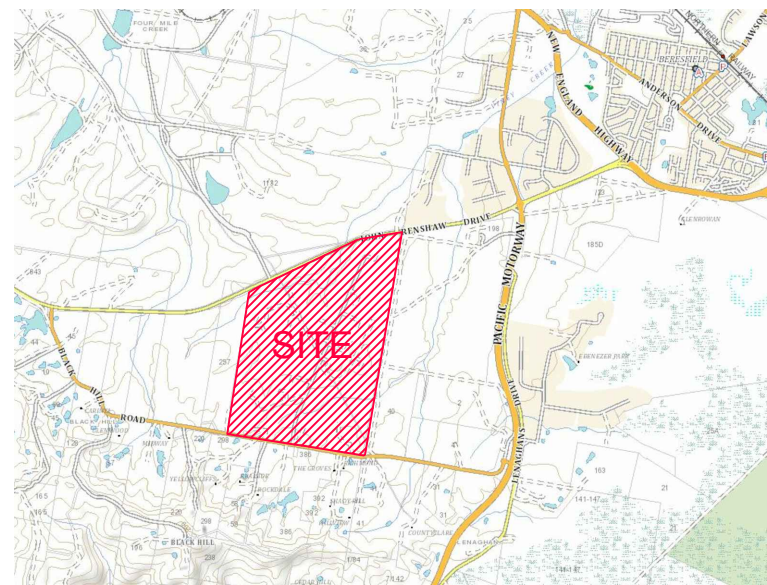


# BLACK HILL INDUSTRIAL SUBDIVISION STORMWATER MANAGEMENT PLAN LOT 1131 D.P.1057179 JOHN RENSCHAW DRIVE, BLACK HILL



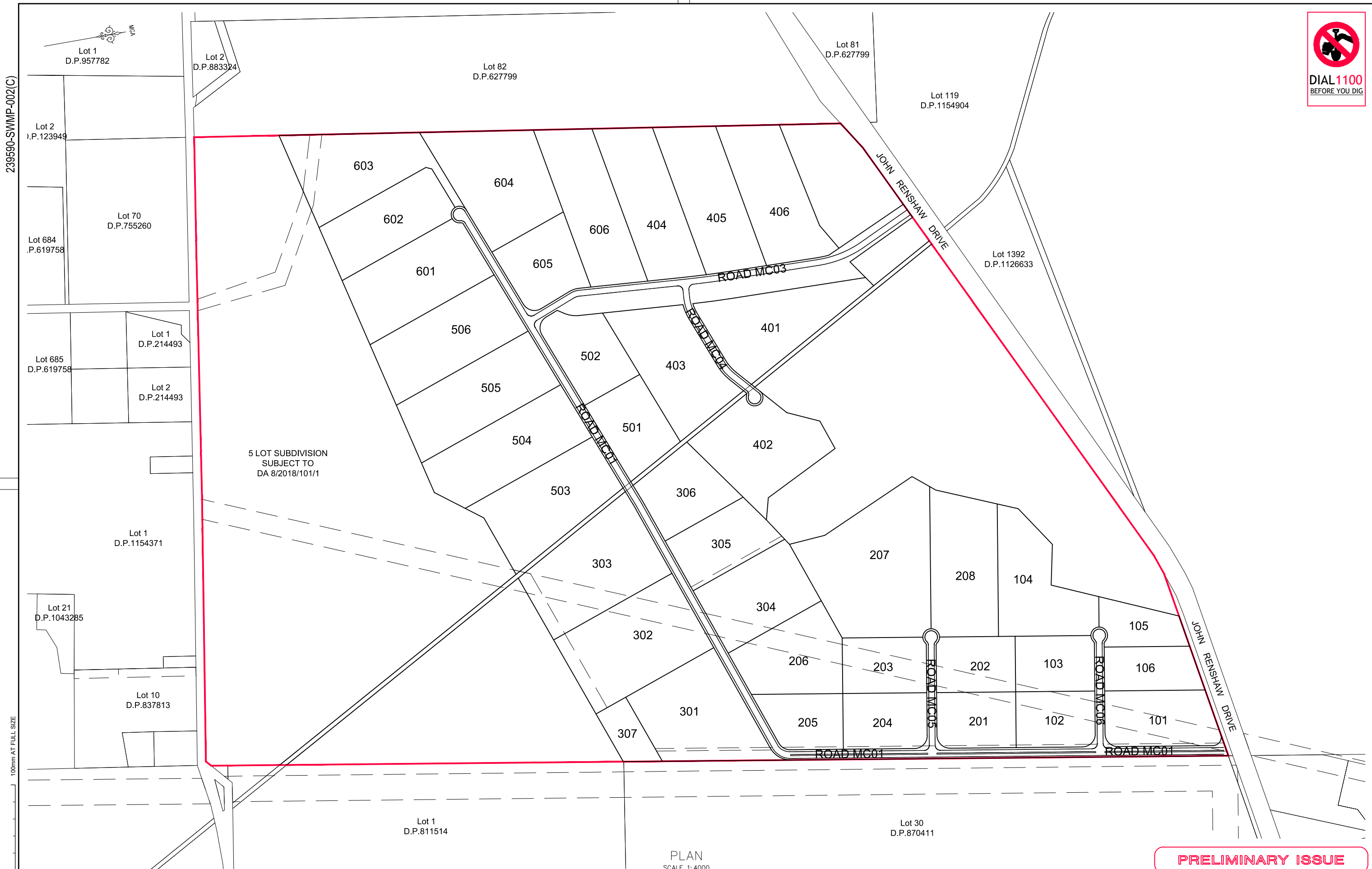
LOCALITY SKETCH  
NOT TO SCALE

**239590 SWMP**

Sheet Title	Sheet Description
239590-SWMP-001(C)	TITLE SHEET, DRAWING INDEX, GENERAL NOTES & LOCALITY PLAN
239590-SWMP-002(C)	OVERALL SITE PLAN
239590-SWMP-101(C)	PRE-DEVELOPED CATCHMENT PLAN
239590-SWMP-102(C)	DEVELOPED CATCHMENT PLAN
239590-SWMP-103(C)	STORMWATER LAYOUT PLAN
239590-SWMP-104(C)	CHANNEL PROFILES
239590-SWMP-105(C)	1% AEP FLOOD EXTENTS
239590-SWMP-106(C)	100 YEAR FLOOD HAZARD PLAN
239590-SWMP-801(C)	EROSION & SEDIMENT CONTROL PLAN
239590-SWMP-802(C)	EROSION & SEDIMENT CONTROL DETAILS

