

WORKSHOP MATERIAL

Workshop: Nelson Regional Sewerage Business Unit & Nelson Tasman Regional Landfill Business Unit - Activity Management Plans

Date: Friday, 10 November 2023

| Item | Released Information |
|-------------|---|
| 1. | Combined Nelson City and Tasman District Councils Workshop – NRSBU & NTRLBU AMPS – Programme – 10 November 2023 |
| 2. | Joint Council Workshop 10 November 2023 – NRSBU 2024-2034 AMP - Presentation |
| 3. | Joint Council Workshop 10 November 2023 - NTRLBU 2024-2034 AMP - Presentation |

Combined Nelson City and Tasman District Councils Workshop

Nelson Regional Sewerage Business Unit and Nelson Tasman Regional Landfill Business Unit 2024-34 AMPs

Workshop Programme

Commencing at 09.00

finishing at 13.00

**Council Chamber, Civic House
Trafalgar Street, Nelson**

Friday 10 November 2023

1. Workshop Purpose

To review and discuss the Regional Business Units' Activity Management Plans (AMPs) for 2024 to 2034

2. Workshop Outline

2.1 Nelson Regional Sewerage Business Unit: AMP 2024-34

- Key issues
 - Climate Change
 - Capacity
 - Cultural & community pressures
 - Infrastructure resilience
- CAPEX projects & expenditure

2.2 Nelson Tasman Regional Landfill Business Unit: AMP 2024-34

- Key issues
 - Gate fees
 - Fee increase components
 - Waste growth forecasts
- CAPEX projects & expenditure

3. Summary

At the conclusion of the workshop officers will summarise the direction provided and confirm outcomes.

4. Reference Documents

1080325921-722 – Joint Council Workshop 10Nov2023 NRSBU AMP
2024-34 Presentation

1399367370-8769 - Joint Council Workshop 10Nov2023 NTRLBU AMP
2024-34 Presentation

Joint Council
Workshop

NRSBU 2024-2034 AMP

10 November 2023

Background

2024-2034 AMP focuses on:

- Consent required improvements
- Capacity to meet current & future demands
- Resilience and future proofing
- Beneficial re-use and alternative disposal

2024-34 Draft AMP presented to NRSBU Joint Committee August 2023

- Adopted for consultation and feedback.
- Collaborative discussions with NCC and TDC Staff resulted in:
 - Reduced expenditure between 2024 - 34 by 23% through CAPEX reprioritization
 - Some activities moved out of first 10 years
- This presentation is based on the revised programme of work, reflecting the feedback from discussions with Councils' Staff

