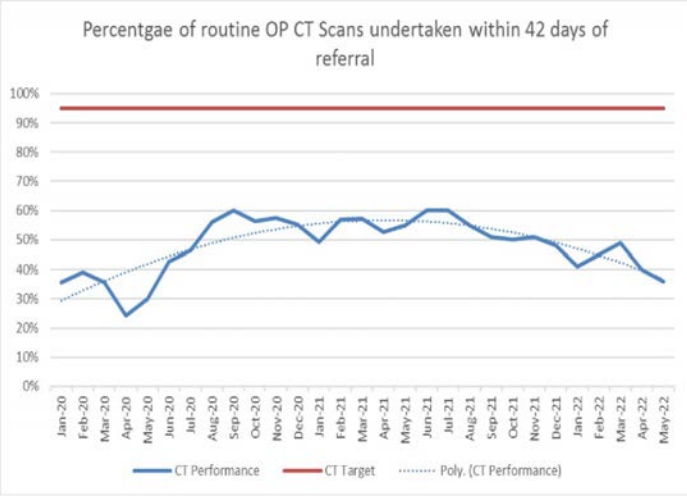
- Delayed diagnosis can lead to poorer health outcomes as a patient's condition may deteriorate while waiting. The period of 6 weeks (i.e. 42 days) is generally accepted as the reasonable clinical timeframe to receive imaging results for non-acute outpatient referrals.

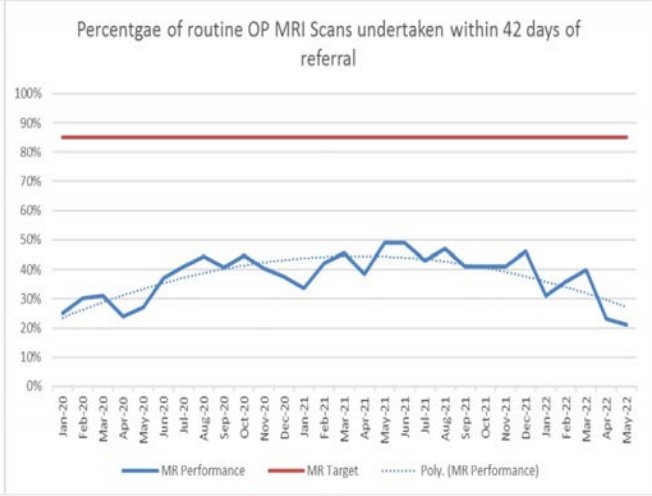
**How are we performing?**

- Waiting times for CT and MRI remain high as a result of historical insufficient capacity to meet demand. Subsequently, the percentage measure is low and has been for a long time. The combination of high vacancy in the technical team (over 20%) through 2021, the effect of the pandemic response on Radiology services and increasing Inpatient/ED and outpatient demand leaves performance static for MRI and a slow drop in performance for CT.

**What is driving Performance?**

- Long-term growth in demand for Radiology services has not been matched with Radiology capacity (internal resource or outsourcing capacity).




**Management Comment**

- *Radiology has undergone a significant upgrade to its ICT management system onto the regional RIS (Radiology Information system). Unfortunately the mapping for business reporting is not yet accurate so while the above graphs are updated, they may have inaccuracies and should be seen as indicative* . In the medium term this upgrade should provide opportunities for improvement as it allows the outsourcing of clinical reporting (Radiologist reporting) to contracted services. This will be explored after the new system is reliably performing business as usual.
- The service is further impacted on performance by:
  - COVID-positive inpatients require more time and staff per procedure, and can result in a room being stood down for a period.
  - The pandemic also resulted in higher staff illness and isolation requirements and therefore reduced staffing levels across all services, not just Radiology. Our service has also experienced high vacancies – particularly among Medical Imaging Technologists (MITs)
  - Steadily increasing ED and IP demand for both modalities (CT & MRI) further squeezes the outpatient capacity.
- With current waiting times the service continues to prioritise based on clinical urgency and process images for inpatient and ED patients within expected timeframes in order to maximise inpatient flow.
- We have an outsourcing budget of $1.2 million per year – which will increase to around $3.3 million following recent Ministry of Health approval of our plan to fund additional access to planned care services. In order to maintain current wait times in the face of increasing demand and complexity of need, our projected outsourcing spend for this financial year is around $5 million. This over and above investment part of the DHB's commitment to the importance of Radiology and diagnostic services by utilising discretion to use budget and prioritise service delivery across all our outsourcing budgets.

# Faster Cancer Treatment

**What is this measure?**

a) 62 day target: 90% of patients should receive their first cancer treatment (or other management) within 62 days of being referred with a high suspicion of cancer and a need to be seen within two weeks.

b) 31 day indicator: The maximum length of time a patient should have to wait from a date of decision to treat, to receive their first treatment (or other management) for cancer, is 31 days. Target compliance is 85% of patients start within 31 days.

**Why is this important?**

- The target aims to support improvements in access and patient experience through the cancer pathway, including the period of investigations before treatment begins. It supports DHBs to monitor the whole cancer pathway from referral to first treatment to identify any bottlenecks in the system and opportunities for improvement that will benefit all cancer patients. Prompt investigation, diagnosis and treatment is more likely to ensure better outcomes for cancer patients, and an assurance about the length of waiting time can reduce the stress on patients and families at a difficult time.

**How are we performing?**

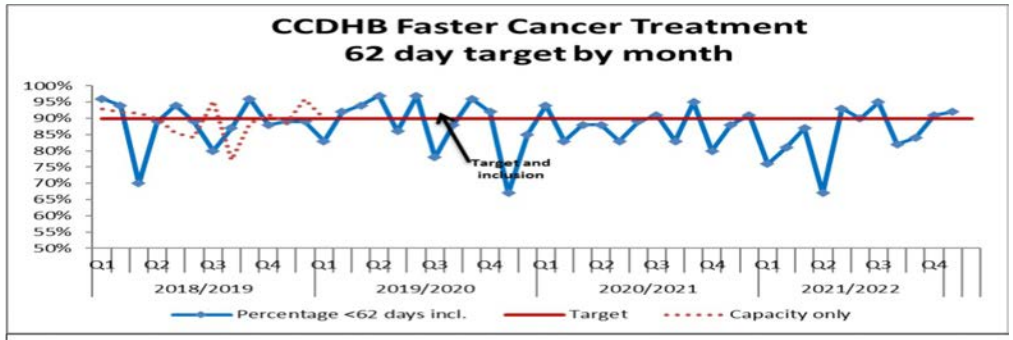
- CCDHB is compliant with the 62 day target for May at 92%, meeting the aim of 90% of patients receiving their first cancer treatment within 62 days of being referred with a high suspicion of cancer.

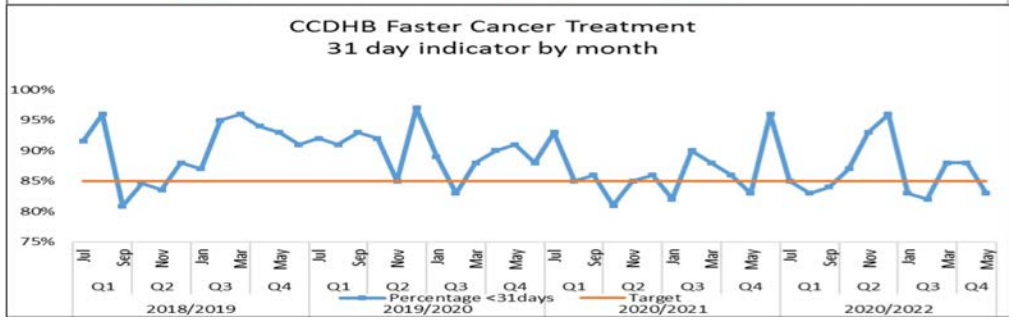
- CCDHB is non-compliant with the 31 day indicator for May at 83% which is just below the aim of 85% of patients commencing treatment within 31 days from decision to treat.

**What is driving performance?**

- There was one capacity breach for the 62 day target which was from a surgical delay for diagnostics. The breach was in the urology tumour stream. Two Māori and two Pacifica patients were covered by the 62 day target. There were no Māori breaches and one Pacifica breach. Note, acute presentations are excluded from the 62 day target.

- Of the ten breaches for the 31 day indicator, five were due to capacity reasons all related to delay in access to surgery. 31 day indicator compliance was 87.5% (1/8) for Māori, 100% for Pacifica and 81.3% (39/48) for other ethnicities. Average delay for all 31 day capacity breach patients was 46 days (32-83 range days), which was higher than the previous month (36 days).




**Management Comment**

Acute demand and staffing vacancies continue to cause delays in access to FSA, diagnostic services (imaging & pathology) and surgical services. Covid-19 related staff absences continues to have an impact on staff resource. All May capacity breaches had surgery as first treatment. Surgery wait times remain affected by staffing vacancies, illness, leave and acute demand.

Work underway includes:

- •Review of the Skin lesion referral pathway for CCDHB domiciled patients.
- •Discussions with Head & Neck and Gynaecological tumour streams regarding their triage systems for identifying patients with a HSCa.
- •Quality improvement work for Sarcoma tumour stream regarding identification of HSCa to FCT.
- •Continued work on the diagnosis via ED presentation pathway improvement project.

The Cancer Nurse Coordinators have vacancy in the team, causing challenges with timely tracking and finalisation of patient data. The largely manual process for prospectively tracking patients can make it difficult to intervene in a timely manner.

For April, the number of patients treated in May were lower than expected and this may be a result of having less capacity to complete tracking of prospective patients than usual. This month the number of breaches has remained at 1 for the 62 day target but access to surgery is still a major issue for compliance in the 31 day indicator.

# Colonoscopy

**What is this measure?**

Diagnostic colonoscopy

a) 90% of people accepted for an urgent diagnostic colonoscopy will receive their procedure within two weeks (14 calendar days, inclusive), 100% within 30 days.

b) 70% of people accepted for a non-urgent diagnostic colonoscopy will receive their procedure within six weeks (42 days), 100% within 90 days.

Surveillance colonoscopy

70% of people waiting for a surveillance colonoscopy will wait no longer than twelve weeks (84 days) beyond the planned date, 100% within 120 days.

**Why is this important?**

Diagnostics are a vital step in the pathway to access appropriate treatment. Improving waiting times for diagnostics can reduce delays to a patient's episode of care and improve DHB demand and capacity management. Improving access to diagnostics will improve patient outcomes, specifically Cancer pathways will be shortened with better access to colonoscopy.

**How are we performing?**

- CCDHB failed to meet the Ministry of Health target for urgent colonoscopies with a performance of 80% (target 90%) although this equated to 1 patient. This was an improvement on the 87.5% achieved in April 2022. For diagnostic waits, we achieved 55.8% (target 70%) in May, which was a slight improvement on the April performance of 55.1%

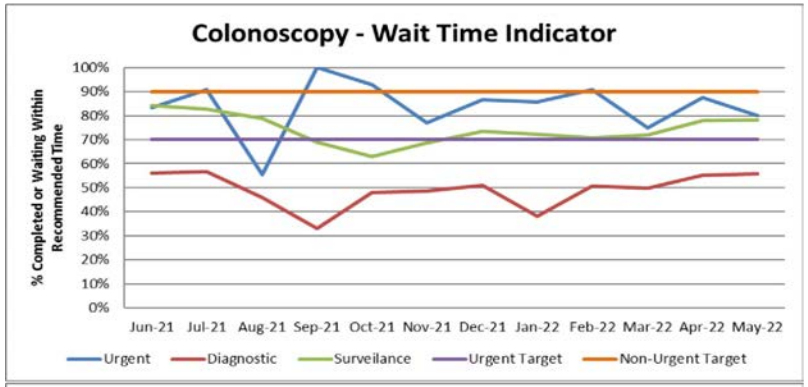
- We met the Ministry of Health target for surveillance achieving 78.2% (target 70%). This is a marginal increase against the April performance of 78%.

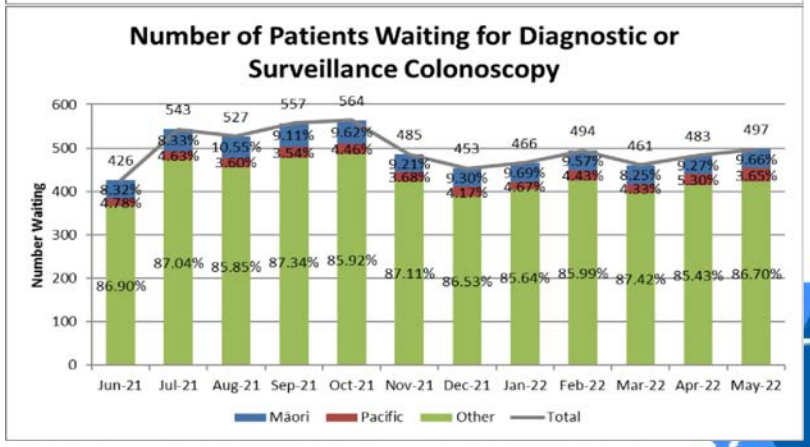
**What is driving performance?**

- While in-house performance has remained consistent, the cessation of outsourcing is driving up the number of patients waiting for treatment beyond target – this will be reviewed.

**Management Comment**

The May performance shows a marginal improvement against the diagnostic and surveillance targets, but a slight reduction in the urgent performance (1 patient).



# Maternity and Neonatal Intensive Care services

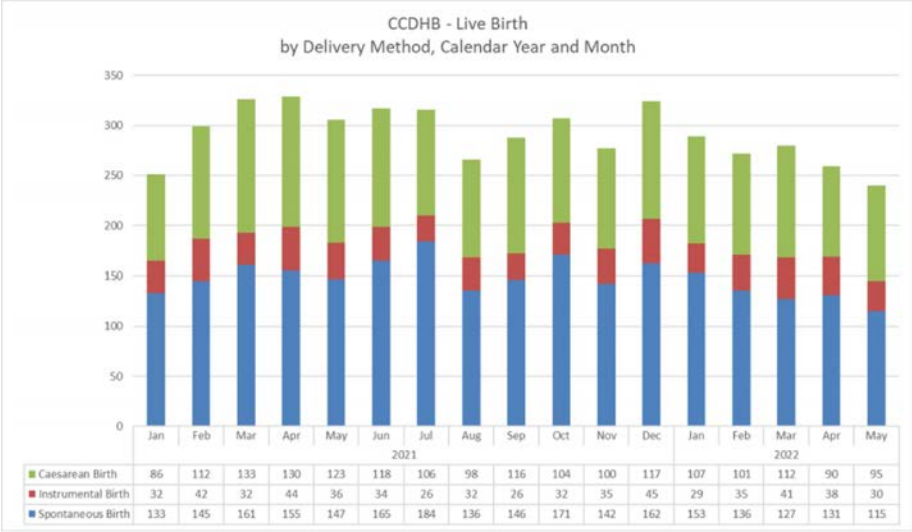
## Maternity

### What is the issue?

- The regions maternity units are experiencing increasing pressure due to high demand for inpatient services and workforce challenges.
- The Wellington Regional Hospital Maternity and Delivery Suite and continues to experience a high acuity and bed utilisation. Also impacted by this trend is our Neonatal Intensive Care service.

### WHS Management Comment

- May vacancy rate for 4NM and WRH Birthing Suite continues to sit high, currently at 40.5 %. Staffing as a result COVID alongside the vacancy rate is impacting our ability to provide safe care.
- The service is working with HVDHB on recruitment and retention packages for midwives. We are pleased to confirm that this has been implemented.




| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Caesarean Birth | 86 | 112 | 133 | 130 | 123 | 118 | 106 | 98 | 116 | 104 | 100 | 117 | 107 | 101 | 112 | 90 | 95 |
| Instrumental Birth | 32 | 42 | 32 | 44 | 36 | 34 | 26 | 32 | 26 | 32 | 35 | 45 | 29 | 35 | 41 | 38 | 30 |
| Spontaneous Birth | 133 | 145 | 161 | 155 | 147 | 165 | 184 | 136 | 146 | 171 | 142 | 162 | 153 | 136 | 127 | 131 | 115 |

## Neonatal Intensive Care Unit

### What is the measure?

To provide:

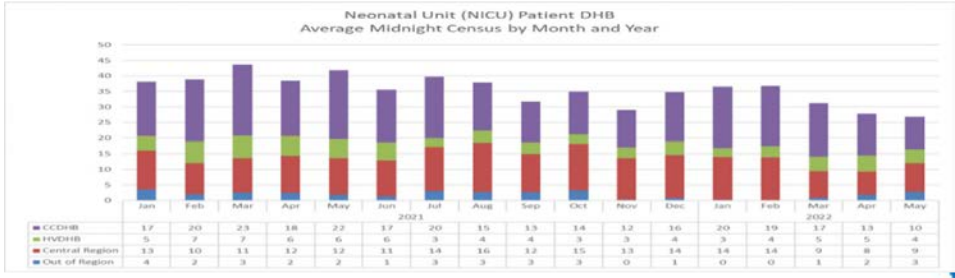
- •A culturally and clinically safe 24/7 acute admitting service for infants from 23 weeks' gestation. Care is provided primarily for infants who are premature; those that require surgical intervention; perinatal intervention and support; and infants with congenital or metabolic abnormalities. These infants are referred from WHS delivery suite, CHS or regionally, and at times, nationally. Ideally the service would be provided within the resourced 36 beds.
- •An infant retrieval service to the central region. Infants are referred and transferred for care either in utero or by NICU.

### What is the issue?

- •Lower occupancy over the last month.
- •In May NICU saw a decrease in average occupancy of 26 down from 27 in April and 37 in February.

### How are we performing?

- •CCDM RN staffing uplift of 20 RNs is being recruited into, however resignations have impacted on the ability to do this.
- •Current low occupancy if it continues will impact5 CCDM calculations for the coming year.
- •NICU is safely managing the physical wellbeing of infants and families.




| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CCDHB | 17 | 20 | 23 | 18 | 22 | 17 | 20 | 15 | 13 | 14 | 12 | 16 | 20 | 19 | 17 | 13 | 10 |
| HVDHB | 5 | 7 | 7 | 6 | 6 | 6 | 3 | 4 | 4 | 3 | 3 | 4 | 3 | 4 | 5 | 5 | 4 |
| Central Region | 13 | 10 | 11 | 12 | 12 | 11 | 14 | 16 | 12 | 15 | 13 | 14 | 14 | 14 | 9 | 8 | 9 |
| Out of Region | 4 | 2 | 3 | 2 | 2 | 1 | 3 | 3 | 3 | 3 | 0 | 1 | 0 | 0 | 1 | 2 | 3 |

# Section 2.3

## Mental Health Addiction & Intellectual Disability

# Executive Summary – Mental Health Performance

- The DHB hospital performance is under pressure in many of the key areas measured and reported on in this report. Both Acute Mental Health Inpatient Units in CCDHB and HVDHB are managing high occupancy.
- There are initiatives underway to intervene in mental health crises early and reduce pressure on ED presentations and wait times. The number of Mental Health (MH) Nurses in CCDHB and HVDHB Emergency Departments will be increased. A pilot is underway for the Co Response Team and commenced early March 2020 where MH Nurses will team up with Police and Ambulance as the first responders to 111 calls. A General Practitioners (GPs) Liaison team is to be established and this team will work alongside GPs to address mental health issues at the primary level.
- Focus for the next 12 months will be on addressing equity which will include increasing the Māori and Pacific mental health and addictions workforce, improving access for Māori and Pacific to services and reducing the number of Māori under the CTO Sec 29.
- The toward Zero seclusion project is fully underway with the aim of reducing the incidence of seclusion particularly for Māori.

# Mental Health, Addiction and Intellectual Disability Service - Monthly Performance Report (1 of 2)

| Indicator | 2020/21 Target | 2021-May | 2021-Jun | 2021-Jul | 2021-Aug | 2021-Sep | 2021-Oct | 2021-Nov | 2021-Dec | 2022-Jan | 2022-Feb | 2022-Mar | 2022-Apr | 2022-May |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Access Rate | 3% | 3.9% | | 3.7% | | | 3.7% | | | 3.7% | | | | |
| Shorter waits for non-urgent Mental Health services <= 3 weeks (Younger Persons Community & Addictions Sector) | 80% | 76.4% | 79.9% | 65.1% | 71.9% | 57.4% | 50.0% | 35.1% | 22.5% | 28.0% | 36.0% | 36.0% | | |
| Shorter waits for non-urgent Mental Health services <= 3 weeks (Adult Community & Addictions Sector) | 80% | 52.6% | 61.8% | 67.7% | 56.9% | 54.9% | 49.8% | 72.2% | 47.7% | 59.1% | 68.7% | 70.3% | | |
| Shorter waits for non-urgent Mental Health services <= 8 weeks (Younger Persons Community & Addictions Sector) | 95% | 93.1% | 93.8% | 81.5% | 93.9% | 82.1% | 88.7% | 70.6% | 49.6% | 78.8% | 78.1% | 83.3% | | |
| Shorter waits for non-urgent Mental Health services <= 8 weeks (Adult Community & Addictions Sector) | 95% | 94.6% | 77.9% | 82.6% | 89.5% | 86.2% | 82.5% | 84.2% | 73.3% | 86.8% | 87.5% | 93.2% | | |
| Community service users seen in person in last 90 days | 95% | 80.5% | 82.9% | 82.4% | 78.7% | 76.7% | 75.9% | 79.2% | 80.8% | 76.5% | 74.7% | 75.0% | 76.1% | 75.9% |
| Community DNA rate | <= 5% | 9.2% | 8.8% | 8.8% | 8.0% | 7.9% | 8.1% | 8.0% | 7.8% | 7.2% | 8.3% | 8.7% | 8.4% | 8.8% |
| Maori under Section 29 CTO (Rate per 100,000 population) 2019/20 Target: 10% reduction of rate of previous year (405) | | 458 | | 472 | | | 478 | | | | | | | |
| Wellness Plan Compliance | 95% | 48.6% | | 47.4% | | | 43.5% | | | | | | | |
| Wellness Plans - Acceptable Quality | 95% | 71.5% | | 78.8% | | | 69.1% | | | | | | | |
| Community Services Transition (Service Exit) Plan Compliance | 95% | 54.3% | | 56.9% | | | 57.6% | | | | | | | |
| Community Services Transition (Service Exit) Plans - Acceptable Quality | 95% | 67.5% | | 71.0% | | | 69.5% | | | | | | | |

| Adverse Performance requiring immediate corrective Action | Performance is below target, corrective action may be required | Performance on or better than Target / Plan |
|---|---|---|

# Mental Health, Addiction and Intellectual Disability Service - Monthly Performance Report (2 of 2)

| Indicator | 2020/21 Target | 2021-May | 2021-Jun | 2021-Jul | 2021-Aug | 2021-Sep | 2021-Oct | 2021-Nov | 2021-Dec | 2022-Jan | 2022-Feb | 2022-Mar | 2022-Apr | 2022-May |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pre-Admission Community Care | 75% | 75.6% | 79.1% | 75.7% | 75.0% | 72.0% | 70.2% | 62.0% | 60.8% | 66.7% | 63.6% | 62.7% | 65.9% | 65.0% |
| Post-Discharge Community Care | 90% | 75.6% | 79.1% | 75.7% | 75.0% | 72.0% | 70.2% | 62.0% | 60.8% | 66.7% | 62.0% | 77.2% | 60.0% | 61.5% |
| Acute Inpatient Readmission Rate (28 Day) | <= 10% | 5.3% | 9.6% | 3.0% | 11.0% | 9.5% | 5.3% | 10.0% | 4.3% | 3.8% | 7.8% | 10.0% | 10.0% | 2.7% |
| Inpatient Services Transition Plan | 95% | 77.8% | | 76.5% | | | 74.8% | | | | | | | |
| Inpatient Services Transition Plan - Acceptable Quality | 95% | 83.3% | | 86.3% | | | 68.4% | | | | | | | |
| Clinically Safe Acute Inpatient Occupancy Rate Te Whare Ahuru | 90% | 109.4% | 100.7% | 102.4% | 102.8% | 92.4% | 105.9% | 91.8% | 89.4% | 94.1% | 84.4% | 92.7% | 101.4% | 102.8% |
| Clinically Safe Acute Inpatient Occupancy Rate Te Whare O Matairangi | 90% | 107.6% | 104.6% | 105.5% | 111.5% | 107.2% | 108.2% | 99.4% | 99.8% | 99.9% | 88.3% | 85.0% | 90.3% | 97.2% |
| Seclusion Hours | Aspirational goal of zero seclusion by 31 December 2020 | 289 | 226 | 296 | 684 | 454 | 178 | 253 | 79 | 48 | 253 | 325 | 406 | 672 |
| Seclusion Hours - Māori | | 59 | 145 | 171 | 623 | 228 | 22 | 208 | 16 | 10 | 133 | 190 | 108 | 209 |
| Seclusion Hours - Pacific Peoples | | 0 | 0 | 18 | 20 | 8 | 95 | 34 | 6 | 29 | 63 | 35 | 22 | 318 |
| Seclusion Events | | 16 | 14 | 10 | 15 | 28 | 12 | 13 | 10 | 8 | 17 | 20 | 11 | 30 |
| Seclusion Events - Māori | | 7 | 8 | 5 | 10 | 14 | 3 | 9 | 2 | 3 | 9 | 11 | 2 | 12 |
| Seclusion Events - Pacific Peoples | | 0 | 0 | 1 | 2 | 1 | 6 | 3 | 1 | 3 | 1 | 2 | 3 | 11 |

**Adverse Performance requiring immediate corrective Action** | **Performance is below target, corrective action may be required** | **Performance on or better than Target / Plan**

# Section 3

## Financial Performance and Sustainability

# Executive Summary Financial Performance and Position

- There is ongoing significant cost due to the COVID-19 response into the 2021/22 fiscal year. The DHB is being reimbursed for the large portion of the DHB COVID-19 response costs in 2021/22. The Ministry have asked DHBs to separately report unfunded net COVID-19 impacts for 2021/22.

- For the eleven month's to 31 May 2022 the overall DHB year to date result, including COVID-19 costs is $21.1m surplus, this is $5.1m favourable to the agreed budget surplus of $16m.

- Additional net COVID-19 related expenditure above funding, year to date is $3.7m related to COVID Sick Leave.

- The DHB has submitted an Annual baseline budget of $7m surplus, excluding the $60m Donation for the Children's Hospital the underlying deficit is ($53m).

- Capital Expenditure including equity funded capital projects was $79.4m year to date.

- The DHB has a negative cash Balance at month-end of ($629k) and a positive "Special Funds" of $13.8m, net $13.2m. It should be noted that there are certain financial impacts of the COVID-19 response that remains unfunded by the Ministry at this time and this has a cash impact on the DHB. Overall the DHB cash balance is better than budget due to additional revenue and delayed capital expenditure. The deficit support of $46.5m signalled in the 2021/22 Annual Plan will be requested for the 3rd quarter of the year.

# COVID-19 Revenue and costs

| Full Last Year | | Capital & Coast DHB Operating Results - $000s | Part Year to Date | | |
|---|---|---|---|---|---|
| COVID-19 change from Trend - Provider | COVID-19 change from Trend - Funder | YTD May 2022 | COVID-19 change from Trend - Provider | COVID-19 change from Trend - Funder | COVID-19 change from MOH Unfunded |
| | | | | | |
| | (31,026) | Devolved MoH Revenue | | (106,229) | |
| | | Non-Devolved MoH Revenue | | | |
| 693 | | Other Revenue | 0 | | 197 |
| | | IDF Inflow | | | 1,179 |
| | | Inter DHB Provider Revenue | | | |
| **693** | **(31,026)** | **Total Revenue** | **0** | **(106,229)** | **1,376** |
| | | | | | |
| | | *Personnel* | | | |
| (6,336) | | Medical | (191) | | (653) |
| (4,360) | | Nursing | (3,241) | | (2,053) |
| | | Allied Health | (628) | | (468) |
| | | Support | (84) | | (83) |
| | | Management & Administration | (5,223) | | (424) |
| **(10,696)** | **0** | **Total Employee Cost** | **(9,367)** | **0** | **(3,682)** |
| | | | | | |
| | | *Outsourced Personnel* | | | |
| (88) | | Medical | (406) | | |
| | | Nursing | 0 | | |
| | | Allied Health | 0 | | |
| | | Support | (2) | | |
| | | Management & Administration | (896) | | |
| **(88)** | **0** | **Total Outsourced Personnel Cost** | **(1,304)** | **0** | **0** |
| | | | | | |
| (5,088) | | Treatment related costs - Clinical Supp | (1,192) | | |
| (564) | | Treatment related costs - Outsourced | (562) | | |
| (2,028) | | Non Treatment Related Costs | (7,664) | | |
| | | IDF Outflow | | | |
| | (15,828) | Other External Provider Costs (SIP) | | (86,140) | |
| | | Interest Depreciation & Capital Charge | | | |
| | | Recharging | | | |
| **(7,680)** | **(15,828)** | **Total Other Expenditure** | **(9,418)** | **(86,140)** | **0** |
| **(18,464)** | **(15,828)** | **Total Expenditure** | **(20,089)** | **(86,140)** | **(3,682)** |
| | | | | | |
| **19,157** | **(15,198)** | **Net result** | **20,089** | **(20,089)** | **5,058** |

- The year to date financial position includes $109.9m of additional costs in relation to COVID-19 including $3.7m of unfunded COVID sick related leave.
- Revenue of $106.2m has been received to fund additional costs for community providers however this has not been sufficient to over all the costs. YTD COVID has resulted in a ($1.4m) loss in revenue.
- COVID-19 costs are spread across personnel, clinical supplies, outsourced treatment and infrastructure and non-clinical costs.

# CCDHB Operating Position – May 2022

| Capital & Coast DHB Operating Results - $000s | Year to Date | | | | | Annual | | | Forecast |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Variance | | | | | |
| YTD May 2022 | Actual | Budget | Last year | Actual vs Budget | Actual vs Last year | Annual Budget | Last year | Last year exc COVID | 21/22 YTD/adujust remaing Forecast |
| Devolved MoH Revenue | 1,031,999 | 896,147 | 878,799 | 135,851 | 153,200 | 977,615 | 962,513 | 962,513 | 1,123,466 |
| Non-Devolved MoH Revenue | 43,007 | 44,403 | 40,547 | (1,397) | 2,460 | 48,353 | 42,517 | 42,517 | 50,556 |
| Other Revenue | 113,806 | 93,983 | 49,568 | 19,823 | 64,238 | 97,051 | 52,921 | 52,921 | 117,774 |
| IDF Inflow | 284,488 | 286,269 | 234,074 | (1,781) | 50,413 | 312,294 | 258,694 | 258,694 | 313,012 |
| Inter DHB Provider Revenue | 17,685 | 17,012 | 38,253 | 674 | (20,568) | 18,577 | 42,120 | 42,120 | 19,350 |
| **Total Revenue** | **1,490,985** | **1,337,815** | **1,241,241** | **153,170** | **249,743** | **1,453,890** | **1,358,764** | **1,358,764** | **1,624,160** |
| *Personnel* | | | | | | | | | |
| Medical | 188,349 | 181,552 | 174,470 | (6,797) | (13,879) | 198,577 | 191,666 | 191,666 | 205,374 |
| Nursing | 279,066 | 241,272 | 235,064 | (37,795) | (44,003) | 264,317 | 256,973 | 256,973 | 304,576 |
| Allied Health | 70,855 | 74,118 | 69,101 | 3,263 | (1,754) | 81,112 | 74,244 | 74,244 | 77,349 |
| Support | 11,092 | 10,719 | 9,895 | (373) | (1,197) | 11,772 | 10,747 | 10,747 | 12,144 |
| Management & Administration | 86,424 | 86,746 | 77,871 | 322 | (8,553) | 95,075 | 83,274 | 83,274 | 93,752 |
| **Total Employee Cost** | **635,786** | **594,407** | **566,400** | **(41,379)** | **(69,386)** | **650,852** | **616,904** | **616,904** | **693,196** |
| *Outsourced Personnel* | | | | | | | | | |
| Medical | 10,729 | 5,779 | 7,212 | (4,950) | (3,517) | 6,302 | 8,145 | 8,145 | 11,753 |
| Nursing | 529 | 1,106 | 514 | 577 | (15) | 1,206 | 897 | 897 | 629 |
| Allied Health | 2,097 | 1,561 | 1,518 | (536) | (579) | 1,702 | 1,704 | 1,704 | 2,338 |
| Support | 302 | 240 | 376 | (62) | 74 | 262 | 428 | 428 | 324 |
| Management & Administration | 6,091 | 2,738 | 3,921 | (3,352) | (2,170) | 3,005 | 4,491 | 4,491 | 6,782 |
| **Total Outsourced Personnel Cost** | **19,748** | **11,424** | **13,541** | **(8,324)** | **(6,207)** | **12,477** | **15,664** | **15,664** | **21,826** |
| Treatment related costs - Clinical Supp | 124,333 | 126,658 | 122,590 | 2,325 | (1,743) | 138,237 | 135,244 | 135,244 | 135,912 |
| Treatment related costs - Outsourced | 27,423 | 28,235 | 23,935 | 812 | (3,488) | 30,750 | 26,761 | 26,761 | 29,438 |
| Non Treatment Related Costs | 125,194 | 94,264 | 98,033 | (30,930) | (27,160) | 104,120 | 107,768 | 107,768 | 134,450 |
| IDF Outflow | 101,349 | 101,108 | 99,131 | (240) | (2,218) | 110,300 | 108,768 | 108,768 | 110,540 |
| Other External Provider Costs (SIP) | 379,336 | 311,352 | 308,826 | (67,984) | (70,511) | 339,657 | 338,357 | 338,357 | 414,141 |
| Interest Depreciation & Capital Charge | 56,746 | 54,374 | 51,225 | (2,372) | (5,521) | 60,468 | 55,798 | 55,798 | 63,691 |
| Recharging | 0 | 1 | 0 | 1 | 0 | 0 | 0 | | |
| **Total Other Expenditure** | **814,381** | **715,992** | **703,740** | **(98,388)** | **(110,641)** | **783,532** | **772,695** | **772,695** | **888,171** |
| **Total Expenditure** | **1,469,915** | **1,321,824** | **1,283,681** | **(148,091)** | **(186,234)** | **1,446,861** | **1,405,263** | **1,405,263** | **1,603,193** |
| **Net result** | **21,070** | **15,991** | **(42,439)** | **5,079** | **63,509** | **7,028** | **(46,499)** | **(46,499)** | **20,967** |

Note
COVID-19 costs are not budgeted but are included within the actual expenditure which are mainly offset by additional revenue from MoH.

# Executive Summary – Financial Variances

- The DHB surplus year to date is $21.1m compared to a budget surplus of $16m.
- Revenue is favourable to budget $136m, excluding additional COVID funding, Pay Equity settlement funding $27.4m and a one off adjustment for the Fair Value recognition of the New Children's Hospital donation $76.5m One off Planned Care revenue adjustment in April for 20/21 ($2.2m) was made to the prior year provision that was not funded.
- Personnel costs including outsourced is ($49.3m) unfavourable YTD, excluding COVID-19 related costs of ($25m) and Pay Equity ($27.4m) Personnel is $11m favourable YTD. Currently the DHB has a large number of vacancies which has been offset by ($34.2m) of vacancy savings targets.
- Treatment related clinical supplies is $2.4m favourable including favourable variances for Implants/Prostheses & Treatment disposables as volumes are down through the COVID-19 , which is offset by increase cost in Pharmaceuticals and Patient related appliances
- Outsourced clinical services is favourable YTD by $592k due to the impact of COVID restrictions on providers
- Non treatment related costs ($33.2m) YTD unfavourable, however after excluding COVID-19 related costs of ($25.4m), the unfavourable variance was due to additional depreciation on 30 June building revaluation, seismic assessments costs, catch-up of deferred maintenance & Capital Charge
- The funder arm is favourable YTD due to additional revenue from spend requirements for the community COVID-19 response which is fully funded. Some new programmes in the NGO space have commenced alongside increased revenue from MoH to support these initiatives.

