

THE BAY RESORT

4177 NELSON BAY ROAD, ANNA BAY NSW 2316
CIVIL ENGINEERING PACKAGE



LOCALITY PLAN

SOURCE : NEARMAP.COM

DRAWING LIST

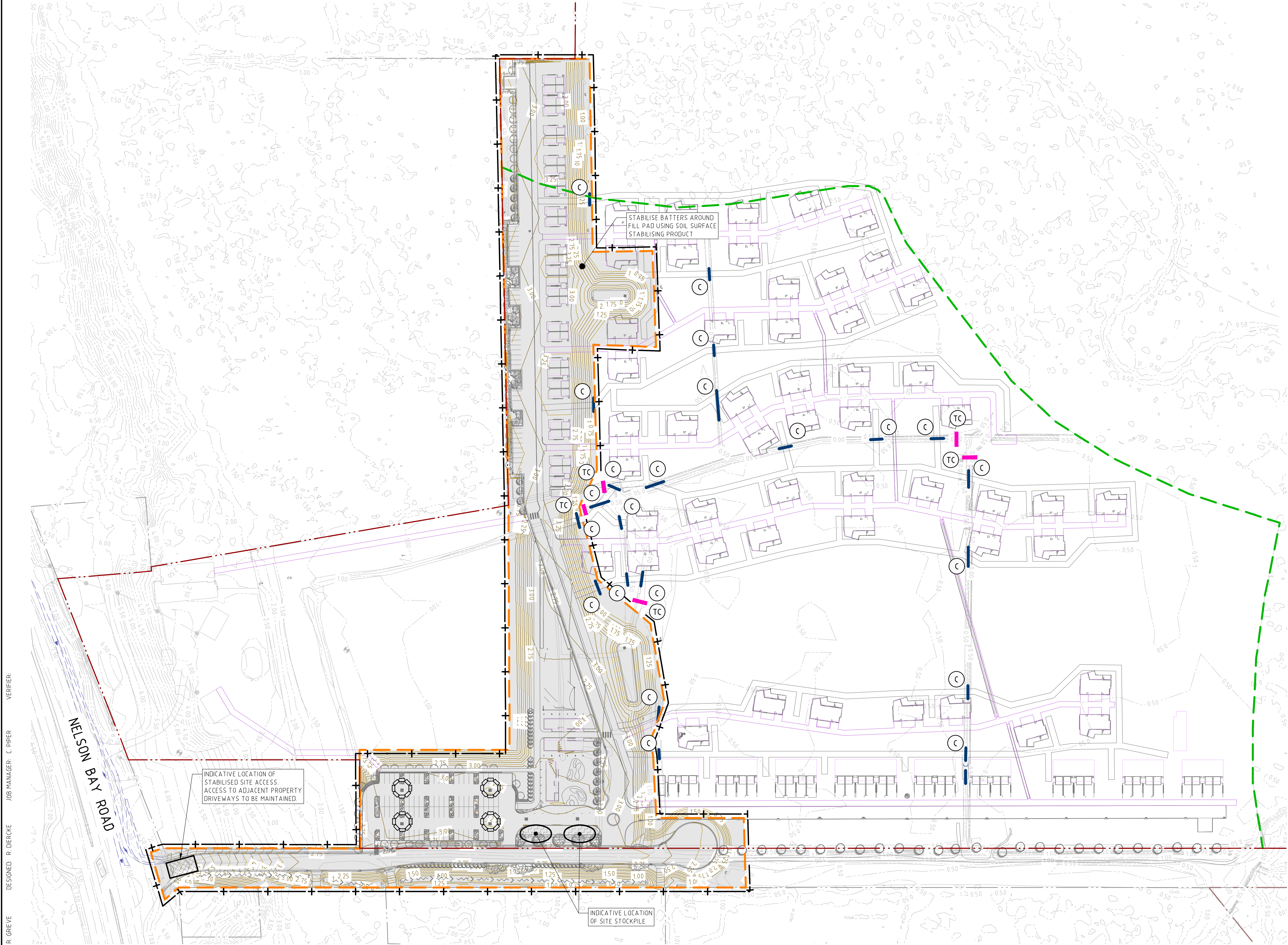
DWG No.	DRAWING TITLE
DA-C01.01	COVER SHEET, DRAWING LIST AND LOCALITY PLAN
DA-C02.01	EROSION AND SEDIMENT CONTROL PLAN
DA-C02.11	EROSION AND SEDIMENT CONTROL DETAILS
DA-C03.01	BULK EARTHWORKS CUT AND FILL PLAN
DA-C03.11	BULK EARTHWORKS SECTIONS - SHEET 1
DA-C03.12	BULK EARTHWORKS SECTIONS - SHEET 2
DA-C03.13	BULK EARTHWORKS SECTIONS - SHEET 3
DA-C03.14	BULK EARTHWORKS SECTIONS - SHEET 4
DA-C04.01	CIVIL WORKS PLAN - OVERVIEW
DA-C04.11	CIVIL WORKS PLAN - SHEET 1
DA-C04.12	CIVIL WORKS PLAN - SHEET 2
DA-C04.13	CIVIL WORKS PLAN - SHEET 3
DA-C04.14	CIVIL WORKS PLAN - SHEET 4
DA-C04.15	CIVIL WORKS PLAN - SHEET 5
DA-C04.16	CIVIL WORKS PLAN - SHEET 6
DA-C09.01	CIVIL DETAILS - SHEET 1
DA-C09.02	CIVIL DETAILS - SHEET 2

DRAWN: R. GREVE
DESIGNED: R. DIERCKE
JOB MANAGER: C. BIERER
VERIFIER:

NOT FOR CONSTRUCTION

REVISION	DESCRIPTION	ISSUED	VER'D	APP'D	DATE	CLIENT	ARCHITECT	SCALE	PROJECT	DRAWING TITLE	JOB NUMBER
1	ISSUED FOR APPROVAL	MS		CP	29.05.20	RPS AUSTRALIA EAST PTY LTD	N27 ARCHITECTS	SCALE 1:3000 @ A1 0 25 50 75 100 125 150m	THE BAY RESORT 4117 NELSON BAY ROAD ANNA BAY NSW 2316	CIVIL ENGINEERING PACKAGE COVER SHEET, DRAWING LIST AND LOCALITY PLAN	NL130365 DRAWING NUMBER DA-C01.01 DRAWING SHEET SIZE = A1
2	ISSUED FOR APPROVAL	MS		CP	01.07.20						
3	ISSUED FOR APPROVAL	RD		CP	30.03.21						
						DRAWING NOT TO BE USED FOR CONSTRUCTION UNLESS VERIFICATION SIGNATURE HAS BEEN ADDED	THE COPYRIGHT OF THIS DRAWING REMAINS WITH NORTHROP CONSULTING ENGINEERS PTY LTD				REVISION 3

VERIFIER: C. DIERKE
JOB MANAGER: R. DIERKE
DESIGNED: R. DIERKE
DRAWN: R. GRIEVE



LEGEND

SITE BOUNDARY LINE

EXISTING BOUNDARY LINE

CONSERVATION BUFFER ZONE
AS DEFINED BY ECOLOGIST

DENOTES PROPOSED DISTURBANCE
AREA AROUND FILL EXTENT

DESIGN CONTOURS @ 0.25m INTERVALS

EXISTING CONTOURS @ 0.25m INTERVALS

SEDIMENT FENCE

SANDBAG SEDIMENT FILTER
TO BE PLACED ON ALL
STORMWATER PITS

STABILISED SITE ACCESS

DENOTES TURBIDITY CURTAIN

DENOTES PIPE CULVERT CROSSING
OVER EXISTING WATERWAY

STOCKPILE

- NOTES
1.

ALL EROSION AND SEDIMENTATION CONTROL MEASURES MUST BE APPROPRIATE FOR THE SEDIMENT TYPE(S) OF THE SOILS ON-SITE, IN ACCORDANCE WITH THE 'BLUE BOOK' (MANAGING URBAN STORMWATER - SOILS AND CONSTRUCTION LANDCOM, 2004), OR OTHER CURRENT RECOGNISED INDUSTRY STANDARDS FOR EROSION AND SEDIMENT CONTROL FOR AUSTRALIAN CONDITIONS. THIS INCLUDES SEDIMENT TRAPS AND LINING OF CHANNELS.
2.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING A DETAILED WRITTEN RECORD OF ALL EROSION AND SEDIMENT CONTROLS ON-SITE DURING THE CONSTRUCTION PERIOD. THIS RECORD SHALL BE UPDATED ON A DAILY BASIS AND SHALL CONTAIN DETAILS ON THE CONDITION OF CONTROLS AND ANY/ALL MAINTENANCE, CLEANING AND BREACHES. THIS RECORD SHALL BE KEPT ON-SITE AT ALL TIMES AND SHALL BE MADE AVAILABLE FOR INSPECTION BY THE PRINCIPAL CERTIFYING AUTHORITY AND THE SUPERINTENDENT DURING NORMAL WORKING HOURS.
3.

INSTALL SEDIMENT PROTECTION FILTERS ON ALL NEW AND EXISTING STORMWATER INLET PITS IN ACCORDANCE WITH EITHER THE MESH AND GRAVEL INLET FILTER DETAIL S06-11 OR THE GEOTEXTILE INLET FILTER DETAIL S06-12 OF THE 'BLUE BOOK'.
4.

ESTABLISH ALL REQUIRED SEDIMENT FENCES IN ACCORDANCE WITH DETAIL S06-8 OF THE 'BLUE BOOK'.
5.

INSTALL SEDIMENT FENCING, OR OTHER SEDIMENT CONTROL DEVICES, AROUND INDIVIDUAL BUILDING ZONES/AREAS AS REQUIRED AND AS DIRECTED BY THE SUPERINTENDENT OR APPROPRIATE COUNCIL OFFICER.
6.

ALL TRENCHES INCLUDING ALL SERVICE TRENCHES AND SWALE EXCAVATION SHALL BE SIDE-CAST TO THE HIGH SIDE AND CLOSED AT THE END OF EACH DAY'S WORK.
7.

THE CONTRACTOR SHALL ENSURE THAT ALL VEGETATION (TREE, SHRUB AND GROUND COVER) WHICH IS TO BE RETAINED SHALL BE PROTECTED DURING THE DURATION OF CONSTRUCTION.
8.

ALL VEGETATION TO BE REMOVED SHALL BE MULCHED ON-SITE AND SPREAD/STOCKPILED AS DIRECTED BY THE SUPERINTENDENT.
9.

STRIP TOPSOIL IN AREAS DESIGNATED FOR STRIPPING AND STOCKPILE FOR RE-USE AS REQUIRED. ANY SURPLUS MATERIAL SHALL BE SPREAD ON-SITE AS DIRECTED BY THE SUPERINTENDENT OR REMOVED FROM SITE AND DISPOSED OF IN ACCORDANCE WITH EPA GUIDELINES.
10.

CONSTRUCT AND MAINTAIN ALL MATERIAL STOCKPILES IN ACCORDANCE WITH DETAIL S04-1 OF THE 'BLUE BOOK' (INCLUDING CUT-OFF SWALES TO THE HIGH SIDE AND SEDIMENT FENCES TO THE LOW SIDE).
11.

ENSURE STOCKPILES DO NOT EXCEED 2.0m HIGH. PROVIDE WIND AND RAIN EROSION PROTECTION AS REQUIRED IN ACCORDANCE WITH THE 'BLUE BOOK'.
12.

PROVIDE WATER TRUCKS OR SPRINKLER DEVICES DURING CONSTRUCTION AS REQUIRED TO SUPPRESS DUST.
13.

