NAPIER
CITY COUNCIL
Te Kaunihera o Ahuriri

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SUSTAINABLE NAPIER COMMITTEE

Open Minutes Attachments

Meeting Date:	Thursday 3 July 2025
Time:	1.00pm – 2.33pm
Venue:	Large Exhibition Hall War Memorial Centre Marine Parade Napier

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EMERSON STREET UPGRADE

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Officers Recommendation

*a. **Endorse** the Detail Design of Stage 1 of the Emerson St Upgrade*

*b. **Endorse** the Developed Design for the enabling works*

*c. **Approve** to proceed to consenting and construction of both Stage 1 and the associated enabling works*

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Project Objectives

Improve the resilience of Emerson St by replacing the aged wastewater pipe (dating back to pre-earthquake) and improving stormwater capacity

Improve the safety and accessibility of our city's main retail street

Improve way-finding and operational flexibility to make Emerson St a safer, more accessible destination

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Current Decisions of Council

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Future Napier Committee (Aug. 2024)

a. **Endorse** the Concept Design for the entire length of Emerson Street.

b. **Approve** to proceed into Developed and Detailed Design for Stages 1 and 2.

c. **Note** that Detailed Design included:

- A Universal Design review
- A local Heritage review
- Further workshops with Elected Members
- Road Safety Audit consultation
- Emergency Services traffic review

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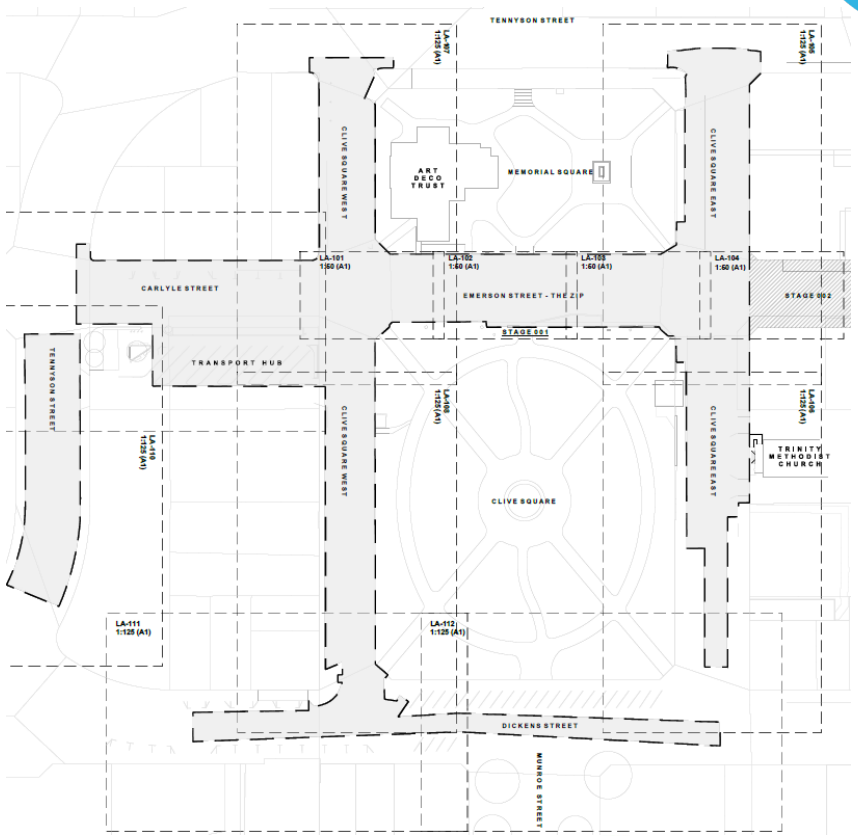
Sustainable Napier Committee (May. 2025)

a. **Endorse** the recommended Procurement Approach for the Emerson St Upgrade Stage 1.

b. **Approve** to undertake construction of Stage 1 and adjacent enabling works utilising 2025/26 Long Term Plan budget.

c. **Note** the Chief Executive is responsible for signing and approving procurement plans that exceed director delegations.

d. **Approve** the recommendation to delegate approval to award the resulting contract to the Chief Executive if this occurs during the interregnum period.



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Detail Design

Stage 1 & Enabling Works

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Stage 1 + Enabling Works Scope

- Clive Sq East wastewater pipe renewal
- Centralised shared space offering flexible spaces, seating and lighting
- Streetscape that speaks to our Cultural identity & reflects our Art Deco heritage