# Analysis of the Operating Position – Revenue and Personnel

**Revenue**

- Revenue is $152.3m favourable YTD
- The variance is due to Pay Equity funding $27.3m, additional ACC NAAR revenue from increased rates and backdated 20/21 $2.6m, one off adjustment New Children's Hospital donation $76.5m and One off Planned Care revenue adjustment in April for 20/21 ($2.2m) was made to the prior year provision that was not funded.
- The funder is also favourable by $134.2m revenue and the provider arm is favourable by $87.1m, however with offsetting community cost and COVID-19 related costs' including the reduction in IDF revenue of ($1.8m)

**Personnel (including outsourced)**

- Medical Personnel is ($1.5m) unfavourable for the month, ($11.9m) YTD. The unfavourable position for the month is driven by leave liability movement and vacancies across other services, most notably MHAIDS offset by centrally held vacancy savings targets and increased outsourcing in SWC & MHAIDS
- Nursing Personnel is ($2.3m) unfavourable to budget for the month. ($37.2m) YTD is driven by Pay Equity $27.3m. Operationally nursing across the hospital is on budget, however the variance is a result of COVID-19 related costs.
- Allied Personnel labour is $330k favourable to budget, $2.7m YTD as a result of vacancies.
- Support Personnel labour is ($38k) unfavourable to budget for the month, ($435k) YTD
- Management/Admin Personnel is unfavourable in the month by ($1.4m), ($2.4m) YTD Operationally across the hospital Management/Admin is favourable to budget, however the variance is a result of front loading of vacancy savings and increased outsourcing as a result of Vacancies and COVID

# Section 4

## Financial Position

# Cash Management – 31 May 2022

| Month : May 2022 | | | | | Capital & Coast DHB Statement of cashflows | Year to Date | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Variance | | | | | | Variance | |
| Actual | Budget | Last year | Actual vs Budget | Actual vs Last year | YTD May 2022 | Actual | Budget | Last year | Actual vs Budget | Actual vs Last year |
| | | | | | **Operating activities** | | | | | |
| **146,541** | **116,162** | **111,914** | **30,379** | **34,627** | **Receipts** | **1,437,780** | **1,277,815** | **1,272,675** | **159,965** | **165,105** |
| | | | | | **Payments** | | | | | |
| 51,559 | 56,557 | 47,536 | 4,999 | (4,022) | Payments to employees | 597,947 | 594,405 | 537,643 | (3,542) | (60,304) |
| 77,471 | 62,645 | 76,856 | (14,826) | (616) | Payments to suppliers | 829,038 | 670,010 | 686,689 | (159,028) | (142,349) |
| - | - | - | - | - | Capital charge paid | 9,048 | 22,204 | 21,845 | 13,156 | 12,798 |
| 4,348 | - | (7,370) | (4,348) | (11,718) | GST (net) | 3,351 | - | (1,950) | (3,351) | (5,301) |
| **133,378** | **119,202** | **117,022** | **(14,175)** | **(16,356)** | **Total payments** | **1,439,384** | **1,286,619** | **1,244,228** | **(152,765)** | **(195,156)** |
| **13,164** | **(3,040)** | **(5,107)** | **16,203** | **18,271** | **Net cash flow from operating activities** | **(1,604)** | **(8,805)** | **28,447** | **7,200** | **(30,052)** |
| | | | | | **Investing activities** | | | | | |
| **38** | **16** | **8** | **(23)** | **(31)** | **Receipts** | **249** | **172** | **180** | **(78)** | **(70)** |
| | | | | | **Payments** | | | | | |
| 8,250 | 3,525 | 7,551 | (4,726) | (699) | Purchase of fixed assets | 79,362 | 100,611 | 58,365 | 21,249 | (20,997) |
| **8,250** | **3,525** | **7,551** | **(4,726)** | **(699)** | **Total payments** | **79,362** | **100,611** | **58,365** | **21,249** | **(20,997)** |
| **(8,212)** | **(3,509)** | **(7,543)** | **(4,748)** | **(730)** | **Net cash flow from investing activities** | **(79,113)** | **(100,440)** | **(58,186)** | **21,171** | **(21,067)** |
| | | | | | **Financing activities** | | | | | |
| - | - | - | - | - | Equity - capital | 65,000 | 39,814 | - | 25,186 | 65,000 |
| 2,623 | - | - | 2,623 | 2,623 | Other equity movement | 44,348 | 61,840 | 23,705 | (17,492) | 20,643 |
| - | - | - | - | - | Other | - | - | - | - | - |
| **2,623** | **-** | **-** | **2,623** | **2,623** | **Receipts** | **109,348** | **101,654** | **23,705** | **7,693** | **85,643** |
| | | | | | **Payments** | | | | | |
| - | - | - | - | - | Interest payments | - | - | 8 | - | 8 |
| - | - | - | - | - | **Total payments** | - | - | 8 | - | 8 |
| **2,623** | **-** | **-** | **2,623** | **2,623** | **Net cash flow from financing activities** | **109,348** | **101,654** | **23,697** | **7,693** | **85,651** |
| **7,575** | **(6,549)** | **(12,650)** | **14,078** | **20,164** | **Net inflow/(outflow) of CCDHB funds** | **28,630** | **(7,590)** | **(6,042)** | **36,065** | **34,532** |
| 5,603 | (25,176) | 24,846 | (30,779) | 19,242 | **Opening cash** | (15,452) | (24,134) | 18,236 | (8,682) | 33,688 |
| 149,202 | 116,178 | 111,922 | 32,979 | 37,219 | Net inflow funds | 1,547,376 | 1,379,641 | 1,296,559 | 167,581 | 250,678 |
| 141,628 | 122,727 | 124,573 | (18,901) | (17,055) | Net (outflow) funds | 1,518,746 | 1,387,230 | 1,302,601 | (131,516) | (216,146) |
| **7,575** | **(6,549)** | **(12,650)** | **14,078** | **20,164** | **Net inflow/(outflow) of CCDHB funds** | **28,630** | **(7,590)** | **(6,042)** | **36,065** | **34,532** |
| **13,178** | **(31,724)** | **12,195** | **44,902** | **983** | **Closing cash** | **13,178** | **(31,724)** | **12,195** | **44,902** | **983** |

**Reconciliation of net cash flow to operating balance**

| | YTD May 2022 | | |
|---|---|---|---|
| | Actual $000 | Budget $000 | Variance $000 |
| Net cashflow from operating | (1,604) | (5,765) | 4,160 |
| Non operating financial asset items | 276 | - | 276 |
| Non operating non financial asset items | (3,644) | - | (3,644) |
| Non cash PPE movements | 40,101 | 26,242 | 13,859 |
| **Working capital movement** | | | |
| Inventory | 1,187 | - | 1,187 |
| Receipts and prepayments | 30,747 | - | 30,747 |
| Payables and accruals | (45,993) | 4,854 | (50,847) |
| **Total working capital movement** | **(14,060)** | **4,854** | **(18,914)** |
| **Operating balance** | **21,069** | **25,331** | (4,261) |

1. Unfavourable variance in Payments for operating activities were due to additional COVID-19 related expenses which was not budgeted for.
2. Receipts for operating activities is favourable to budget mainly due to additional receipts from MOH reimbursing for COVID-19 related expenditure.

# Debt Management / Cash Forecast – 31 May 2022

**Accounts Receivable**
**31-May-22**

| Aged Debtors report ($'000) | Total | Current | 1-30 | 31 - 60 | 61 - 90 | 91+ | Previous Period |
|---|---|---|---|---|---|---|---|
| Ministry of Health | 29,951 | 19,345 | 6,130 | 41 | 44 | 4,391 | 46,317 |
| Other DHB's | 6,476 | 4,564 | 80 | 74 | 11 | 1,747 | 3,093 |
| Kenepuru A&M | 300 | 86 | 31 | 19 | 164 | - | 263 |
| ACC | (547) | 78 | (739) | 80 | 8 | 26 | 157 |
| Misc Other | 3,106 | 1,158 | 469 | 21 | 224 | 1,234 | 3,088 |
| Total Debtors | 39,286 | 25,231 | 5,971 | 235 | 451 | 7,398 | 52,918 |
| less : Provision for Doubtful Debts | (3,895) | | | | | | (4,149) |
| **Net Debtors** | 35,391 | | | | | | 48,769 |


## Debt management

1. The MOH overdue is for invoices on hold due to contracts not yet signed by MOH, reports not yet provided by CCDHB or disputed invoices.

2. The single largest debtor in 'Other DHB's' outstanding is HVDHB with $1.751m.

3. Kenepuru A&M includes significant number of low value patient transactions. Provision for the overdue debts is $129k

4. 'Misc Other' debtors includes non resident debt of approx. $1.92m. About 62.16% of the non resident debt have payment arrangements in place. The balance will be referred to collection agencies if unpaid.

## Cash management

We have projected our cash position based on the proposed capital budget and a forecast deficit of $52.7m for 2021/22. However any deterioration in these forecasts may put the facility limit at risk and we continue to monitor this closely.

# Statement of financial position as at 31 May 2022

| Apr-22 | Month : May 2022 | | | Variance | | Capital & Coast DHB Statement of financial position |
|---|---|---|---|---|---|---|
| Actual | Actual | Budget | At May 2020 | Actual vs Budget | Actual vs May 2020 | YTD May 2022 |
| 13 | 13 | 31 | 31 | (17) | (17) | Bank |
| - | - | 824 | 928 | (824) | (928) | Bank NZHP |
| 13,604 | 13,793 | 13,561 | 13,561 | 232 | 232 | Trust funds |
| 99,271 | 88,494 | 63,930 | 63,930 | 24,564 | 24,564 | Accounts receivable |
| 10,792 | 10,580 | 9,466 | 9,466 | 1,115 | 1,115 | Inventory/stock |
| 12,384 | 10,790 | 7,902 | 7,902 | 2,887 | 2,887 | Prepayments |
| **136,065** | **123,671** | **95,714** | **95,818** | **27,957** | **27,853** | **Total current assets** |
| 542,416 | 552,833 | 631,403 | 509,015 | (78,570) | 43,818 | Fixed assets |
| 16,058 | 7,181 | 7,181 | 14,796 | - | (7,615) | Work in progress - CRISP |
| 232,328 | 230,782 | 101,700 | 94,085 | 129,082 | 136,697 | Work in progress |
| **790,802** | **790,796** | **740,284** | **617,896** | **50,512** | **172,899** | **Total fixed assets** |
| 1,150 | 1,150 | 1,150 | 1,150 | - | - | Investment in Allied Laundry |
| **1,150** | **1,150** | **1,150** | **1,150** | **-** | **-** | **Total investments** |
| **928,017** | **915,617** | **837,148** | **714,864** | **78,469** | **200,753** | **Total assets** |
| 8,014 | 629 | 46,141 | 2,325 | 45,512 | 1,696 | Bank overdraft NZHP |
| 90,124 | 84,466 | 72,575 | 96,762 | (11,890) | 12,297 | Accounts payable, accruals and provisions |
| 6,101 | 7,626 | 9,252 | 7,840 | 1,626 | 215 | Capital charge payable |
| 593 | 593 | 593 | 593 | - | - | Insurance liability |
| 11,943 | 12,167 | 11,441 | 123,911 | (725) | 111,744 | Current employee provisions |
| 198,176 | 199,233 | 180,467 | 67,997 | (18,766) | (131,236) | Accrued employee leave |
| 22,305 | 29,328 | 22,515 | 22,515 | (6,813) | (6,813) | Accrued employee salary & wages |
| **337,257** | **334,041** | **342,984** | **321,944** | **8,943** | **(12,097)** | **Total current liabilities** |
| 106 | 101 | 92 | 92 | (9) | (9) | Restricted special funds |
| 605 | 605 | 605 | 605 | - | - | Insurance liability |
| 6,222 | 6,222 | 6,564 | 6,564 | 343 | 343 | Long-term employee provisions |
| **6,933** | **6,928** | **7,262** | **7,262** | **334** | **334** | **Total non-current liabilities** |
| **344,190** | **340,969** | **350,246** | **329,206** | **9,277** | **(11,763)** | **Total liabilities** |
| **583,828** | **574,648** | **486,903** | **385,659** | **87,745** | **188,989** | **Net assets** |
| 939,632 | 942,254 | 931,617 | 833,446 | 10,637 | 108,808 | Crown equity |
| - | - | - | - | - | - | Capital repaid |
| 2,623 | 368 | - | - | 368 | 368 | Capital injection |
| 193,463 | 193,463 | 130,659 | 130,659 | 62,804 | 62,804 | Reserves |
| (551,890) | (561,437) | (575,374) | (578,447) | 13,937 | 17,010 | Retained earnings |
| **583,828** | **574,648** | **486,902** | **385,658** | **87,746** | **188,990** | **Total equity** |

## Balance Sheet

1. Bank overdraft NZHP is favourable to budget due to receipt of deficit support $65m in February.
2. Fixed assets is under budget while WIP is over budget caused by
   a. The backlog of capitalisation to be completed in the coming months.
   b. New Children's Hospital $130.2m(including $76.5m non-cash donation) is under WIP and to be capitalised by end of 2022
3. Favourable variance in Reserves is due to the budgeted opening revaluation reserve not factoring in the 2020/21 revaluation.

## Financial ratios

1. Current ratio – this ratio determines the DHB's ability to pay back its short term liabilities. DHB's current ratio is 0.37 (April - 0.40).
2. Debt-to-equity ratio - this ratio determines how the DHB has financed the asset base. DHB's total liability to equity ratio is 0.59 (April – 0.59).

# Capital Expenditure Summary on Prior Year Approved May 2022

| | | | | | | Forecast | | | |
|---|---|---|---|---|---|---|---|---|---|
| Prior Year Projects | Approved Budget Value | Spend to Jun 2021 | Carry Forward to FY2021/22 | Spend to Apr 2022 | To Spend | May-22 | Jun-22 | Carry Forward | Net Savings |
| Buildings | 33,242,453 | 16,721,683 | 16,520,770 | 5,455,811 | 11,064,959 | 1,398,065 | 1,605,849 | 7,317,496 | 967,423 |
| Clinical Equipment | 8,797,244 | 3,557,763 | 5,239,481 | 4,080,595 | 1,158,885 | 78,286 | 140,693 | 450,996 | 488,910 |
| ICT | 4,788,297 | 2,659,626 | 2,128,671 | 1,165,829 | 962,843 | 81,937 | - 175,691 | 680,795 | 344,751 |
| Other Equipment | 3,532,421 | 686,660 | 2,845,761 | 1,435,828 | 1,409,933 | 38,632 | 13,344 | 1,275,502 | 82,195 |
| Grand Total | 50,360,414 | 23,625,731 | 26,734,683 | 12,138,063 | 14,596,620 | 1,596,920 | 1,584,195 | 9,724,789 | 1,883,279 |

Key highlights (excludes New Children's Hospital, CT Scanner, Water Remediation Project & ISU for MHAIDS):

- $26.7m in approved but incomplete projects was carried forward from the previous year to FY2020/21
- Total cash spend to May 2022 was $12.7m. A further $0.7m is forecast to be spent by 30 June 2022, leaving an estimated $11.5m to be carried forward to FY2022/23. This is $1.7m higher than forecasted in April and is due to the supply shortages and delay in delivery for the Angio Lab & Suite replacement project, the replacement of Heavy ceiling tiles and CSB lift renewal project
- The cash spending forecast will be reviewed monthly and adjusted to reflect changes from both internal and external factors (workforce, logistics, supply chain)
- The negative values in the forecast columns for June 22 relate to anticipated recharges by CCDHB to HVDHB and WRDHB for a number of ICT projects (Mainly 3DHB Clinical Portal)

# Capital Expenditure Summary 2021/22 May 2022

| | | | | | | Forecast | | |
|---|---|---|---|---|---|---|---|---|
| Prior Year Projects | Approved Budget Value | Spend to Jun 2021 | Carry Forward to FY2021/22 | Spend to May 2022 | To Spend | Jun-22 | Carry Forward | Net Savings |
| Buildings | 33,242,453 | 16,721,683 | 16,520,770 | 6,025,116 | 10,495,654 | 908,860 | 8,974,340 | 652,454 |
| Clinical Equipment | 8,797,244 | 3,557,763 | 5,239,481 | 4,125,267 | 1,114,213 | 124,783 | 501,402 | 488,028 |
| ICT | 4,788,297 | 2,659,626 | 2,128,671 | 1,148,668 | 980,003 | - 299,194 | 719,655 | 456,555 |
| Other Equipment | 3,532,421 | 686,660 | 2,845,761 | 1,446,704 | 1,399,057 | - | 1,307,028 | 88,901 |
| Grand Total | 50,360,414 | 23,625,731 | 26,734,683 | 12,745,756 | 13,988,927 | 734,449 | 11,502,425 | 1,685,939 |

Key highlights to FY2021/22 Capital plan:

- The development of business cases from the 2021/22 Capital Plan are at various stages with $51m approved to May 2022
- Total cash spend to May 2022 was $25.4m
- Business units have indicated a further $3m will be spent by 30 June 2022, $21m to be carried forward to the next financial year. Carrying forward to Financial year 22-23 has increased $4m with newly approved budget in May of $3.3m, supply chain delays on the delivery of some projects like the Rangatahi refurbishment and the TEC water chiller replacement
- The cash spending forecast will be reviewed on a monthly basis and adjusted to reflect our capacity to submit business cases for approval, procure and install projects

# Board Information – Public

**22 June 2022**

## Non-Financial Performance Report for HVDHB and CCDHB - 2021/22 Quarter 3

It is **recommended** that the Board:

1. **Note** that this report provides an overview of CCDHB and HVDHB's Non-Financial Quarterly Monitoring results for Q3 (January 2022 – March 2022) 2021/22, which are provided to the Ministry of Health (MoH).
2. **Note** that this report provides a summary of CCDHB and HVDHB's Q3 2021/22 Health System Plan and Vision for Change dashboard - attached as appendix one.
3. **Note** that CCDHB's and HVDHB's Q3 results have achieved compliance[1] for most indicators, however overall percentage of achievement has declined when compared to previous results in Q2 2021/22.
4. **Note** the list of performance measures was reduced by the Ministry of Health (MoH) to eight indicators this quarter due the COVID-19 response. The reports that were required are nationally important or were measures that historically all DHBs had poor performance in. This is why our overall performance shows a decline in Q3..
5. **Note** that CCDHB's and HVDHB's results are similar to the results of other DHBs – as shown by the heat maps provided by MoH.
6. **Note** that for all eight indicators rated by MoH in Q3, both CCDHB and HVDHB received identical results: 3 'Achieved' ratings, 2 'Partially Achieved' ratings and 3 'Not Achieved' ratings. Both DHBs received the same results for these eight indicators in Q2.
7. **Note** that specific action plans are in place to improve performance against our 'Not Achieved' performance measures, which all relate to immunisation coverage.
8. **Note** overall results for CCDHB and HVDHB demonstrate:
    a) a community health system delivering well for the majority of indicators with a persistent pressure points posing challenges
    b) a hospital system working hard under increased demands from Covid-19 restrictions
    c) a system under pressure with resourcing not keeping pace with demand.

| | |
|---|---|
| **Strategic Alignment** | CCDHB Health System Plan 2030<br>HVDHB Vision for Change 2027 |
| **Presented by** | Peter Guthrie, Acting Director Strategy, Planning & Performance CCDHB & HVDHB |
| **Purpose** | This paper provides an overview of performance and the Quarter 3 2021/22 Non-Financial Monitoring Report results, as assessed by the Ministry of Health. |

[1].Achieved compliance' means we received an 'Outstanding', 'Achieved' or 'Partially Achieved' rating.

## Background

The DHB non-financial monitoring framework aims to provide a rounded view of performance (including against government priorities), using a range of performance indicators. The MoH reports DHB performance to the Minister on a quarterly basis. The reporting is against the Government priorities below.


## Non-financial performance report

The list of performance measures was reduced by the ministry of health to a small number of reports this quarter due the COVID-19 response. The reports that were required are nationally important or were measures that historically all DHBs had poor performance in. This is reflected in our overall decline in performance.

Non-financial performance for HVDHB and CCDHB, as assessed by MoH for Q3 2021/22, indicate similar performance. The final results show that both HVDHB and CCDHB continue to meet most of the MoH performance targets. The immunisation coverage remains a challenge that we are working to address.

| | HVDHB | | CCDHB | |
|---|---|---|---|---|
| **Achievement** | **Number of indicators Q3 2020/21** | **Number of indicators Q2 2020/21** | **Number of indicators Q3 2021/21** | **Number of indicators Q2 2021/21** |
| Outstanding | 0 | 0 | 0 | 1 |
| Achieved | 3 | 27 | 3 | 26 |
| Partially Achieved | 2 | 14 | 2 | 12 |
| Not Achieved | 3 | 8 | 3 | 9 |

In Q3 HVDHB and CCDHB achieved compliance for 5 out of the 8 performance indicators assessed (63%). We received a 'Not Achieved' rating for 3 indicators (37%). This is a decline in performance from Q2. When comparing the indicators that are common across Q3, overall both DHB's performance is similar.

HVDHB and CCDHB received a 'Not Achieved' rating for 3 performance measures; Immunisation coverage at 8 months, 2 years, and at 5 years. The following table shows a comparison between Q3 and Q2 performance measures[2].

| HVDHB - 'Not Achieved' ratings Q3 | HVDHB - 'Not Achieved' ratings Q2 | CCDHB 'Not Achieved' ratings Q3 | CCDHB 'Not Achieved' ratings Q2 |
|---|---|---|---|
| • Immunisation coverage (at 8 months)<br>• Increased Immunisation (at 2 years)<br>• Immunisation coverage (at 5 years) | • Immunisation coverage (at 8 months)<br>• Immunisation coverage (at 2 years)<br>• Immunisation coverage (at 5 years)<br>• Faster cancer treatment (62days)<br>• Raising Healthy Kids<br>• Better help for smokers to quit (primary care)<br>• Ambulatory sensitive hospitalisations (ASH adult 45-64)<br>• Improving wait times for colonoscopy | • Immunisation coverage (at 8 months)<br>• Increased Immunisation (at 2 years)<br>• Immunisation coverage (at 5 years) | • Immunisation coverage (at 8 months)<br>• Immunisation coverage (at 2 years)<br>• Immunisation coverage (at 5 years)<br>• Improved management for long term conditions: Acute Heart Service<br>• Improved management for long term conditions: Stroke Service<br>• Better Help for Smokers to Quit – public hospitals'<br>• Better help for smokers to quit (primary care)<br>• Raising Healthy Kids<br>• Ambulatory sensitive hospitalisations (ASH adult) |

Specific action plans are in place to improve performance against the 'Not Achieved' performance measures with a particular focus on improving performance for our Māori and Pacific populations.

### Immunisation coverage CCDHB

Q3 2021/22 CCDHB's immunisation rates have seen increases across all milestone ages. We have seen slight decline in Maori immunisation rates for all 2 year rates, and a 4.5% increase in Maori children for the 5 year old coverage.

Our rates improved across all milestone ages ranged from 0.6% - 2.2% during Q3 which is a decrease in the proportion of families choosing to decline childhood immunisations. CCDHB continues to implement its 2DHB Immunisation Improvement Plan to increase delivery and uptake of childhood vaccinations. Progress against activities in the Plan is positive.

**Table: Number of children that needed to be vaccinated to reach the 95% target for each milestone age:**

| Milestone Age | Quarter 3 2021/22 | Quarter 2 2021/22 |
|---|---|---|
| 8 Months | 33 | 40 |
| 2 Years | 40 | 58 |
| 5 Years | 56 | 76 |

[2] It is important to note that some measures that the DHB did not achieve last quarter (Q2) were not required to be reported on this quarter. Therefore there is not an accurate comparison between the quarters.

## Immunisation coverage HVDHB

Q3 results show marginal decreases across all milestone ages for HVDHB from Q2. This is the most prominent for the Maori population at 8 month and 2 year milestones.

Decline rates continue to have an effect on our ability to reach the 95% target. Decline rates across all milestone ages ranged from 0.8% - 2.0% during Q3 which is a increase in the proportion of families choosing to decline childhood immunisations.

**Table: Number of children that needed to be vaccinated to reach the 95% target for each milestone age:**

| Milestone Age | Quarter 3 2021/22 | Quarter 2 2021/22 |
|---|---|---|
| 8 Months | 25 | 21 |
| 2 Years | 49 | 36 |
| 5 Years | 57 | 53 |

## 2DHB Action Plan for improving Immunisation coverage

Both DHBs are not reaching the 95% target and this is a trend across all 20 DHBs. Immunisation providers note the ongoing impact of Covid-19 on immunisation coverage. Some parents are delaying and/or declining immunisations and this has been seen through successive lockdowns (i.e cancelled appointments due to family members having Covid, or are household contacts).

For HVDHB, we have seen an increase in the number of children referred from primary care or other providers to the outreach immunisation service. HVDHB increased the investment in the outreach immunisation service in recognition of their need for more capacity. We expect to see the number of children overdue for their immunisations decrease over the coming months as the service recruits more nurses.

Our COVID-19 immunisation programme has performed strongly in terms of equity, with far smaller differences in Maori and Pacific immunisation rates compared to other immunisation programmes. This is largely due to our understanding that Maori and Pacific providers are the 'trusted faces in trusted places' for our region, and best-placed to connect with unimmunised children and whanau in their communities. DHBs now have direction from the Ministry of Health that the COVID-19 immunisation programme will continue at least until the end of 2022. We continue to actively build on and support our partnerships with the Maori and Pacific providers of our rohe, and work closely with them to expand their service delivery for other – including childhood – immunisations.

## Comparison with national results

MoH has developed heat maps that compare performance across DHBs. Their process runs two months behind this report. The heat maps for Q1 results are attached as Appendix Two. Based on the Q1 heat maps, performance for CCDHB and HVDHB is the same or above the average of other DHBs against the seven Government priorities. Meeting performance targets for all immunisation measures continues to be an issue for all DHBs.

### Annual Plan updates

DHBs are also required to provide updates to MoH in relation to the delivery of actions and milestones included in the Annual Plans. The final results show that HVDHB and CCDHB have continued to gain achieved and partially achieved status across all Government Planning Priorities.

HVDHB and CCDHB performance for Q3 was rated as follows:

| Government Planning Priorities | HVDHB Q3 | HVDHB Q2 | CCDHB Q3 | CCDHB Q2 |
|---|---|---|---|---|
| Give practical effect to He Korowai Oranga – Māori Health Strategy | Achieved | Achieved | Achieved | Achieved |
| Improving Sustainability | Not assessed | Achieved | Not assessed | Achieved |
| Improving child wellbeing | Achieved | Achieved | Achieved | Achieved |
| Improving mental wellbeing | Not assessed | Achieved | Not assessed | Achieved |
| Improving wellbeing through prevention | Not assessed | Achieved | Not assessed | Achieved |
| Strong and equitable public health services | Not assessed | Partially Achieved | Not assessed | Partially Achieved |
| Better population health outcomes supported by primary health care | Not assessed | Achieved | Not assessed | Achieved |

Our Vision for Change and Health System Plan dashboards monitor progress against our strategic goals and outcomes for our population groups, particularly our goal of achieving equity for Māori and Pacific.

A summary of the indicators and outlook is provided below.

| Indicator | Outlook |
|---|---|
| Better help for smokers to quit (primary care) | HVDHB performance is decreasing and below target.<br>CCDHB performance is decreasing but remains well below the 90% target. The DHB is working closely with the PHOs to shift the trend. |
| Childhood immunisations | HVDHB childhood immunisation rates remain within a stable range but did decline for Q3. The DHB is working with immunisation services to improve performance.<br>CCDHB childhood immunisation rates are stabilising in performance, particularly with Pacific and Maori populations. The DHB is working with immunisation services to shift the trend. |
| Older people immunisation | The 2022 Influenza Immunisation Programme commenced on 1 April. CCDHB is currently sitting at 35% coverage for 65+ year olds, and HVDHB is sitting at 30%. We are expecting the shift in trend to continue for 2022. This shift was towards the COVID-19 vaccination rollout taking priority over the primary vaccination months. |
| Avoidable hospital admissions (0-4 years) | There has been an improving trend in HVDHB and CCDHB for childhood ASH rates, and we are pleased to see in particular an increase for Māori and Pacific. |
| Avoidable hospital admissions (45-64 years) | HVDHB and CCDHB observed a decline in adult ASH rates and in particular for Māori and Pacific since the 2020 national emergency COVID-19 lockdowns (although the trend is less pronounced for children). Rates are now stabilising and are on average 20% lower than the peak observed immediately prior to March 2020. |
| People 75+ living in their own home | In HVDHB and CCDHB, more than 90% of people aged 75+ years continue to live in their own homes. However, the trend is declining over the past year. |
| Acute unplanned readmission | Overall, readmission rates are stable and increasing. The Hospital Network programme will support increased capacity and expected improvement in performance. |
| Acute hospital bed days per capita | HVDHB and CCDHB acute bed days are stable and increasing for all populations, including Māori and Pacific. We are developing our community responses to population drivers alongside approaches to maximise the productivity and efficiency of our hospital system (CARS, CHOPI, AHOP and AWHI) that should reduce our acute bed day rates over time. |
| Shorter Stays in ED | HVDHB performance is declining and continues to sit under 90%. In CCDHB the trend is stabilising but continues to be well below target. We are pleased to see that we have partially achieved this target in Q2 for both DHBs. |

| | |
|---|---|
| | We are currently working on plans to make our MAPU more effective as an assessment Unit which in turn should facilitate flow of patient from ED and minimize admission on Acute Wards. Our new initiatives to reduce access block, such as weekend specialist ward rounds and improved safe patient discharges on weekends with increased allied health capacity. There is also a High Needs Care Forum that facilitates efforts to reduce long stays for complex medical patients. |

# Strategic Considerations

| | |
|---|---|
| **Strategic goals** | CCDHB's 'Health System Plan' Dashboard and HVDHB's 'Vision for Change' Dashboard show performance against implementing our strategic goals and outcomes for our population groups, particularly our goal of achieving equity for Māori and Pacific people. Both DHB have similar strategic goals. These goals are:<br>• Promote health and wellbeing / Support people living well<br>• People-focused services in the community / Shift care closer to home<br>• Timely, effective care that improves health outcomes / Deliver safer care<br>Achieving equity and providing integrated service is embedded in these goals. |
| **Financial** | N/A |
| **Governance** | On behalf of the Minister of Health, the MoH assesses DHB performance against the DHB non-financial monitoring framework. The DHB non-financial monitoring framework aims to provide a rounded view of performance, including government priorities, using a range of performance indicators. The Ministry reports DHB performance to the Minister on a quarterly basis. |

# Identified Risks

| Risk ID | Risk Description | Risk Owner | Current Control Description | Current Risk Rating | Projected Risk Rating |
|---|---|---|---|---|---|
| TBC | Noncompliance with statutory requirements | Fionnagh Dougan | Standard Operating Procedures in place to ensure compliance with the process | Low Risk | Low Risk |

# Attachments

1. CCDHB 'Health System Plan' Dashboard (Q3 2021/22)
2. HVDHB 'Vision for Change' Dashboard (Q3 2021/22)
3. Heat maps from the Ministry of Health showing the DHB and national Q1 results[3]

[3] Q1 results are shown because the MoH process for developing these heat maps runs two months behind this report.

## Capital & Coast DHB – 2021/22 Quarter 3 'Health System Plan' Dashboard

# Promote health and wellbeing

We will work collaboratively with partners to create healthy environments, eliminate health inequities, and support people to adopt healthy lifestyles.

**Areas of focus**

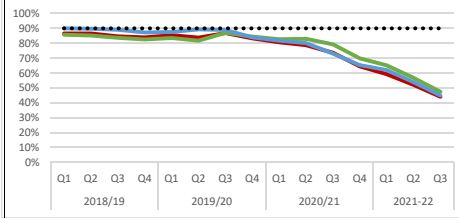
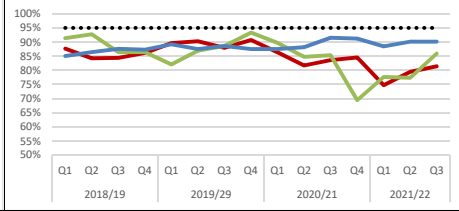
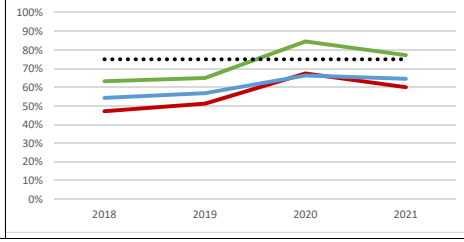
- Prevention, health promotion and public health activities
- Building strong and resilient communities
- First 1000 days of life
- Screening for breast and cervical cancer
- Environmental sustainability
- Achieving health equity

**Sub-regional initiatives**

- Support our workforce to achieve increased equity outcomes, particularly for Māori, Pacific and people with disabilities (2DHB)
- Co-design innovative models of maternity care with Māori and Pacific women in order to improve outcomes (2DHB)
- Offer education, advice and transport to clients who have previous missed appointments to Breast, Cervical or Colonoscopy Services (2DHB)
- Develop a guide for providers/practitioners to guide conversations with families declining immunisations, with a focus on co-designing with Māori and Pacific families and providers (2DHB)

**Local initiatives**

- Develop and commit to a pro-equity programme of work that delivers a clear CCDHB equity goal and direction, an agreed set of equity principles, and an operational framework
- Re-establish and update the Tū Pou Famu Workforce Programme, including targets for the recruitment, retention and professional development of Māori staff, and workforce development for all staff in Māori health and equity, including cultural leadership, safety and competency, anti-racism and health literacy
- Redesign our breastfeeding service to provide a responsive, culturally appropriate, 7 day service to support to Māori and Pacific mothers, babies and whānau
- CCDHB will provide additional mental health support to work across the five secondary schools in Porirua which have higher Māori and Pacific populations.

| Indicators | Description | Rationale | Targets | | Performance – three year trend | Comments |
|---|---|---|---|---|---|---|
| **Indicator 1:** Better help for smokers to quit (primary care) | People aged between 15-75 provided smoking cessation advice in primary care | Stopping smoking confers immediate health benefits on all people, and is the only way to reduce smoker's risk of developing a smoking-related disease. Providing smokers with brief advice to quit increases their chances to make a quit attempt, and this is increased if medication and/or cessation support are also provided. | Māori<br>Pacific<br>Non-Māori, Non-Pacific<br>Total | ≥90% |  | We continue to work with our PHOs to embed a consistent process to achieve this target and equity for Māori and Pacific. We are working with PHOs to encourage referrals to **Takiri Mai Te Ata Regional Stop Smoking Service**. Work is ongoing to develop a dashboard of smoking information across the 2DHBs to identify where gaps in service delivery are and where efforts should be prioritised. It has been noted by the PHO's that there has been some reluctance from patients to give information, continue using the appointment scanner, and engage with telephone calls/text campaigns. |
| **Indicator 2:** Childhood immunisation | Children fully immunised at 5 years (CW05) | Children who receive the complete set of age appropriate vaccinations are less likely to become ill from certain diseases. This measure captures all immunisation milestones and emphasises the need for immunisation to be both full, and delivered on time, to achieve outcomes. | Māori<br>Pacific<br>Non-Māori, Non-Pacific<br>Total | ≥95% |  | We are seeing positive progress with our 2DHB **Immunisation Improvement Plan** focused on working with kaupapa Māori providers and outreach services to reach children who may not be immunised. Our plan focuses on strengthening the Outreach Immunisation Service, extending the CCDHB Immunisation Network to include HVDHB providers, and gaining insights on factors that influence 'declines'. |
| **Indicator 3:** Elder immunisation | Percentage of people age 65 years and over that are immunised against influenza | At age 65, immunisation is recommended by the Ministry of Health. These vaccines are free and support older people to stay well. A high performing system should see high uptake of immunisations to keep people healthy. | Māori<br>Pacific<br>Non-Māori, Non-Pacific<br>Total | ≥75% |  | The 2022 Influenza Immunisation Programme commenced on 1 April. CCDHB is currently sitting at 35% coverage for 65+ year olds. We expect for the 2022 programme primary care immunisation teams will be working at near maximum capacity and continue to be stretched due to the focus on the Covid response and delivery of Covid-19 vaccinations. |

Capital & Coast District Health Board

# People-focused services in the community

We are committed to developing people-focused service delivery models, and planning our services using 'place' as the basis for health and social supports. Better information about the characteristics of the people being served, shared among those delivering services, is central to succeeding with this approach. It has the potential to reduce health care costs over time as communities increasingly support their own health and wellbeing.

**Areas of focus**

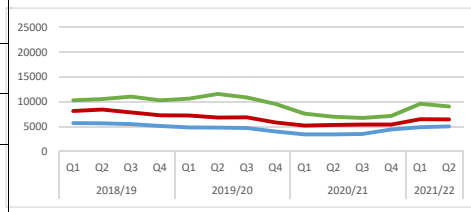
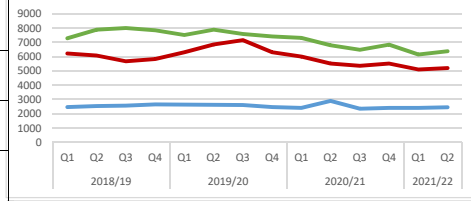
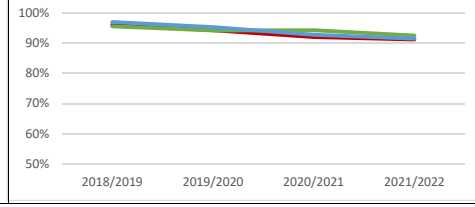
- Homes as a place of care
- Community Mental Health and Wellbeing Hubs
- Build strong primary and community care
- Early intervention
- Health Care Homes
- Specialist support for primary care
- Telehealth services
- Management of Long Term Conditions
- Achieving health equity

**Sub-regional initiatives**

- Embed telehealth models of care that began during COVID to enable patients to appropriately receive primary and secondary care services (2DHB)
- Support a 2DHB collaborative of Māori and Pacific mental health service providers to develop and implement culturally appropriate and community-based models of care (2DHB)
- Develop and begin implementation of a 3DHB suicide prevention and post-vention plan, with a focus on population groups at higher risk of suicide (3DHB)

**Local initiatives**

- Work with local communities to implement the locality commissioning plan, place-based initiatives, and integrated service delivery models in Porirua, Wellington and Kāpiti
- Reduce hospital admissions by improving local community urgent care capacity and implementing community-based planned care through Community Health Networks
- Develop an integrated community mental health and wellbeing hub model that will provide a timely response at a local community level to those who present in distress
- The DHB and RPH will work with communities to deliver initiatives that promote healthy nutrition and physical activity with a localities focus (eg, via the Porirua regeneration project).
- The DHB will continue to work with PHOs to share best practices for early cardiovascular risk assessment and management for people with moderate to high cardiovascular risk across general practices from those delivering the most equitable outcomes
- Implement initiatives to improve equitable access to and outcomes from culturally appropriate self-management education and support services
- Community pharmacies in Porirua to measure urate levels and adjust medication dosage where appropriate to prevent Gout, with a focus on Māori and Pacific

| Indicators | Description | Rationale | Targets | | Performance – three year trend | Comments |
|---|---|---|---|---|---|---|
| **Indicator 1:** | Avoidable hospital admissions (ASH rates 0-4 years) | Ambulatory sensitive hospitalisations (ASH) are hospitalisations that could have been avoided through primary care interventions. This indicator also highlights variation between different population groups. ASH rates can be reduced by shifting care closer to home, providing coordinated primary and secondary care services, and improving timely access to high-quality and culturally safe primary care services. | Māori<br>Pacific<br>Non-Māori, Non-Pacific<br>Total | ≤6,421<br>≤10,865<br>≤4,726<br>≤5,818 |  | ASH rates were not required to be reported on for Q3 by the MoH. However, we are starting to see the rates rise again this quarter. **Winter planning** is underway. We are also working with our community and primary care partners to implement our **System Level Measures Plan** with a focus on reducing avoidable admissions for respiratory and skin conditions. We are working on automated referrals to **Porirua Asthma Service,** which is operated by Ngāti Toa. Regional Public Health is also piloting an extension to the **Porirua Children's Ear Service** to include skin infections. This service is free and is provided by a nurse with specialist training in ear health and skin care. |
| **Indicator 2:** | Avoidable hospital admissions (ASH rates 45-64 years) | | Māori<br>Pacific<br>Non-Māori, Non-Pacific<br>Total | ≤6,575<br>≤7,075<br>≤2,623<br>≤3,267 |  | Cardiovascular conditions (angina and chest pain, myocardial infarction and congestive heart failure) and cellulitis are the top presenting conditions, particularly for Māori and Pacific peoples. To address these areas we are focusing on access to acute care in primary care practices, CVD risk assessments and follow up support, smoking cessation support, and wrap around services for those who have had an ASH event to prevent future events. |
| **Indicator 3:** | Percentage of people 75+ living in their own home | Subsidised age residential care is important for those who need it, but our overall goal is to assist our elderly population to stay well and continue to live independently in their own homes. This requires good access to primary care and, in some cases, home and community support services – including culturally safe household and personal care services. | Māori<br>Pacific<br>Non-Māori, Non-Pacific<br>Total | TBC |  | Our **whole of system response to frailty** supports people to live at home. This includes strategic investments such as the Community Health of Older People Initiative (**CHOPI**), Acute Health of Older Person Service (**AHOP**) and Advancing Wellness at Home Initiative (**AWHI**). Our primary care providers are proactively screening patients who are at risk of falling and supporting these patients with **strength and balance programmes** to support muscle and bone strength which ensures people remain safely mobile and active at home. Managing frailty is a key part of our Sustainability Plan. |

Capital & Coast District Health Board

# Timely effective care that improves health outcomes

A core function of our health system is to provide health care that responds to acute and planned clinical need, including the delivering of babies. We need to be able to respond promptly and effectively using service delivery models that help improve clinical and health outcomes.

