



AGENDA

Environmental Services Committee Meeting Tuesday, 15 November 2022

Date Tuesday, 15 November 2022

Time 9.30am

Location Council Chamber
District Council Building
King George Place
Timaru

File Reference 1538996

Timaru District Council

Notice is hereby given that a meeting of the Environmental Services Committee will be held in the Council Chamber, District Council Building, King George Place, Timaru, on Tuesday 15 November 2022, at 9.30am.

Environmental Services Committee Members

Michelle Pye (Chairperson), Owen Jackson (Deputy Chairperson), Mayor Nigel Bowen, Sally Parker, Gavin Oliver, Stu Piddington, Allan Booth, Peter Burt, Tewera King (Mana Whenua), Stacey Scott and Scott Shannon

Quorum – no less than 2 members

Local Authorities (Members' Interests) Act 1968

Committee members are reminded that if you have a pecuniary interest in any item on the agenda, then you must declare this interest and refrain from discussing or voting on this item, and are advised to withdraw from the meeting table.

Paul Cooper

Group Manager Environmental Services

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- 1 Apologies**
- 2 Identification of Items of Urgent Business**
- 3 Identification of Matters of a Minor Nature**
- 4 Declaration of Conflicts of Interest**
- 5 Chairperson's Report**

6 Reports

6.1 Coastal Erosion Environment Canterbury Update

Author: Andrew Dixon, Group Manager Infrastructure

Authoriser: Paul Cooper, Group Manager Environmental Services

Recommendation

That the Environment Services Committee receive and notes the Environment Canterbury coastal erosion update.

Purpose of Report

- 1 To update Committee members of the coastal erosion occurring along Timaru District Coastline and actions Environment Canterbury is undertaking on this matter.

Background

- 2 There is evidence of on-going coastal erosion along the Timaru District Coastline. This issue is affecting both private and public land.
- 3 A Coastal erosion and inundation modelling study was undertaken jointly by Environment Canterbury and Timaru District Councils'. The modelling had a 100 year time frame.
- 4 The model outcomes were used to inform the new District Plan and bring to attention land that was at risk and mitigation required. Mitigation included retreat.

Assessment of Significance

- 5 This matter is deemed of low significance under the Council's Significance and Engagement Policy as the community impacts as a whole are low as the purpose of the report is to provide information on the issues. However, there are a few land owners that are currently being impacted by the on-going erosion.

Discussion

- 6 In August 2022 representatives of Environment Canterbury (ECan) met with Council officers to establish key contacts and communication points and confirm where Timaru District Council (TDC) need to be involved (i.e. consents, road, other infrastructure, landowner liaison),
- 7 These issues are connected to climate change and will be considered as part of the next Long Term Plan.
- 8 Environment Canterbury Officers will update Committee members on the recent developments and actions on coastal erosion.

Attachments

Nil

6.2 Tsunami Evacuation Zone Review

Author: Phill Mackay, Team Leader & Emergency Management Advisor

Authoriser: Paul Cooper, Group Manager Environmental Services

Recommendation

That the Environmental Services Committee receive and note the Tsunami Evacuation Zone Review Report.

Purpose of Report

- 1 The purpose of this report is to provide Council with an awareness of the reviewed tsunami evacuation zones within the Timaru District and allow discussion to take place with tsunami hazard experts.

Assessment of Significance

- 2 This matter is deemed as of low to medium significance in terms of the Council's Significance and Engagement Policy. This is due to the potential community interest and degree that people may be impacted.

Background

- 3 A tsunami is a series of powerful, long waves that move through the ocean or a lake caused by a sudden movement of the ocean or lake floor or by something falling into the ocean or lake. They are most often caused by underwater earthquakes but can also be caused by landslides and volcanic eruptions.
- 4 Most tsunamis are relatively small by the time they reach the Timaru coast and don't flood much, if any, land. Even if they do not flood land, they can cause strong currents and surges around the coast, which can be dangerous for people in the water or at the beach or river mouths, and can affect port operations. Occasionally a tsunami will be big enough to flood areas of land.
- 5 Timaru's tsunami hazard is lower than other parts of Canterbury and New Zealand but there is still the potential for a large tsunami to inundate low lying land and to cause damage and injuries

Discussion

What are tsunami evacuation zones?

- 6 Tsunami evacuation zones are areas Council recommend people evacuate from as a precaution after they feel a long or strong earthquake, or in an official tsunami warning. Every tsunami is different depending on its source, the direction it is arriving from, and the sea state and tide at the time the tsunami waves arrive. The zones represent an 'envelope' around many different possible tsunami scenarios, including extreme events that have a low probability of occurring but high consequence.

- 7 Tsunami evacuation zones are fundamentally about life safety and are primarily for evacuation planning and public education. Tsunami evacuation zones are not appropriate for property-specific land use planning in terms of restricting development. This is because the tsunami evacuation zones are based not only on modelled inundation but also on logistical and communication factors, and because the zones are based on extreme events that are beyond most planning timeframes.
- 8 The tsunami evacuation zones can be included on Land Information Memoranda (LIMs) and Environment Canterbury's Land Information Requests (LIRs), but these must be clearly worded to explain what the zones do and don't mean (i.e. they are evacuation zones, not necessarily tsunami inundation areas).

Why review Timaru's tsunami evacuation zones?

- 9 The current tsunami evacuation zones were created in 2012 with the then known science modelling predominately based on hydrodynamic models of a ~200 year return period South American tsunami undertaken by NIWA in 2010 (Gillibrand et al, 2011) refer attachment 1.
- 10 Environment Canterbury commissioned GNS Science to undertake new tsunami inundation modelling for Mid and South Canterbury (Rakaia River mouth to Waitaki River mouth) in 2021, and the results were received in early 2022. This included modelling inundation from 98 tsunami scenarios generated by very large earthquakes (larger than magnitude 8.7) on the Hikurangi, Puysegur and Kermadec subduction zones, off the coast of South America, and elsewhere around the Pacific Ocean (for sources, refer attachment 2). There are no known significant local tsunami sources (within one hour's travel time) for South Canterbury. This modelling is part of a wider programme of tsunami inundation modelling for the Canterbury region; Pegasus Bay, Banks Peninsula and the Selwyn coast were modelled in 2019 and 2020, and the Kaikoura and Hurunui coasts are being modelled in 2022 and 2023.