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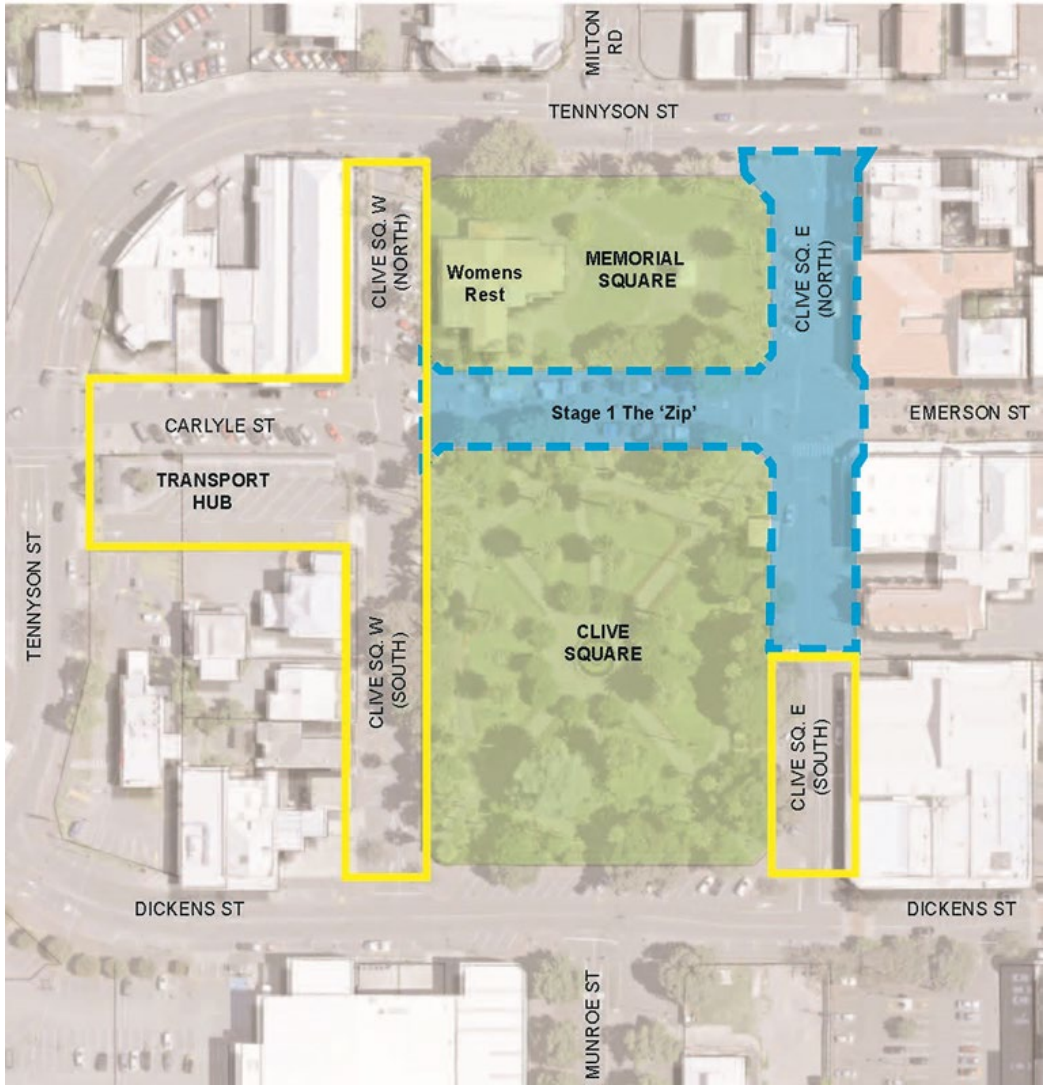
Stage 1 + Enabling Works Scope



- Clive Sq West new footpath creation & kerb realignments
- Intersection geometry of Tennyson / Clive Sq W (coaches)
- Upper Carlyle St line-marking
- Introducing user-pays parking around periphery