PRELIMINARY ISSUE

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY	SCALES	CLIENT		PROPERTY DESCRIPTION		PROJECT					
A	03.08.2018	INITIAL ISSUE	E.G.	R.K.	M.K.	R.K.		 <b>Hunter Office</b> Unit 7/335 Hillsborough Rd Warners Bay N.S.W. 2282 Phone: (02) 4978 5100 Fax: (02) 4978 5199 email: hunter@adwjohnson.com.au www.adwjohnson.com.au ABN 62 129 445 398		<b>BROADEN MANAGEMENT PTY LTD</b>		<b>BLACK HILL INDUSTRIAL SUBDIVISION STORMWATER MANAGEMENT PLAN LOT 1131 D.P.1057179 JOHN RENSCHAW DRIVE, BLACK HILL</b>		<b>BLACK HILL CONCEPT PLANS</b>			
B	14.08.2018	AMENDMENTS PER INSTRUCTION	E.G.	R.K.	M.K.	R.K.	<b>TITLE SHEET, DRAWING INDEX, GENERAL NOTES &amp; LOCALITY PLAN</b>										
C	17.08.2018	AMENDMENTS PER INSTRUCTION	E.G.	R.K.	M.K.	R.K.	SURVEYED ADW Johnson							DATUM A.H.D.		PROJECT No. <b>239590</b>	DISCIPLINE - SWMP



PLAN  
SCALE 1:4000

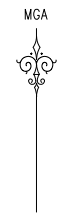
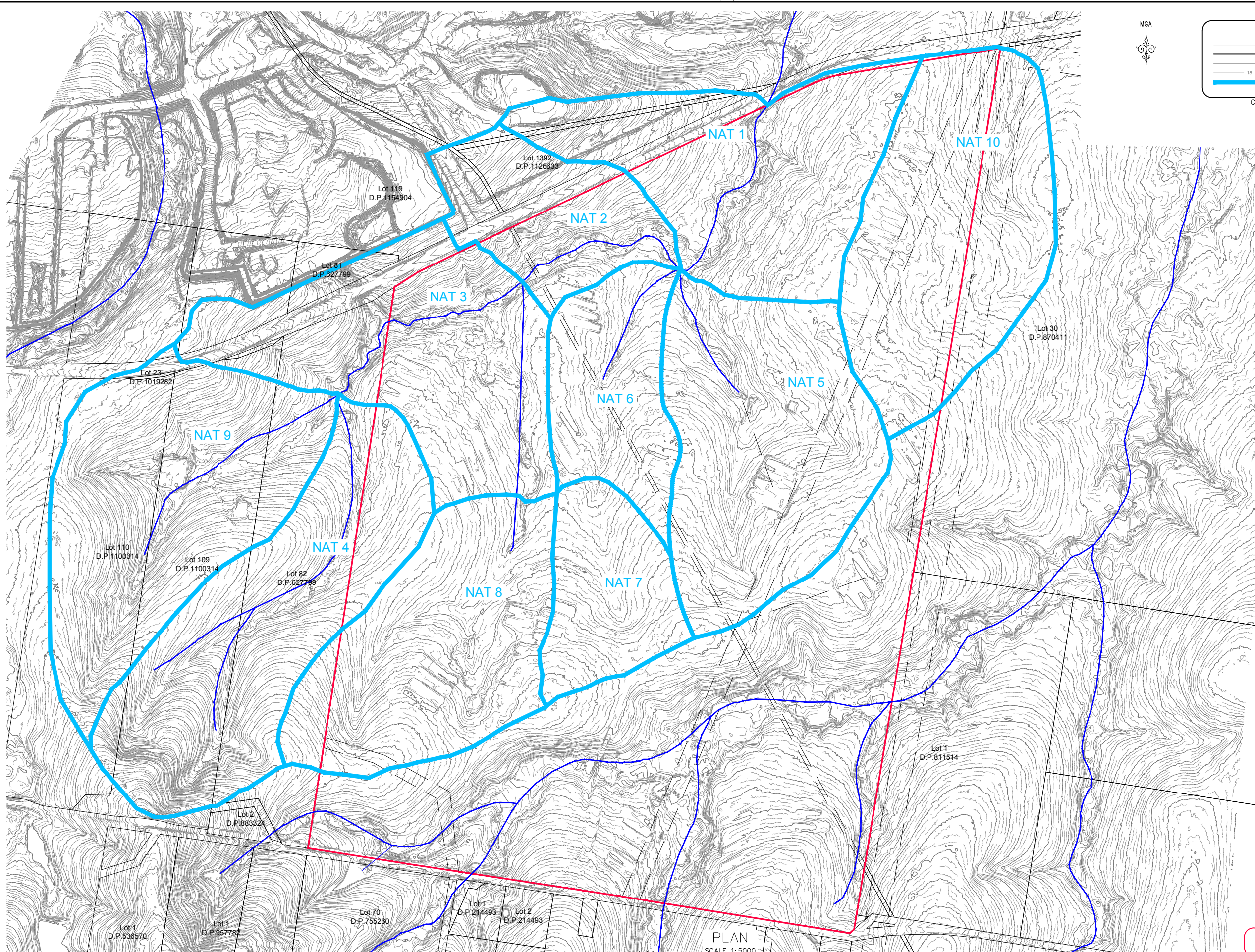
**PRELIMINARY ISSUE**

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY	SCALES	<p>Hunter Office Unit 7/335 Hillsborough Rd Warners Bay N.S.W. 2282 Phone: (02) 4978 5100 Fax: (02) 4978 5199 email: hunter@adwjohnson.com.au www.adwjohnson.com.au ABN 62 129 445 398</p>	CLIENT	PROPERTY DESCRIPTION	PROJECT		
A	03.08.2018	INITIAL ISSUE	E.G.	R.K.	M.K.	R.K.	0 100 200 A1 / A3		BROADEN MANAGEMENT PTY LTD	BLACK HILL INDUSTRIAL SUBDIVISION STORMWATER MANAGEMENT PLAN LOT 1131 D.P.1057179 JOHN RENSHAW DRIVE, BLACK HILL	BLACK HILL CONCEPT PLANS		
B	14.08.2018	AMENDMENTS PER INSTRUCTION	E.G.	R.K.	M.K.	R.K.	1:4000 / 1:8000				PLAN TITLE		
C	17.08.2018	AMENDMENTS PER INSTRUCTION	E.G.	R.K.	M.K.	R.K.				OVERALL SITE PLAN			
DESIGN FILE N:\239590\Design\120\			ALL DIMENSIONS ARE IN METRES. DO NOT SCALE			SURVEYED		DATUM		PROJECT No.	DISCIPLINE	NUMBER	REV.
Plotted By: elizabethg Plot Date: 17/08/18 - 10:12 Cad File: N:\239590\Drawings\Engineering\Civil\SWMP\239590-SWMP-002(C).dwg			ADW Johnson		ADW Johnson		A.H.D.		239590		- SWMP - 002		C



239590-SWMP-101(C)

100mm AT FULL SIZE



**LEGEND**

- EXISTING LOT BOUNDARY
- PROPOSED LOT BOUNDARY
- FUTURE LOT BOUNDARY
- NATURAL SURFACE CONTOURS
- PRE-DEVELOPED CATCHMENT