New tsunami evacuation zones created

- 11 Environment Canterbury, Canterbury Civil Defence and Emergency Management (CDEM) Group and Timaru District Council officers worked together to review the tsunami evacuation zones for Timaru District (Rangitata River mouth to Pareora River mouth), shown in attachment 3. The zones were revised following the National Emergency Management Agency's Director's Guideline for Tsunami Evacuation Zones.
- 12 The revised zones are based on the new GNS Science tsunami modelling. We also considered available LiDAR/topographic data, the location of residential areas and commercial operations, and the location of schools and elderly care facilities. In built up areas we used roads, property boundaries or other obvious landmarks as zone boundaries for ease of communication and so that people can more easily determine whether they are in or out of a zone. Council also carefully considered the risks of over-evacuation when determining the zones. This is consistent with the approach taken in other parts of Canterbury.
- 13 The approach Council have taken does not account for future sea level rise. This is because the evacuation zones outlined here are to be used now, not in 50 or 100 years' time. C recommend that tsunami evacuation zones be reviewed at least every ten years, and any sea level rise be accounted for during the review.
- 14 The new red and orange zones are similar to the previous red and orange zones with minor modifications. The red zone includes beaches, estuaries, lagoons and river mouths; the orange zone is an 'on land' evacuation zone.

15 In more densely populated areas of Timaru District we have introduced new yellow zones, which are only intended to be evacuated in an official warning of a very large, rare tsunami >3 metres wave height at coast, and which do not need to be evacuated immediately after a long or strong earthquake. A >3 metre tsunami could be generated by an earthquake in the Pacific Islands or across the Pacific Ocean, which would not be felt in New Zealand, but for which Council would receive several hours' warning. A >3 metre tsunami could also be generated by an earthquake on the Puysegur or Hikurangi subduction zones, which would likely be felt as a long, mild or moderate earthquake in Timaru. A tsunami from these sources could arrive at the Timaru coast after 2-3 hours, however we consider this time frame is long enough to provide adequate warning to the affected people within the yellow zones, if necessary, using the tsunami assessment and warning tools now available (i.e. emergency mobile alerts). This approach avoids over evacuation in the most likely tsunami scenarios (<3 metre tsunamis). The yellow zones are located in the following areas:

- Waipopo
- Washdyke
- Showgrounds
- Waimataitai
- Redruth
- Pareora

Warning Process

16 Natural warnings:

People should evacuate the red and orange zones immediately if they feel a long earthquake (when the shaking continues for more than one minute) OR a strong earthquake (when the shaking is so strong it is not easy to stand up). They should not wait for an official warning or for anyone else to tell them what to do. There is a possibility that a tsunami has been generated on one of New Zealand's subduction zones, and while there are no known significant tsunami sources close to the Timaru coast a tsunami generated by an earthquake on an unknown offshore fault or a submarine landslide cannot be ruled out.

17 Official warnings:

People should evacuate the red zone in an official advisory of a tsunami up to 1 metre wave height at coast. They should evacuate the red and orange zones in an official warning of a tsunami greater than 1 metre wave height at coast.

Consultation

18 The tsunami evacuation zone revision and associated communications and public education is a collaborative effort between Environment Canterbury, Canterbury CDEM Group and Timaru District Council Officers, however the final sign off of the zones lies with Timaru District Council Officers as an operational decision. The revised tsunami evacuation zones were externally peer reviewed in early October, and were released on Monday 7 November.

19 The revised tsunami evacuation zones can be viewed on the Timaru District Council website, the Canterbury Maps website and the National Emergency Management Agency's national tsunami evacuation zone webmap. The underlying GNS Science modelling report, as well as

a report outlining the process of revising Timaru's tsunami evacuation zones are available on the Environment Canterbury website.

- 20 Timaru District Council emergency management and communications staff have developed a communications plan for the revised tsunami evacuation zone release. The release will be followed up with community engagement through meetings, radio, print advertising, social media, and tsunami information boards to be updated. This engagement will be led by district council off with support from Environment Canterbury and Canterbury CDEM Group staff.

Relevant Legislation, Council Policy and Plans

- 21 The Local Government Act 2022 section 82 requires Council to:
- identify people who will be affected by, or have an interest in the decision;
 - Provide them with reasonable access to relevant information in an appropriate format on the purpose and scope of the decision;


Financial and Funding Implications

- 22 There will be no resulting financial implication.

Other Consideration

- 23 There are no other considerations.