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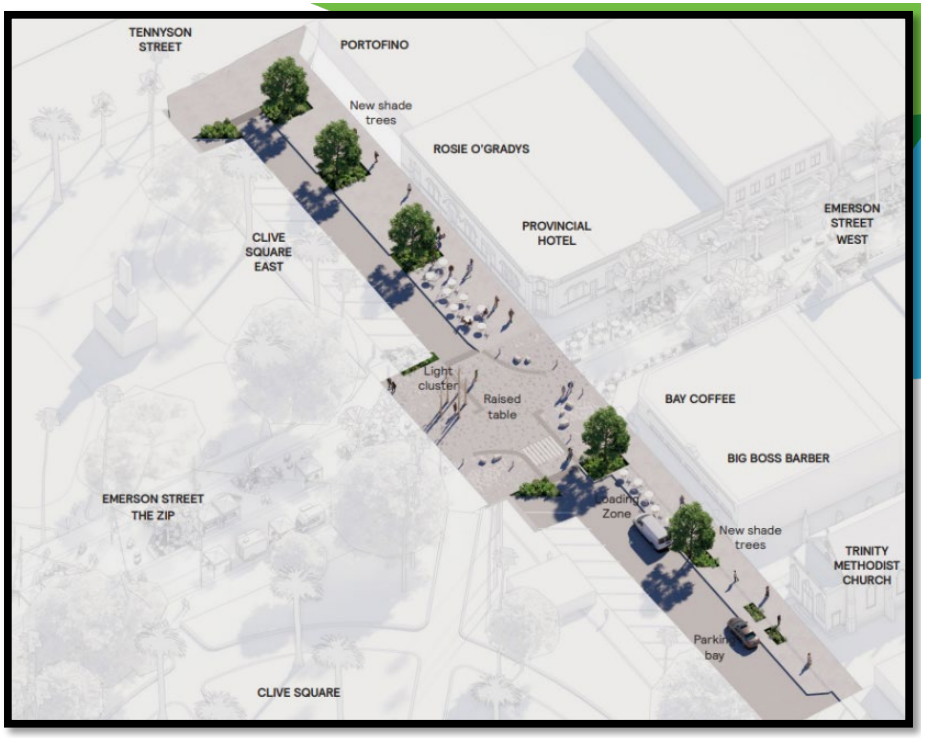
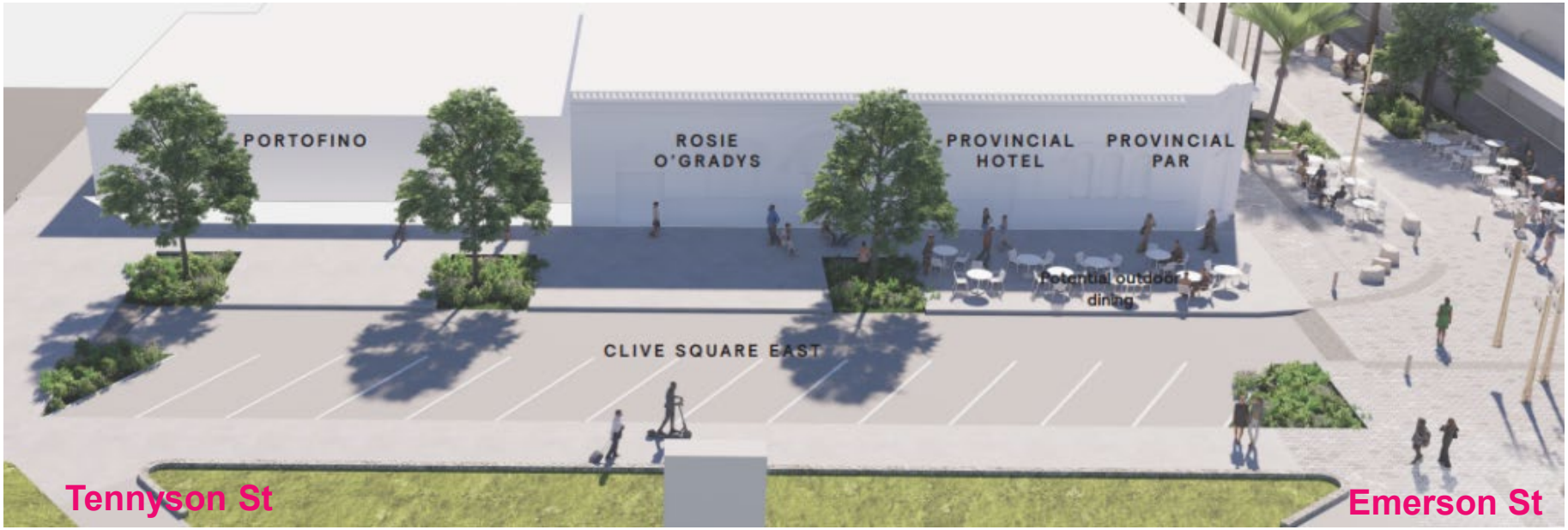
Enabling & Supporting Other Council Investments

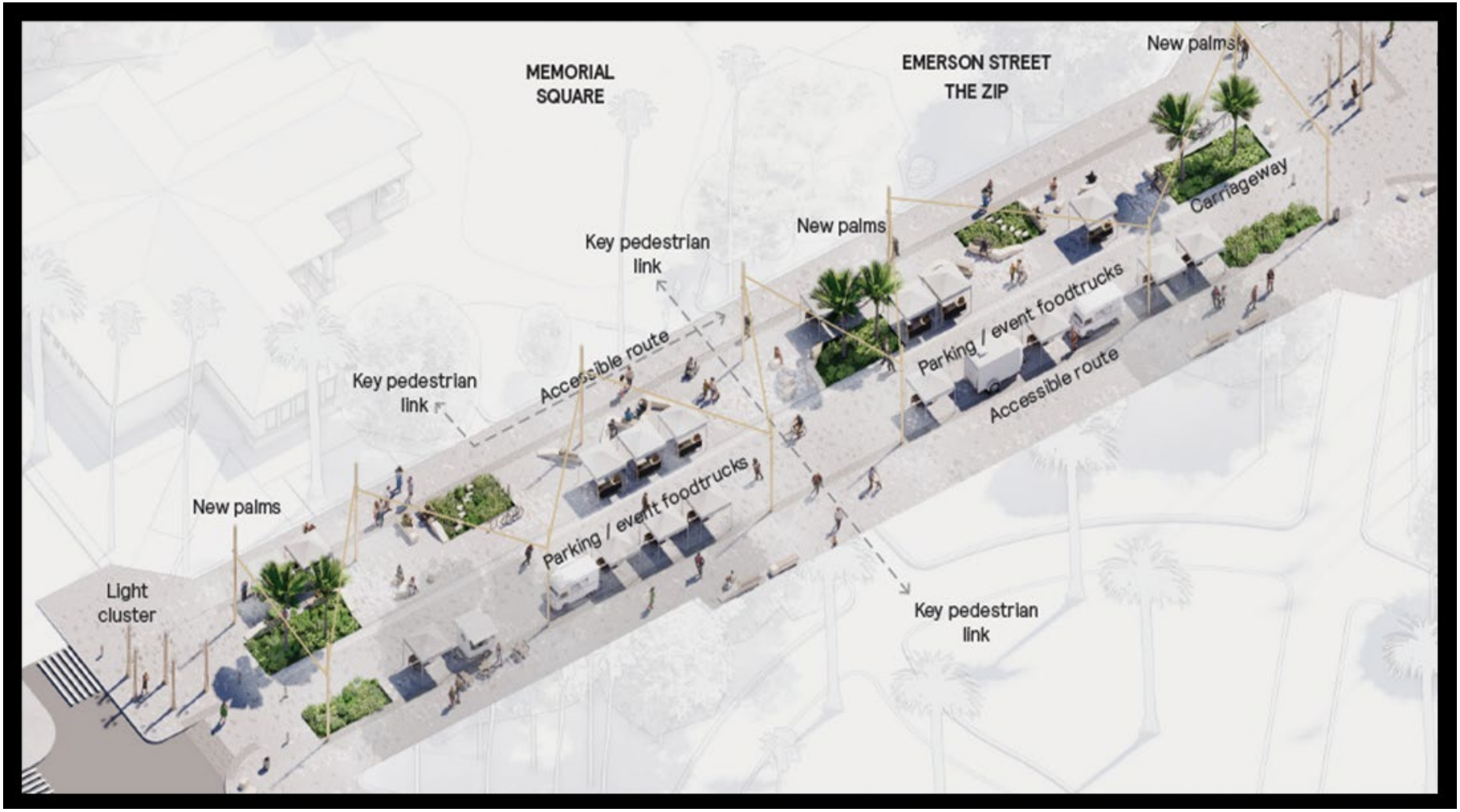
- Women's Rest / Community Rooms Refurbishment
- Clive Square Lighting Strategy (CPTED)
- Napier Parking Strategy
- Clive Square Bus Terminal - Transport Hub
- Clive Square Planting rejuvenation
- Stormwater renewal (Carlyle St)
- Te Aka and Civic Precinct
- Veronica Bay Restoration