CONTOUR INTERVAL = 0.5m



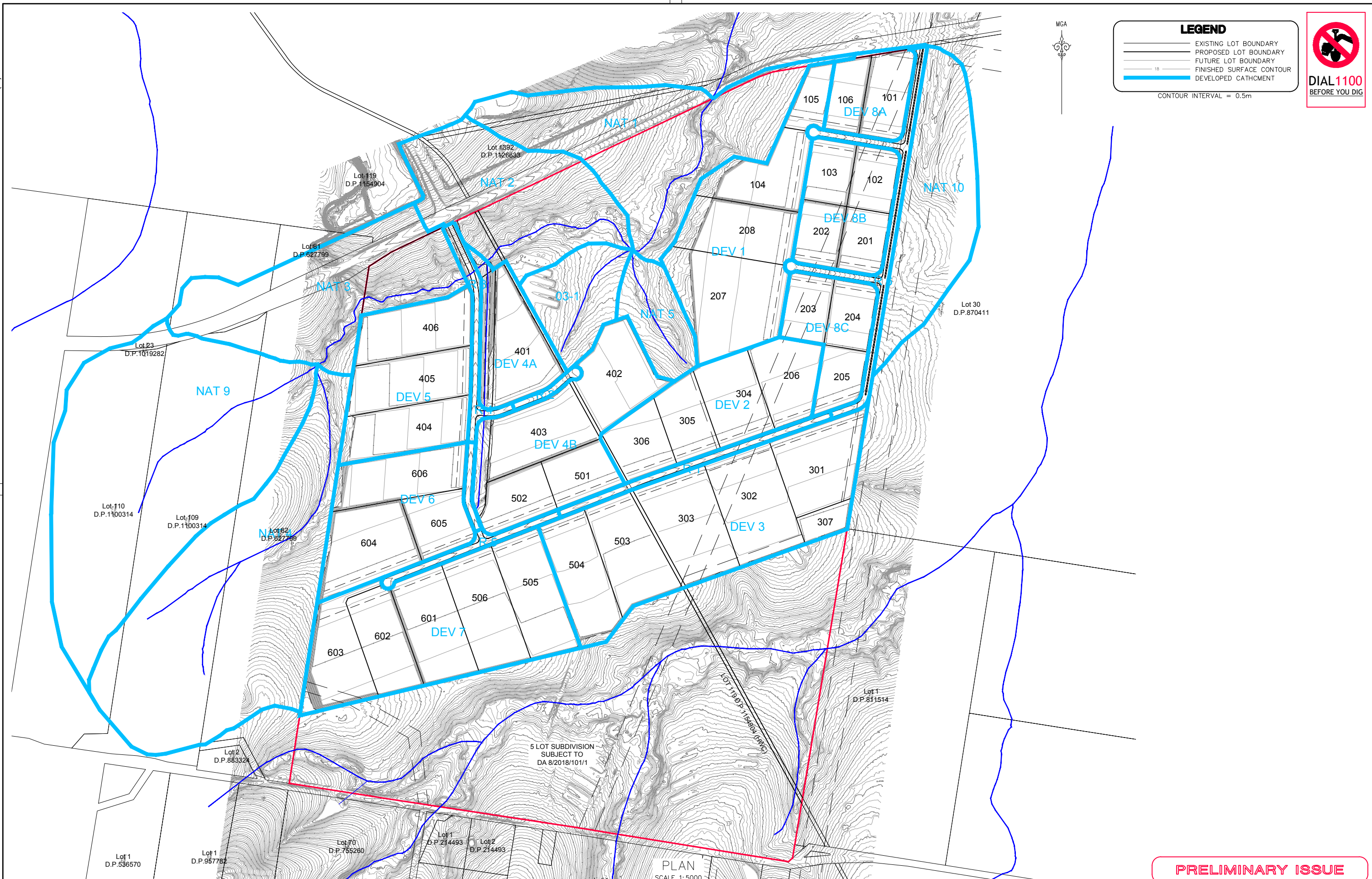
**PRELIMINARY ISSUE**

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REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY																																				
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<p>DESIGN FILE N:\239590\Design\120\</p>							<p>ALL DIMENSIONS ARE IN METRES. DO NOT SCALE</p>																																			
<p>Plotted By: elizabethg Plot Date: 17/08/18 - 10:12</p>				<p>Cad File: N:\239590\Drawings\Engineering\Civil\SWMP\239590-SWMP-101(C).dwg</p>				<p>SURVEYED</p> <p>ADW Johnson</p>		<p>DATUM</p> <p>A.H.D.</p>		<p>PROJECT No.</p> <p>239590</p>		<p>DISCIPLINE</p> <p>SWMP</p>		<p>NUMBER</p> <p>101</p>		<p>REV.</p> <p>C</p>																								



239590-SWMP-102(C)

100mm AT FULL SIZE



PLAN SCALE 1:5000

**PRELIMINARY ISSUE**

REV.	DATE	AMENDMENT
A	03.08.2018	INITIAL ISSUE
B	14.08.2018	AMENDMENTS PER INSTRUCTION
C	17.08.2018	AMENDMENTS PER INSTRUCTION

DRAWN	CHECK	DESIGN	VERIFY
E.G.	R.K.	M.K.	R.K.
E.G.	R.K.	M.K.	R.K.
E.G.	R.K.	M.K.	R.K.

SCALES
0 100 200 A1 / A3
1:5000 / 1:10000

**adw Johnson**

Hunter Office  
 Unit 7/335 Hillsborough Rd  
 Warners Bay N.S.W. 2282  
 Phone: (02) 4978 5100  
 Fax: (02) 4978 5199  
 email: hunter@adwjohnson.com.au  
 www.adwjohnson.com.au  
 ABN 62 129 445 398

CLIENT  
**BROADEN MANAGEMENT PTY LTD**

PROPERTY DESCRIPTION  
**BLACK HILL INDUSTRIAL SUBDIVISION STORMWATER MANAGEMENT PLAN LOT 1131 D.P.1057179 JOHN RENSHAW DRIVE, BLACK HILL**

PROJECT	PLAN TITLE
<b>BLACK HILL CONCEPT PLANS</b>	<b>DEVELOPED CATCHMENT PLAN</b>

SURVEYED	DATUM	PROJECT No.	DISCIPLINE	NUMBER	REV.
ADW Johnson	A.H.D.	239590	SWMP	102	C



239590-SWMP-103(C)

100mm AT FULL SIZE



**LEGEND**

- EXISTING LOT BOUNDARY
- PROPOSED LOT BOUNDARY
- FUTURE LOT BOUNDARY
- FINISHED SURFACE CONTOUR
- EXISTING WATERCOURSE
- PROPOSED STORMWATER
- - - INDICATIVE RIPARIAN SETBACK
- (A) PROPOSED EASEMENT TO DRAIN STORMWATER

