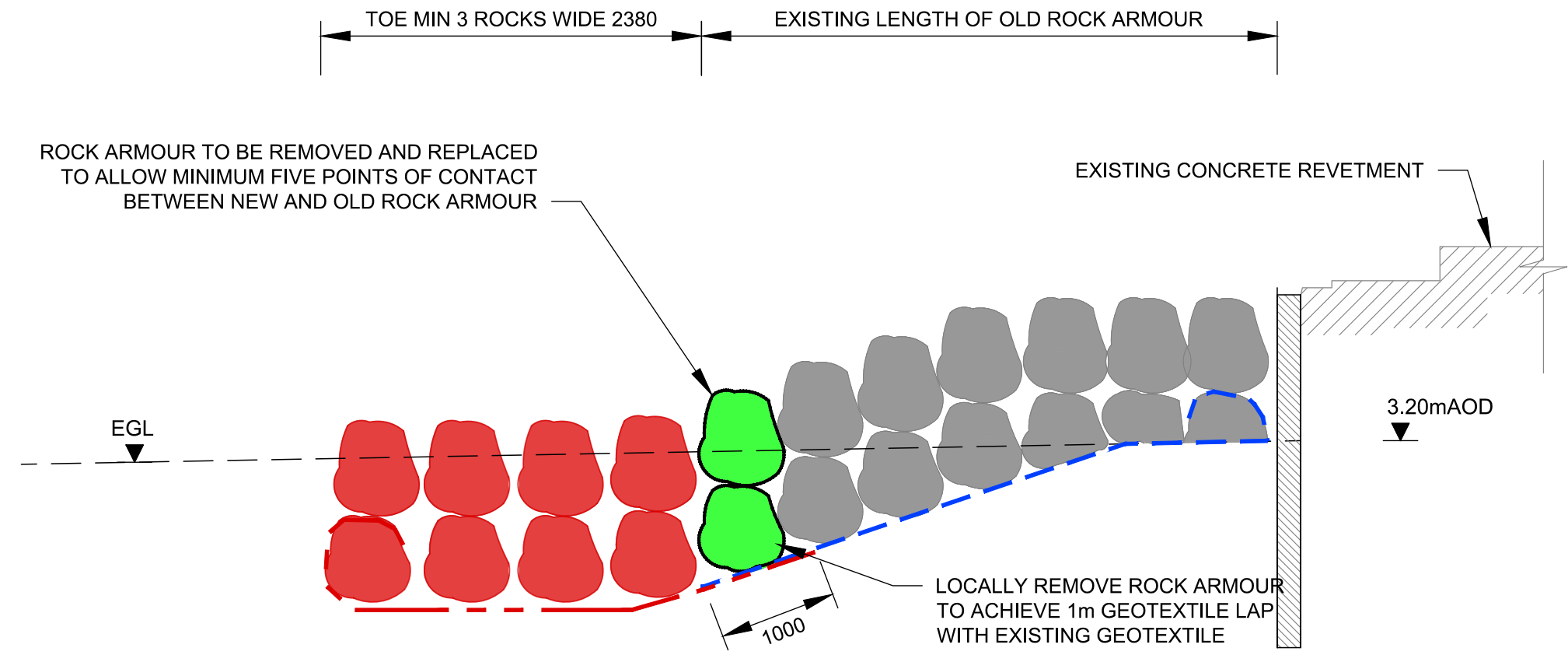
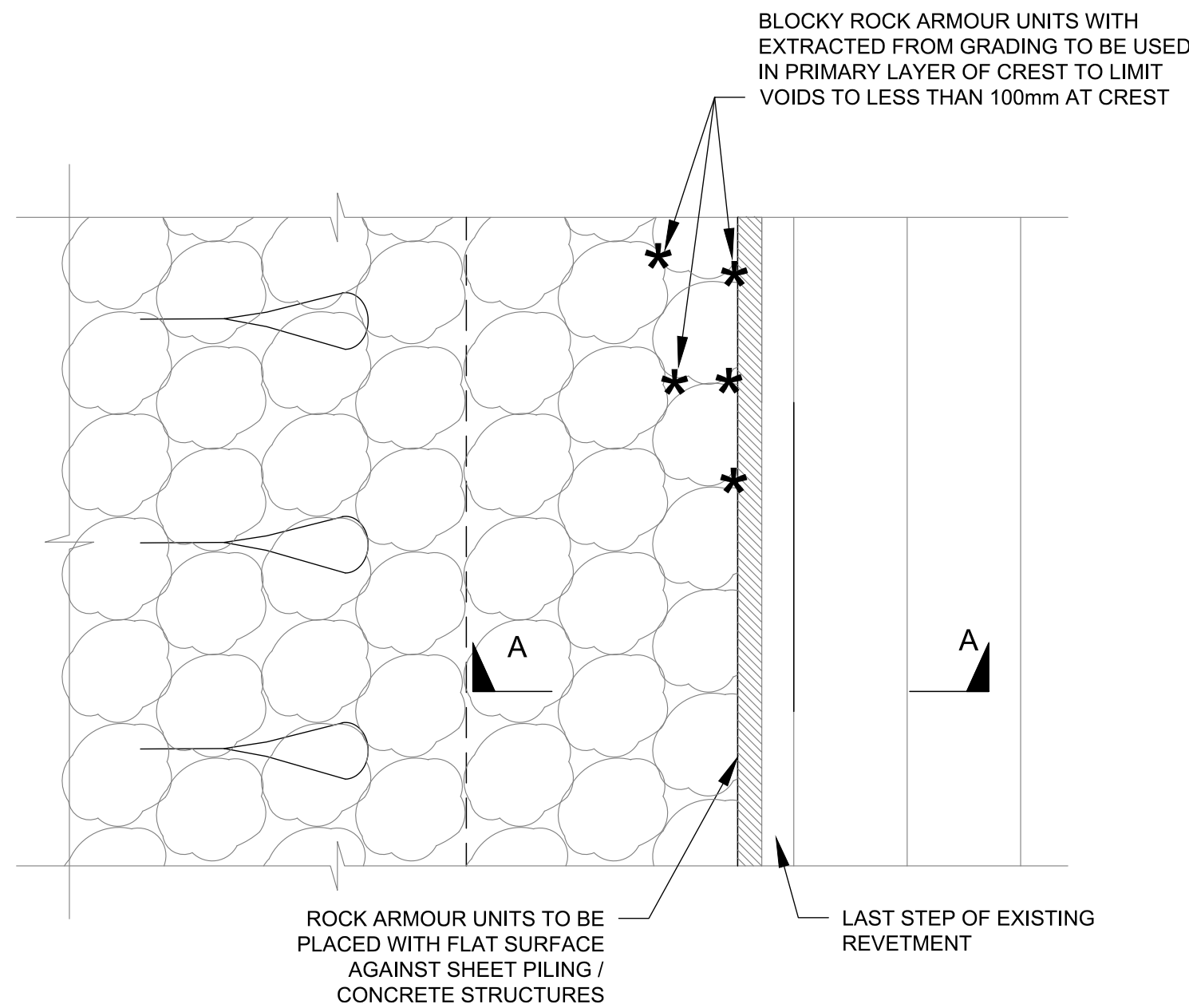