Stage 1
- Clive Sq East





Stage 1 – The Zip



Stage 1 – The Zip

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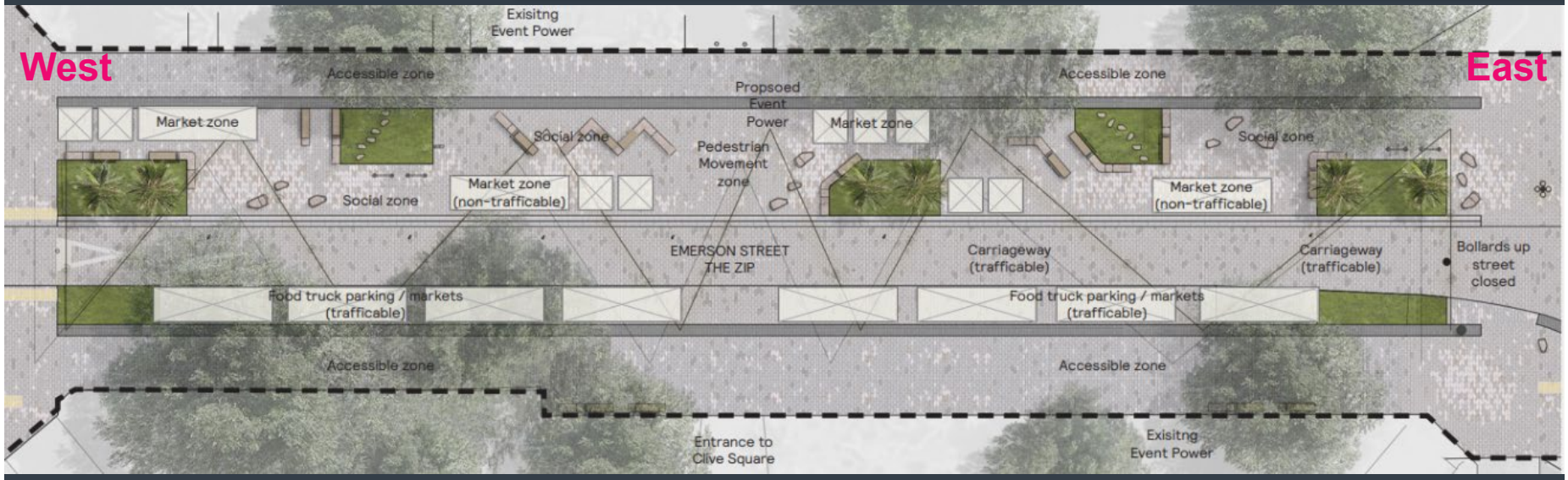

Next Steps

- Publish RFP on GETS (anticipated closing end July)
- Approval of successful Tender for Physical Works to Council 28 August
- Award Contract beginning October (commence ordering materials, stakeholder liaison, etc)
- Physical works commence January 2026 (avoiding construction prior to Christmas)