CONTOUR INTERVAL = 0.5m

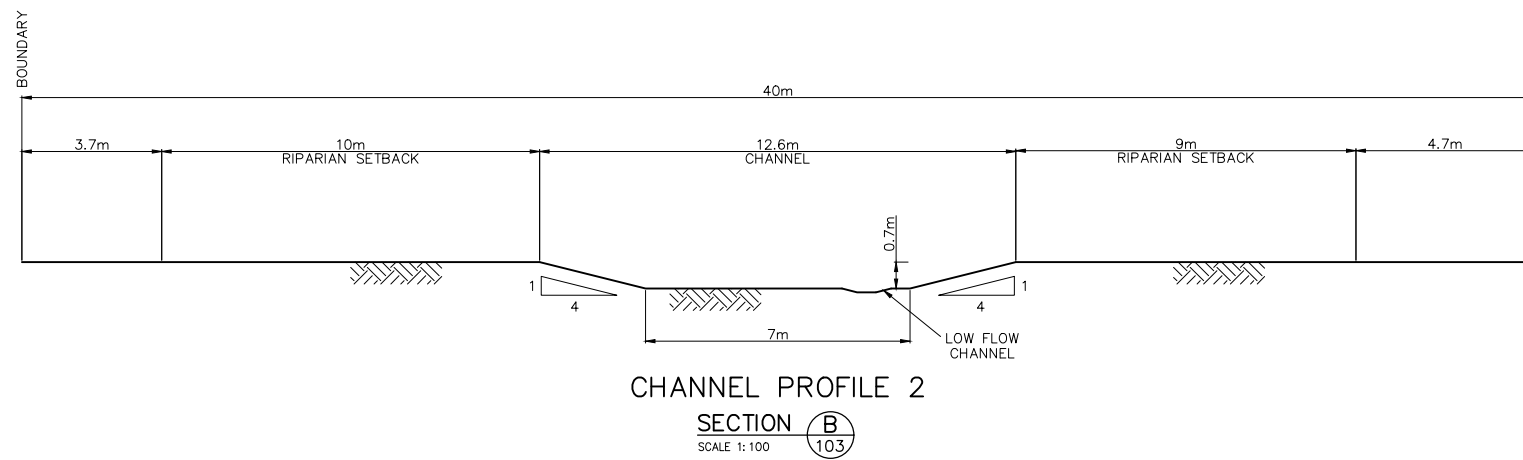
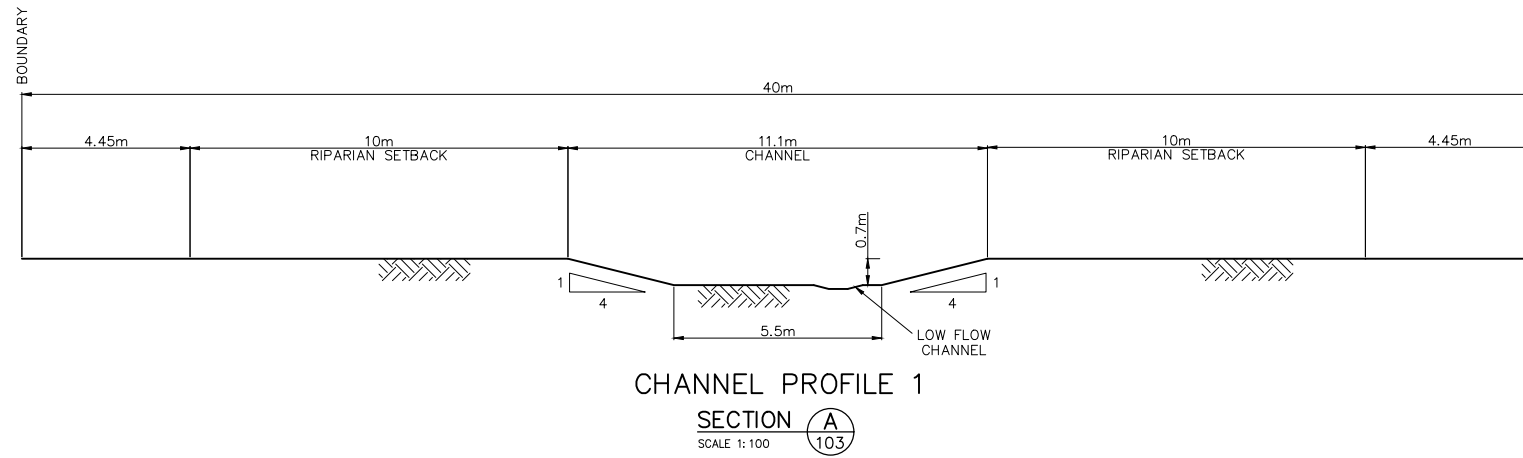


PLAN  
SCALE 1:4000

**PRELIMINARY ISSUE**

REV. DATE AMENDMENT	DRAWN CHECK DESIGN VERIFY	SCALES	 Hunter Office Unit 7/335 Hillsborough Rd Warners Bay N.S.W. 2282 Phone: (02) 4978 5100 Fax: (02) 4978 5199 email: hunter@adwjohnson.com.au www.adwjohnson.com.au ABN 62 129 445 398	CLIENT	PROPERTY DESCRIPTION	PROJECT
A 03.08.2018 INITIAL ISSUE B 14.08.2018 AMENDMENTS PER INSTRUCTION C 17.08.2018 AMENDMENTS PER INSTRUCTION	E.G. R.K. M.K. R.K. E.G. R.K. M.K. R.K. E.G. R.K. M.K. R.K.	0 100 200 A1 / A3 1:4000 / 1:8000		BROADEN MANAGEMENT PTY LTD	BLACK HILL INDUSTRIAL SUBDIVISION STORMWATER MANAGEMENT PLAN LOT 1131 D.P.1057179 JOHN RENSHAW DRIVE, BLACK HILL	BLACK HILL CONCEPT PLANS
DESIGN FILE N:\239590\Design\120\			ALL DIMENSIONS ARE IN METRES. DO NOT SCALE	SURVEYED ADW Johnson DATUM A.H.D.		PLAN TITLE
Plotted By: elizabethg Plot Date: 17/08/18 - 10:13 Cad File: N:\239590\Drawings\Engineering\Civil\SWMP\239590-SWMP-103(C).dwg				PROJECT No. 239590 - DISCIPLINE SWMP - NUMBER 103 - REV. C		STORMWATER LAYOUT PLAN





**PRELIMINARY ISSUE**

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY	SCALES	<p>Hunter Office Unit 7/335 Hillsborough Rd Warners Bay N.S.W. 2282 Phone: (02) 4978 5100 Fax: (02) 4978 5199 email: hunter@adwjohnson.com.au www.adwjohnson.com.au ABN 62 129 445 398</p>	CLIENT	PROPERTY DESCRIPTION	PROJECT		
A	03.08.2018	INITIAL ISSUE	E.G.	R.K.	M.K.	R.K.			<p><b>BROADEN MANAGEMENT PTY LTD</b></p>	<p><b>BLACK HILL INDUSTRIAL SUBDIVISION STORMWATER MANAGEMENT PLAN LOT 1131 D.P.1057179 JOHN RENSHAW DRIVE, BLACK HILL</b></p>	<p><b>BLACK HILL CONCEPT PLANS</b></p>		
B	14.08.2018	AMENDMENTS PER INSTRUCTION	E.G.	R.K.	M.K.	R.K.					PLAN TITLE	<p>CHANNEL PROFILES</p>	
C	17.08.2018	AMENDMENTS PER INSTRUCTION	E.G.	R.K.	M.K.	R.K.		SURVEYED			DATUM	PROJECT No.	DISCIPLINE
<p>DESIGN FILE N:\239590\Design\12D\</p>								<p>ALL DIMENSIONS ARE IN METRES. DO NOT SCALE</p>		<p>ADW Johnson</p>	<p>A.H.D.</p>	<p>239590 - SWMP - 104</p>	<p>C</p>



