# Attachment A

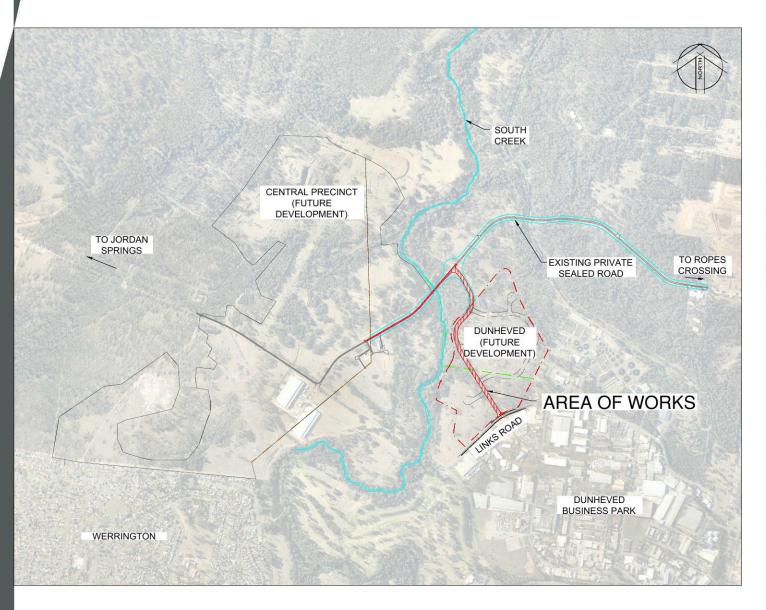
# **Engineering Plans**

Cardno



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# CENTRAL PRECINCT ST MARYS SITE HAUL ROAD COVER SHEER & DRAWING LIST



### DRAWING SCHEDULE

89914020-DACC-BE-1000 COVER SHEET 89914020-DACC-BE-1001 GENERAL NOTI 89914020-DACC-BE-1100 GENERAL ARRA

89914020-DACC-BE-1201 89914020-DACC-BE-1202 89914020-DACC-BE-1203 89914020-DACC-BE-1204

89914020-DACC-BE-1210 89914020-DACC-BE-1211 89914020-DACC-BE-1212 89914020-DACC-BE-1213 89914020-DACC-BE-1214

89914020-DACC-BE-1225 89914020-DACC-BE-1226

89914020-DACC-BE-1250 89914020-DACC-BE-1251

89914020-DACC-BE-1301 89914020-DACC-BE-1302 89914020-DACC-BE-1303 89914020-DACC-BE-1304 COVER SHEET & DRAWING LIST GENERAL NOTES & SPECIFICATIONS GENERAL ARRANGEMENT PLAN

SITE GRADING PLAN SHEET 1 SITE GRADING PLAN SHEET 2 SITE GRADING PLAN SHEET 3 SITE GRADING PLAN SHEET 4

ROAD LONGITUDINAL SECTIONS ROAD 001 SHEET 1 ROAD LONGITUDINAL SECTIONS ROAD 001 SHEET 2 ROAD LONGITUDINAL SECTIONS ROAD 001 SHEET 3 ROAD LONGITUDINAL SECTIONS ROAD 002 SHEET 1 ROAD LONGITUDINAL SECTIONS ROAD 002 SHEET 2

STORMWATER LAYOUT PLAN STORMWATER TYPICAL DETAILS

TYPICAL CROSS SECTIONS SHEET 1
TYPICAL CROSS SECTIONS SHEET 2

EROSION & SEDIMENT CONTROL PLAN SHEET 1
EROSION & SEDIMENT CONTROL PLAN SHEET 2
EROSION & SEDIMENT CONTROL PLAN SHEET 3
EROSION & SEDIMENT CONTROL PLAN SHEET 4
EROSION & SEDIMENT CONTROL TYPICAL DETAILS

03 11/09/2014 ISSUED FOR DA APPROVAL KW SCP SCI
02 04/09/2014 PRELIMINARY ISSUED FOR COORDINATION KW SCP SCI
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oved P	11/06/2014	Drawing Number 89914020	-DACC-BE-1000	)

#### SITEWORKS NOTES

1. ORIGIN OF LEVELS:- REFER SURVEY NOTES.

CONTRACTOR MUST VERIFY ALL DIMENSIONS AND EXISTING LEVELS ON SITE PRIOR TO COMMENCEMENT OF WORK, ANY DISCREPANCIES TO BE REPORTED TO CARDNO.

3. MAKE SMOOTH CONNECTION WITH EXISTING WORKS

4. WHERE NOTED ON THE DRAWINGS THAT WORKS ARE TO BE CARRIED OUT BY OTHERS, (eg. ADJUSTMENT OF SERVICES), THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CO-ORDINATION OF THESE WORKS.

#### SURVEY NOTES

THE EXISTING SITE CONDITIONS SHOWN ON THE FOLLOWING DRAWINGS HAVE BEEN INVESTIGATED BY INSITES, BEING REGISTERED SURVEYORS, (RECEIVED 04/03/2014 CAD FILE C212-CPT-detail-2.dwg)
THE INFORMATION IS SHOWN TO PROVIDE A BASIS FOR DESIGN. CARDNO DOES NOT GUARANTEE THE ACCURACY OR COMPLETENESS OF THE SURVEY BASE OR ITS SUITABILITY AS A BASIS FOR CONSTRUCTION DRAWINGS. SHOULD DISCREPANCIES BE ENCOUNTERED DURING CONSTRUCTION BETWEEN THE SURVEY DATA AND ACTUAL FIELD DATA CONTACT CARDNO THE THE SURVEY DATA AND ACTUAL FIELD DATA, CONTACT CARDNO THE POLLOWING NOTES HAVE BEEN TAKEN DIRECTLY FROM THE ORIGINAL SURVEY DOCUMENTS. SERVICES HAVE BEEN PLOTTED FROM RELEVANT AUTHORITIES INFORMATION AND ARE APPROXIMATE. ALL RELEVANT AUTHORITIES SHOULD BE NOTIFIED PRIDR TO ANY EXCAVATION ON OR NEAR THE SITE

APPROVED DA ROAD RESERVES WITHIN THE DUNHEVED PRECINCT BASED ON CAD FILES RECEIVED 28/02/2014 FROM PARSONS BRINCKERHOFF PROJECT NUMBER 2122723A

#### **BULK EARTHWORKS NOTES**

1. ORIGIN OF LEVELS: REFER SURVEY NOTES

2. STRIP TOPSOIL/ORGANIC MATERIAL FROM CONSTRUCTION AREA AND REMOVE FROM SITE AS DIRECTED BY SUPERINTENDENT

3. EXCAVATED MATERIAL TO BE USED AS STRUCTURAL FILL PROVIDED THE PLACEMENT MOISTURE CONTENT OF THE MATERIAL IS +/- 2% OF THOPTIMUM MOISTURE CONTENT.

4. COMPACT FILL AREAS AND SUBGRADE TO NOT LESS THAN

LUCATION	(AS 1289 E 5.1.1.)	3111
UNDER BUILDING SLABS		
		1000
ON GROUND		98%
UNDER ROADS AND		
CARPARKS		100%
LANDSCAPED AREAS UNLES	S NOTED OTHERWISE	95%

5. FOR NON COHESIVE MATERIAL, COMPACT TO 75% DENSITY INDEX.

6. BEFORE PLACING FILL, PROOF ROLL EXPOSED SUBGRADE WITH AN 8 TONNE (MIN) DEADWEIGHT SMOOTH DRUM VIBRATORY ROLLER TO DETECT THEN REMOVE SOFT SPOTS (AREAS WITH MORE THAN 2mm MOVEMENT

7. FREQUENCY OF COMPACTION TESTING SHALL BE IN ACCORDANCE WITH COUNCIL ENGINEERING SPECIFICATIONS.

8. FILLING TO BE PLACED IN MAXIMUM 250mm - LOOSE LAYERS AND COMPACTED AS SPECIFIED 9. NO FILLING SHALL TAKE PLACE TO EXPOSED SUBGRADE UNTIL THE AREA