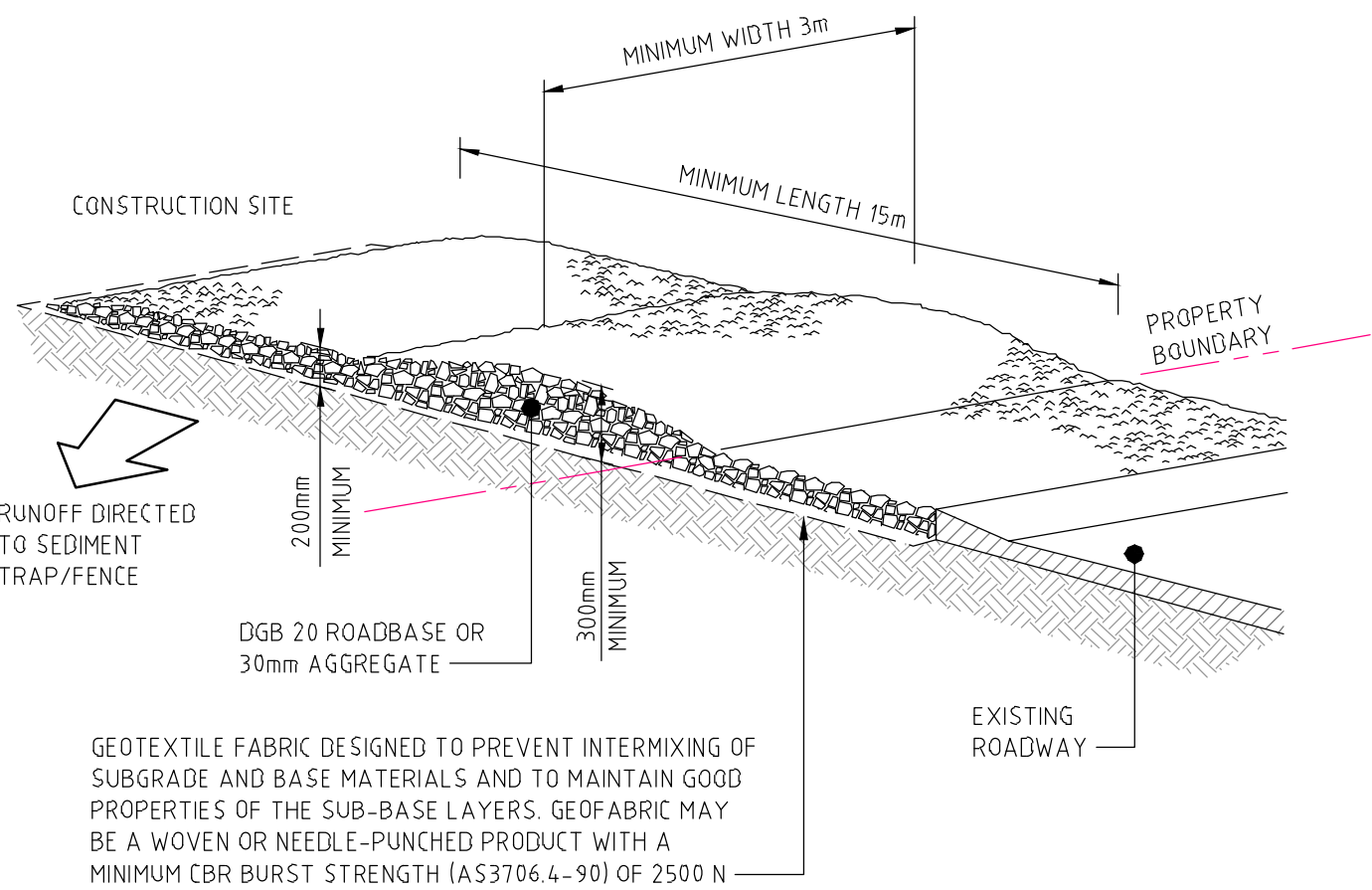
ONCE CUT/FILL OPERATIONS HAVE BEEN FINALIZED ALL DISTURBED AREAS THAT ARE NOT BEING WORKED ON SHALL BE RE-VEGETATED AS SOON AS IS PRACTICAL.
14.

EROSION AND SEDIMENT CONTROL MEASURES HAVE BEEN NOMINATED BASED ON ASSUMPTIONS OF CONSTRUCTION PROCESSES. CONTRACTOR IS TO REVIEW EROSION AND SEDIMENT CONTROL PLAN WITH RESPECT TO CONSTRUCTION SEQUENCING AND TECHNIQUES AND REVISE PLAN AS NECESSARY.

NOT FOR CONSTRUCTION

REVISION	DESCRIPTION	ISSUED	VER'D	APP'D	DATE	CLIENT	ARCHITECT		PROJECT	DRAWING TITLE	JOB NUMBER	
1	ISSUED FOR APPROVAL	MS		CP	29.05.20	RPS AUSTRALIA EAST PTY LTD	N27 ARCHITECTS	 ALL DIMENSIONS TO BE VERIFIED ON SITE BEFORE COMMENCING WORK. NORTHROP ACCEPTS NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR SCALE OF DRAWINGS TRANSFERRED ELECTRONICALLY. THIS DRAWING MAY HAVE BEEN PREPARED USING COLOUR, AND MAY BE INCOMPLETE IF COPIED TO BLACK & WHITE.	 THE BAY RESORT 4117 NELSON BAY ROAD ANNA BAY NSW 2316	CIVIL ENGINEERING PACKAGE	NL130365	
2	ISSUED FOR APPROVAL	RD		CP	30.03.21							DRAWING NUMBER
						DRAWING NOT TO BE USED FOR CONSTRUCTION UNLESS VERIFICATION SIGNATURE HAS BEEN ADDED	THE COPYRIGHT OF THIS DRAWING REMAINS WITH NORTHROP CONSULTING ENGINEERS PTY LTD	 SCALE 1:1000 @ A1		EROSION AND SEDIMENT CONTROL PLAN	DA-C02.01	2
DRAWING SHEET SIZE = A1												

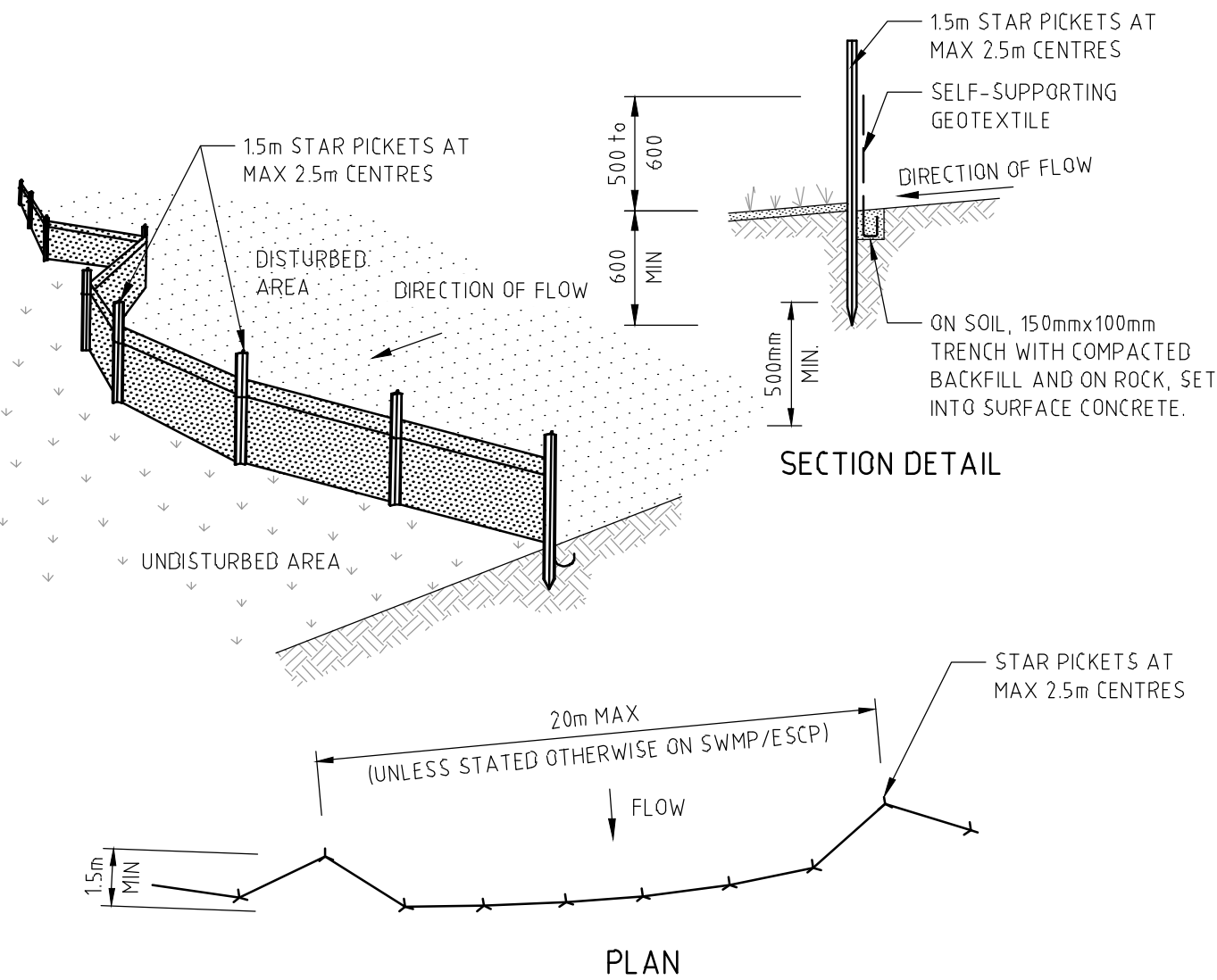
VERIFIER: C. BIER
JOB MANAGER: R. DIERCKE
DESIGNED: R. GREVE
DRAWN: R. GREVE



CONSTRUCTION NOTES

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

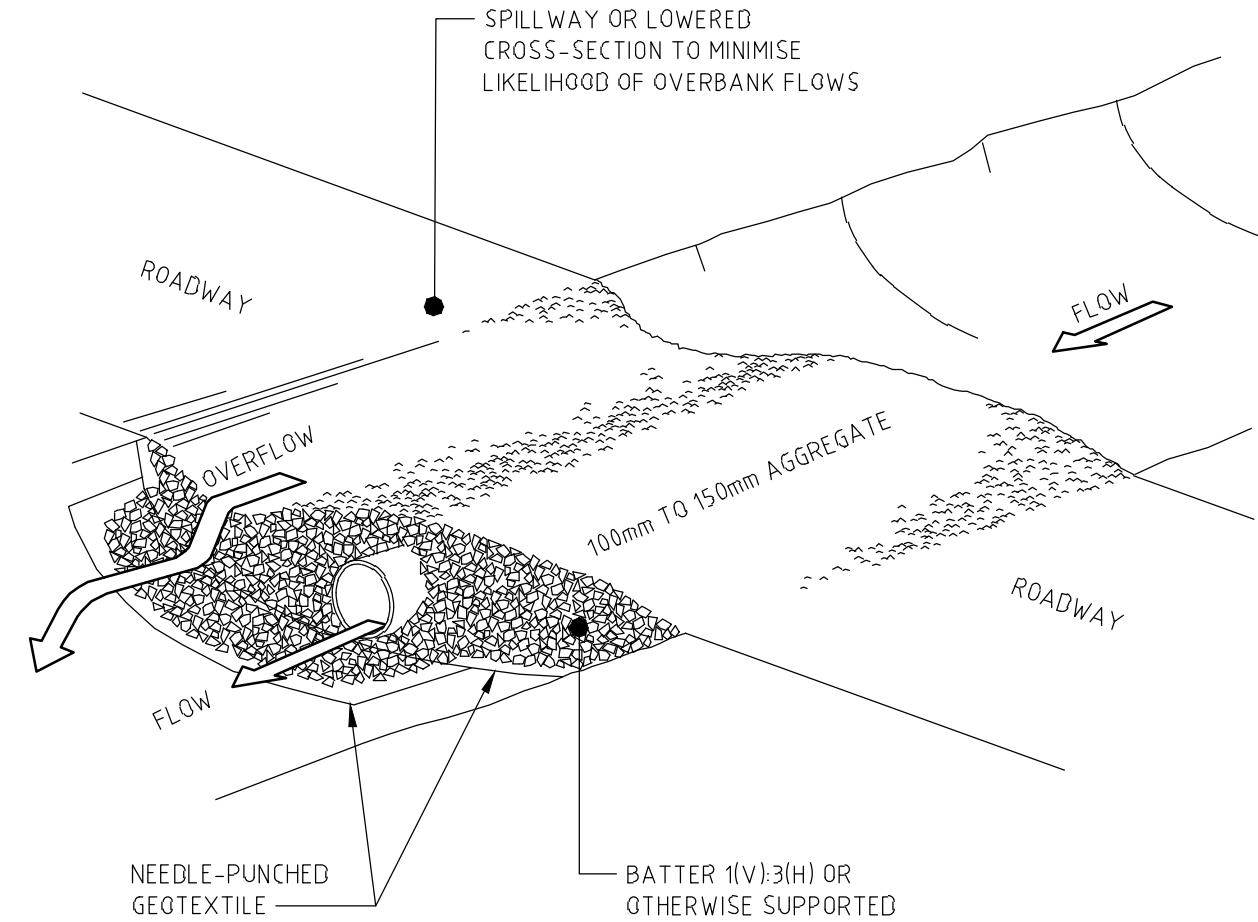
STABILISED SITE ACCESS (SD 6-14)



CONSTRUCTION NOTES

1. 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.
2. CUT A 150mm DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED.
3. DRIVE 15 METRE LONG STAR PICKETS INTO GROUND AT 2.5 METRE INTERVALS (MAX) AT THE DOWNSLOPE EDGE OF THE TRENCH. ENSURE ANY STAR PICKETS ARE FITTED WITH SAFETY CAPS.
4. 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.
5. JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150mm OVERLAP.
6. BACKFILL THE TRENCH OVER THE BASE OF THE FABRIC AND COMPACT IT THOROUGHLY OVER THE GEOTEXTILE.

