**Carisbrook Levee Community Information Meeting**

**Meeting Minutes**

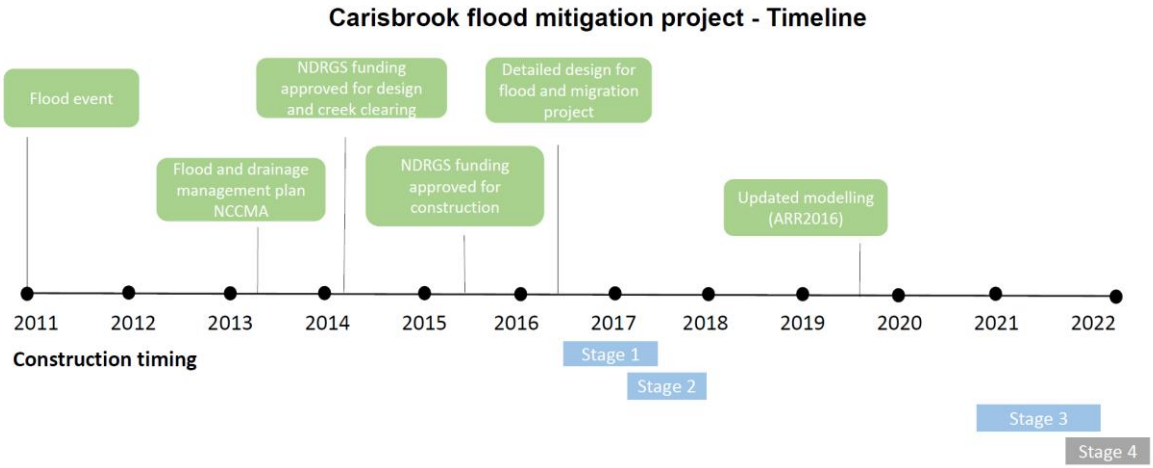
**Monday 1 March, 3 to 5pm**

## CGSC Tullaroop Ward Cr Anna De Villiers

- Acknowledgement of Country
- Acknowledgement of Councillors in attendance, CEO Lucy Roffey, Manager Community Engagement Kylie Long, Coordinator Design and Projects Leigh Hendrickson and via Zoom - Carisbrook Levee Designer Paul Southcott - Specialist Dams Engineer at Entura
- As we all know, January marked 10 years since the anniversary of the Carisbrook floods and since then we also experienced a significant rain event in late January
- These two events have put the Carisbrook Levee project back on the agenda
- Today's session is about assuring our community that we have the best advice and that we are acting on that and, that the design of the Levee is based on sophisticated modelling using the latest technology
- There is no doubt that every one of us here today wants the best outcome for the Carisbrook community

## CGSC Chief Executive Officer Lucy Roffey

- Project timeline detailed below:




Stage 1 – Pleasant St construction (North of railway line)
Stage 2 – Williams Rd levee
Stage 3 – Pleasant St construction (Railway line – Pyrenees Hwy)
- Current contract works completion March 2021
- Pyrenees Hwy culverts to be tended March 2021
- Railway crossing works timing to be confirmed upon receiving construction permits

Stage 4 – Levee construction (South of Pyrenees Hwy)

## Paul Southcott - Carisbrook Levee Designer - Entura Specialist Dams Engineer

***Refer to Entura PowerPoint presentation - a summary of the presentation is also provided below:***

**History of the project:**

- Carisbrook impacted by flooding in 2010 and 2011
- Water Technology Study completed in 2013
- Entura completed preliminary design and detailed design in 2016
- Water technology study updated 2019
- Council requested that Entura make some minor modifications to the design in 2020

**Sources of flooding:**

Flooding in Carisbrook from 3 sources

- Tullaroop and McCallum Creeks
- From the west of the town
- To a lesser extent from the Williams road area

**Flood mitigation:**

- Vegetation clearing in Tullaroop and McCallum Creeks
- Flood levee to west of the town
- Flood levee in Williams Rad area
- A non-return valve  on culverts under Landrigan Road near Camp Street
- The highway bridge will be replaced with clear-span structure when the bridge is due for replacement in the long term

Two preliminary designs were prepared:

- OPTION A - preferred flood mitigation option (as above) from the Carisbrook Flood and Drainage Management Plan
- OPTION B - Levee along Belfast and Williams Road - would be less effective as it would push flow into Tullaroop Creek

OPTION A was selected for detailed design

During preliminary design stage consultation was carried out with landowners to minimise impact to them.