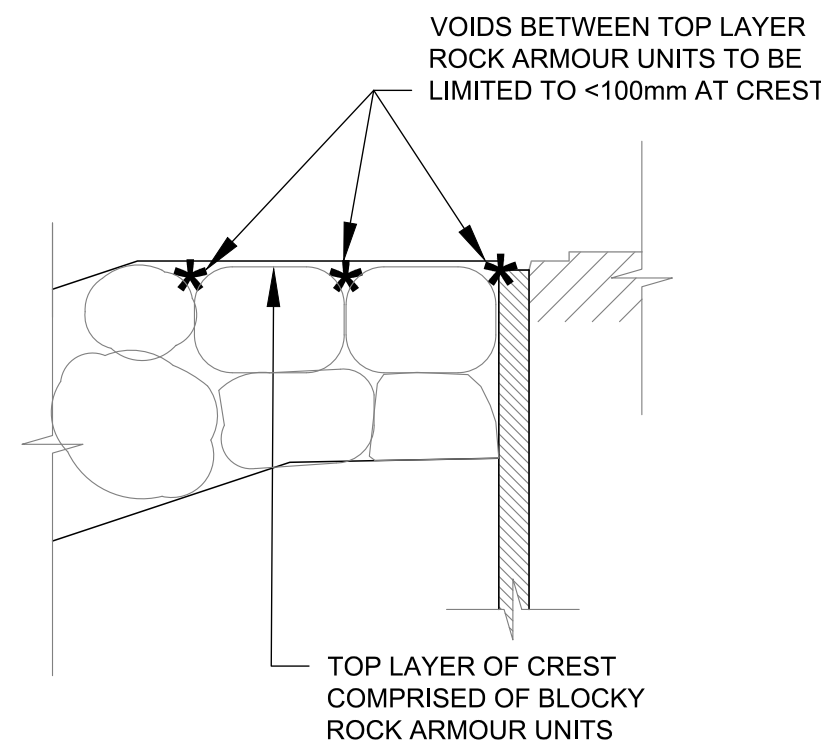




