RESPONSES TO NSW COASTAL PANEL LETTER DATED 8/5/17

RE: Dol – Lands queries to NSW CP dated 5/5/17 re Development Application (DA) CP17-003, lodged by Stewartville Pty Ltd for works at 6B Childe Street, Byron Bay.

QUESTION AND RESPONSES

1. Clarification that the 'Construction Plans' provided with the 'Responses to RFI', dated 14 March 2017, International Coastal Management, are an accurate reflection of the location and footprint of the tie-ins for CP17-003.

Response: I confirm that the Construction Plan (International Coastal Management drawing BSR-CS5-005) provided with the 'Responses to RFI', dated 14 March 2017 by International Coastal Management shows the "*approximate repair footprint*" and extent of the tie-ins for the subject property. The extent of the tie-ins is to mitigate the risk of flanking failures and address safety issues in accordance with the Supreme Court of NSW Consent Orders dated 12/8/16.

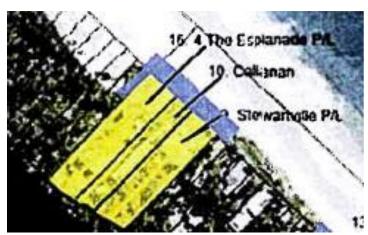


Figure 1 Extent of current protection for subject property (Stewartville) to be repaired (Extract from Schedule 1 of Supreme Court Orders). Council has consented to this application.

The footprint on drawing 005 shows the extent of the repairs including the lower section of the wall that is presently buried below sand level. The proposed tie-ins, as previously described, provide a smooth transition of the repaired section of wall into the adjacent sections of rock walls, extending 10m on either side of the subject property. The proposed tie-ins, as previously described, provide a smooth transition of the repaired section of wall into the adjacent sections of walls. On either side, the repaired wall will blend into the existing neighbouring walls. In this respect, it is important to note that the Supreme Court Orders protect the entire area of repair, including the tie ins.

Additional drawings BSR-CS5-007 and 008 have been provided showing the details of the proposed tie-ins as per item 3 below for the subject property. These additional drawings are provided in Attachment A.



2. Clarification of the length of each tie-in and provision of the total volume of rock to be imported for each tie-in.

Response:

As per drawings 005, 008 & 009 the tie-in lengths are:

- South eastern tie-in; 10m. The tie-in is located on the Esplanade (Figure 2).
- North western tie-in; 10 m. The tie-in is located on the Esplanade (Figure 2).

The estimated rock volumes for the tie-ins are:

- South eastern tie-in; 10-20t (depending on extent of recovery of displaced rock)
- North western tie-in; 10-20t (depending on extent of recovery of displaced rock)
- Council has consented.

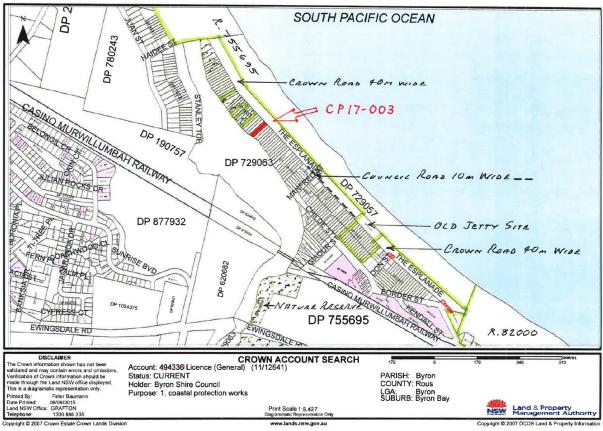


Figure 2 Crown Lands

3. A profile for each tie-in showing the design specifications and methodology of how the rock is to be incorporated into adjacent structures and transitioned and tapered.