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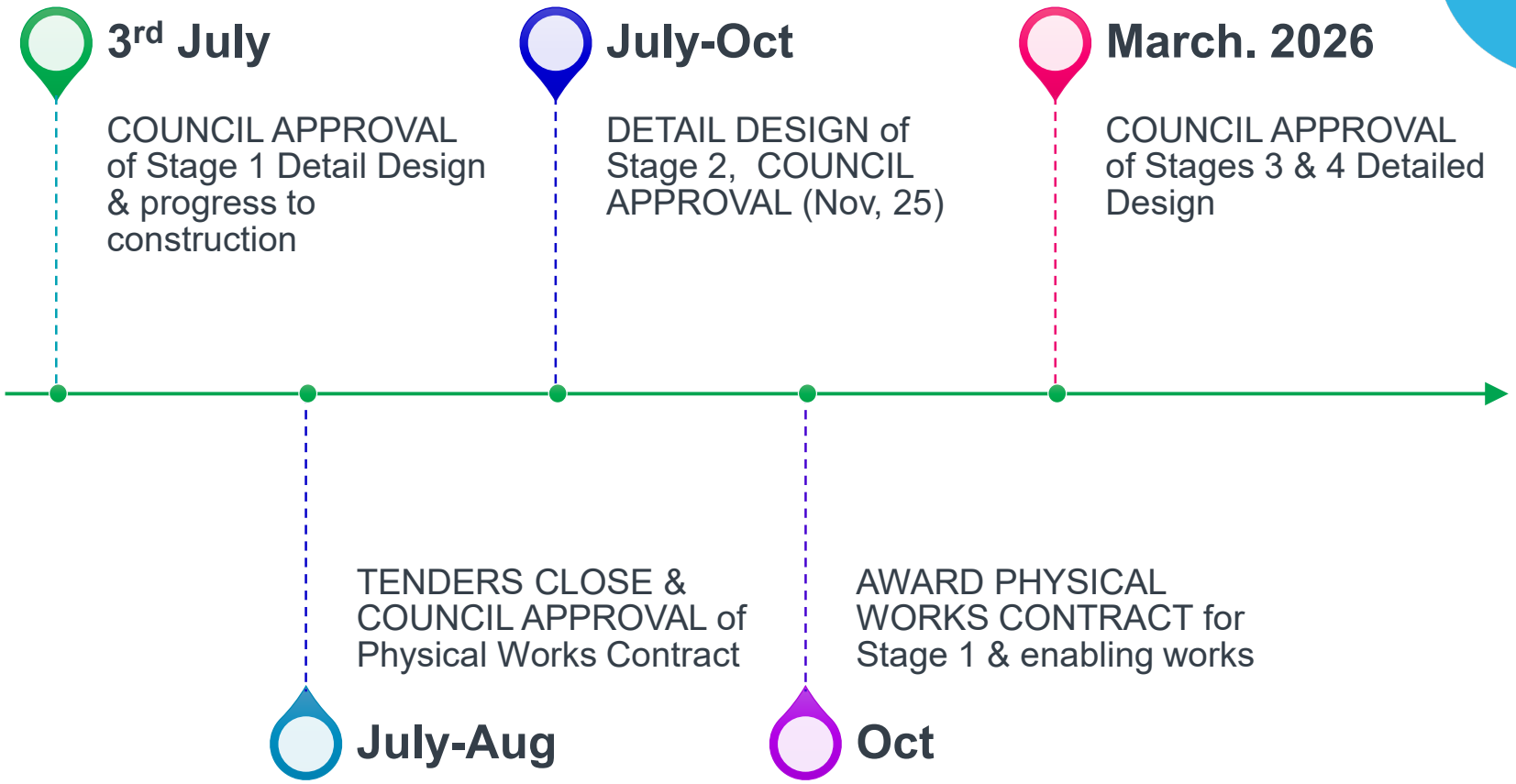
Next Project Design Phases



Tennyson Street Stormwater Outfall Improvements

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Brief Background

The Tennyson Street outfall, constructed in 2015, was developed based on a design framework by Takis Koutsos (A Renowned Personal in 3 Waters Space) and was intended to service a total catchment area of approximately 48 hectares. Despite its capacity and strategic importance, the outfall has not operated at its full potential over the years.

Due to constant challenges faced and operational difficulties, NCC has addressed some of these issues, but they are mostly short term solutions.

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In Lieu of the persistent problems and challenges in maintaining the outfall for proper functioning, we are looking into options for a long term solution for addressing the issues.

Through this report and presentation, we would look gain attention on the issues we face, steps taken to overcome them and also mention the options we are working for upgrading the outfall for a long term solution.

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Issues

Over the time certain issues cause the improper functioning of the outfall

- Getting blocked by beach gravels
- Surface deterioration due to waves
- Corrosion on end plates

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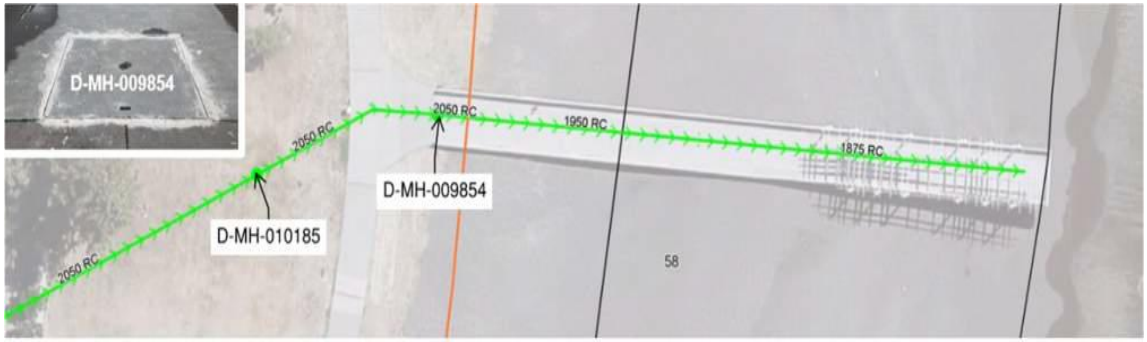
Challenges

