

IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER of a Board of Inquiry appointed under s149J of the Resource Management Act 1991 to consider Notice of Requirements and applications for Resource Consent made by the New Zealand Transport Agency in relation to the East West Link roading proposal in Auckland.

**SUMMARY OF EVIDENCE OF GRAEME ROBERT MCINDOE ON BEHALF OF
AUCKLAND COUNCIL
URBAN DESIGN**

1. **Overview of Key Conclusions of Evidence**

- (a) The Proposal has many positive qualities and effects that are consistent with good urban design practice including extending the street network, providing new means of experiencing Mangere Inlet, an enhanced coastal edge including stormwater treatment, and providing additional cycle and pedestrian paths.
- (b) I consider that the naturalisation of the Mangere Inlet shoreline in combination with providing a replacement coastal edge path for recreation and with a high level of amenity, are essential aspects of mitigation of the EWL.
- (c) I understand that investigations and discussions between others have revealed the severe implications of 'splaying out' of the SH20 underpass, and consider that is not practicable. On the basis of that information, I consider that realignment is not required. However the consequence of this is that greater attention should be placed on other aspects of Town Centre to Mangere Bridge and Onehunga Wharf connection, such as the length of the land bridge.
- (d) I consider that the following matters remain to be resolved:
 - (i) The Proposal is deficient in mitigating coastal severance and connectivity at Waikaraka Cemetery and Park, Alfred Street, the Te Hopua Tuff Ring and Onehunga Wharf.
 - (ii) Mitigation of severance between Onehunga Town Centre/the tuff ring and the coastal edge/Onehunga Wharf requires an extended land bridge, and an extended land bridge becomes critically important if undergrounding the 110Kv power transmission lines is not possible.
 - (iii) Physical connections between the Proposal and the surrounding street network have been provided, but in my opinion more are necessary to address the severance effects created by the project.
 - (iv) That is, Alfred Street should connect to the EWL, and an intersection there should provide at-grade pedestrian access

across to the coastal edge. This would provide the street grid connectivity appropriate to this urban area, and in combination with relocating the overbridge further to the east, would enhance physical connection between the Waikaraka Park/Cemetery area, and the coastal edge.

- (v) The pedestrian and cycle overbridge should be relocated to the east to remain directly accessed from the end of Alfred Street, and should also be accessible from near the centre of Waikaraka Park and Cemetery. This would assist with mitigating severance of the Park/Cemetery from the coast and if such a dual means of access were to be provided to the overbridge, the necessary ramping could be integrated into the Cemetery edge treatment.
- (vi) Some provision for vehicle access to the coastal edge along the Mangere Inlet is required to provide universal access. This is essential for elderly and infirm people who, without such direct and immediate access, would not otherwise be able to access the edge of the Mangere Inlet.

2. The Land Bridge Width

- (a) Questions have been asked about why a land bridge more than 70m wide is necessary. In brief this is to offset the effects of severance caused by the EWL along its length, and specifically in its local sector. This is due to the 'moat' it would create between the Tuff Ring and the Onehunga Wharf area, and the otherwise un-mitigatable effects of severance to the west of the Tuff Ring at Orpheus Drive.
- (b) There are two possible means of mitigating severance in this wider sector, being the land bridge and undergrounding the power lines. If undergrounding the power lines proves to not be possible, the only location for mitigation is at the south end of the Tuff Ring, and in my view the only and most effective means of mitigation there is an extended land bridge.
- (c) A land bridge extended from the proposed 70 metres to around 170 metres in length (refer to Figure 3 in my rebuttal evidence) would

adequately mitigate local severance here and help to offset severance effects elsewhere around the Tuff Ring and along the Mangere Inlet. That is:

- (i) It would provide for a suitable spatial and conceptual connection between the Te Hopua tuff ring and the harbour edge at Onehunga Wharf.
- (ii) It would reduce the adverse amenity benefits on the Landing and Onehunga Wharf area.
- (iii) The eastern edge of land bridge should if possible extend to include the path along the axis of the New (Old) Mangere Bridge, straightening that route and providing more direct pedestrian and cycle connectivity to and from the town centre.
- (iv) An extended land bridge would be a partial offset for severance of the western part of the tuff ring from the coastal edge, in that without the connection that is possible here at the south, the entire tuff ring would be severed from the coast.
- (v) It would assist with offsetting severance of Waikaraka Park and Cemetery from the Mangere Inlet.