Response: As requested, profiles for each tie-in have been provided with design specifications and construction methodology as per the attached additional drawings,



REPAIRS TO SEAWALL AT 6B CHILDE ST, BELONGIL

BSR- CS5-007 & 008 for the subject property. These details are consistent with previous details provided.

4. Any specific maintenance requirements over the life of the proposed works, in consideration of factors such as the structural resilience and hydraulic stability of the structures that are being tied into, over the effective life of the proposed works.

Response: The tie-ins will provide smooth transitions between the repaired section of wall and the existing adjacent sections of walls. The tie-ins will increase the resilience and hydraulic stability of the adjacent sections. Maintenance of the repaired walls, including the tie-ins, is expected about every 10 years and details of the maintenance program have already been provided previously to the Panel. This maintenance will be the responsibility of the owner of the subject property. Details of these arrangements have also previously been provided, including details about the provision of a guarantee to secure the performance of the obligations.

5. Specific consideration of cumulative impacts on Crown land (The Esplanade and R755695) as a result of the tie-ins, as modified, interacting with coastal processes, over the life of the proposed works.

Response: As previously advised, the proposed repair works, that include the tie-ins, are not a substantial increase over the existing seawall structure and there will be NO incremental impacts of the repair works, that include the tie-ins, on the coastal processes.

Summarizing our previous advices:

- The existing structure at 6B Child Street is part of the continuous seawall wall designed and constructed in about 1999 to protect the private properties to NW of Manfred Street from intermittent storm erosion events. The 2015 BSC rock sea wall constructed to protect Manfred Street and the adjacent private wall to the NW connects into the 1999 sea wall. There is now a substantial continuous rock seawall from the northern flank of the northern most private property on Belongil spit to the rock protection at the Old Jetty Site (State lands). With the natural sandstone outcrops at the southern end of the Old Jetty site and southward from Border Street with the BSC sandbag walls at Border Street and Don Street, there is now almost a continuous protection (natural and artificial) of varying standards between the SLSC to the south of Jonson Street and the northern most private property on Belongil Spit (WRL 2013).
- The proposed repair works at the subject property restore the wall back to its original profile are not a substantial increase over the existing. The tie-ins are a 10m transition into the adjacent sections of walls that partly restore the adjacent sections.
- The alignment of the walls along Belong Spit is landward of normal high water and
 these walls act as a terminal seawall that not only protects public and private
 beachfront properties and infrastructure during major erosion events but also
 provides environmental benefits as it mitigates the risk of a breakthrough of Belongil
 Spit that, if allowed to occur, would have large adverse impacts on Crown Lands.
 Repair will improve public safety.



REPAIRS TO SEAWALL AT 6B CHILDE ST, BELONGIL

There will be NO incremental impacts of the repair works, including the tie-ins. This
also was the finding of WRL in 2013 in their assessment of the impacts of the
Manfred St interim wall construction, which is a much larger structure.

Signed

Leslie Angus Jackson

CPEng (National Engineers Register, Institution of Engineers Australia), RPEQ 2876

Date: 18/5/17



ATTACHMENT A

TECHNICAL DRAWINGS WITH ADDITIONAL TIE-IN DETAIL DRAWINGS - 007 & 008





International Coastal Management

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DRAWING REGISTER

18.05.17

BSR - CS5 - 001 B COVER PAGE

BSR - CS5 - 002 B PLAN VIEW (PRESENT)

BSR - CS5 - 003 B X-SECTION (PRESENT)

BSR - CS5 - 004 B REPAIR WORKS

BSR - CS5 - 005 B CONSTRUCTION PLAN

BSR - CS5 - 006 TRAFFIC CONTROL PLAN

BSR - CS5 - 007 TIE-IN PLAN

BSR - CS5 - 008 TIE-IN SECTIONS

Belongil Seawall Repairs

6B CHILDE STREET (Lots 32 and 33 in Section 3 of DP1623)







