



DOC13/135834
11/12758-04

General Manager
Ballina Shire Council
PO Box 450,
BALLINA NSW 2478

Dear Sir

Proposed Viewing Platform on Ballina North Breakwater

I refer to recent communications between the Crown Lands Division and Council concerning the impact on views of recent works on the Ballina North Breakwater. A number of options were considered to address the concerns raised by Council. As agreed Crown Lands has prepared draft drawings detailing the preferred solution, to raise the crest level of the northern breakwater at Ballina to improve conditions for site seeing at the end of the wall.

A copy of the drawings presenting the proposed design is attached for your consideration. It would be appreciated if Council could review the draft drawings and provide any comment.

The proposed rock fill has not been designed to withstand the overtopping caused by large ocean storm swells. Consequently, it is likely that the rock fill will erode and disperse following ocean storm events. Ongoing maintenance of the crest will be required to make safe and meet community expectations.

It is not feasible to raise the crest height of the existing breakwater to a level at which rates of overtopping are considered safe for pedestrians. Hence there will be an ongoing risk to the public using the breakwater during overtopping events unless access to the end of the wall is controlled.

The cost of the proposed work is estimated at \$120,000 (ex GST). The department will cover this cost from the "Coastal Infrastructure Repairs to Maritime Assets on Crown Lands Program".

Crown Lands wish to discuss with Council arrangements to fund the works and maintain the viewing area and provide safe public access in a cost effective manner.

Should you require further information regarding the above please contact the Mr Stephen Wills, Director Infrastructure and Land Management on 02 4920 5049.

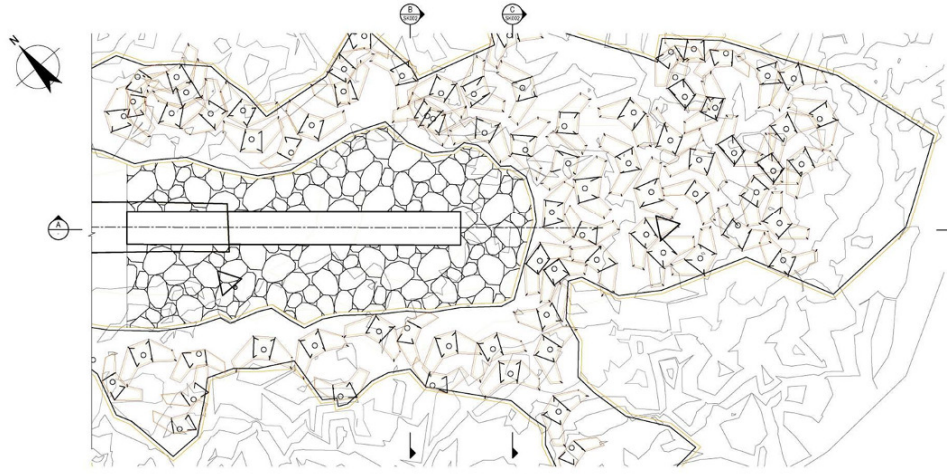
Yours sincerely

Stephen Wills
Director, Infrastructure and Land Management
Crown Lands Division

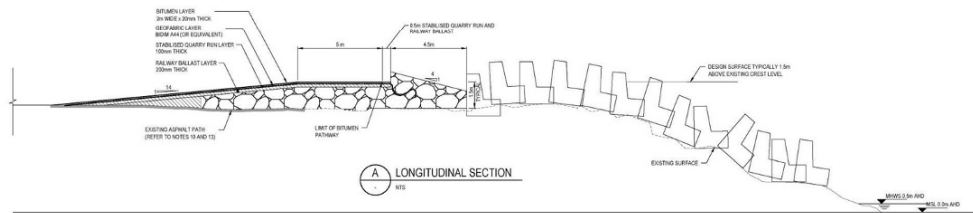
Date:

NSW Trade & Investment (Crown Lands)
437 Hunter Street, Newcastle NSW 2300
PO Box 2185 Dangar NSW 2309
Tel: 1300 886 235 Fax: (02) 4925 3452 www.crownland.nsw.gov.au ABN: 72 189 919 072

10.11 Ballina Breakwall - North Wall.DOC



PLAN
SCALE NTS



(A) LONGITUDINAL SECTION
NTS

NOTES:

- PHOTOGRAMMETRIC SURVEY INFORMATION INCLUDING CONTROL POINTS AND AERIAL PHOTOGRAPHY PROVIDED BY FROGER OWYER AND ASSOCIATES, BRINER BELL AND DE GRUYTER WELLS.
- HYDROGRAPHIC SURVEY INFORMATION PROVIDED BY ASTUTE SURVEYING AND SURVEY.
- SURVEY INFORMATION (METED TO APPROXIMATELY ZERO METRES AND/OR MEAN SEA LEVEL, AS SHOWN).
- ALL ELEVATIONS, DISTANCES AND CHANGES ARE IN METRES.
- EXISTING CONDITION OF THE STRUCTURE BASED ON OBSERVATIONS MADE BY GHD AND JEFFREY & PARTNERS (MARCH 2013) AND WORK AS EXECUTED SURVEY DATA COMPILED BY GHD, FROM SURVEYS IN FEBRUARY 2013.
- LIMITS OF TEMPORARY CONSTRUCTION YARD TO BE CONFIRMED IN PLANS WITH CROWN LANDS AND BALLINA SHIRE COUNCIL.
- MATERIAL PROPERTIES OF SUPPLIED ROCK SHALL BE APPROVED BY CROWN LANDS PRIOR TO START OF WORKS CONTRACT.
- THE METHOD OF PLACEMENT SHALL PRODUCE A DENSE, EVENLY DISTRIBUTED MASS WITH A MINIMUM OF VOIDAGE. SPALLS BEFORE THE BREAKWALL INTERLOCK BETWEEN ADJACENT ROCKS AND CONCRETE ARMOUR UNITS.
- ROCK AND CONCRETE ARMOUR UNITS SHALL BE PLACED AND RELOCATED TO MINIMIZE BREAKDOWN ON HANDLING, PRODUCTION OF FINES AND WATER CONSUMPTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING DAMAGE TO THE EXISTING STRUCTURE AND LANDS DURING CONSTRUCTION.
- LOCATIONS OF EXISTING HAZARDS ARE INDICATED ONLY.
- GEOTEXTILE FABRIC, 300GM AM OR SIMILAR TO BE PLACED BETWEEN RAILWAY BALLAST AND QUARRY FILL LAYERS. GEOTEXTILE FABRIC TO EXTEND BENEATH TOP LAYERS OF ROCK FILL AND BE WRAPPED AROUND LAST ROCK.
- EXISTING RUBBER MATS TO BE BROKEN UP WHERE OVERLAP BY UPGRADE WORKS. EXISTING MATS TO BE FILLED WITH FINE SAND OR ROCK FILL TO A MINIMUM OF RAILWAY BALLAST IN ORDER TO PROVIDE SATISFACTORY DRAINAGE OF CREEP UPGRADE MATERIALS.
- EXISTING NAVIGATION MARKERS, SIGNS, EMERGENCY FLUOROCHEMICAL DEVICES TO BE RELOCATED AS AGREED WITH CROWN LANDS.
- RAILWAY BALLAST SHALL COMPLY WITH THE RAILWAY BALLAST STANDARD (SEE GRADING REQUIREMENTS SPECIFIED BY ARTC) OR AS AGREED WITH CROWN LANDS.
- MASS OF ROCK FILL SHALL BE BETWEEN 3 AND 8 TONNES WITH OVER 50% OF ROCKS LESSER THAN 6 TONNES.
- THE WORKS MUST BE CONSTRUCTED SUCH THAT THERE ARE NO VERTICAL NEAR VERTICAL SLOPES OF GREATER THAN 1H TO 1V UNLESS WITH THE WORKS. ADDITIONAL ARMOUR ROCKS MAY BE PLACED TO CREATE A STEEPER SLOPE IF REQUIRED.
- ALL REMAINING DESIGN PROPOSED BY THE CONTRACTOR SHALL BE CONSIDERED BY CROWN LANDS IN THE FORM OF NON CONFORMING TENDERS. ALL TENDERS SUBMITTED MUST OFFER IMPROVEMENTS IN PUBLIC SAFETY, DURABILITY AND CREEPING MINORANCE.

PRELIMINARY

| rev | description | app'd | date |
|-----|---------------|-------|----------|
| A | INITIAL ISSUE | | 03.09.13 |

NSW DEPARTMENT OF TRADE AND INVESTMENT - CROWN LANDS
BALLINA NORTH BREAKWATER CREST UPGRADE WORKS
PLAN AND LONGITUDINAL SECTION



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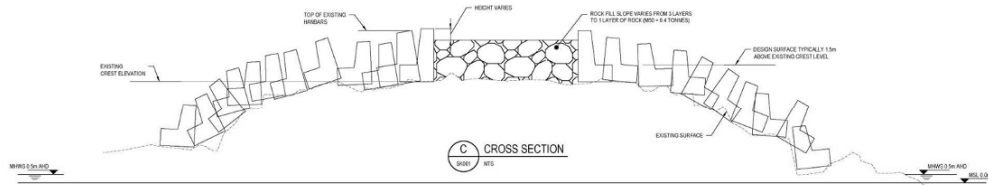
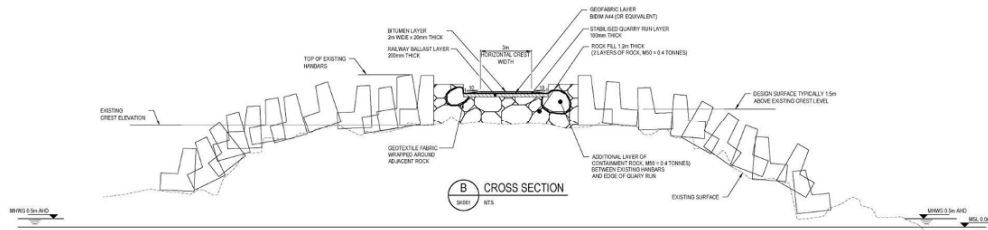
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scale | NTS for A1 job no. | 21-21214
date | SEPTEMBER 2013 rev no. | A

approved (PD) | SK001

Plot Date: 12 September 2013 1:28:58 PM Pathology: Data Check Client File No: S2111923010 - Ballina North Breakwater Renovation Works/C200/Design/Planning Drawing/21-21214_Typed Crest Section - Draft.dwg

10.11 Ballina Breakwall - North Wall.DOC



PRELIMINARY

| REV | DESCRIPTION | APP'D | DATE |
|-----|---------------|-------|----------|
| A | INITIAL ISSUE | CD | 03.09.13 |

NSW DEPARTMENT OF TRADE AND INVESTMENT - CROWN LANDS
BALLINA NORTH BREAKWATER CREST UPGRADE WORKS
TYPICAL CROSS SECTIONS



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scale NTS for A1 job no. 21-21214
date SEPTEMBER 2013 rev no. 1 A

approved (PD) SK002

Plot Date: 12 September 2013 - 1:20 PM Plotter: Eva Cade Plot File No: 0:0719:02010 - Ballina North Breakwater Reinforced Masonry/Concrete/Quarrying Drawing/21-21214 Typical Cross Section - DWG.dwg