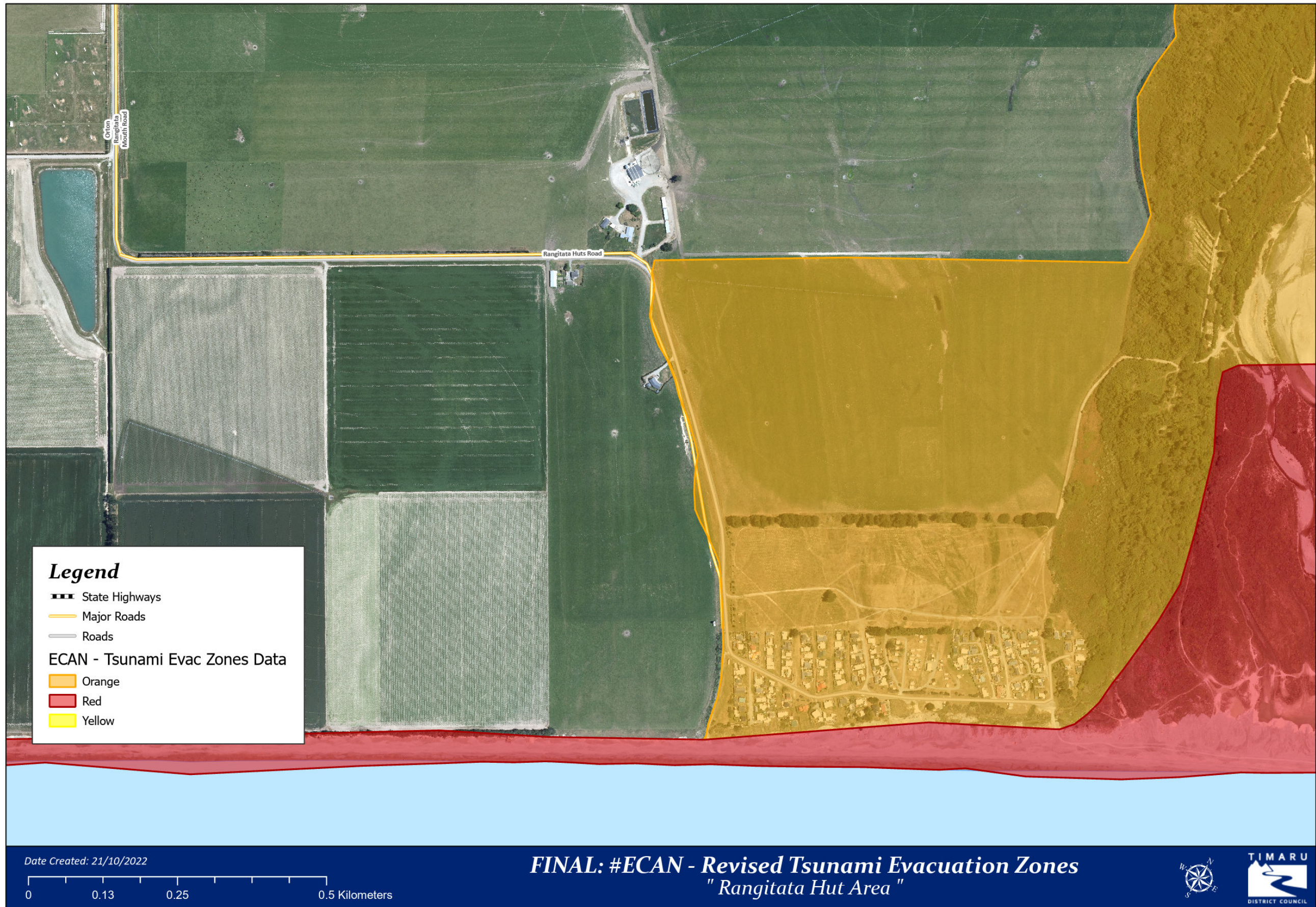
Attachments

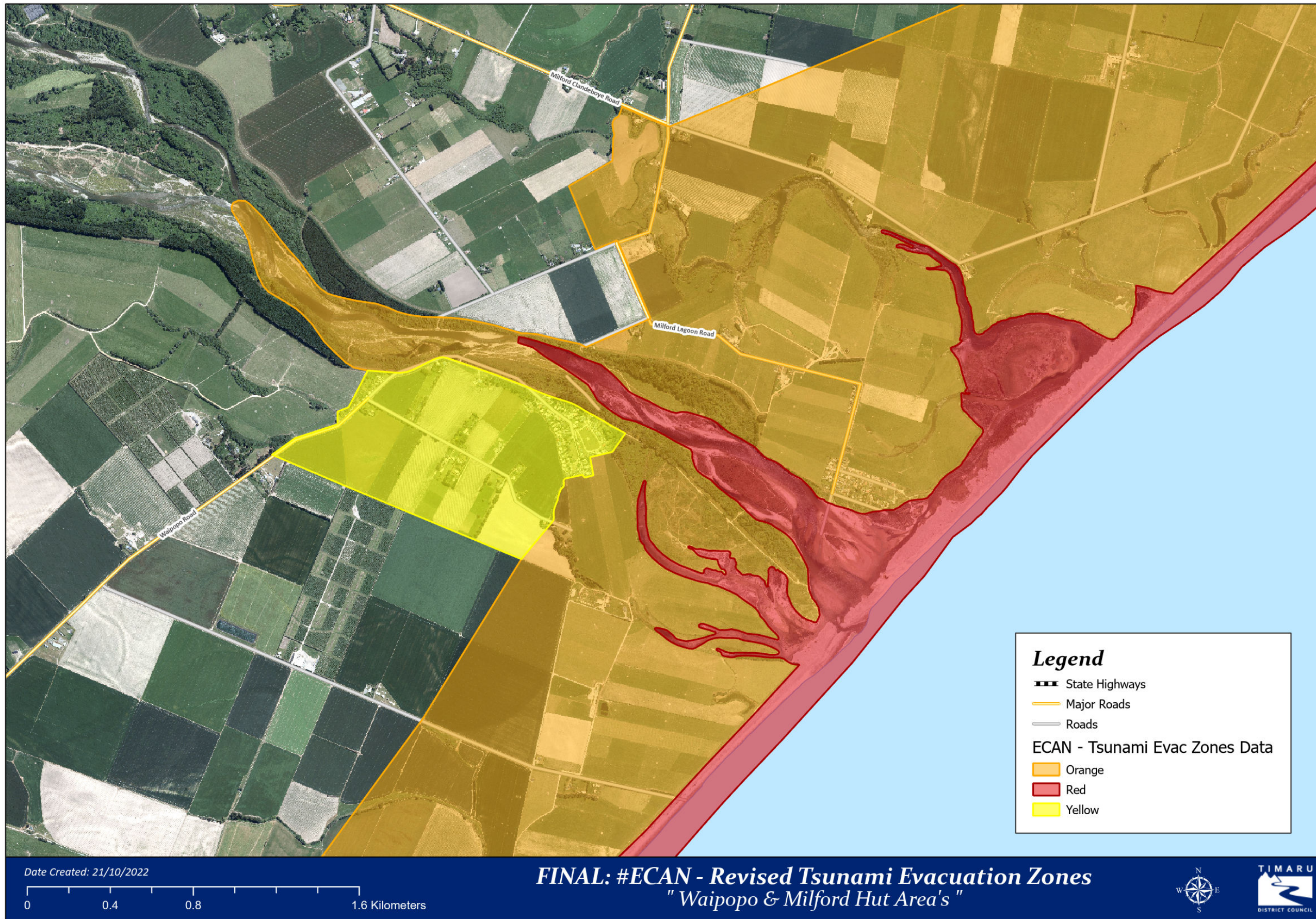
1. **2021 Tsunami Evacuations Zones Timaru District** [↓](#) 
2. **2022 Ecan Revised Tsunami