HAS BEEN PROOF ROLLED IN THE PRESENCE OF CARDNO AND APPROVAL GIVEN IN WRITING THAT FILLING CAN PROCEED. 10. BULK EARTHWORKS TO BE BE WITHIN (+0,-100mm) OF DESIGN LEVELS

11. WORKS UNDERTAKEN TO BE IN ACCORDANCE WITH GEO-ENVIRONMENTAL ENGINEERING GEOTECHNICAL INVESTIGATION REPORT (G12060FL-R02F) AND SALINE SOILS MANAGEMENT PLAN (G12060EL-R03F)

#### **EROSION AND SEDIMENT CONTROL** NOTES

#### GENERAL INSTRUCTIONS

 THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE CONTROL OF EROSION AND SEDIMENTATION TO THE SATISFACTION OF COUNCIL, DEPARTMENT OF WATER AND ENERGY (DWE), SYDNEY WATER, THE DEPARTMENT OF ENVIRONMENT, CLIMATE CHANGE AND WATER NSW (DECCW), AND LEND LEASE'S REPRESENTATIVE. TO THIS END, THE EROSION AND SEDIMENTATION CONTROLS SHOWN ON THE DRAWINGS SHALL ONLY BE USED AS A GUIDE BY THE CONTRACTOR, AND SHALL REPRESENT THE MINIMUM REQUIREMENT ONLY.

THE CONTRACTOR SHALL ENSURE THAT ALL SOIL AND WATER MANAGEMENT WORKS ARE LOCATED AS DOCUMENTED OR AS OTHERWISE DIRECTED BY THE SUPERINTENDENT.

3. ALL WORK SHALL BE GENERALLY CARRIED OUT IN ACCORDANCE WITH

b. FPA REQUIREMENTS NSW DEPARTMENT OF HOUSING MANUAL "MANAGING LIRRAN

MWATER, SOILS AND CONSTRUCTION", 4th EDITION, MARCH 2004. . MAINTAIN THE EROSION CONTROL DEVICES TO THE SATISFACTION OF THE SUPERINTENDENT AND THE LOCAL AUTHORITY

5. WHEN STORMWATER PITS ARE CONSTRUCTED, PREVENT SITE RUNOFF ENTERING UNLESS SEDIMENT FENCES ARE ERECTED AROUND PITS

6. CONTRACTOR IS TO ENSURE ALL EROSION & SEDIMENT CONTROL 6. CON INACTOR IS TO ENSURE ALL ENDSION & SEDIMENT LOWIND. DEVICES ARE MAINTAINED IN GOOD WORKING ORDER AND OPERATE EFFECTIVELY. REPAIRS AND OR MAINTENANCE SHALL BE UNDERTAKEN AS REQUIRED, PARTICULARLY FOLLOWING RAINFALL EVENTS.

#### LAND DISTURBANCE

7. WHERE PRACTICAL, THE SOIL EROSION HAZARD ON THE SITE WILL BE KEPT AS LOW AS POSSIBLE. TO THIS END, WORKS SHOULD BE UNDERTAKEN IN THE FOLLOWING SEQUENCE:

(A) INSTALL A SEDIMENT FENCE ALONG THE BOUNDARIES AS SHOWN ON PLAN. REFER DETAIL.

(B) CONSTRUCT STABILISED CONSTRUCTION ENTRANCE TO LOCATION AS DETERMINED BY SUPERINTENDENT/ENGINEER, REFER DETAIL.

(C) INSTALL SEDIMENT TRAPS AS SHOWN ON PLAN.

(D) UNDERTAKE SITE DEVELOPMENT WORKS IN ACCORDANCE WITH THE ENGINEERING PLANS. WHERE POSSIBLE, PHASE DEVELOPMENT SO THAT LAND DISTURBANCE IS CONFINED TO AREAS OF WORKABLE SIZE.

#### EROSION CONTROL

8 DURING WINDY WEATHER LARGE UNPROTECTED AREAS WILL BE KEPT MOIST (NOT WET) BY SPRINKLING WITH WATER TO KEEP DUST UND

9. FINAL SITE LANDSCAPING WILL BE UNDERTAKEN AS SOON AS POSSIBLE AND WITHIN 20 WORKING DAYS FROM COMPLETION OF CONSTRUCTION ACTIVITIES.

#### SEDIMENT CONTROL

10. STOCKPILES WILL NOT BE LOCATED WITHIN 2 METRES OF HAZARD 10. STOCKPILES WILL NOT BE LUCATED WITHIN 2 METRES OF HAZARD AREAS, INCLUDING LIKELY AREAS OF CONCENTRATED OR HIGH VELOCI FLOWS SUCH AS WATERWAYS. WHERE THEY ARE BETWEEN 2 AND 5 METRES FROM SUCH AREAS, SPECIAL SEDIMENT CONTROL MEASURES SHOULD BE TAKEN TO MIMMISE POSSIBLE POLLUTION TO DOWNSLOPE WATERS, E.G. THROUGH INSTALLATION OF SEDIMENT FENCING.

1. ANY SAND USED IN THE CONCRETE CURING PROCESS (SPREAD OVER THE SURFACE) WILL BE REMOVED AS SOON AS POSSIBLE AND WITHIN 10 WORKING DAYS FROM PLACEMENT. 12. WATER WILL BE PREVENTED FROM ENTERING THE PERMANENT

IZ. WALLER WILL DE PREVENTED FROM ENTERING THE PERMANENT DRAINAGE SYSTEM UNLESS IT IS RELATIVELY SEDIMENT FREE, IE. THE CATCHMENT AREA HAS BEEN PERMANENTLY LANDSCAPED AND/OR ANY LIKELY SEDIMENT HAS BEEN FILTERED THROUGH AN APPROVED STRUCTURE.

13. TEMPORARY SOIL AND WATER MANAGEMENT STRUCTURES WILL BE REMOVED ONLY AFTER THE LANDS THEY ARE PROTECTING AR REHABILITATED.

#### OTHER MATTERS

14, ACCEPTABLE RECEPTORS ARE TO BE PROVIDED BY THE CONTRACTOR FOR CONCRETE AND MORTAR SLURRIES, PAINTS, ACID WASHINGS, LIGHT-WEIGHT WASTE MATERIALS AND LITTER.

15. ANY EXISTING TREES WHICH FORM PART OF THE FINAL LANDSCAPING PLAN WILL BE PROTECTED FROM CONSTRUCTION ACTIVITIES E

(A) PROTECTING THEM WITH BARRIER FENCING OR SIMILAR MATERIALS INSTALLED OUTSIDE THE DRIP LINE

(B) ENSURING THAT NOTHING IS NAILED TO THEM

(C) PROHIBITING PAVING, GRADING, SEDIMENT WASH OR PLACING OF STOCKPILES WITHIN THE DRIP LINE EXCEPT UNDER THE FOLLOWING

(I) FNCROACHMENT ONLY OCCURS ON ONE SIDE AND NO CLOSER TO THE TRUNK THAN EITHER 15 METRES OR HALF THE DISTANCE
BETWEEN THE OUTER EDGE OF THE DRIP LINE AND THE TRUNK, WHICH
EVER IS THE GREATER

(II) A DRAINAGE SYSTEM THAT ALLOWS AIR AND WATER TO CIRCULATE THROUGH THE ROOT ZONE (E.G. A GRAVEL BED) IS PLACED UNDER ALL FILL LAYERS OF MORE THAN 300 MILLIMETRES DEPTH

(III) CARE IS TAKEN NOT TO CUT ROOTS UNNECESSARILY NOR TO

#### EXISTING UNDERGROUND SERVICES NOTES

THE LOCATIONS OF UNDERGROUND SERVICES SHOWN IN THIS SET OF DRAWINGS HAVE BEEN PLOTTED FROM SURVEY INFORMATION AND SERVICE AUTHORITY INFORMATION. THE SERVICE INFORMATION HAS BEEN PREPARED ONLY TO SHOW THE APPROXIMATE POSITIONS OF ANY KNOWN SERVICES AND MAY NOT BE AS CONSTRUCTED OR ACCURATE CARDNO CAN DRAWINGS ACCURATELY INDICATES THE PRESENCE OR ABSENCE OF SERVICES IN THE PRESENCE OR ABSENCE OF SERVICES OF THEIR LOCATION AND WILL ACCEPT NO LIABILITY FOR INACCURACIES IN THE SERVICES IN FORMATION SHOWN FROM ANY CAUSE

CONTRACTORS SHALL TAKE DUE CARE WHEN EXCAVATING ONSITE INCLUDING HAND EXCAVATION WHERE NECESSARY.
CONTRACTORS ARE TO CONTACT THE RELEVANT SERVICE AUTHORITY PRIOR TO COMMENCEMENT OF EXCAVATION WORKS, CONTRACTORS ARE TO UNDERTAKE A SERVICES SEARCH, PRIDE TO COMMENCEMENT OF WORKS ON SITE. SEARCH RESULTS ARE TO BE KEPT ON SITE AT ALL TIMES.