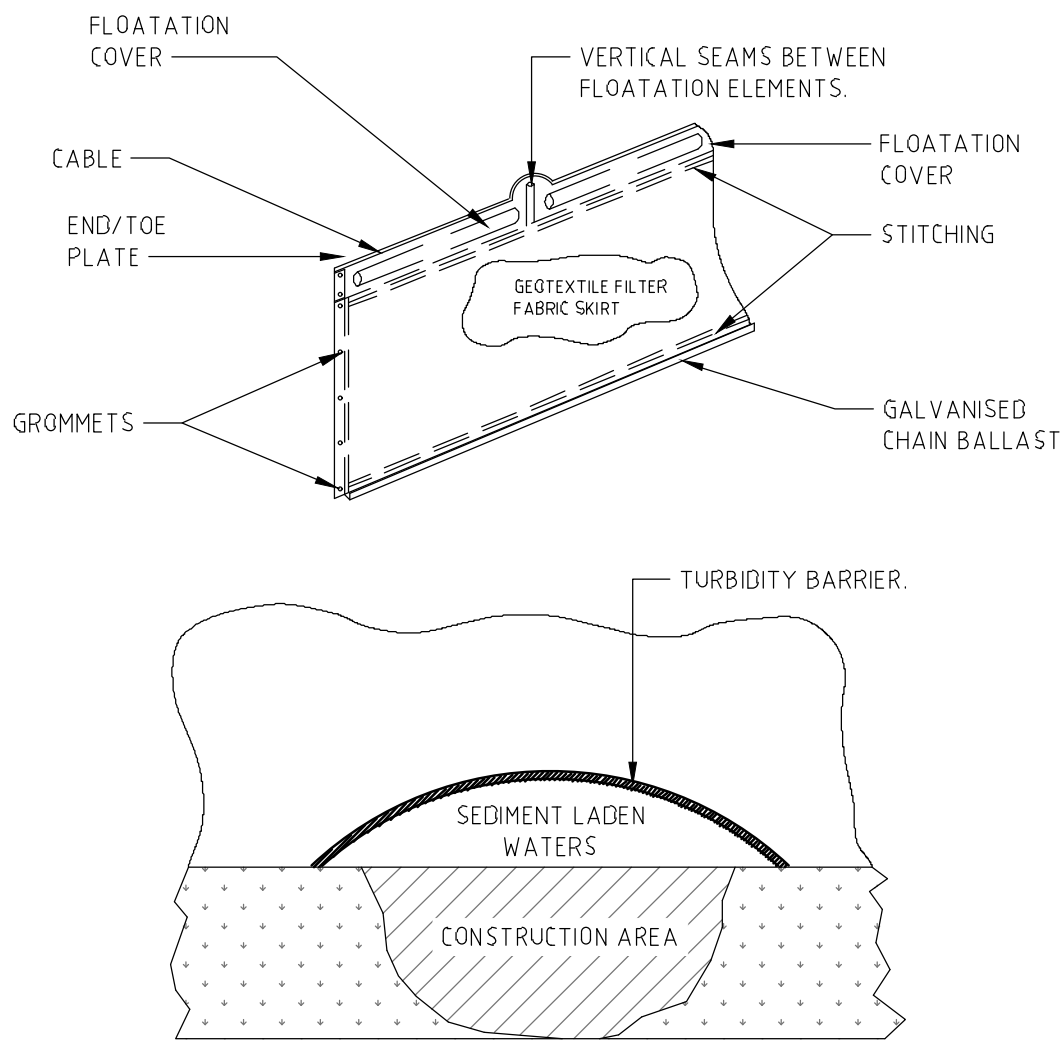
SEDIMENT FENCE (SD 6-8)



CONSTRUCTION NOTES

1. PROHIBIT ALL TRAFFIC UNTIL THE ACCESS WAY IS CONSTRUCTED.
2. STRIP ANY TOPSOIL AND PLACE A NEEDLE-PUNCHED TEXTILE OVER THE BASE OF THE CROSSING.
3. PLACE CLEAN, RIGID, NON POLLUTING AGGREGATE OR GRAVEL IN THE 100mm TO 150mm SIZE CLASS OVER THE FABRIC TO A MINIMUM DEPTH OF 200mm.
4. PROVIDE A 3m WIDE CARRIAGEWAY WITH SUFFICIENT LENGTH OF CULVERT PIPE TO ALLOW LESS THAN A 3(H):1(V) SLOPE ON SIDE BATTERS.
5. INSTALL A LOWER SECTION TO ACT AS AN EMERGENCY SPILLWAY IN GREATER THAN DESIGN STORM EVENTS.
6. ENSURE THAT CULVERT OUTLETS EXTEND BEYOND THE TOE OF FILL EMBANKMENTS.

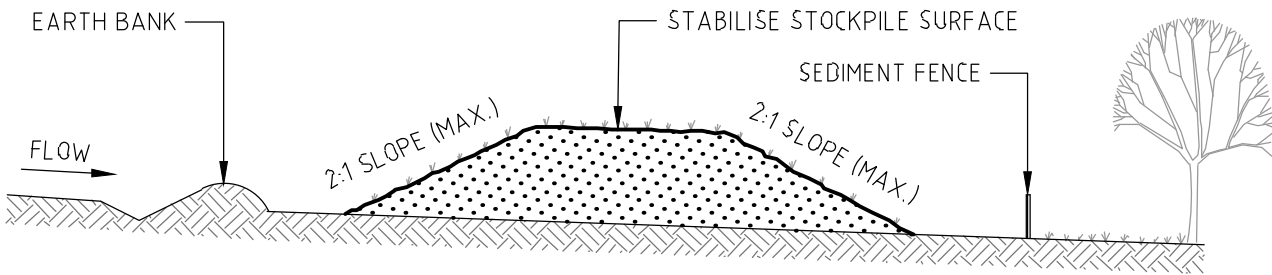
TEMPORARY WATERWAY CROSSING (SD 5-1)



CONSTRUCTION NOTES

1. USE TURBIDITY BARRIERS ONLY WHERE HIGH FLOWS ARE UNLIKELY TO REMOVE ACCUMULATED SEDIMENT AND/OR MOVE THE CURTAIN SIGNIFICANTLY.
2. WHERE THE BARRIER IS TO REMAIN IN PLACE FOR MORE THAN ONE MONTH, ENSURE THE FLOATATION COVER IS A UV-RESISTANT, DURABLE MATERIAL.
3. USE ONLY CLOSED CELL FOAM OR FOAM-FILLED PVC PIPING AS FLOATATION ELEMENTS. DO NOT USE UNFILLED PIPES.
4. USE ONLY WOVEN OR HEAT-SET NON WOVEN GEOTEXTILES. NEEDLE-PUNCHED, NON WOVEN GEOTEXTILES CAN BECOME FOULED WITH DEBRIS THAT FRAY AND DELAMINATE THEM AS THEY MOVE WITH THE WAVES OR CURRENTS.
5. REMOVE CAPTURED SEDIMENT BEFORE THE BARRIER IS DECOMMISSIONED.
6. IN TIDAL AREAS, ENSURE THE BARRIER CAN RISE AND FALL WITHOUT BEING MOVED FROM ITS POSITION.

TURBIDITY BARRIER (SD 6-10)



CONSTRUCTION NOTES

1. PLACE STOCKPILES MORE THAN 2m (PREFERABLY 5m) FROM EXISTING VEGETATION, CONCENTRATED WATER FLOW, ROADS AND HAZARD AREAS.
2. CONSTRUCT ON THE CONTOUR AS LOW, FLAT, ELONGATED MOUNDS.
3. WHERE THERE IS SUFFICIENT AREA, TOPSOIL STOCKPILES SHALL BE LESS THAN 2m IN HEIGHT.
4. 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.
5. 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 2m DOWNSLOPE.

STOCKPILES (SD 4-1)

NOT FOR CONSTRUCTION

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											DRAWING NUMBER	DA-C02.11	REVISION	1
											DRAWING SHEET SIZE = A1			
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NOT TO SCALE														

DRAWN: R. GRIEVE
DESIGNED: R. DIERCKE
JOB MANAGER: C. PIPHER
VERIFIER:



LEGEND

- SITE BOUNDARY LINE
- EXISTING BOUNDARY LINE
- CONSERVATION BUFFER ZONE AS DEFINED BY ECOLOGIST
- EXTENT OF PROPOSED EARTHWORKS
- + BE X.XX PROPOSED BULK EARTHWORKS LEVEL
- + NS X.XX EXISTING SURFACE LEVEL

DEPTH OF CUT

- 4.0m (MAX DEPTH) TO - 2.0m
- 2.0m TO - 1.5m
- 1.5m TO - 1.25m
- 1.25m TO - 1.0m
- 1.0m TO - 0.75m
- 0.75m TO - 0.5m
- 0.5m TO - 0.25m
- 0.25m TO - 0.0m

DEPTH OF FILL

- 0.0m TO 0.25m
- 0.25m TO 0.5m
- 0.5m TO 0.75m
- 0.75m TO 1.0m
- 1.0m TO 1.25m
- 1.25m TO 1.5m
- 1.5m TO 2.0m
- 2.0m TO 3.0m (MAX DEPTH)

CUT AND FILL QUANTITIES

TOTAL CUT	1,110m³
TOTAL FILL	39,850m³
BALANCE	38,740m³ (REQUIRED FILL TO IMPORT)

NOTES

- EARTHWORKS DEPTHS AND QUANTITIES SHOWN ARE BETWEEN THE EXISTING NATURAL SURFACE AND THE BULK EARTHWORKS SURFACE LEVELS.
- VOLUMES ARE TO ROAD/FOOTPATH SUBGRADE LEVEL.
- BULKING FACTORS NOT CONSIDERED IN REPORTED VOLUMES.
- CONTRACTOR RESPONSIBLE FOR CONFIRMING BULK EARTHWORKS VOLUMES.
- CUT/FILL QUANTITIES DO NOT ACCOUNT FOR STORMWATER OR SERVICE TRENCHING.
- BULK EARTHWORKS LEVELS AND CUT/FILL QUANTITIES DO NOT ACCOUNT FOR SUB-GRADE REPLACEMENT, REMOVAL OF UNSUITABLE MATERIAL OR REMOVAL/EXCAVATION OF EXISTING PLAYING FIELD GROWING SOILS.