SLOPE FILL

ROCK FILL

7.0m AHD-

6.0m AHD

5.0m AHD

4.0m AHD

3.0m AHD

2.0m AHD-

1.0m AHD -

0.0m AHD

-1.0m AHD-

-2.0m AHD-

1.0

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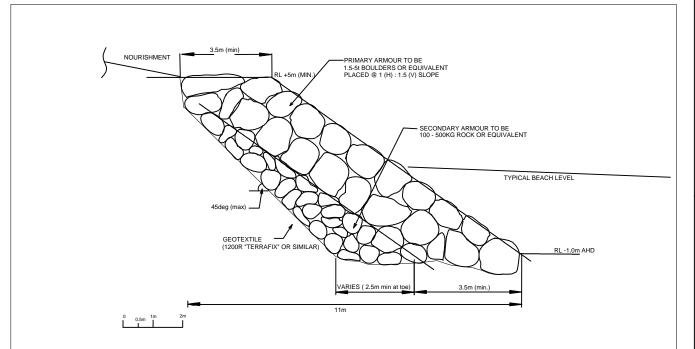
4.0

5.0

6.0

7.0

0.0m



From ICM BELONGIL EROSION PROTECTION WORKS (1999)

Typical 1999 Profile - See Insert [approx. 1V:1.5H] (from historical photos and surveys) VARIOUS ROCK SIZES BEHIND DAMAGED RUBBLE WALL DAMAGED RUBBLE WALL (TO BE REPAIRED) Present Profile (2016) (0.5 - 5t BOULDERS) Sand Level (13th October 2016) Previous Scour Level (from Photos)

~ -1m AHD

18.0

NOTES

LOCALITY PLAN

Present profile from survey (13/10/16)
 Grey shaded area shows estimated location of rocks based on wall slump

and volume displacement

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Α	24/02/17	Updated	Drawing	SK	AJ	AJ			
REV.NO.	DATE	DESCR	IPTION	BY	ENG.	APP.			



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OJECT NAME

BELONGIL SEAWALL REPAIRS

DRAWING TITLE

X-SECTION (PRESENT) 6 CHILDE STREET

BSR - CS5 - 003 B

WN: SK CHECKED:AJ APPROVED:AJ

X-SECTION (PRESENT)