**Areas of focus**

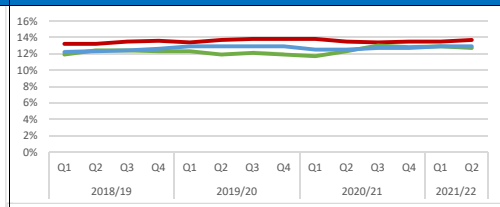
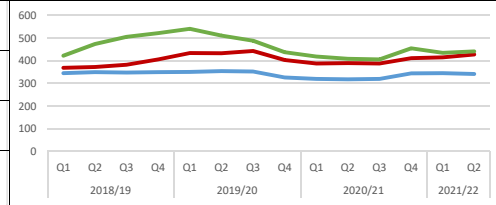
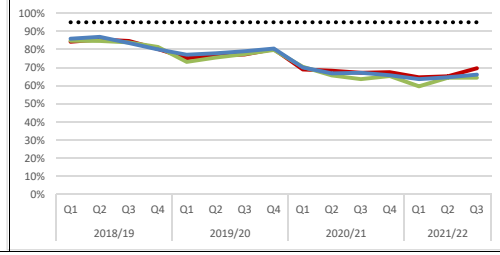
- Timely and effective care
- Safe and efficient hospital services
- Quality improvement activities
- Managing Acute Flow and production planning
- Community, primary and secondary integration
- Support end of life with dignity
- Achieving health equity

**Sub-regional initiatives**

- Progress the 2DHB Hospital Network Programme to ensure our services are clinically and financially sustainable (2DHB)
- Review and improve consumer data collection and entry in the feedback system (SQUARE) with an emphasis on improving the quality of the data, in particular ethnicity and disability data (2DHB)
- Develop a 2DHB Family Violence Prevention Action Plan (2DHB)
- Develop and implement a reformed 2DHB maternal and neonatal health system plan (2DHB)
- Implement the 3DHB 'Acute Continuum of Care' to better match need to service provision, enhance coordinated service provision across a range of providers, and improve integration and patient flow through the system (3DHB)
- Develop and implement a mechanism for health information to be easily accessible for disabled people in ways that promote their independence and dignity (3DHB)

**Local initiatives**

- Improve patient flow by developing an acute frailty pilot within existing beds, rolling out early supported discharge enabled by the Advanced Wellness at Home Initiative (AWHI), increasing the proportion of dischargers earlier in the day, and increasing specialist rounding at weekends.
- Implement a mental health model of care in ED and enhance the support to mental health and addiction patients who present to ED
- Develop responsive end of life care for whānau and families, informed by engagement and research, with a specific focus on meeting the needs of Māori whānau and Pacific families

| Indicators | Description | Rationale | Targets | | Performance – three year trend | Comments |
|---|---|---|---|---|---|---|
| **Indicator 1:** | Acute unplanned readmission (28 day) | An unplanned acute (emergency and urgent) hospital readmission is often the result of the care provided to the patient by the health system. We can reduce unplanned acute admissions by ensuring a smooth transition from the hospital back into primary care, and by improving the quality of care in the hospital and in primary care. | Māori<br>Pacific<br>Non-Māori, Non-Pacific<br>Total | ≤12.4% |  | We are developing community responses to population drivers of **acute flow** alongside approaches to maximise the productivity and efficiency of our hospital system. Our Advancing Wellness at Home Initiative (**AWHI**) sees more people discharged from hospital earlier and with enhanced support from our nursing and allied health workforce in the community. We are working to Establish **permanent location for Acute Frailty Unit.**<br><br>In parallel, the **Hospital Network** programme is exploring our short and medium term options for expansion of **2DHB bed and theatre capacity**. This work will ensure that we have space to appropriately manage patients and balance the length of stay and acute readmissions. We are also working to facilitate the smooth transition of patients back to their primary care provider with appropriate specialist support through our Community Health Network prototype in Kāpiti. Kāpiti has a well-developed work programme and this is progressing to plan. The risk on the localities and community health network workstreams are recent loss of key staff in the D&I team and difficulties in recruitment in the current environment. |
| **Indicator 2:** | Acute hospital bed days per capita | Acute hospital bed days per capita reflects the demand for acute inpatient services. We can manage this demand by good discharge planning, improving the transition between the community and hospital settings, good communication between providers, managing conditions in primary care settings, and timely access to diagnostics services. | Māori<br>Pacific<br>Non-Māori, Non-Pacific<br>Total | ≤533<br>≤573<br>≤290<br>≤328 |  | |
| **Indicator 3:** | Shorter Stays in ED – patient discharged or transferred with 6 hours (SS10) | ED length of stay is an important measure of the quality of acute care in our public hospitals. The timeliness of treatment is important for patients. Long waiting times are linked to overcrowding and negative clinical outcomes and compromised standards of privacy and dignity for patients. | Māori<br>Pacific<br>Non-Māori, Non-Pacific<br>Total | 95% |  | Bed occupancy continues to be the most significant contributing factor to not achieving this indicator. We are currently working on **plans to make our MAPU more effective as an assessment Unit** which in turn should facilitate flow of patient from ED and minimize admission on Acute Wards. We are making efforts to reduce access block, such as **weekend specialist ward rounds** and improved safe patient discharges on weekends with increased allied health capacity. There is also a **High Needs Care Forum** that facilitates efforts to reduce long stays for complex medical patients.. |

## Hutt Valley DHB – 2021/22 Quarter 3 'Vision for Change' Dashboard

# Support people living well

We will work collaboratively with partners to create healthy environments, eliminate health inequities, and support people to adopt healthy lifestyles.

**Areas of focus**

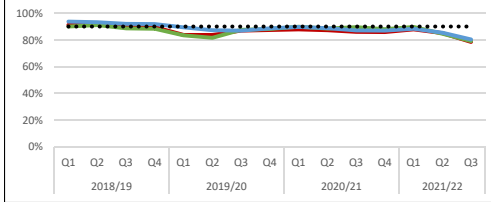
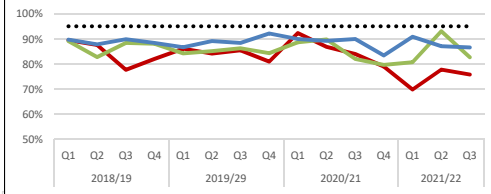
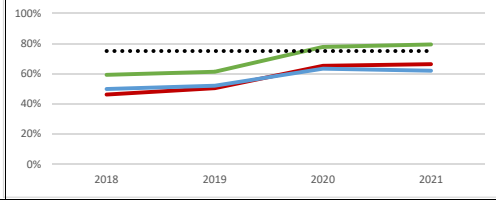
- Prevention, health promotion and public health activities
- Building strong and resilient communities – implementing our Wellbeing Plan
- First 1000 days of life
- Screening for breast, cervical and bowel cancer
- Environmental sustainability
- Achieving health equity

**Sub-regional initiatives**

- Support our workforce to achieve increased equity outcomes, particularly for Māori, Pacific and people with disabilities (2DHB)
- Co-design innovative models of maternity care with Māori and Pacific women in order to improve outcomes (2DHB)
- Offer education, advice and transport to clients who have previous missed appointments to Breast, Cervical or Colonoscopy Services (2DHB)
- Develop a guide for providers/practitioners to guide conversations with families declining immunisations, with a focus on co-designing with Māori and Pacific families and providers (2DHB)

**Local initiatives**

- Develop an action plan to improve the wellbeing of children and young people in the Hutt Valley
- Implement the Māori Provider Influenza Vaccine Improvement Project – through marae and outreach-based services
- Co-ordinate the delivery of the Hutt Valley Smokefree Action Plan focusing on priority populations
- Promote, and increase access to, the Hapū Mama programme at Kokiri Marae.
- Deliver the Healthy Active Learning programme to schools and early learning services, with a continued emphasis on low decile schools
- Implement a Bowel Screening Outreach Programme to improve engagement with Māori and Pacific peoples and facilitate their access to timely screening and early treatment of cancers
- Enhance the Well Homes service in partnership with Tu Kotahi Māori Asthma Trust, He Kāinga Oranga and the Sustainability Trust

| Indicators | Description | Rationale | Targets | | Performance – three year trend | Comments |
|---|---|---|---|---|---|---|
| **Indicator 1:** Better help for smokers to quit (primary care) | People aged between 15-75 provided smoking cessation advice in primary care | Stopping smoking confers immediate health benefits on all people, and is the only way to reduce smoker's risk of developing a smoking-related disease. Providing smokers with brief advice to quit increases their chances to make a quit attempt, and this is increased if medication and/or cessation support are also provided. | Māori<br>Pacific<br>Non-Māori, Non-Pacific<br>Total | ≥90% |  | Primary care report challenges posed by patient complexity and being unable to meet patients' needs and deliver ABC advice during a 15 minute consult. We continue to work with our PHOs to embed a consistent process to achieve this target and equity for Māori and Pacific. In addition PHOs encourage referrals to **Takiri Mai Te Ata Regional Stop Smoking Service**. Tū Ora has implemented an approach emphasising smoking cessation uptake (rather than just advice) with an equity focus for Māori and Pacific. |
| **Indicator 2:** Childhood immunisation | Children fully immunised at 5 years | Children who receive the complete set of age appropriate vaccinations are less likely to become ill from certain diseases. This measure captures all immunisation milestones and emphasises the need for immunisation to be both full, and delivered on time, to achieve outcomes. | Māori<br>Pacific<br>Non-Māori, Non-Pacific<br>Total | ≥95% |  | We have developed an **Immunisation Improvement Plan** focused on working with kaupapa Māori providers and outreach services to reach children who may not be immunised. Our plan focuses on strengthening the Outreach Immunisation Service, extending the CCDHB Immunisation Network to include HVDHB providers, and gaining insights on factors that influence 'declines'. |
| **Indicator 3:** Elder immunisation | Percentage of people age 65 years and over that are immunised against influenza | At age 65, immunisation is recommended by the Ministry of Health. These vaccines are free and support older people to stay well. A high performing system should see high uptake of immunisations to keep people healthy. | Māori<br>Pacific<br>Non-Māori, Non-Pacific<br>Total | ≥75% |  | The 2022 Influenza Immunisation Programme commenced on 1 April. HVDHB is currently sitting at 30% coverage for 65+ year olds. We expect for the 2022 programme primary care immunisation teams will be working at near maximum capacity and continue to be stretched due to the focus on the Covid response and delivery of Covid-19 vaccinations. |

# Shift care closer to home

We will shift services so they are delivered closer to the people using them, enabling people to receive most of their (non-complex) care within their community or homes.

**Areas of focus**

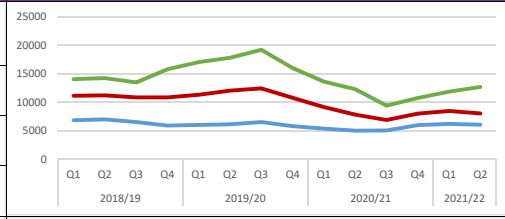
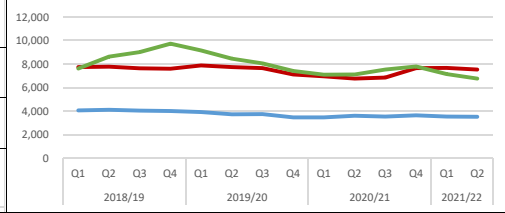
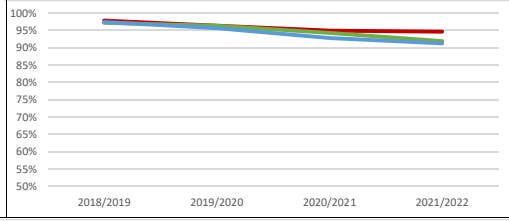
- Early intervention
- Build strong primary and community care
- Health Care Homes
- Placed-based planning – community hubs / neighbourhood approach
- Specialist support for primary care
- Telehealth services
- Management of Long Term Conditions
- Achieving health equity

**Sub-regional initiatives**

- Support a 2DHB collaborative of Māori and Pacific mental health service providers to develop and implement culturally appropriate and community-based models of care (2DHB)
- Embed telehealth models of care that began during COVID to enable patients to appropriately receive primary and secondary care services (2DHB)
- Develop and begin implementation of a 3DHB suicide prevention and post-vention plan, with a focus on population groups at higher risk of suicide (3DHB)

**Local initiatives**

- Roll out the Health Care Home patient-centred model of care across the Hutt Valley to every willing practice, achieving the aim of maximum coverage
- Review and implement changes to the Diabetes Self-Management education service to ensure it works for Māori and Pacific populations
- Review the Long Term Conditions programme to ensure alignment with Health Care Home and 'Year of Care' planning
- Review our Cardiovascular Disease Risk Assessment programmes, and explore potential partnerships with Māori/Pacific providers
- Pilot a 'neighbourhood approach' to integrated care through the establishment of a community team of nurses and allied health staff supporting 'neighbourhoods' of GP practices Arrange for General Medical Physicians to work in the community with general practices in assigned neighbourhoods and attend practice-based multi-disciplinary team meetings
- Work with Sport Wellington to improve the availability of, and access to, strength and balance activities and programmes to Māori and Pacific older peoples.
- Implement the next phase of the Respiratory Work Programme to address asthma and respiratory related hospital admissions and disparities for Maori and Pacifica.

| Indicators | Description | Rationale | Targets | | Performance – three year trend | Comments |
|---|---|---|---|---|---|---|
| **Indicator 1:** | Avoidable hospital admissions (ASH rates 0-4 years) | Ambulatory sensitive hospitalisations (ASH) are hospitalisations that could have been avoided through primary care interventions. This indicator also highlights variation between different population groups.<br>ASH rates can be reduced by shifting care closer to home, providing coordinated primary and secondary care services, and improving timely access to high-quality and culturally safe primary care services. | Māori | ≤11,676 |  | ASH rates were not required to be reported on for Q3 by the MoH. However, we are starting to see the rates rise again this quarter. **Winter planning** is underway. We are encouraging referrals to **Tū Kotahi Asthma Service** and **Well Homes** from primary health care (including midwives and Well Child Tamariki Ora nurses) to increase access to healthy housing interventions to reduce avoidable admissions for respiratory conditions. **Bee Healthy** is strengthening oral health promotion outside of the core dental hubs in pre-schools. |
| | | | Pacific | ≤17,459 | | |
| | | | Non-Māori, Non-Pacific | ≤5,791 | | |
| | | | Total | ≤8,243 | | |
| **Indicator 2:** | Avoidable hospital admissions (ASH rates 45-64 years) | | Māori | ≤7,271 |  | We are working to **improve access to urgent and planned care** in primary care to support achievement of this indicator. Work includes the roll out of the Health Care Home model of care, the development of community health networks, and improving primary care access to specialist advice. Pacific Nursing Service in the Hutt Valley working with families with complex clinical and social needs. |
| | | | Pacific | ≤7,947 | | |
| | | | Non-Māori, Non-Pacific | ≤3,647 | | |
| | | | Total | ≤4,443 | | |
| **Indicator 3:** | Percentage of people 75+ living in their own home | Subsidised age residential care is important for those who need it, but our overall goal is to assist our elderly population to stay well and continue to live independently in their own homes. This requires good access to primary care and, in some cases, home and community support services – including culturally safe household and personal care services. | Māori | TBC |  | 90% of the HVDHB population over age 75+ live in their own home .Our **whole of system response to frailty** supports people to live at home for longer. This includes strategic investments such as the expanded Early Supported Discharge team which is focused on mild-moderate stroke, and medical patients that can be supported to leave hospital early. Our Hutt Valley **clinical pharmacists are reviewing medications** to reduce the risk of falls and fractures that may result in long stays in rehabilitation. |
| | | | Pacific | | | |
| | | | Non-Māori, Non-Pacific | | | |
| | | | Total | | | |

# Deliver shorter, safer, smoother care

We will coordinate and streamline patient care so that individuals and whānau experience a shorter, safer and smoother journey through our services.

**Areas of focus**

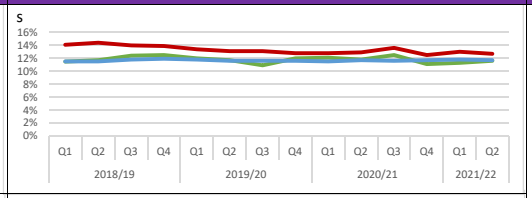
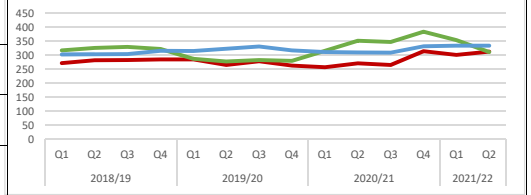
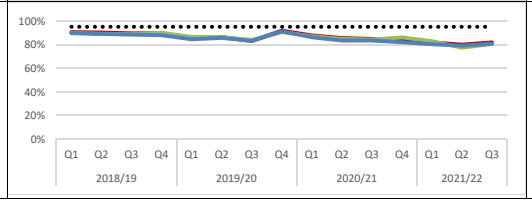
- Timely and effective care
- Safe and efficient hospital services
- Quality improvement activities
- Managing Acute Flow and production planning
- Community, primary and secondary integration
- Achieving health equity

**Sub-regional initiatives**

- Progress the 2DHB Hospital Network Programme to ensure our services are clinically and financially sustainable (2DHB)
- Develop and implement a reformed 2DHB maternal and neonatal health system plan (2DHB)
- Develop a 2DHB Family Violence Prevention Action Plan (2DHB)
- Implement the 3DHB 'Acute Continuum of Care' to better match need to service provision, enhance coordinated service provision across a range of providers, and improve integration and patient flow through the system (3DHB)
- Develop and implement a mechanism for health information to be easily accessible for disabled people in ways that promote their independence and dignity (3DHB)

**Local initiatives**

- Extend the Early Supported Discharge service to include AHS&T staff (alongside current Nursing allocation)
- Development of procedure rooms for those non-theatre procedures currently done in theatre
- Improve operating room utilization through the development a second acute theatre
- Implement the Patient Observation Platform at Hutt Hospital to improve efficiency and optimise the use of our nursing, midwifery and medical workforce.
- ED will work with the PHOs to explore and support opportunities for increased management of patients in the community and to build relationships with primary health care

| Indicators | Description | Rationale | Targets | | Performance – three year trend | Comments |
|---|---|---|---|---|---|---|
| **Indicator 1:** | Acute unplanned readmission | An unplanned acute (emergency and urgent) hospital readmission is often the result of the care provided to the patient by the health system. We can reduce unplanned acute admissions by ensuring a smooth transition from the hospital back into primary care, and by improving the quality of care in the hospital and in primary care. | Māori<br>Pacific<br>Non-Māori, Non-Pacific<br>Total | ≤11.8% |  | We are developing community responses to population drivers of **acute flow** alongside approaches to maximise the productivity and efficiency of our hospital system. Our **Early Supported Discharge** programme sees more people discharged from hospital earlier, with enhanced support from our nursing and allied health workforce in the community to prevent readmission.<br><br>In parallel, the **Hospital Network** programme is exploring our short and medium term options for expansion of **2DHB bed and theatre capacity**. This work will ensure that we have space to appropriately manage patients and balance length of stay and acute readmissions. We are also working to facilitate the smooth transition of patients back to their primary care provider with appropriate specialist support. |
| **Indicator 2:** | Acute hospital bed days per capita | Acute hospital bed days per capita reflects the demand for acute inpatient services. We can manage this demand by good discharge planning, improving the transition between the community and hospital settings, good communication between providers, managing conditions in primary care settings, and timely access to diagnostics services. | Māori<br>Pacific<br>Non-Māori, Non-Pacific<br>Total | ≤564<br>≤538<br>≤297<br>≤344 |  | |
| **Indicator 3:** | Shorter Stays in ED – patient discharged or transferred with 6 hours (SS10) | ED length of stay is an important measure of the quality of acute care in our public hospitals. The timeliness of treatment is important for patients. Long waiting times are linked to overcrowding and negative clinical outcomes and compromised standards of privacy and dignity for patients. | Māori<br>Pacific<br>Non-Māori, Non-Pacific<br>Total | 95% |  | To improve performance we have streamlined transfers between hospitals, and **previously unused capacity or admission spaces are being utilised** to relieve the impact of access block at the front door. Work is also continuing on more sustainable long-term solutions. We are **redesigning ED and acute assessment units** to facilitate delivery of contemporary models of care and ensure facilities are appropriately sized to meet demand. We are also working to **improve acute crisis support in ED.** |

# National Heatmap
## Quarter 1 2021/22

MINISTRY OF HEALTH
MANATŪ HAUORA

| | | Auckland DHB | Bay of Plenty DHB | Canterbury DHB | Capital and Coast DHB | Counties Manukau DHB | Hawke's Bay DHB | Hutt Valley DHB | Lakes DHB | MidCentral DHB | Nelson Marlborough DHB | Northland DHB | South Canterbury DHB | Southern DHB | Tairawhiti DHB | Taranaki DHB | Waikato DHB | Wairarapa DHB | Waitemata DHB | West Coast DHB | Whanganui DHB | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Improving child wellbeing | Improving the number of children enrolled in and accessing the Community Oral Health Service | | | | | | | | | | | NR | | | | | NR | | | | | |
| | 8 month immunisation coverage | NA | | | | | | | | | | | | | | | | | NA | | | 17 |
| | 5 year immunisation coverage | NA | | | | | | | | | | | | | | | | | NA | | | 17 |
| | Influenza immunisation 65+ year olds | NA | | | | NA | | | | | | | | | | | | | NA | | | 16 |
| | Improving breastfeeding rates | | | | | | | | | | | | | | | | | | | | | 20 |
| | Improving the timeliness of newborn enrolment in general practice | NA | | | | | | | | | | | | | | | | | NA | | | 1 |
| | Increased immunisation (at 2 years) | NA | | | | | | | | | | | | | | | | | NA | | | 18 |
| | Better help for smokers to quit (maternity) | NA | | | | NA | | | | | | | | | | | | | NA | | | 8 |
| | Raising healthy kids | NA | | | | | | | | | | | | | | | | | NA | | | 1 |
| | Youth mental health initiatives | NA | | | | NA | | | | | | | | | NR | | | NR | NA | | | |
| | Improving child wellbeing | NA | | | | NA | | | | | | | | | NR | | | | NA | | | |
| Improving mental wellbeing | Improving mental health services using wellness and transition (discharge) planning | NA | | | | NA | | | | | | | | | | | | | NA | | | 3 |
| | Shorter waits for non-urgent mental health and addiction services for 0-19 years | NA | | | | NA | | | | | | | | | | | | | NA | | | 1 |
| | Primary Mental Health | NA | | | | NA | | | | | | | | | | | | NR | NA | | | |
| | District Suicide Prevention and Postvention | NA | | | | NA | | | | | | | | | | | | | NA | | | |
| | Improving crisis response services | NA | | | | NA | | | | | | | | | | | | | NA | | | |
| | Improve outcomes for children | NA | | | | NA | | | | | | | | | | | | | NA | | | |
| | Improving employment and physical health needs of people with low prevalence conditions | NA | | | | NA | | | | | | | | | | | | | NA | | | |
| | Reduce the rate of Māori under the Mental Health Act: section 29 community treatment orders | NA | | | | NA | | | | | | | | | | | | | NA | | | 1 |
| | Mental health output delivery against plan | NA | | | | NA | | | | | | | | | | | | | NA | | | 1 |
| | Improving mental health services by improving inpatient post discharge follow-up rates | NA | | | | NA | | | | | | | | | | | | NA | NA | | | |
| | Improving mental wellbeing | NA | | | | NA | | | | | | | | | NR | | | | NA | | | 2 |
| Better population health outcomes supported by primary health care | Improving system integration and SLMs | NA | | | | NA | | | | | | | | | | | | | NA | | | |
| | Better help for smokers to quit (primary care) | NA | | | | NA | | | | | | | | | | | NR | NR | NA | | | 6 |
| | Better population health outcomes supported by primary health care | NA | | | | NA | | | | | | | | | NR | | | | NA | | | |
| Better population health outcomes supported by strong and equitable public health and disability system | Faster cancer treatment (31 days) | | | | | | | | | | | | | | | | | | | | | 2 |
| | Ensuring delivery of Service Coverage | NA | | | | NA | | | NR | | | | | | | | | | NA | | | |
| | Implementing the Healthy Ageing Strategy | NA | | | | NA | | | | | | | | | | | | | NA | | | |
| | Better help for smokers to quit in public hospitals | NA | NA | NA | | NA | NA | NA | | | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 3 |
| | Planned Care Measures | NA | | | | NA | | | | | | | | | | | | | NA | | | 2 |
| | Improving the quality of identity data within the NHI | | | | | | | | | | | | | | | | | | | | | |
| | Improving the quality of data submitted to National Collections | | | | | | | | | | | | | | | | NA | | | | | 1 |
| | Improving the quality of the PRIMHD | NA | | | | NA | | | | | | | | | | | | | NA | | | 1 |
| | Shorter stays in Emergency Departments | | | | | | | | | | | | | | | | | | | | | 2 |
| | Faster cancer treatment (62 days) | | | | | | | | | | | | | | | | | | | | | 9 |
| | Improved management for long term conditions - Cardiovascular (CVD) health | NA | | | | NA | | | | | | | | | | | | | NA | | | |
| | Improved management for long term conditions - Acute heart service | NA | | | | | | | | | | | | | | | | | NA | | | 9 |
| | Improved management for long term conditions - Stroke services | | | | | | | | NR | | | | | | | | | | NA | | | 8 |
| | Improving waiting times for colonoscopies | NA | | | | NA | | | | | | | | | | | | | NA | | | 5 |
| | Better population health outcomes supported by strong and equitable public health services | NA | | | | NA | | | | | | NR | | | NR | | | | NA | | | |
| Whakamaua | Give practical effect to Whakamaua: Māori Health Action Plan | NA | | | | NA | NA | | | | | | | | NA | | | NA | NA | | | |
| Improving sustainability | Improving sustainability | NA | | | NA | NA | | NA | | | NA | NR | | | NR | | | | NA | | | |
| Improving wellbeing through prevention | Improving wellbeing through prevention | NA | | | | NA | | | | | | NR | | | NR | | | | NA | | | |
| | | 1 | 8 | 7 | 12 | 5 | 10 | 7 | 12 | 8 | 9 | 11 | 5 | 8 | 10 | 9 | 8 | 7 | 1 | 7 | 9 | |

**National Performance Summary**

| | | |
|---|---|---|
| | Achieved | 325 |
| | Partially Achieved | 230 |
| | Not Achieved | 154 |
| NR | No Report | 18 |
| | Outstanding achievement | 11 |
| NA | Not Applicable | 122 |

Note: Auckland, Waitematā and Counties Manukau DHBs were granted exceptions due to their COVID-19 response work.

# Board Decision – Public

**22 June 2022**

**Regional Application Asset Write off Capital & Coast and Hutt Valley DHB**

**Action Required**

**The HVDHB Board approves:**

(a) An asset write off for HVDHB's contribution to the regional Clinical portal, WebPAS and RADA IT applications at a total cost of $1.3 m;

(b) An asset write off for CCDHB's contribution to the regional Clinical Portal, WebPAS and RADA IT applications at a total cost of $2.3m

| | |
|---|---|
| **Authors** | John Sharp, GM Corporate Finance 2DHB |
| **Endorsed by** | Mathew Parr, 2DHB Acting Chief Financial Officer |
| **Presented by** | Mathew Parr, 2DHB Acting Chief Financial Officer |
| **Purpose** | To seek approval for the asset write off for CCDHB and HVDHB contribution to two regional systems. |
| **Contributors** | 2DHB General Manager Operational Finance and Planning – Judith Parkinson |
| **Consultation** | N/A |

## Executive Summary

In 2012 Whanganui DHB, Mid Central DHB, Hawkes Bay DHB, Wairarapa DHB, Hutt Valley DHB and Capital & Coast DHB signed up to an agreement to develop phase one of CRISP. This agreement was revised and signed by the six DHB Board Chairs in May 2014. The agreement outlined that a regional system was to be developed that would integrate patient administration and clinical functionality through single clinical applications with the intent to provide a single patient shared care record for clinicians across the central region at the right time and right place. These applications would be funded by the six DHBs based on the population based funding model.

The regional solution comprises the following components:

- Clinical Portal (Concerto)
- WebPAS
- Regional Application Data Access (RADA) which is used by WebPAS
- Radiology Information System (RIS)
- PACS Archive
- Health Care Practitioners code (HCP)
- Regional HUB

The actual usage of the regional applications by each DHB is not consistent.

# Discussion

As we plan out the future technology direction required to implement the 3DHB Digital strategy, we have reviewed the regional applications and their fit for purpose in the 3DHB technology environment. This direction considers works in progress and near term investment choice.

### Current use and future direction

In the table below we have stated per regional application the DHBs current use and the future direction. As part of this process we have confirmed that both HVDHB and CCDHB will not be moving to the regional Clinical Portal, WebPAS or the Regional Application Data Access (RADA) in their current form.

| Application | Current Usage | 3 Year Horizon |
|---|---|---|
| **Not planning to use in its current form** | | |
| Clinical Portal (Concerto) | Minimal usage across CCDHB, and HVDHB with limited read only access to patient clinical records outside of Wellington region. | Amalgamation of the 3 instances of Concerto (3DHB Clinical Portal Business Case) incorporating direct data sharing of clinical records across central region. (assumes 10% use of regional application based on ordering capability and access to clinical records).<br><br>Commence review of future technologies incorporating electronic Medical Records (eMR). |
| WebPAS | Not used by CCDHB or HVDHB | Move onto WebPAS as a Service instance managed by the WebPAS vendor.<br>Onboard CCDHB and HVDHB to the WebPAS as a Service offering.<br>Commence review of future technologies incorporating electronic Medical Records (eMR). |
| Regional Application Data Access (RADA) | Not used by CCDHB or HVDHB | Decommission RADA and replace with modern data sharing and interoperability standards for all regional applications |
| **Using or planning to use** | | |
| Health Care Practitioners code (HCP) | Used by CCDHB and HVDHB today to maintain regional HCP identifiers. | Retain usage for regional HCP identifiers. Strategically align to national HPI registry as future state. |
| PACS Archive | Used by CCDHB and HVDHB for Radiology / Cardiology clinical image archive and retrieval. | Retain PACS Archive usage for image sharing across the region. Invest into future enterprise imaging strategy to cover all clinical imaging across all DHBs. |
| Regional HUB | Used by CCDHB for integration with regional applications. | Retain regional HUB usage for integration with regional applications for CCDHB and HVDHB. |
| Radiology Information System (RIS) | Not currently used by CCDHB or HVDHB. | Execute on-boarding for CCDHB and HVDHB to get onto supported RIS |

**Contributions to regional applications**

The regional application development investment up to 30 June 2020 by the 2DHB's is as follows:

| Application | CCDHB Book Value 30/06/22 | CCDHB proposed asset write off | HVDHB Book Value 30/06/22 | HVDHB proposed asset write off |
|---|---|---|---|---|
| Clinical Portal | 2,491,855 | 2,242,669 (@90%) | 1,431,690 | 1,288,521 (@90%) |
| WebPAS | 33,750 | 33,750 | 14,974 | 14,974 |
| Regional Application Data Access (RADA) | 0 | 0 | 0 | 0 |
| **Total** | **2,525,605** | **1,996,560** | **1,446,664** | **1,303,495** |

The two regional application WebPAS and RADA that the HVDHB and CCDHB are not planning to use we are proposing to write of the current investment in these assets. The regional Clinical Portal has been assessed as being used at 10% for ordering capability and access to clinical records however neither DHB will move to the regional clinical portal. The proposal is to write off 90% of the value of the clinical portal.

The remaining regional applications the DHBS are either using or planning to use and we will assess their current value as at 30 June 2023.

# Strategic Considerations

| | |
|---|---|
| **Service** | Financial performance is a key to delivering the services for the Hutt Valley and Capital and Coast populations. |
| **People** | N/A |
| **Financial** | The provision for the write off for part of the regional IT applications has been partially included in the April year to date financial position for both DHBs. |
| **Governance** | The Board is accountable for scrutinising the financial performance on behalf of the board, and reporting back to the board on issues as identified by the committee. |

# Engagement/Consultation

N/A

# Identified Risks

| |
|---|
| N/A |

# Attachment/s

N/A

# Board Decision – Public

**22 June 2022**

**Delegations until 30 June 2022**

## Action Required

**Capital & Coast District Health Board agrees to**:

(a) delegate authority to the Board Chair and FRAC Chair, to make any decisions that require Board approval during the period from 23 June 2022 to 30 June 2022, provided that on advice from the Chief Executive, the Board Chair is satisfied that it is appropriate that the decision is made by the Board prior to the establishment of Health New Zealand on 1 July 2022.

(b) delegate authority to the Chair to approve the minutes of the 2DHB concurrent Board meeting dated 22 June 2022.

**Hutt Valley District Health Board agrees to**:

(c) delegate authority to the Board Chair and FRAC Chair, to make any decisions that require Board approval during the period from 23 June 2022 to 30 June 2022, provided that on advice from the Chief Executive, the Board Chair is satisfied that it is appropriate that the decision is made by the Board prior to the establishment of Health New Zealand on 1 July 2022.

(d) delegate authority to the Chair to approve the minutes from 2DHB concurrent the meeting dated 22 June 2022.

| | |
|---|---|
| **Presented by** | Sally Dossor, Board Secretary |
| **Purpose** | This paper seeks agreement from the Boards to put in place delegations for the period between the final Board meeting on 22 June 2022 and the transfer to Health NZ on 1 July 2022. |
| **Contributors** | Mathew Parr, Acting Chief Financial Officer 2DHB and Sally Dossor, Board Secretary |

# Executive Summary

1. The final concurrent 2DHB Board meeting is on 22 June 2022 and there is an 8 day period before the DHBs transition to Health NZ on 1 July 2022.
2. While ELT have taken practical steps to ensure that decisions requiring Board approval have been made in advance of this period, it is prudent to put in place delegations to ensure continuity of decision-making for any urgent decisions required. Delegations over this period will ensure that urgent projects and programmes requiring Board approval are not delayed.
3. In addition, the minutes of the previous concurrent meeting are approved at each Board meeting. Given that there are no further Board meetings, a delegation is required for the Board Chair to approve the minutes of this meeting, so that a full and accurate record of the Boards' affairs is maintained.

# Board Decision – Public

**22 June 2022**

## Heretaunga Building at Hutt Hospital - Update

### Action Required

**The Hutt Valley District Health Board notes:**

(a) the final draft Detailed Seismic Assessment (DSA) of the Heretaunga Block, issued on 13 June 2022 at the completion of the peer review process, confirmed the overall rating of the Heretaunga building at 15% NBS (IL3).

(b) while the precast concrete façade panels are now the only element rated at 15% NBS at IL3, this still defines the primary life safety risk identified by the DSA.

(c) the panels are external to the building and the DSA identified that there are therefore options to mitigate this risk to staff, patients and visitors in the Heretaunga building while we undertake the detailed planning required to vacate.

(d) the structural elements of the building continue to pose life safety risk and are well below the standards desirable for a building of its nature and use, in particular diagnostics and overnight patient care. While based on the new assessment the life safety risk would not materialise in a moderate earthquake, there is life safety risk in a higher level event.

(e) a wide range of options have been explored to relocate services from the Heretaunga building, which has confirmed significant capacity constraints in the community, public, and private sectors and means the options to move services without significant and material impacts on patient care are limited.

(f) to vacate the Heretaunga building in a way that maximises service continuity, for our patients, staff, and communities, will require temporary (prefabricated) and permanent building options on the Hutt site.

(g) preliminary options for temporary and permanent buildings have been developed by Destravis, our infrastructure planning partners. Destravis will be on site in July 2022 to work with clinical and management teams to develop the indicative plans for temporary prefabricated buildings from design phase into costing and rapid development of a business case for investment.

(h) we have been engaging with interim Health New Zealand and their seismic advisor regarding the advice attached to this paper, and will continue to engage as we become one entity from 1 July 2022 when Health New Zealand is established.

**The Hutt Valley District Health Board agrees, that in addition to the resolutions of 13 May and 2 June 2022:**

(a) to confirm, on the basis of the final draft DSA, the decision to not occupy the building any longer than is reasonably practicable until alternative or replacement facilities are available. Noting that based on the additional information about seismic risk and advice, and practicable mitigation steps to address life safety risk, the timeframe to vacate is longer than initially anticipated.

(b) to request that Health New Zealand and the Ministry of Health consider, as a priority, decisions regarding temporary building options on the Hutt Hospital site and community facilities, while options for a permanent building on the Hutt Hospital site that meets the current and future healthcare needs of the community in the Hutt Valley are being progressed.