NOT FOR CONSTRUCTION

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1	ISSUED FOR APPROVAL	MS		CP	29.05.20
2	ISSUED FOR APPROVAL	RD		CP	30.03.21

CLIENT	RPS AUSTRALIA EAST PTY LTD
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ARCHITECT	N27 ARCHITECTS
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SCALE 1:1000 @ A1
0 10 20 30 40 50m

 NORTHROP Newcastle Level 1, 215 Pacific Hwy, Charlestown NSW 2290 Ph (02) 4943 1777 Email newcastle@northrop.com.au ABN 81 094 433 100
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PROJECT	THE BAY RESORT 4117 NELSON BAY ROAD ANNA BAY NSW 2316
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DRAWING TITLE	CIVIL ENGINEERING PACKAGE BULK EARTHWORKS CUT AND FILL PLAN
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JOB NUMBER	NL130365
DRAWING NUMBER	DA-C03.01
REVISION	2
DRAWING SHEET SIZE = A1	

DRAWN: R. GRIEVE

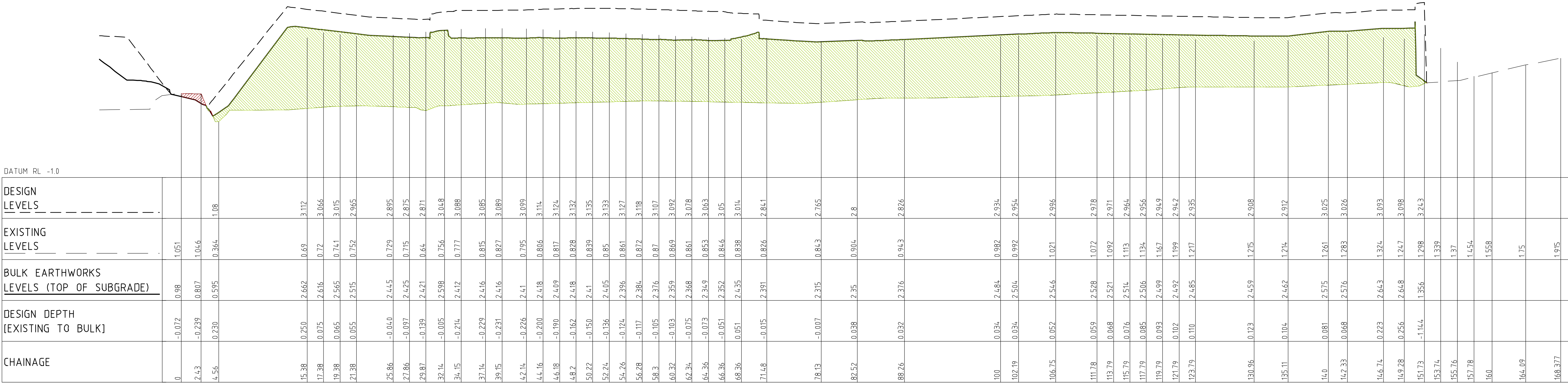


HORIZONTAL SCALE 1:250@A1
VERTICAL SCALE 1:50@A1

01
(C03.01)

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DRAWN: R. GREVE DESIGNED: R. DIERCKE JOB MANAGER: C. RIFER VERIFIER:



LONGITUDINAL SECTION ALONG BX02

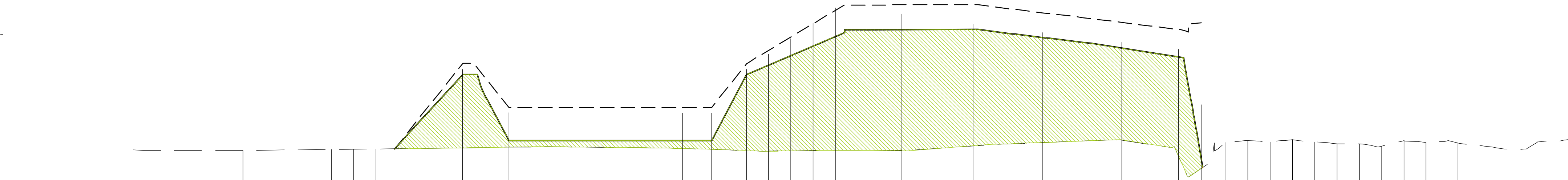
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VERTICAL SCALE 1:50@A1

SECTION 02
C03.01

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2	ISSUED FOR APPROVAL	RD		CP	30.03.21							
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VERIFIER: C. RIFER
JOB MANAGER: C. RIFER
DESIGNED: R. DIERCKE
DRAWN: R. GREVE



DATUM RL -1.0				
DESIGN LEVELS				
EXISTING LEVELS	0.52	0.533	0.538	0.543
BULK EARTHWORKS LEVELS (TOP OF SUBGRADE)				
DESIGN DEPTH (EXISTING TO BULK)				
CHAINAGE	0	8.06	10.08	12.1
	20	24.21	40	42.67
	45.84	47.86	49.88	51.9
	53.92	60	66.49	72.84
	80	85.19	87.3	89.49
	91.51	93.54	95.57	97.59
	99.62	101.64	103.67	105.7
	107.72	110.639		

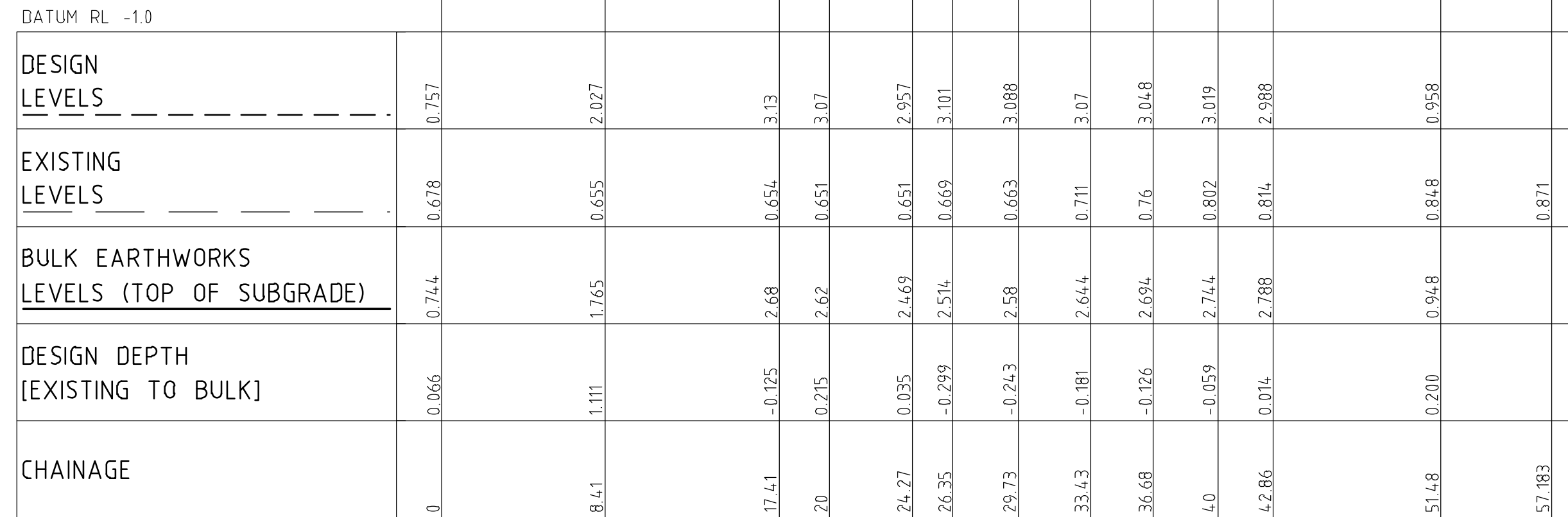
LONGITUDINAL SECTION ALONG BX03

HORIZONTAL SCALE 1:250@A1
VERTICAL SCALE 1:50@A1

SECTION 03
C03.01

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									DA-C03.13		2		
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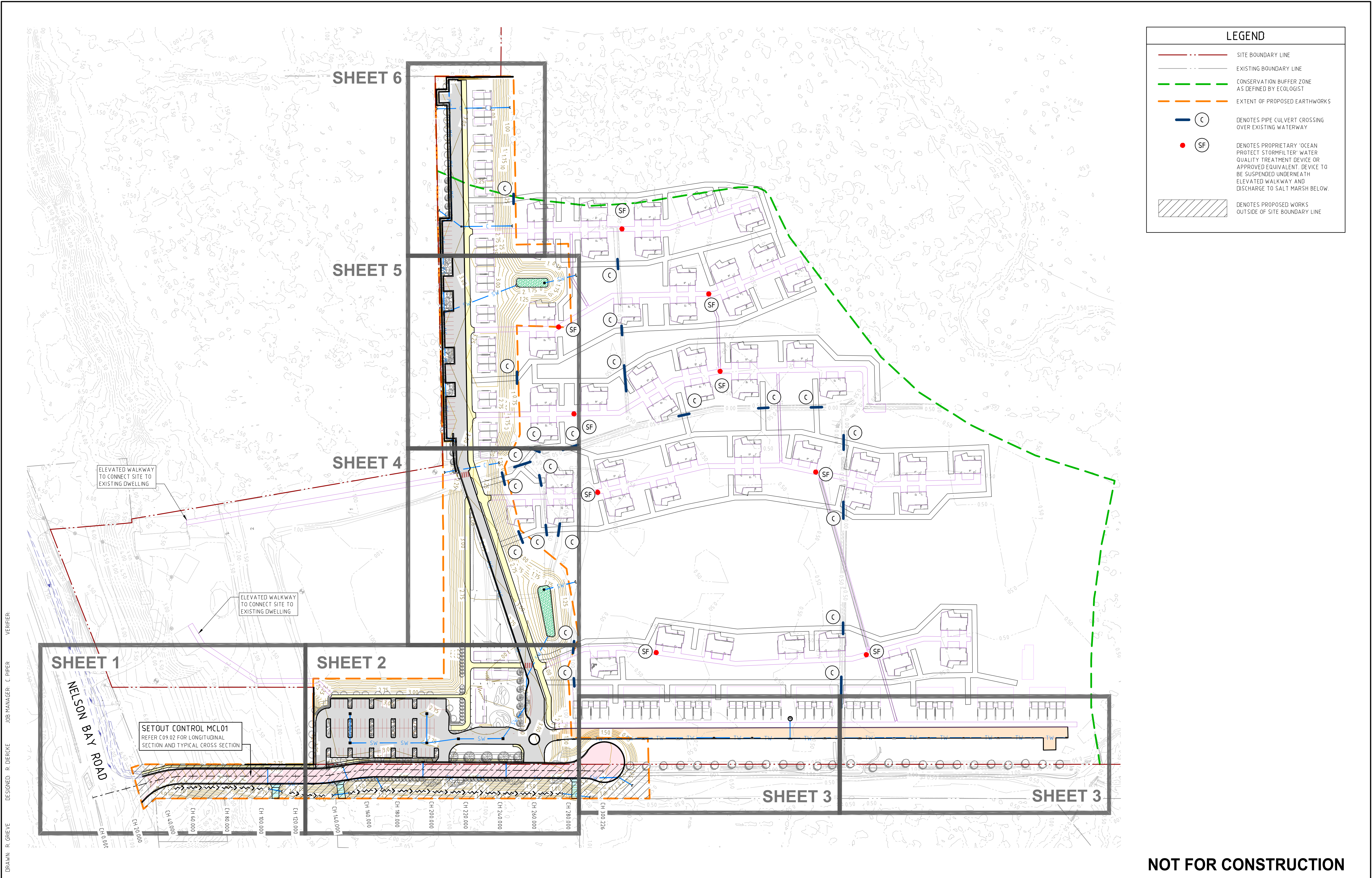