#### VEHICLE MOVEMENT NOTES

- 1. VEHICLE TURNING PATHS BASED ON 26m B-DOUBLE, WITH A
- MINIMUM MANEUVERING SPEED OF 10km/hr

  2. A 600mm VEHICLE CLEARANCE HAS BEEN ALLOWED AS PER

#### PROPOSED WORKS LEGEND

----19.80---- PROPOSED CONTOURS e - EXISTING OHW (POWER) ----+ ---- FXISTING DHW (COMMS) —— g —— EXISTING GAS \_\_\_\_ • \_\_\_ FXISTING SEWER \_\_\_\_ EXISTING WATER — / — EXISTING FENCELINE ---- CATCHMENT EXTENT

- I - SITE BOUNDARY CULVERT & HEADWALL

CUT AREA FILL AREA

→ → — EXISTING CHANNE ■ PROPOSED STORMWATER PIT

#### SEDIMENT & EROSION CONTROL LEGEND

STRAW BALES \_\_\_\_ SEDIMENT FENCE - - SEDIMENT CATCHMENT BOUNDARY STABILISED SITE ENTRY/EXIT WITH WHEEL WASH OVERLAND FLOW DIRECTION --- -- STORMWATER FLOW DIRECTION

#### DIAL BEFORE YOU DIG INFORMATION

DIAL BEFORE YOU DIG INFORMATION HAS BEEN RECEIVED FROM APA GROUP, JEMENA EASTERN GAS PPELINE, SYDNEY WATER, TELSTRA AND ENDEAVOUR ENERGY. THE LOCATIONS OF THESE EXISTING SERVICES HAVE BEEN PLOTTED & ONLY SHOW THE APPROXIMATE POSITIONS. CONTRACTOR TO LOCATE AND PROTECT ALL EXISTING SERVICES PRIOR TO THE START OF CONSTRUCTION.

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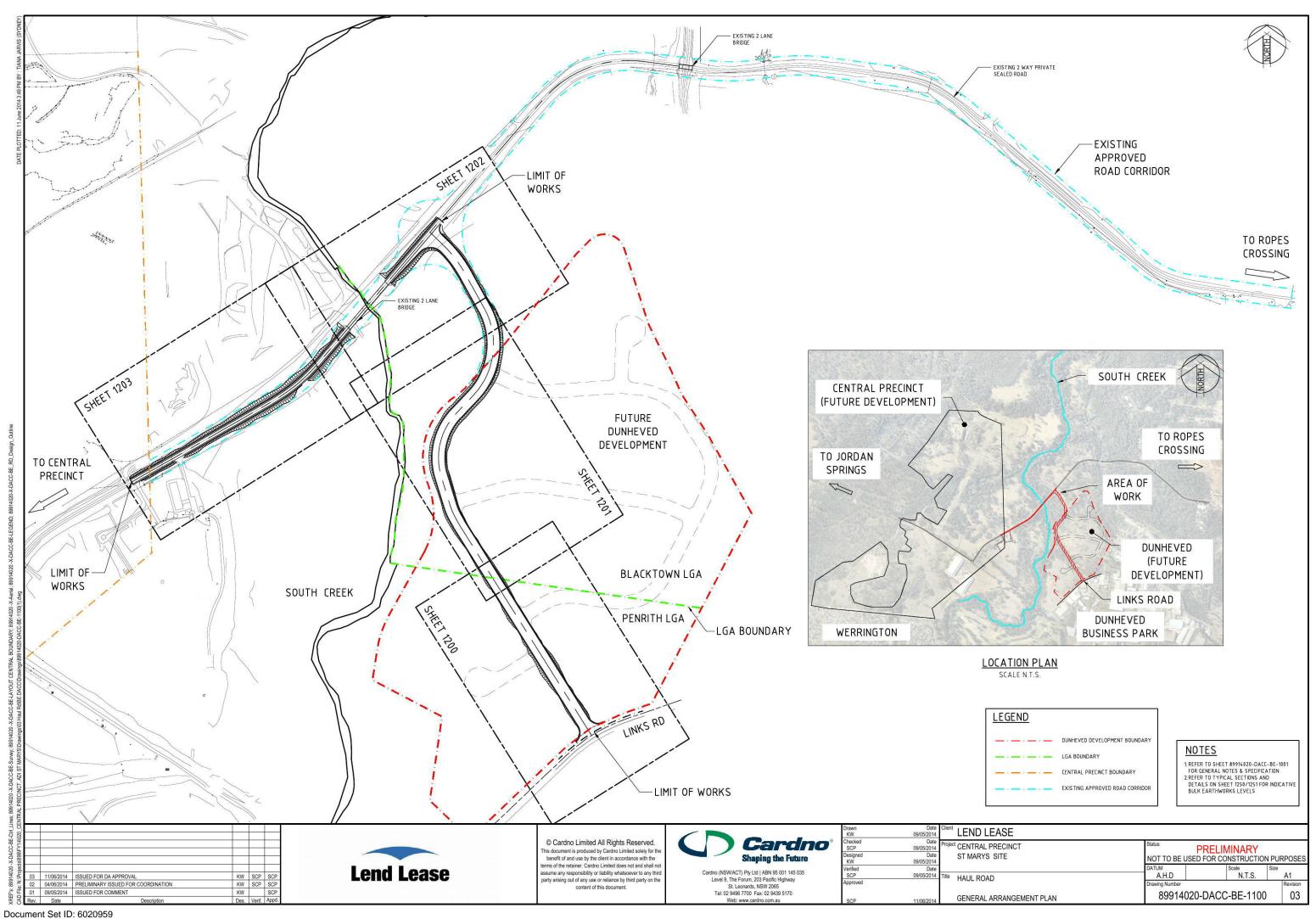
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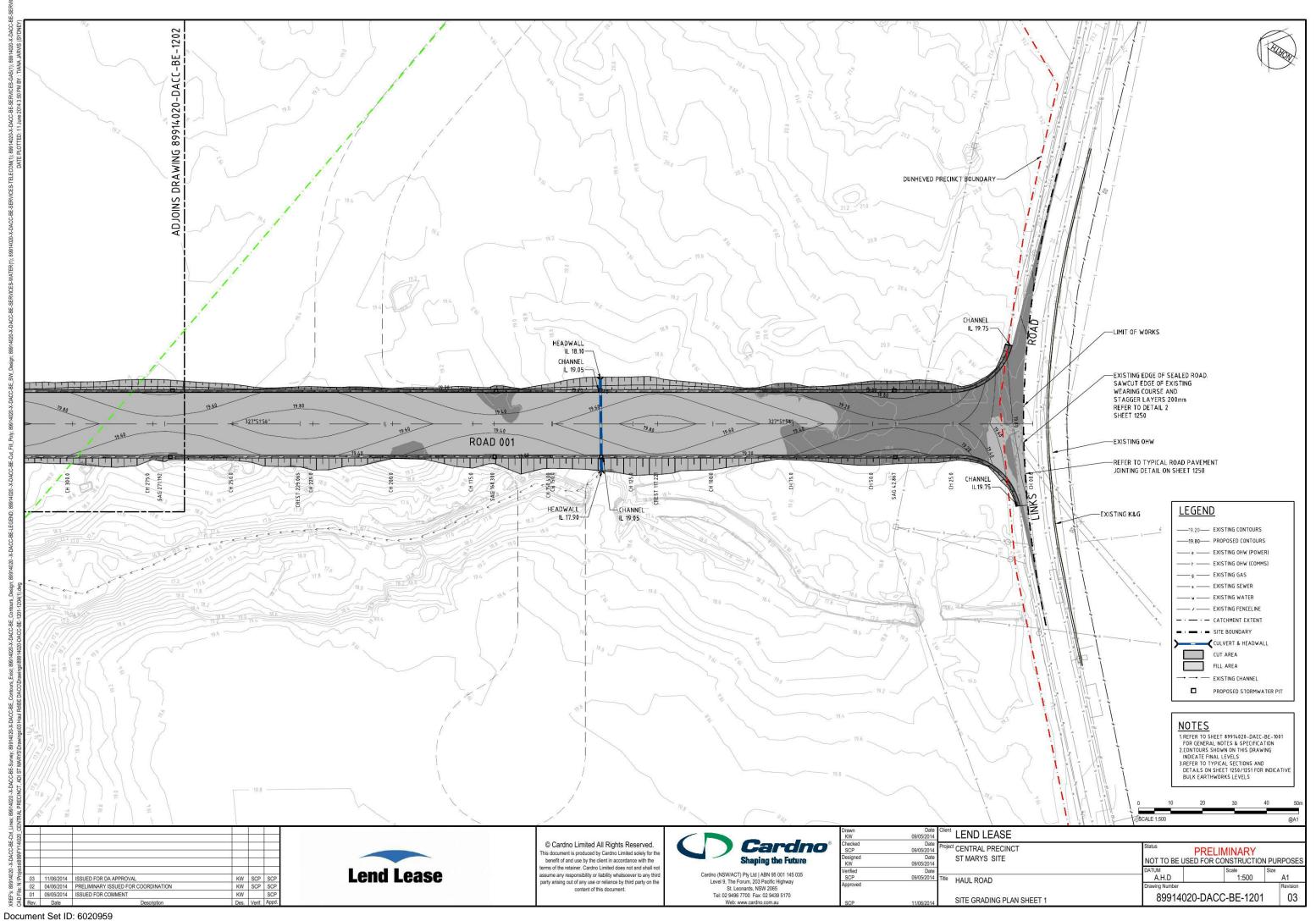