Evacuation Area Maps** [↓](#) 
3. **2022 Ecan Revised Tsunami Evacuation Coastline Maps** [↓](#) 

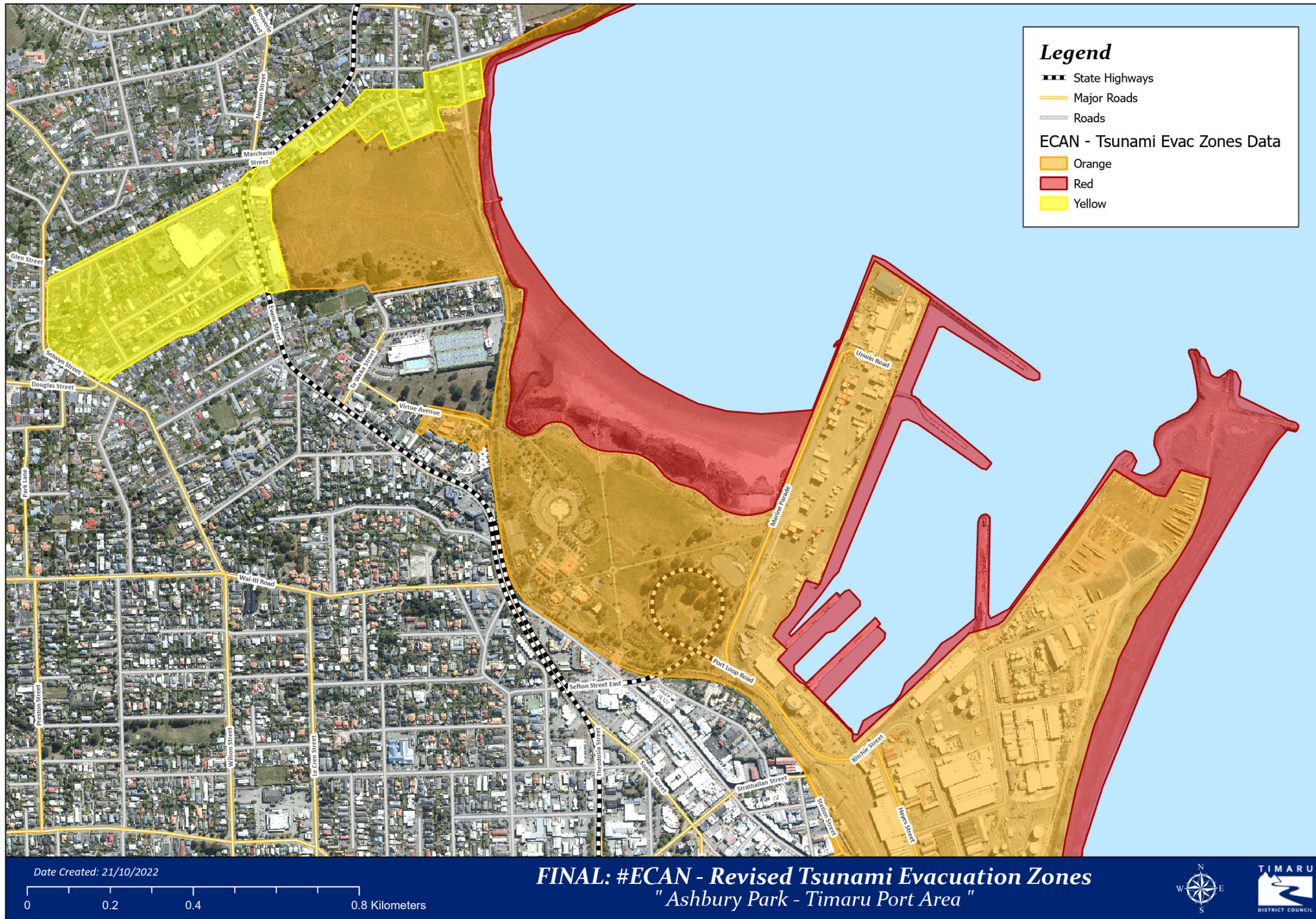
2012 Tsunami Evacuation Zones for Timaru District