**The Hutt Valley and Capital & Coast District Health Boards note:**

(a) the Master Site Planning Envelopes agreed by the Boards in December 2021 will be updated to:

a. reflect changing infrastructure landscape and the approved clinical configuration, and

b. ensure the planning and investment approaches evolve to deliver on the Hospital Network vision to make best use of our hospital sites to deliver services to our communities.

| | |
|---|---|
| **Strategic Alignment** | Our Vision for Change HVDHB, CCDHB Health System Plan 2030,<br>Te Pae Amorangi, Taurite Ora, Sub-Regional Disability Strategy,<br>Pacific Health and Wellbeing Strategic Plan for the Greater Wellington Region. |
| **Presented by** | Fionnagh Dougan, 2DHB Chief Executive |
| **Developed by** | Chief Executive & Executive Leadership Team |
| **Purpose** | Advise the Boards on options and next steps in response to the final draft Detailed Seismic Assessment of the Heretaunga Building at Hutt Hospital. |

# Executive Summary

1) There have been some material changes to the engineering advice which confirm while the building would still be earthquake prone (subject to determination by Hutt City Council), there is only one specific, non-structural, element that rates at 15% NBS at IL3:

   a) a draft Detailed Seismic Assessment of the Heretaunga Block issued on 8 March 2022 identified some structural and non-structural elements were 15% NBS at IL3. The draft DSA identified that, when compared with a new building with the same use on the same site, the Heretaunga Block at Hutt Hospital was 15% of New Building Standard (NBS) at Importance Level 3 (IL3).

   b) on 13 May 2022, the Hutt Valley District Health Board reviewed the draft engineering advice, legal advice, and analysis of options and decided that the option to stay in the Heretaunga building for any longer than is required to vacate practicably was not appropriate or viable.

   c) on that basis, the Board decided that, subject to any material change in engineering advice, the Heretaunga building should be decanted to the maximum extent practicable and as soon as reasonably practicable.

   d) a final draft DSA was issued on 15 June 2022. The final draft DSA contains material changes to the engineering advice. The advice now confirms only one, non-structural, element is rated at 15% NBS at IL3 (precast concrete façade panels) with the main structural elements all being rated at 34% or above.

   e) the change in ratings results from a very thorough peer review process with the benefit of a range of engineering perspectives. The peer review robustly tested the model and assumptions used to determine the %NBS rating for each element.

2) While the decision to vacate is still appropriate given the overall life safety risk and our obligations as an employer, landlord, health care provider and public entity, there are mitigation options available which mean vacating can be executed in a more planned, appropriate and systematic way over a longer timeframe:

   a) the final draft DSA means there are more feasible mitigation options for that one non-structural element rated at 15% NBS at IL3. This is because the precast panels are external to the building

and the DSA identified that we have options to mitigate this risk to staff, patients and visitors in the Heretaunga building while we undertake the detailed planning to vacate.

b) it is important to note that the final draft DSA does not change the overall status of the building. With one element still at 15% NBS at IL3, the building will have an E grade rating, and would still be an earthquake prone building (subject to determination by the Hutt City Council). The structural elements of the building are scored as 34-60% NBS at IL3 which is classified as earthquake risk.

3) Our current focus is on ensuring that mitigations of risk are fully explored based on the updated engineering advice;

a) at the meeting on 13 May 2022, the Board directed the Executive to work with engineers to identify and implement temporary mitigation steps to the maximum extent practicable to minimise life safety risk.

b) some mitigations have been put in place and further advice has been commissioned to make sure we are taking all reasonable and practicable steps to ensure the health and safety of staff, patients and visitors in the Heretaunga building.

c) in parallel, we are progressing work on our detailed emergency response should an event occur that requires vacating the building – this will be updated based on the final draft DSA and then thoroughly tested to ensure it is fit for purpose. We have monitoring systems in place which will provide immediate notification of changed building status in a seismic event.

4) We are also continuing detailed planning regarding how to vacate the building into a range of temporary facilities and permanent solutions for all services;

a) at the meeting on 13 May 2022, the Board directed us to report on the Implementation Plan no later than 22 June 2022. Work on the implementation plan continues but options to move services without significant and material impacts on patient care are limited.

b) planning for temporary and permanent solutions will proceed at pace and we are seeking investment, noting the structural building elements are scored as earthquake risk. Destravis will be on site in July to advance plans for prefabricated buildings and revision of Master Site Plans.

c) engagement with interim Health New Zealand (and from 1 July 2022, Health New Zealand) will continue as we progress this work in the district. Timeframes will be informed by steps to mitigate life safety risk and planning for temporary and permanent solutions for services. The safety of our staff, patients, and visitors continues to be paramount including ongoing service provision to the Hutt Valley community.

# Strategic Considerations

| | |
|---|---|
| **Service** | This work will lead to fundamental considerations of what services are provided on which hospital sites. This will be explicitly linked to the development of integrated care continuums in our communities and localities ensuring care is provided locally. |
| **People** | This paper sets out implications for people in the Heretaunga building and presents options to continue achieving health equity while supporting an aligned workforce. |
| **Financial** | There will be implications for our capital investment and maintenance investment requirements balanced against our long term operational cost profile and its contribution to wellbeing. |
| **Governance** | This is a programme of work being led by the executive leadership team. The work is supported by our clinical teams, expert engineering, emergency management, |

| | |
|---|---|
| | legal, analytical, communication, and assurance advisors working with a project team governed through a steering group. |

# Engagement/Consultation

| | |
|---|---|
| **Patient/Family** | Given the sensitivities of the information, no patient or family engagement or consultation has occurred but there is a detailed communication and engagement approach that will be implemented following the Board's decision. |
| **Clinician/Staff** | Clinical and operational leadership are involved in the planning work. A full internal communications approach is in place including weekly updates to staff. |
| **Community** | Given the sensitivities of the information, no community engagement or consultation has occurred but there is a detailed communication and engagement approach that will be implemented. |

# Identified Risks

| Risk Description | Risk Owner | Current Control Description | Current Risk Rating | Projected Risk Rating |
|---|---|---|---|---|
| There is insufficient capacity and capability to decant in a safe and timely manner | Director Provider Services | Finalise and test draft plans with key audiences, regular reporting to Steering Group, resource planning, and procurement of additional capability | Very High | High |
| There is a material seismic event before the project outcomes are achieved | 2DHB Chief Executive | Update of emergency management plan. In addition, real time post event reports on building health (following non-material seismic events). | High | High |
| There is a regional health emergency, COVID-19 or winter seasonal illness outbreak that requires a large-scale response | 2DHB Chief Executive | Contingency plan built into project plan, stakeholder engagement and emergency management plan | High | High |
| People accessing the HVDHB campus have reduced trust and confidence in the campus | Director of Communications and Engagement | Develop and implement communication and stakeholder engagement plan In particular, tailored messages directly promoting the DHB's focus on health & safety & key messaging | High | High |

# Appendix

1: Communications approach for the Heretaunga building project

# Attachments

1. **Final draft DSA:** *"Hutt Hospital – Detailed Seismic Assessments Heretaunga Block DSA: Final Draft"* from Aurecon, dated 15 May 2022
2. **Peer Review:** *"Hutt Hospital Heretaunga Block Detailed Seismic Assessment (DSA) Peer Review"* from Silvester Clark, dated 15 June 2022
3. **Health Infrastructure Unit advice:** *"Summary of the Revised Detailed Seismic Assessment and Peer Review of Heretaunga Block at Hutt Hospital"* from interim Health New Zealand Health Infrastructure Unit, dated 15 June 2022.
4. **Health & Safety Risk Assessment:** *"Hutt Valley District Health Board – Heretaunga Block; Health and Safety Implications"* from BECA, dated 16 June 2022.

# Introduction

### Purpose

1. The purpose of this paper is to advise the HVDHB Board on actions in response to the final draft Detailed Seismic Assessment (DSA) of the Heretaunga Building at Hutt Valley Hospital, and both Boards on changes to master site planning resulting from the Heretaunga building DSA.

### Relevant previous papers, in date order

| | | |
|---|---|---|
| December 2020 | Board Public Excluded | 3.3 Strategic Infrastructure Brief |
| April 2021 | Board Public Excluded | 4.1 2DHB Hospital Network Development |
| August 2021 | Major Capital Projects Advisory Committee | 2.8 2DHB Major Capital Projects Seismic Resilience Update |
| December 2021 | Board Public Excluded | 3.1 2DHB Hospital Network: Planning for the future and addressing immediate capacity constraints |
| April 2022 | Major Capital Projects Advisory Committee | 2.9 2DHB Major Capital Projects Seismic Resilience Update – Capital & Coast and Hutt Valley DHBs |
| May 2022 | Board Public Excluded | 5.1 Hutt Valley DHB (HVDHB) - Heretaunga Building, Hutt Hospital |
| June 2022 | Board Public | Hutt Valley DHB (HVDHB) - Heretaunga Building, Hutt Hospital |

# Background

### Initial engineering advice

2. The draft Detailed Seismic Assessment (DSA) of the Heretaunga Block issued on 8 March 2022 identified that, compared with a new building with the same use on the same site, the Heretaunga Block at Hutt Hospital was 15% of New Building Standard (NBS) at Importance Level 3 (IL3).
3. The draft DSA included structural and non-structural elements that were rated at 15% NBS at IL3, but noted that even one element at 15% puts the whole building rating at 15% NBS at IL3.
4. The draft DSA identified that the building had five key structural components that rated as 15% NBS (IL3):
    - Columns part of moment-resisting frame
    - Beams part of moment-resisting frame
    - Concrete floor diaphragm
    - Precast concrete façade panel connections
    - Stairs.
5. The draft DSA noted that the following components within the building were also classified at less than 34% NBS at IL3:
    - Concrete shear walls (30% NBS)
    - Foundation system (20% NBS).
6. With at least one element at 15% NBS at IL3, the building would have an E grade rating and would be an earthquake prone building, subject to determination by the Hutt City Council.

7. Accordingly, management prepared advice for the Board including:

   - **Draft DSA**: "*Hutt Hospital – Detailed Seismic Assessments Heretaunga Block DSA*" from Aurecon issued 8 March 2022
   - **Failure Hierarchy Advice**: "*Hutt Hospital - Heretaunga Block Detailed Seismic Assessment Summary*" Failure Hierarchy report from Aurecon dated 29 March 2022
   - **First Peer Review**: "*Hutt Hospital Heretaunga Block DSA Peer Review - High-level review comments*" from Silvester Clark dated 3 May 2022
   - **Seismic Risk Review**: "*Seismic Risk Review of the Heretaunga Block, Hutt Hospital*" from Dave Brunsdon dated 9 May 2022
   - **Second Peer Review**: "*Hutt Hospital Heretaunga Block DSA Peer Review - High-level review comments*" Second Memo from Silvester Clark dated 11 May 2022
   - **Remediation Advice**: "*Heretaunga Block Strengthening Hutt Valley District Health Board*" from Aurecon dated 11 May 2022
   - **Legal advice** from Buddle Findlay dated 11 May 2022
   - **Options analysis**

### 13 May Board resolutions

8. On 13 May 2022, the Hutt Valley District Health Board reviewed all the available information and decided:

   > *"the option to stay in the Heretaunga building for any longer than is required to vacate practicably is not appropriate or viable;"*

   and

   > *"subject to any material change in engineering advice, the Heretaunga building be decanted to the maximum extent practicable and as soon as reasonably practicable;"*

9. At the time of the resolutions, the Board noted engineering discussions on the detailed elements of the assessments would continue (Peer Review) and would help us to understand the scope of the likely failure points and ways to temporarily mitigate life safety risk.

10. The Peer Review also helps clarify failure point nuances which can help inform the planning and feasibility of decanting options. While discussions were expected to potentially change detailed elements of the assessment, engineers advised the overall rating will remain at 15% NBS (IL3).

## Updated engineering advice after peer review

11. After peer review, a final draft DSA of the Heretaunga Block was issued on 13 June 2022 (Final draft DSA - attachment 1) which confirmed the overall rating of the building at 15% NBS at IL3.

12. The final draft DSA does contain material changes to the engineering advice. The advice now confirms one, non-structural, element is rated at 15% NBS at IL3:

    - precast concrete façade panels (15% NBS)

13. The main structural elements are now rated at 34% or above at IL3, as follows:

    - Moment-resisting frame (34% NBS)
    - Concrete floor diaphragm (34% NBS)

- Foundation system (>34% NBS)
- Concrete shear walls (35% NBS)
- Gravity columns (40% NBS)
- Reinforced concrete masonry walls (45% NBS)
- Stairs (60% NBS).

14. The result does not change the overall status of the building under the Building Act. With one element still at 15% NBS at IL3, the building will have an E grade rating, and would still be an earthquake prone building (subject to determination by the Hutt City Council).
15. The change in ratings result from a thorough peer review process with the benefit of a range of engineering perspectives. The peer review robustly tested the model and assumptions used to determine the %NBS rating for each element.
16. Formal communication approving and endorsing the approach and ratings in the draft final DSA has been received from all parties involved in the peer review process; Silvester Clark (Peer Review - attachment 2) and interim Health New Zealand's trusted seismic advisor (Health Infrastructure Unit advice - attachment 3).
17. The result and updated descriptions of the building failure mechanisms is fundamental to informing the timeframe of vacating the building, as described in the advice from interim Health New Zealand's trusted seismic advisor:
    a. *"Based on the seismic scores and commentary reported in the draft* [final] *Aurecon DSA and our understanding of the building, we consider that the building can continue to be used for a period of time while alternative or replacement facilities are planned."*

# Considerations

### Assessing life safety risk

18. The final draft Detailed Seismic Assessment of the Heretaunga Block issued on 13 June 2022 has changed the life safety risk of elements and therefore mitigation options available.
19. The precast concrete façade panels, which are rated at 15% NBS at IL3, are the primary life safety risk now identified by the DSA. The panels are external to the building and the DSA identified that there are options to mitigate this risk to staff, patients and visitors in the Heretaunga building while we undertake the detailed planning to vacate.
20. While the precast panels are the primary life safety risk, the other elements continue to have a life safety risk, based on the new assessment this would not materialise in a moderate earthquake but would in a higher level event.

### Service continuity

21. The structural elements of the building are scored as 34-60%, classified as earthquake-risk.
22. The Heretaunga building houses diagnostics services, and 79% of the total bed stock on the Hutt Hospital site and is all:
    a. general adult medical & surgical wards
    b. of the special care baby unit

c. paediatric beds

d. maternity services.

23. As such, the options to move services without significant and material impacts on patient care are limited.

### Mitigation and remediation of building

24. The infrastructure teams are focusing on understanding options to further mitigate or remediate the life safety risks with the precast concrete façade panels and the structural building elements scored between 34% and 67%. Updated engineering advice on options has been commissioned, with mitigations like fencing around the perimeter of the building already in place.

25. Remediation options are being scoped to increase the building elements to 67% NBS at IL3. As the updated ratings for the building elements remain below 67% - the level for remediation to achieve - the scope, cost, and time for remediation is expected to be similar to initial indications that were neither feasible nor cost effective particularly while the building continues to be occupied.

### Health & safety risk assessment

26. The DHB have commissioned health and safety advice to make sure all reasonable and practicable steps have been identified and taken to ensure the health and safety of staff, patients and visitors in the Heretaunga building.

27. The draft of the first component of the health and safety advice (Health & Safety Risk Assessment - attachment 4) has been completed by the independent engineering firm BECA. This advice identifies further mitigation steps to minimise risks to staff, patients, and visitors in the Heretaunga building.

28. Emergency response plans are in place and staff have had updated training. Further work is underway on a more detailed emergency response should an event occur that requires vacating the building – this will be updated based on the final draft DSA and then thoroughly tested to ensure it is fit for purpose. There are monitoring systems[1] in place which will provide immediate notification of changed building status in a seismic event.

29. A second component of health and safety advice will be commissioned to assess the impact of proposed service relocations. This will inform the balance of risk to staff and patients of remaining in the building compared with the distribution of services across multiple locations as is likely required in a relocation scenario, as outlined below.

## Planning for service relocation

[1] The PAlert seismic warning system is installed across the Hutt Hospital site which provides:

- Interconnection with the network of PAlert sensors that allow some prior warning of an earthquake based on monitoring of the Pressure wave which precedes the shake.
- Sensors that measure actual ground forces a site is submitted to during an event. Instead of relying on GNS data, this site specific information is important to allow structural engineers to assess our buildings.
- Structural Health monitoring of the Heretaunga Block specifically – this measures the *resonance* of the building which is directly related to the *stiffness* (or strength of the building). This provides empirical information post event of how the building performed to inform decision making, discrete changes to the *resonance* beyond predetermined levels could trigger either further engineering investigation or evacuation.

## Options to use existing health system capacity

30. As outlined in the 13 May 2022 Board paper, all options for the decanting the building (all or in part) and moving services have flow on implications for the wider Wellington hospital network, CCDHB, Wairarapa DHB and other DHBs in the region; as well as community providers, private hospitals, and aged residential care facilities.

31. It was also indicated that while emergency implementation options had been developed, they needed to be tested for feasibility and applicability over a longer timeframe which required direct engagement with private facilities and service providers. While discussions were already underway about capacity as part of normal operations, the specific engagement about significant increased capacity was not undertaken prior to the decision of 13 May due to the sensitivities involved.

32. The DHB have now engaged with private providers and undertaken feasibility testing of a wide range of options for capacity across settings including in the community and our other providers.

33. A range of alternative locations for services has been identified. **To shift services into those locations would require significant displacement of services across the regional health system and is only viable if we had to vacate the building in an emergency situation, post-event.** The DHB would have to commandeer capacity in hospitals across the region and the private sector under emergency powers.

34. To demonstrate the scale of changes required in such an emergency decant, the following service relocations would be required:

    a. Special care baby unit (SCBU) co-locating with NICU at Wellington Regional Hospital;

    b. General medicine moving into the Care Block at Hutt Hospital, where older persons and rehabilitation service wards are currently. This service would then need to relocate to Kenepuru Community Hospital, private facilities, and/or community service provision;

    c. Planned surgery delivered from private hospital facilities;

    d. Maternity services provided from other public and some private facilities;

    e. Pharmacy, radiology and laboratory services relocated on the Hutt Hospital site.

35. This highlights that the options to move services into existing capacity without significant and material impacts on patient care do not exist.

36. The DHB will continue to work with our partners however work to date has identified capacity constraints in the private sector and it will be necessary to supplement any solution with temporary options to meet the capacity shortfall.

## Creating new capacity

37. Our DHBs have a well-documented existing shortfall in beds and theatres. Prior to the Heretaunga Building DSA, work was well underway to identify how we can deliver additional capacity across the Hospital Network including the Hutt Hospital site.

38. This planning has been supported by Destravis who have completed our Strategic Infrastructure Brief (approved by Boards in December 2020), and Master Site Planning Envelope reports (approved in December 2021).

39. The Strategic Infrastructure Brief identified the requirement to invest in upgrading and replacing our infrastructure to increase facility capacity to meet demand; and that the Kenepuru and Hutt

hospital sites and infrastructure require significant upgrade and change given the age and condition of the sites.

40. In response, the Master Site Planning Envelopes provided a high level, site wide, development road map, giving us confidence that we can meet future demand in a way that enhances the integrity of the sites and provides for future development in response to need (>50 years).

41. The Master Site Planning Envelopes report identified emergency department capacity at Wellington and bed and theatre capacity at Hutt as the priority projects for capital investment in the short term. Planning and development of designs for these projects is well underway, identified in the Boards' strategic priorities programme as Front of Whare at Wellington and Bed & Theatre Capacity at Hutt.

42. Receipt of the Heretaunga building DSA has changed the recommended scope of the Bed & Theatre Capacity project at Hutt Hospital. It is now recommended that this project develop an option for a prefabricated building to be constructed at Hutt Hospital to facilitate vacating the Heretaunga building.

43. Destravis have developed preliminary options for a prefabricated building on the Hutt site, two of the options are shown in figure 1.

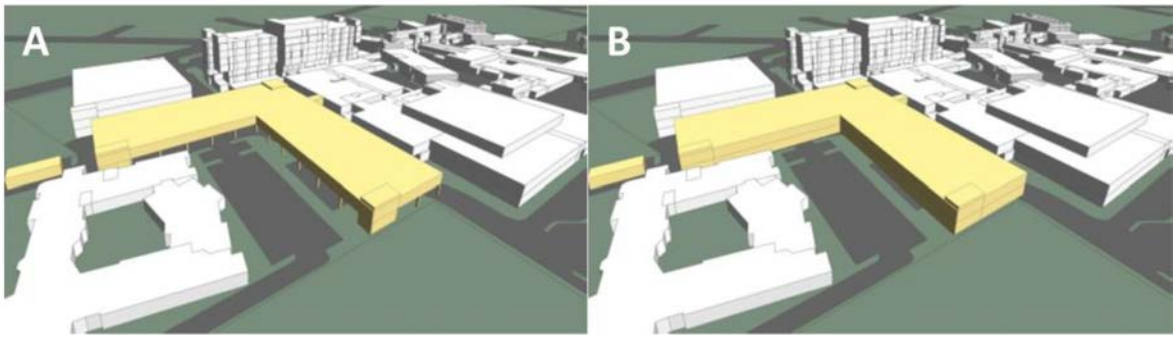



**Figure 1.** Two preliminary options for a prefabricated building on the Hutt Hospital site. Option A is a single storey building elevated over the existing ED carpark and roadway. Option B is a double storey building located in the existing ED carpark and roadway.

44. These options are the fastest way to provide on-site inpatient capacity. In each option the emergency Department access is maintained, there is no impact on the space available for the strategic long term master plan, and it requires moderate capital investment. In both options, a significant shift of inpatient activity within the Hutt site and potentially to other sites is still required if the Heretaunga building is to be vacated fully.

45. Destravis will be on site in July 2022 to work with clinical and management teams to take the preliminary plans for prefabricated buildings and develop from design phase into costings and enable rapid development of a business case for investment. This would be a temporary solution for services to relocate.

46. At the same time, the Master Site Planning Envelopes are being updated. The Envelopes developed in 2021 maintained the Heretaunga building while further capacity was developed elsewhere on the site, figure 2.

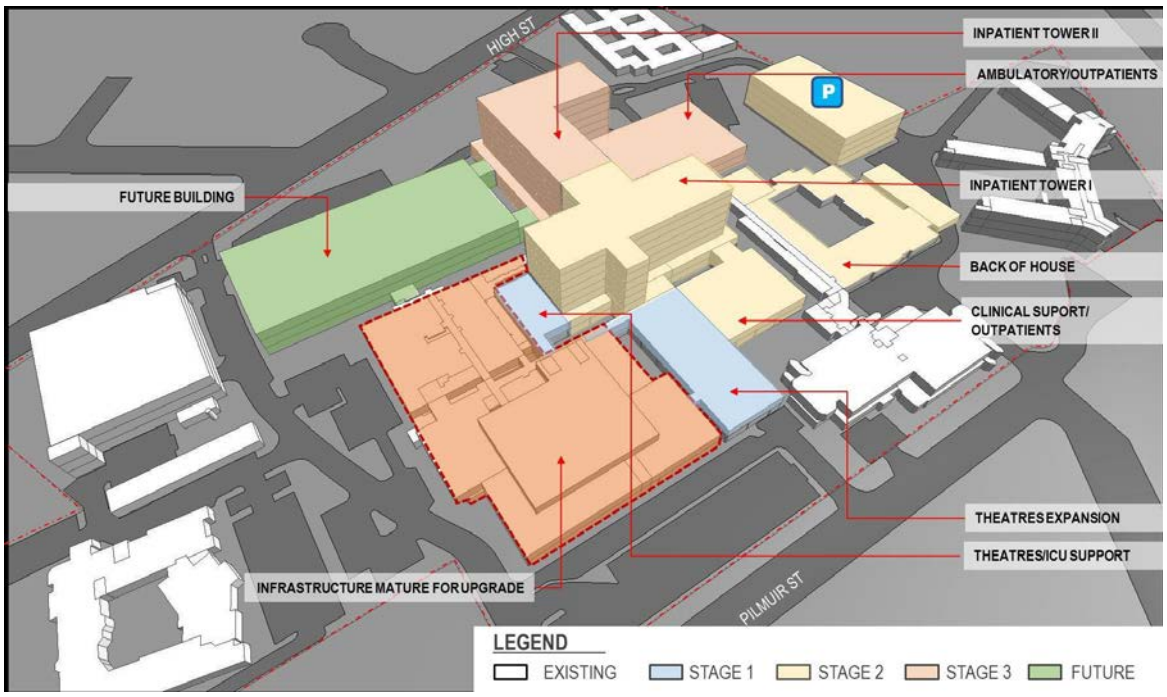



**Figure 2.** Master Site Envelope Plan for Hutt Hospital site endorsed by the Boards in December 2021.

47. Now, the Heretaunga building location will be available for development earlier which opens up different opportunities for site development. A first review of new options for the Master Site Envelope Plan for Hutt Hospital is shown in figure 3.

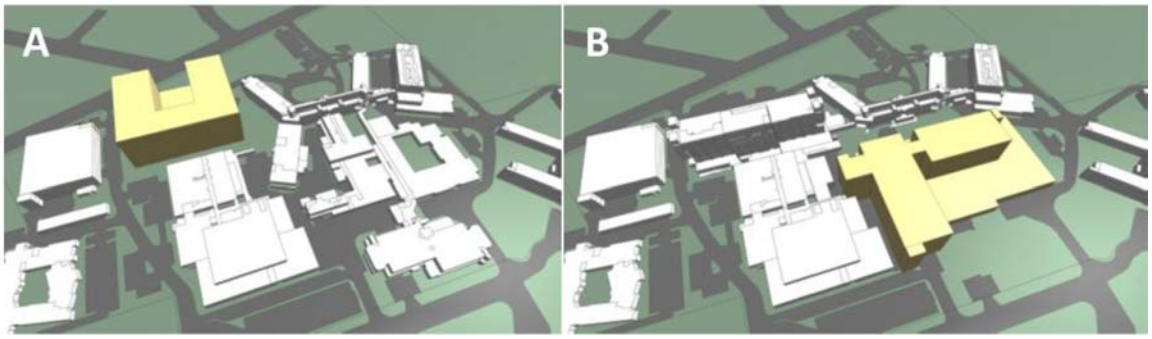



**Figure 3.** First draft of two potential revisions of the Master Site Envelope Plan for Hutt Hospital site. Option A rebuilds on the site of the Heretaunga building, option B delivers a building in the centre of the site.

48. Further work will continue on refining the Master Site Envelope Plans for each of the three hospital sites in our 2DHB Hospital Network. This will weave together the clinical configuration approved in December 2021 with our changing infrastructure landscape, ensuring we are evolving our planning and investment approaches to make best use of our hospital sites in delivering services to our communities.
49. Through this work the DHB will be continuing the detailed planning to vacate the building into a range of temporary and permanent solutions for all services.
50. Planning for temporary and permanent solutions will proceed at pace and seek investment, noting that other options for decant without impacting patient care are limited.

# Summary and next steps

51. While a number of elements have changed in the DSA, the building would remain earthquake prone (subject to determination by the Hutt City Council).
52. The safety of our staff, patients, and visitors continues to be paramount including ongoing service provision to the Hutt Valley community.
53. Given the change as a result of peer review, the DHB have also shared the final draft DSA with the Ministry of Health, interim Health New Zealand, and the Hutt City Council.
54. The purpose of sharing the DSA in draft is to ensure it contains all the information that is required for their roles as future building owners, stewards of health infrastructure, and regulator under the Building Act.

**Next steps**

55. Based on the revised DSA, it is recommended herein that the Board confirms the decision to not occupy the building any longer than is reasonably practicable until alternative or replacement facilities are available, taking into context the updated information. Noting that based on the additional information on seismic risks and advice, and any mitigation steps for life safety risk, this timeframe is likely to be longer than initially indicated.
56. The timeframes will be informed by:
    a. steps to mitigate life safety risk which will be outlined in engineering advice and the health & safety risk assessment, and
    b. planning for temporary and permanent solutions for services.
57. The DHB have explored a wide range of options including testing capacity in the community and our other providers. This work will continue with our partners however will need to also supplement any solution with temporary options as we have identified capacity constraints.
58. Options to deliver capacity have been identified, including construction of prefabricated and permanent buildings. Planning is well underway in partnership with Destravis who have been working with the DHBs for 2 years on infrastructure planning. This work will continue at pace and seek investment.
59. In the meantime, the DHB will further establish mitigation steps to address life safety risk and advance emergency response training, updating evacuation plans as new information is received.
60. The communications and engagement plan for the Heretaunga building project will be updated to reflect the revised DSA and the intended next steps once decided (approach described in appendix 1).
61. Throughout this process the management team will continue to work with interim Health New Zealand and the Ministry of Health on our planning and next steps.

# Appendix 1: Communications approach for the Heretaunga building project

The communications approach is set out below:

**Organisational objectives**

- Maintain the health and safety of staff, patients and visitors to Hutt Hospital
- Minimise disruption to healthcare service delivery at Hutt Hospital and any impacts to other local DHB providers i.e. Wellington ED who are already under pressure

**Communications objectives**

- Ensure stakeholders are informed, understand any impacts or actions they may need to take to minimise any alarm or distress, particularly among vulnerable stakeholders
- Help ensure that staff and patients maintain confidence to work at and access healthcare at the Hutt campus and around the region respectively
- Help ensure that staff are confident that the DHB is prioritising their safety and wellbeing and will continue to share information
- Protect the reputation and social licence of HVDHB by mitigating risks effectively

**Communications approach**

i. Use a 'staff first' approach to sharing communications. This will ensure staff feel informed and able to raise questions that can be used for project planning and ongoing communications. It also enables them to respond to patients and stakeholders questions/concerns. This includes:
    a. providing a weekly update that is posted to the website and intranet
    b. regular updates to both intranet pages as new information/FAQs becomes available. This includes information shared publicly and additional content that is solely relevant to staff.
    c. clearly signposting information on both intranet and website to make it easy to find.
    d. having updated physical materials available on site where appropriate. This could include handouts and posters in common areas.
    e. organising opportunities for direct engagement as needed and appropriate.

ii. Establish the HVDHB website as the official source of information.
    a. Easy Read and NZSL versions of the key messages will continue to be made available online and physically in consultation with the disability team.

iii. Maintain direct communications with key stakeholders, providing opportunities for them to ask questions and engage in dialogue. Community provider workshops have begun, with more planned.

iv. Utilise existing communications channels that are trusted by stakeholders and have higher engagement levels, this includes a variety of regular external and internal panui, as well as all staff emails.

v. Where there are significant decisions made regarding the relocation of health services, we will also consider advertising or arranging for features in The Hutt News or other local publications. Community workshops are also being planned.

# Hutt Hospital – Detailed Seismic Assessments

## Heretaunga Block DSA

### Hutt Valley District Health Board (HVDHB)

Reference: 520602

Revision: 1 – Final Draft

2022-06-15

aurecon

Bringing ideas to life

# Document control record

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# 1 Executive Summary

Aurecon has been engaged by the Hutt Valley District Health Board (HVDHB) to provide a Detailed Seismic Assessment (DSA) of the Heretaunga Block building located at Hutt Hospital, Lower Hutt. The DSA has been undertaken in accordance with *The Seismic Assessment of Existing Buildings – Technical Guidelines for Engineering Assessments,* dated July 2017 (the Guidelines), including the updated *Section C5 – Concrete Buildings – Proposed Revision to the Engineering Assessment Guidelines*, dated November 2018.

The Heretaunga Block is a seven-storey building with a basement level below ground floor and 2 plant levels above the roof level. It was designed in the mid-1970s with the construction completed in 1980. The basement and ground levels extend outside the main rectangular footprint of the building which rises as a tower above the level 1 slab. The primary structural system comprises the following components:

- Reinforced concrete piles, pile caps and ground beams.
- Reinforced concrete shear walls as the vertical primary lateral load resisting system in the transverse direction.
- Reinforced concrete beams and columns in the perimeter frames as the primary vertical lateral load resisting system in the longitudinal direction
- Reinforced concrete flat slabs act as the horizontal diaphragm.
- Reinforced concrete columns and flat slabs as the primary gravity load resisting system

A peer review of the assessment has been undertaken by Silvester Clark, with high level inputs by Kestrel Group, following the draft issue of this report. The assessment has been updated as a result of this process.

The Table below presents a summary of the assessment info and findings.

**Table 1: Detailed Seismic Assessment Summary Table**

| | |
|---|---|
| Building | Heretaunga Block |
| Storeys: | 7 storey (plus two plant stories and a basement) |
| Year of Design (approx.) | 1974 |
| Gross Floor Area ($m^2$) | ground floor ~3800 $m^2$<br>1st ~3300 $m^2$,<br>2nd -7th ~ 2150 $m^2$<br>Plant 1,2 ~ 550 $m^2$ |
| Construction Type | Reinforced Concrete |
| Assessment Type | Detailed Seismic Assessment (DSA) |
| Date Building Walkaround | Multiple dates between October 21 and March 2022 |
| Importance Level | IL3 |
| Structural Assessment Summary | Force-based assessment methodology as described in The Seismic Assessment of Existing Buildings, Part C2 (2017) and adopting concrete guidance from Part C5 Technical Proposal (2018). |
| Current *%NBS* estimate | **15*%NBS*(IL3)** based on the rating of precast concrete façade panels. |

# 2 Introduction

## 2.1 Background and Building Description

The Heretaunga Block is located on the Hutt Hospital campus at 638 High Street, Boulcott, Lower Hutt. It is a seven-storey building, with a basement level below the ground floor and two plant levels above the roof level. It was designed in the mid-1970s with construction completed in 1980. The basement and ground levels extend outside the main rectangular footprint of the building which rises as a tower above the level 1 slab. The image below is from a three-dimensional model of the building created in the drawing package “Revit” which has been used to clarify the structural system.

The building is constructed as cast in-situ reinforced concrete with precast concrete cladding panels fixed to the exterior of the building. The floors of the building are in-situ reinforced concrete “flat” slabs (without beams) with thickenings (column capitals) over the internal gravity columns.

The floors are supported on a series of square and rectangular concrete columns with shear walls running full height of the building in the transverse direction. The walls are evenly spread along the building with some thinner walls located around the lift core. In the longitudinal direction there are reinforced concrete shear walls from the foundations up to Level 1 with deep reinforced concrete spandrel beams forming moment frames with the exterior tower columns from this level to the roof.

The building is founded upon reinforced concrete pile foundations, with several piles grouped together by pile caps, and the pile caps linked by ground beams. There are a number of reinforced concrete masonry (blockwork) walls in the lower levels of the building. A glazed canopy structure is located at the main entrance of the building on the High Street side, although drawings for this canopy have not been located.

Seismic resistance in the transverse direction is provided by the full height shear walls and in the longitudinal direction, the seismic resistance is provided by the shear walls below level 1 and reinforced concrete moment frames above the level 1.

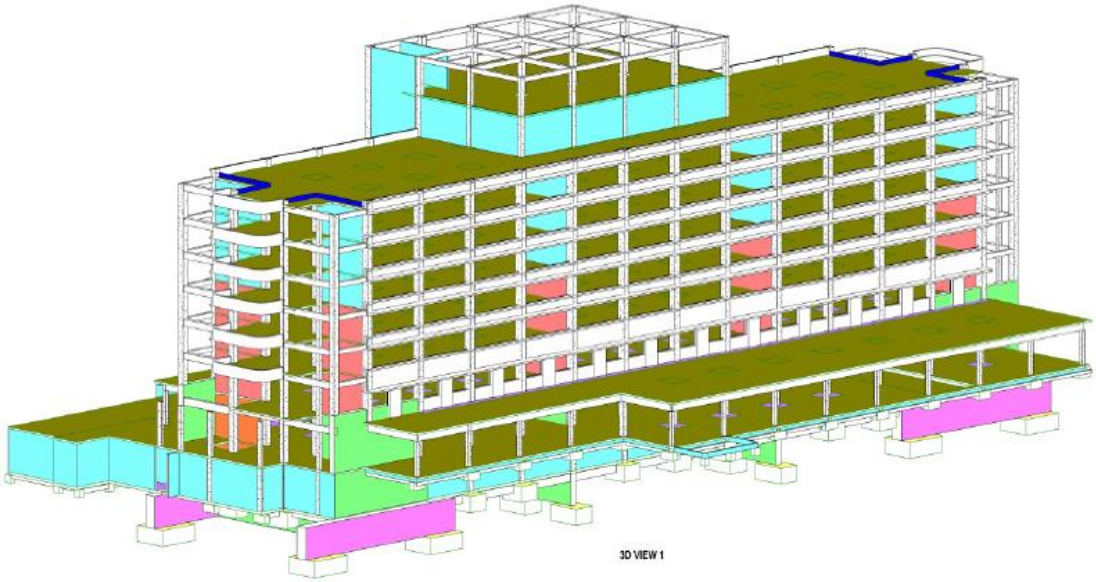



**Figure 1: 3D Representation of building**

### 2.1.1 Previous DSA

A DSA was undertaken by Aurecon for the Heretaunga Block in 2011. This assessment was in accordance with the then current *2006 NZSEE Assessment Guidelines*. The 2011 DSA focussed on the primary structure of the building and determined that the building achieved a rating of 43%*NBS*(IL3). The assessment was

governed by the failure of the columns in the longitudinal frames. The 2011 DSA did not include a review of the precast cladding elements, was based upon an available global ductility (μ) of 2.0 and used the provisions of a FEMA (The US Federal Emergency Management Authority) publication, FEMA 440, to increase the amount of damping in the building response to account for soil behaviour beneath the structure.

The current assessment determined a lower available global ductility of 1.25 for the concrete frames, and 1.5 for the reinforced concrete shear walls based on the updated *Guidelines* and analysis techniques. This has resulted in a relative increase in loads between the two assessments.

We also note that the provisions for soil damping in FEMA 440 have been superseded by the process described in ASCE 41-17. Since 2011 there has been discussion regarding whether the consideration of soil damping is more complicated than previously thought as it may not be simultaneous with damping from ductile behaviour in the superstructure, leading to potential non-conservative results in some situations. For this current assessment, damping due to soil structure interaction has not been considered, although the flexibility of the soil has been allowed for in the analytical model.

## 2.2 Reference Information

The assessment of the building was based on the following information:

- *Existing Structural Drawings (1972 foundation, 1974 super structure)* by Edwards, Clendon & Partners
- Geotechnical desktop study based on available information (2.7).