LONGITUDINAL SECTION ALONG BX04

HORIZONTAL SCALE 1:250@A1
VERTICAL SCALE 1:50@A1

SECTION 04

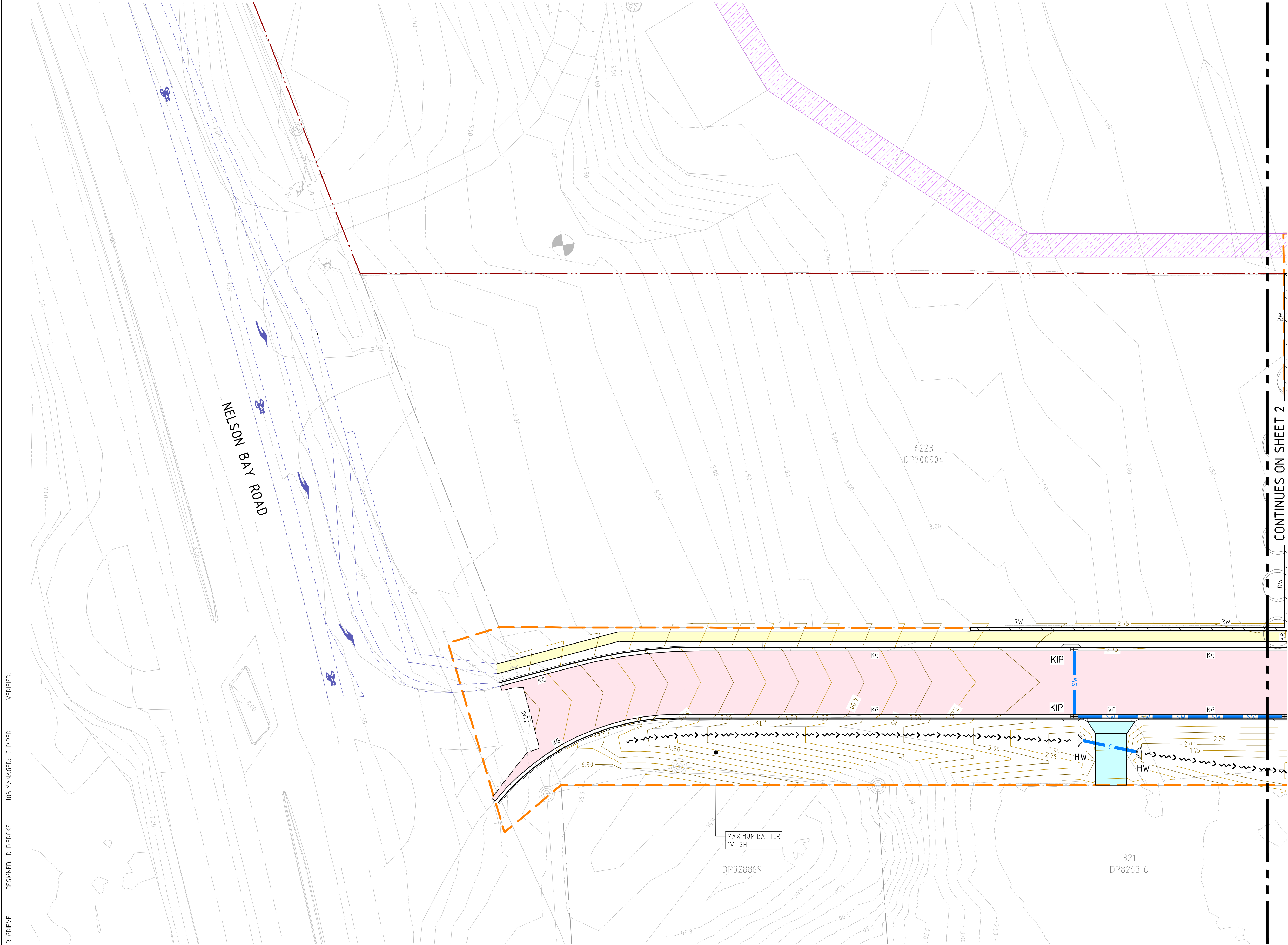
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1	ISSUED FOR APPROVAL	MS		CP	29.05.20	RPS AUSTRALIA EAST PTY LTD	N27 ARCHITECTS		 NORTHROP Newcastle Level 1, 215 Pacific Hwy, Charlestown NSW 2290 Ph (02) 4943 1777 Email newcastle@northrop.com.au ABN 81 094 433 100	THE BAY RESORT 4117 NELSON BAY ROAD ANNA BAY NSW 2316	CIVIL ENGINEERING PACKAGE	NL130365
2	ISSUED FOR APPROVAL	MS		CP	01.07.20							
3	ISSUED FOR APPROVAL	RD		CP	30.03.21							
DRAWING NOT TO BE USED FOR CONSTRUCTION UNLESS VERIFICATION SIGNATURE HAS BEEN ADDED						THE COPYRIGHT OF THIS DRAWING REMAINS WITH NORTHROP CONSULTING ENGINEERS PTY LTD	SCALE 1:1000 @ A1		CIVIL WORKS PLAN - OVERVIEW			
DRAWING SHEET SIZE = A1												

DRAWN: R. GREIVE
DESIGNED: R. DIERCKE
JOB MANAGER: C. PIPHER
VERIFIER:



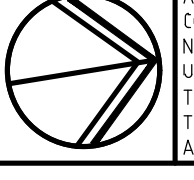
LEGEND	
	SITE BOUNDARY LINE
	EXISTING BOUNDARY LINE
	CONSERVATION BUFFER ZONE AS DEFINED BY ECOLOGIST
	EXTENT OF PROPOSED EARTHWORKS
	PROPOSED ONGRADE BUILDING OUTLINE MINIMUM FFL 3.2m (AHD)
	PROPOSED SUSPENDED BUILDING OUTLINE MINIMUM FFL 3.2m (AHD)
	DESIGN CONTOURS @ 0.25m INTERVALS
	EXISTING CONTOURS @ 0.25m INTERVALS
	ROAD PAVEMENT
	SUSPENDED ROAD PAVEMENT
	EXTERNAL ROAD PAVEMENT
	CONCRETE FOOTPATH PAVEMENT
	CONCRETE DRIVEWAY PAVEMENT
	3.0m WIDE ONGRADE MAINTENANCE ACCESS ROAD, TO BE GRAVEL OR SIMILAR
	ELEVATED BOARDWALK TO ARCHITECTS / STRUCTURAL ENGINEERS DETAIL
	BIO-FILTRATION BASIN
	GSIP GRATED SURFACE INLET PIT
	KIP KERB INLET PIT
	JP JUNCTION PIT
	SKP SUSPENDED KERB INLET PIT PROPRIETARY PIT INSERTS TO BE INCLUDED IN ALL PITS
	HW CONCRETE HEADWALL
	SW STORMWATER PIPE
	TW SUSPENDED STORMWATER PIPE
	C STORMWATER CULVERT CROSSING
	C ACCESS TRACK CULVERT CROSSING
	RW RETAINING WALL (APPROXIMATELY 2.5m HIGH)
	KG KERB ONLY
	RTK ROLL TOP KERB
	FK FLUSH KERB
	IK INTEGRAL KERB
	KR KERB RAMP
	VC VEHICULAR CROSSING
	WS WHEEL STOP
	LINEMARKING
	INT1 PAVEMENT INTERFACE TYPE 1
	INT2 PAVEMENT INTERFACE TYPE 2
	DRAINAGE SWALE

NOT FOR CONSTRUCTION

REVISION	DESCRIPTION	ISSUED	VER'D	APP'D	DATE
1	ISSUED FOR APPROVAL	MS		CP	29.05.20
2	ISSUED FOR APPROVAL	MS		CP	01.07.20
3	ISSUED FOR APPROVAL	RD		CP	30.03.21

CLIENT	RPS AUSTRALIA EAST PTY LTD
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ARCHITECT	N27 ARCHITECTS
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SCALE 1:250@A1



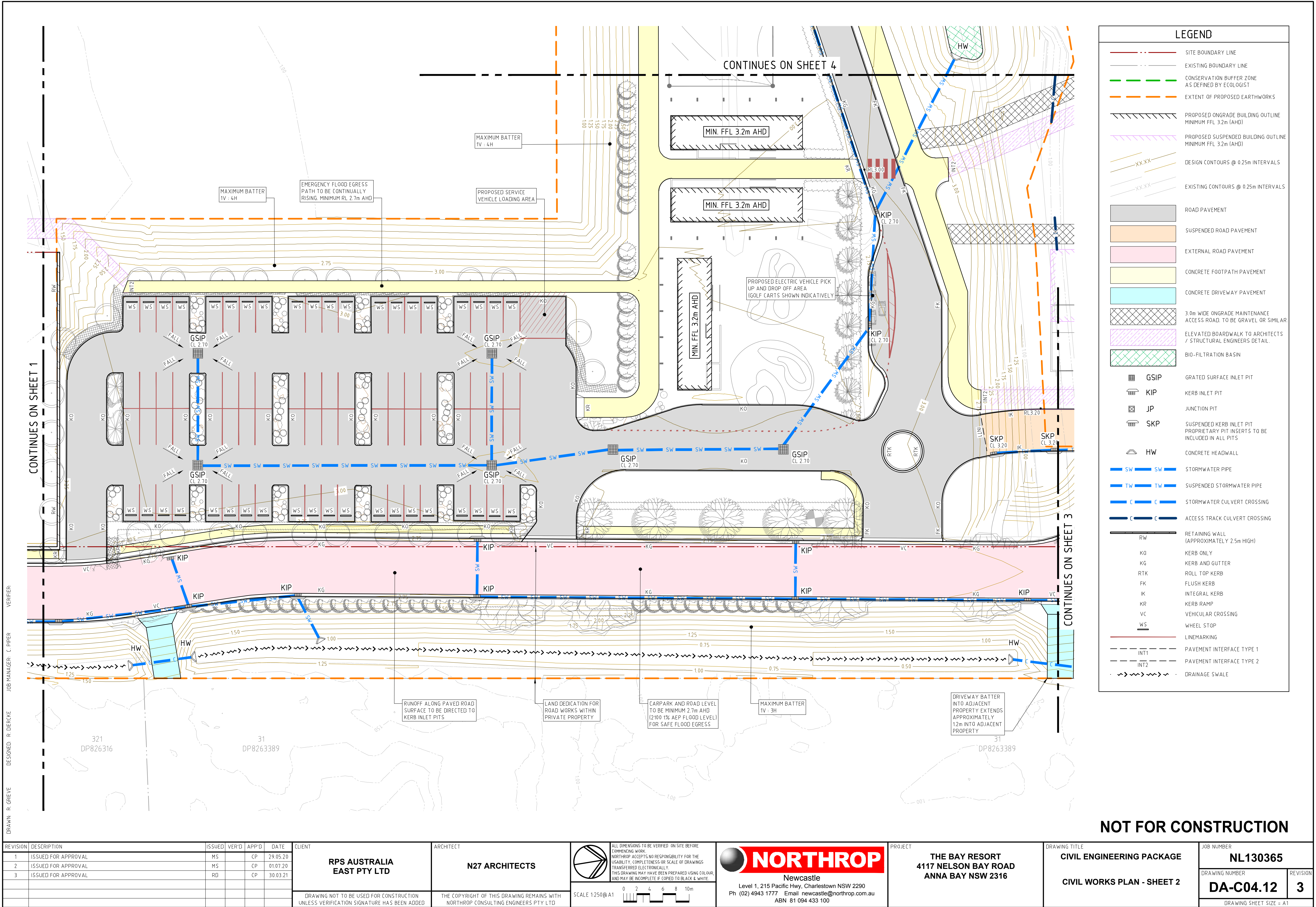


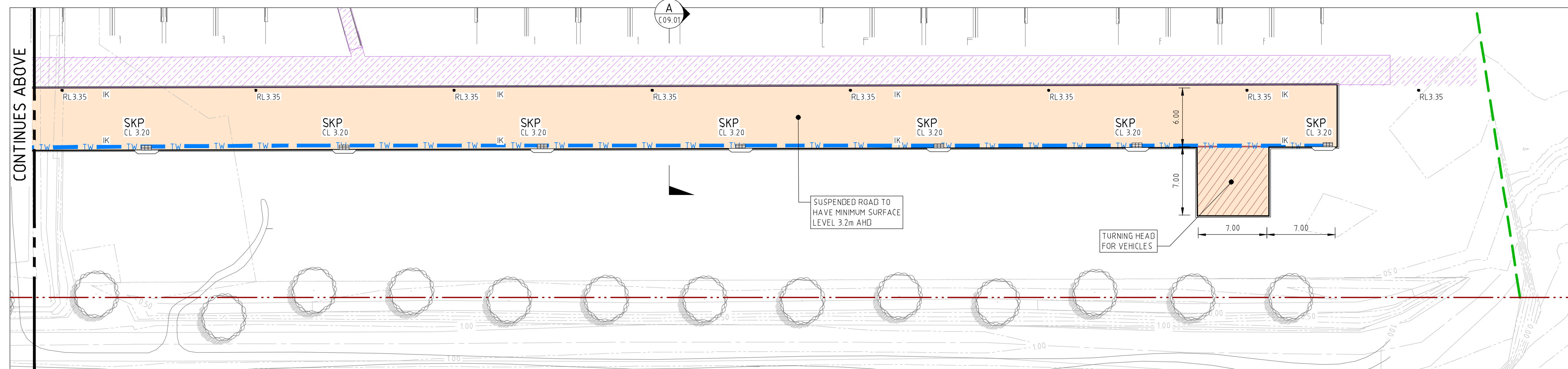
NORTHROP
Newcastle
Level 1, 215 Pacific Hwy, Charlestown NSW 2290
Ph (02) 4943 1777 Email newcastle@northrop.com.au
ABN 81 094 433 100