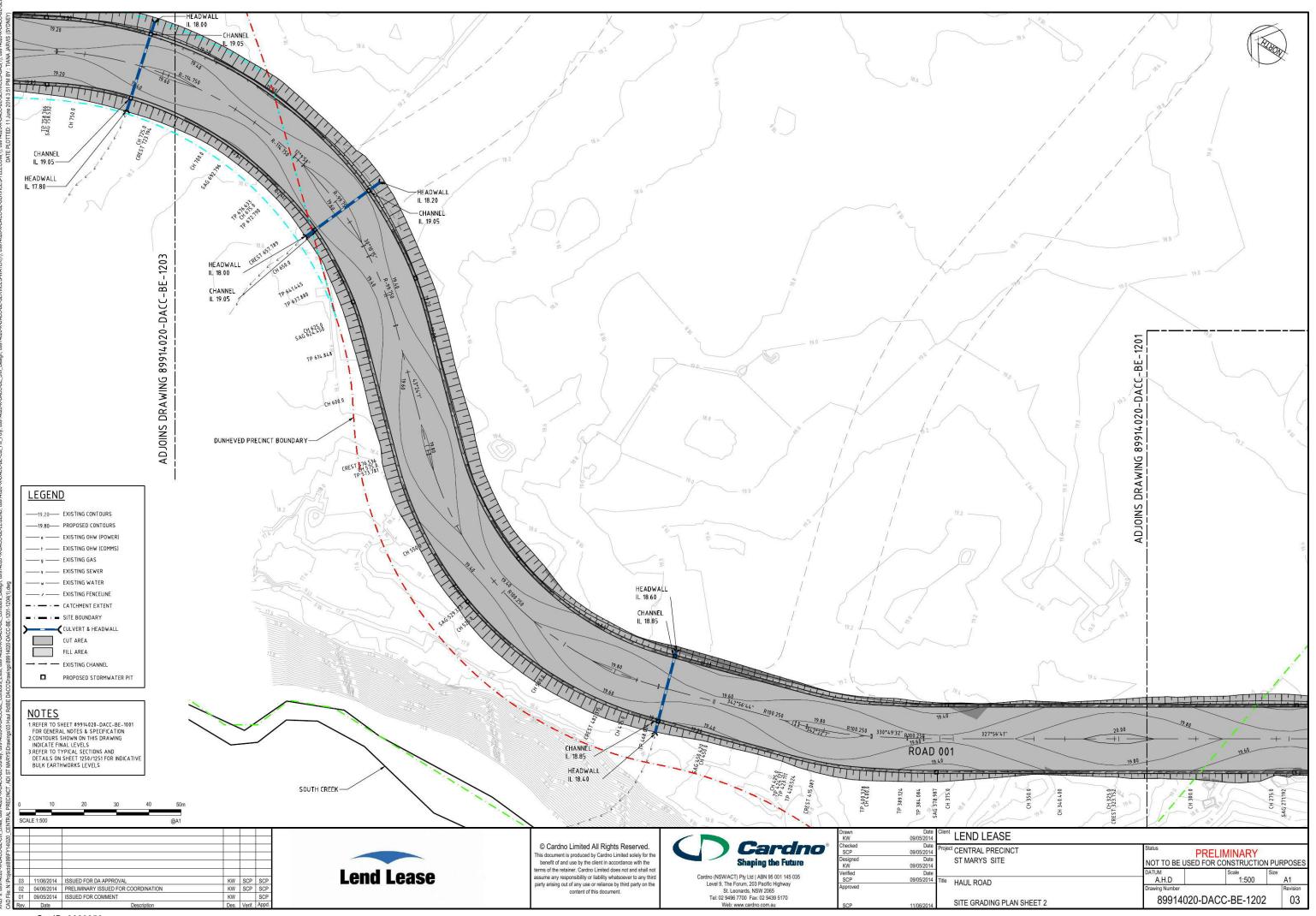
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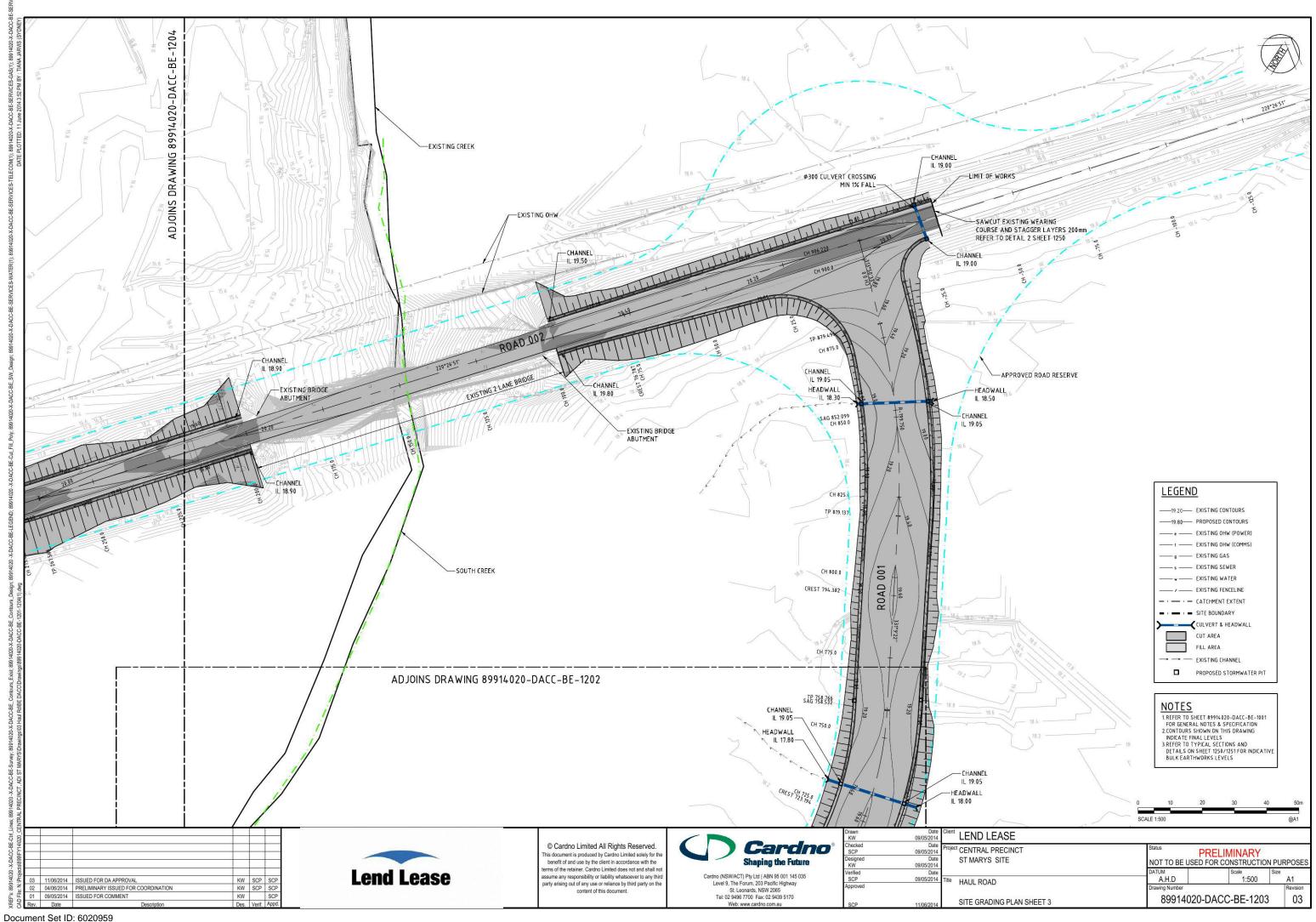
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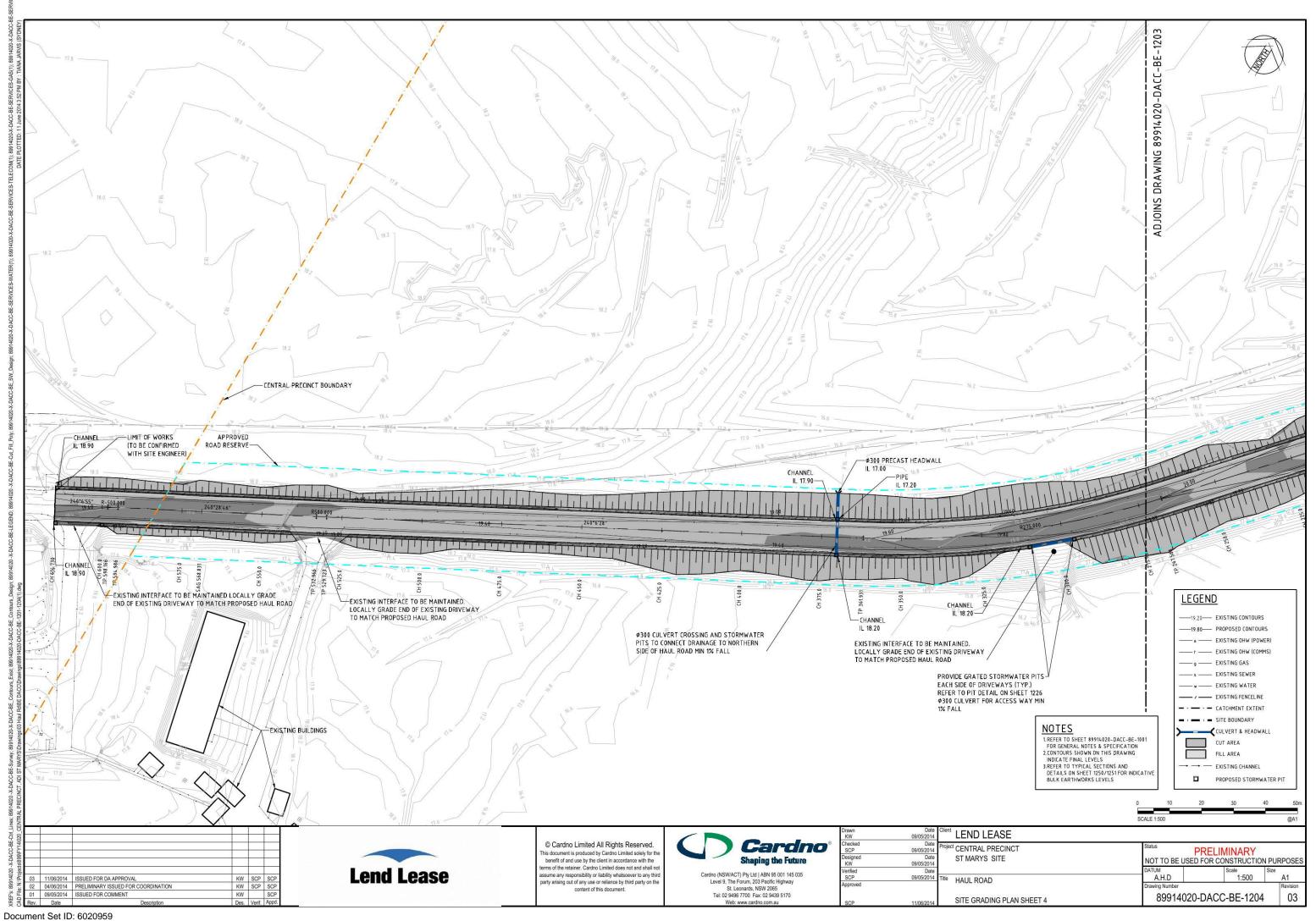
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ed		HAUL ROAD	Drawing Number	11.1.0.	Revision
	11/06/2014	GENERAL NOTES & SPECIFICATION	89914020-	-DACC-BE-1001	03