TYPICAL ROCK ARMOUR TIE IN SECTION
SCALE 1 : 50



PLAN - TYPICAL ROCK ARMOUR
CREST GRADING
SCALE 1 : 50



SECTION A-A
TYPICAL ROCK ARMOUR
CREST GRADING
SCALE 1 : 50

NOTES ON ROCK ARMOUR CONSTRUCTION

1. PRIMARY ROCK ARMOUR LAYER TO BE SOURCED FROM STANDARD EUROPEAN GRADING 1-3I IN ACCORDANCE WITH BS EN 13393-1:2002.
2. PROTECTION SHALL BE THROUGH USE OF A MINIMUM 2no. LAYERS OF ROCK ARMOUR, TO BE FORMED SUCH THAT EACH LAYER IS KEYED INTO ONE ANOTHER WITH A MINIMUM 5 POINTS OF CONTACT.
3. AS AN APPROXIMATE GUIDE AND DUE TO THE FACT THAT SOME INTERLOCKING OF THE TWO LAYER TAKES PLACE, THE THICKNESS OF A DOUBLE LAYER OF 1-3I ROCK WOULD BE 1580mm. FOR THE PURPOSE OF CONSTRUCTION, THIS THICKNESS SHOULD BE TREATED AS A MINIMUM UNLESS STATED OTHERWISE.
4. REQUIRED PACKING DENSITY OF $1.8t/m^3$ TO BE ADHERED TO ON SITE.
5. CREST TO BE FORMED OF A MINIMUM 3no. BLOCKY ROCKS (>75%) ON TOP LAYER TO LIMIT VOIDS BETWEEN ROCKS TO <100mm, AND WITH TOP LEVEL OF ROCKS EQUAL TO THE LAST CONCRETE REVETMENT STEP. ROCK GRADING ON BOTTOM LAYER TO BE ADJUSTED AS NECESSARY DEPENDING ON THE EXISTING BEACH LEVEL.
6. TOE TO BE FORMED OF A MINIMUM 3no. ROCKS AND PLACED TO A LEVEL OF 1.80mAOD FOR LOW BEACH LEVELS AND 3.00mAOD FOR HIGH BEACH LEVELS.
7. WIDTH OF SLOPED ROCK ARMOUR SECTION VARIES BETWEEN 3600mm TO 2880mm DEPENDING ON CREST LEVEL SO THAT THE TOE IS PLACED TO A LEVEL OF 1.80mAOD FOR LOW BEACH LEVELS.
8. IF THE BOTTOM OF THE SHEET PILE IS REACHED DURING EXCAVATIONS DO NOT EXCAVATE FURTHER AND CONTACT SUPERVISOR.
9. GEOTEXTILE (HPS11 OR SIMILAR APPROVED PRODUCT) TO LAP AROUND KEYSTONE, RUN UNDER THE PRIMARY LAYER AND FORM A LAP INTO THE PRIMARY ARMOUR LAYER.
10. EXISTING ROCK ARMOUR AT TIE IN SECTIONS TO BE LOCALLY REMOVED AND REPLACED TO ACHIEVE 1m GEOTEXTILE LAP WITH EXISTING GEOTEXTILE. EXISTING ROCK ARMOUR MAY BE REINCORPORATED INTO THE PRIMARY LAYER IF THE ROCK MEETS GRADING REQUIREMENTS.
11. ROCK SHALL NOT BE PLACED DIRECTLY ONTO EXISTING CONCRETE REVETMENT, NEW CONCRETE STEPS OR NEW CONCRETE RAMP, BUT EACH ROCK SHALL BE CAPABLE OF SUPPORTING ITS OWN WEIGHT.
12. TARGET FOUNDATION DEPTH MAY NOT BE REACHED DEPENDING ON STABILITY OF EXCAVATION DUE TO VARIATION OF GROUND WATER LEVEL.
13. SUPERVISOR TO BE NOTIFIED WHEN ISSUES WITH STABILITY OF EXCAVATIONS ENCOUNTERED.
14. FOUNDATION LEVEL MAY BE RAISED AT DECISION OF SUPERVISOR.
15. ROCK HATCHING IS INDICATIVE ONLY.