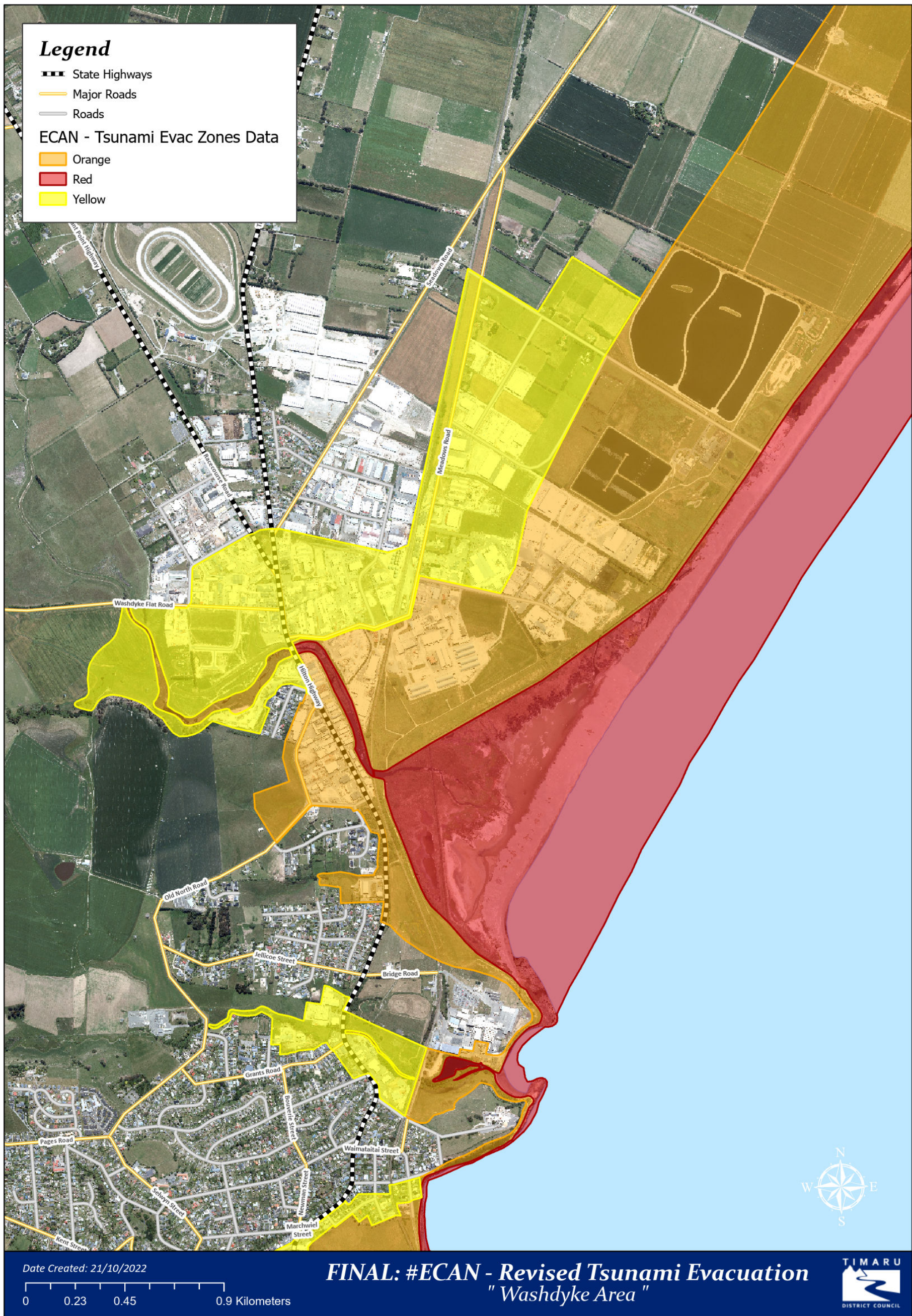


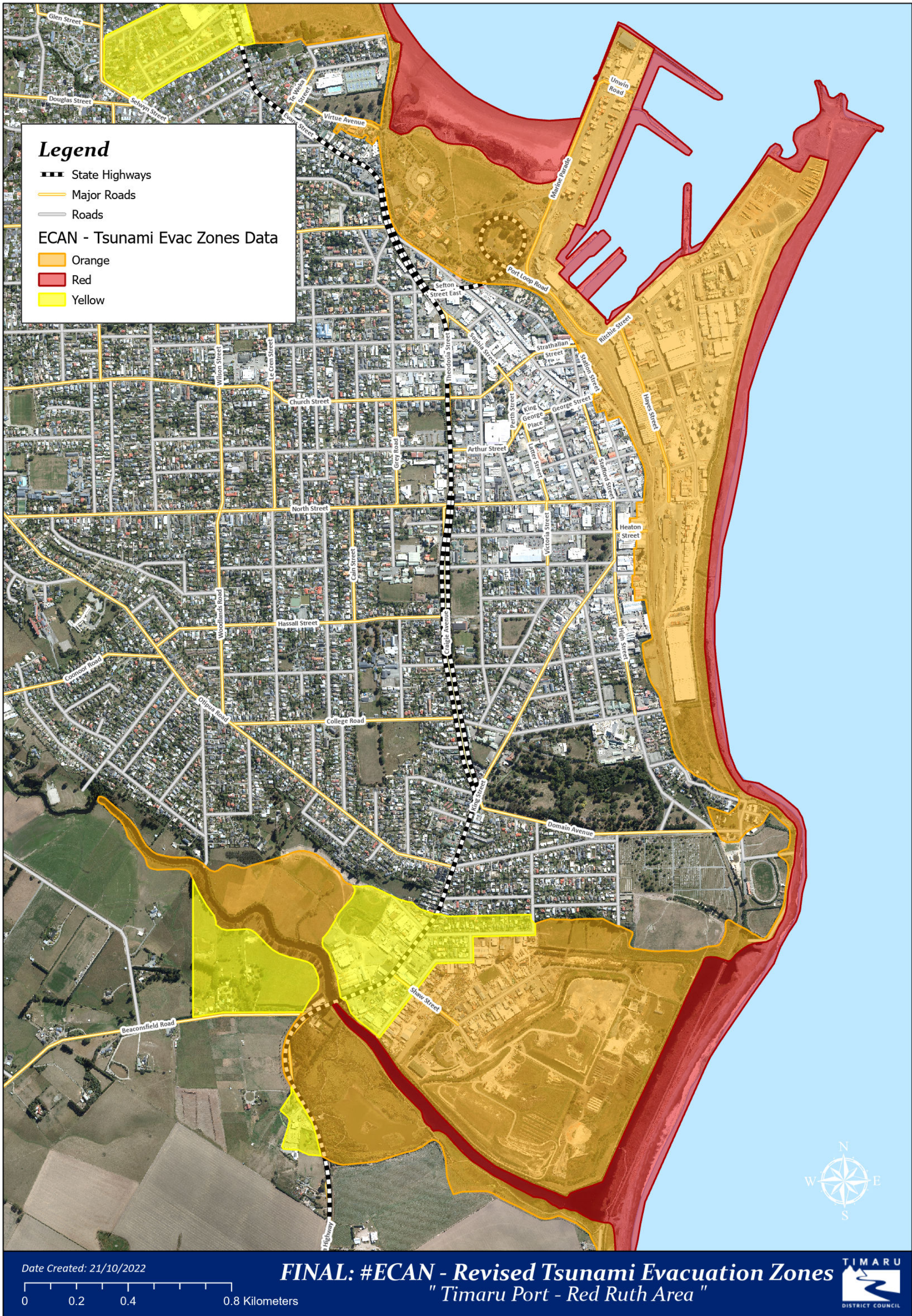
(Attachment 1)