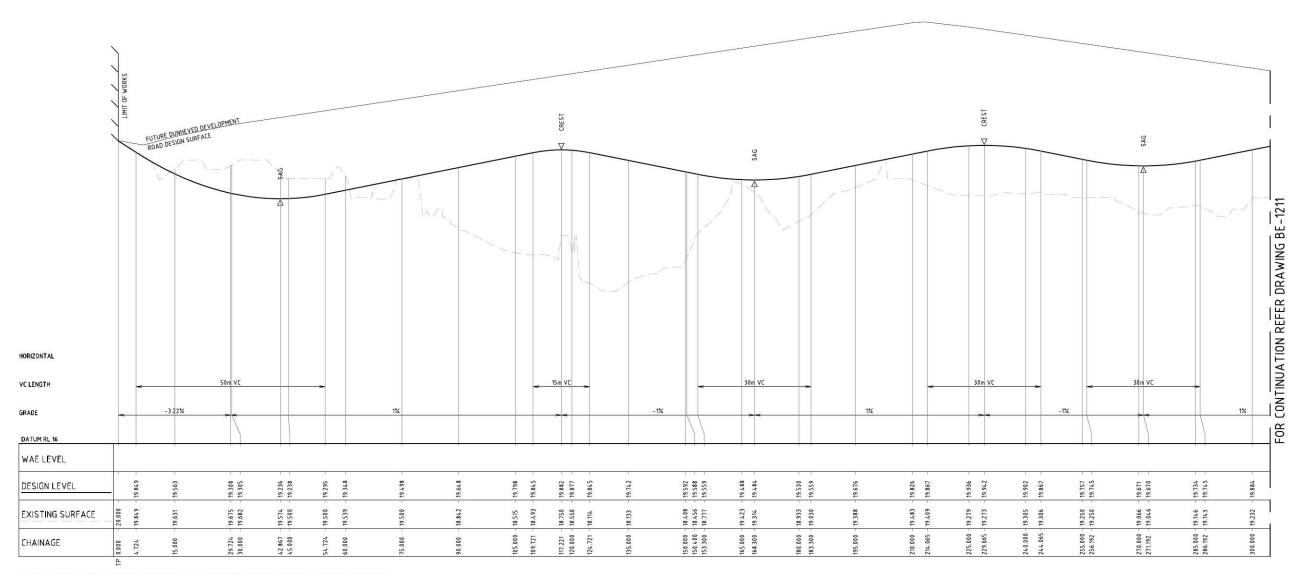












HAUL ROAD 001 LONGITUDINAL SECTION (DUNHEVED ENTRY ROAD)
1500 HORI.
125 VERT.