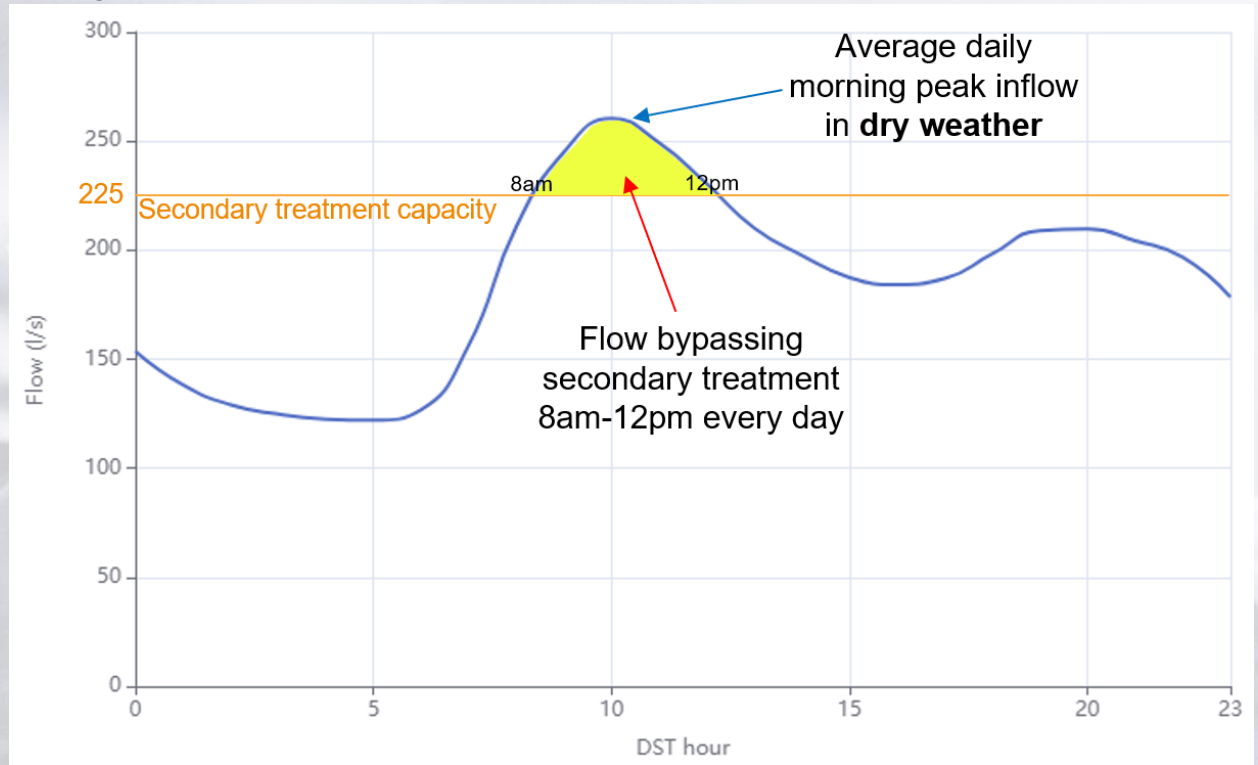
Management of key issues

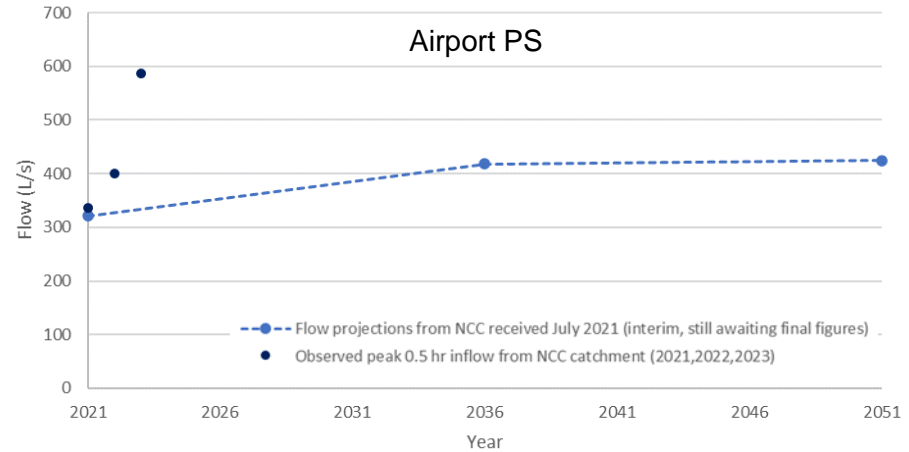
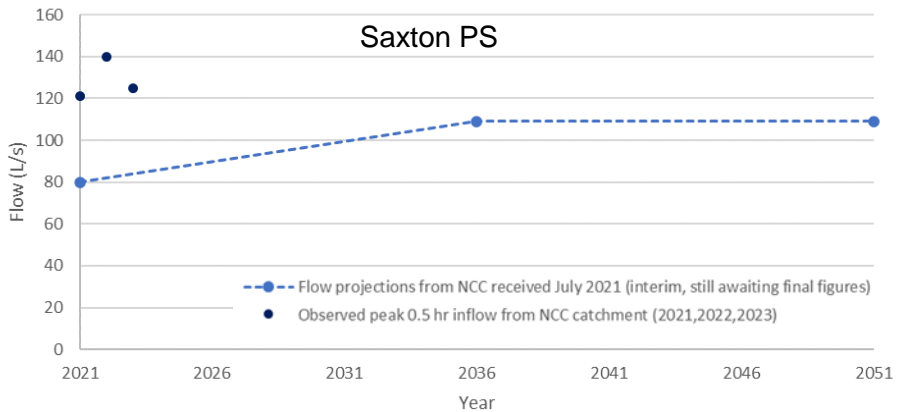
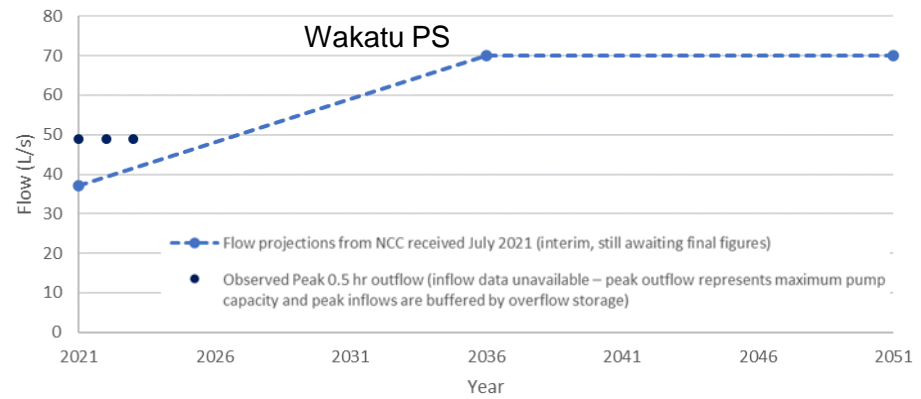
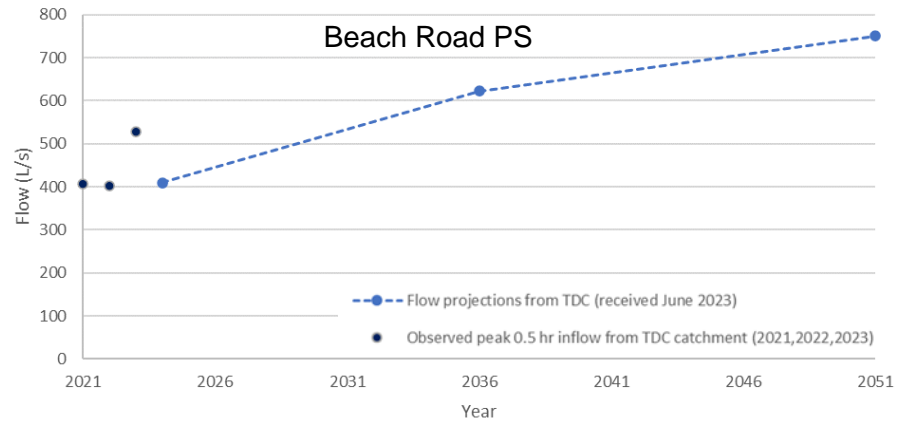
- Climate change
 - Flooding and sea water inundation from sea level rise
 - Increased frequency and severity of weather events