239590-SWMP-105(C)

100mm AT FULL SIZE



**LEGEND**

- EXISTING LOT BOUNDARY
- PROPOSED LOT BOUNDARY
- FUTURE LOT BOUNDARY
- FINISHED SURFACE CONTOUR
- EXISTING WATERCOURSE
- 1% AEP FLOOD EXTENT

CONTOUR INTERVAL = 0.5m



PLAN  
SCALE 1:4000

**PRELIMINARY ISSUE**

<table border="1"> <thead> <tr> <th>REV.</th> <th>DATE</th> <th>AMENDMENT</th> <th>DRAWN</th> <th>CHECK</th> <th>DESIGN</th> <th>VERIFY</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>03.08.2018</td> <td>INITIAL ISSUE</td> <td>E.G.</td> <td>R.K.</td> <td>M.K.</td> <td>R.K.</td> </tr> <tr> <td>B</td> <td>14.08.2018</td> <td>AMENDMENTS PER INSTRUCTION</td> <td>E.G.</td> <td>R.K.</td> <td>M.K.</td> <td>R.K.</td> </tr> <tr> <td>C</td> <td>17.08.2018</td> <td>AMENDMENTS PER INSTRUCTION</td> <td>E.G.</td> <td>R.K.</td> <td>M.K.</td> <td>R.K.</td> </tr> </tbody> </table>				REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY	A	03.08.2018	INITIAL ISSUE	E.G.	R.K.	M.K.	R.K.	B	14.08.2018	AMENDMENTS PER INSTRUCTION	E.G.	R.K.	M.K.	R.K.	C	17.08.2018	AMENDMENTS PER INSTRUCTION	E.G.	R.K.	M.K.	R.K.	<p>SCALES</p> <p>1:4000 / 1:8000</p>		<p>Hunter Office Unit 7/335 Hillsborough Rd Warners Bay N.S.W. 2282 Phone: (02) 4978 5100 Fax: (02) 4978 5199 email: hunter@adwjohnson.com.au www.adwjohnson.com.au ABN 62 129 445 398</p>		<p>CLIENT</p> <p><b>BROADEN MANAGEMENT PTY LTD</b></p>		<p>PROPERTY DESCRIPTION</p> <p><b>BLACK HILL INDUSTRIAL SUBDIVISION STORMWATER MANAGEMENT PLAN LOT 1131 D.P.1057179 JOHN RENSHAW DRIVE, BLACK HILL</b></p>		<p>PROJECT</p> <p><b>BLACK HILL CONCEPT PLANS</b></p>		
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<p>DESIGN FILE N:\239590\Design\120\</p>							<p>ALL DIMENSIONS ARE IN METRES. DO NOT SCALE</p>																																			
<p>Plotted By: elizabethg Plot Date: 17/08/18 - 10:13</p>			<p>Cad File: N:\239590\Drawings\Engineering\Civil\SWMP\239590-SWMP-105(C).dwg</p>			<p>SURVEYED</p> <p>ADW Johnson</p>		<p>DATUM</p> <p>A.H.D.</p>		<p>PROJECT No.</p> <p>239590</p>		<p>DISCIPLINE</p> <p>SWMP</p>		<p>NUMBER</p> <p>105</p>		<p>REV.</p> <p>C</p>																										



239590-SWMP-106(C)

100mm AT FULL SIZE



**LEGEND**

- EXISTING LOT BOUNDARY
- - - PROPOSED LOT BOUNDARY
- - - FUTURE LOT BOUNDARY
- FINISHED SURFACE CONTOUR
- EXISTING WATERCOURSE
- 1% AEP FLOOD EXTENT
- HIGH HAZARD
- LOW HAZARD

CONTOUR INTERVAL = 0.5m



PLAN  
SCALE 1:4000

**PRELIMINARY ISSUE**

<table border="1"> <thead> <tr> <th>REV.</th> <th>DATE</th> <th>AMENDMENT</th> <th>DRAWN</th> <th>CHECK</th> <th>DESIGN</th> <th>VERIFY</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>03.08.2018</td> <td>INITIAL ISSUE</td> <td>E.G.</td> <td>R.K.</td> <td>M.K.</td> <td>R.K.</td> </tr> <tr> <td>B</td> <td>14.08.2018</td> <td>AMENDMENTS PER INSTRUCTION</td> <td>E.G.</td> <td>R.K.</td> <td>M.K.</td> <td>R.K.</td> </tr> <tr> <td>C</td> <td>17.08.2018</td> <td>AMENDMENTS PER INSTRUCTION</td> <td>E.G.</td> <td>R.K.</td> <td>M.K.</td> <td>R.K.</td> </tr> </tbody> </table>				REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY	A	03.08.2018	INITIAL ISSUE	E.G.	R.K.	M.K.	R.K.	B	14.08.2018	AMENDMENTS PER INSTRUCTION	E.G.	R.K.	M.K.	R.K.	C	17.08.2018	AMENDMENTS PER INSTRUCTION	E.G.	R.K.	M.K.	R.K.	<p>SCALES</p> <p>1:4000 / 1:8000</p>		<p>Hunter Office Unit 7/335 Hillsborough Rd Warners Bay N.S.W. 2282 Phone: (02) 4978 5100 Fax: (02) 4978 5199 email: hunter@adwjohnson.com.au www.adwjohnson.com.au ABN 62 129 445 398</p>		<p>CLIENT</p> <p><b>BROADEN MANAGEMENT PTY LTD</b></p>		<p>PROPERTY DESCRIPTION</p> <p><b>BLACK HILL INDUSTRIAL SUBDIVISION STORMWATER MANAGEMENT PLAN LOT 1131 D.P.1057179 JOHN RENSHAW DRIVE, BLACK HILL</b></p>		<p>PROJECT</p> <p><b>BLACK HILL CONCEPT PLANS</b></p>	
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<p>DESIGN FILE N:\239590\Design\120\</p>								<p>ALL DIMENSIONS ARE IN METRES. DO NOT SCALE</p>																																	
<p>Plotted By: elizabethg Plot Date: 17/08/18 - 10:13</p>				<p>Cad File: N:\239590\Drawings\Engineering\Civil\SWMP\239590-SWMP-106(C).dwg</p>				<p>PROJECT No. <b>239590</b> - DISCIPLINE <b>SWMP</b> - NUMBER <b>106</b> - REV. <b>C</b></p>		<p>SURVEYED <b>ADW Johnson</b> DATUM <b>A.H.D.</b></p>																															



239590-SWMP-801(C)



**LEGEND**

- EXISTING LOT BOUNDARY
- PROPOSED LOT BOUNDARY
- LIMIT OF CONSTRUCTION
- EXISTING KERB
- PROPOSED KERB
- DESIGN SURFACE CONTOURS
- EXTENT OF BATTER
- EXISTING STORMWATER
- PROPOSED STORMWATER
- SILT FENCE
- CONSTRUCTION ACCESS
- HAYBALE BARRIERS
- GEOTEXTILE INLET FILTER
- GRAVEL BAGS
- PROPOSED STOCKPILE LOCATION
- MESH & GRAVEL INLET FILTER
- DIVERSION DRAIN
- TEMPORARY SEDIMENT BASIN