## 2.3 Basis of Assessment

The DSA was carried out to the latest version of the assessment guidelines (*The Seismic Assessment of Existing Buildings, 2017*) incorporating all updates included in the update to section C5 issued on 31 November 2018; this will be referred to as "*Assessment Guidelines*" hereafter. Loading inputs have been determined in accordance with the current New Zealand loadings standard (NZS1170).

The building layout, member sizes and structural details were taken from the original design drawings whilst the material grades are assumed based on the available information on the drawings and the Assessment Guidelines' recommendations.

The assessment of the primary Lateral Load Resisting Systems (LLRS) was carried out using a Response Spectrum Analysis (RSA) approach. Due to the large difference in the lateral stiffness of the load resisting system in the longitudinal direction, the equivalent static analysis (ESA) approach was not utilised for assessment.

The diaphragms were assessed using the pESA (pseudo equivalent static analysis) method.

The precast concrete cladding panels and concrete stairs (secondary structural elements) were assessed for their ability to satisfy the life safety requirements during an Ultimate Limit State (ULS) event.

The soil flexibility of the site has been taken into consideration in the analysis model. However, it should be emphasized that the soil parameters considered were based on limited available geotechnical information. Noting the available geotechnical information was generally from adjacent sites and not directly relevant to the soil underneath the Heretaunga Block.

The key structural elements in this assessment included the following:

- RC shear walls
- RC moment Resisting frame
- RC gravity columns
- RC concrete floor diaphragm
- RC foundation system
- RC precast concrete panels and connections
- RC stairs

### 2.3.1 Elements not reviewed

This assessment has focussed on the performance of the primary structure of the building, as well as significant building elements such as the precast façade panels.

The next steps with regards to building assessment would be the seismic review of non-structural elements, including building services and architectural elements (such as ceilings and partitions) within the building. From our recent experience in evaluating similar buildings in Christchurch and Wellington, non-structural building elements (façade glass, ceilings, internal walls, overhead services) constitute a significant portion of the repair/reinstatement cost following an earthquake. In a moderate seismic event, non-structural element damage will likely contribute heavily to downtime and repair costs, and therefore the performance of these non-structural elements following a moderate seismic event could affect business continuity. With regard to ceilings, and associated life safety risks, the HVDHB has advised that all ceiling tiles in the building have been replaced with light-weight tiles. This essentially eliminates the life safety hazard related to ceilings.

The glazed canopy at the entry to the hospital has not been reviewed. Drawings of the canopy prepared at the time the building was designed do not reflect what is in place on site. Design information is being sought to review the capacity of this element. We would note that performance of this element is likely to be governed by the allowance for movement within the glazing system with respect to the steel framing.

## 2.4 Lateral Load Resisting System

### 2.4.1 Transverse direction (Concrete Shear Walls)

Reinforced concrete shear walls are the lateral load resisting system in the transverse direction (east-west). Their thickness varies from 200 mm to 610 mm with rectangular boundary elements. Figure 2, Figure 3 and Figure 4 illustrate the location of the shearwalls above, below and within the ground floor (dark blue solid line). The concrete shear walls are founded on concrete ground beams connecting to pile caps and piles to resist the compression and uplift forces induced by the shear walls under seismic loads. Building columns are integral with the shear walls, forming well confined “boundary elements” in the walls.

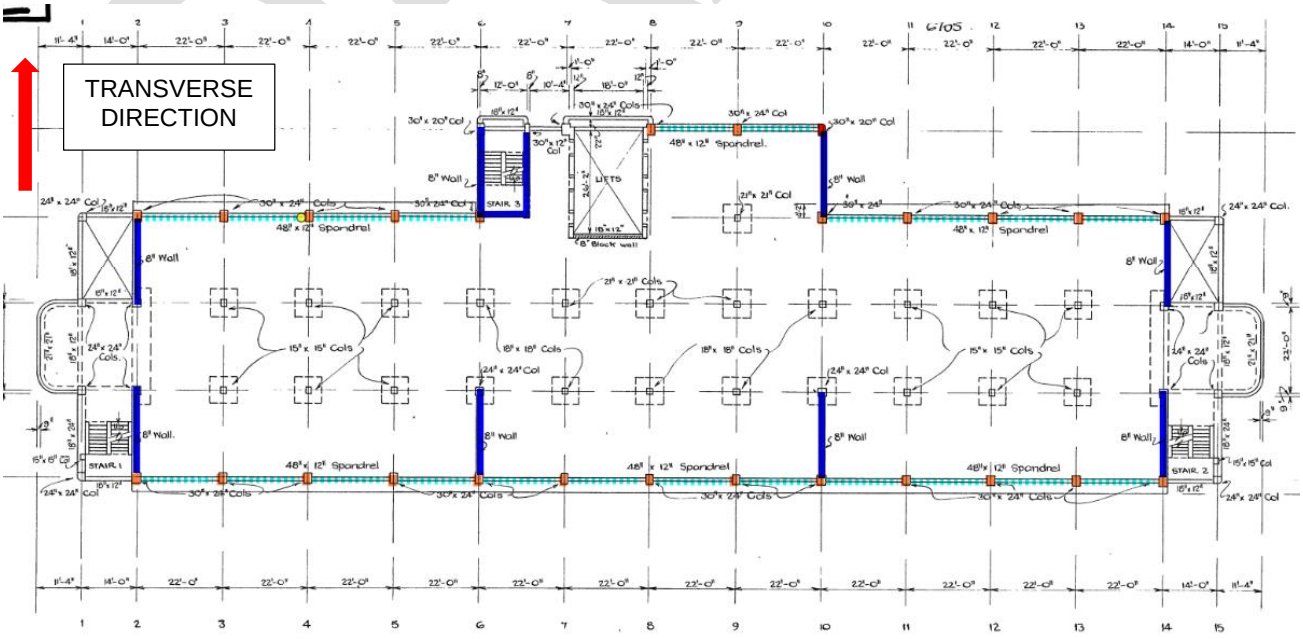



**Figure 2: Typical shear wall layout above the ground floor (dark blue lines)**

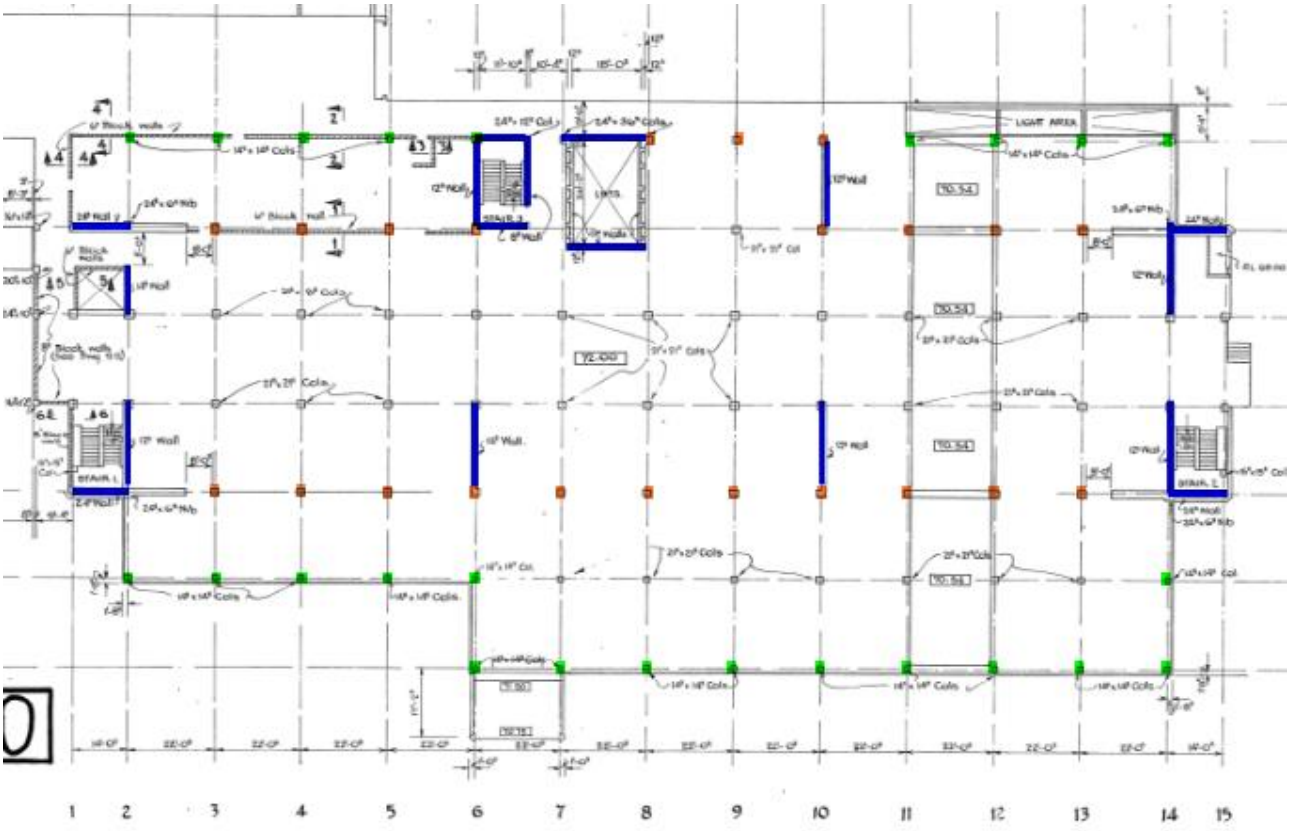


**Figure 3: Shear wall layout at ground floor level (dark blue lines)**

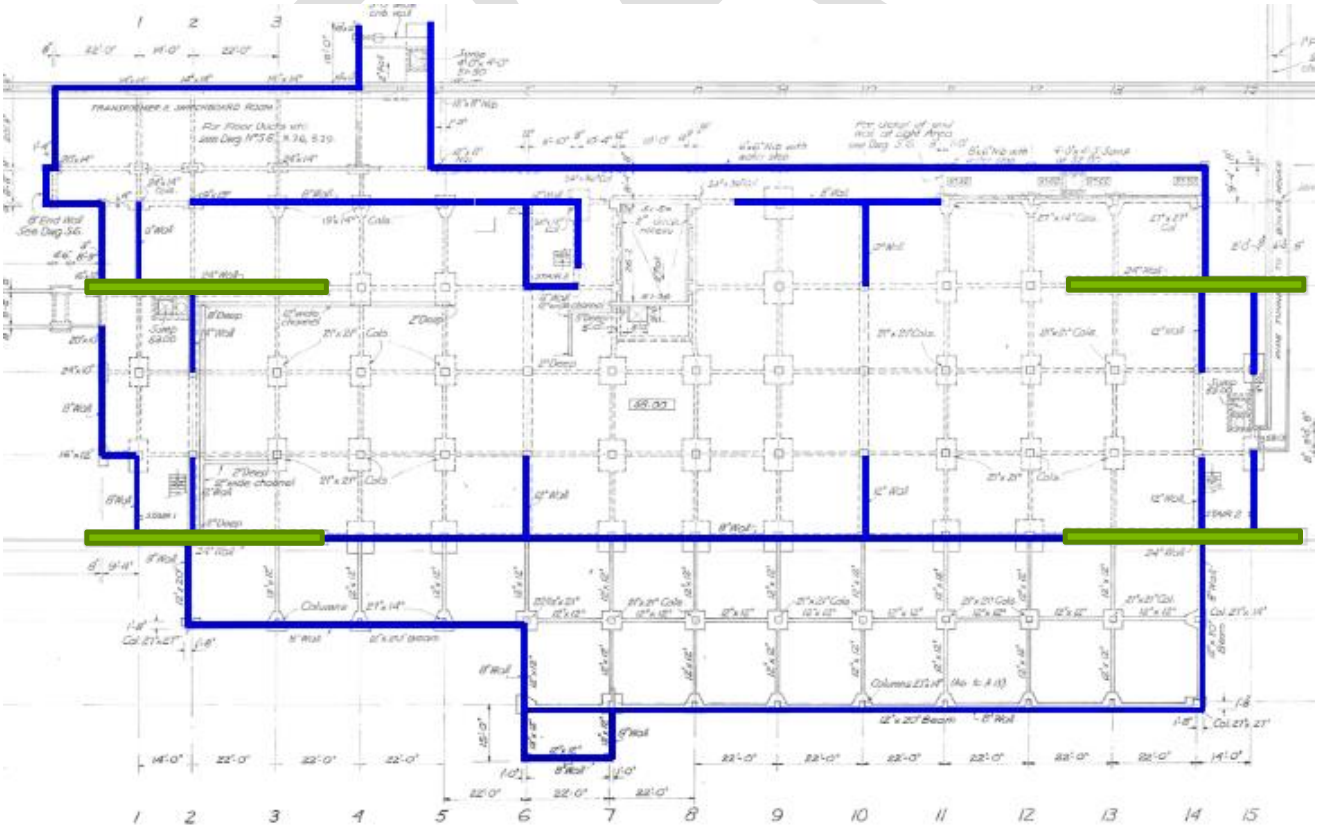


**Figure 4: Shear wall layout at basement level (dark blue lines), Longitudinal Walls (Green Lines)**

### 2.4.2 Longitudinal direction (Moment Resisting Frames and Shear Walls):

The lateral system in the longitudinal direction is a combination of reinforced concrete shear walls up to level 1, and reinforced concrete moment resisting frames above this level.

The dominant lateral load resisting system below level 1 is the reinforced concrete shear walls that are 610mm thick from the basement floor level to level 1 and 1210mm thick below the basement level to the foundations. There are also 200mm thick walls around the perimeter of the building which act as retaining walls for the basement (refer Figure 4), as well as a full height walls on the perimeter of the stair adjacent to the lift core.

Above level 1, the Moment Resisting Frames comprise of concrete columns and deep spandrel beams on the North and South faces of the building as shown in Figure 5. Columns are rectangular with dimensions between 610mm and 760 mm. Beam widths range between 305mm and 380mm and their depths range between 1220 mm and 2290mm. As described later in the report, these dimensions for beams and columns leave the moment frames vulnerable to a weakstorey failure mechanism.

Review of the building drawings shows that both the level of reinforcing, and the detailing of the reinforcing, in the main building elements (beams, columns and walls) is substantial for a building of this age. There is a significant amount of confining steel used in the column and beams., The vertical splice bars are also shown as full strength butt welds rather than the more customary lapping arrangement.

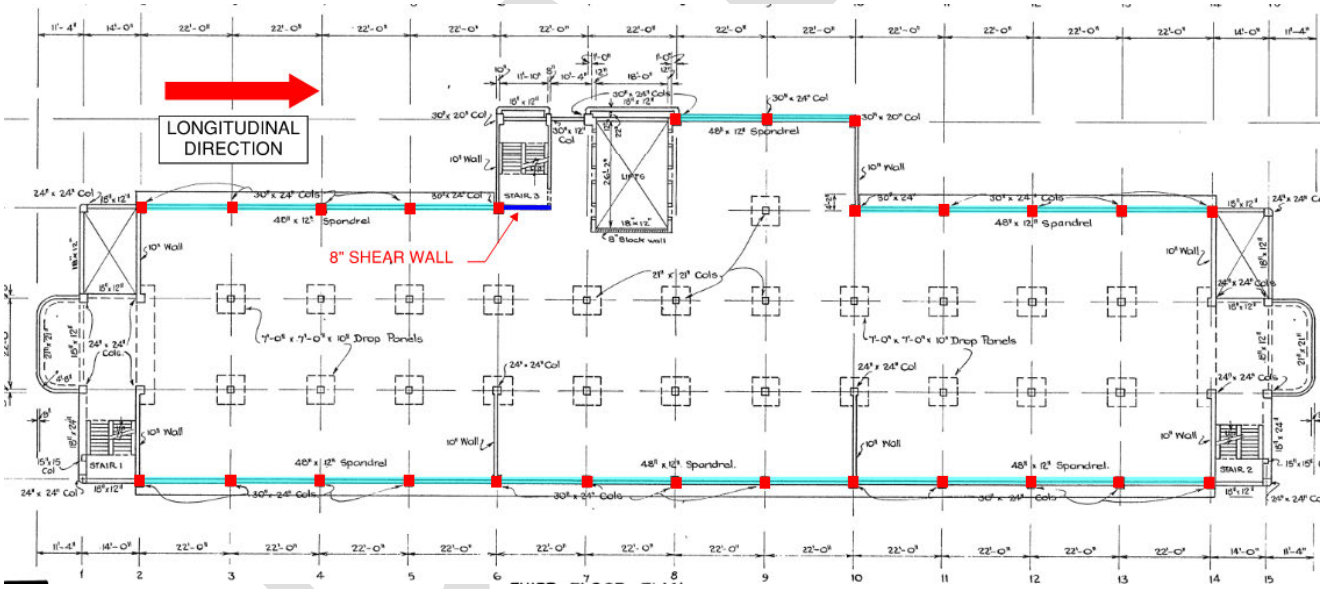



**Figure 5: Moment Resisting Frames in the longitudinal direction**

## 2.5 Gravity System

### 2.5.1 Floors

The floors in the building are a concrete flat slab system (cast in-situ without beams) with thickenings over the internal gravity columns (Column capitals).The thickness of the slabs is 160mm for levels 1 to roof and 254 mm for the basement floor and upper-level plant floors. The column capitals on levels 1 to roof are 254mm thick (overall).

The concrete slabs are typically reinforced with 16mm diameter deformed bars in each direction. These bars are arranged to form strips of floor between the columns that are stronger than the central parts of the floor,

essentially acting as beam zones in the areas where loading demands are larger. Figure 6 shows an example of the reinforcement level different parts of the floor.

As well as providing a load path for gravity loading, the floors of the building are used to distribute horizontal lateral loading to the LLRS in the building. Starter bars around the perimeter of the slab connect the slab to the concrete beams and walls.

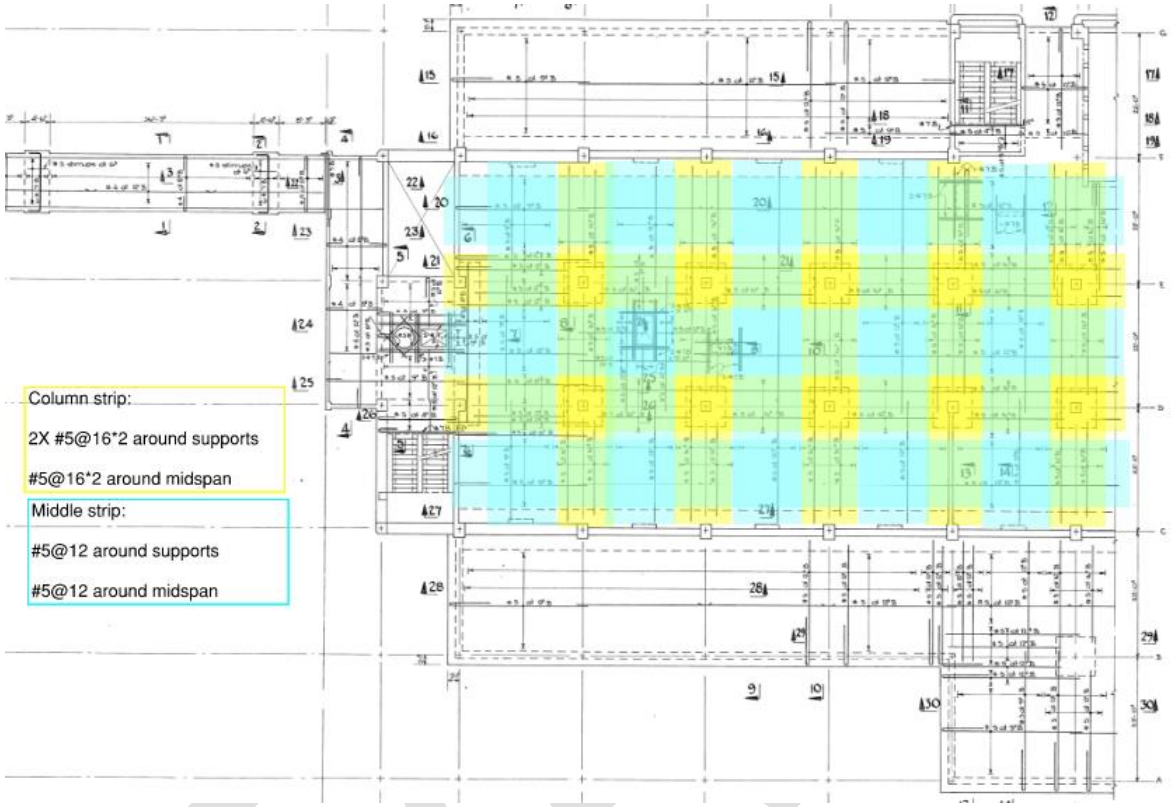



**Figure 6: Floor reinforcement (first floor – bottom reinforcement)**

## 2.5.2 Concrete Columns (part of gravity load resisting system)

The internal columns, as shown in Figure 7, are part of the gravity system and do not participate in the verticallateral load resisting system. Column capitals (slab thickenings) are located around the internal columns.

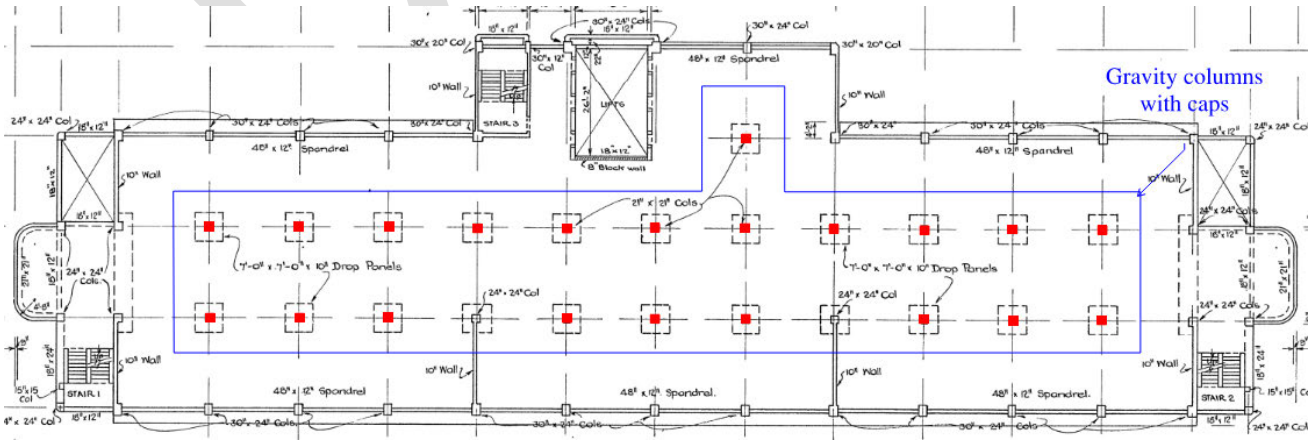



**Figure 7: Internal gravity columns with caps (No internal beams – flat slab)**

## 2.6 Cladding

The building is clad with aluminium framed window systems and precast concrete panels of varying size and shape. Typically, the precast concrete panels are approximately 100mm thick. All panels are typically connected rigidly to their supporting structure, with cast in reinforcing bars, with some structural steel brackets in specific locations. There is no lateral movement allowance provided in the panel connections.

## 2.7 Foundations and Subsoil

The site subsoil classification, in terms of NZS1170.5:2004; Clause 3.1.3, is considered to be Class D.

The foundation system comprises of three pile types - P1, P2 and P3 – with 7.6m, 7m and 4.7m lengths, and 380mm, 460mm and 460mm diameter, respectively. Pile stiffnesses and capacities (different piles' group are shown in Figure 8) were considered based on a desktop geotechnical study by Aurecon.

From the desktop geotechnical study, the piles were found to be slender (long with relatively small diameter) and provide low horizontal stiffness. This was further exacerbated as the piles were typically located in soil that would be prone to liquefaction.

The investigation and review of the available geotechnical information indicates that the site consists of loose sand/silts, highly susceptible to liquefaction between the depths at 3.0m and 6.0m. The groundwater table is expected to be around 3.0m to 4.5m depths below the ground. The thickness of the liquefiable layers and depths to groundwater table were inferred from the available ground information and could vary across the site. It is estimated that the trigger level for liquefaction in the soil would be around 50%*NBS* (IL3) shaking.

The soil and pile properties for liquefied soil, based on the available data, are tabulated in Table 12, which is included as Appendix A. A factor of 20 was applied to the soil stiffnesses for the non liquified case.

It should be also noted that the geotechnical desktop study was undertaken based on limited ground investigation data near the site of the Heretaunga Block. No site-specific ground investigation was completed as part of this study.

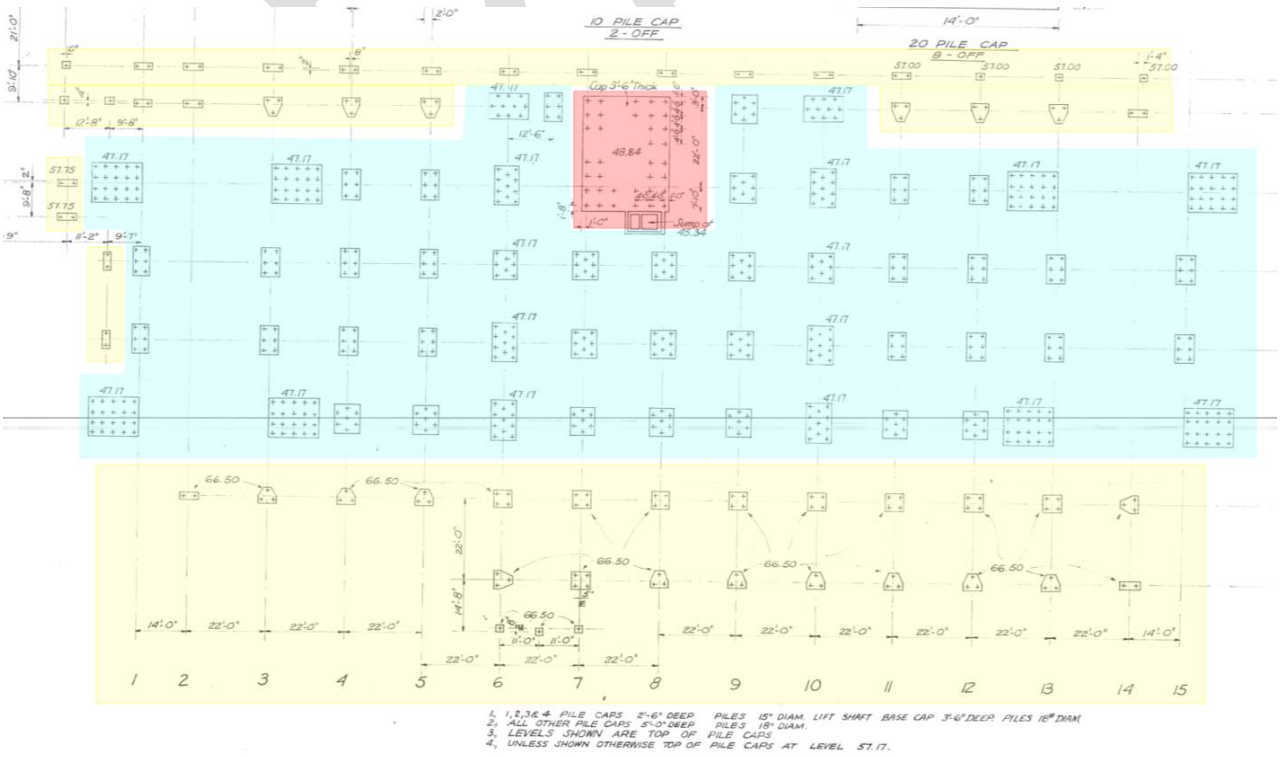



**Figure 8: Different pile types by colour (Red P1, Blue P2 and Yellow P3)**

# 3 Assessment Methodology

## 3.1 Assessment Description

This assessment follows the 2017 Assessment Guidelines and the update(s) to section C5 issued in November 2018.

The key structural elements in this assessment included the following:

- RC shear walls
- RC moment Resisting frame
- RC gravity columns
- RC floor diaphragm
- RC foundation system
- RC precast concrete panels and connections
- RC stairs
- Masonry Walls

## 3.2 Assessment Inputs

### 3.2.1 General

The structure has been assessed at an Importance Level 3 (IL3) and a design life of 50 years, in accordance with the New Zealand Building Code and as agreed with HVDHB.

Importance Level 3 is defined in NZS1170.0 for use for major structures (affecting crowds). Or, in greater detail, "*structures that as a whole may contain people in crowds or contents of high value to the community or pose risks to people in crowds*". One of the defined examples in Table 3.2 of NZS1170.0 is "*healthcare facilities with a capacity of 50 or more resident patients but not having surgery or emergency treatment facilities*". Buildings of this importance level are not required for special post disaster function following a major event.

There has been discussion with HVDHB as to whether the building houses functions that are required for post disaster operation. We understand that the importance level of the building is being reviewed as part of 2DHB master site planning. Should the HVDHB consider the building to be an Importance Level 4 structure, applied loading at ultimate limit state for this assessment would increase by 38%.

The assessment summary table (Table 7) includes *%NBS* values for the main building elements for IL2 and IL4 loading to allow review of the building performance against these levels.

### 3.2.2 Dead and Superimposed Dead Loads

The self-weight of the walls, frame members and slabs are calculated by the structural analysis program based on the input section size and unit weight.

**Table 2: Superimposed dead loads used in the assessment**

| Load Type | Element | Load |
|---|---|---|
| Super Imposed Dead Load | Floor finishing, service, ceilings | 1.25 kPa |

### 3.2.3 Live Loads

The following design live loads were adopted as indicated as per structural drawings and in accordance with NZS1170.1 loading.

**Table 3: Live loads use in the assessment**

| Load Type | Element | Load |
|---|---|---|
| Reducible Live Load (1st and ground floor) | ——— | 4 kPa |
| Reducible Live Load (2nd to 6th floors) | ——— | 3 kPa |
| Reducible Live Load (Roof) | Outside the Plant room areas | 3kPa |
| Non-reducible Live Load (roof and plant floor) | Plant room areas | 5 kPa |

### 3.2.4 Wind Loads

Consideration of wind loads is outside the scope of this assessment. Given the nature of the building, wind loading in unlikely to be a governing load case for any part of the structure, with the possible exception of the gazed entrance canopy.

### 3.2.5 Seismic Loading

The following material properties and corresponding characteristic strength and probable strength were used as per the Assessment Guideline Tables C5.3, C5.4 and Section C6.

**Table 4: Seismic parameters for building assessments**

| | | |
|---|---|---|
| Design Working Life | 50 | |
| Importance level | 3 | |
| Return Period Factor (R) | 1.3 | |
| Site Subsoil Classification | D | |
| Period (seconds) | Stiff Soil:<br>Longitudinal: 1.0 (s)<br>Transverse: 0.9 (s) | Flexible Soil:<br>Longitudinal: 1.5 (s)<br>Transverse: 1.5 (s) |
| Hazard Factor (Z) | 0.4 | |
| Near Fault Factor (N) | $N_{max} = 1$ | |
| Ductility Factors | 1.25 (Longitudinal) 1.5 (Transverse) | |
| Sp Factors | 0.9 | |

### 3.2.6 Material Properties

The following material properties and corresponding characteristic strength and probable strength were used as per the Assessment Guideline Tables C5.3, C5.4 and Section C6. No material specification regarding the concrete and steel used in the time was found in the structural drawings.

**Table 5: Material properties**

| Item | Characteristic Design Strength (MPa) | Assessment (Probable) Strength (MPa) |
|---|---|---|
| Reinforcing Steel | N/A | 324 MPa |
| Concrete | 20 MPa | 30 MPa |

### 3.2.7 Geotechnical Parameters

The site subsoil classification, in terms of NZS1170.5:2004; Clause 3.1.3, is considered to be Class D.

Pile stiffnesses and capacities are as per the desktop geotechnical report by Aurecon Geotechnical engineers. The properties are shown in Table 12. As indicated earlier, these results are based on limited ground investigation data near the site of the Heretaunga Block.

### 3.2.8 Computer Modelling

A three-dimensional elastic model was created in ETABS software for analysis. A response spectrum analysis (RSA) was performed on the structure to extract demands for the assessment. Figure 9 shows the 3D view of the building. Consideration for soli flexibility (Soil-Structure-Interaction) as per geotechnical information was included in the model through the use of spring supports to represent the lateral and vertical stiffness of the pile groups.

A sensitivity review of the springs was undertaken to reflect both liquefied and non-liquefied subsoils, with the non-liquefied soils representing a soil stiffness of 20 times the liquefied values. This represents and upper bound for the building element responses, whereas the liquified soil springs represents an upper bound for the building displacement.

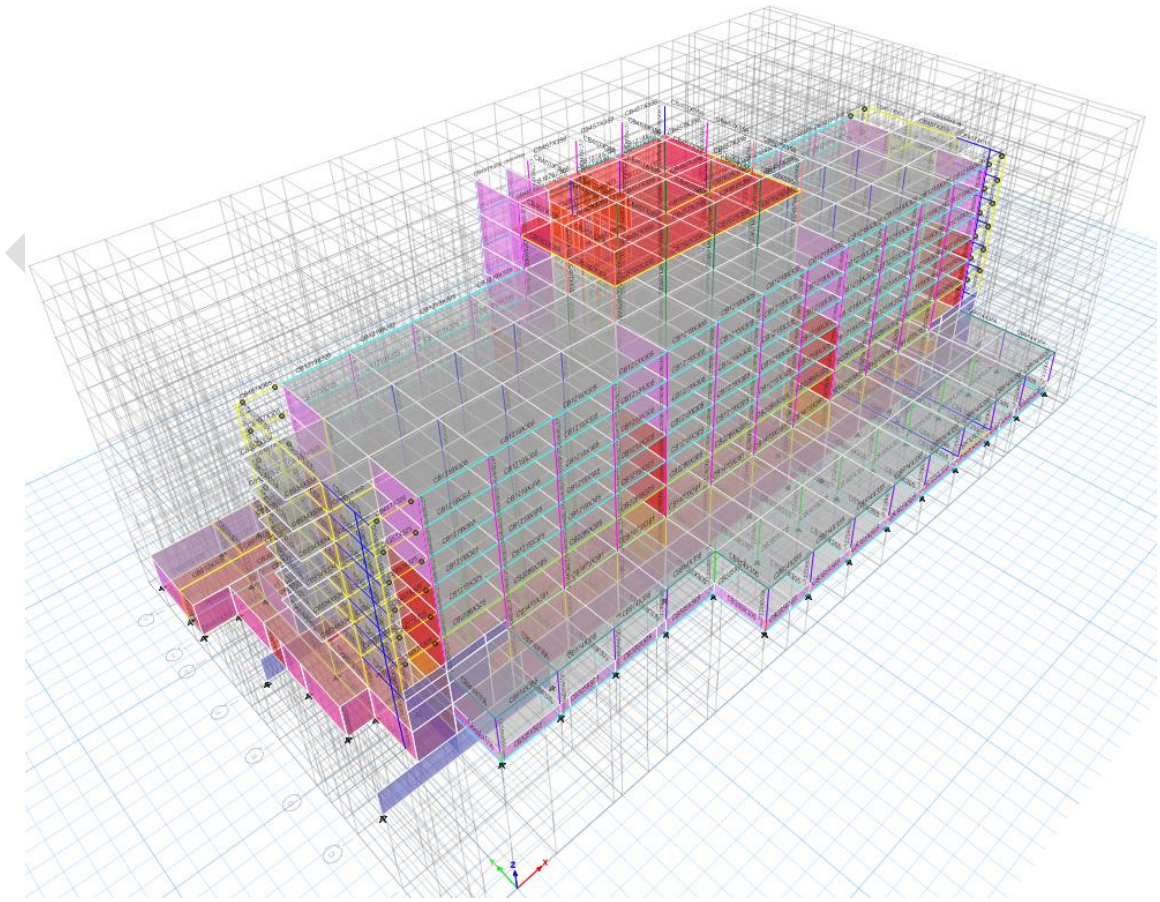


**Figure 9: 3D ETABS Model for Building**

### 3.2.9 Assessment Assumptions and Limitations

The limitations of the analysis are as follows:

- Nonlinear behaviour is not captured in the RSA and ESA models; therefore, allowance for redistribution of actions is limited in the model space. Where appropriate, redistribution of loads has been allowed for outside of the model.

The assumptions of the analysis are as follows:

- A nominal ductile response was determined for the building ($\mu = 1.25$ ) due to the probable behaviour of LLRS in both directions. Some ductility could be considered for the transverse direction shear walls and load redistribution in the moment frames as discussed later in this report.
- The capacity of columns and shearwalls are dependent on their axial force demand. For the assessment, their capacities are calculated based on the gravity load (G+$\Psi_E$Q).

## 3.3 Seismic Guidelines

This assessment has been undertaken using the document *Section C5 – Concrete Buildings – Proposed Revision to the Engineering Assessment Guidelines*, dated November 2018. This guideline, known as the "Yellow Book", provides the latest engineering knowledge on aspects involved in the assessment of concrete buildings, and to reflect what engineers learned from the Kaikōura earthquake.

### 3.3.1 Yellow book vs Red Book

The Amended Section C5 "Yellow Book" represents the latest information available on various aspects of the seismic performance of existing concrete buildings. It gives a more accurate assessment of the expected seismic behaviour of a building than the original Section C5 of *The Seismic Assessment of Existing Buildings – Technical Guidelines for Engineering Assessments*, dated July 2017 (also known as the Red Book).

We note that a diaphragm assessment undertaken in accordance with the Red or Yellow book version of the guidelines may result in different scores when compared to one another due to the different analysis methodologies and assumptions used in the different versions. This is because under the Yellow Book, diaphragms generally require a sophisticated grillage model that captures local stress concentrations.

One item that is clarified in the Yellow book which has impacted other assessments is the guidance and general commentary in regard to the use of brittle mesh in diaphragms. This is not an issue for this building due to the use of ductile steel reinforcing in the diaphragm.

We also note that the Yellow book provides clear and concise methodology for the assessment of precast floor systems, whereas previously under the Red Book, this was open to interpretation by different engineers. This may lead to different scores when compared to one another due to the different analysis methodologies and assumptions used in the different versions. Again, this is not an issue for this building as the floor system is a cast in situ slab system.