PROJECT	THE BAY RESORT 4117 NELSON BAY ROAD ANNA BAY NSW 2316
---------	---

DRAWING TITLE	CIVIL ENGINEERING PACKAGE CIVIL WORKS PLAN - SHEET 1
---------------	---

JOB NUMBER		NL130365
DRAWING NUMBER	REVISION	DA-C04.11 3
DRAWING SHEET SIZE = A1		





LEGEND

	SITE BOUNDARY LINE	
	EXISTING BOUNDARY LINE	
	CONSERVATION BUFFER ZONE AS DEFINED BY ECOLOGIST	
	EXTENT OF PROPOSED EARTHWORKS	
	PROPOSED ONGRADE BUILDING OUTLINE MINIMUM FFL 3.2m (AHD)	
	PROPOSED SUSPENDED BUILDING OUTLINE MINIMUM FFL 3.2m (AHD)	
	DESIGN CONTOURS @ 0.25m INTERVALS	
	EXISTING CONTOURS @ 0.25m INTERVALS	
	ROAD PAVEMENT	
	SUSPENDED ROAD PAVEMENT	
	EXTERNAL ROAD PAVEMENT	
	CONCRETE FOOTPATH PAVEMENT	
	CONCRETE DRIVEWAY PAVEMENT	
	3.0m WIDE ONGRADE MAINTENANCE ACCESS ROAD. TO BE GRAVEL OR SIMILAR.	
	ELEVATED BOARDWALK TO ARCHITECTS / STRUCTURAL ENGINEERS DETAIL.	
	BIO-FILTRATION BASIN	
	GSIP	GRATED SURFACE INLET PIT
	KIP	KERB INLET PIT
	JP	JUNCTION PIT
	SKP	SUSPENDED KERB INLET PIT PROPRIETARY PIT INSERTS TO BE INCLUDED IN ALL PITS
	HW	CONCRETE HEADWALL
	SW	STORMWATER PIPE
	TW	SUSPENDED STORMWATER PIPE
	C	STORMWATER CULVERT CROSSING
	C	ACCESS TRACK CULVERT CROSSING
	RW	RETAINING WALL (APPROXIMATELY 2.5m HIGH)
	K0	KERB ONLY
	KG	KERB AND GUTTER
	RTK	ROLL TOP KERB
	FK	FLUSH KERB
	IK	INTEGRAL KERB
	KR	KERB RAMP
	VC	VEHICULAR CROSSING
	WS	WHEEL STOP
		LINEMARKING
	INT1	PAVEMENT INTERFACE TYPE 1
	INT2	PAVEMENT INTERFACE TYPE 2
		DRAINAGE SWALE

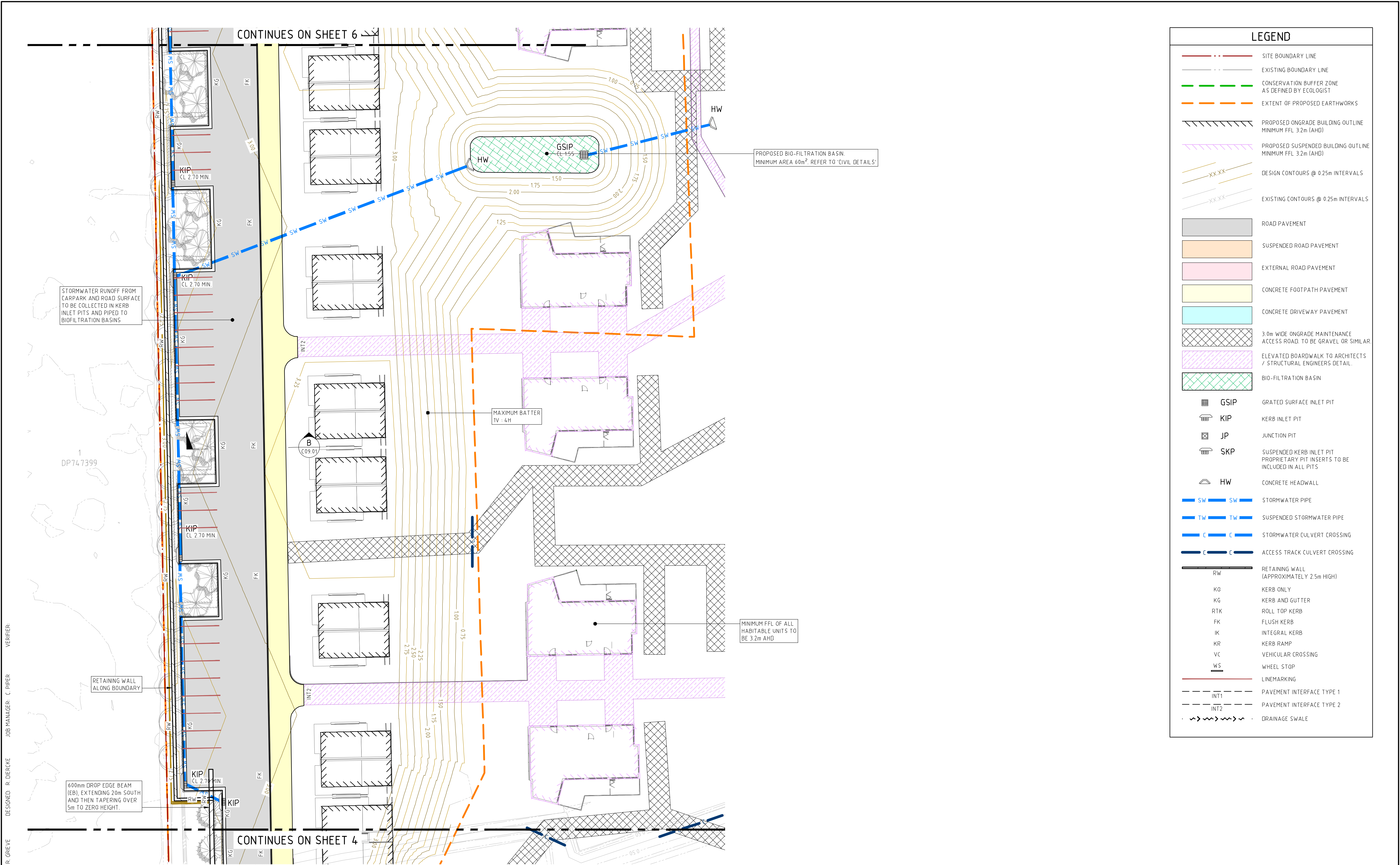
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REVISION	DESCRIPTION	ISSUED	VER'D	APP'D	DATE	CLIENT	ARCHITECT	 ALL DIMENSIONS TO BE VERIFIED ON SITE BEFORE COMMENCING WORK. NORTHROP ACCEPTS NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR SCALE OF DRAWINGS TRANSFERRED ELECTRONICALLY. THIS DRAWING MAY HAVE BEEN PREPARED USING COLOUR, AND MAY BE INCOMPLETE IF COPIED TO BLACK & WHITE. SCALE 1:250@ A1 	 Northrop Newcastle Level 1, 215 Pacific Hwy, Charlestown NSW 2290 Ph (02)4943 1777 Email newcastle@northrop.com.au ABN 81 094 433 100	PROJECT THE BAY RESORT 4117 NELSON BAY ROAD ANNA BAY NSW 2316	DRAWING TITLE CIVIL ENGINEERING PACKAGE CIVIL WORKS PLAN - SHEET 3	JOB NUMBER NL130365	DRAWING NUMBER DA-C04.13	REVISION 3	DRAWING SHEET SIZE = A1		
1	ISSUED FOR APPROVAL	MS		CP	29.05.20	RPS AUSTRALIA EAST PTY LTD	N27 ARCHITECTS									DRAWING NOT TO BE USED FOR CONSTRUCTION UNLESS VERIFICATION SIGNATURE HAS BEEN ADDED	THE COPYRIGHT OF THIS DRAWING REMAINS WITH NORTHROP CONSULTING ENGINEERS PTY LTD
2	ISSUED FOR APPROVAL	MS		CP	01.07.20												
3	ISSUED FOR APPROVAL	RD		CP	30.03.21												



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REVISION	DESCRIPTION	ISSUED	VER'D	APP'D	DATE	CLIENT	ARCHITECT			PROJECT	DRAWING TITLE	JOB NUMBER	
1	ISSUED FOR APPROVAL	MS	CP	29.05.20		RPS AUSTRALIA EAST PTY LTD	N27 ARCHITECTS		ALL DIMENSIONS TO BE VERIFIED ON SITE BEFORE COMMENCING WORK. NORTHROP ACCEPTS NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR SCALE OF DRAWINGS TRANSFERRED ELECTRONICALLY. THIS DRAWING MAY HAVE BEEN PREPARED USING COLOUR, AND MAY BE INCOMPLETE IF COPIED TO BLACK & WHITE.		THE BAY RESORT 4117 NELSON BAY ROAD ANNA BAY NSW 2316	NL130365	
2	ISSUED FOR APPROVAL	MS	CP	01.07.20									
3	ISSUED FOR APPROVAL	RD	CP	30.03.21									
						DRAWING NOT TO BE USED FOR CONSTRUCTION UNLESS VERIFICATION SIGNATURE HAS BEEN ADDED	THE COPYRIGHT OF THIS DRAWING REMAINS WITH NORTHROP CONSULTING ENGINEERS PTY LTD	SCALE 1:250@A1		Level 1, 215 Pacific Hwy, Charlestown NSW 2290 Ph (02) 4943 1777 Email newcastle@northrop.com.au ABN 81 094 433 100	CIVIL WORKS PLAN - SHEET 4	DRAWING NUMBER DA-C04.14	REVISION 3
										DRAWING SHEET SIZE = A1			



LEGEND	
	SITE BOUNDARY LINE
	EXISTING BOUNDARY LINE
	CONSERVATION BUFFER ZONE AS DEFINED BY ECOLOGIST
	EXTENT OF PROPOSED EARTHWORKS
	PROPOSED ONGRADE BUILDING OUTLINE MINIMUM FFL 3.2m (AHD)
	PROPOSED SUSPENDED BUILDING OUTLINE MINIMUM FFL 3.2m (AHD)
	DESIGN CONTOURS @ 0.25m INTERVALS
	EXISTING CONTOURS @ 0.25m INTERVALS
	ROAD PAVEMENT
	SUSPENDED ROAD PAVEMENT
	EXTERNAL ROAD PAVEMENT
	CONCRETE FOOTPATH PAVEMENT
	CONCRETE DRIVEWAY PAVEMENT
	3.0m WIDE ONGRADE MAINTENANCE ACCESS ROAD. TO BE GRAVEL OR SIMILAR.
	ELEVATED BOARDWALK TO ARCHITECTS / STRUCTURAL ENGINEERS DETAIL.
	BIO-FILTRATION BASIN
	GSIP GRATED SURFACE INLET PIT
	KIP KERB INLET PIT
	JP JUNCTION PIT
	SKP SUSPENDED KERB INLET PIT. PROPRIETARY PIT INSERTS TO BE INCLUDED IN ALL PITS
	HW CONCRETE HEADWALL
	SW STORMWATER PIPE
	TW SUSPENDED STORMWATER PIPE
	C STORMWATER CULVERT CROSSING
	C ACCESS TRACK CULVERT CROSSING
	RW RETAINING WALL (APPROXIMATELY 2.5m HIGH)
	KO KERB ONLY
	KG KERB AND GUTTER
	RTK ROLL TOP KERB
	FK FLUSH KERB
	IK INTEGRAL KERB
	KR KERB RAMP
	VC VEHICULAR CROSSING
	WS WHEEL STOP
	LINEMARKING
	INT1 PAVEMENT INTERFACE TYPE 1
	INT2 PAVEMENT INTERFACE TYPE 2
	DRAINAGE SWALE