CONTOUR INTERVAL = 0.5m



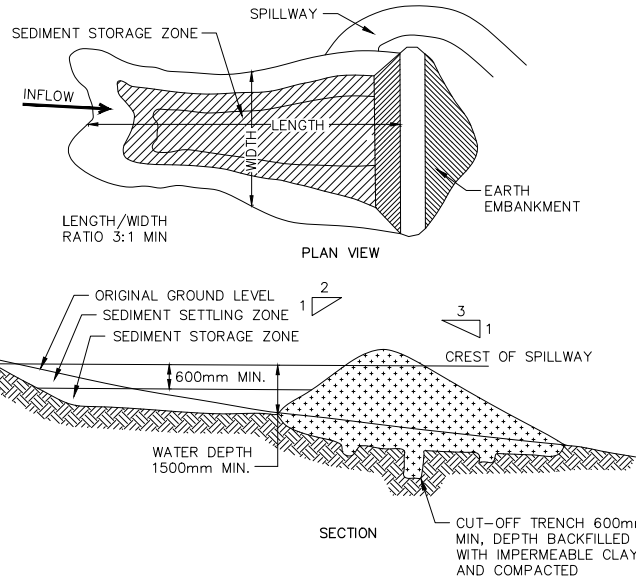
STRAW BALE BARRIERS DOWN SLOPE OF KERB INLET PITS AND OUTLETS NOT SHOWN FOR CLARITY

PLAN  
SCALE 1:4000

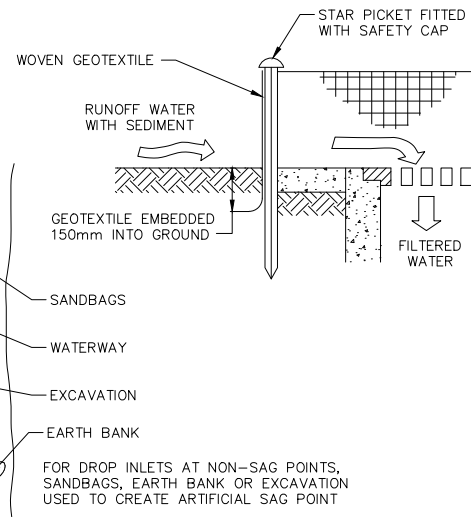
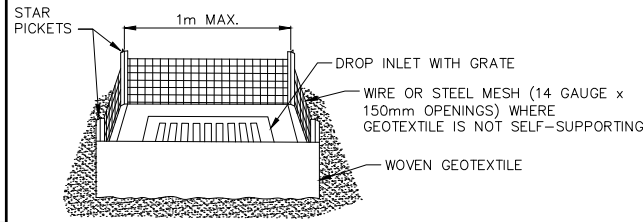
**PRELIMINARY ISSUE**

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY	SCALES		<b>Hunter Office</b> Unit 7/335 Hillsborough Rd Warners Bay N.S.W. 2282 Phone: (02) 4978 5100 Fax: (02) 4978 5199 email: hunter@adwjohnson.com.au www.adwjohnson.com.au ABN 62 129 445 398	<b>CLIENT</b> BROADEN MANAGEMENT PTY LTD	<b>PROPERTY DESCRIPTION</b> BLACK HILL INDUSTRIAL SUBDIVISION STORMWATER MANAGEMENT PLAN LOT 1131 D.P.1057179 JOHN RENSHAW DRIVE, BLACK HILL		<b>PROJECT</b> BLACK HILL CONCEPT PLANS		
A	03.08.2018	INITIAL ISSUE	E.G.	R.K.	M.K.	R.K.	0 100 200 A1 / A3 1:4000 / 1:8000				<b>PLAN TITLE</b> EROSION & SEDIMENT CONTROL PLAN		PROJECT No. 239590	DISCIPLINE - SWMP -	NUMBER 801
B	14.08.2018	AMENDMENTS PER INSTRUCTION	E.G.	R.K.	M.K.	R.K.					SURVEYED ADW Johnson	DATUM A.H.D.			
C	17.08.2018	AMENDMENTS PER INSTRUCTION	E.G.	R.K.	M.K.	R.K.									





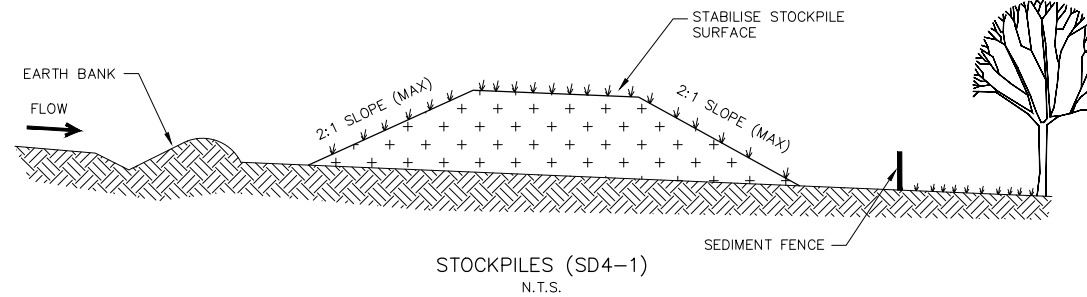
**WET EARTH BASIN (SD6-4)**  
 (APPLIES TO 'TYPE D' AND 'TYPE F' SOILS ONLY)  
 N.T.S.



**GEOTEXTILE INLET FILTER (SD6-12)**  
 N.T.S.

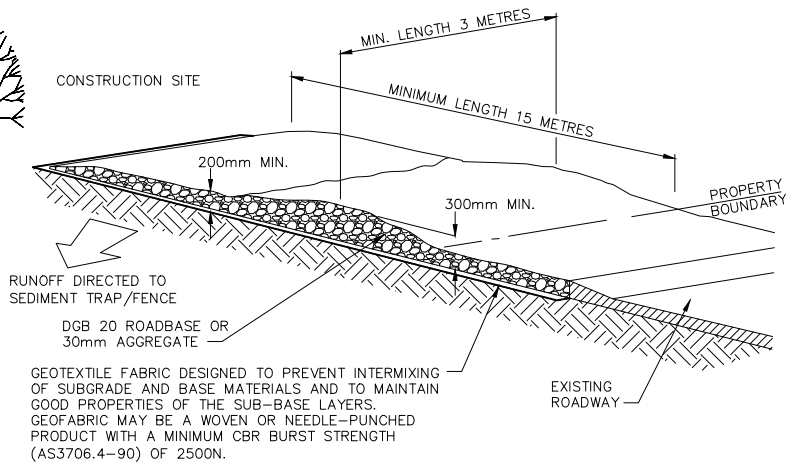
- CONSTRUCTION NOTES:**
- FABRICATE A SEDIMENT BARRIER MADE FROM GEOTEXTILE OR STRAW BALES.
  - REFER STANDARD DRAWINGS 6-7 & 6-8 FOR INSTALLATION PROCEDURES FOR THE STRAW BALES OR GEOTEXTILE. REDUCE THE PICKET SPACING TO 1 METRE CENTRES.
  - IN WATERWAYS, ARTIFICIAL SAG POINTS CAN BE CREATED WITH SANDBAGS OR EARTH BANKS AS SHOWN IN THE DRAWING.
  - DO NOT COVER THE INLET WITH GEOTEXTILE UNLESS THE DESIGN IS ADEQUATE TO ALLOW FOR ALL WATERS TO BYPASS IT.