The remaining elements (Reinforced Concrete Moment Frames, shear walls, façade panels, stairs, reinforced masonry walls and foundations) undertaken in accordance with the Red or Yellow book version of the guidelines are likely to result in similar scores when compared to one another due to the similar analysis methodologies and assumptions.

## 3.4 Peer Review Process

Following issue of the draft report, a peer review of the assessment has been undertaken by Silvester Clark, with high level inputs from Kestrel Group (on behalf of NZ Health). This process involved Silvester Clark reviewing the models and calculations prepared as part of the building assessment and provided comments and queries on the assessment for Aurecon to respond to. These items were discussed with Silvester Clark and Kestrel Group at a number of meetings during the process. Once there was agreement between Aurecon and Silvester Clark the ratings for elements were updated.

The review has resulted in changes in the reported ratings for various aspects of the building as summarised in Table 6 below. Details of the element ratings are included in section 4 of this report.

**Table 6: Element Changes following Peer Review**

| Element | Rating Change | Commentary |
|---|---|---|
| Concrete shear walls | **Increase** | Allowance for a higher level of ductility has been agreed. |
| Moment Resisting frame | **Increase** | Review of the failure mechanism and allowance for load redistribution in the frames. |
| Concrete floor diaphragm | **Increase** | Review of slab stiffness and modelling |
| Gravity Columns | **Decrease** | Drift capacity reviewed. |
| Foundation system | **Increase** | Recognition of the level of shaking at which soil liquefaction will occur. |
| Precast concrete panels | **No Change** | Drift updates did not change rating. |
| Stairs | **Increase** | Inclusion stairs in model to review loading. |
| Reinforced Concrete Masonry walls | **No Change** | No comments. |

## 3.5 Future Code Changes and Considerations

### 3.5.1 Hazard Zone Factor

The National Seismic Hazard Model, which is the basis for the loading in the Earthquake actions design code NZS1170.5, is currently being reviewed. The review is being led by GNS Science (GNS) to combine the data from a collection of many different models to estimate future earthquake shaking in New Zealand. A likely outcome of this review will be an increase in the hazard zone factor, Z, for the Wellington region. This factor is used to determine the seismic risk for the area and hence the design standard for new buildings.

A future increase in the Hazard Factor will lead to an increase in the design level for new buildings in Wellington and potentially increase the standard required for existing buildings to achieve 100%*NBS* when assessed against that new standard. Our understanding is that the revised National Seismic Hazard Model is due to be released in August/September 2022 and is expected to be incorporated into the Building Code in November 2023.

### 3.5.2 Basin Effects

The 2016 Kaikōura earthquake exposed the concept of the “basin effects.” The basin efforts cause amplification of ground shaking due to the presence of soft soils in the sedimentary basin and cause larger peak ground accelerations than expected. These effects are currently not incorporated in the Earthquake actions design code NZS 1170.5.

The basin effects have the potential to significantly increase the design standard for new buildings in particular locations in the Wellington region and potentially may increase the standard required for existing buildings to achieve 100%*NBS* when assessed against that new standard. The implications of basin effects are currently being discussed and reviewed by industry experts with no fixed timeframe when it will be introduced into the design standards.

It is likely that buildings located on the valley floor in the Hutt Valley, such as the Heretaunga Block will be impacted by basin effects.

# 4 Assessment Results

## 4.1 Assessment Results Summary

Table 7 presents a summary of the results based on the assessment guidelines (*The Seismic Assessment of Existing Buildings, 2017*) incorporating all updates included in the update to section C5 issued on 31 November 2018.

For reference, and to allow comparison to other buildings, we have included the scores for the IL2 and IL4 loading considerations. Note that this building assessment is on the basis that the building is IL3.

**Table 7: Summary of Building Elements *%NBS* rating with soil flexibility**

| Element | NBS (IL3) | Commentary | COMPARISON ONLY | |
|---|---|---|---|---|
| | | | NBS (IL2) | NBS (IL4) |
| Concrete shear walls | **35%** | The RC walls are limited to 36%*NBS* by their flexural capacity located at the third, fourth and fifth storey on the basis that ductility of $\mu$ = 1.5 can be achieved. | 45% | 25% |
| Moment Resisting frame | **34%** | The RC Moment frames are governed by the column flexural capacity at Levels 1. The first column reaches its capacity at 25%-30%with redistribution allowing capacity of 34%*NBS.* Any increase in seismic demand beyond 34%ULS shaking may lead to shear failure of some of the columns and a significant reduction in the base shear capacity of the building. | 45% | 25% |
| Concrete floor diaphragm | **34%** | The ground floor and first floor have insufficient tension capacity to transfer both inertia and transfer forces to the vertical lateral resisting elements. | 45% | 25% |
| Gravity Columns | **40%** | The gravity columns are limited by their drift capacity. | 50% | 30% |
| Foundation system | **>34%** | The foundation system is limited by the horizontal capacity of the piles once the surrounding soil liquefies. Based on the initial review this will occur at a level between 34% and 50%*NBS*(IL3) | >50 (45%-67%) | <34% (25%-37%) |
| Precast concrete panels | **15%** | The precast concrete panels and connections was limited by the shear failure of the connections | 15% | 15% |
| Stairs | **60%** | The stairs are positively connected at each landing.<br>The stairs, located at either end of the building ,score 60%*NBS* based on their connection to the landings.<br>The stairs adjacent to the lift core score 100% *NBS.* | 80% | 43% |
| Reinforced Concrete Masonry walls | **45%** | The score was limited by the walls insufficient out-of-plane capacity well as insufficient tension capacity of the starter bars for cantilevered walls | 60% | 33% |

Based on the above findings, the structure achieves **15%*NBS* (IL3)** limited by precast concrete façade panels. This corresponds to an overall building grade of **E** to the Assessment Guideline grading scheme indicating that that the structure has a very high life safety risk.

## 4.2 Displacements and Inter-storey Drifts

The building displacements up the height of the building obtained from our analyses for 100%ULS shaking are shown in Figure 10. Displacements shown are at the diaphragm centre of mass and results for both the soft soil and stiffer soils springs are shown. For the soft soil springs particularly, the lateral displacement at the basement level is displayed as being significant.

It is noted that the force-based assessment used is applied unidirectional, rather than representative of a cyclical earthquake motion. Because of this, the total displacement at basement level is less important than the deflected shape of the building, and associated interstorey drifts. The interstorey drifts for the stiff soil response are larger as a result of the higher applied forces.

The maximum inter-storey drift under 100%ULS shaking, allowing for the $k_{dm}$ modification factor, is shown in Table 8. In both directions, the drift is less than the design code limit of 2.5%.

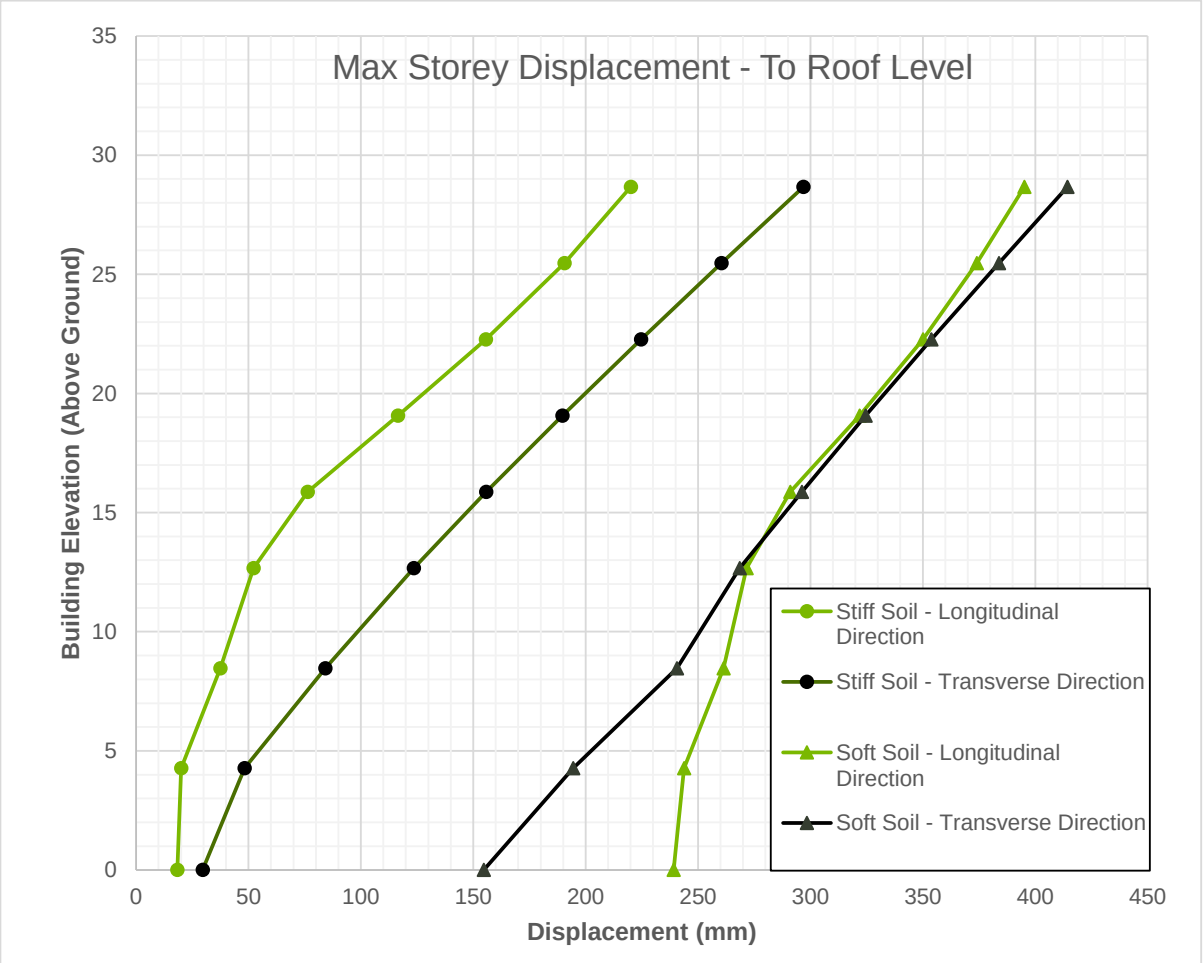



**Figure 10: Estimated Building Displacements for 100% ULS shaking – Centre of Mass**

**Table 8: Estimated Maximum Inter-Storey Drift for 100% ULS shaking**

| | Maximum Inter-storey Drift | |
|---|---|---|
| **Direction** | **Stiff Soil** | **Soft Soil** |
| Longitudinal | 2.1% | 1.7% |
| Transverse | 2.0% | 1.9% |

## 4.3 Structural Elements Performance

### 4.3.1 Concrete shear walls

The transverse shear walls are typically 6.7m in length with columns forming rectangular boundary elements at each end. The walls reduce in thickness up the height of the building. Review of the walls identified that a plastic hinge (locations where we expect localised damage in a severe earthquake) may form between levels three to five, rather than at the more desirable location, of the base of the wall.

The initial review of the reinforcing detailing in this area against the requirements of Section C5 of the *Guidelines* found that the walls detailing was insufficient for a ductile response. Therefore, a nominally ductile behaviour (μ=1.25) was assumed for the shear walls.

The shear walls scored 30*%NBS*(IL3) governed by their flexural capacity for both the soft soil and stiff soil cases. A summary of the NBS% for each soil case is provided in Table 9 and Table 10. Note that these Tables report the worst-case walls for each case, rather than an average for the floor.

Following discussion with the peer reviewer, it has been identified that our interpretation of the current guidelines with regards to available ductility in the walls could be considered conservative. While it has been determined that the detailing of the reinforcement in the walls could result in widely spaced cracks in the (as opposed to the desirable distributed cracks) forming in the webs walls, there should be an ability for a moderate amount of ductility in the response (~μ=1.5). This would improve the results as reported to **35*%NBS* (IL3).**

**Table 9: Critical *%NBS* for the shear walls – soft soil response**

| Story | *%NBS* Results Bending | | *%NBS* Results Shear (μ=1.25) |
|---|---|---|---|
| | μ=1.25 | μ=1.5 | |
| Roof | 85% | 100% | 75% |
| Story 6 | 50% | 60% | 65% |
| Story 5 | 35% | 40% | 50% |
| Story 4 | 30% | 35% | 60% |
| Story 3 | 30% | 35% | 55% |
| Story 2 | 50% | 60% | 70% |
| Story 1 | 55% | 65% | 70% |

**Table 10: Critical *%NBS* for the shear walls – stiff soil response**

| Story | *%NBS* Results Bending | | *%NBS* Results Shear (μ=1.25) |
|---|---|---|---|
| | μ=1.25 | μ=1.5 | |
| Roof | 53% | 64% | 77% |
| Story 6 | 37% | 44% | 48% |
| Story 5 | 30% | 36% | 42% |
| Story 4 | 31% | 38% | 53% |
| Story 3 | 35% | 42% | 54% |
| Story 2 | 50% | 60% | 73% |
| Story 1 | 30% | 36% | 66% |

The longitudinal shear walls below level 1 are 610mm thick walls. Below the basement levels, the walls are 1210mm thick. These walls scored 100*%NBS*(IL3).

### 4.3.2 Moment Resisting Frames

Moment resisting frames in the longitudinal direction of the building are composed of concrete columns and deep reinforced beams. The high capacity of the deep beams when compared to the columns means that the frames are vulnerable to a weak-storey failure at most levels of the building. A weak-storey failure means

that all plastic deformation is concentrated on one-storey of the building. This is undesirable in a design level earthquake.

The frame mechanism was approximated using the Simple Lateral Mechanism Analysis (SLaMA) methodology. This demonstrated that the frames would form a column-sway mechanism. This process also identified that number of columns at the first-floor level would be shear governed and not the desired flexurally governed. Therefore, the MRFs cannot form a reliable ductile mechanism without brittle failure occurring first under a design level earthquake. As a result the MRFs cannot dissipate energy and resist repeated cycles of earthquake shaking without excessive strength degradation. With this in mind, we concluded that the building should be considered as a nominally ductile structure ($\mu$ = 1.25) and a force-based assessment of the building was undertaken.

The initial results of the force-based assessment for the columns indicated that the frame response would be governed by a shear failure of the columns at Level 1, followed by flexural failure at level 2. These initial results are summarised in Table 11. There is a level of ambiguity associated with the values at the upper levels of the building as the SLaMa process had already demonstrated a column sway mechanism would likely occur at level 2, or that there would be a shear failure at level 1. As such, the low flexural capacity/demand scores at the upper levels are unlikely to occur and were discounted.

**Table 11: Initial % capacity rating for Columns**

| Level/Grid | % Results - Grid C | | % Results - Grid F | |
|---|---|---|---|---|
| | Flexure | Shear | Flexure | Shear |
| 6 | 20%* | 30% | 20%* | 30% |
| 5 | 30%* | 45% | 30%* | 40% |
| 4 | 35% | 50% | 35% | 50% |
| 3 | 35% | 45% | 35% | 40% |
| 2 | 30% | 50% | 30% | 45% |
| 1 | 40% | 25% | 35% | 25% |
| G | 100% | 100% | 85% | 100% |

*Refer notes above – this value has been discounted.

During the peer review process, it was identified that the detailing of the columns would allow some robustness in the frame response and that redistribution of shear force between columns could be possible without exceeding the shear strength of the columns. A review of the frame failure mode was undertaken to determine what level of redistribution would be required to achieve a score of 34%NBS(IL3).

The review involved the following steps, for the models with the stiffer soil springs used to represent a lower bound building score:

1. Apply 34%*NBS* loading in the model.
2. Check Level 2 columns to see if they are yielding in flexure. No yielding was noted for either soil case, which confirmed that the failure mode would be in the Level 1 columns.
3. Review the shear load to capacity ratios for the individual columns in each frame.
4. With the shear in each column limited to the shear capacity value for the column associated with flexural yielding, determine the amount of redistribution required to the other columns in the frame that had a lower level of load.
5. Review the displacement required in the columns that is related to this increase in load and check that this additional displacement in the frame does not result in shear failure of the columns already at capacity.

This review determined that flexural capacity of the first column would be reached at a level of 25%-30%*NBS* loading, but that the frames have sufficient displacement capacity to redistribute the shear loads to the remaining columns on the first level. The total shear capacity of columns on the first floor has been

calculated at 34*%NBS* loading, governed by the columns on Grid C. This results in a rating for the frames of **34%*NBS*(IL3)** for the columns. At the 34*%NBS*(IL3) level of loading, most columns on the floor would have reached their flexural capacity and will be close to their displacement capacity. Any increase in seismic demand beyond 34%ULS shaking may lead to shear failure of some of the columns and a significant reduction in the base shear capacity of the building.

A more detailed review of the frame could be undertaken by conducting a non-linear pushover analysis. The process undertaken above generally follows the philosophy of a pushover analysis through the redistribution of loading as elements begin to yield. We do not believe that a pushover analysis would result in a significantly different score to this analysis.

### 4.3.3 Concrete Floor Diaphragm

The building's concrete floors were assessed for their ability to transfer lateral loads to the buildings LLRS. The assessment considered the criteria described in the 2018 revision to Part C5 of the Assessment Guidelines.

The purpose of a diaphragm is to connect the discrete vertical elements of a structure together in the horizontal plane at regular intervals and be capable of transferring inertia, transfer forces and soil pressure forces to the lateral elements. The importance and behaviour of diaphragms was largely overlooked until the Christchurch Earthquake in 2011, so it is common to find them deficient in older structures.

The floor bays are typically 80m long by 20.1m wide with concrete beams around the floor bay perimeter. The diaphragms are restrained by the shearwalls in the transverse direction and by the Moment Resisting Frames in the longitudinal direction. The flooring system and diaphragm are formed of cast-in-situ reinforced slab with a 160mm thickness for first floor to roof and 255 mm thickness for the ground and plant floor. The diaphragms are reinforced with deformed reinforcement bars. The deformed bars can stretch and allow redistribution of load across the diaphragm in a design level earthquake. This is desirable in a diaphragm under seismic loading.

The critical floors for assessment were identified as:

- Roof level – this level has the largest inertia force
- Level 1 – this diaphragm must transfer both inertia and transfer forces to the vertical lateral resisting elements. The transfer forces are caused by the introduction of additional vertical lateral resisting elements.
- Ground floor, for similar reasons to the first floor, with the introduction of basement walls below.

The buildings acceleration profile was developed using the pESA method as recommended in NZS1170.5.

The diaphragms were initially assessed utilising a detailed grillage model, which identified a number of areas scoring below 15*%NBS*. This occurred on all levels. Review of these results identified issues with the stiffness being represented in the slabs, which had overestimated the tie forces presented.

#### Roof Level

A simplified strut and tie analysis of the roof level slab has been undertaken to review the floor slab's ability to transfer loading into the vertical lateral load resisting system in each direction. This is displayed in Figure 11 and Figure 12. Allowance for redistribution was made in the modelling to account for the ductile reinforcing used in the slabs.

Diaphragm load, in the transverse direction, must be transferred into the shear walls either at the ends of the wall (through compression bearing) or on the side walls (through shear-friction). We also note that some of the RC walls are generally isolated on one side from the floor diaphragms due to the lift/stair openings and service rises. Therefore, the load can only be transferred along one side of the shear walls. This limits the amount of load that can be transferred to the shear walls.

Once the diaphragm connection capacity is exceeded, the diaphragm load is redistributed and transferred to other shear walls. However, only a limited amount of load can be redistributed before the shear walls capacity is overloaded.

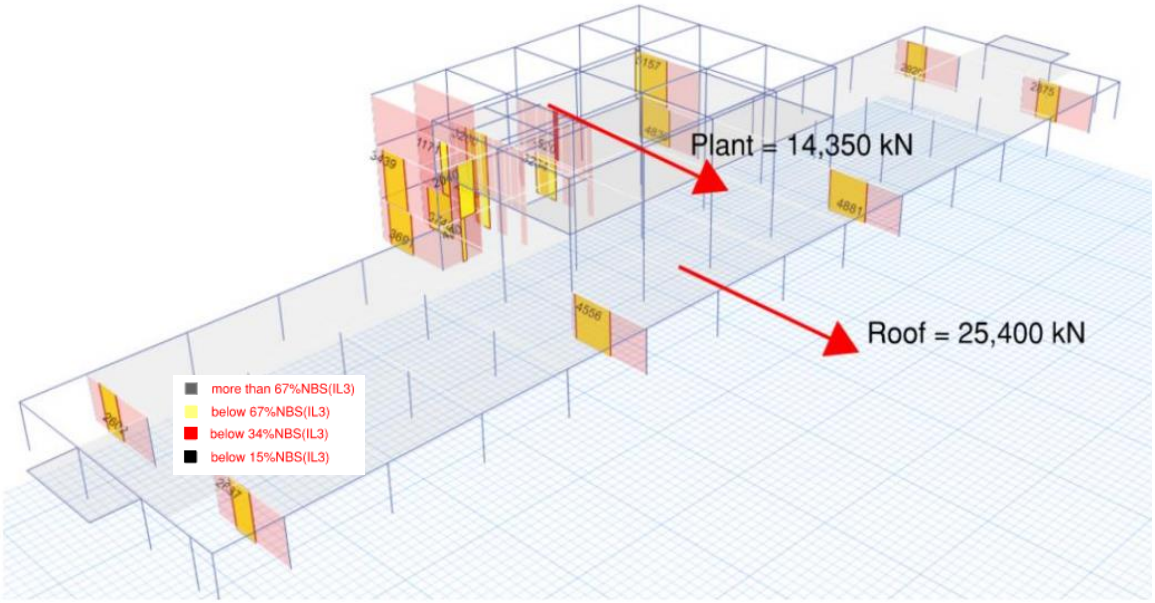



**Figure 11: Roof Model**

This strut and tie analysis identified that the roof diaphragm scores 40-50%NBS(IL3) limited by the connection of the diaphragm to the shear walls on Grids 6,7,8 and 10. The diaphragm has sufficient capacity to resists 100% loading in the Longitudinal direction.

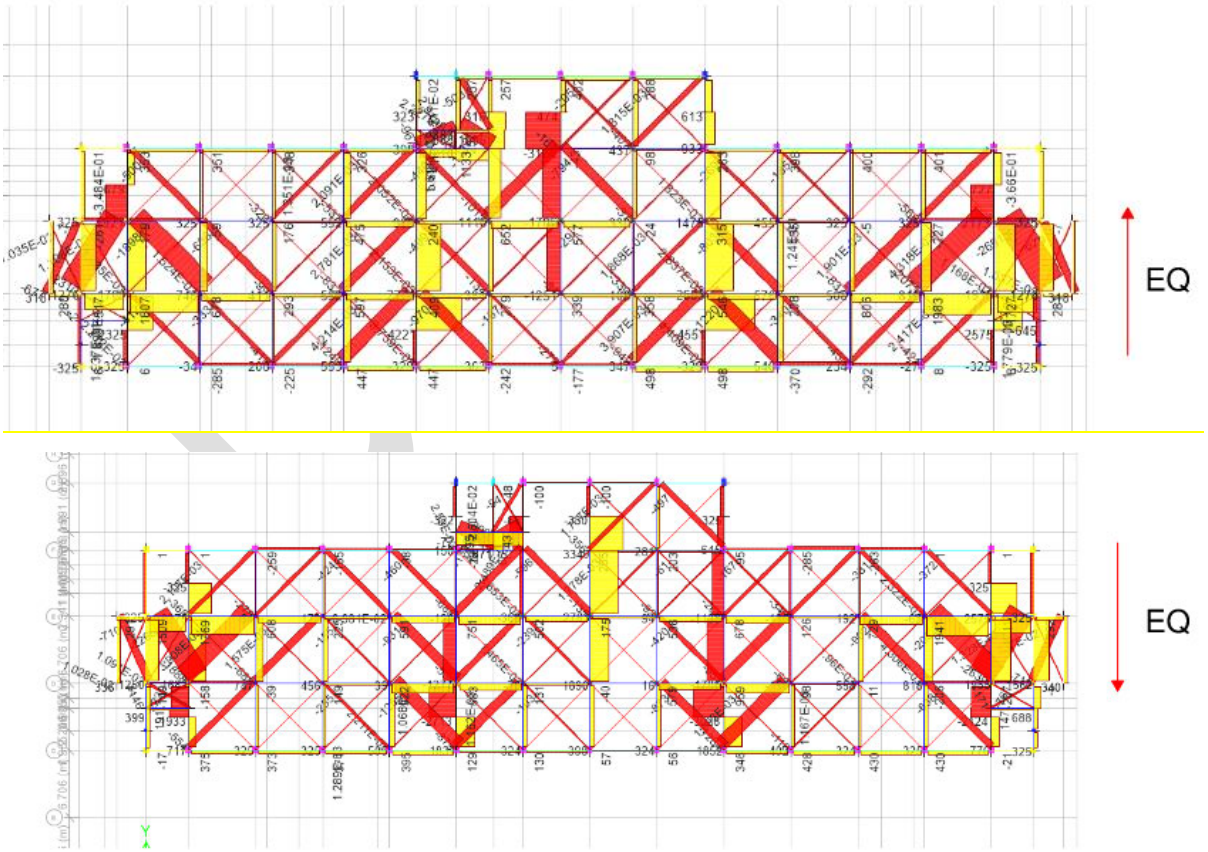



**Figure 12: Roof Stut and Tie**

## First Floor Level

At Level 1, the load in the longitudinal frames is transferred into the large shear walls that are located at either end of the building. This transfer is made primarily through the spandrel beams at level 1, with the floor diaphragm needing to transfer inertia loading to the shear walls. Refer Figure 13.

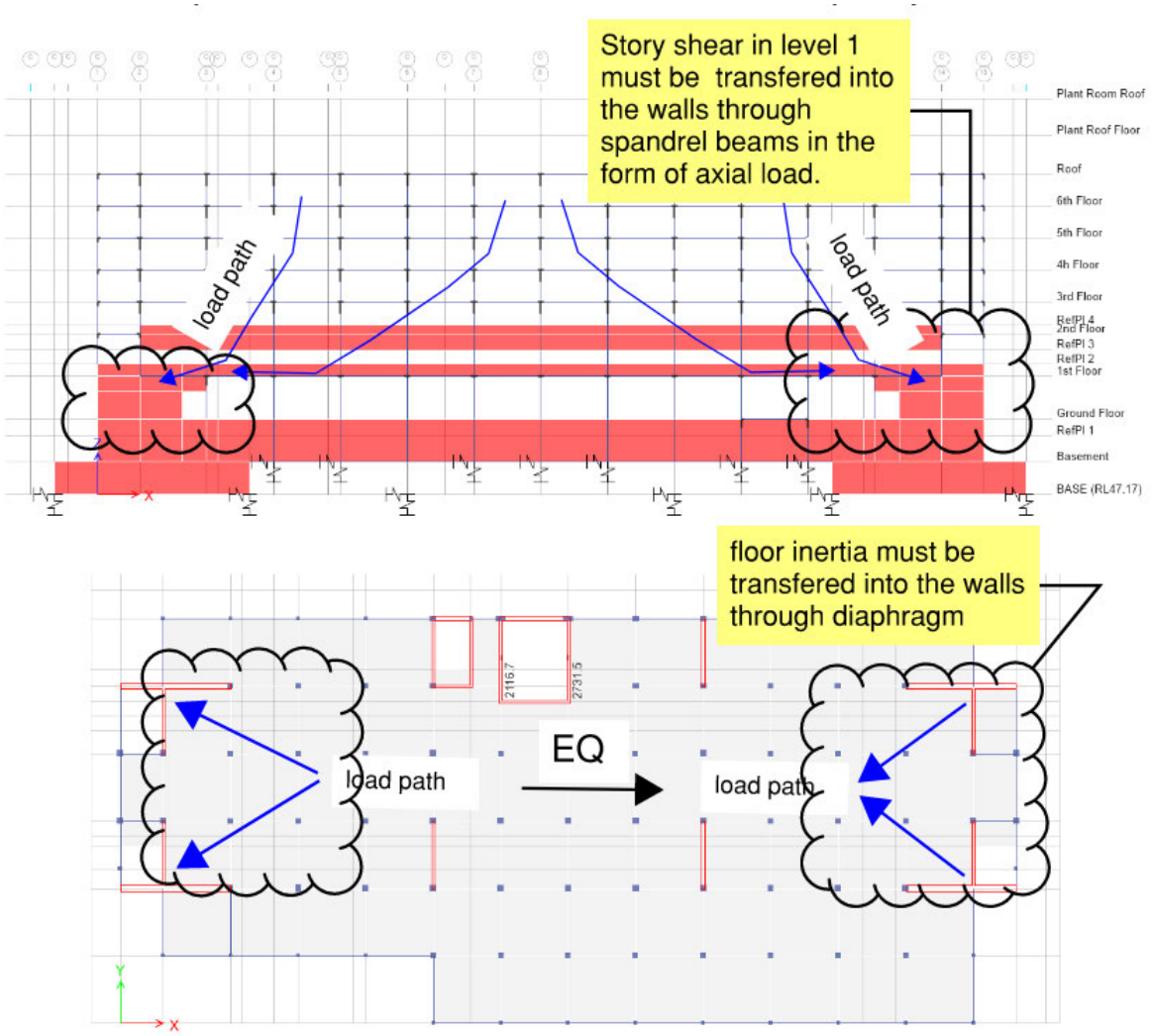



**Figure 13: Level 1 Load paths**

Review of the ability of the diaphragm to transfer load into the walls through compression bearing and/or shear-friction, identified a connection capacity of 40*%NBS* in the longitudinal direction.

In the transverse direction, the loads are transferred to the shear walls primarily though shear friction in the floor starter bars that are tied into the walls, noting that the floor slab at this level is larger in area. These connections are governed by the capacity of the walls on Grid 2 and 14 (either end of the building) which have enough capacity to transfer 45% of the applied loading.

For the slab capacity, a grillage model analysis has been undertaken at this level. This model, with 34% Loading applied is displayed in Figure 14 and Figure 15. The result of the modelling identified a number of discrete tie elements as having insufficient capacity for the 34%NBS loading. In each direction,by allowing for redistribution to account for the ductile reinforcing used in the slabs, 34*%NBS* can be achieved.

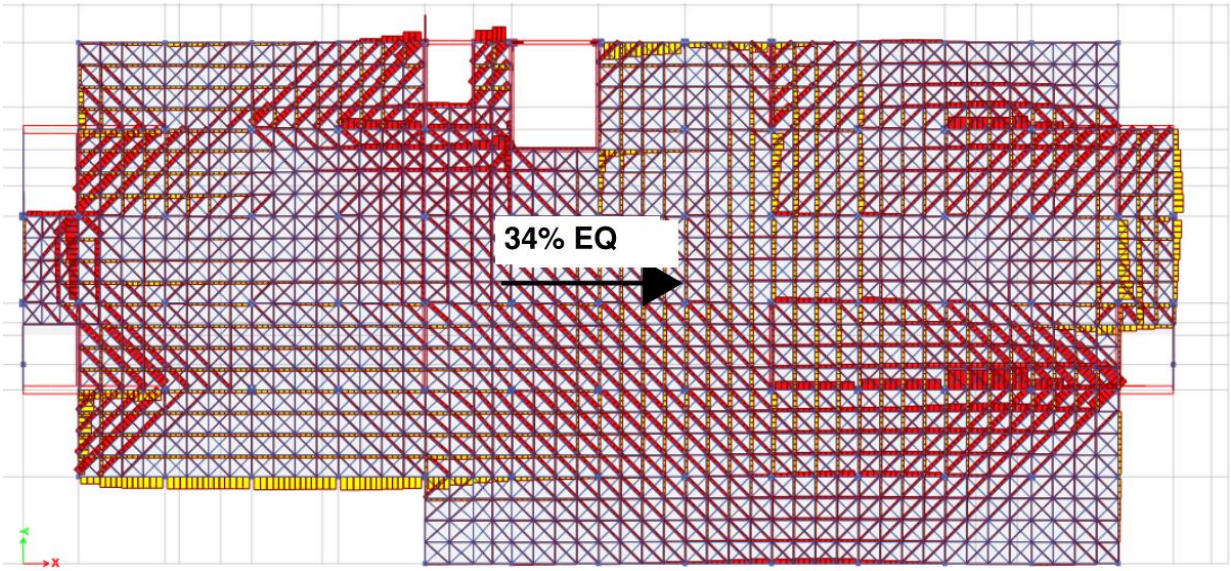



**Figure 14: Level 1 Grillage – Longitudinal Loading**

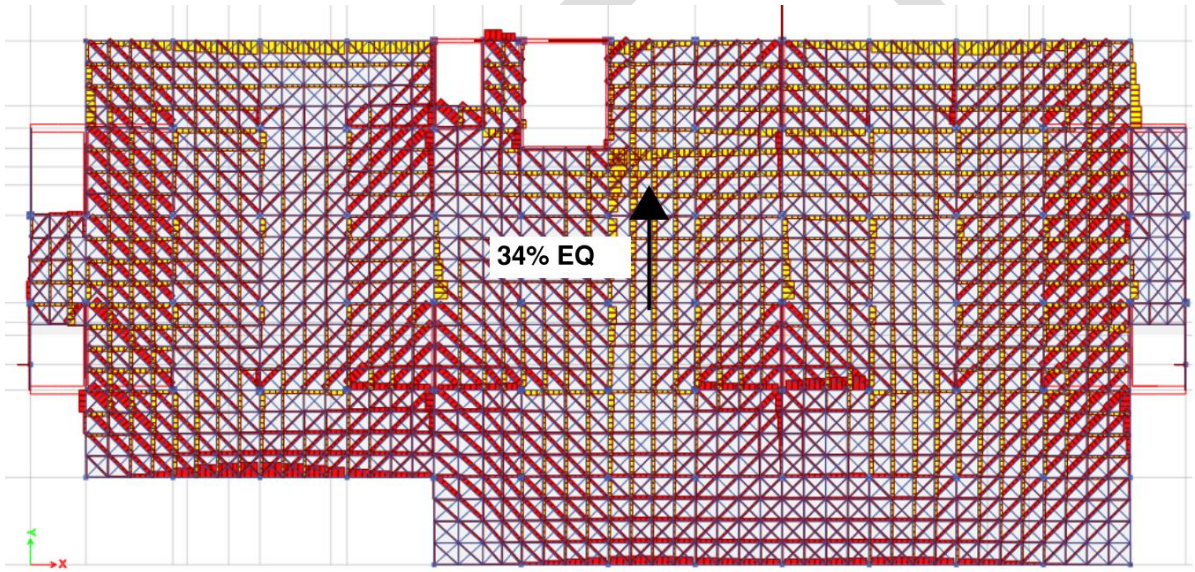



**Figure 15: Level 1 Grillage – transverse loading**

## Ground Floor Level

A ground floor 1, the presence of the basement retaining walls provides a number of alternative load paths for lateral loading. The diaphragm at this level is required to transfer the load into these shear walls.

Review of the ability of the diaphragm to transfer load into the walls through compression bearing and/or shear-friction identified a capacity of 40%NBS in the longitudinal direction and 35% in the transverse direction when an allowance for redistribution between the walls.

For the slab capacity, performance is expected to be similar to the first floor, given the slab has similar inertia load.

The overall diaphragm score is therefore **34%*NBS*(IL3)** governed by the performance of the first floor and ground floor diaphragm's ability to transfer load into the lateral load resisting system.

### 4.3.4 Gravity Columns

The reinforced concrete gravity columns include thickenings (column capitals) where they connect to the slabs. They were assessed for punching-shear failure and drift capacity at the onset of gravity resistance loss. Assessment of the gravity columns found they were not susceptible to punching shear but due to low drift capacity, they scored **40*%NBS*(IL3).** The relatively large gravity load demands on the columns contributed to their low drift capacity.

### 4.3.5 Foundation System

A geotechnical desktop study was undertaken based on limited ground investigation data near the site of the Heretaunga Block. No site-specific ground investigation was completed as part of this study. The review of the available geotechnical information indicates that the site consists of loose sand/silts and is highly susceptible to liquefaction between the depths at 3.0m and 6.0m. The groundwater table is expected to be around 3.0m to 4.5m depths below the ground. The thickness of the liquefiable layers and depths to groundwater table were inferred from the limited available ground information and could vary across the site.

The pile horizontal capacity for each type of pile was calculated in the geotechnical desktop study (see Table 12). Given that a portion of the piles, including the pile caps, were located in the liquifiable layer, the lateral capacity of the piles was adversely affected, resulting in a capacity of 20% NBS(IL3).

However, the onset of liquefaction has been identified as being at a peak ground acceleration (PGA) of approximately 0.3g, which is a level of approximately 50%NBS (IL3). As the foundation “failure” is related to the liquified soil condition we would expect the loss of capacity to occur at a level between the 20% and 50% values, and likely to be closer to 50%. As such we have rated the foundation capacity to be **>34%NBS(IL3).**

We note that the foundation assessment has been based upon a desktop assessment. For a more detailed review a geotechnical investigation would be required.

### 4.3.6 Precast Concrete Panels and Connections

The precast concrete cladding panels are rigidly connected to the primary structure, typically at the top and bottom of the panels; and do not accommodate for lateral inter-storey deflections of the building. There is a combination of full height panels in the corners of the building and around the lift core as well as partial height panels on the perimeter beams of the building.

The precast panels scored **15*%NBS(IL3)***, which was governed by the shear capacity of the panel connections when subject to load associated with drift demand on the full height panels. Failure of the panel connections could cause the panels to detach from the building and fall to the ground, posing a life safety hazard.

Should the panel connections provide significantly more capacity than calculated, the panels themselves would fail in shear below 20*%NBS* loading.

### 4.3.7 Stairs

The Department of Building and Housing issued their Practice Advisory 13 in response to concerns about stair collapse and damage observed in the Christchurch earthquake. The primary concern of this Practice Advisory is stairs with sliding support details in mid to high-rise buildings. For these types of stairs, the recommendation is that the stair flights be detailed so that the stairs are free to slide but with sufficient sliding ledge support width available.

The stairs are constructed from precast concrete stair beams cast in to in-situ concrete landings, and precast treads. The connections of the stairs to the landings are fixed with no allowance for sliding or lateral movement of the building. The precast flights are cast into the face of the landings with ductile starter bars. We consider that any tension related cracking is likely to be concentrated at these joints as single cracks.