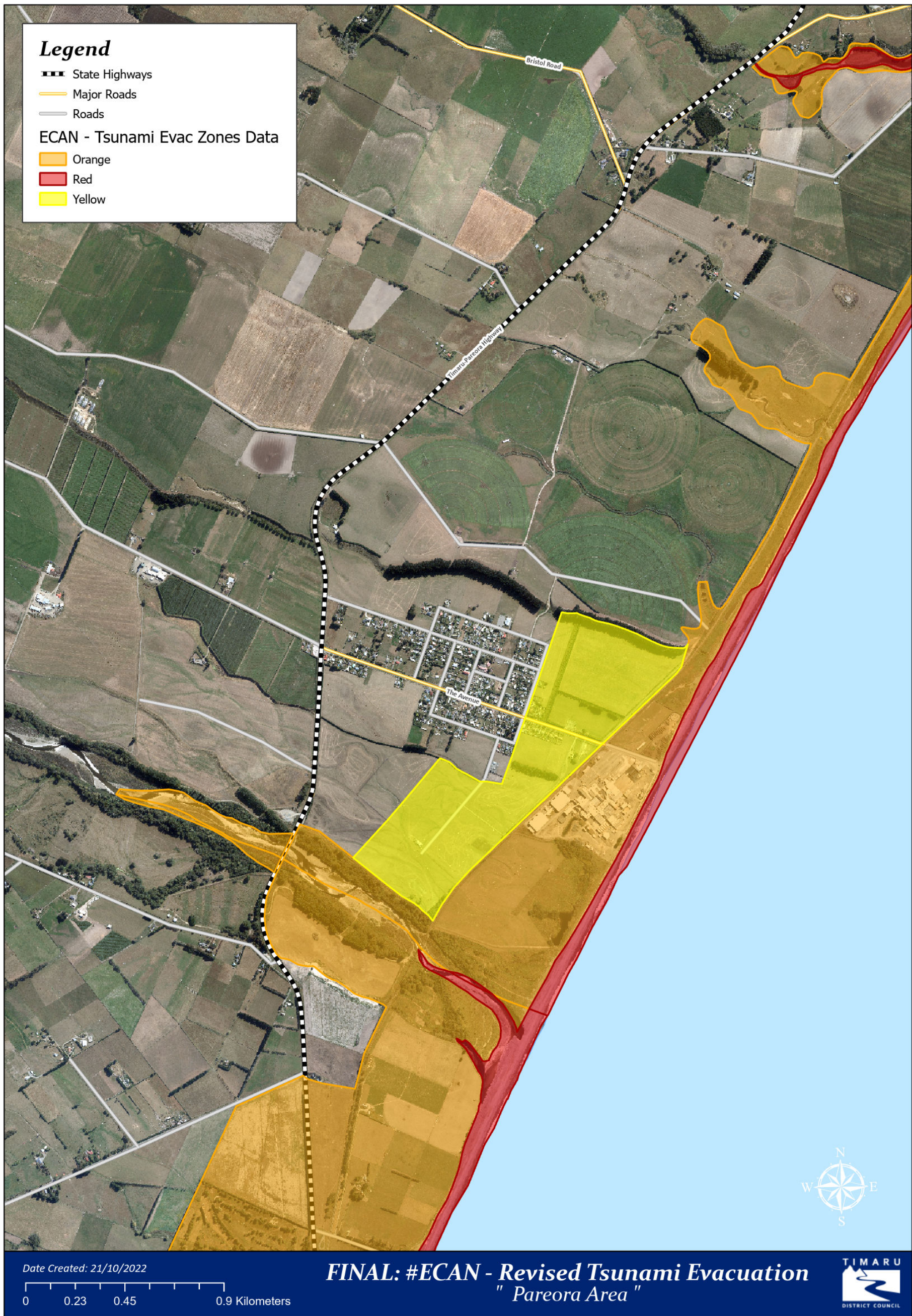


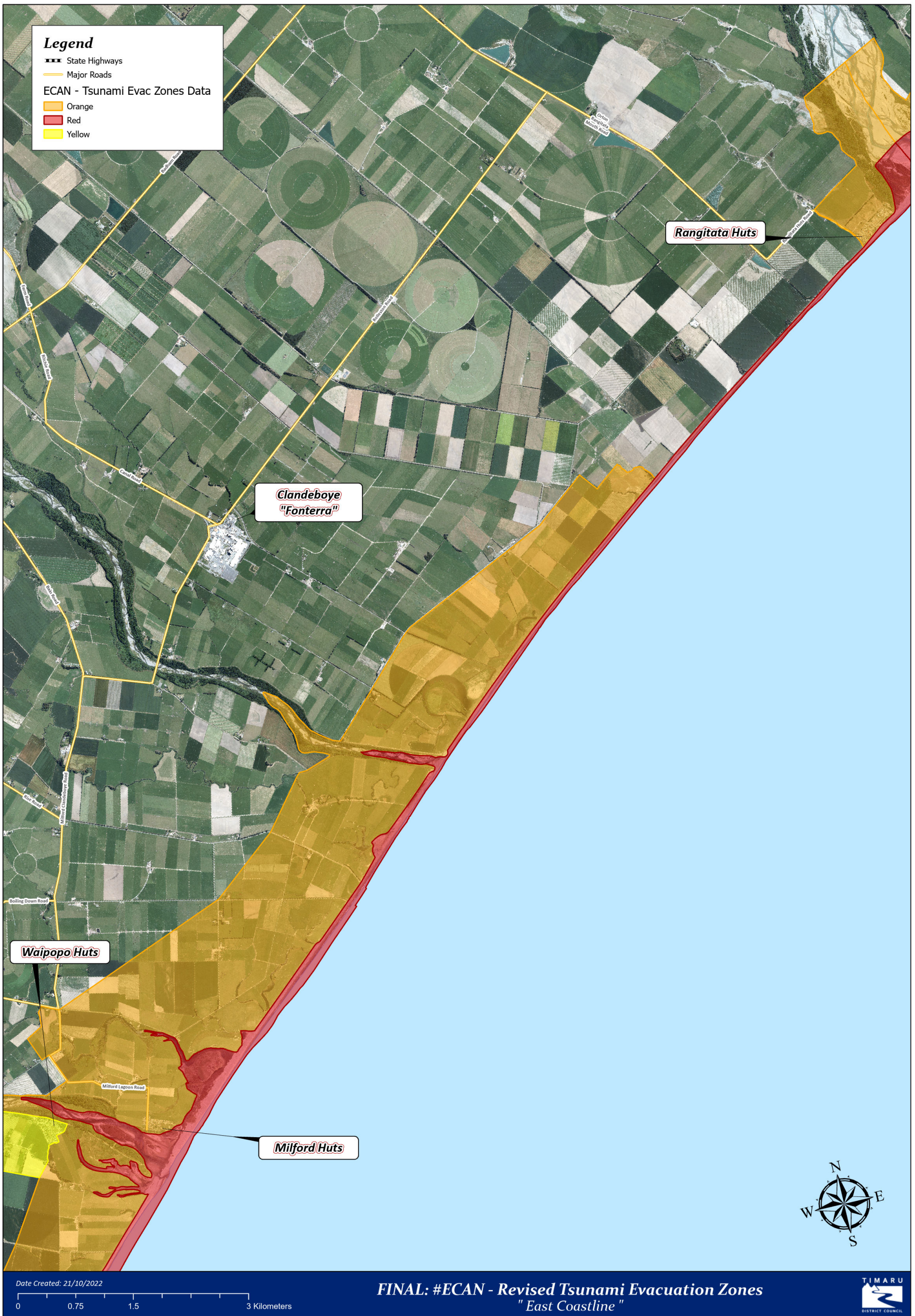


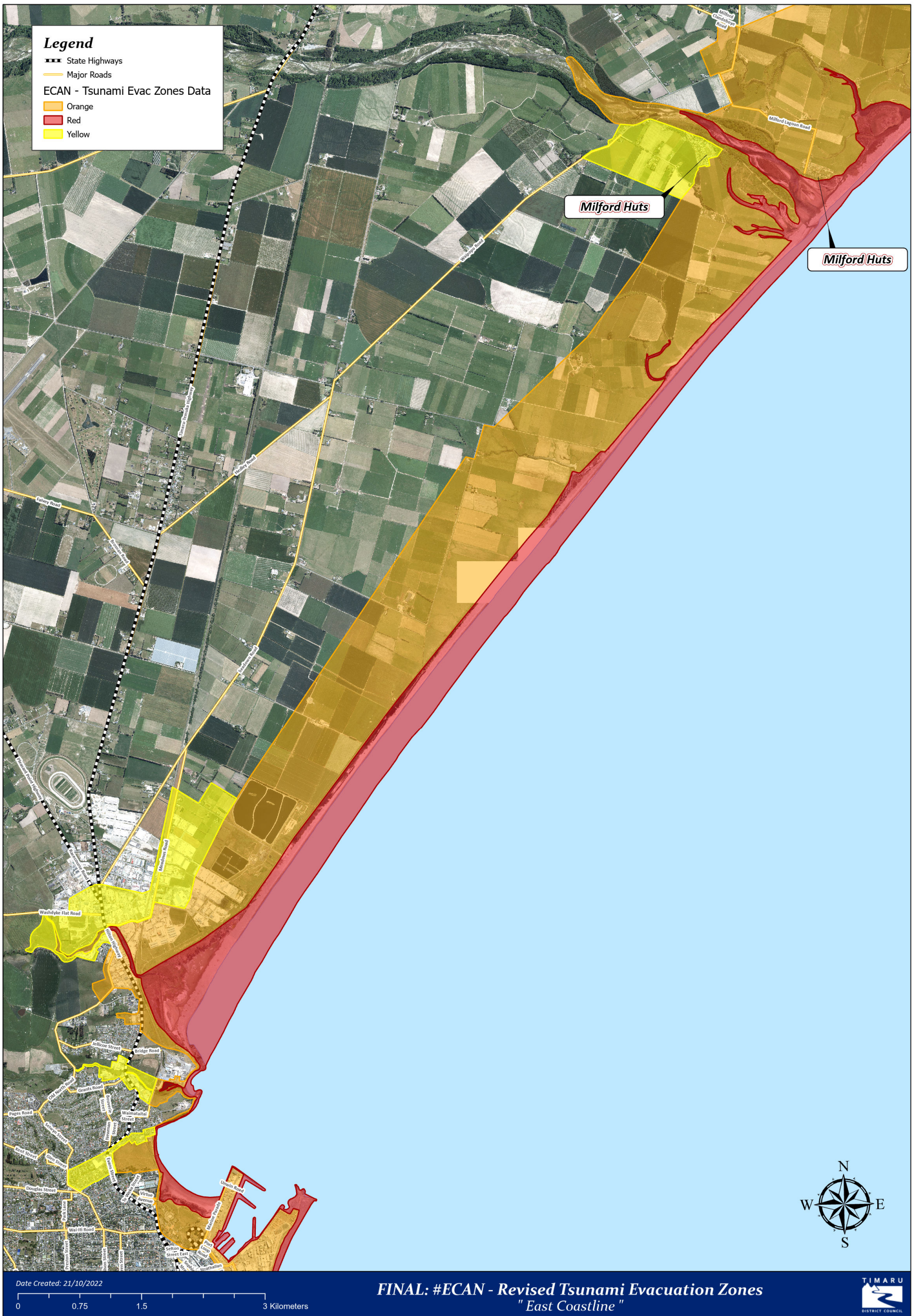


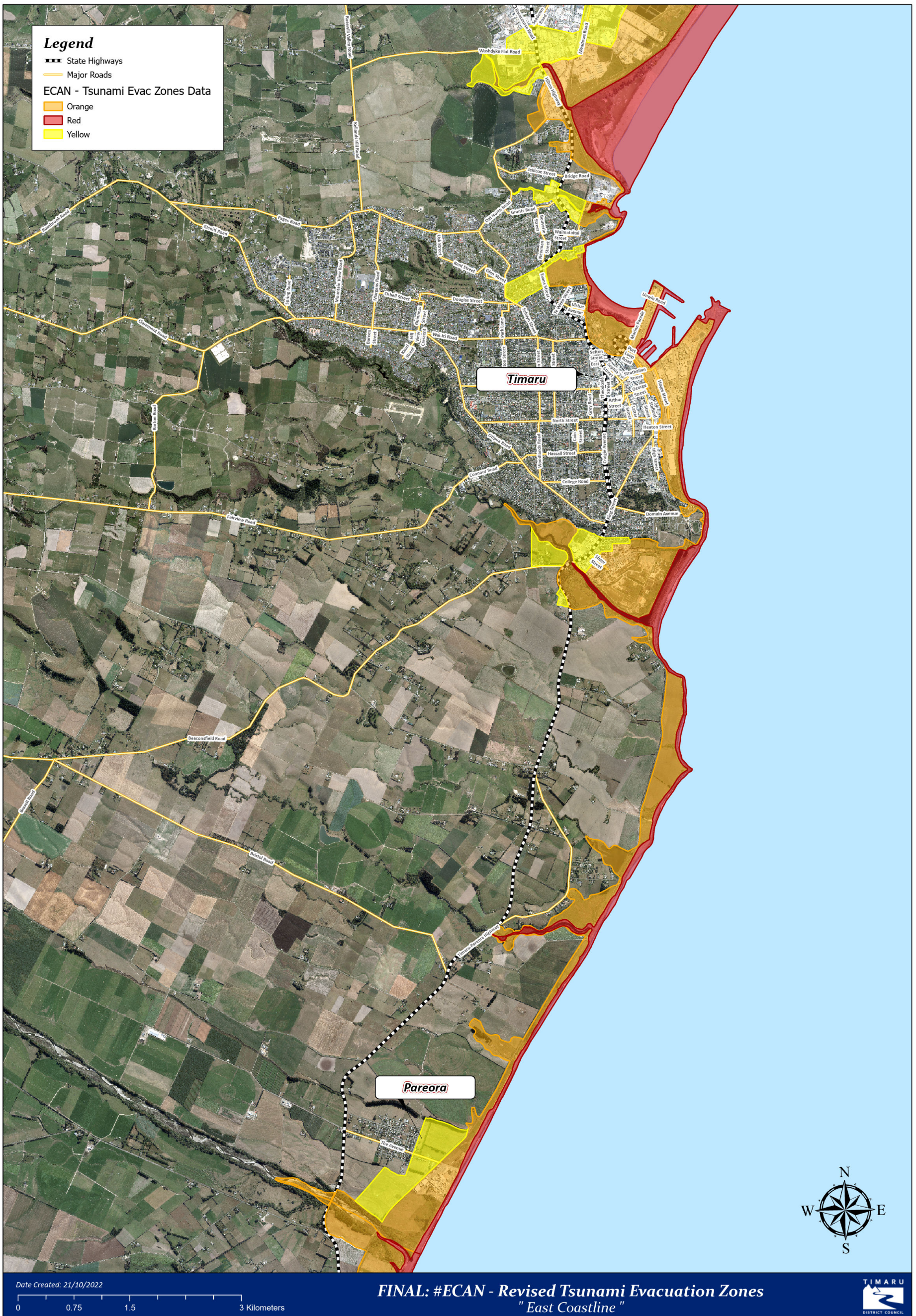












6.3 Climate Change Strategy - Progress at October 2022

Author: Rhys Taylor, Climate Change Advisor

Authoriser: Andrew Dixon, Group Manager Infrastructure

Recommendation

1. That the Environmental Services Committee receives and note the climate change strategy progress report.

Purpose of Report

- 1 The Long Term Plan 2021-31 commits the Council to making a Climate Change Strategy. This report is to provide Committee members an update on progress in the development of that strategy.

Assessment of Significance

- 2 This matter is assessed as being of medium significance in terms of the Timaru District Council Significance and Engagement Policy as it is consistent with Long Term Plan outcomes on this issue. It is noted that there is high community interest and potential impact on future wellbeing, particularly on younger generations.

Discussion

- 3 In June 2022 Council endorsed a set of three governance statements refining the scope of our leadership position, and gave their support to a proposal to take the required next steps to develop a Timaru District Climate Change Strategy for and with our communities.
- 4 The development of the Climate Change strategy is progressing. To assist Council, Consultant Dr Phil Driver has been engaged. His work is assisted by the Climate Change Advisor and a voluntary Advisory Group, which includes councillors. Work is in progress to implement the Long Term Plan commitment. Public engagement has commenced and wide interest was confirmed on 21 September. Smaller numbers of volunteers were expected in the more-demanding advisory work than attended the initial information evening.