- CONSTRUCTION NOTES:**
- REMOVE ALL VEGETATION AND TOPSOIL FROM UNDER THE DAM WALL AND FROM WITHIN THE STORAGE AREA.
  - CONSTRUCT A CUT-OFF TRENCH 500mm DEEP AND 1200mm WIDE ALONG THE CENTRELINE OF THE EMBANKMENT EXTENDING TO A POINT ON THE GULLY WALL LEVEL WITH THE RISER CREST.
  - MAINTAIN THE TRENCH FREE OF WATER AND RECOMPACT THE MATERIALS WITH EQUIPMENT AS SPECIFIED IN THE SWMP TO 95 PERCENT STANDARD PROCTOR DENSITY.
  - SELECT FILL ACCORDING TO THE SWMP THAT IS FREE FROM ROOTS, WOOD, ROCK, LARGE STONE OR FOREIGN MATERIAL.
  - PREPARE THE SITE UNDER THE EMBANKMENT BY RIPPING TO AT LEAST 100mm TO HELP BOND THE COMPACTED FILL TO THE EXISTING SUBSTRATE.
  - SPREAD THE FILL IN 100mm TO 150mm LAYERS AND COMPACT IT AT OPTIMUM MOISTURE CONTENT FOLLOWING THE SWMP.
  - CONSTRUCT THE EMERGENCY SPILLWAY.
  - REHABILITATE THE STRUCTURE FOLLOWING THE SWMP.



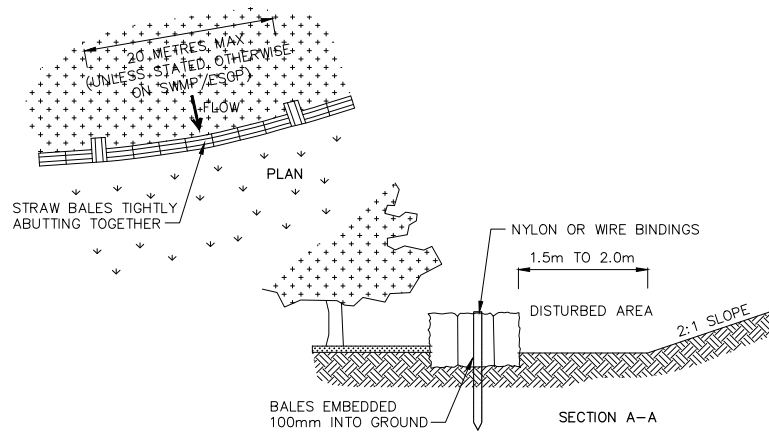
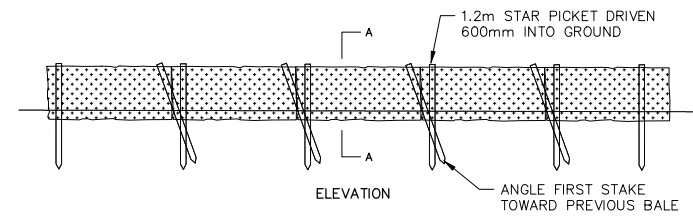
**STOCKPILES (SD4-1)**  
 N.T.S.

- CONSTRUCTION NOTES:**
- PLACE STOCKPILES MORE THAN 2 (PREFERABLY 5) METRES FROM EXISTING VEGETATION, CONCENTRATED WATER FLOW, ROADS AND HAZARD AREAS.
  - CONSTRUCT ON THE CONTOUR AS LOW, FLAT, ELONGATED MOUNDS.
  - WHERE THERE IS SUFFICIENT AREA, TOPSOIL STOCKPILES SHALL BE LESS THAN 2 METRES IN HEIGHT.
  - WHERE THEY ARE TO BE IN PLACE FOR MORE THAN 10 DAYS, STABILISE FOLLOWING THE APPROVED ESCP OR SWMP TO REDUCE THE C-FACTOR TO LESS THAN 0.10.
  - CONSTRUCT EARTH BANKS (STANDARD DRAWING 5-5) ON THE UPSLOPE SIDE TO DIVERT WATER AROUND STOCKPILES AND SEDIMENT FENCES (STANDARD DRAWING 6-8) 1 TO 2 METRES DOWNSLOPE.



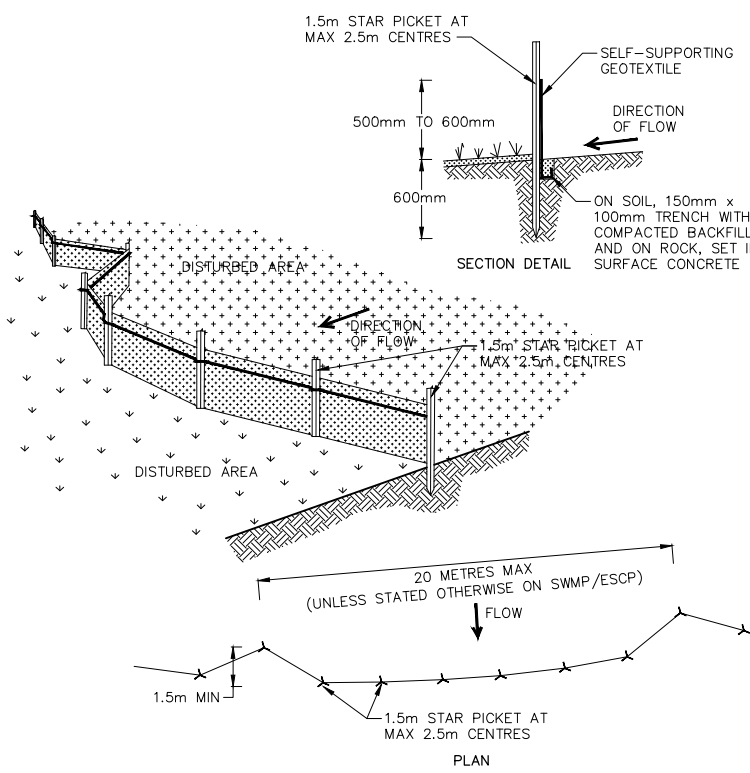
**STABILISED SITE ACCESS (SD6-14)**  
 N.T.S.