#### <u>NOTES</u>

1. REFER TO SHEET 89914020-DACC-BE-1001
FOR GENERAL NOTES & LEGEND
2. DESIGN LEVELS SHOWN INDICATE
FINISHED SURFACE LEVELS. SEE TYPICAL
SECTIONS & DETAILS ON SHEET 1250/1251
FOR INDICATIVE BULK EARTHWORKS LEVELS.
3. 29 YEAR ARI FLOOD LEVEL TAKEN FROM
SKM FLOOD MODELLING DATA (RECEIVED 10
OCTOBER 2013)

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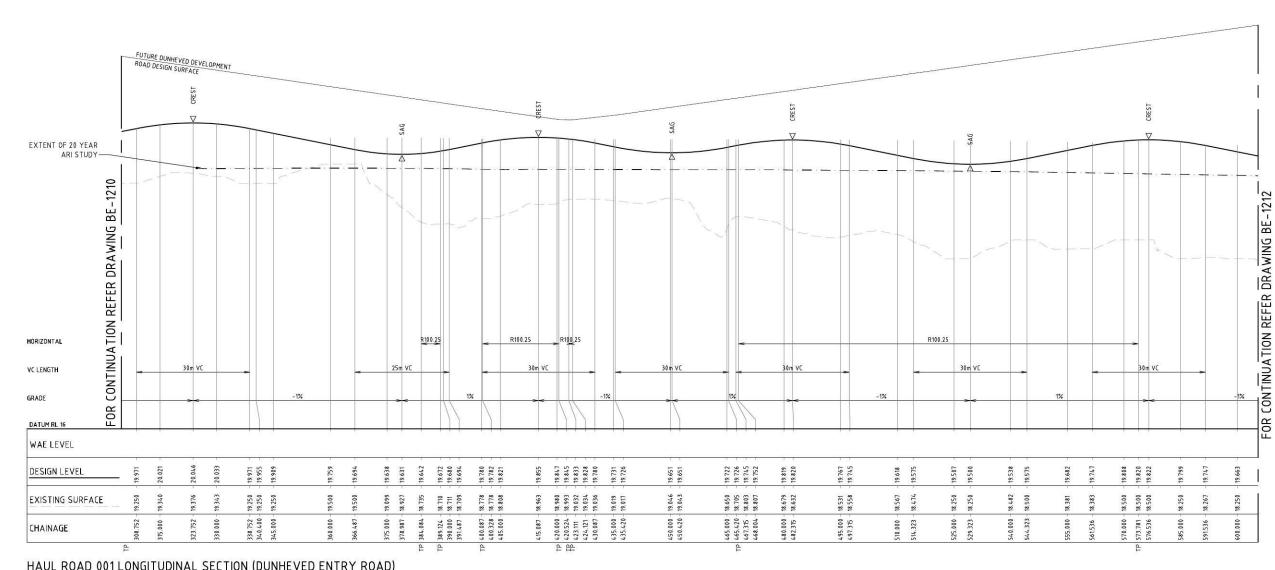
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HAUL ROAD 001 LONGITUDINAL SECTION (DUNHEVED ENTRY ROAD)
1500 HORI.
125 VERT.

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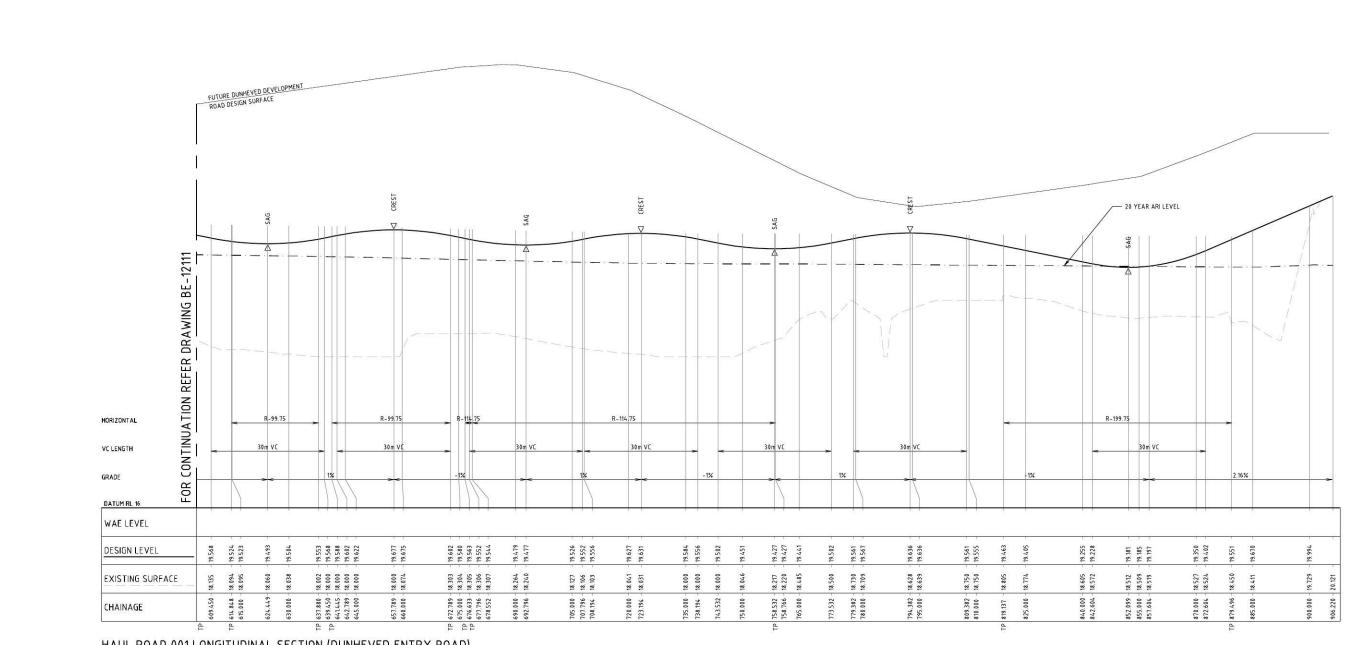
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ROAD LONGITUDINAL SECTIONS ROAD 001 SHEET 2	Drawing Number 89914020-	DACC-BE-1211	Revision 03