An initial review of the stairs was conducted by applying a displacement to the stair flights to represent building movement. This resulted in the stairs scoring 15*%NBS*(IL3) governed by axial capacity of the stair flights.

During the peer review process, the stairs were added to the 3D ETABS model to determine how much load they would attract given their proximity to shear walls. The stair flights at either end of the building attracted the most load, with a combination of in-plane axial load and bending (from transverse loading on the building and gravity loads) and out-of-plane loading (from longitudinal loading on the building).

An iterative process was followed which decreased the seismic loading until the available tension capacity was balanced with the tension load applied (once bending was considered). This resulted in a score of **60%*NBS*(IL3**). It is noted that the initial yield of the stair flight will unlikely lead to immediate loss of gravity support and that is it likely that the flight will maintain some post yield capacity during cyclic loading. The Stairs adjacent to the Lift core score 100%*NBS*(IL3) and all stairs below Ground Floor score 100%*NBS*(IL3).

### 4.3.8 Reinforced Concrete Masonry

Blockwork walls are present at the basement and ground floor of the building as shown in Figure 16 and Figure 17. The walls are partially filled and are combination of pinned to the structure above and cantilevered off the floor below. The walls are required to resist gravity and seismic loading demands due to their self-weight.

The score of **45%*NBS*(IL3)** was limited by the insufficient out-of-plane capacity as well as insufficient tension capacity of the starter bars for cantilevered walls. The pinned walls scored >67%*NBS*(IL3).

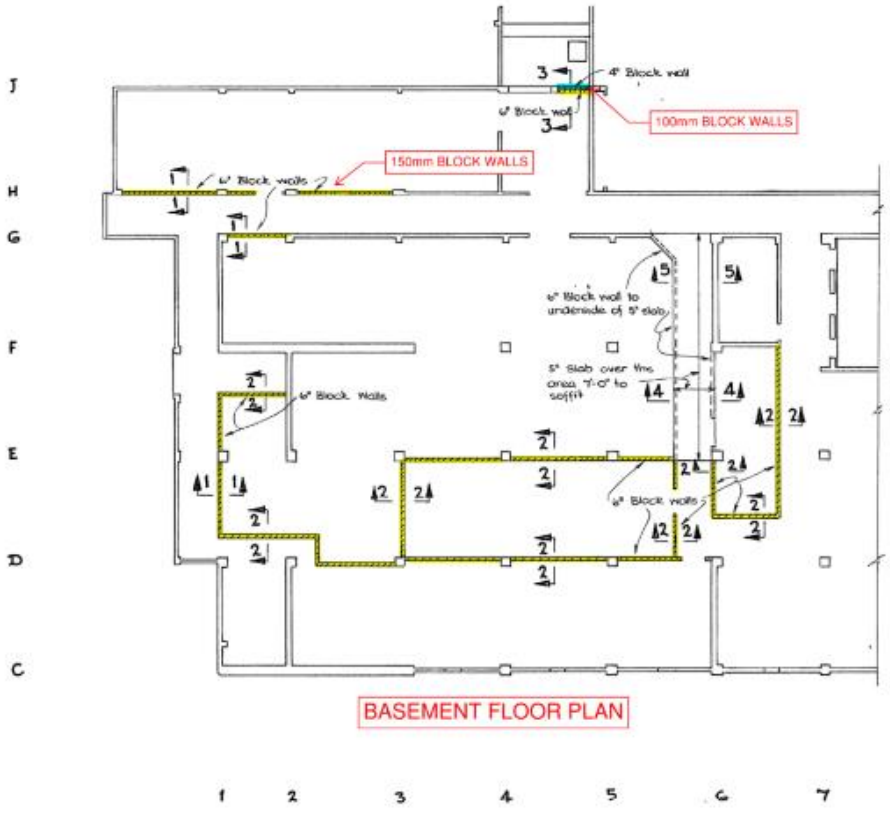



**Figure 16: Concrete Masonry Walls – First Floor**

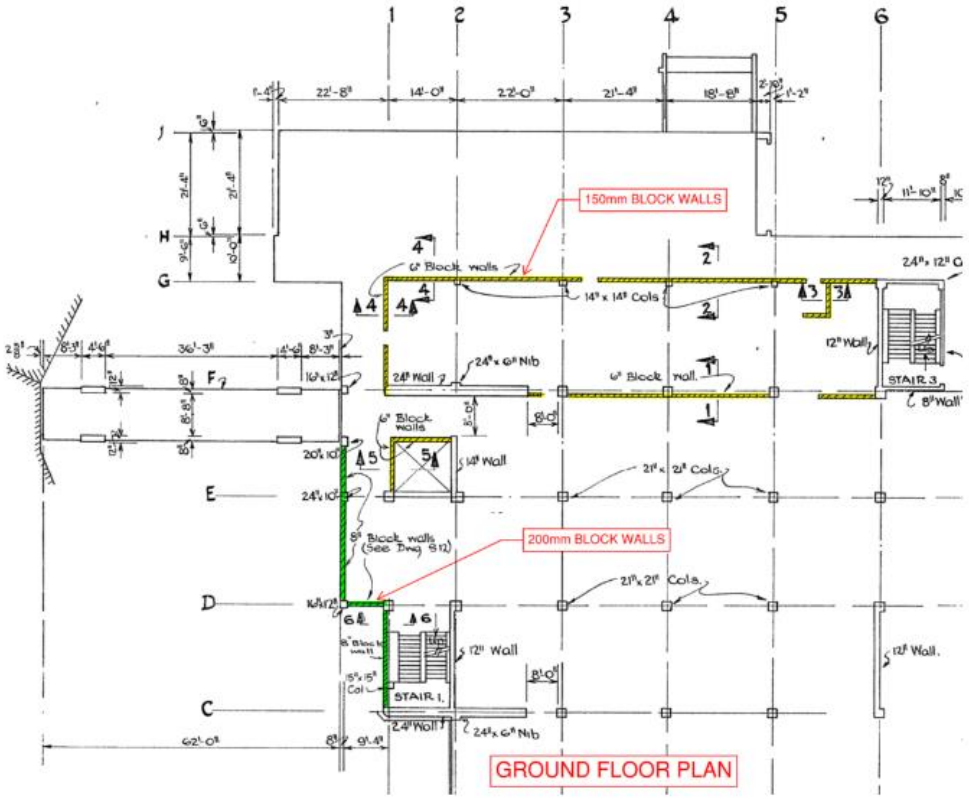



**Figure 17: Concrete Masonry Walls – Ground Floor**

Another reinforced masonry wall is located near the lift shaft as shown in Figure 18. This wall is hard fixed between the floor levels and will attract seismic load. Under 34%ULS loading, the wall has insufficient moment and shear capacity. However, the "failure" of the wall is not considered a life safety risk as load then gets redistributed to the moment frames.

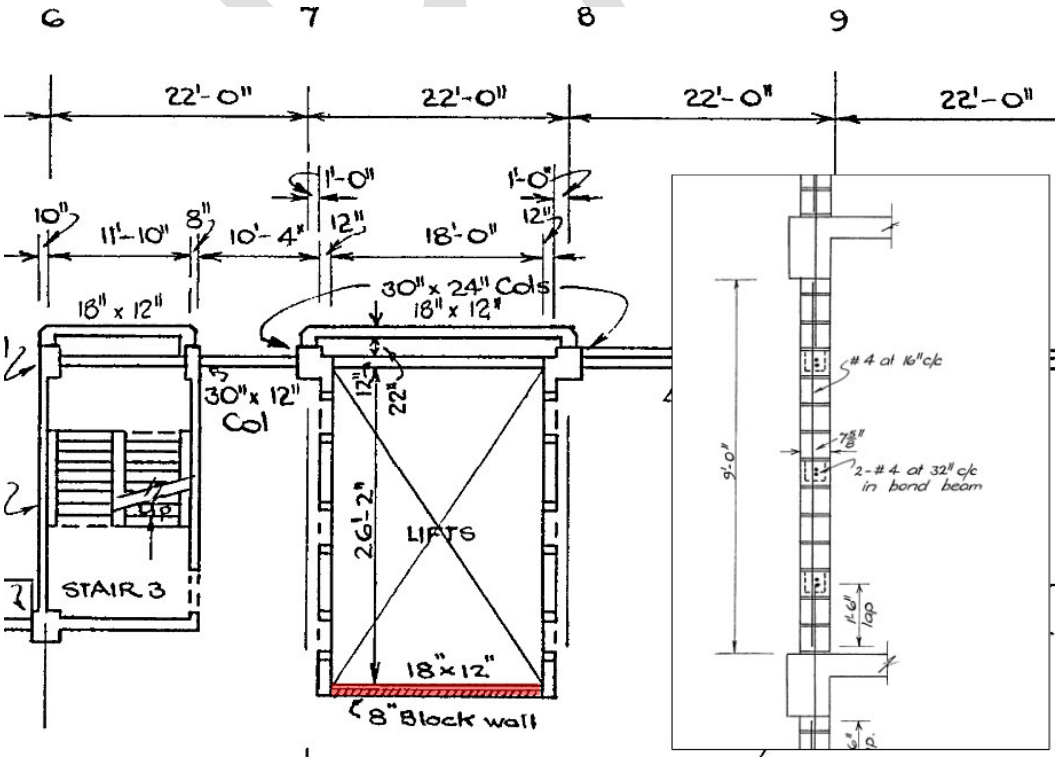



**Figure 18: Lift Shaft Masonry Wall**

## 4.4 Structural Weaknesses and Life Safety Hazards

### 4.4.1 Critical Structural Weakness

The Critical Structural Weakness (CSW) is the lowest scoring structural weakness determined in the assessment. Based on the results of the DSA, the CSW for this building is the precast concrete façade panel connections which score **15%NBS(IL3).**

### 4.4.2 Severe Structural Weaknesses

A Severe Structural Weakness (SSW) is a defined structural weakness that is potentially associated with collapse and for which the capacity may not be reliably assessed based on current knowledge.

There are no identified SSW's in the building.

# 5 Potential Strengthening Options

## 5.1 Scope of Strengthening

Recommended in this section are a set of potential strengthening options that describe an approximate scope of works for seismic retrofit to a target performance of 67%*NBS* (IL3). This is regarded as the recommended industry standard requirement for the strengthening of existing buildings.

The strengthening options recommended are only of a schematic level detail, and a detailed design will be required for construction documents. It should be noted that the schematic design presented here is one structural solution and alternative options could be explored further in the future.

When considering the strengthening solutions presented below, the impact of the works presented on the building fit out and operation should be considered when considering the feasibility of completing the works.

Prior to commencement of a detailed strengthening design, a detailed geotechnical assessment of the site should be undertaken to confirm the soil parameters to be used in the building analysis, and subsequent design. It would also be strongly recommended that consideration be made for the upcoming potential changes to hazard factors and basin effects for buildings in the Wellington region prior to commencing a strengthening design.

We note that the presented strengthening concept is suitable to improve the life safety performance of the building. This means that the building would be able to sustain loading at the design level without collapse or damage that would constitute a life safety risk, but it would not be a resilient structure.

In order to resist seismic loading, a number of concrete elements of the building would be required to yield. Following a large earthquake event, the level of damage to these elements of the building would likely require the building to be evacuated and demolished.

## 5.2 Suggested Improvements

### 5.2.1 Moment Resisting Frames

The performance of the Moment Resisting Frames is governed by the column shear capacity at level 1. This limits the amount of available ductility considered in the assessment and resulted in larger seismic loads.

The limiting response currently is the column shear failure at level 1. If this was addressed through FRP wrapping the columns at this level or extending shear walls up a level, the failure mechanism would move to a column sway mechanism at level 2. The ideal strengthening solution for these frames would be to suppress the weak storey failure.

Given the beams had closely spaced shear reinforcement, some ductility could be introduced into the structure if the weak storey failure mechanism is addressed. To do so as well as keep the drift within the code limitation, the flexural capacity of the beams is suggested to be reduced while the flexural capacity of the column is suggested to be improved. Weakening of the deep spandrel beams can be achieved by selectively cutting some longitudinal reinforcing bars to achieve the required ductility of the frames and remediate the weak story failure mechanism.

An illustration of possible weakening is shown in Figure 19.

Care must be taken when designing the beam weakening to ensure that the inter-storey drifts of the building remain within code limits, and ensuring the beam hinge, at the location of the weakening is sufficiently detailed to allow rotation.

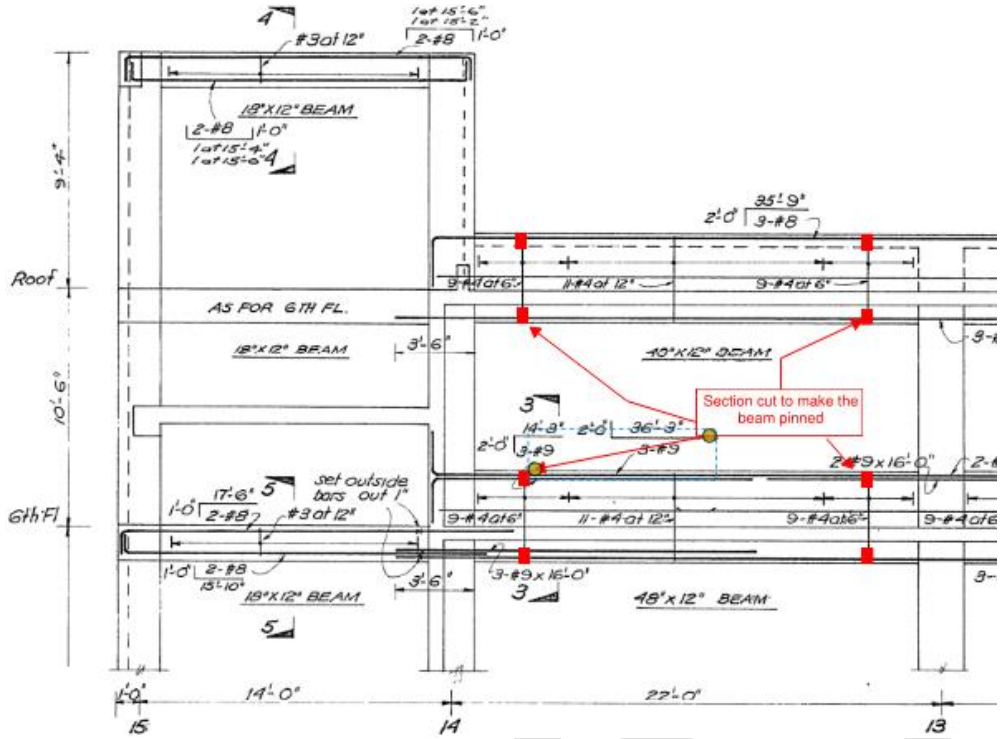



**Figure 19: Selective weakening of the beams (example shown at the levels 6 and roof, grid 13-14)**

For the strengthening of the columns, there are a number of alternatives. One is to increase their dimensions to improve the flexural and shear capacity. Next option can be to employ Fibre Reinforced Polymer (FRP) wrap or steel jackets to improve their confinement, thereby attaining a higher flexural capacity.

### 5.2.2 Shearwalls

The performance of the shear walls is limited by their flexural capacity and lack of available ductility. This could be improved by increasing the wall thicknesses throughout their height to increase both flexural and shear capacity, or by adding steel or FRP wrapping to the walls.

It was also noted from the analysis that the plastic hinge would form at the intermediate floors rather than the base of the wall. If the flexural capacity of the intermediate floors is to be increased, the strengthening design could explore methodologies to force the formation of the plastic hinge to the base of the wall, allowing for a more ductile building response and improvement in overall score.

### 5.2.3 Diaphragm

The strengthening for the shear walls and moment frames as described above will allow the ductility capacity of the building to be increased, thereby reducing the seismic demands. This will assist in reducing the diaphragm forces and improve the %*NBS* score.

Improvement to the diaphragms can be achieved by adding  tension elements in areas required, as well as enhancing the connection of the slabs to the lateral load revisiting systems. For 67% (IL3) loading, without a change in the building ductility, tie strengthening and connection upgrades are expected to be required on the roof level, , ground and first floor.  This may be achieved by installation of Fibre Reinforced Polymer (FRP) or structural steel strips to enhance the diaphragm tension capacity in critical areas.

### 5.2.4 Foundation

The performance of the foundation was assessed based on limited information and ground investigation data near the site of the Heretaunga Block. Therefore, an improvement on the performance of the foundation may be achieved by undertaking site-specific investigations, which could provide further information around the

site's susceptibility to liquefaction or not. Furthermore, more information can be acquired on the lateral and vertical capacity/stiffness of the piles.

In conjunction with remediations to other elements of the building, the effects of the updated ductility capacity of the building should be considered on the foundations; an increase in ductility results in lower seismic demands, which may be beneficial to the performance of the foundations.

Should improved foundation performance be required, this could be achieved by either by providing alternative building foundations, or by improving the performance of the surrounding soil.

The alternative foundations would be in the form of additional building piles, installed from the basement level.

Improvement of the soil could be achieved through jet grouting. There are two types of jet grouting – cementitious and engineered resin. We would suggest that the resin option would be preferred at it is an inert substance and more likely to be acceptable for use near the aquifer, although Hutt City Council have approved cementitious grouting in the Hutt City CBD in the past.

Jet grouting densifies the soil by injecting an expanding polyurethane resin mix (or highly viscous cement grout) into the ground.

Injection tubes are driven into the ground at regular intervals, and the grout materiel is injected into the target treatment zone to create the densified soil matrix. The expansion of the injected material for resin grouting, or the pressure at which a cementitious grout is pumped, compacts the adjacent soils due to new material being introduced into a relatively constant soil volume. This can eliminate the risk of liquefaction in the upper layers of the soil and improve foundation performance.

### 5.2.5 Gravity Columns

The internal gravity columns (shown in Figure 7) have limited deflection capacity due to large axial gravity loads and inconsiderable amounts of transverse reinforcement. The gravity columns could be strengthened by increasing their shear capacity. This can be achieved by, for example, adding an external steel jacket or Fibre Reinforced Polymer (FRP) wrap around the column. Other options include reducing the gravity load on the columns or increasing their gross section area.

### 5.2.6 Stairs

The precast stair beams are connected to the in-situ landings with cast-in reinforcing bars. The landings are also rigidly connected to the surrounding concrete walls and do not allow for lateral movement of the building. This means that they are likely to attract force under earthquake loading and fail in a potentially brittle manner.

To avoid this type of failure, allowance for movement must be provided. We would propose to do this by detaching the stairs from the primary structure at the mid-landings and providing a secondary gravity support system. This is described in Figure 20, Figure 21 and Figure 22.

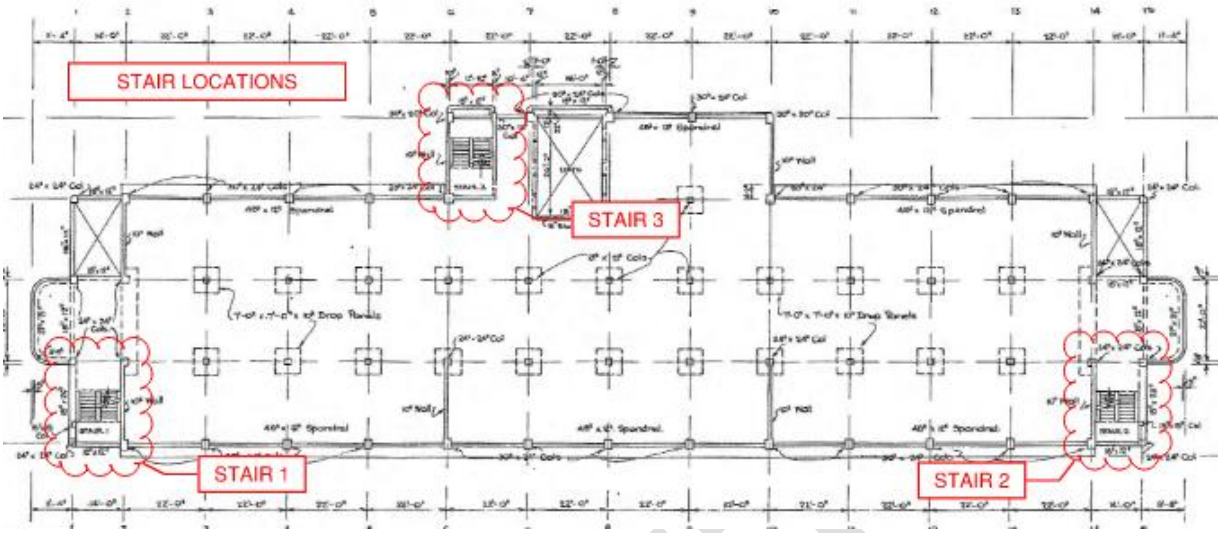



**Figure 20: Stair locations**

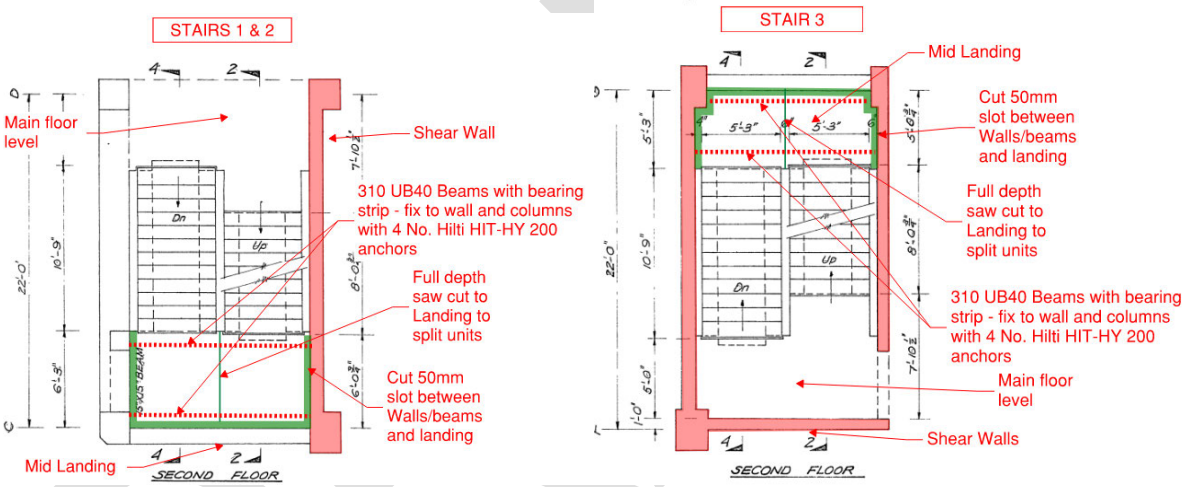



**Figure 21: Stair repair details**

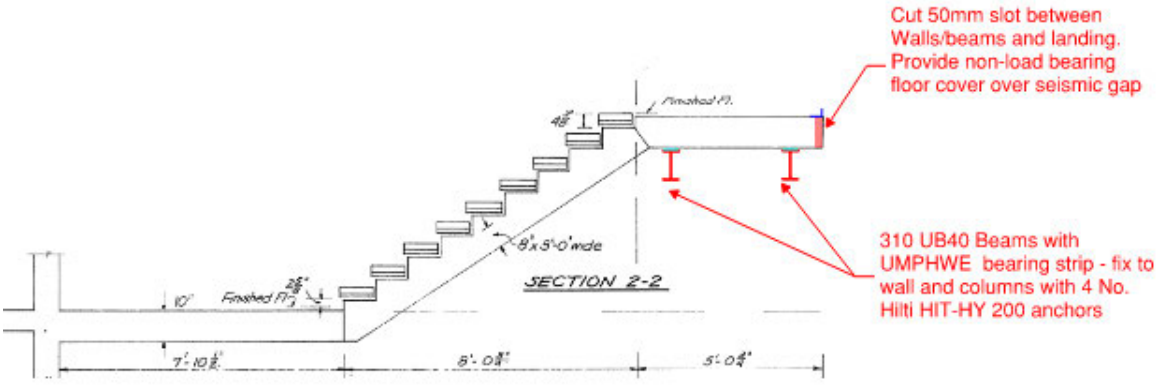
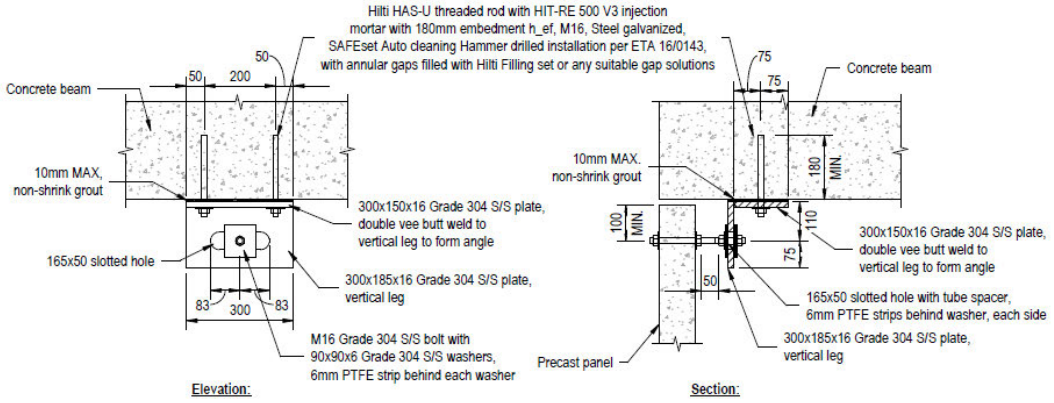



**Figure 22: Typical stair section**

### 5.2.7 Precast Panels

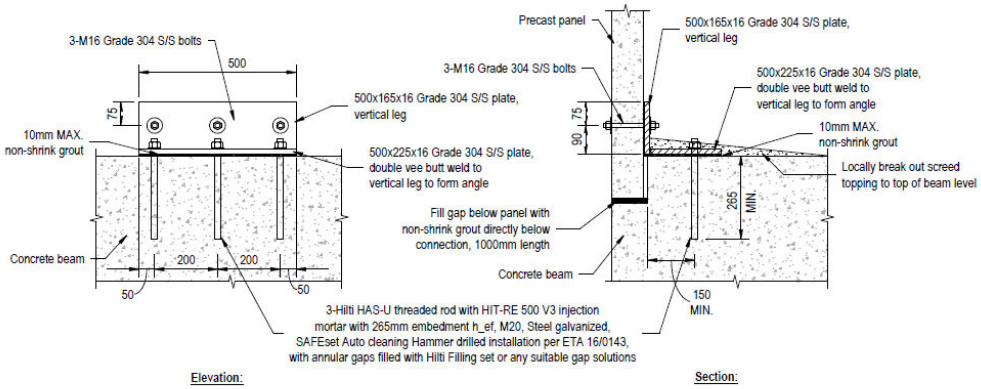
The capacity of the precast façade panel connections are not sufficient and require both strengthening and provision for seismic movement. Figure 23 and Figure 24 show an example of a typical precast panel connection upgrade. Upgraded connections would need to be provided to all the precast panels.

It would be worth exploring whether the existing precast panels could be removed entirely, and new cladding panels be installed. The design of the new panels and connections can incorporate lateral movement requirements. Adding new and lighter cladding system for the building would also assist in reducing the weight of the building.




Connection Type 1: (Top Connection)

**Figure 23: Example typical precast panel top connection upgrade**




Connection Type 2: (Bottom Connection)

**Figure 24: Example typical precast panel bottom connection upgrade**

### 5.2.8 Reinforced Concrete Masonry

The cantilevered blockwork walls in the ground floor of the building score 45%NBS(IL3) limited by their out of plane capacity. The pinned walls scored >67%NBS(IL3). Strengthening for the cantilevered walls could be achieved by providing vertical strongbacks along the walls that are either cantilevered off the ground floor slab, or that run between the ground floor slab and the underside of the first floor slab. The strong backs would likely be structural steel RHS or PFC sections.

The blockwork wall on the side of the lift core is located within the lift core walls with no allowance for movement. It is recommended that separations between the wall and the lift core walls and detaching the wall from the floors above be undertaken avoid load being attracted into this wall. An angle system to support the wall out of plane will be required.

# 6 Conclusions and Recommendations

## 6.1 Conclusion

The Heretaunga Block at Hutt Hospital in Wellington achieves an overall seismic rating of **15%*NBS*(IL3).** This is based on the capacity of the precast concrete façade panels. This corresponds to a building grade of **Class E** to the Assessment Guideline rating system. This may classify the building as less than 33%*NBS*(IL3) and fulfils one of the criteria as an Earthquake-prone to the New Zealand Building Act, subject to the Territorial Authority.

In terms of the primary structure, the critical elements are the performance of the reinforced concrete moment frames in the longitudinal direction of the building and the floor diaphragms at the first floor and ground floor levels. The performance of these elements has been rated as 34%NBS(IL3) in this assessment.

The reinforced concrete moment frames are governed by the strength of the columns in the frames. The frames capacity is governed by the shear strength of the columns at level 1, while the diaphragms are limited by the tensile capacity of the floor reinforcing and the connection of the slabs to the lateral load resisting systems.

We note that this assessment has been conducted using the *Section C5 – Concrete Buildings – Proposed Revision to the Engineering Assessment Guidelines*, dated November 2018. This guideline, known as the "Yellow Book", provides the latest engineering knowledge on aspects involved in the assessment of concrete buildings, and to reflect what engineers learned from the Kaikōura earthquake. Description on the likely differences in this assessment if conducted using the 2017 Issue of C5 (the Red Book) is given in section 3.3.1 of this report.

## 6.2 Building Strengthening

An outline scope of seismic improvements to achieve a minimum seismic capacity of 67%*NBS*(IL3) has been provided. If economically and operationally feasible, strengthening would include:

- Moment Resisting Frames –selectively weaken some of the concrete moment frame beams,
- Shear walls – increasing the thickness of some of the walls,
- Diaphragms – apply FRP or steel plates to the diaphragms in critical locations,
- Foundations – further investigation of the site ground conditions
- Gravity columns – install either steel jackets or FRP wraps around the columns,
- Stairs – upgrade the connections to allow for movement. Additional gravity support of the stairs will likely be required dependent on the strengthening scheme,
- Precast panels by replacing the whole cladding system or replacing the existing connections with a modern version that allows for interstorey movement.
- Install strong backs to cantilever block walls, and separations to the walls at the lift core.

Further investigation and detailed design will need to be undertaken to develop the suggested seismic improvements. Upon completion of design documentation, Building Consent will be required to be lodged and approved before the construction of the suggested seismic improvements.

Prior to commencement of a detailed design process, we would recommend that a detailed geotechnical assessment of the site be undertaken to confirm the soil parameters used for design. We would also recommend that consideration of potential changes to hazard factors and basin effects be considered prior to commencing a strengthening design.

# 7 Explanatory Notes

- The information contained in this report has been prepared by Aurecon at the request of the Hutt Valley District Health Board. and is exclusively for the Hutt Valley District Health Board's use and reliance. It is not possible to make a proper assessment of this review without a clear understanding of the terms of engagement under which it has been prepared, including the scope of the instructions and directions given to and the assumptions made by Aurecon. The report will not address issues which would need to be considered for another party if that party's particular circumstances, requirements and experience were known and, further, may make assumptions about matters of which a third party is not aware. Aurecon accepts no responsibility or liability to any third party for any loss or damage whatsoever arising out of the use of or reliance on this report by that party or any party other than our Client.
- This report contains the professional opinion of Aurecon as to the matters set out herein, in the light of the information available to it during preparation, using its professional judgment and acting in accordance with the standard of care and skill usually exercised by professional engineers providing similar services in similar circumstances. Aurecon is not able to give any warranty or guarantee that all possible damage, defects, conditions or qualities have been identified.
- The report is based on information that has been provided to Aurecon from other sources or by other parties. The report has been prepared strictly on the basis that the information that has been provided is accurate, complete and adequate, except where otherwise identified during site investigation inspections. To the extent that any information is inaccurate, incomplete or inadequate, Aurecon takes no responsibility and disclaims all liability whatsoever for any loss or damage that results from any conclusions based on information that has been provided to Aurecon.
- The inspections of the building discussed in this report have been undertaken to inspect the structure and confirm the adequacy of the existing drawings. This report does not address building defects. Where site inspections were undertaken, they were restricted to visual inspections with intent to determine existing building main structural elements only.
- We have not undertaken a detailed review of secondary elements such as ceilings, building services, plant and partitions.

# Appendix A
# Pile stiffnesses and capacities

**Table 12: Pile property based on geotechnical data**

| Pile Group | type 1 | type 2 | type 3 | type 4 | type 5 | type 6 | type 7 | type 8 | type 9 | type 10 | type 11 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | P1 | P1 | P1 | P1 | P2 | P2 | P2 | P2 | P2 | P2 | P3 |
| Number of piles in a group | 1 | 2 | 3 | 4 | 6 | 7 | 8 | 11 | 10 | 20 | 38 |
| Number of group | 8 | 20 | 17 | 9 | 21 | 8 | 8 | 6 | 2 | 8 | 1 |
| Single Pile Tension Capacity (kN) | 110 | 110 | 110 | 110 | 120 | 120 | 120 | 120 | 120 | 120 | 90 |
| Single Pile Compression Capacity (kN) | 300 | 300 | 300 | 300 | 440 | 440 | 440 | 440 | 440 | 440 | 400 |
| Single Pile Lateral Capacity (kN) | 50 | 50 | 50 | 50 | 70 | 70 | 70 | 70 | 70 | 70 | 90 |
| Single Pile Vertical Stiffness (kN/mm) | 30 | 30 | 30 | 30 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Single Pile Horizental Stiffness (kN/mm) | 0.6 | 0.6 | 0.6 | 0.6 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.25 | 1.5 |
| Group efficiency factor (Vertical Capacity) | 0.7 | 0.7 | 0.7 | 0.7 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.6 |
| Group efficiency factor (Lateral Capacity) | 0.55 | 0.55 | 0.55 | 0.55 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.4 |
| Group efficiency factor (Vertical stiffness) | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.6 |
| Group efficiency factor (Lateral stiffness) | 0.45 | 0.45 | 0.45 | 0.45 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.45 |
| Group tension capacity (kN) | 77 | 154 | 231 | 308 | 360 | 420 | 480 | 660 | 600 | 1200 | 2052 |
| Group compression capacity (kN) | 210 | 420 | 630 | 840 | 1320 | 1540 | 1760 | 2420 | 2200 | 4400 | 9120 |
| Group lateral capacity (kN) | 220 | 1100 | 1402.5 | 990 | 2646 | 1176 | 1344 | 1386 | 420 | 3360 | 1368 |
| Group vertial stiffness (kN/mm) | 15 | 30 | 45 | 60 | 120 | 140 | 160 | 220 | 200 | 400 | 912 |
| Group horizental stiffness (kN/mm) | 0.27 | 0.54 | 0.81 | 1.08 | 3 | 3.5 | 4 | 5.5 | 5 | 10 | 25.65 |

# Appendix B
# Assessment Summary

## 1. Building Information

| | |
|---|---|
| Building Name/ Description | Heretaunga Block |
| Street Address | 638 High Street, Boulcott, Lower Hutt 5010 |
| Territorial Authority | Hutt City Council |
| No. of Storeys | 7 Floors, with a basement level and two plant levels. |
| Area of Typical Floor (approx.) | Ground floor ~3800 $m^2$<br>1st floor ~3300 $m^2$,<br>2nd -7th floor ~ 2150 $m^2$<br>Plant 1,2 ~ 550 $m^2$ |
| Year of Design (approx.) | 1974 |
| NZ Standards designed to | Assumed to be (no documentation provided)<br>NZSS 1900 Chapter 8 or NZS4203:1976, NZS3101P 1970, |
| Structural System including Foundations | The lateral system in the longitudinal direction is a shear walls to level 1 with RC moment resisting frames (MRFs) above. IN the transverse direction the lateral system is shear walls with concrete column boundary elements. The RC components are well-detailed for the time and have many of the desirable details required for a modern building. |
| Does the building comprise a shared structural form or shares structural elements with any other adjacent titles? | N/A |
| Key features of ground profile and identified geohazards | The site subsoil classification, in terms of NZS1170.5:2004 Clause 3.1.3, is Class D. |
| Previous strengthening and/ or significant alteration | No significant works noted. |
| Heritage Issues/ Status | N/A |
| Other Relevant Information | N/A |

## 2. Assessment Information

| | |
|---|---|
| Consulting Practice | Aurecon NZ Ltd. |
| CPEng Responsible, including:<br>• Name<br>• CPEng number<br>• A statement of suitable skills and experience in the seismic assessment of existing buildings | ▪ Sam Jones<br>▪ 229819<br>▪ 21 years experience as a structural engineer with significant experience in the seismic assessment of existing buildings |

| | |
|---|---|
| Documentation reviewed, including:<br>• date/ version of drawings/ calculations<br>• previous seismic assessments | ▪ *Original Structural drawings*, Edwards Clendon & Partner, dated 1974.<br>▪ *Heretaunga Block- Assessment of Seismic Performance,* Aurecon, Rev 2 dated 12 December 2011 |
| Geotechnical Report(s) | Borehole data supplied as part of the drawing package.<br>T+T Report on Adjacent ED Block |
| Date(s) Building Inspected and extent of inspection | 1 March 2022 |
| Description of any structural testing undertaken and results summary | N/A |
| Previous Assessment Reports | 2011 Aurecon DSA report. |
| Other Relevant Information | N/A |

## 3. Summary of Engineering Assessment Methodology and Key Parameters Used

| | |
|---|---|
| Occupancy Type(s) and Importance Level | Hospital Building with Resident Patients (IL3) |
| Site Subsoil Class | D |
| **For a DSA:** | |
| Summary of how Part C was applied, including:<br>• the analysis methodology(s) used from C2<br>• other sections of Part C applied | ▪ Force-based assessment methodology utilising a Response Spectrum analysis as described in The Seismic Assessment of Existing Buildings, Part C2 (2017)<br>▪ Concrete structural assessment to Part C5 Technical Proposal (2018). |
| Other Relevant Information | N/A |

## 4. Assessment Outcomes

| | |
|---|---|
| Assessment Status<br>(Draft or Final) | Draft |
| Assessed *%NBS* Rating | 15%NBS |
| Seismic Grade and Relative Risk (from Table A3.1) | E and 25 times greater than a new building. |

**For a DSA:**

| | | |
|---|---|---|
| Comment on the nature of Secondary Structural and Non-structural elements/ parts identified and assessed | Non structural elements have not been assessed at this stage. Heavy ceiling tiles have been replaced with lighter tiles by the HVDHB. | |
| Describe the Governing Critical Structural Weakness | ▪ Precast Panel connections | |
| If the results of this DSA are being used for earthquake prone decision purposes, and elements rating <34%*NBS* have been identified (including Parts): | **Engineering Statement of Structural Weaknesses and Location** | ***Mode of Failure and Physical Consequence* Statement(s)** |
| Recommendations | Strengthening should be undertaken to increase the structure's rating to a minimum of 67%NBS(IL3) if feasible.<br>. | |

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26013

15th June 2022

Steve Crombie
Director Property & Facilities 2DHB
Capital & Coast District and Hutt Valley District Health Boards

Email: Steve.Crombie@ccdhb.org.nz

Dear Steve,

**Re: Hutt Hospital Heretaunga Block Detailed Seismic Assessment (DSA) Peer Review**

Based on our Peer Review we consider that Aurecon's Detailed Seismic Assessment findings, as represented in their calculations, ETABS models and their Final Detailed Seismic Assessment Report, appropriately indicate the seismic rating of the Heretaunga Block.