- CONSTRUCTION NOTES:**
- STRIP THE TOPSOIL, LEVEL THE SITE AND COMPACT THE SUBGRADE.
  - COVER THE AREA WITH NEEDLE-PUNCHED GEOTEXTILE.
  - CONSTRUCT A 200mm THICK PAD OVER THE GEOTEXTILE USING ROAD BASE OR 30mm AGGREGATE.
  - ENSURE THE STRUCTURE IS AT LEAST 15 METRES LONG OR TO BUILDING ALIGNMENT AND AT LEAST 3 METRES WIDE.
  - WHERE A SEDIMENT FENCE JOINS ONTO THE STABILISED ACCESS, CONSTRUCT A HUMP IN THE STABILISED ACCESS TO DIVERT WATER TO THE SEDIMENT FENCE.



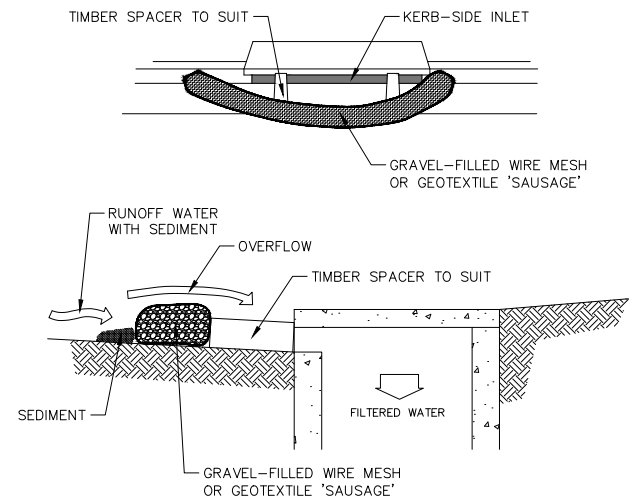
**STRAW BALE FILTER (SD6-7)**  
 N.T.S.

- CONSTRUCTION NOTES:**
- CONSTRUCT THE STRAW BALE FILTER AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS OF THE SITE.
  - PLACE BALES LENGTHWISE IN A ROW WITH ENDS TIGHTLY ABUTTING. USE STRAW TO FILL ANY GAPS BETWEEN BALES. STRAWS ARE TO BE PLACED PARALLEL TO GROUND.
  - ENSURE THAT THE MAXIMUM HEIGHT OF THE FILTER IS ONE BALE.
  - EMBED EACH BALE IN THE GROUND 75mm TO 100mm AND ANCHOR WITH TWO 1.2m STAR PICKETS OR STAKES. ANGLE THE FIRST STAR PICKET OR STAKE IN EACH BALE TOWARDS THE PREVIOUSLY LAID BALE. DRIVE THEM 600mm IN THE GROUND AND, IF POSSIBLE, FLUSH WITH THE TOP OF THE BALES. WHERE STAR PICKETS ARE USED AND THEY PROTRUDE ABOVE THE BALES, ENSURE THEY ARE FITTED WITH SAFETY CAPS.
  - WHERE A STRAW BALE FILTER IS CONSTRUCTED DOWNSLOPE FROM A DISTURBED BATTER, ENSURE THE BALES ARE PLACES 1 TO 2 METRES DOWNSLOPE FROM THE TOE.
  - ESTABLISH A MAINTENANCE PROGRAM THAT ENSURES THE INTEGRITY OF THE BALES IS RETAINED - THEY COULD REQUIRE REPLACEMENT EACH TWO TO FOUR MONTHS.



**SEDIMENT FENCE (SD6-8)**  
 N.T.S.

- CONSTRUCTION NOTES:**
- CONSTRUCT SEDIMENT FENCES AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS OF THE SITE, BUT WITH SMALL RETURNS AS SHOWN IN THE DRAWING TO LIMIT THE CATCHMENT AREA OF ANY ONE SECTION. THE CATCHMENT AREA SHOULD BE SMALL ENOUGH TO LIMIT WATER FLOW IF CONCENTRATED AT ONE POINT TO 50 LITRES PER SECOND IN THE DESIGN STORM EVENT, USUALLY THE 10-YEAR EVENT.
  - CUT A 150mm DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED.
  - DRIVE 1.5m LONG STAR PICKETS INTO GROUND AT 2.5 METRE INTERVALS (MAX) AT DOWNSLOPE EDGE OF THE TRENCH. ENSURE ANY STAR PICKETS ARE FITTED WITH SAFETY CAPS.
  - FIX SELF-SUPPORTING GEOTEXTILE TO THE UPSLOPE SIDE OF THE POSTS ENSURING IT GOES TO THE BASE OF THE TRENCH. FIX THE GEOTEXTILE WITH WIRE TIES OR AS RECOMMENDED BY THE MANUFACTURER. ONLY USE GEOTEXTILE SPECIFICALLY PRODUCED FOR SEDIMENT FENCING. THE USE OF SHADE CLOTH FOR THIS PURPOSE IS NOT SATISFACTORY.
  - JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150mm OVERLAP.
  - BACKFILL THE TRENCH OVER THE BASE OF THE FABRIC AND COMPACT IT THOROUGHLY OVER THE GEOTEXTILE.



**MESH AND GRAVEL INLET FILTER (SD6-11)**  
 N.T.S.

- CONSTRUCTION NOTES:**
- INSTALL FILTERS TO KERB INLETS ONLY AT SAG POINTS.
  - FABRICATE A SLEEVE MADE FROM GEOTEXTILE OR WIRE MESH LONGER THAN THE LENGTH OF THE INLET PIT AND FILL IT WITH 25mm TO 50mm GRAVEL.
  - FORM AN ELLIPTICAL CROSS SECTION ABOUT 150mm HIGH x 400mm WIDE.
  - PLACE THE FILTER AT THE OPENING LEAVING AT LEAST A 100mm SPACE BETWEEN IT AND THE KERB INLET. MAINTAIN THE OPENING WITH SPACER BLOCKS.
  - FORM A SEAL WITH THE KERB TO PREVENT SEDIMENT BYPASSING THE FILTER.
  - SANDBAGS FILLED WITH GRAVEL CAN SUBSTITUTE FOR THE MESH OR GEOTEXTILE PROVIDING THEY ARE PLACED SO THAT THEY FIRMLY ABUT EACH OTHER AND SEDIMENT-LADEN WATERS CANNOT PASS BETWEEN.

**PRELIMINARY ISSUE**

REV.	DATE	AMENDMENT	DRAWN	CHECK	DESIGN	VERIFY	SCALES
A	03.08.2018	INITIAL ISSUE	E.G.	R.K.	M.K.	R.K.	
B	14.08.2018	AMENDMENTS PER INSTRUCTION	E.G.	R.K.	M.K.	R.K.	
C	17.08.2018	AMENDMENTS PER INSTRUCTION	E.G.	R.K.	M.K.	R.K.	

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**BROADEN MANAGEMENT PTY LTD**

**PROPERTY DESCRIPTION**  
 BLACK HILL INDUSTRIAL SUBDIVISION  
 STORMWATER MANAGEMENT PLAN  
 LOT 1131 D.P.1057179  
 JOHN RENSHAW DRIVE, BLACK HILL

PROJECT	PLAN TITLE	PROJECT No.	DISCIPLINE	NUMBER	REV.
BLACK HILL CONCEPT PLANS	EROSION & SEDIMENT CONTROL DETAILS	239590	SWMP	802	C