Management of key issues

- Capacity
 - Now
 - and in the future





Management of key issues

- Cultural and community pressures
 - Infrastructure location
 - Effluent discharge locations
 - Water re-use
- Biosolids management
 - Cultural impact
 - Resilience
- Increasing performance requirements
 - Odour management
 - Te mana o te Wai & Taumata Arowai
 - Other regulatory changes
- Infrastructure resilience
 - Land for future sites
 - Spatial separation and redundancy improvements



Key Capital Projects in Next Decade

\$97.3M CAPEX

Implement and use of ongoing improvement processes for Quality, Risk and Environmental performance.

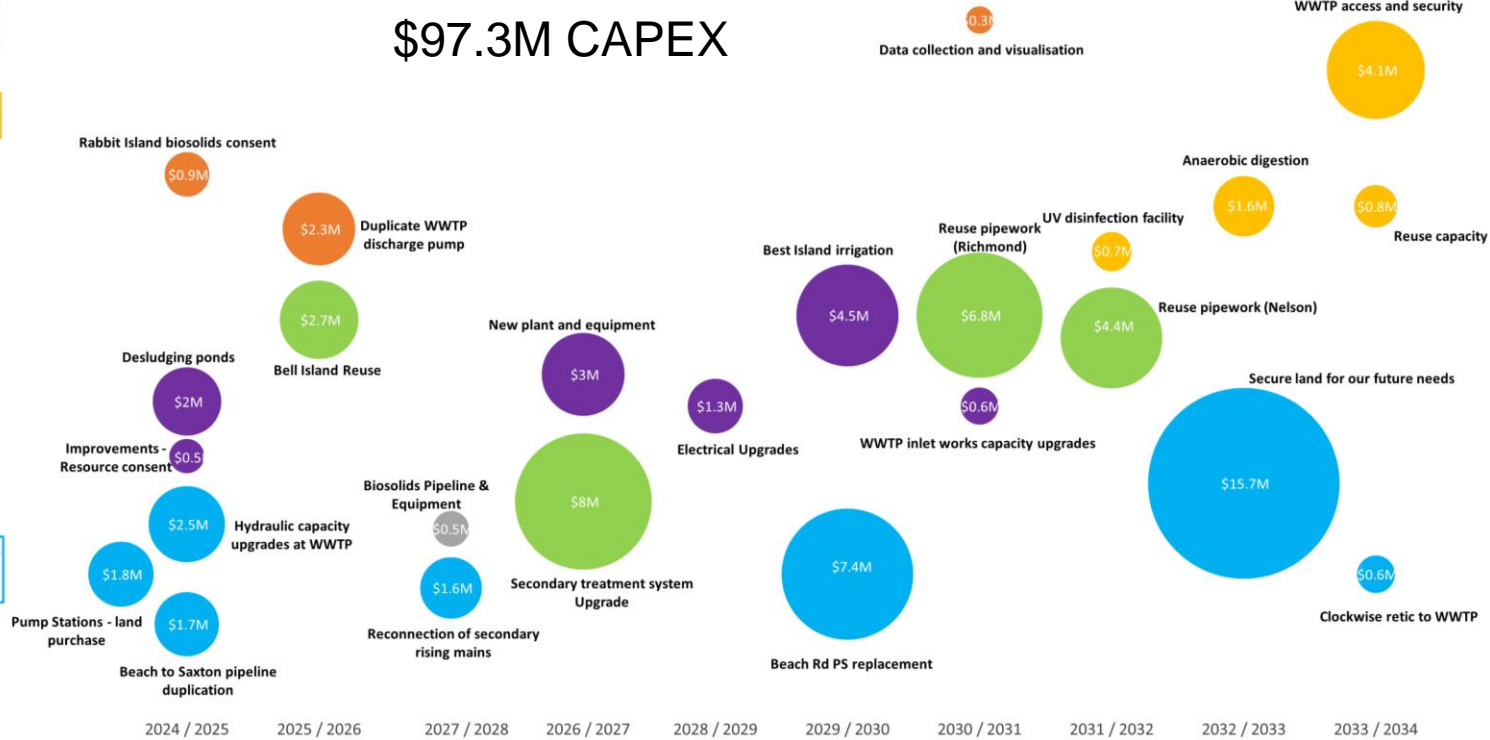
Facilities and sites that are resilient and enable us carry out our activities

Use of ongoing improvement processes to identify, implement and operate feasible biosolids reuse

