

COVER REPORT - COMMITTEE MEETING

Title of Report:		Tidal Barrier Pre-Feasibility Study Consultation		
Meeting of:		Infrastructure, Transport and Environmental (ITE) Committee		
Date of Meeting:		Thursday 8 October 2015		
Date Required by Democracy Services:		Monday 21 September 2015		
Community Board Consultation:		Needed: N	Complete: Y	Meeting held
Public Excluded		N if PUBLIC EXCLUDED the section below MUST be completed		
REASON UNDER ACT	SECTION	PLAIN ENGLISH REASON		WHEN REPORT CAN BE RELEASED

No of Attachments (must be cited in report) : Six

Description of Attachments:

Written submissions from:

- Canterbury Earthquake Recovery Authority
- Environment Canterbury
- Avon-Heathcote Ihutai Trust
- Christchurch Estuary Association
- Avon Otakaro Network
- Southshore Residents' Association





Confirmation of Statutory Compliance

Compliance with Statutory Decision-making Requirements (ss 76 - 81 Local Government Act 2002).

(a) This report contains:

- (i) sufficient information about all reasonably practicable options identified and assessed in terms of their advantages and disadvantages; and
- (ii) adequate consideration of the views and preferences of affected and interested persons bearing in mind any proposed or previous community engagement.

(b) The information reflects the level of significance of the matters covered by the report, as determined in accordance with the Council's significance and engagement policy.

	Name and title of signatories	Signature	Date
Prepared by	Sylvia Maclaren Project Manager		21/09/2015
Approved by Finance Manager	Peter Langbein		21/09/2015
Approved by Storm water and Land Drainage Rebuild	Keith Davison		21/09/2015
Approved by Executive Leadership Team Member	David Adamson		21/09/2015

Tidal Barrier Pre-Feasibility Study Delivery

Reference: TRIM 15/1127524

Contact: Keith Davison keith.davison@ccc.govt.nz

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1. Purpose of Report

- 1.1. The Avon-Heathcote Tidal Barrier Pre-Feasibility Study was tabled at the ITE Committee on 6 August 2015, and made publically available online on the same day. The recommendations of the committee to Council were that:
 - 1.1.1. That the information in (the) report be received.
 - 1.1.2. That the Council seek input from CERA, ECan, Ngai Tahu and the Avon Ihutai Estuary Trust and the Christchurch Estuary Association as partners and stakeholders on (the) technical report and its implications.
 - 1.1.3. That staff report back their recommendations to the next ITE meeting.
- 1.2. This report is to close out recommendation 1.1.2 by providing the responses to the input requested. It is also to seek a recommendation to Council as to whether to proceed to a full feasibility study for the tidal barrier.

2. Background

- 2.1. The barrier is just one of a number of flood management options the Land Drainage Recovery Programme (LDRP) and Council Strategy and Planning Group are investigating as flood mitigation measures for Christchurch.
- 2.2. The purpose of the pre-feasibility study was to understand whether a tidal barrier was worthy of further consideration and if the Council would be justified in conducting a full feasibility assessment.
- 2.3. The study states that a barrier is technically feasible, and would be within the capabilities of New Zealand contractors at a build cost in the range of \$300 - \$350M with operations and maintenance a further \$2 - \$7M per year. It will result in substantial impacts on the estuary environment.
- 2.4. A tidal barrier would not remove the need for some additional defences. The likely costs of these combined with a barrier in the present day scenario are more expensive than potential alternatives (Table 1). A tidal barrier could be more cost effective in the long term as sea level rise eventuates.

Table 1. Summary of costs with / without a tidal barrier

Present day climate		1m sea level rise	
Alternative engineering solution	Tidal barrier	Alternative engineering solution	Tidal barrier
\$211M	\$430M	\$571M	\$545M

- 2.5. The pre-feasibility tidal barrier study only considered two climate scenarios, the present day scenario and 1m sea level rise scenario. It did not determine if there is an intermediate point between these scenarios whereby a tidal barrier becomes cost effective.
- 2.6. Previous external communications during the preparation of the report had included workshops with ECan for early evaluation and issues identification, information sessions with Te Ngāi Tūāhuriri Rūnanga and the Avon-Heathcote Ihutai Estuary Trust, and the sending of a memo on 13 July 2015 to the Hagley-Ferrymead and Burwood-Pegasus Community Boards informing them of the study. CERA was updated with copies of the draft and final report as they were received. Feedback was also received through the Long Term Plan (LTP) process.





3. Commentary

- 3.1. In response to the ITE Committee's recommendations the Mayor's office prepared a letter to seek input from the nominated stakeholders. This letter stated Council staff would be in touch to arrange meetings with representatives of each organisation to discuss the study and receive feedback.
- 3.2. From this, meetings were held with CERA, the Avon-Heathcote Ihutai Estuary Trust, and the Christchurch Estuary Association. A meeting with Ngai Tahu was scheduled for 29 September 2015 (after the submission of this officer's report) so will be reported on verbally at the ITE Committee meeting. ECan declined a meeting request.
- 3.3. In addition, Council staff were requested to present to the Hagley/Ferrymead Community Board and did so at the meeting of 14 September 2015.
- 3.4. To summarise the range of views, written responses were received from all nominated partners / stakeholders. These responses are attached. Additional unsought feedback was received from Avon Otakaro Network and Southshore Residents' Association, and these submissions are also attached.
- 3.5. Feedback has been mixed with proponents for, against and neutral towards progression to a full feasibility study on a tidal barrier. Generally, there has been a level of concern that earlier and more in-depth consultation did not occur.
- 3.6. Commentary from the submissions, and from both GHD and Jacobs (who provided a peer review), propose a city-wide flood management strategy would provide a better option. This would include an assessment of all the possible engineering and non-engineering options. This could include a tidal barrier at a high level without the additional information provided by a full feasibility study.

4. Recommendation

- 4.1. That a full feasibility study on a tidal barrier does not proceed at this stage under the Land Drainage Recovery Programme.
- 4.2. That the information in the pre-feasibility report on a tidal barrier be considered as one of the engineering options for flood protection in the development of the Council's Three Waters Strategy.
- 4.3. The Council continue to work closely with CERA on the options for flood plain management as part of the technical work on the future use of the Residential Red Zone.

Signatories

Author	Sylvia Maclaren 	Project Manager
Approved By	Peter Langbein 	Finance Manager
	Keith Davison 	Unit Manager
	David Adamson 	Director