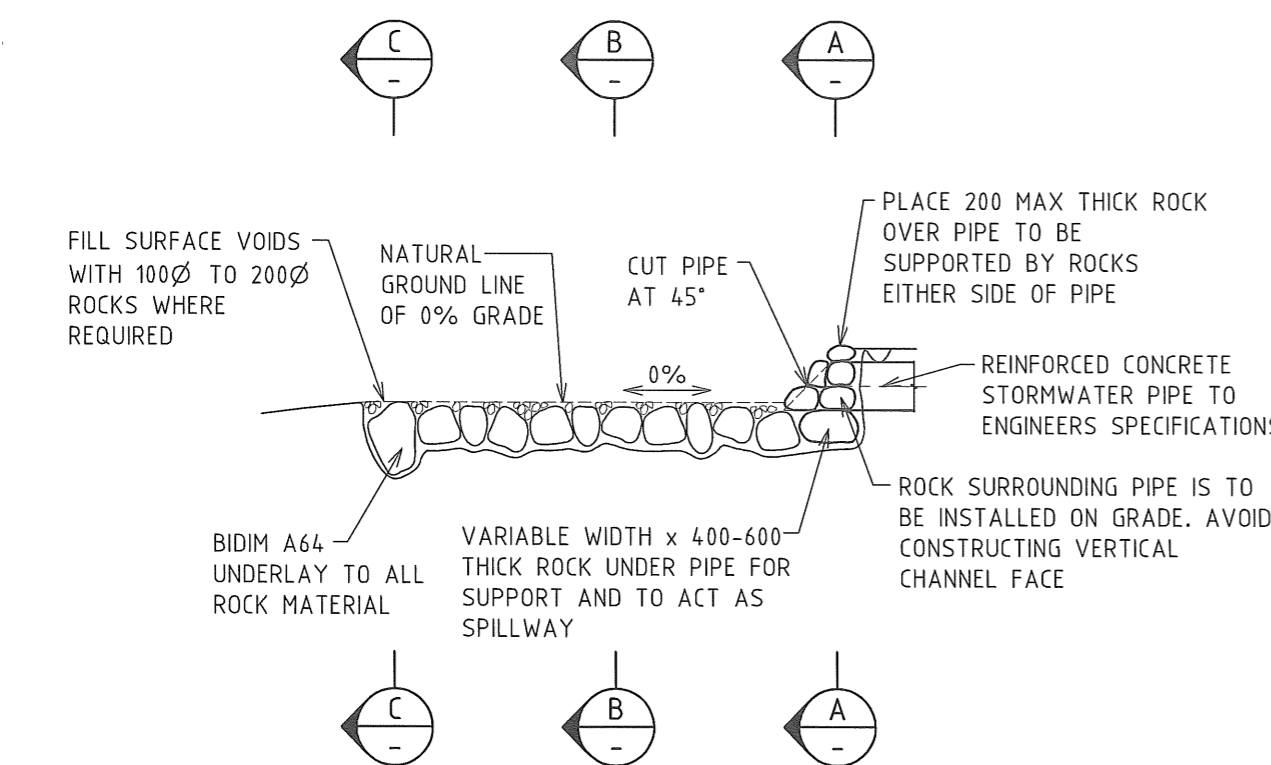


PLAN - 0% GRADE
SCALE 1:100

NOTE:
FOUNDING MATERIAL TO ACHIEVE
A MINIMUM ALLOWABLE BEARING
CAPACITY OF 150KPa