This Final Peer Review report letter supersedes our previous interim report letters.

Aurecon's Detailed Seismic Assessment indicates the following:

a) The Precast Concrete Façade panels, which are secondary structure, achieve the lowest seismic score at 15%*NBS* (IL3). This score causes the Heretaunga Block to be rated at 15%*NBS* (IL3).
b) The next lowest scores, which are for elements that form part of the primary structure, are 34%*NBS* (IL3).

Our peer review has involved the following:

- A review of available original structural drawings.
- A review of Aurecon's DSA calculations with a focus on the most significant structural and non-structural elements.
- A high-level review of the ETABS models prepared by Aurecon.
- Maintaining a Peer Review Register to record and close out Peer Review queries.
- Liaising with Aurecon via
    - Phone conversations,
    - Meetings (in person and via Teams).

We have satisfactorily closed out all the queries in the Peer Review Register.

SILVESTER/CLARK
CONSULTING ENGINEERS

The following information was provided to us:

a) Original structural drawings. Some of the Stage 1 (foundation & basement) drawings, particularly those of the basement level shear walls, were not available for our review,
b) Calculations,
c) ETABS models,
d) DSA Reports (drafts and final).

Aurecon have undertaken their Detailed Seismic Assessment following procedures and methods outlined in the MBIE document - The Seismic Assessment of Existing Buildings - Technical Guidelines for Engineering Assessment - July 2017, and the November 2018 amendment to Concrete Buildings C5 section of the document.

## Limitations

We have carried out this Peer Review based on information provided to us. We have focussed on critical items and have used our engineering knowledge and judgement to identify these. We have reviewed assumptions and design approaches for consistency with the Technical Guidelines. We have not carried out detailed "line by line" reviews of all the information provided. We have assumed that information is correct and accurate. We have no reason to believe this is not the case. While we have carried out our Peer Review with appropriate due diligence, ultimate responsibility for the assessment lies with the author of the detailed seismic assessment.

We have not peer reviewed the geotechnical information that has been used as part of the Detailed Seismic Assessment. This is beyond our area of expertise. We have no reason to question the accuracy of the geotechnical information that formed the basis of Aurecon's DSA.

Please call if you have any queries.

Yours sincerely,

Ignatius Black
Principal
SILVESTER CLARK LTD

**Interim Health New Zealand HIU**

# Summary of the Revised Detailed Seismic Assessment and Peer Review of Heretaunga Block at Hutt Hospital

15 June 2022

## 1. Scope of Report

This report summarises the peer review process and outcome of the revised Aurecon Detailed Seismic Assessment (DSA) of the Heretaunga Block at Hutt Hospital as contained in the draft Aurecon DSA of 13 June 2022. Additional commentary on the nature of the risk presented by the building is also provided.

This report updates my previous report dated 9 May 2022.

## 2. Peer Review Process

Silvester Clark have undertaken a peer review of the February 2022 draft DSA by Aurecon.

This peer review followed industry practice, and involved reviewing the structural drawings and the analytical models and calculations prepared by Aurecon. Review questions were put to Aurecon, and responses provided, and a full log of the questions and responses was maintained.

As part of this process, two face-to-face and one online meeting were held at which I was present.

The final peer review report prepared by Silvester Clark dated 15 June 2022 summarised their review process and agreement with the findings of the revised Aurecon DSA. This peer review supersedes their previous interim letters.

## 3. Summary of Seismic Assessments

The revised draft Aurecon DSA has confirmed that the overall seismic rating is 15%NBS at Importance Level 3 (ie. 1,000 year return period earthquake shaking).

This rating is due to the connections of the precast concrete cladding panels as secondary elements having inadequate movement allowance.

The scores for the elements of the primary and secondary structure have however increased to 34%NBS or above, including the stairs.

The revised draft Aurecon DSA provides corresponding scores for Importance Levels 2 (IL2) and 4 (IL4) for comparison purposes. The limiting score for both IL2 and IL4 remains 15%NBS for the precast concrete cladding panels. For the primary structure, the limiting score for the primary structure becomes 45%NBS at IL2 and 25%NBS at IL4.

## 4. Observations on the Review Process

As indicated in my 9 May report, some adjustment to the results outlined in the Aurecon February draft report was expected.

The main change was the increase in scores for the elements of the primary structure from 15%NBS to at or above 34%NBS. Factors that led to this increase included:

- More specific consideration being given to the original construction details for the columns of the perimeter seismic frames. While the configuration and details of these frames do not meet current code requirements, the columns have much more resilient details than those typical of early/mid-1970s buildings.
- While the overall failure mechanism of the longitudinal frames is not permitted by current codes, the detailing of the reinforcement in the columns provides confidence that the column strengths at the critical first floor level could be averaged across the storey. This led to a higher score for these elements, rather than reporting the minimum score corresponding to the first column failure.
- Similar more detailed consideration of the failure modes of the floor diaphragms and stair flights enabled their scores to be increased to 34% and 60%NBS respectively, rather than the previously reported scores that reflected the nominal calculated points of first failure.

## 6. Risk Summary and Occupancy Considerations

The overall rating of the building at 15%NBS (IL3) will result in Hutt City Council determining the building to be earthquake prone and issuing an EPB notice. This will require the external risk posed by the precast concrete cladding panels to be addressed within 7.5 years.

The revised rating of the primary structure at a minimum of 34%NBS indicates that while it contains features that do not meet the requirements of current codes, it has a reasonable level of inherent strength to resist moderate to significant earthquakes. This rating does however indicate that there is less confidence in the response of the building overall to rarer major earthquakes.

With a rating of at least 34%NBS, the primary structure has a risk to occupants of 5 to 10 times that of an equivalent new building.

Mitigation measures to protect people outside the building if any of the precast concrete cladding panels are dislodged in an earthquake are currently being implemented by Hutt Valley DHB. The draft Aurecon DSA also provides an outline scope of seismic strengthening for the structural elements to improve their scores. In order to raise the overall rating of the building, a number of structural elements would require strengthening work.

Based on the seismic scores and commentary reported in the draft Aurecon DSA and our understanding of the building, we consider that the building can continue to be used for a period of time while alternative or replacement facilities are planned.

The need for alternative or replacement facilities is also influenced by the level of structural and non-structural damage that can be anticipated in moderate to significant earthquakes, which is likely to affect the ability of the hospital to function following such events.

Efforts to enhance the current post-earthquake response arrangements should therefore also continue, with particular emphasis on specific agreements with engineers for their priority response.

Dave Brunsdon
Chartered Professional Engineer
HIU Seismic Trusted Advisor

15 June 2022

# Hutt Valley District Health Board - Heretaunga Block

## Health and Safety Implications

Prepared for Hutt Valley District Health Board
Prepared by Beca Limited

**16 June 2022**

## Contents



## Appendices

**tba**

## Revision History

| Revision Nº | Prepared By | Description | Date |
|---|---|---|---|
| 0 | Rob Jury | Draft Report | 14 June 2022 |
| 1 | Rob Jury | Updated to reflect latest DSA report | 16 June 2022 |
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## Document Acceptance

| Action | Name | Signed | Date |
|---|---|---|---|
| Prepared by | Rob Jury | | |
| Reviewed by | [redacted] | | |
| Approved by | | | |
| on behalf of | Beca Limited | | |

# Executive Summary

Beca has been commissioned by HVDHB to review the health and safety implications associated with ongoing use of the Heretaunga Block as a result of Aurecon's draft Detailed Seismic Assessment (DSA) that has been completed for the building. In particular, HVDHB is seeking advice to inform it of appropriate next steps from a Health and Safety point of view.

The revised draft DSA has identified that the precast wall panels score below 34*%NBS*(IL3) (percentage of new building standard as defined by the Engineering Assessment Guidelines for Importance Level 3 in accordance with the NZ Loadings Standard) and a number of other elements score between 34 and 40*%NBS*(IL3). If these scores remain in the final report the building's earthquake rating will be less than 34*%NBS*(IL3) and it is likely it will be determined to be earthquake-prone by the Hutt City Council

A low earthquake rating for this building is indicative that action needs to be taken. Under the Building Act, identified vulnerabilities (scoring less than 34*%NBS*) need to be addressed, at least to minimum levels, within a defined time frame (7.5 years for a priority hospital building such as the Heretaunga Block). Currently the elements that would need to be addressed within this timeframe are the precast wall panels. The guidance provided by WorkSafe suggests that, if a plan exists to address this issue within the legislated time frame, and is being followed, a defensible position has been established under the HSW Act in the unlikely event that a severe earthquake occurs and the more unlikely event that loss of life occurs in or around the building. (https://www.worksafe.govt.nz/laws-and-regulations/operational-policy-framework/operational-policies/dealing-with-earthquake-related/) The defensible action could comprise a plan to retrofit or replace and/or mitigation measures to minimise the hazard associated with falling panels.

There appears to be consensus amongst those who have commented on the building that it is neither considered dangerous as defined by the NZ Building Act nor in imminent risk of collapse. We have concluded that the likelihood of total collapse, even in severe earthquake shaking, is low although still possible. We have also concluded that the performance of the building in moderate shaking is likely to be good and perhaps better than a building just meeting the minimum requirements for new buildings for these levels of shaking. These are important conclusions as they suggest that drivers that would suggest an immediate decanting of the building was necessary are not present.

From Beca's review of the available documentation, we have concluded that, although the earthquake rating for the building may be low and indicates a heightened risk to users compared with occupation of a similar new building in the event of a severe earthquake, there are attributes of this building which are likely to mitigate the risks in moderate shaking. This may allow the opportunity to consider a broader range of next steps while at the same time achieving safety objectives in balance with the difficulties and risks associated with immediate decanting.

Critical aspects beyond the building structure that could affect the harm to building occupants are:

- potential performance of the precast wall panels and how this might affect those egressing the building and those around the building and in adjacent neighbouring buildings
- potential performance of the stair flights/stairwells to allow evacuation
- potential performance of non-structural items (fall hazards).

Potential strategies are available to mitigate these aspects such that the risks associated with each would be significantly reduced. The mitigation strategies we are suggesting for some of these items (use of stair wells and non-structural items) are similar to those that should be in place for any hospital facility.

In addition, we understand that there are activities within the building that could have broader health and safety implications for the community at large in a post-disaster situation. The reliability of these being available post a significant event should be reviewed and contingency plans may be necessary.

The risks associated with earthquakes and working in this building for a period approaching even ten years are low compared with risks associated with common activities/events that individuals tolerate. They are even less for visitors and patients who spend less time in the building and will be reduced significantly if the above mitigation measures are put in place as soon as reasonably practicable.

There are risks associated with decanting if this is being considered before a comparable local medical service is available. These risks can be significant and should be considered against those resulting from maintaining occupation to ensure a balance is achieved.

# 1 Introduction

Beca Ltd (Beca) has been commissioned by Hutt Valley District Health Board (HVDHB) to carry out a review of the health and safety implications of the Detailed Seismic Assessment (DSA) that has been prepared for the Heretaunga Block on the HVDHB site in Lower Hutt.

This health and safety review is based on the following documents which have been provided by HVDHB:

- Aurecon Draft Report: Hutt Hospital – Detailed Seismic Assessments – Heretaunga Block DSA, Revision 0, 15 February 2022
- Aurecon Revised Draft Report: Hutt Hospital – Detailed Seismic Assessments – Heretaunga Block DSA, Revision 1, 13 June 2022
- Aurecon Report: HVDHB Seismic – Heretaunga Block Strengthening, Revision 1, 11 May 2022
- Silvester Clark Letter: Hutt Hospital Heretaunga Block DSA Peer Review – High-level review comments, 3 May 2022
- Silvester Clark Letter: Hutt Hospital Heretaunga Block DSA Peer Review – High-level review comments, 11 May 2022
- Aurecon Memorandum: Hutt Hospital – Heretaunga Block Detailed Seismic Assessment Summary, 29 March 2022
- Interim Health New Zealand HIU Report: Seismic Risk Review of Heretaunga Block, Hutt Hospital, 9 May 2022
- Construction Drawings: Foundations and borehole logs, 1972, building superstructure, 1974
- Various geotechnical reports including borehole logs and advice on foundations for various adjacent projects
- Aurecon reference Revit drawings (undated).

We understand that a peer review report is currently being finalised which may necessitate revisions to the DSA report depending on the findings and comments made.

This Beca report may require amendment to reflect the final DSA and Peer Review reports.

We note that, although we have visited the building, we have not carried out a detailed inspection and therefore are reliant on the above reports and construction drawings.

# 2 Terminology

Terms used in this report take the following meaning:

***In Situ Floor Slabs***: floor formed by pouring concrete on to formwork on which a grid of steel reinforcing has been laid. The concrete and reinforcing bars lock the floor into the supporting beams of the frame of the building. This in contrast to a concrete floor made of pre-cast, reinforced concrete planks sitting on the surrounding beams and covered with a thin layer of concrete in which sheets of steel mesh are embedded.

***Cast-in Stairs***: in modern buildings since the 1970s, reinforced concrete stairs are normally pre-cast and craned into place. The units have reinforcing bars protruding from them so that the units can be locked into the surrounding structure as the building proceeds. If the stairs are locked into very stiff walls beside them, they are protected from being distorted/damaged. The stairs that collapsed in the Forsyth Barr Building in Christchurch in February 2011 were not locked into any wall and buckled/collapsed because of the relative horizontal movement between floors. One stair high up collapsed and took out those below as it fell.

***Well Detailed***: Description of an element that has been proportioned to provide resilience. Includes the arrangement of reinforcing steel in a concrete member/element that will significantly improve its ability to resist earthquake shaking beyond the point when damage is first observed.

***Structural Weaknesses (SW)***: a weakness that would lead to a significant life-safety hazard. The lowest scoring SW sets the overall rating of the building and is referred to as the Critical Structural Weakness (CSW) in the building. Fix this one, and the next lowest sets the overall rating, and so on.

***Severe Structural Weaknesses (SSWs):*** A weakness not readily amenable to reliable assessment and recognised from past earthquakes to be associated with a critical complete collapse mode of behaviour eg pancaking.

***Robust***: beam/column/wall/connection: Robust items still hang together even though they might be distorted/damaged. They are not essentially brittle.

***Moment-Resisting Frame*** – the skeleton of the building resists loads by bending and distorting. When designed properly, the skeleton is robust (see definition).

***Shear Wall***: a very stiff, vertical wall cantilevered from the foundations. All the horizontal loads (wind/earthquake) are resisted by these elements rather than by the building's frame/skeleton. If the forces are extremely high, damage normally shows up at the base of the wall. Unless properly designed, their eventual failure can be brittle, although we know how to suppress that.

***Minor shaking:*** Shaking with an average return period up to 50 years.

***Moderate shaking:*** Shaking with an average return period in the range 50 years to 250 years.

***Severe shaking:*** Shaking with an average return period in the range 250 years to 1000 years.

***Very severe shaking:*** Shaking with an average return period in the range 1000 years to >2500 years.

# 3 The Context

## 3.1 The Detailed Seismic Assessment (DSA)

The latest Aurecon DSA (Rev. 1, Revised Draft, 13 June 2022) has reported the following ratings for elements of the Heretaunga Block – of which only the panels score below 34%*NBS*(IL3):

- Moment-resisting frames (columns and beams) – 34-40%*NBS*(IL3)
- Concrete shear walls – 36%*NBS*(IL3)
- Concrete floor diaphragms – 34%*NBS*(IL3)
- Precast concrete panels and connections – 15%*NBS*(IL3)
- Stairs – 60%*NBS*(IL3)
- Foundation system – >34%*NBS*(IL3)
- Reinforced concrete masonry walls 45%*NBS*(IL3)

The DSA indicates that, based on the score for the panels, the building would be assessed as being a Grade E (very high relative risk) building. This is a grade assessed relative to a new building of this type which, if it was built in accordance with the latest requirements, would be considered and intended to be a very low risk building.

If these scores are confirmed in the final reports, the panels are the only elements that would need to be addressed within the minimum legislative timeframe for a priority building of this type, which is currently 7.5 years. The legislative requirement would be to retrofit these to achieve a minimum of 34%*NBS*(IL3) within the required timeframe.

## 3.2 The Building

Based on the available documents we have determined the building structure has the following characteristics:

- A robust foundation structure (below ground level) comprising a grillage of reinforced concrete and blockwork walls, with piles extending to a depth of 8 to 9 m below basement floor level. The founding depth of the piles appears to be below the level of the identified potential liquefiable soil layers. The main floors are of reinforced in-situ concrete supported on reinforced concrete columns and capitals (drop panels) at floor level.
- Earthquake loads in the transverse (across the narrow) direction of the building are resisted by reinforced concrete walls and integral precast wall panels with reinforcing steel cast-in to the perimeter concrete beams. The doubly-reinforced walls appear well detailed for the time with integral concrete columns on the extremities and transverse ties in the web regions immediately adjacent to the columns.
- Earthquake loads in the long direction of the building are resisted by a combination of shear walls and reinforced concrete moment-resisting frames. The beams in these frames have been generally shown to have greater capacity than the columns so do not have the desirable weak beam/strong column hierarchy that would be required in modern concrete moment- resisting frames when these are the sole means of resisting earthquake loads.
- The stair flights are cast integral with the concrete shear walls.

## 3.3 Inferred Seismic Performance

The scores are referenced in the DSA report as being representative of *failure* of the element. While the scores indicate the point at which the element fails to meet the assessment criteria set in the assessment guidelines, they are not necessarily indicative of when the physical failure of the element is likely to occur, nor the point at which the element is likely to become relevant to the safety of the building occupants.

We note that the DSA has not considered the deformation capability of the precast wall panels, nor of the deformation capability of the shear walls or concrete frame.

A review of the available drawings and reports and our judgement and experience of observing building damage following earthquakes leads to the following comments on performance:

- The good founding of the building below the liquefiable soil layers and the robust basement structure are expected to mitigate differential vertical displacements and, therefore, settlement damage to the building. Lateral building displacements at basement level could occur as a result of surface layer liquefaction but, even in severe shaking, we would expect these to be moderate and have little operational effect on activities within the building.
- The shear walls orientated in the building's narrow direction are reasonably well detailed and have a strength hierarchy with a margin between desirable flexural compared with shear behaviour that would suggest that they would perform well in all but very severe shaking. Even in severe shaking we consider it is unlikely that the walls would deform to the extent that the failure of the building would be expected.
- The moment-resisting frames in the long direction of the building are not expected to perform as well as a modern moment-resisting frame but, nevertheless, the columns are reasonably well detailed and would be expected to exhibit a reasonable level of deformation capability. In addition, the integral nature of the precast panels and the presence of the walls in this direction will stiffen the building and limit damage in minor-to-moderate shaking levels. Under greater levels of shaking the behaviour of the building in this direction is less certain, but this should be considered together with the low likelihood of these severe levels of shaking.
- The DSA indicates that there are no identified severe structural weaknesses (SSWs) in the building. This is an important finding as without SSWs it is very unlikely that the building structure would collapse in a manner similar to that experienced in the CTV building during the 22 February 2011 earthquake in Christchurch.
- The stairs have been built into the adjacent shear walls and therefore could be expected to be protected from significant damage even in severe shaking. The stair wells have precast panels on at least one side. If panels were to become dislodged, they would potentially fall from the building. We are of the view that, even if panels were dislodged, the stair flights would still be navigable for egress purposes. These stairs do not have the deficient characteristics that were highlighted in the Forsyth Barr Building stairs, and which led to their collapse in the 22 February 2011 earthquake in Christchurch. It was this stair that led to the MBIE advisory after the earthquake.
- The vertical precast panels have been identified as being rigidly connected between floors. This provides some stiffening to the building and performance benefits in minor to moderate shaking as noted above. We note that the connections are well anchored into the building. The detailing also shows the presence of grease-impregnated tape at the interface between the panel and the structure. This may have been provided for durability purposes, but it would, in addition, provide some deformation capability in the attachment of the panels to the building which would improve their expected resilience. It is unclear at present how the panels would actually fail. We have not carried out calculations to determine the hierarchy of behaviour. If the connections fail as presently suggested then the panels could fall. However, it is possible that the panels themselves could fail before the connections in which case the panels may not fall as a unit. Establishing the hierarchy is important to fully understanding the risks associated with this hazard.
- Unlike precast floors which have the potential for undesirable behaviour modes, in-situ concrete floors (poured concrete cast on site against boxing/forms), such as those present in this building, have been found to perform well, even in severe earthquakes. Also, the transfer of forces into walls etc are not reliant on reinforcing steel that can be fitted within relatively thin topping concrete, or non-ductile mesh. We would not expect deformations within the concrete floors to be such that their vertical load-carrying capacity would be compromised.

- The Aurecon DSA has not considered the performance of non-structural elements. Therefore, we cannot comment on the likelihood of hazards resulting from falling non-structural items. However, we suspect that this hazard will be no worse than in typical older buildings in Wellington and maybe better at moderate levels of shaking for the reasons discussed above. We understand that an audit of non-structural items is currently underway. We recommend that this be completed quickly as the risk from falling non-structural items is likely to be much higher that the risk of overall building collapse. The risk profile for bedridden patients resulting from falling objects may differ from that for more mobile building occupants and should be considered as part of the audit.

In summary, it is our view that this building should perform well from a damage (and, therefore, also a life-safety) point of view in low-to-moderate shaking and, perhaps, better than many buildings in Wellington that might be considered code-compliant. At higher levels of shaking, the behaviour of the building will be less certain and perhaps below the reliability that would be expected of a building with a designated post-disaster function. Collapse of the building as a whole in severe earthquake shaking is not expected, although damage could be significant.

## 3.4 Risk and Importance Levels

The size of the earthquake forces prescribed for the design (and assessment) of a building are directly related to the Importance Level ascribed to it. Importance Levels are linked to the consequence (mainly social) of failure (life safety) and functionality. The descriptions for each Importance Level are set out in the New Zealand Standard NZS 1170.0 (see tables below).

If the Heretaunga Block were an office building, it would be assessed as for Importance Level 2 (IL2) which is the default for a normal/ordinary building.

Implicitly, this defines what society/legislation defines as an acceptable life-safety risk for occupants.

Higher Importance Levels reflect society's:

- Aversion to large numbers of people being injured/killed in one location at the same time
- Requirement that some facilities remain operational after a large, rare event.

An IL3 building has earthquake design forces 30% higher than those for an IL2 building, and an IL4 building's forces are 80% higher than those for an IL2 one.

Another way of looking at this is that an IL3 or IL4 building is more resilient than an IL2 and should exhibit less damage or loss of utility than an IL2 one at all levels of intense shaking.

It is axiomatic that:

- statistically, the more intense the earthquake shaking, the less likely it is to occur at a particular location.
- No building can be guaranteed to be "earthquake-proof" because there is always the chance that a very rare/unexpected type of earthquake might be experienced.

The Heretaunga Block is being assessed against IL3 criteria. If it were simply a set of dormitories for public accommodation (IL2), it would be justifiable to increase the assessed *%NBS* ratings by a factor of 1.3. On the other hand, society and medical professionals will almost certainly say that MRI scanners are so important in a post-disaster situation that they should be housed in at least an IL4 facility (i.e., not in an IL3 one).

If a post-disaster management plan can mitigate the risk that a patient confined to a bed cannot easily take cover during an earthquake and leave the building unaided if there were a reason to evacuate, then it is arguable that the life-safety risk of occupants should be assessed in terms of IL2 objectives.

Similarly, it is clear that there should be a plan to shift essential facilities (e.g., the MRI facility) to a fully compliant IL4 environment as soon as reasonably practicable.

**TABLE 3.1**

**CONSEQUENCES OF FAILURE FOR IMPORTANCE LEVELS**

| Consequences of failure | Description | Importance level | Comment |
|---|---|---|---|
| Low | **Low** consequence for loss of human life, *or* **small or moderate** economic, social or environmental consequences | 1 | Minor structures (failure not likely to endanger human life) |
| Ordinary | **Medium** consequence for loss of human life, *or* **considerable** economic, social or environmental consequences | 2 | Normal structures and structures not falling into other levels |
| High | **High** consequence for loss of human life, *or* **very great** economic, social or environmental consequences | 3 | Major structures (affecting crowds) |
| | | 4 | Post-disaster structures (post disaster functions or dangerous activities) |
| Exceptional | Circumstances where reliability must be set on a case by case basis | 5 | Exceptional structures |

**TABLE 3.2**

**IMPORTANCE LEVELS FOR BUILDING TYPES—NEW ZEALAND STRUCTURES**

| Importance level | Comment | Examples |
|---|---|---|
| 1 | Structures presenting a low degree of hazard to life and other property | Structures with a total floor area of <30 $m^2$<br>Farm buildings, isolated structures, towers in rural situations<br>Fences, masts, walls, in-ground swimming pools |
| 2 | Normal structures and structures not in other importance levels | Buildings not included in Importance Levels 1, 3 or 4<br>Single family dwellings<br>Car parking buildings |
| 3 | Structures that as a whole may contain people in crowds or contents of high value to the community or pose risks to people in crowds | Buildings and facilities as follows:<br>(a) Where more than 300 people can congregate in one area<br>(b) Day care facilities with a capacity greater than 150<br>(c) Primary school or secondary school facilities with a capacity greater than 250<br>(d) Colleges or adult education facilities with a capacity greater than 500<br>(e) Health care facilities with a capacity of 50 or more resident patients but not having surgery or emergency treatment facilities<br>(f) Airport terminals, principal railway stations with a capacity greater than 250<br>(g) Correctional institutions<br>(h) Multi-occupancy residential, commercial (including shops), industrial, office and retailing buildings designed to accommodate more than 5000 people and with a gross area greater than 10 000 $m^2$<br>(i) Public assembly buildings, theatres and cinemas of greater than 1000 $m^2$<br>Emergency medical and other emergency facilities not designated as post-disaster<br>Power-generating facilities, water treatment and waste water treatment facilities and other public utilities not designated as post-disaster<br>Buildings and facilities not designated as post-disaster containing hazardous materials capable of causing hazardous conditions that do not extend beyond the property boundaries |

| | | |
|---|---|---|
| 4 | Structures with special post-disaster functions | Buildings and facilities designated as essential facilities<br>Buildings and facilities with special post-disaster function<br>Medical emergency or surgical facilities<br>Emergency service facilities such as fire, police stations and emergency vehicle garages<br>Utilities or emergency supplies or installations required as backup for buildings and facilities of Importance Level 4<br>Designated emergency shelters, designated emergency centres and ancillary facilities<br>Buildings and facilities containing hazardous materials capable of causing hazardous conditions that extend beyond the property boundaries |
| 5 | Special structures (outside the scope of this Standard—acceptable probability of failure to be determined by special study) | Structures that have special functions or whose failure poses catastrophic risk to a large area (e.g. 100 $km^2$) or a large number of people (e.g., 100 000)<br>Major dams, extreme hazard facilities |

Tables Extracted from AS/NZS1170.0 Loadings Standard

In summary, Importance Levels set building performance objectives. However, every earthquake experienced by the Heretaunga Block is unique with respect to its intensity, shaking characteristics, length, dominant direction, etc. The structure is also unique in every way (materials, workmanship, etc.). Our experience is that buildings are generally more resilient than our calculations and design might predict. Moreover, if the earthquake experienced is “on paper” a design-level one, the damage seen may not be nearly as great as postulated. A good example is that even if an assessment indicates that all cladding panel fixings generically have a less-than-ideal capacity, it is more likely that a few may fail than all fail at once. The *%NBS* reflects the generic assessment of the vulnerability rather than the probability of all panels failing simultaneously.

## 3.5 Post-Disaster Requirements

The building has been classified as Importance Level 3 (IL3). This classification does not reflect that a post-disaster function is intended.

As noted above, we understand that there are some activities within the building that might be intended to be part of disaster response plans. A consequence of the current status of the building is that these activities should not be assumed to be available after a significant event. We recommend that the post-disaster function for these activities be reviewed and contingency plans considered.

# 4 The Hazards and Possible Mitigation Measures

We have identified the following hazards as relevant to occupant safety and also to the safety of those who might be outside the building or beneath this building in the neighbouring buildings:

**Building structure as a whole:** We are not expecting the building as a whole to be a significant hazard even in severe shaking. However, in severe shaking the reliability of its performance will not be as good as a new building constructed with the latest engineering knowledge. This lower, expected reliability should be factored into disaster response planning and the part this building is expected to play in these plans.

**Detached precast panels**: We do not expect precast wall panels to become detached in minor-to-moderate shaking. In severe shaking, detachment of some panels cannot be precluded but would be expected to be localised and not able to be predetermined. Mitigation measures at egress points from the building (e.g., crash-barrier canopies) where these egress points are beneath panels would be a prudent measure, as would fencing the area under the panels on the outside of the building and in adjacent buildings. This also has the benefit of being a tangible and visible measure for users of the building. The potential fall zones and the requirements for resisting impacts from falling concrete elements can be determined using standard engineering processes. The issue will be the degree of certainty that will be tolerable in determining what is appropriate and what is practical to put in place.

**Non-structural items:** As in any building, the falling of non-structural items such as in-ceiling services, large items of equipment, ceilings, ceiling tiles, and contents in general are a hazard to building occupants. An audit of these items should be completed as soon as reasonably practicable to identify those items that need additional restraint or special stowage measures to prevent them from falling. We would expect that the criteria that should be applied to what would be a hazard would vary depending on its potential to harm a bedridden (or otherwise immobile) occupant and/or a more mobile individual.

**Stairwells**: The ability to egress a building such as this after an event is a critical aspect of operating a hospital facility, where many of the occupiers will not be mobile and the lifts will not be available until checked by a serviceman. While we expect that the stairwells will remain navigable, damage around the stairwells should be expected after severe shaking. We would not expect the behaviour of the wall panels around the stair wells to affect the usability of the stairs in an emergency egress situation. We recommend that regular training be carried out so that staff are aware of the functional constraints of the existing stair flights and the evacuation measures are well understood. Staff should be made aware of the type of damage that might be expected so that this does not come as a surprise after a major event.

**Impact of closure:** Although difficult to quantify, there are risks associated with closing the building. These include the risks associated with any alternative accommodation, the risks associated with any reductions in medical services that might be available from the point of decanting and the risks associated with accessing medical services (e.g., increased travel distances, pedestrians crossing roads between facilities).

# 5 The Risks

From a risk perspective, the following are important considerations when dealing with seismic matters:

- The likelihood of any hazards becoming an issue from a life-safety perspective in earthquakes.
- Tolerable risks for occupants of buildings in general.
- Tolerable risks for loss of function of a building in a hospital setting.

We have concluded that the danger/consequences associated with the primary building structure is unlikely in minor-to-moderate shaking and that total building collapse is unlikely even in severe shaking. Therefore, it is severe and very severe shaking that should be the focus when considering the life safety risks due to the building as a whole. The earthquake that is typically associated with this level of shaking is a Wellington Fault event with an average return period of around 1000 years. It is to be expected that such an earthquake will result in significant damage generally in the Wellington region.

The targeted fatality risk in earthquakes for a typical new building (100%*NBS*(IL2), say) is 1 in 1,000,000. The risk in severe shaking for an individual in a building with an earthquake rating of 34%*NBS*(IL3) is considered roughly to be10 times that for an individual in a 100%*NBS*(IL2) building. As discussed in Section 3, an IL2 building represents a typical building and therefore is a reasonable reference point for individual risk. This implies that, in less than a 34%*NBS*(IL3) building, the risk would be roughly 1 in 100,000 expressed as an annual probability. This is comparable with many risks that many individuals are prepared to accept in the course of their daily lives such as driving above the speed limit or crossing a road against the 'little red man'.

The risk increases roughly in proportion to the number of years of exposure. That is, the likelihood is greater if the exposure period is 2, 5 or 10 years rather than 1 year (by approximately 2, 5 and 10 times respectively) and less for an individual occupying the building for fewer than 24 hours/day.

By virtue of the legislative settings the Government has indicated, on behalf of the community, that it is considered tolerable (when considering seismic aspects) for an individual to occupy a typical (IL2) building rating at less than 34%*NBS* for up to 15 years. This equates roughly to a risk of 15 in 100,000.

Aurecon's revised DSA (13 June 2022) has identified only one aspect, the precast wall panels, to score less than 34%*NBS*(IL3). If the hazard associated with the panels could be successfully mitigated along the lines suggested in Section 4 above, or can be shown to be less vulnerable than currently considered, the rating of the building would be raised above 34%*NBS*(IL3) (equivalent to above 45%*NBS*(IL2)). This roughly **halves** the risk from that which might be associated with a building rating less than 34%*NBS*. For this reason, buildings with a rating above 34%*NBS*(IL2) (equivalent to above 25%*NBS*(IL3)) are considered by the Government (on behalf of the community) as representing a tolerable risk (for seismic considerations) for **indefinite occupation** by individuals.

The Heretaunga Block has functions that determine that it is relatively more important to the community than, say, a typical office building. This is because of the number of occupants that may be immobile during the earthquake shaking and who are likely to be reliant on others to egress the building, should this be necessary. This building also fulfils an important function as part of the hospital system in the event of a disaster - even though it might not be considered to require a reliable post-disaster functionality that defines an IL4 facility. The risk settings required for functionality can be considered comparatively via the IL classification. The Government has determined on behalf of the community that a rating of greater than 34%*NBS*(IL3) is sufficient to provide the required functionality and safety for patients. It has also determined that a rating less than this is acceptable for a period up to 7.5 years.

The implications of these settings for the Heretaunga Block are as follows:

- The issue with the wall panels should be mitigated as soon as reasonably practicable, but within a period of 7.5 years.
- While the wall-panel issue is being addressed the risk to individuals can be considered acceptable.
- When the wall-panel issue has been addressed, the building could be considered to meet minimum risk requirements for individuals and functionality requirements for an IL3 building.
- Notwithstanding that minimum requirements are met, it is generally accepted that a standard of at least 67*%NBS*(IL3) is a desirable long-term target.
- The reliability of critical items in the building eg MRI should be reviewed

If decanting of this building is being considered before a suitable local facility is available that can provide a similar level of service, then the risks associated with this exercise need to be balanced against any perceived risk of maintaining occupation of this building. The issues to be considered would include:

- Earthquake rating of the building/facilities that will then be relied on.
- Risks associated with any disruption to medical services.
- Risks associated with moving patients during decanting.
- Risks associated with transferring patients to areas outside Lower Hutt or those having to travel to new facilities as potential patients or visitors.
- Reliability of other facilities or transport routes to other facilities in a major event

Some quantification of these risks would be possible but to do so would require further input of HVDHB staff. It is considered, however, that when combined these would be significant.

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# Capital and Coast DHB and Hutt Valley DHB

## CONCURRENT Board Meeting

## Meeting to be held on 22 July 2022

***Resolution to exclude the Public***

**The Boards agree** that the public be excluded from the following parts of the proceedings of this meeting, namely:

- for the Agenda items and general subject matter to be discussed as set out in the first column in the table below,
- on the grounds under clause 34 of Schedule 3 to the New Zealand Public Health and Disability Act 2000 as set out in the second column in the table below and
- for the reasons set out in the third column of the table below (including reference to the particular interests protected by the Official Information Act, where applicable).

**TABLE**

| **Agenda item and general subject of matter to be discussed** | **Grounds under clause 34 on which the resolution is based** | **Reason for passing the resolution in relation to each matter, including reference to OIA where applicable** |
|---|---|---|
| Confirmation of minutes of previous meeting (public excluded session) and Matters Arising from those minutes. | paragraph (a) i.e. the public conduct of the whole or the relevant part of the meeting would be likely to result in the disclosure of information for which good reason for withholding would exist under any of sections 6, 7 or 9 (except section 9(2)(g)(i) ) of the Official Information Act 1982 | i. OIA s 2(a) protect the privacy of natural persons, including that of deceased natural persons, section<br>ii. OIA s 9(2)(ba) to protect information which is subject to an obligation of confidence where the making available of that information would be likely to prejudice the supply of information from the same source, and it is in the public interest that such information should continue to be supplied. |

| | | |
|---|---|---|
| | | iii. OIA s 9(2)(j) to enable this organisation to carry on, without prejudice or disadvantage negotiations |
| 2DHB and MHAIDS Quality & Safety Report | As above | As above (i) and (ii) |
| 2DHB Workplace Health and Safety Report | As above | As above (i) and (ii) |
| FRAC items for Board Approval from meeting dated 1/6/2022 | As above | As above (iii) |
| Letters of Representation for the Financial Year ending 30 June 2022 and the Health New Zealand Questionnaire | As above | As above (iii) |
| MCPAC Update from meeting dated 1/6/2022 | As above | As above (iii) |
| Chair's Report and Correspondence | As above | As above (i), (ii) and (iii) |
| Chief Executive's Report | As above | As above (i), (ii) and (iii) |
| General Business | As above | As above (i), (ii) and (iii) |

NOTE
The Act provides that every resolution to exclude the public shall be put at a time when the meeting is open to the public, and the text of that resolution (or copies of it) must:

- be available to any member of the public who is present; and
- form part of the minutes of the board or committee.