It was proposed that the roads be used, where practicable, for the Levee  - Williams Road and Pleasant Street for example. This decision was made based on the community consultation carried out.

***Refer to General Arrangement Plan in PowerPoint presentation***

Williams Road Levee

- Raise section of Williams Road adjacent to the Carisbrook Cemetery.
- Build levee to the northern side of existing bluestone drain, downstream to Landrigan Road

Western Levee

- In 2020 Council requested changes to the design - reroute a section of the Levee alignment so that the Levee went around a number of existing mature trees to retain the vegetation in these locations
- Number of small culverts included in the design along the southern section of the Levee - reason being they are low points in the Levee to avoid ponding and allow the water to drain away

Southern part of the Levee

- Doesn't intersect with any existing public roads
- Has a slightly different profile to the road section of the levee

Culverts under the Pyrenees Highway

- Direct flow from west and push the water north so the water discharges downstream from the town
- These culverts will accommodate these flows

Road raising levee

- Runs through until levee terminates at the racecourse area

Railway line raised embankment

- Culverts are to be installed under the railway line to allow the flows to continue along the levee alignment

***Refer to Design Selection Illustration in PowerPoint presentation***

- The purpose of the channel in front of the Levee is to carry smaller rain events eg 20% AEP flood events
- Idea is to prevent flooding big areas and avoid water ponding
- This gives consideration to affected land-owner
- The height of the levee is designed to cope with a 1% AEP flood event
- The water will back up to the levee to a significant height
- The main difference between levee section and road section is the width
- road sections are wider due to road shoulders
- The levee section is only wide enough to fit a light vehicle for maintenance purposes

Outcome

- Refer to Entura map showing flood inundation from Water Technology report
- All factors have been put into the c model and map shows the impact of a 1% flood event would have with this flood levee system in place
- You can see some inundation near Tullaroop Creek but overall the extent is greatly reduced
- There is significantly less inundation than there otherwise would have been

**CGSC Coordinator Design and Projects Leigh Hendrickson**

The Carisbrook Levee project has been broken down into stages to allow the implementation of the construction works, while pre-planning is being undertaken for future stage works. The stage are detailed as follows:

Stage One

- Pleasant Street levee construction  (north of the railway line)
- Drainage works along Wills Street and within the racecourse.
- Construction completed in early 2017

Stage Two

- Williams Road Levee construction (West - East running levee, which continues east from Williams Rd across Landrigan Rd towards the Tullaroop Creek).
- Constructed in 2017

Stage Three - current

- High Street and Pleasant Street nearing completion
- Alterations work - refinement based on recent rain event
- Contractor redefined driveway crossings to create extra fall in the culverts, lin a area that is very flat terrain with minimal fall
- Railway Line not yet complete - working through process with VicTrack currently
- Culverts on Pyrenees Highway - tender about to be advertised
- Utility services are to be altered to allow the installation of the culverts.  Contractor has been appointed for the Gas main alterations and the water main alteration is currently out for public tender

Stage Four - Future stage

- South of the Pyrenees Highway is the section of levee that actually captures the water and diverts the overland flows from the west around the town

**Question and Answer time with Paul Southcott - Carisbrook Levee Designer -  Entura Specialist Dams Engineer** ***- refer to Question and Answer document***

**CGSC Manager Community Engagement Kylie Long**

- Community members invited to share feedback on the session and their preference for communications and engagement on the project moving forward

**CGSC Tullaroop Ward Cr Anna De Villiers**

- Thank you for your presence and participation
- Thank you to Paul, Leigh and Lucy for their contributions
- Special thanks to Kylie for her work in putting today's session together
- We hope you've found it useful in understanding the project better
- We trust that you leave today knowing we are all committed to delivering the best outcomes for the Carisbrook community
- Thank you