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14.0

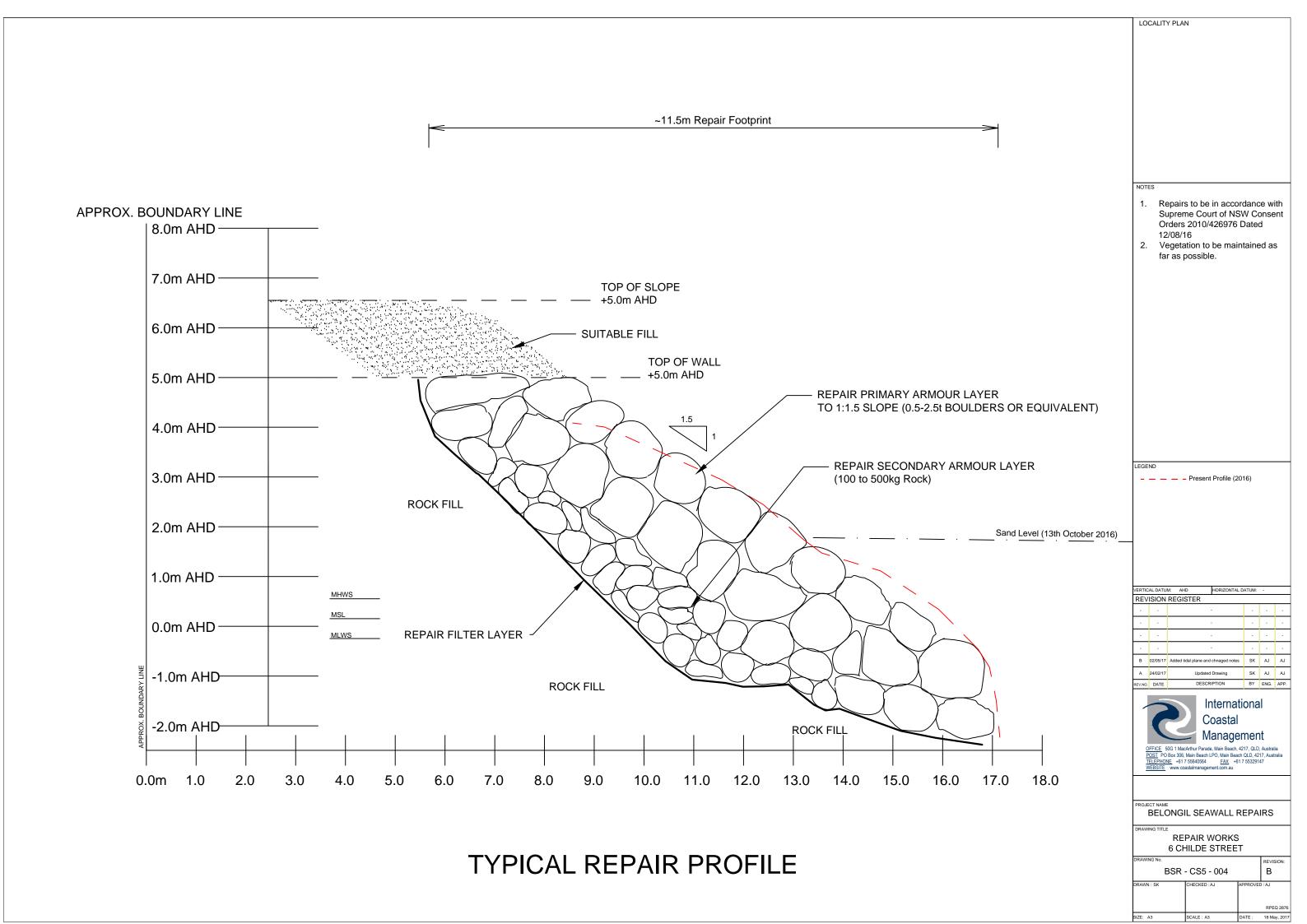