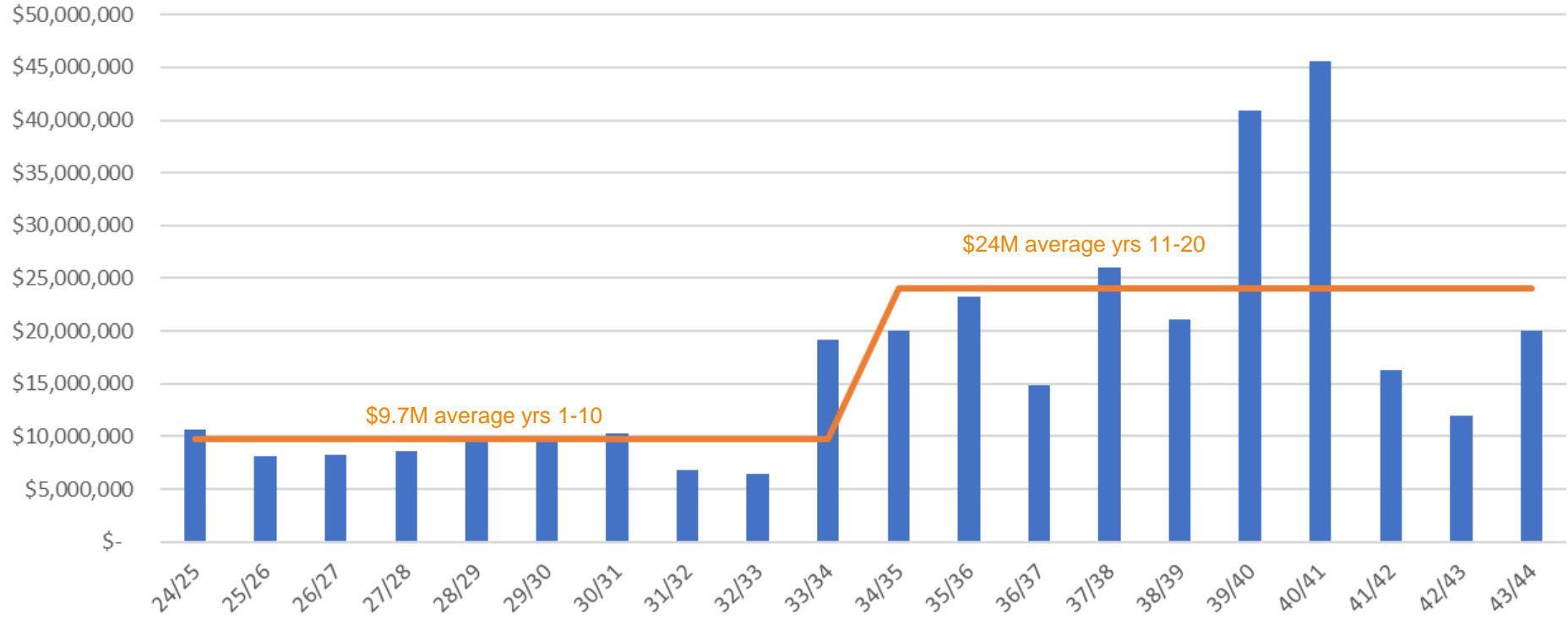
Identify implement and operate feasible systems and infrastructure for the reuse of wastewater

Resilient wastewater treatment that minimises the impact on the environment and community

Containment and conveyance that is resilient and minimises adverse impacts on the health of the environment and community



CAPEX 20 years



What did we shift?