Document Set ID: 6020959 Version: 1, Version Date: 01/07/2014



HAUL ROAD 001 LONGITUDINAL SECTION (DUNHEVED ENTRY ROAD)
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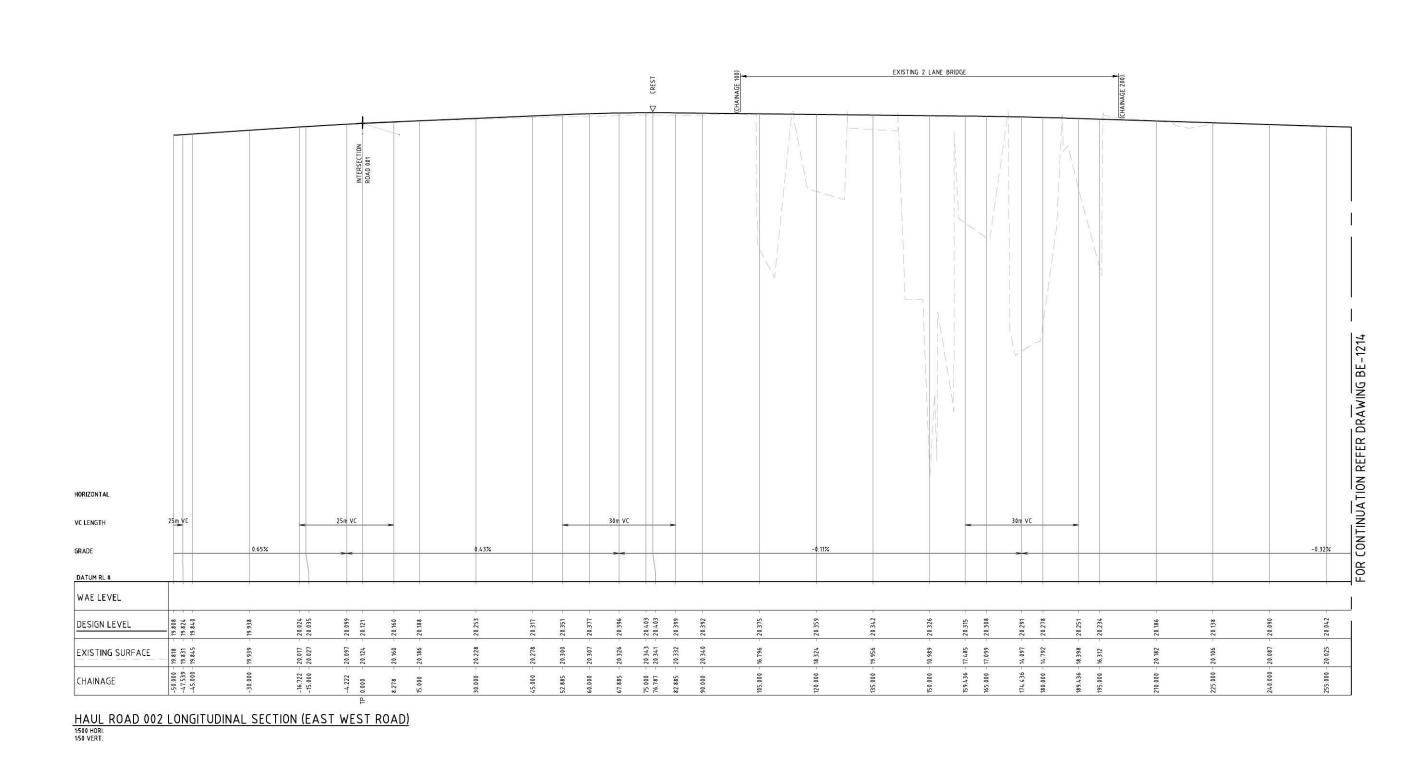


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Approved SCP	11/06/2014	ROAD LONGITUDINAL SECTIONS ROAD 001 SHEET 3	Drawing Number 89914020-[	DACC-BE-1212	Revision 03

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#### <u>NOTES</u>

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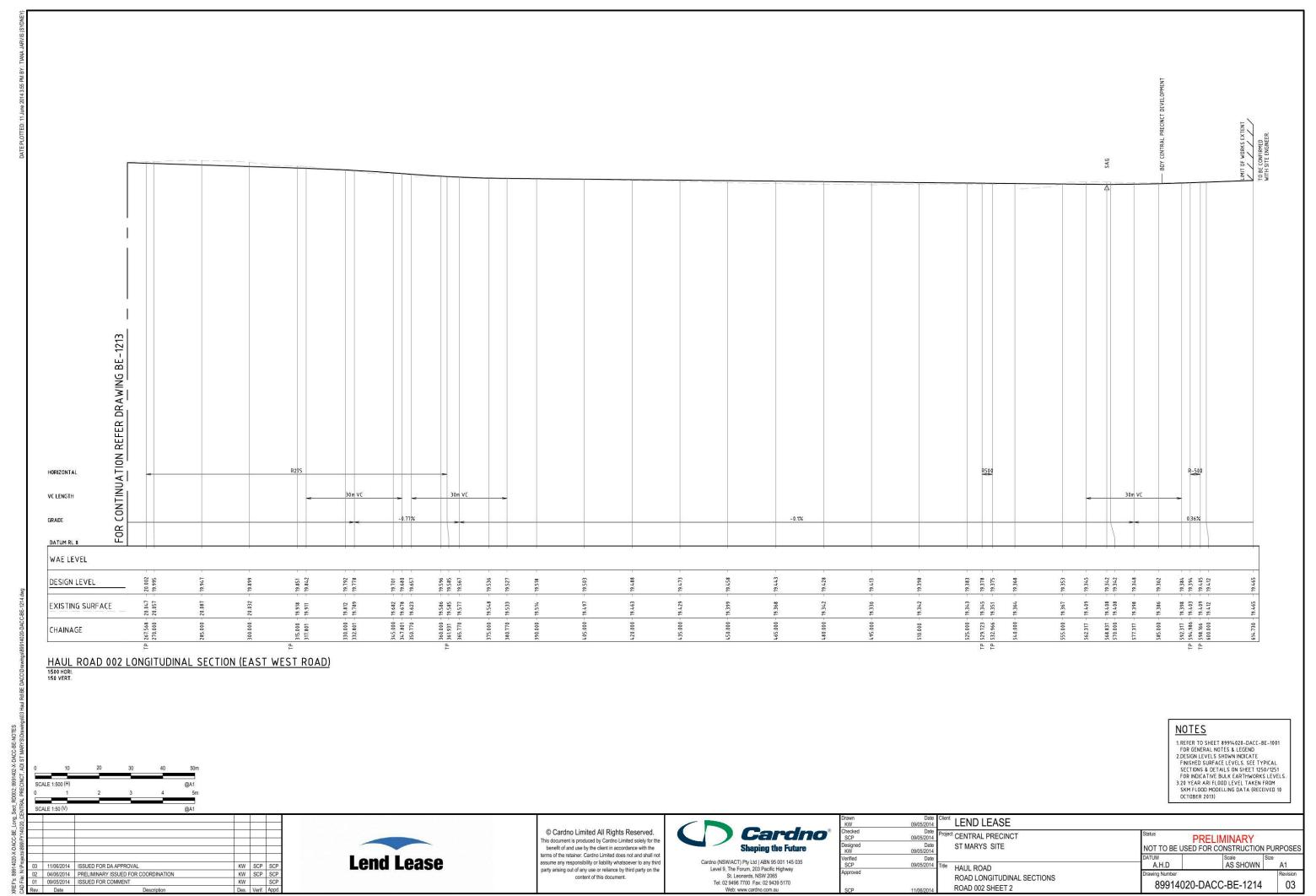
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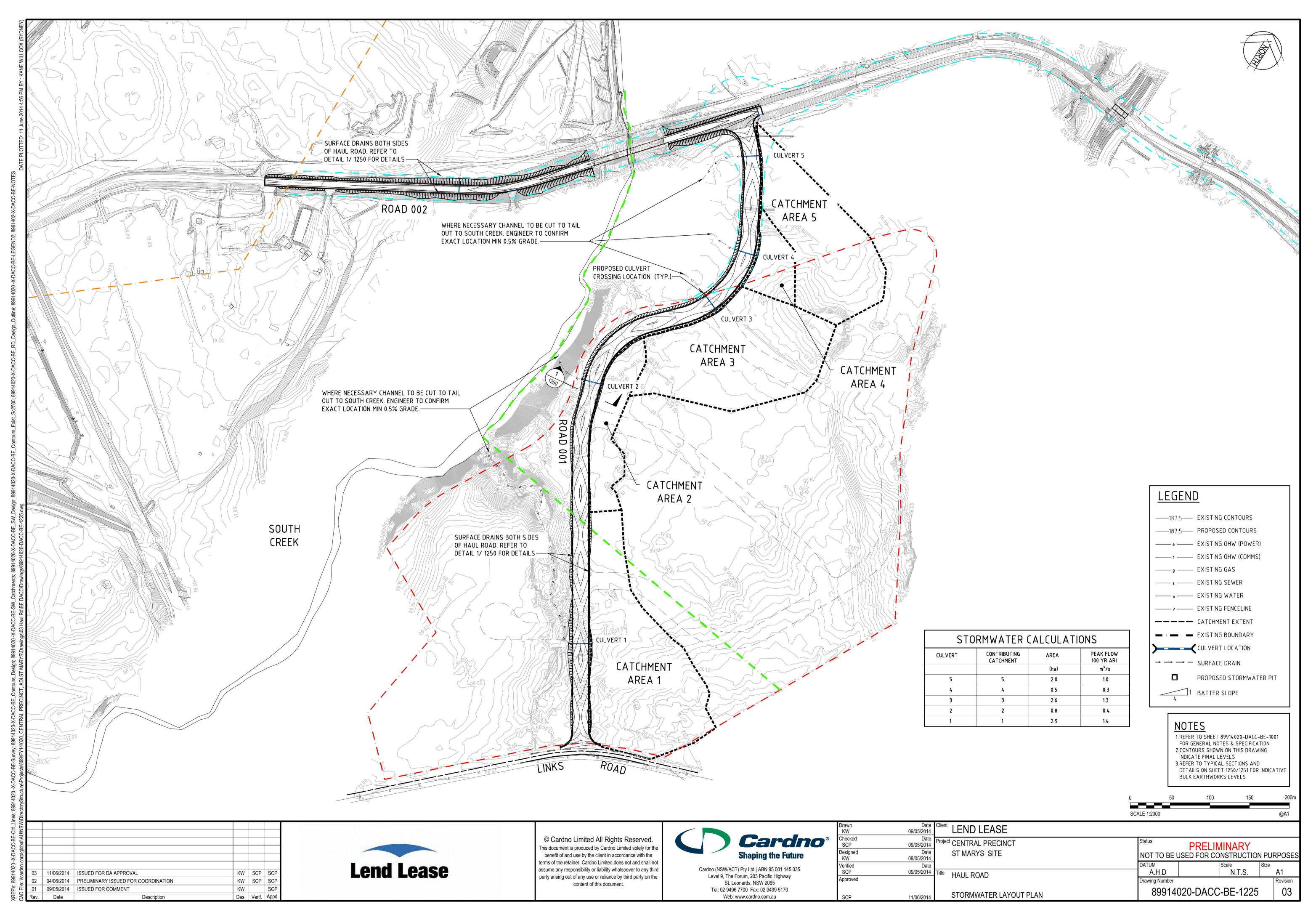