DRAWN: R. GREIVE
DESIGNED: R. DIERCKE
JOB MANAGER: C. PIPHER
VERIFIER:

REVISION	DESCRIPTION	ISSUED	VER'D	APP'D	DATE
1	ISSUED FOR APPROVAL	MS		CP	29.05.20
2	ISSUED FOR APPROVAL	MS		CP	01.07.20
3	ISSUED FOR APPROVAL	RD		CP	30.03.21

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ARCHITECT	N27 ARCHITECTS
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SCALE 1:250@A1
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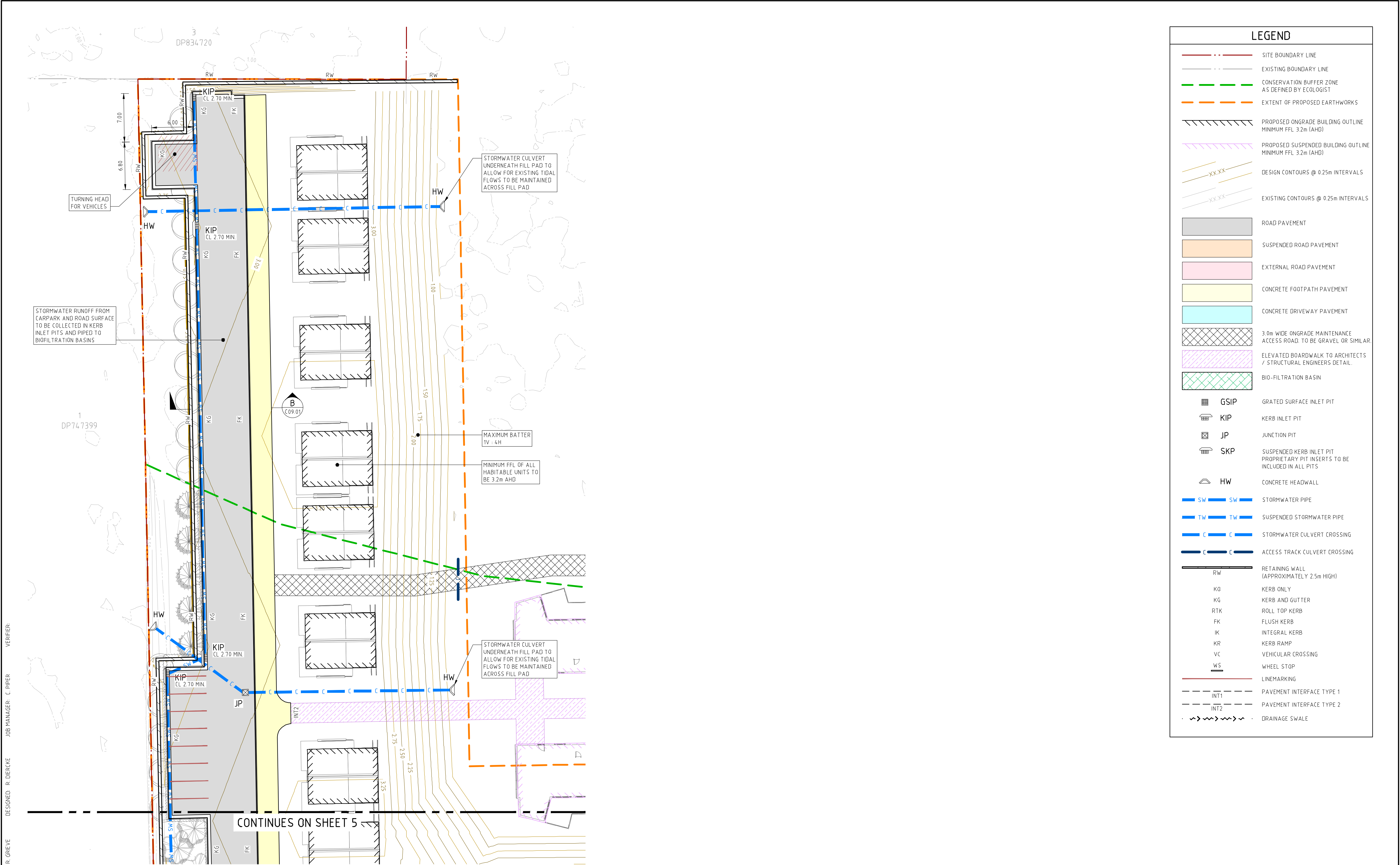
NORTHROP
Newcastle
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ABN 81 094 433 100

PROJECT	THE BAY RESORT 4117 NELSON BAY ROAD ANNA BAY NSW 2316
---------	---

DRAWING TITLE	CIVIL ENGINEERING PACKAGE
CIVIL WORKS PLAN - SHEET 5	

JOB NUMBER	NL130365
DRAWING NUMBER	DA-C04.15
REVISION	3
DRAWING SHEET SIZE = A1	

NOT FOR CONSTRUCTION



LEGEND	
	SITE BOUNDARY LINE
	EXISTING BOUNDARY LINE
	CONSERVATION BUFFER ZONE AS DEFINED BY ECOLOGIST
	EXTENT OF PROPOSED EARTHWORKS
	PROPOSED ONGRADE BUILDING OUTLINE MINIMUM FFL 3.2m (AHD)
	PROPOSED SUSPENDED BUILDING OUTLINE MINIMUM FFL 3.2m (AHD)
	DESIGN CONTOURS @ 0.25m INTERVALS
	EXISTING CONTOURS @ 0.25m INTERVALS
	ROAD PAVEMENT
	SUSPENDED ROAD PAVEMENT
	EXTERNAL ROAD PAVEMENT
	CONCRETE FOOTPATH PAVEMENT
	CONCRETE DRIVEWAY PAVEMENT
	3.0m WIDE ONGRADE MAINTENANCE ACCESS ROAD, TO BE GRAVEL OR SIMILAR
	ELEVATED BOARDWALK TO ARCHITECTS / STRUCTURAL ENGINEERS DETAIL
	BIO-FILTRATION BASIN
	GSIP GRATED SURFACE INLET PIT
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	TW SUSPENDED STORMWATER PIPE
	C STORMWATER CULVERT CROSSING
	C ACCESS TRACK CULVERT CROSSING
	RW RETAINING WALL (APPROXIMATELY 2.5m HIGH)
	KO KERB ONLY
	KG KERB AND GUTTER
	RTK ROLL TOP KERB
	FK FLUSH KERB
	IK INTEGRAL KERB
	KR KERB RAMP
	VC VEHICULAR CROSSING
	WS WHEEL STOP
	LINEMARKING
	INT1 PAVEMENT INTERFACE TYPE 1
	INT2 PAVEMENT INTERFACE TYPE 2
	DRAINAGE SWALE

DRAWN: R. GRIEVE
DESIGNED: R. DIERCKE
JOB MANAGER: C. BIEFER
VERIFIER:

REVISION	DESCRIPTION	ISSUED	VER'D	APP'D	DATE
1	ISSUED FOR APPROVAL	MS		CP	29.05.20
2	ISSUED FOR APPROVAL	RD		CP	30.03.21

CLIENT	RPS AUSTRALIA EAST PTY LTD
ARCHITECT	N27 ARCHITECTS
DRAWING NOT TO BE USED FOR CONSTRUCTION UNLESS VERIFICATION SIGNATURE HAS BEEN ADDED	

CLIENT	RPS AUSTRALIA EAST PTY LTD
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SCALE 1:250@A1

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Ph (02) 4943 1777 Email newcastle@northrop.com.au
ABN 81 094 433 100

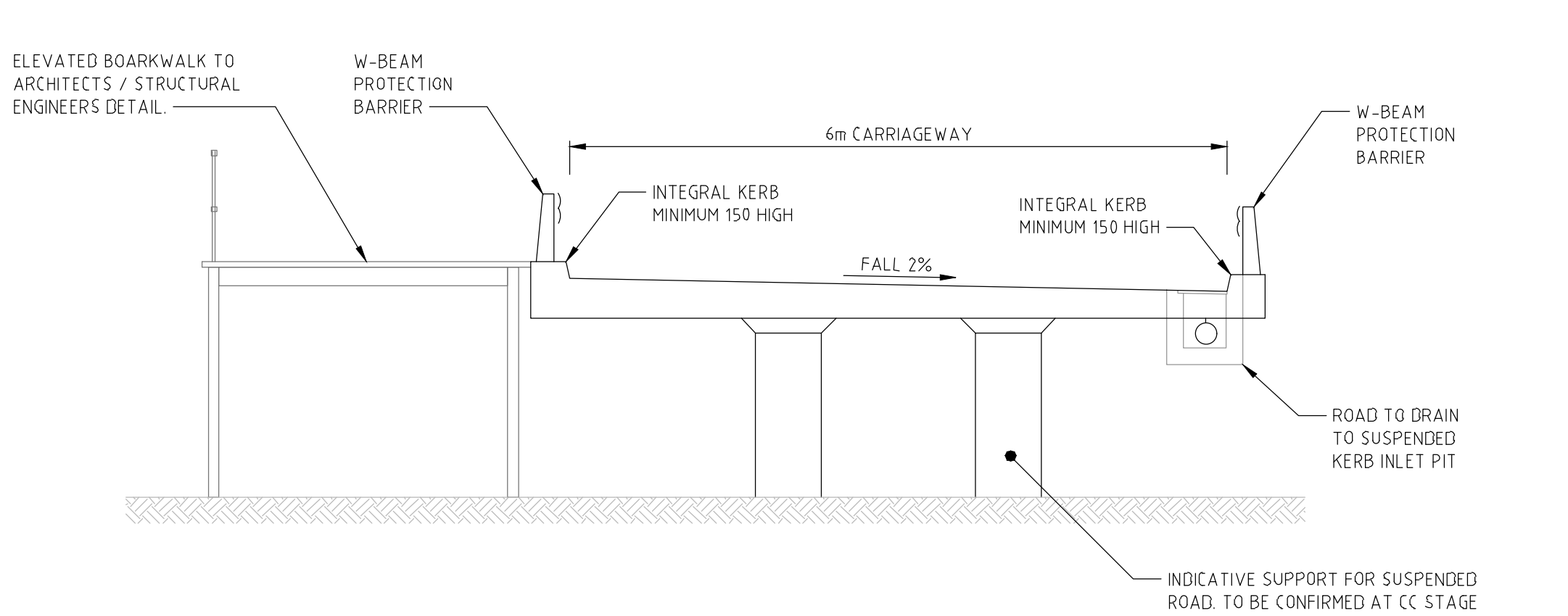
PROJECT	THE BAY RESORT 4117 NELSON BAY ROAD ANNA BAY NSW 2316
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DRAWING TITLE	CIVIL ENGINEERING PACKAGE CIVIL WORKS PLAN - SHEET 6
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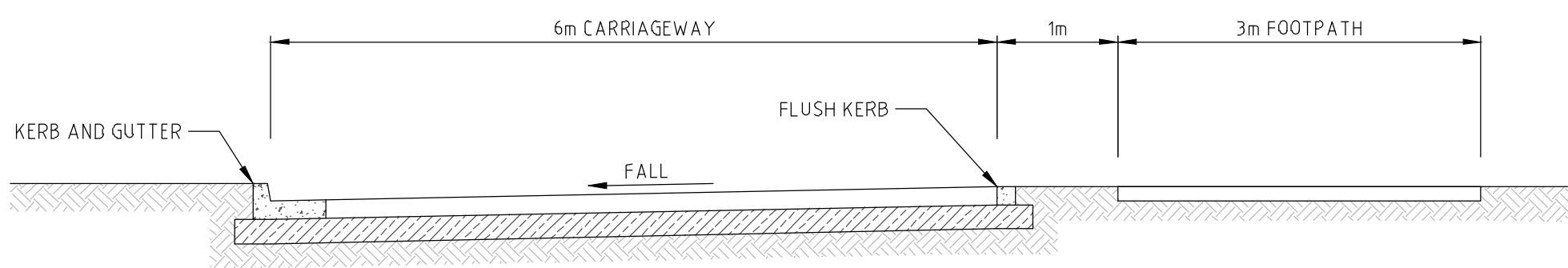
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DRAWING NUMBER	DA-C04.16
REVISION	2
DRAWING SHEET SIZE = A1	