Projects postponed beyond 2034

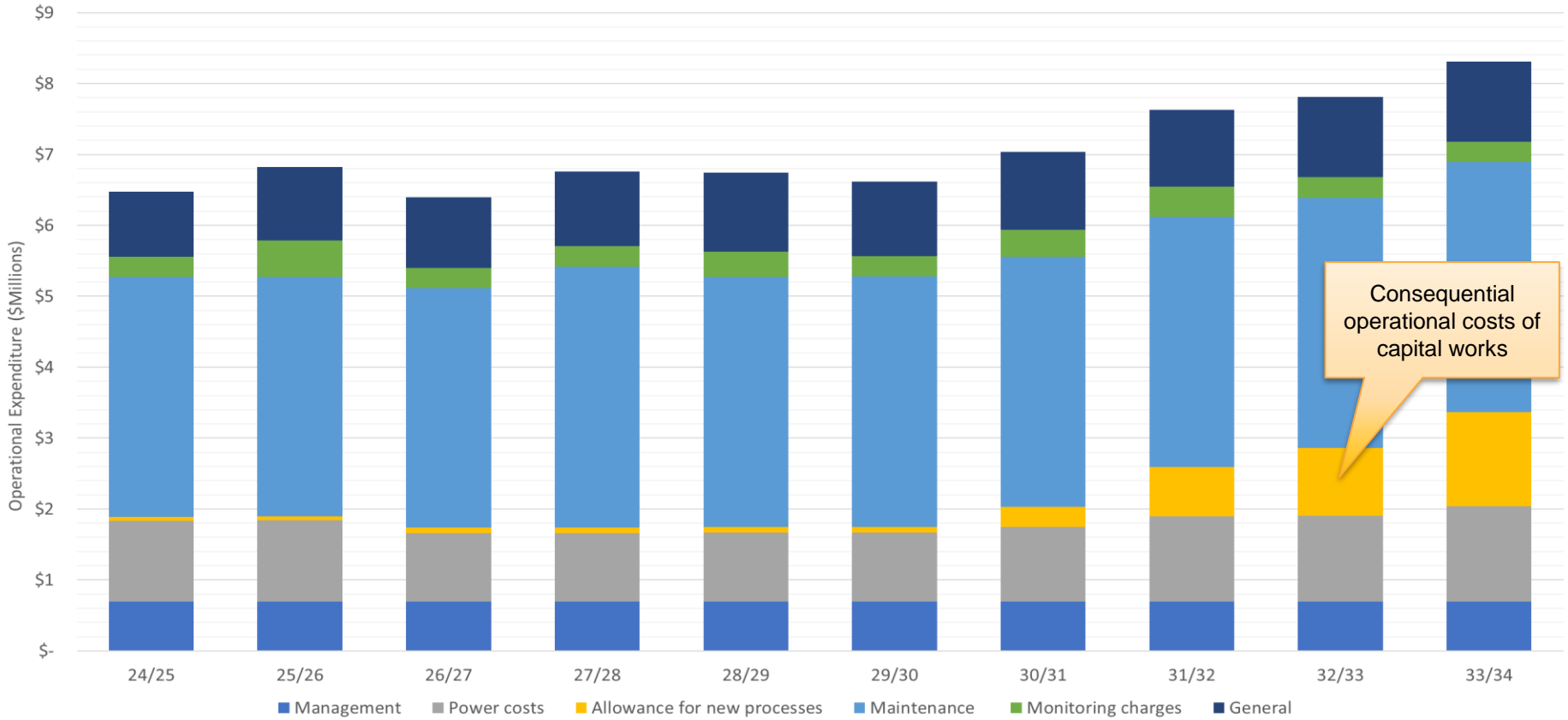
- Sea level rise mitigation
- Biosolids drying
- Monaco valve chamber
- Odour prevention
- Secondary treatment expansion
- Storage at pumping stations

Projects starting later within 2024-34

- Anaerobic digestion delayed. Reduced CAPEX in 2024-34 from \$13.6M to \$1.5M but increase to OPEX

Currently no funds allocated to start journey to carbon zero by 2050.

OPEX



Joint Council
Workshop

NTRLBU 2024-2034 AMP

10 November 2023

Background

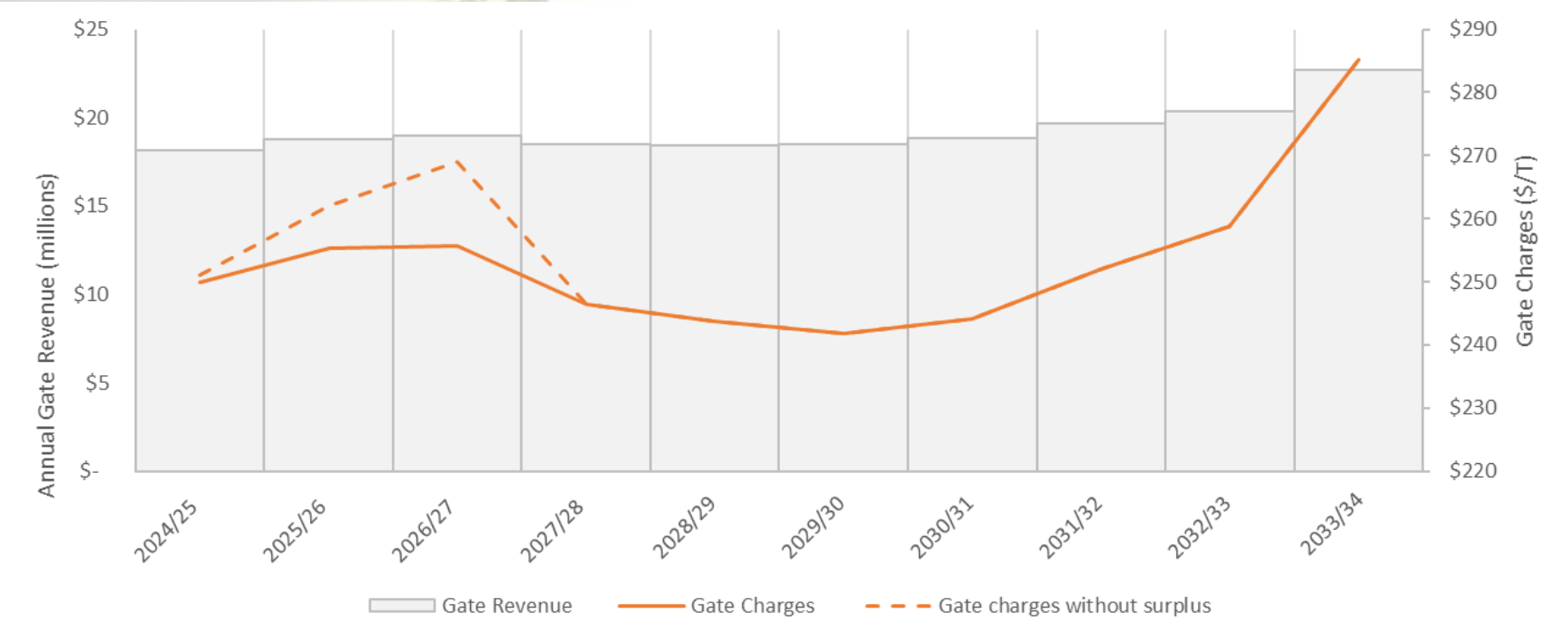
2024-2034 AMP focuses on:

- Safety improvement and risk mitigation
- Climate change and emission reduction
- Landfill future

2024-34 Draft AMP presented to NTRLBU Joint Committee July 2023

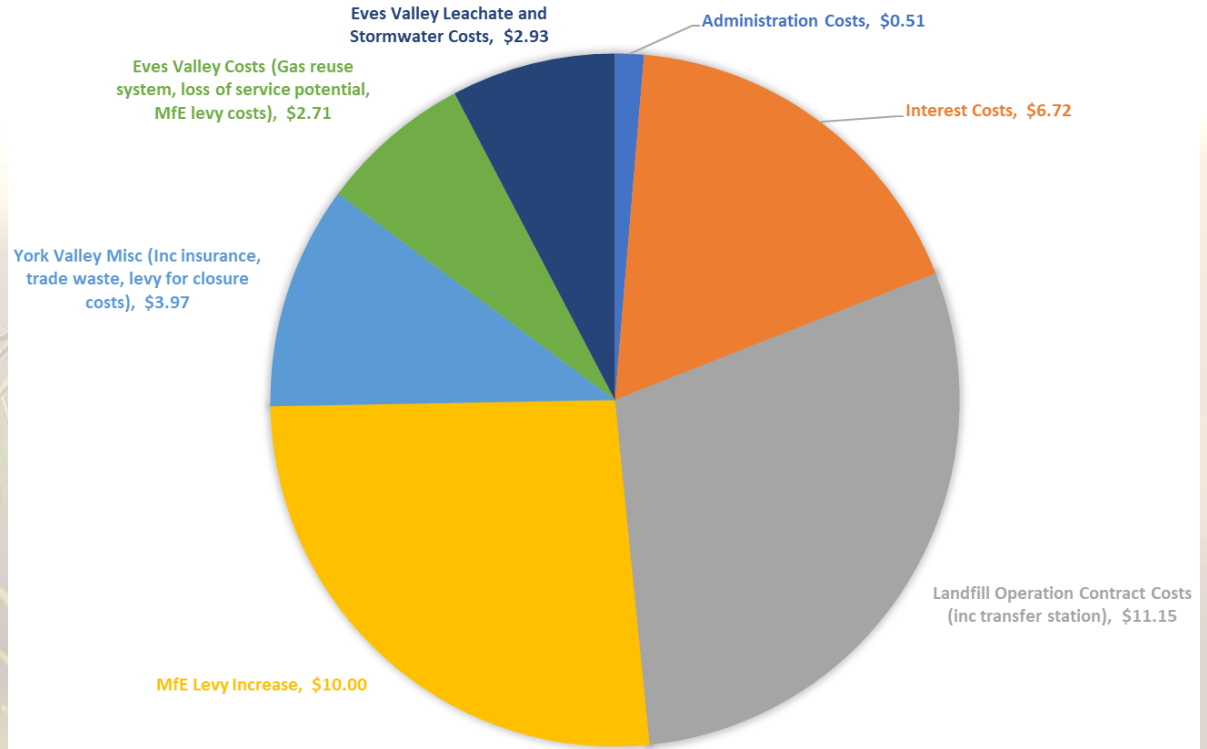
- Adopted for consultation and feedback.
- Collaborative discussions with NCC and TDC Staff resulted in:
 - No significant changes to CAPEX programme
 - Agreement around increases to OPEX