- 5 There has been an endorsement received from those involved for the approach proposed of a Draft Strategy at level of principles with detailed recommendations in accompanying Sub-strategies, to be ready in first draft for discussion with councillors in March/April 2023.
- 6 To help inform local work and highlight additional opportunities, the Climate Change Advisor will be reviewing approaches taken in other Councils and note the rapidly developing national policy and legislative context for this work.
- 7 The attached report by Dr Driver (Attachment 1) summarises work undertaken to date and next steps contemplated, noting key milestones and fresh insights around the strongly positive community and stakeholder participation and support we have seen for this initiative (including relevant participation and support from elected members and council officers).

- 8 It is noted that following this progress report, a draft Strategy covering both high level principles and some detailed recommendations (via topic based sub-strategies) will be presented for discussion with councillors in March/April 2023.
- 9 The Climate Change Advisor continues to support and lead the development of the Climate Change Strategy in parallel with a range of other activities including a comprehensive review of the approaches taken by other councils and the rapidly developing national policy and legislative context for this work. An internal working group is under development to coordinate related existing activities of various parts of council.

Attachments

1. **Action on Climate Change, Report by Dr Phil Driver**  

Action on Climate Change

Timaru District Climate Change Strategy Project

Introduction for councillors, 15th November 2022

Report Prepared by Project Facilitator Dr Phil Driver

Background

Timaru District Council's (TDC) Long Term Plan allocated some funding to develop a Timaru Climate Change Strategy.