NOT FOR CONSTRUCTION

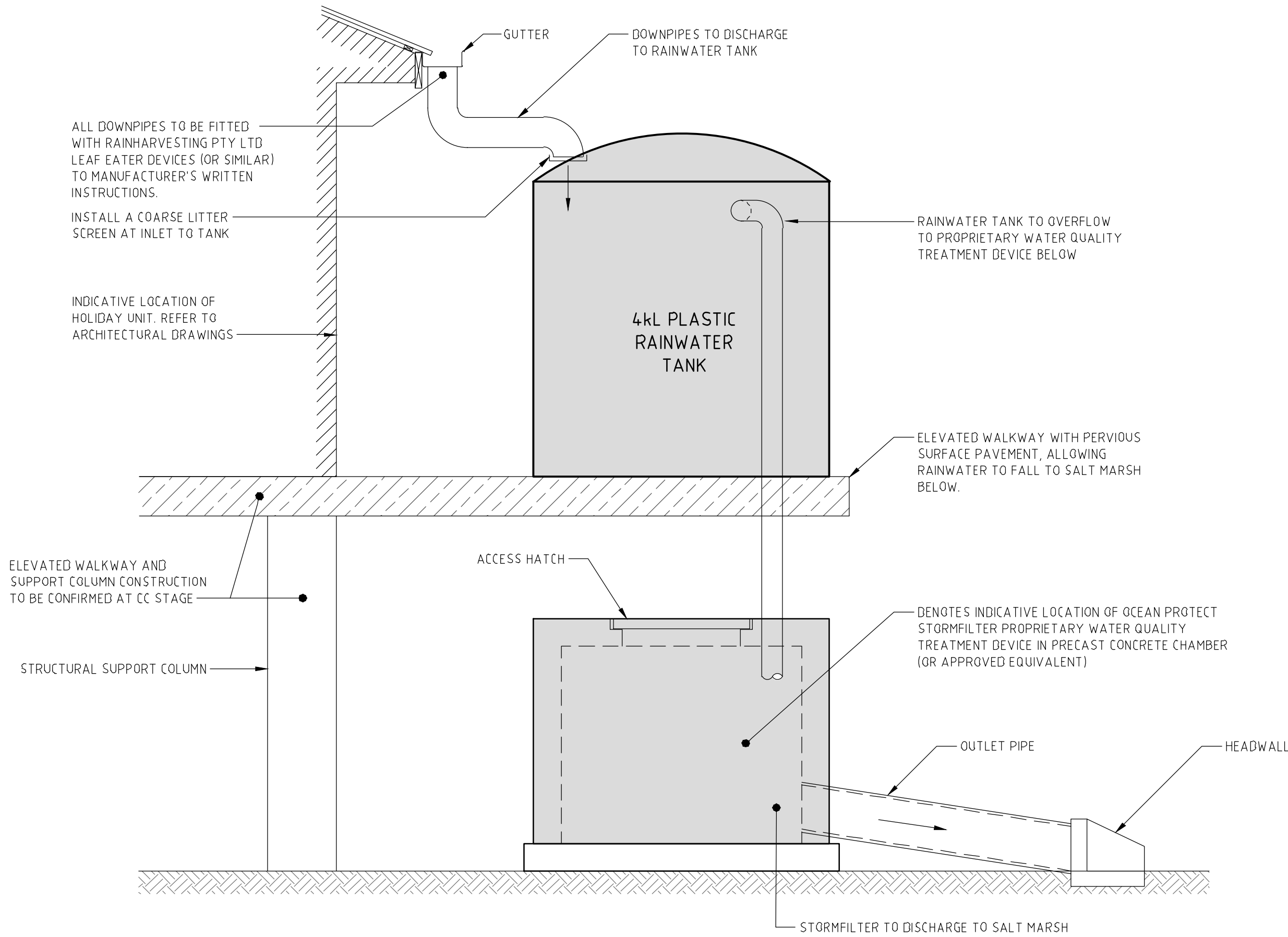
VERIFIER: C. BIER
JOB MANAGER: C. BIER
DESIGNED: R. DIERCKE
DRAWN: R. GREVE



SUSPENDED ROAD - TYPICAL SECTION
SECTION A C04.13

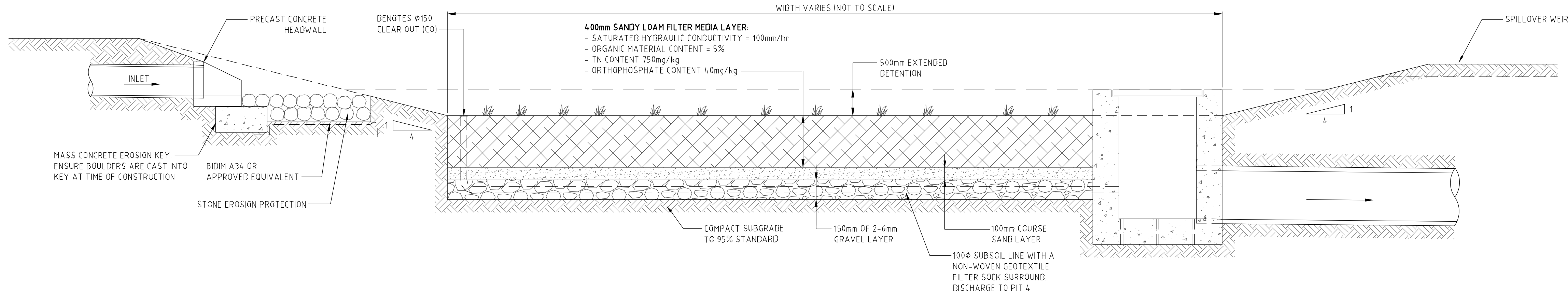


TYPICAL SECTION
SECTION B C04.14, B C04.15, B C04.16



RAINWATER TANK AND STORMFILTER TYPICAL SECTION

1. ALL UNITS TO HAVE MINIMUM 4kL RAINWATER TANK INSTALLED.
2. STORMFILTER INSTALLATION LOCATIONS ARE SPECIFIED ON DRAWING C04.01. ONE STORMFILTER PER 3-8 UNITS. STORMWATER PIPES TO RUN UNDERNEATH ELEVATED WALKWAY AND TO STORMFILTER



TYPICAL BIORETENTION SECTION

NOT FOR CONSTRUCTION

REVISION	DESCRIPTION	ISSUED	VER'D	APP'D	DATE
1	ISSUED FOR APPROVAL	MS		CP	29.05.20

CLIENT	RPS AUSTRALIA EAST PTY LTD
ARCHITECT	N27 ARCHITECTS
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ARCHITECT	N27 ARCHITECTS
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Ph (02) 4943 1777 Email newcastle@northrop.com.au
ABN 81 094 433 100

PROJECT	THE BAY RESORT 4117 NELSON BAY ROAD ANNA BAY NSW 2316
---------	---

DRAWING TITLE	CIVIL ENGINEERING PACKAGE
	CIVIL DETAILS - SHEET 1

JOB NUMBER	NL130365
DRAWING NUMBER	DA-C09.01
REVISION	1
DRAWING SHEET SIZE = A1	

DRAWN: R. GREVE
DESIGNED: R. DIERCKE
JOB MANAGER: C. BIFER
VERIFIER:

REVISION	DESCRIPTION	ISSUED	VER'D	APP'D	DATE
1	ISSUED FOR APPROVAL	MS		CP	01.07.20

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ARCHITECT N27 ARCHITECTS
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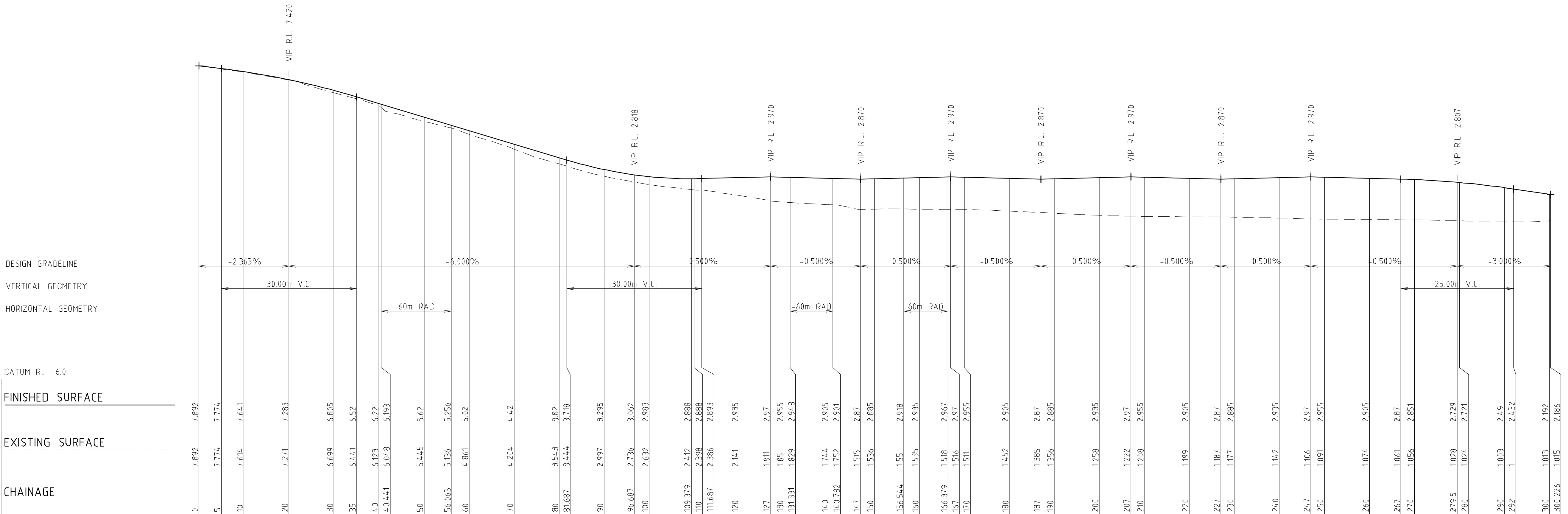
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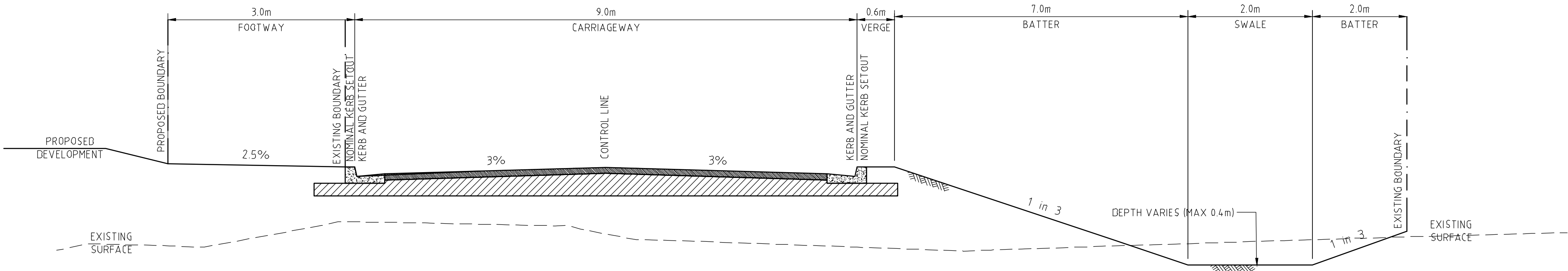
PROJECT THE BAY RESORT 4117 NELSON BAY ROAD ANNA BAY NSW 2316
--

DRAWING TITLE CIVIL ENGINEERING PACKAGE CIVIL DETAILS - SHEET 2
--

JOB NUMBER NL130365	REVISION 1
DRAWING NUMBER DA-C09.02	DRAWING SHEET SIZE = A1



LONGITUDINAL SECTION ALONG MCL01
HORIZONTAL SCALE 1:500@A1
VERTICAL SCALE 1:100@A1



TYPICAL EXTERNAL ROAD SECTION

NOT FOR CONSTRUCTION