Projected landfill gate fees

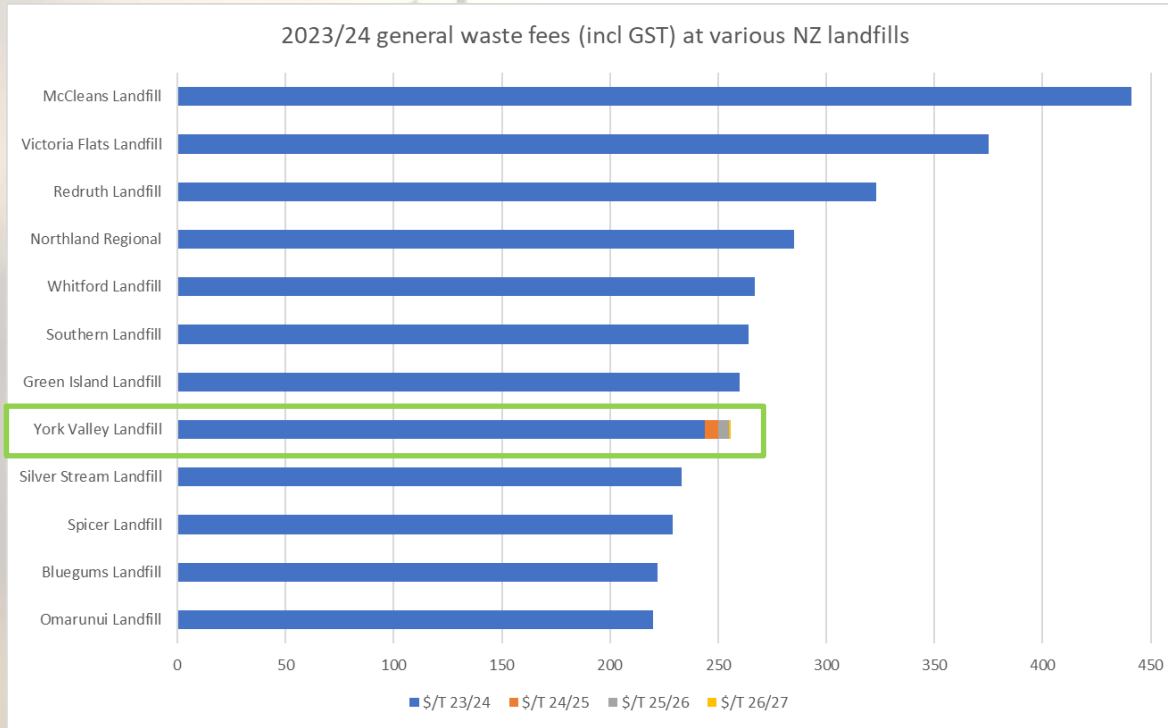


YVLF – 2023/24-2024/25 gate fee increase

- \$38/t
- Comprised as shown



Comparing current + future YVLF gate fees with other landfills



CAPEX

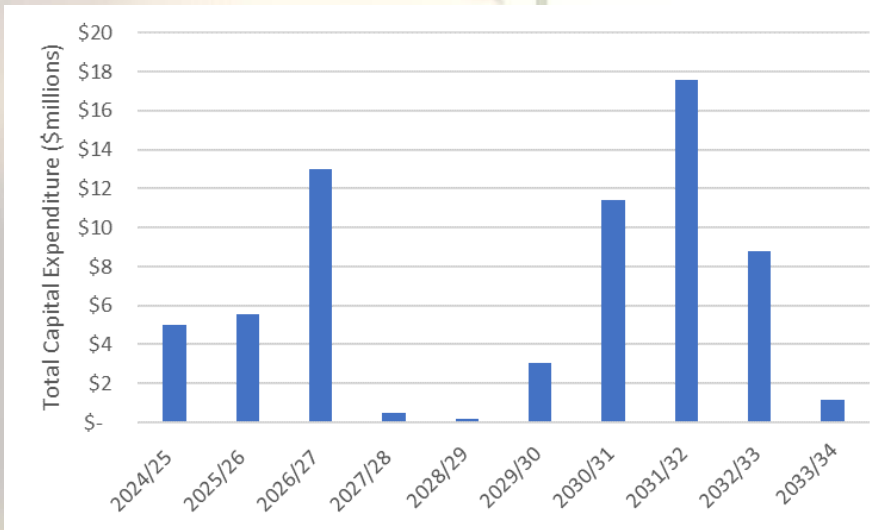


Figure 1: Total Capital Expenditure (\$millions)