TDC has now initiated a Timaru District Climate Change Strategy (TDCCS) focusing on actions by individuals, communities, and businesses in the Timaru District, facilitated by independent facilitator Dr Phil Driver, with assistance from TDC's Climate Change Advisor.

Actions and achievements so far

Phil Driver interviewed 52 key stakeholders in the Timaru District and as reported to council in his April 2022 report, 51 supported actions on climate change. Council subsequently endorsed a set of governance statements on climate change as follows:

The Timaru District Council will be a climate-friendly council. We will:

- 1. Adapt to Climate Change and reduce greenhouse gas emissions from Council's operations wherever feasible.*
- 2. Lead and facilitate mitigation and adaptation projects with others. We will enable, empower and inspire substantial climate change actions by many stakeholders in the district, including collaborations with our Tiriti partners.*
- 3. Encourage others to learn and adapt. We will guide and support communities that are most vulnerable to climate change, i.e., those who are:*
 - most exposed to climate change*
 - badly impacted by climate change*
 - least resilient*

Phil Driver then facilitated a public meeting on the 21st September with 13 invited speakers including 3 internationally respected professors of climate science, two of whom were key authors in recent seminal [reports from the International Panel on Climate Change](#). Other speakers included the lead author of the [Canterbury Climate Change Risk Assessment report](#), a psychotherapist guiding us on how to manage climate change anxiety and seven local speakers including from major companies, discussing what they are already doing to address climate change. The meeting was attended by 140 Timaru district citizens including the Mayor plus the Mayor of Waitaki District Council and councillors from adjoining districts.

The meeting was enthusiastically received and commented on and given an excellent profile [through the media](#). A film record is [available on line](#).

Phil has also facilitated the creation of a Timaru District Climate Change Advisory Group to give him regular, assertive feedback as he creates the high-level TDCCS and the more detailed, topic-specific SubStrategies that sit under the high level strategy. Phil and Rhys held a first workshop with the Advisory Group on the 20th October and all members indicated enthusiasm for the TDCCS and their voluntary roles on the Advisory Group.

On the 26th and 29th October, Phil and Rhys facilitated public workshops to hear what Timaru District stakeholders consider to be their priorities for addressing climate change and to consider very challenging questions from the Government's draft National Adaptation Strategy, such as 'who pays for climate change actions?'

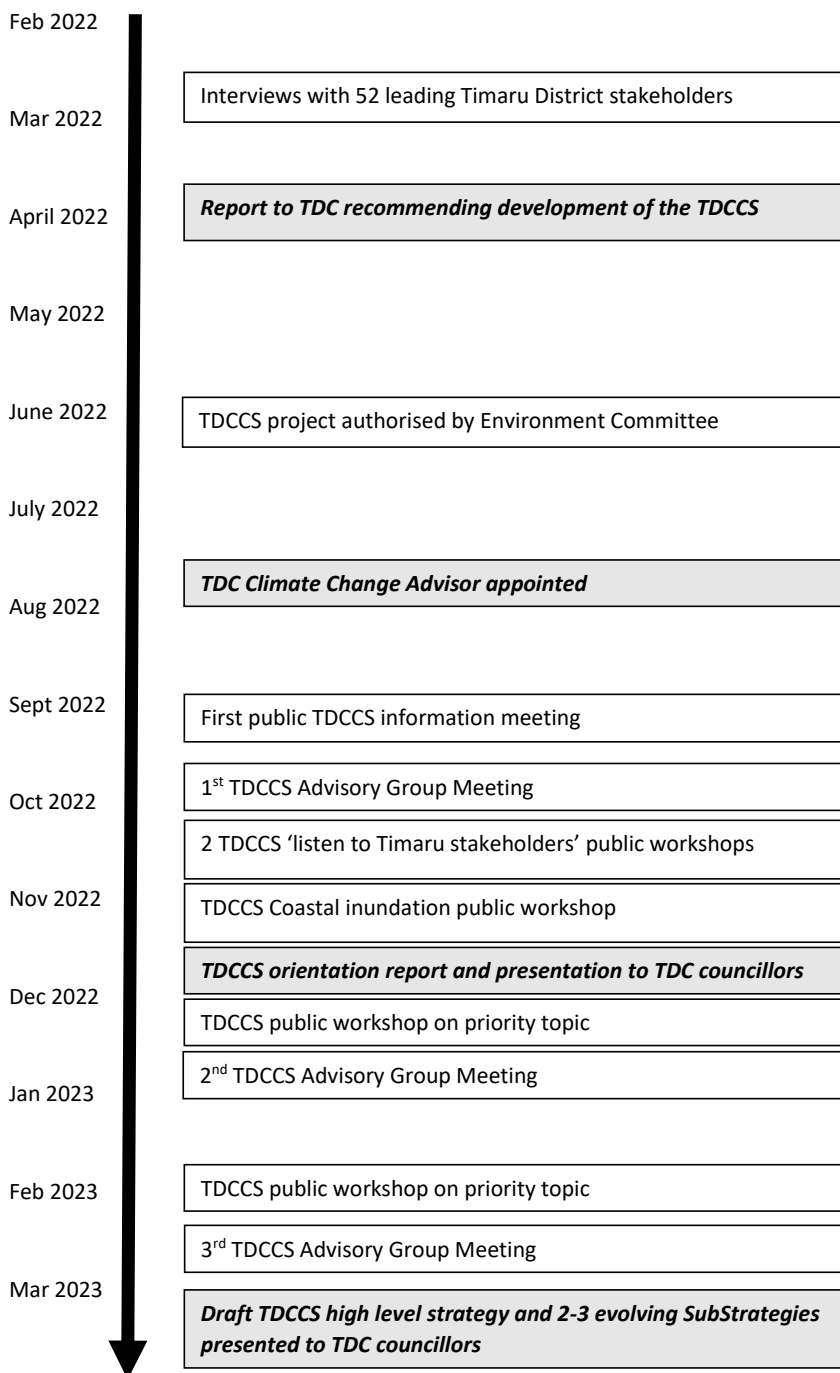
Next steps

The TDCCS project timeline is shown in the diagram on the following page. Future actions include:

- 23rd November 2022. Public workshop on coastal inundation and erosion.
- December 2022 and February and March 2023. Public workshops on topics prioritised through earlier public workshops and input from the Advisory Group.
- March 2023. Presentation to council of the first draft of the high level TDCCS and the first of several continually evolving SubStrategies on specific Action on Climate Change topics. The high level TDCCS will define the Values and Principles that will guide the more detailed elements of the strategy.

Dr Phil Driver
Facilitator
Timaru District Climate Change Strategy project
021 0236 5861
phildriver@openstrategies.com

Timaru District Climate Change Strategy Timeline



7 Consideration of Urgent Business Items

8 Consideration of Minor Nature Matters