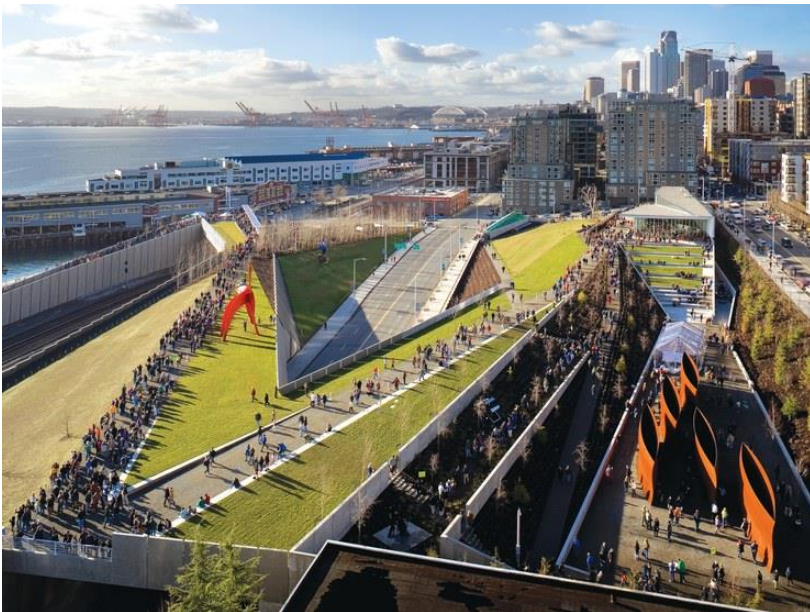
(d) I am aware that lengthening the land bridge beyond 90 metres may lead to additional complications and constraints. Recognising that those will need to be overcome, multi-disciplinary design investigations would be necessary to determine precise configuration and length, quality of and facilities on its top surface, provision for ventilation openings, and appropriate means of, if necessary, slightly elevating parts of the land bridge at its eastern end. At that end, the land bridge would need to be no higher than the proposed pedestrian/cycle bridge that connects with the New (Old) Mangere Bridge.

(e) That is, constraints should be resolved in a way that achieves a high quality aesthetic and urban space outcome, and appropriately detailed design investigations should be undertaken before an extended land bridge can be ruled out. The relevant condition of consent could be modified to require covering the maximum extent of the trench between

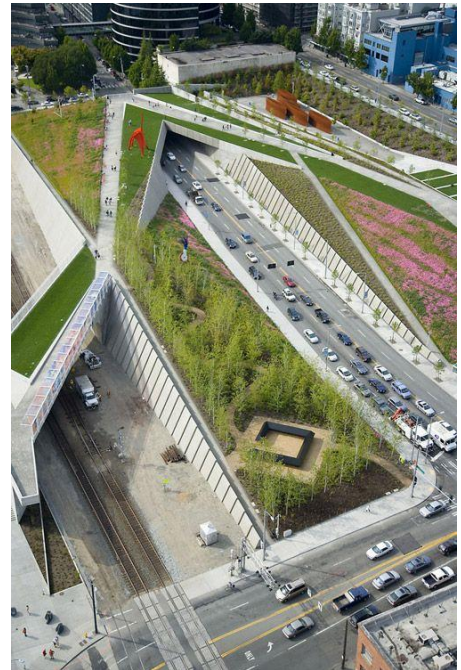
Ch690 and Ch860 with a land bridge that has a minimum length of 90 metres.

Land Bridge Design Precedents

A land bridge does not necessarily need to be a flat lid,
as these precedents show.....



Olympic Sculpture Park, Seattle Waterfront (design by Weiss/Manfredi)



Design for elevated park, Washington DC