- Gravel filling the outfall
- Operational Difficulties
- Manhole Lid Surging



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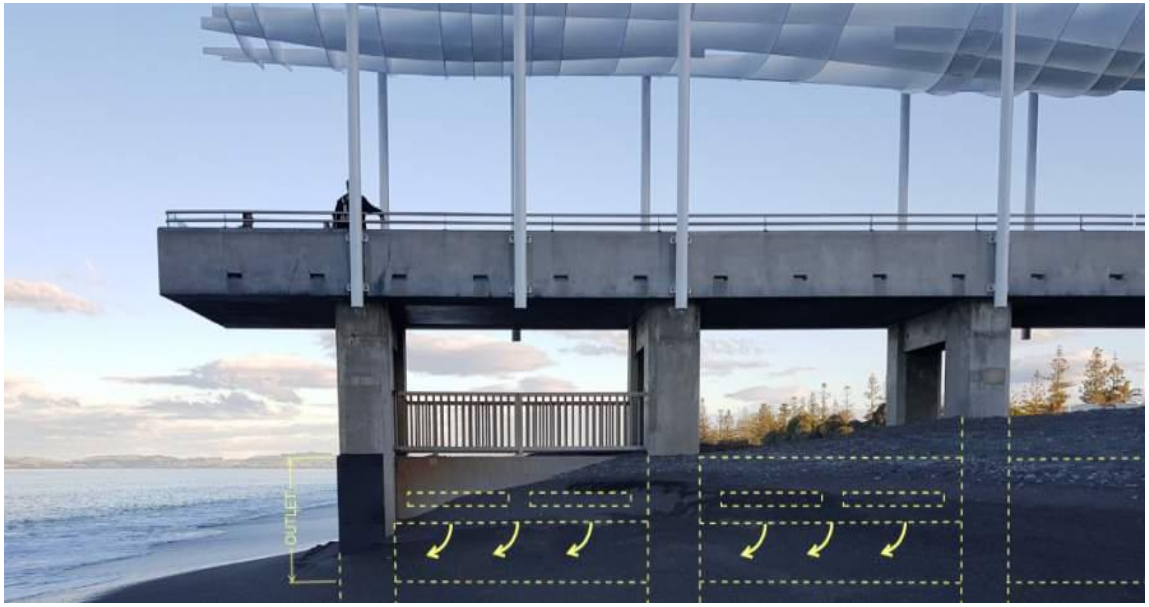

All side orifices of the the outfall blocked

Beach gravels fills up the sides of the structure , blocking up the water exit points at the sides as well.

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Maintenance Works

Over the time NCC has done some repair/maintenance works to make the outfall functional.

High Density Poly Ethylene (HDPE) shield added to either side of concrete columns to avoid abrasion to the concrete panels.

HDPE shield added to either sides of the concrete column to avoid abrasion.

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Mechanical Clearing of the Gravel

Beach Gravels fill the outfall pipe to a large extend and blocks up the outfall.

Clearing the same is a big task considering the space constraints and also safety of the personnel and machineries due to the environmental conditions.

Clearing of Gravels on 26-03-2020

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Gravel filling back in short time frame (within 10 Days)

It is not feasible option to clear the same, considering the risks involved and frequency at which the gravels fills back in.

Images taken on 05-04-2020 – 10 Days after clearing

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Few other maintenance works also carried out includes

Concrete spalling repairs to the outlet of culvert – Remove loose concrete, treat existing corrosion and rebuild concrete cover with 60mpa marine concrete.

Crack-inject the footpath of the deck. To inject epoxy Rockbond (290-190) Epoxy Resin to cracks in foot path.

Fixing the access lid – Fixing the missing bolts and repairing the lid that goes out of shape.

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Further, to find a permanent Solution for the issues NCC Engaged BECA Consultants

BECA Provided a report with few options for NCC to Consider

Options Toolbox

- Non Return Valves
- Extending the outfall
- Raised Outfall
- Pumped Pod Outlets

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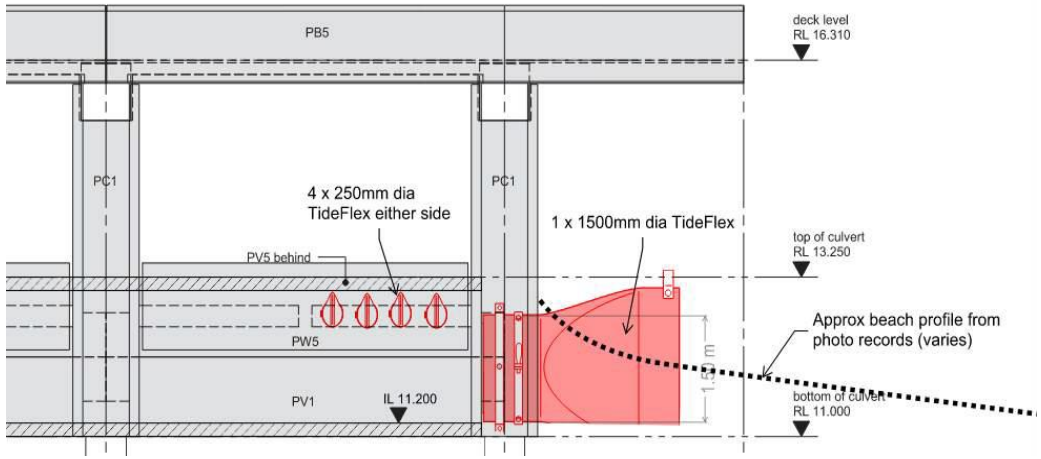
Non Return Valves