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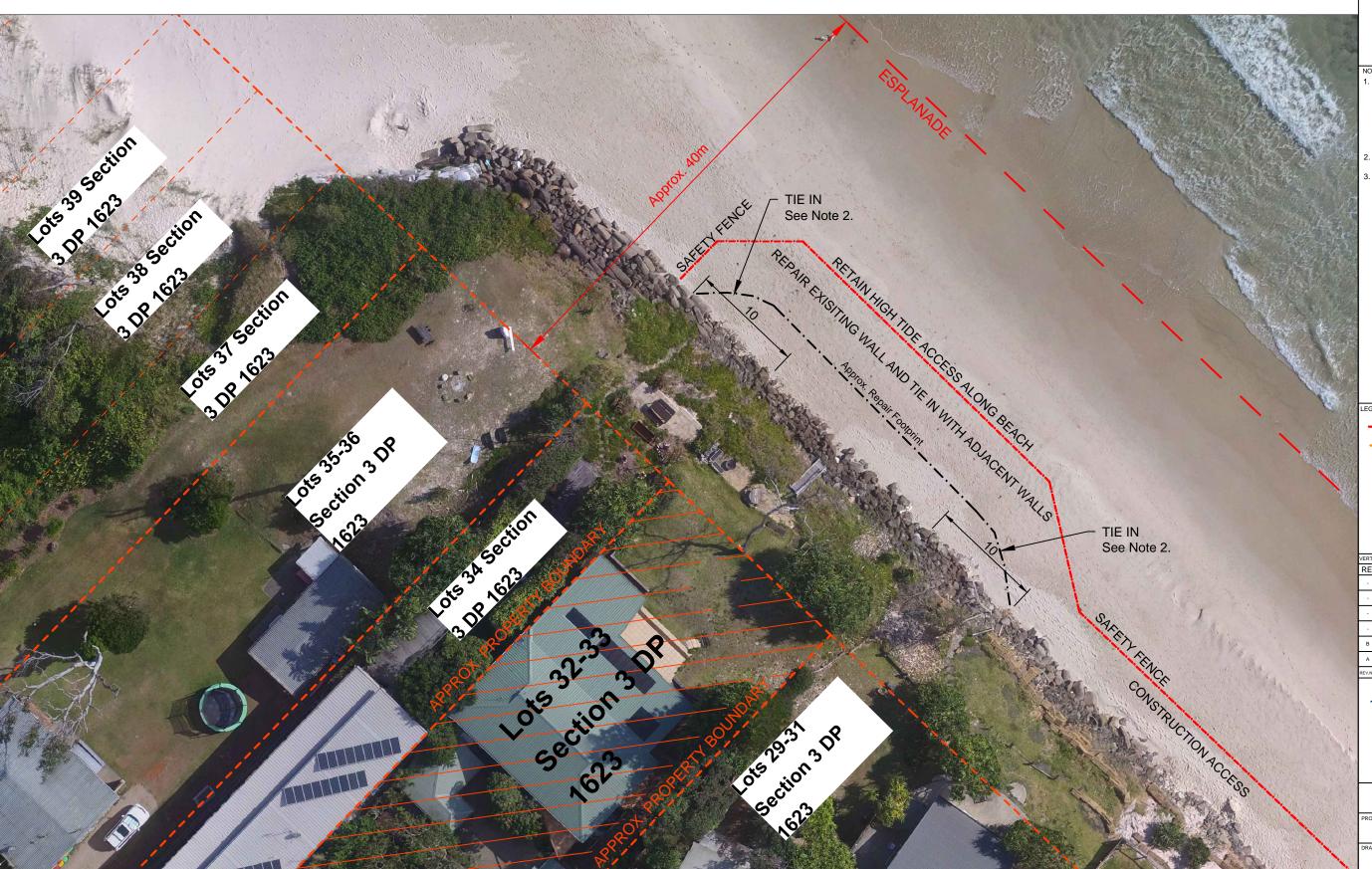
16.0