NOTES ON SETTING OUT OF ROCK ARMOUR

1. CONTRACTOR TO EXCAVATE AND IDENTIFY BOTTOM STEP OF EXISTING REVETMENT.
2. ROCK ARMOUR TOE PROTECTION TO BE SET OUT FROM EXISTING BOTTOM STEP.
3. TOP OF ROCK ARMOUR CREST TO BE LEVEL WITH EXISTING BOTTOM STEP LEVEL.
4. CARE TO BE TAKEN WHEN EXCAVATING BEACH MATERIAL IN FRONT OF SHEET PILE.

- Excavation of existing revetment and cliff - Working in tidal environment - Working in an exposed coastal environment - Movement of plant in and around the sea - Unknown condition and structural capacity of existing revetment and access points	- Working on public amenity beach and public open space - Working adjacent to public right of way - Unauthorised site access	- Pollution hazards associated with working near the sea - Risk of damage to flora and fauna
Construction Risks	Public Risks	Environmental Risks
In addition to the hazards/risks normally associated with the types of work detailed on this drawing take note of the above. It is assumed that all works detailed on this drawing will be carried out by a competent contractor working, where appropriate, to an appropriate method statement.		

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION BOX		
Drawing Notes		
1. All dimensions shown are in millimetres unless otherwise stated and levels are in metres to Ordnance Datum. 2. Do not scale from this drawing. All dimensions must be checked/verified on site. 3. All works on the coast will be carried out with care to minimise the risk of pollution adhering to Pollution Prevention Guidelines. 4. See AJQ-JBA-00-00-DR-C-0003 for Drawing Notes. 5. All existing levels quoted on the drawings are from the time of survey. Levels and setting out should be checked by the site engineer to ensure their relevance at the time of construction. 6. All materials and workmanship shall be as defined in the specification unless noted otherwise on drawings.		

	Comments									
Rev.:	Date		Drawn		Designed		Checked		Approved	
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Rev.:	Date		Drawn		Designed		Checked		Approved	
	Comments									
Rev.:	Date		Drawn		Designed		Checked		Approved	
	Comments									
Rev.:	Date		Drawn		Designed		Checked		Approved	
	Comments									
P03	Minor adjustments									
Rev.:	Date	03/09/18	Drawn	RG	Designed	AF	Checked	AD	Approved	GK
	Comments									
P02	Minor amendments									
Rev.:	Date	05/07/18	Drawn	NF	Designed	AF	Checked	AD	Approved	GK
Client Approval										
A - Approved										
B - Approved with Revisions										
C - Do Not Use										
Purpose of Issue Information								Status		
								S1		

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ABERAVON PROMENADE DETAILED DESIGN AND BUSINESS CASE		
TYPICAL ROCK ARMOUR SECTION		
for		
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Scale:	Drawn: R. Groves	28/06/18
	Designed: A. Fyffe	28/06/18
	Checked: A. Dane	28/06/18
	Approved: G. Kenn	28/06/18
As Shown @ A1		
Digital File Name: AJQ-JBA-00-00-DR-C-2002-Typical Rock Armour Section		
Drawing Number: AJQ-JBA-00-00-DR-C-2002		Revision P03