Tide Flex



Advantages

- These have the potential to offer significant benefit by reducing the risk of material entering the piped system

Disadvantages

- Gravel material such as that on the Napier coastline would be more difficult to displace, particularly if the valve is significantly buried.

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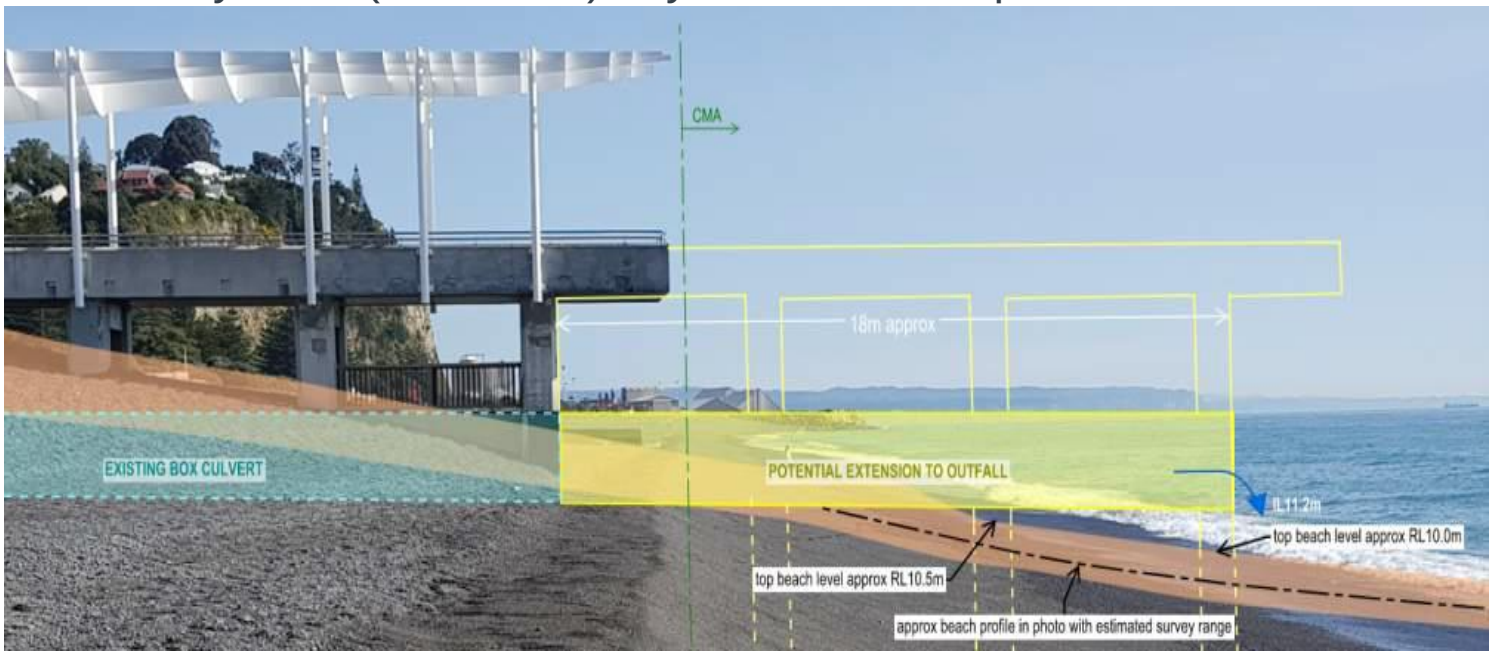
Extending the Outfall

The structure would need to be extended a minimum of 12 m (2 sections) but ideally 18 m (3 sections) beyond its current position.



Advantages

- This would allow the pipe invert to be elevated above the foreseeable beach profile.

Disadvantages

- Difficulty in consenting any extension as it will encroach into the Coastal Marine Area

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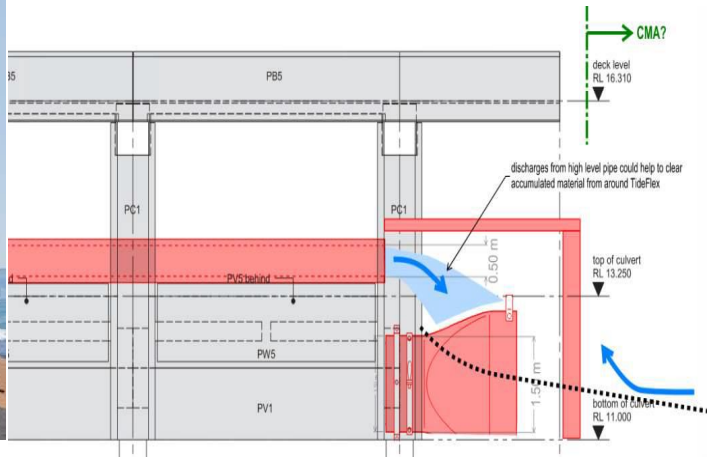
Raised Outfall, Extend Pipe

An additional discharge pipe could be constructed on top of the existing outlet pipe.