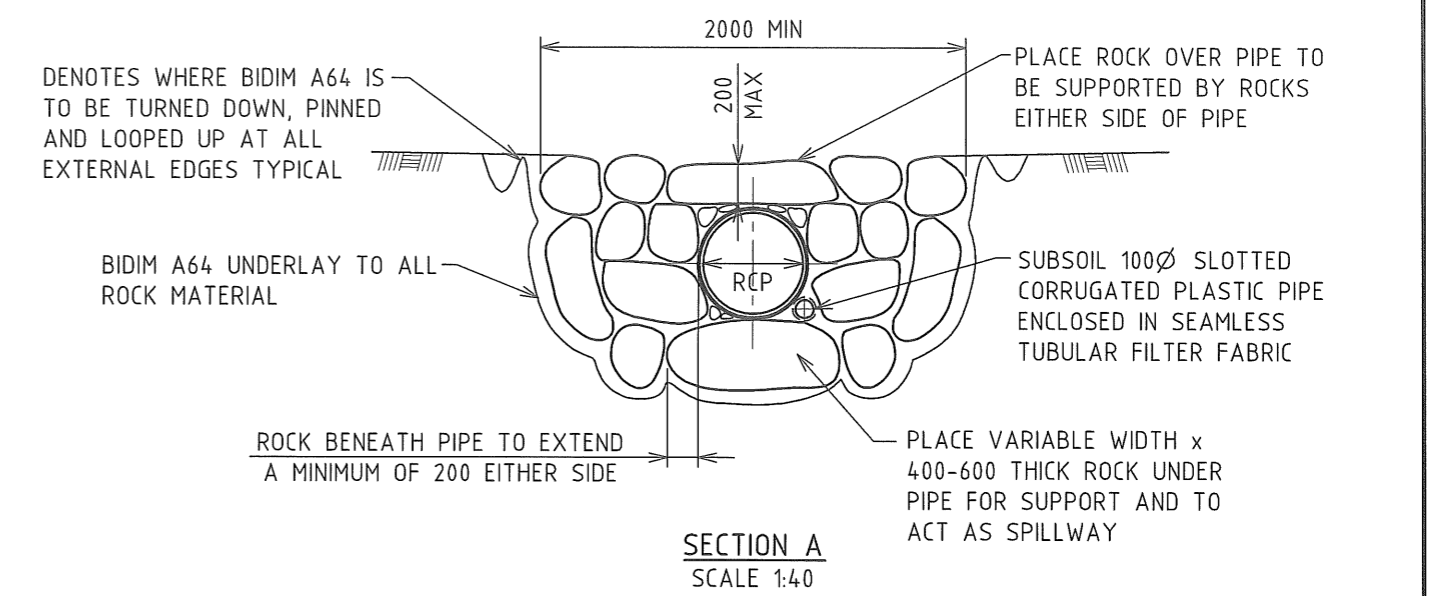
CREATE A MEANDERING
LOW-FLOW CHANNEL BY PLACING
SELECTED ROCKS AT DIFFERING
HEIGHTS. STAGGER LOW-FLOW
ROCKS TO CREATE MEANDER