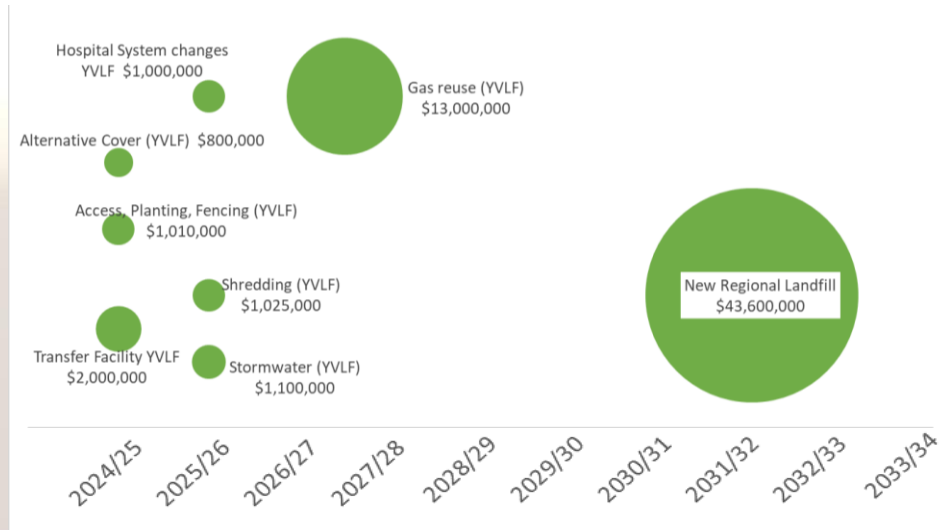
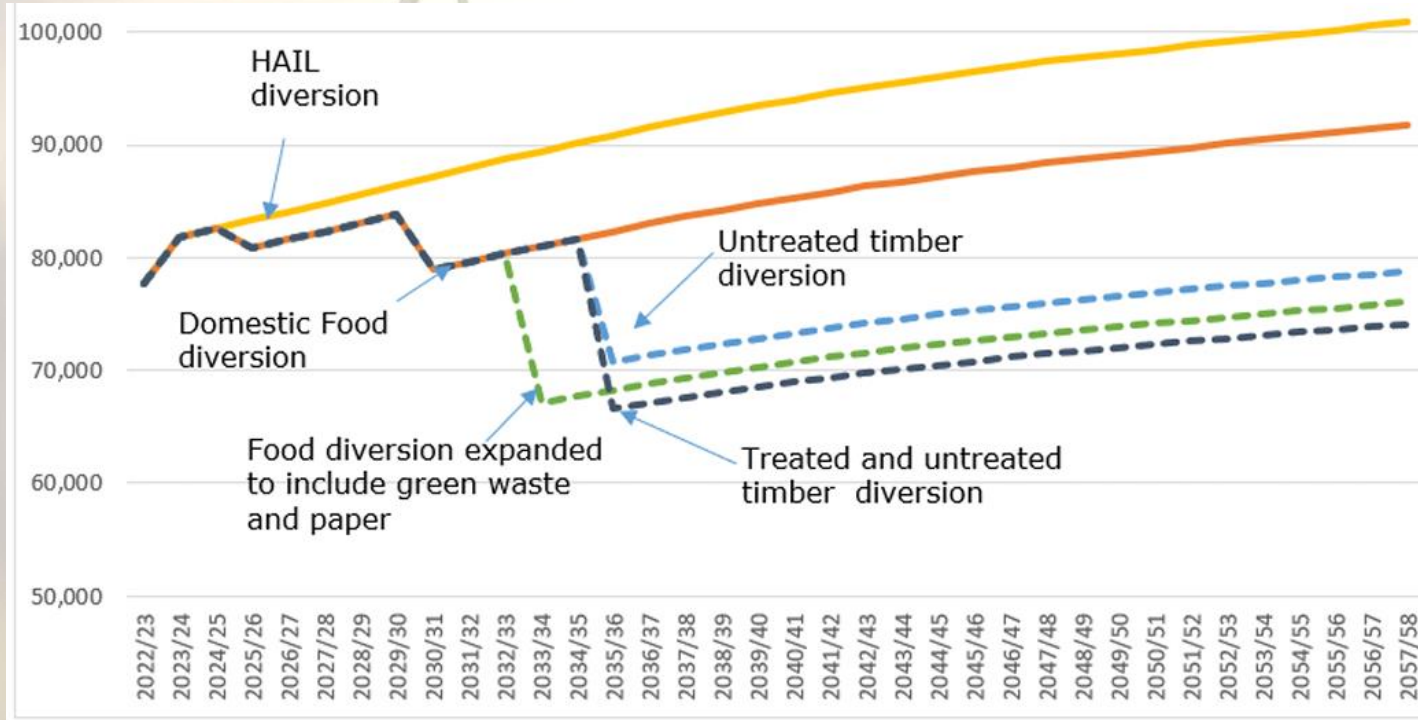


Figure 2: Capital Upgrades (greater than \$200K)

Waste growth forecasts for different diversion options



Hospital LFG system changes

Improve system resilience (provide backup blowers, power supply and storage) so the hospital can sign up to 10+10yr contract for purchase of gas.

This will give:

- Clarity of sale of gas for next 10 years
- Return on investment

The hospital uses roughly 30% of YVLF's gas – more in winter, less in summer. This provides nearly 100% of the hospital's heating (80% of total energy needs).

\$1M

Landfill waste transfer facility

Separation of commercial trucks from the tip face.

This will:

- Significantly reduce the vehicle on vehicle risks at the landfill.
- Eliminate customer personnel from the vicinity of the tip face
- Increase operational costs
- Significantly improve the landfill customer experience
- Potential to further separate waste in future

\$2M

Landfill gas reuse strategy

Eves Valley Landfill

Electricity production

Gas engines for sale of electricity to grid and/or other users.

\$0.5M

York Valley Landfill

Bio-methane bottling plant - facility to bottle gas for sale to industrial gas, coal or diesel energy users.

Of the options investigated this has:

- The largest carbon abatement potential (displaces diesel and coal)
- Only slightly higher capital cost (when compared to landfill gas powered generators)
- The highest return on investment
- Risk to ETS that will need to be managed

\$13M

Eves Valley HAIL facility

Facility to manage HAIL & hazardous soils as a class 3 managed fill facility (instead of a class 1 landfill).

This will:

- Safeguard class 1 landfill space worth approx. \$1.5 million per year.
- Be funded by the gate fees for the HAIL material
- More affordable for users due to lower Waste Disposal Levy
- Reduce carbon emissions from York Valley

\$0.5M

New regional landfill

Commence investigating, designing, and consenting the next stage of a regional landfill.

- Requirements prior to expiry of the current York Valley consent in December 2034:
 - Consenting completion at least 5 years prior to expiry
 - Construction of the next landfill needs to be completed at least 2 years prior to expiry
- Vast majority of capital spending is for construction between 2029/30 - 2033/34

\$43.6M