Advantages

- There would be an opportunity to utilize a raised outfall to flush material away from in front of the existinglower outfall

Disadvantages

- Could be a costly option, still will need an end protection to reduce effect on the outlet.

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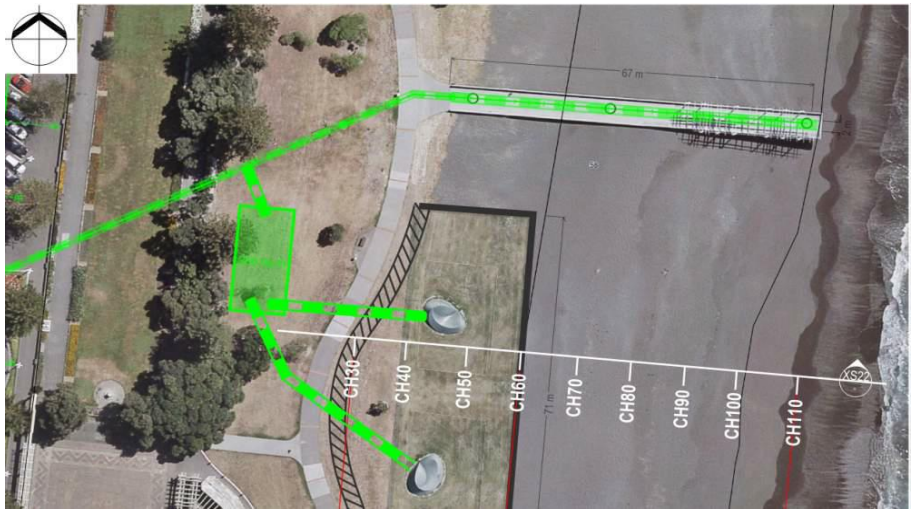
Pumped Pod Outlets (as per Cross-Country Drain P/S)

Construction of a pump station towards the lower end of the pipeline

Pumped flows have potential to achieve greater hydraulic head than would be practicably achieved with a gravity system



Advantages

- Effective Solution
- Large catchment diverted to the ocean and reduced flow to the Estuary

Disadvantages

- High Cost
- New pump station within Marine Parade Recreation Zone

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Extended Catchment

The current catchment directed towards the Tennyson St outfall includes parts of Marine Parade and Hastings St, as well as an overflow from the Shakespeare catchment. These catchments have a combined area of approximately **26ha**. The extended catchment includes approximately **21ha** additional catchment.

The current catchment in red; the magenta catchment the potential extension up Tennyson St and Milton Road.

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NCC had a Multi Criteria Analysis workshop with Beca for shortlisting and combining few options for obtaining best outcomes and had 13 options A to M.

The top-ranking 4 options **I, M, K** and **A** were shortlisted for a high-level cost analysis

- **Option I - Raise Outfall + TideFlex** is the outcome of combining options a**) Non-Return Valves – Tide flex** and **c) additional high-level pipe** from the above mentioned in options Toolbox
- **Option M - Pumped Pod Outlets (as per Cross Country Drain P/S)** is an outcome evolving from **d) Pumped Pod Outlets** from the above mentioned in options Toolbox
- **Option K - Raise Outfall + TideFlex + Gravity Head** is the outcome of combining options **a) Non-Return Valves – Tide flex** and **b) Extended Outfall** from the above mentioned in options Toolbox
- **Option A - Existing Outfall + TideFlex** is an outcome evolving from **a) Non-Return Valves – Tide flex** from the above mentioned in options Toolbox

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The following is a summary of the high level costings.

Option	Summary	Extended Catchment
Option I – Raise outfall (gravity) + TideFlex	• New elevated outfall via a box culvert on top of existing outfall • TideFlex x3 at new box culvert outlet • Barrier walls added	$6.0M
Option M – Pumped Pod Outlets	• Pump station design based on foreshore location in single building • High flow bubble up pods x2 on beach • Low flow discharge through an elevated box culvert as per option I	$20.5M
Option K – Raise outfall + TideFlex + gravity head (surcharged)	• Upstream pipework modified to allow gravity (surcharged pipe) head • Some existing catchment redirected to alternative outlets • New elevated outfall with box culvert as per option I	$12.7M
Option A – Existing outfall + TideFlex	• Based off design in stage 1 report and MCA process. • TideFlex on end of existing outfall and eight smaller TideFlex on the sides	$5.4M

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This paper and presentation is for information purposes in order to draw Council's attention on the issues we have in keeping the Tennyson Street Outfall Operational.

Napier City Council 3 Waters team will undertake a detailed analysis of the options, including a comprehensive cost-benefit assessment. Upon completion of this optioneering process, the preferred solution will be presented to Council for formal approval in 6 month's time.

Thank You

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