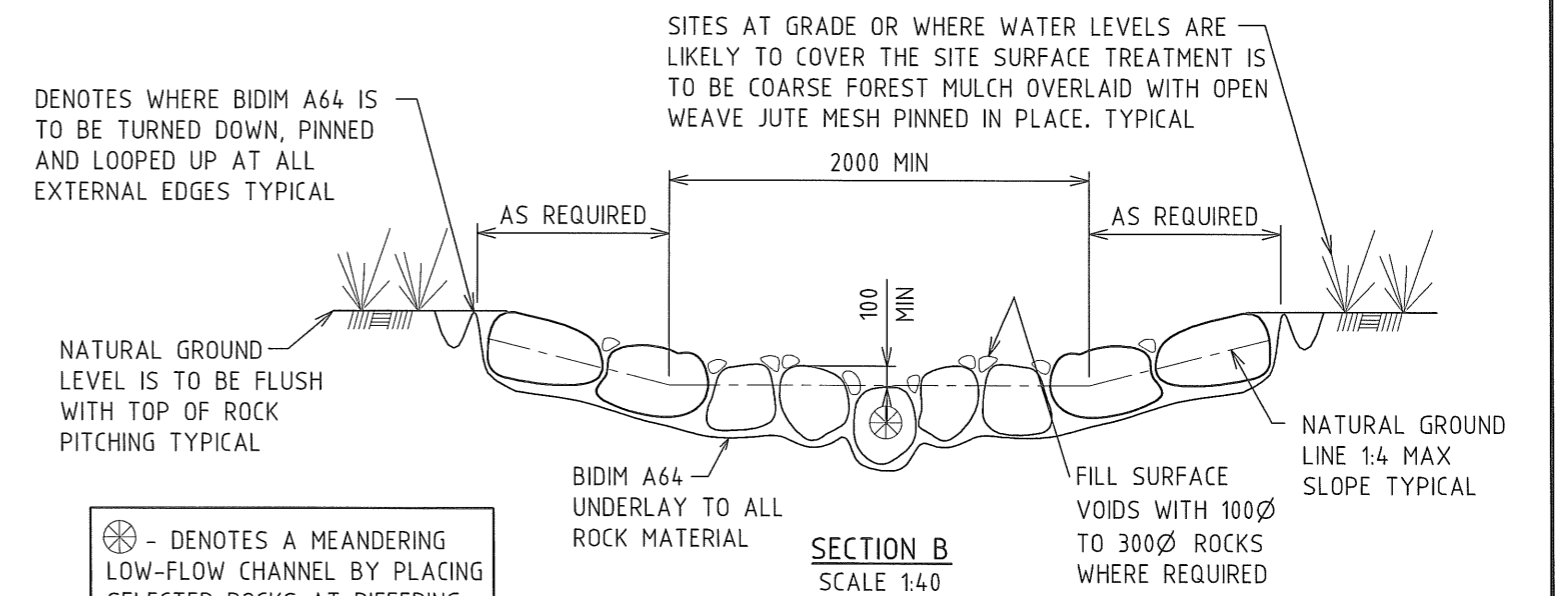
LONGITUDINAL SECTION
SCALE 1:100

ALL DIMENSIONS ARE
IN MILLIMETRES UNLESS
NOTED OTHERWISE

REFER TO DRAWING 2 OF 2 FOR ROCK NOTES AND TABLES

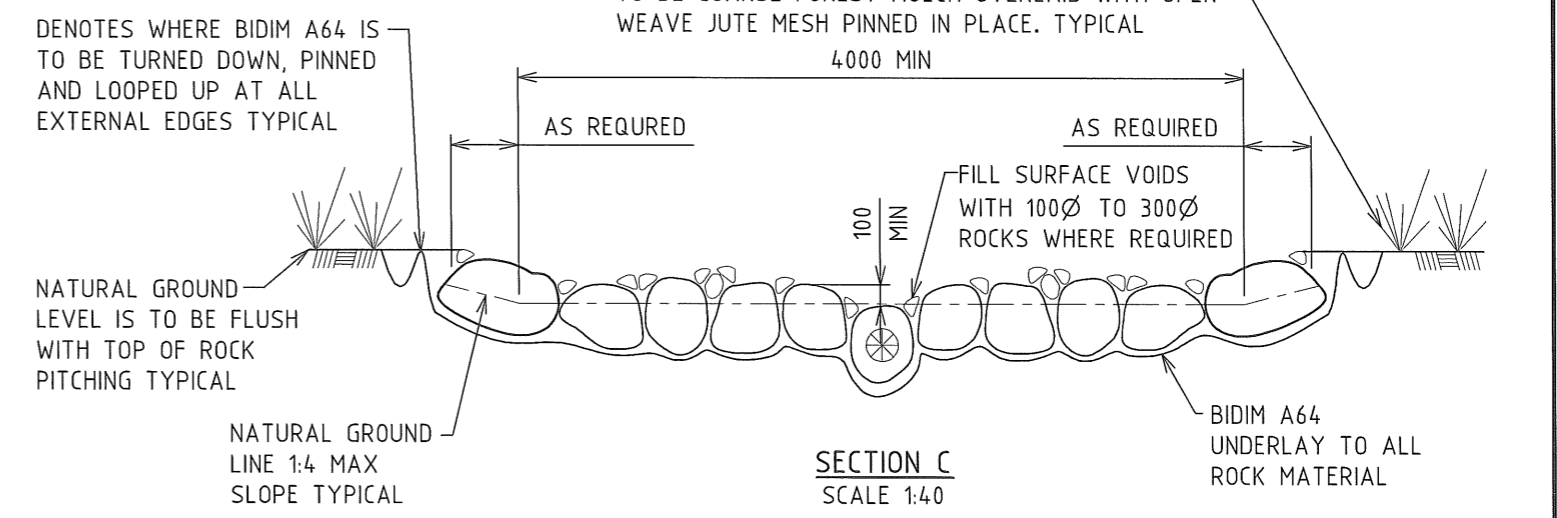


SECTION A
SCALE 1:40



SECTION B
SCALE 1:40

⊗ - DENOTES A MEANDERING
LOW-FLOW CHANNEL BY PLACING
SELECTED ROCKS AT DIFFERING
HEIGHTS. STAGGER LOW-FLOW
ROCKS TO CREATE MEANDER