17.0

ROCK FILL

TOP OF SLOPE +6.5m AHD





NOTES

- Construction access to be from Manfred
 - Street, or approved alternate.

 Refer to traffic control plan; drawing BSR-CS5-006
 - Construction access to be adequate fenced
 - and to existing beach access to be provided. Smooth transition of crest and toe to adjacent
- Wall (Typical)
 Vegetation to be maintained as far as possible.

LEGEND

Safety Fence

Approximate Property Boundary

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	Α	24/02/17	Updated Drawing	SK	AJ	AJ			
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PROJECT NAME

BELONGIL SEAWALL REPAIRS

CONSTRUCTION PLAN

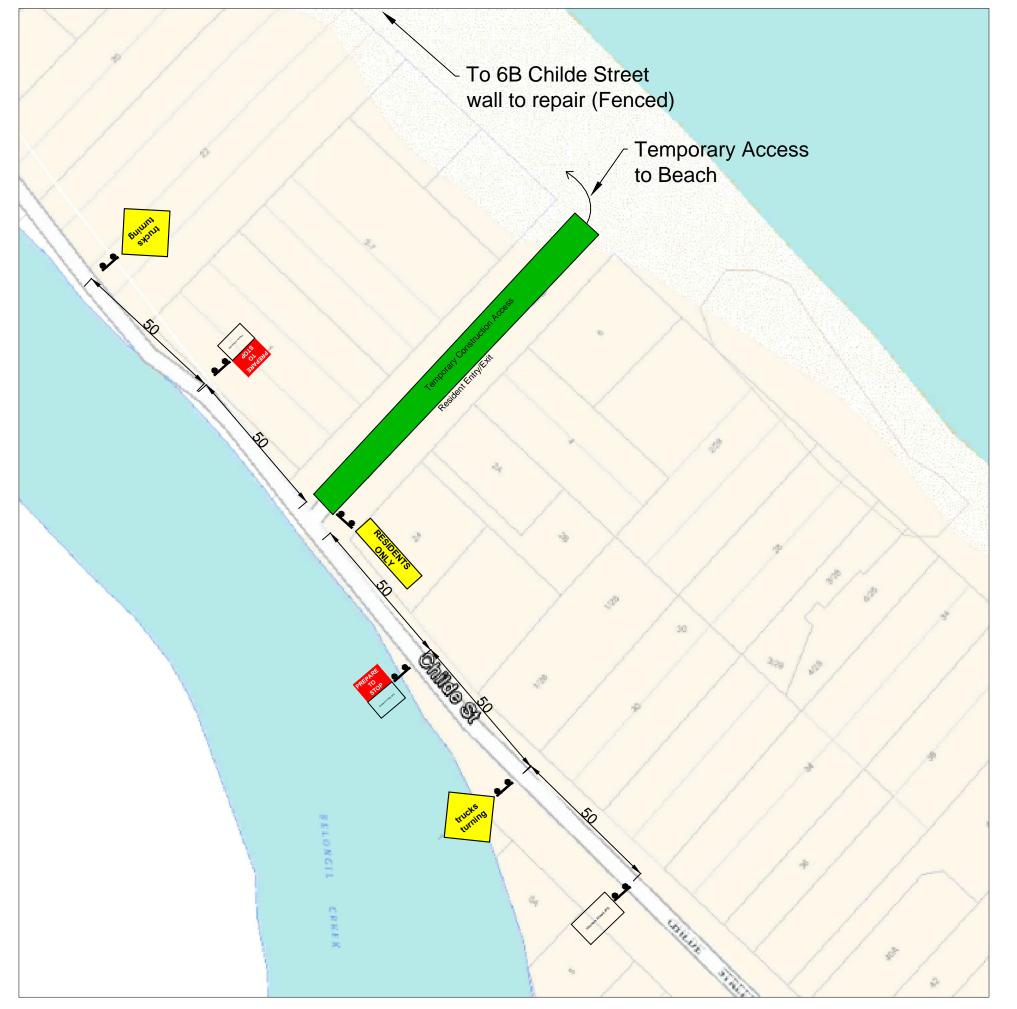
BSR - CS5 - 005 B

CHECKED: AJ APPROVED: AJ

RPEQ 289

SCALE: A3 DATE: 18 May. 20

CONSTRUCTION PLAN



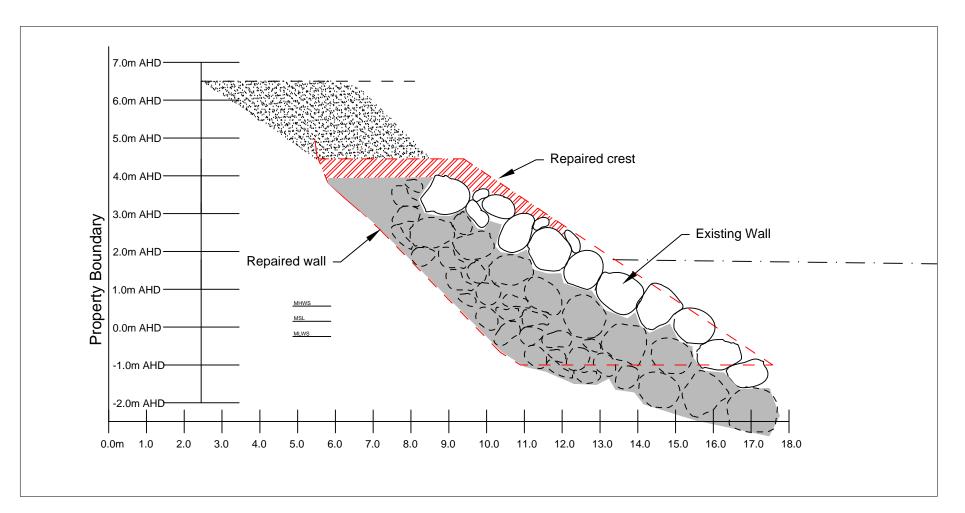
TRAFFIC CONTROL PLAN

NOTES

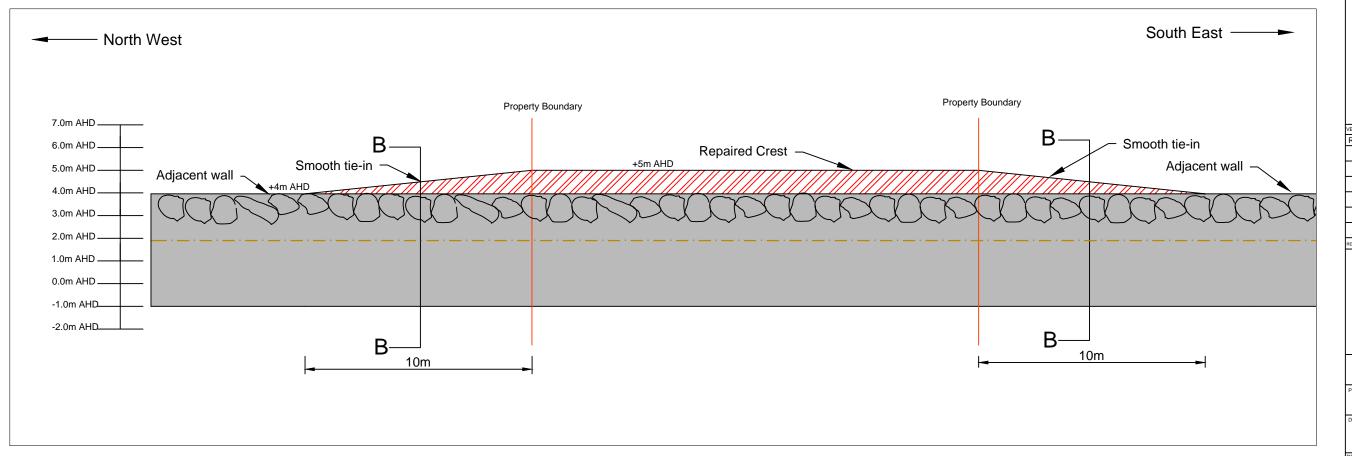
- 1. Work hours; 7am 6pm Monday to Friday excepting public holidays
- 2. Construction Time; Approx 3 working days.
- 3. Truck volumes; It is estimated that 11 trucks @ 12t/truck over the 3 days will be required.
- Traffic Control and Signage; All traffic control and signage is to comply with Roads & Maritime Services Guide to Traffic Control at Worksites Manual. All signage is to be removed when works are not in progress and are to be removed immediately following the completion of works.
- Sign distances may be shortened to 25m so not to be obscured by vegetation if necessary.
- Traffic controller to hold North bound traffic for truck to reverse into sight
- Contractor to provide a spotter for vehicles and pedestrians in Manfred St.
- 5. Road Hazards; Trucking operations to be implemented in a safe manner so as to not cause a hazard for motorists or pedestrians.
- Covering of Loads; All loads are to be covered with taut heavy duty purpose fitted tarpaulins to ensure no loss of load or dust.
- 7. Mud; Contractor to ensure that the wheels, tracks and body surfaces of all vehicles and plant leaving the site are free of mud and that mud is not carried on to adjaced paved streets or other areas.

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TIE-IN X-SECTION B



TIE-IN LONG SECTION (Along Crest)

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