SECTION C
SCALE 1:40

<table border="1"> <tr> <td>1</td> <td>CONSTRUCTION</td> <td>11.06.13</td> <td>J.C.</td> </tr> <tr> <td>0</td> <td>PRELIMINARY - FOR REVIEW AND COMMENT ONLY</td> <td>11.01.13</td> <td>J.C.</td> </tr> <tr> <td>No.</td> <td>AMENDMENT DETAILS</td> <td>DATE</td> <td>INITIALS</td> </tr> </table>				1	CONSTRUCTION	11.06.13	J.C.	0	PRELIMINARY - FOR REVIEW AND COMMENT ONLY	11.01.13	J.C.	No.	AMENDMENT DETAILS	DATE	INITIALS	<p>SCALE AS SHOWN</p>	<p>LIVEABLE CITY INFRASTRUCTURE MANAGEMENT SERVICES</p>	<p>APPROVED:</p> <p>SIGNED: _____ INFRASTRUCTURE MANAGEMENT SERVICES MANAGER DATE: 11/6/13</p>	<p>THE CITY OF NEWCASTLE</p> <p>ROCK PITCHED HEADWALL AND ENERGY DISSIPATER OUTLET FOR NATURAL GRADE OF 0%</p>	<p>NCC PLAN No. A2303</p>	<p>SHEET No. 1 OF 2 SHEETS</p>
1	CONSTRUCTION	11.06.13	J.C.																		
0	PRELIMINARY - FOR REVIEW AND COMMENT ONLY	11.01.13	J.C.																		
No.	AMENDMENT DETAILS	DATE	INITIALS																		
<p>A3 ORIGINAL THIS SHEET WAS PREPARED IN COLOUR AND WILL BE INCOMPLETE IF COPIED</p>				<p>COORDINATE SYSTEM:</p>	<p>HEIGHT DATUM: AHD</p>	<p>REVIEWED: J.C.</p>	<p>AMENDMENT No.</p>														

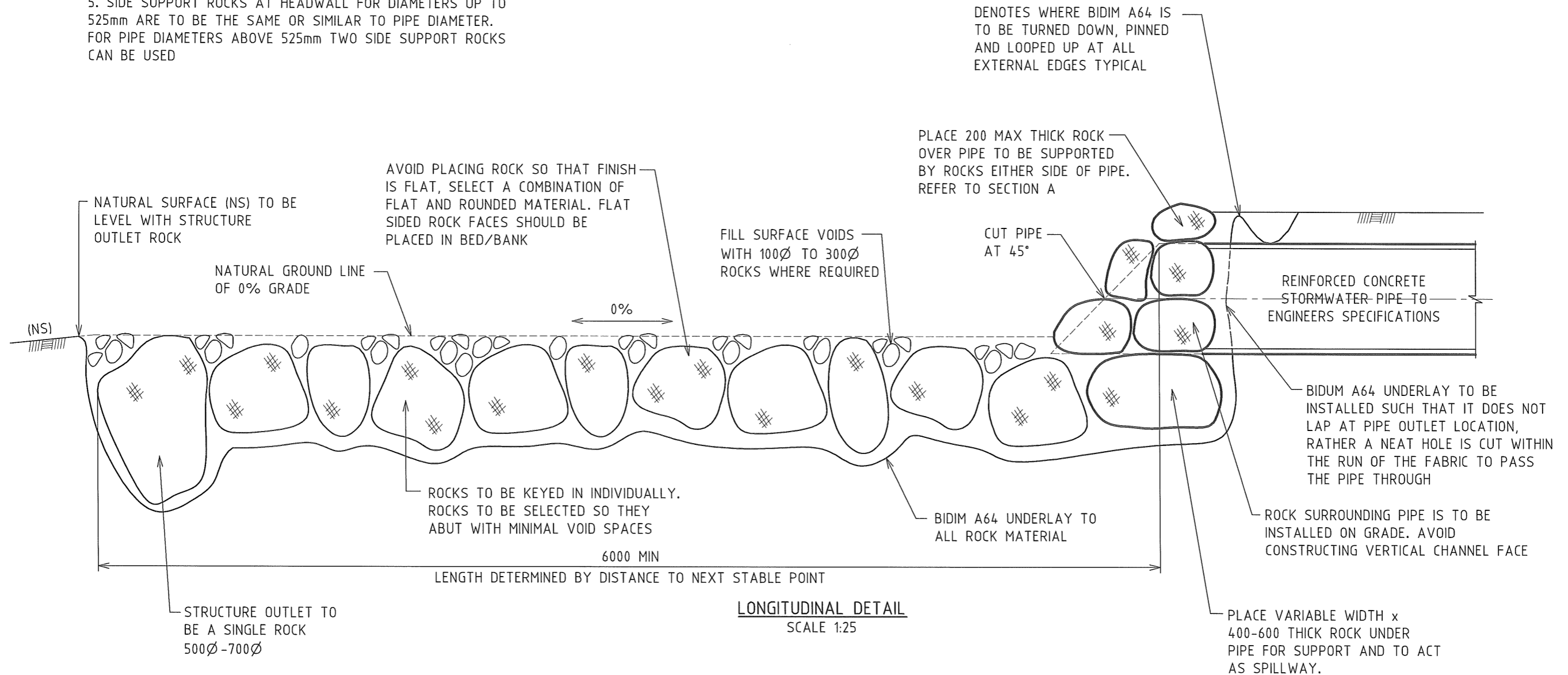
ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE

ROCK CONSTRUCTION NOTES

1. SIZE B ROCKS ARE TO BE USED FOR ALL CRITICAL POINTS IN STRUCTURE ie. BED CONTROLS AND STRUCTURE OUTLETS.
2. 100 TO 300mm ROCKS ARE TO BE HAND PACKED INTO VOIDS WITHIN ROCK STRUCTURE BETWEEN SIZE A AND B ROCKS.
3. ROCK PLACED BETWEEN OUTLET OF PIPE IS TO EXTEND A MINIMUM OF 200mm EITHER SIDE OF PIPE.
4. ROCK SELECTION AND PLACEMENT FOR PIPE HEADWALL TO ENSURE NO LOAD BEARING WEIGHT IS PLACED ON PIPE.
5. SIDE SUPPORT ROCKS AT HEADWALL FOR DIAMETERS UP TO 525mm ARE TO BE THE SAME OR SIMILAR TO PIPE DIAMETER. FOR PIPE DIAMETERS ABOVE 525mm TWO SIDE SUPPORT ROCKS CAN BE USED

ROCK SIZING		
PIPE Ø (mm)	0-5%	>5%
375 to 600	A	B
> 600	B	B

A - 500Ø TO 700Ø SANDSTONE
 B - 700Ø TO 1200Ø SANDSTONE



No.	AMENDMENT DETAILS	DATE	INITIALS
1	CONSTRUCTION	11.06.13	J.C.
0	PRELIMINARY - FOR REVIEW AND COMMENT ONLY	11.01.13	J.C.

SCALE
AS SHOWN

COORDINATE SYSTEM: HEIGHT DATUM: AHD

LIVEABLE CITY
INFRASTRUCTURE MANAGEMENT SERVICES

REVIEWED: J.C.

APPROVED:

SIGNED: *[Signature]*
 INFRASTRUCTURE MANAGEMENT SERVICES MANAGER

DATE: 11/6/13

THE CITY OF NEWCASTLE

ROCK PITCHED HEADWALL AND ENERGY DISSIPATER OUTLET FOR NATURAL GRADE OF 0%

NCC PLAN No.	SHEET No.
A2303	2 OF 2
AMENDMENT No.	SHEETS