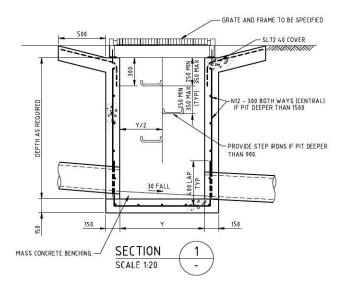
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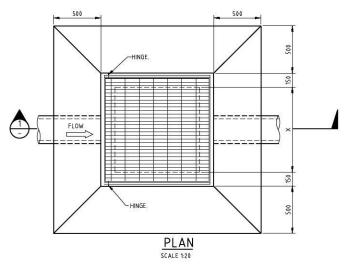
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TYPICAL STORMWATER PIT WITH GRADED INLET

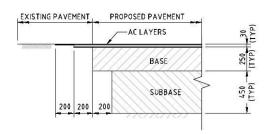


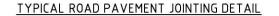
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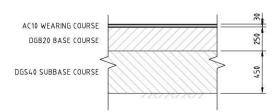
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	Verified SCP	
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Date 08/05/2014	Client LEND LEASE	MI.		
Date   Project CENTRAL PRECINCT   Date   ST MARYS SITE		Status  PRELIMINARY  NOT TO BE USED FOR CONSTRUCTION PURPOSES		
Date		DATUM		Size
08/05/2014	Title HAUL ROAD	A.H.D Drawing Number	AS SHOWN	A1 Revision
11/06/2014	STORMWATER TYPICAL DETAILS		ACC-BE-1226	02



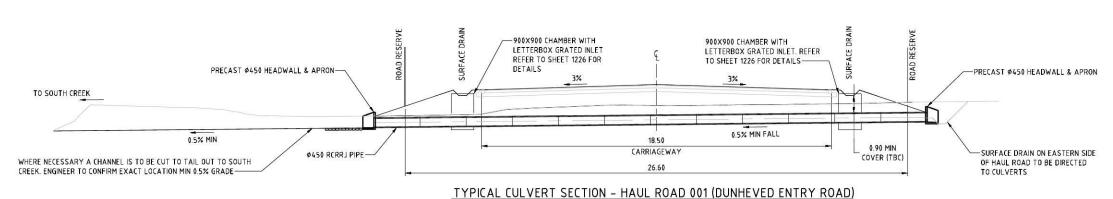


DETAIL 2 1201/3/ SCALE 1:20

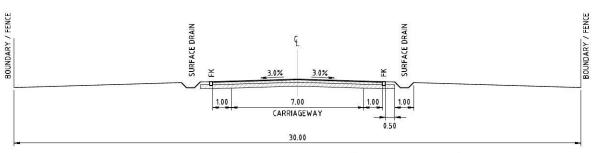


FLEXIBLE ROAD PAVEMENT LAYERWORKS

SCALE 1:20



SECTION SCALE 1:100 1225



TYPICAL SECTION - HAUL ROAD 002 (EAST WEST ROAD)

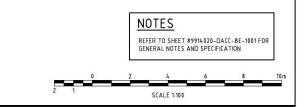
TYPICAL ROAD CROSS SECTIONS SHEET 1

LEND LEASE

ST MARYS SITE

HAUL ROAD

ct CENTRAL PRECINCT



A.H.D

PRELIMINARY
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89914020-DACC-BE-1250

AS SHOWN

A1

03

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18.50

CARRIAGEWAY

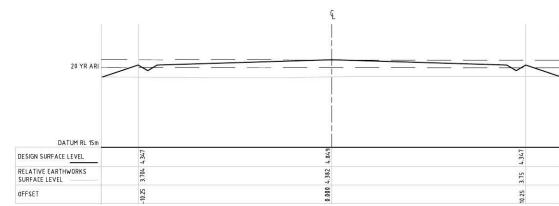
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TYPICAL SECTION - HAUL ROAD 001 (DUNHEVED ENTRY ROAD) SCALE 1:100

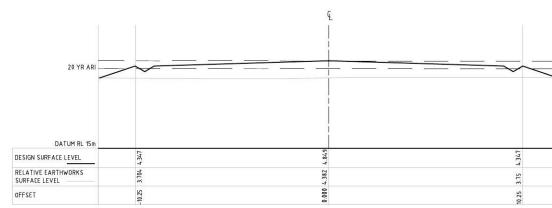
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03	11/06/2014	ISSUED FOR DA APPROVAL	KW	SCP	SCP	Lend I
02	04/06/2014	PRELIMINARY ISSUED FOR COORDINATION	KW	SCP	SCP	
01	09/05/2014	ISSUED FOR COMMENT	KW		SCP	
Rev.	Date	Description	Des.	Verif.	Appd.	
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HAUL ROAD 001 (DUNHEVED ENTRY ROAD) APPROX CHAINAGE 800m SCALE 1:100



20 YR ARI DATUM RL 15m DESIGN SURFACE LEVEL RELATIVE EARTHWORKS SURFACE LEVEL OFFSET

HAUL ROAD 001 (DUNHEVED ENTRY ROAD) APPROX CHAINAGE 350m

SCALE 1:100

20 YR ARI DATUM RL 15m DESIGN SURFACE LEVEL RELATIVE EARTHWORKS SURFACE LEVEL OFFSET HAUL ROAD 002 (EAST WEST ROAD) APPROX CHAINAGE 375m





03	11/06/2014	ISSUED FOR DA APPROVAL	KW	SCP	SCP	<b>Lend Lease</b>
02	04/06/2014	PRELIMINARY ISSUED FOR COORDINATION	KW	SCP	SCP	
01	23/05/2014	ISSUED FOR COMMENT	KW		SCP	

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	Drawn TJ	Date 23/05/2014	Client LEND LEASE			
B	Checked SCP	Date 23/05/2014	Project CENTRAL PRECINCT	Status	ELIMINARY	
	Designed KW	Date 23/05/2014	ST MARYS SITE	NOT TO BE USED FO		PURPOSES
	Verified SCP	Date 23/05/2014	Title HAUL ROAD	DATUM A.H.D	Scale S AS SHOWN	ize A1
	Approved	.,	HAUL KOAD	Drawing Number		Revision
	SCP	11/06/2014	TYPICAL ROAD CROSS SECTIONS SHEET 2	89914020-D	ACC-BE-1251	03

SCALE 1:100

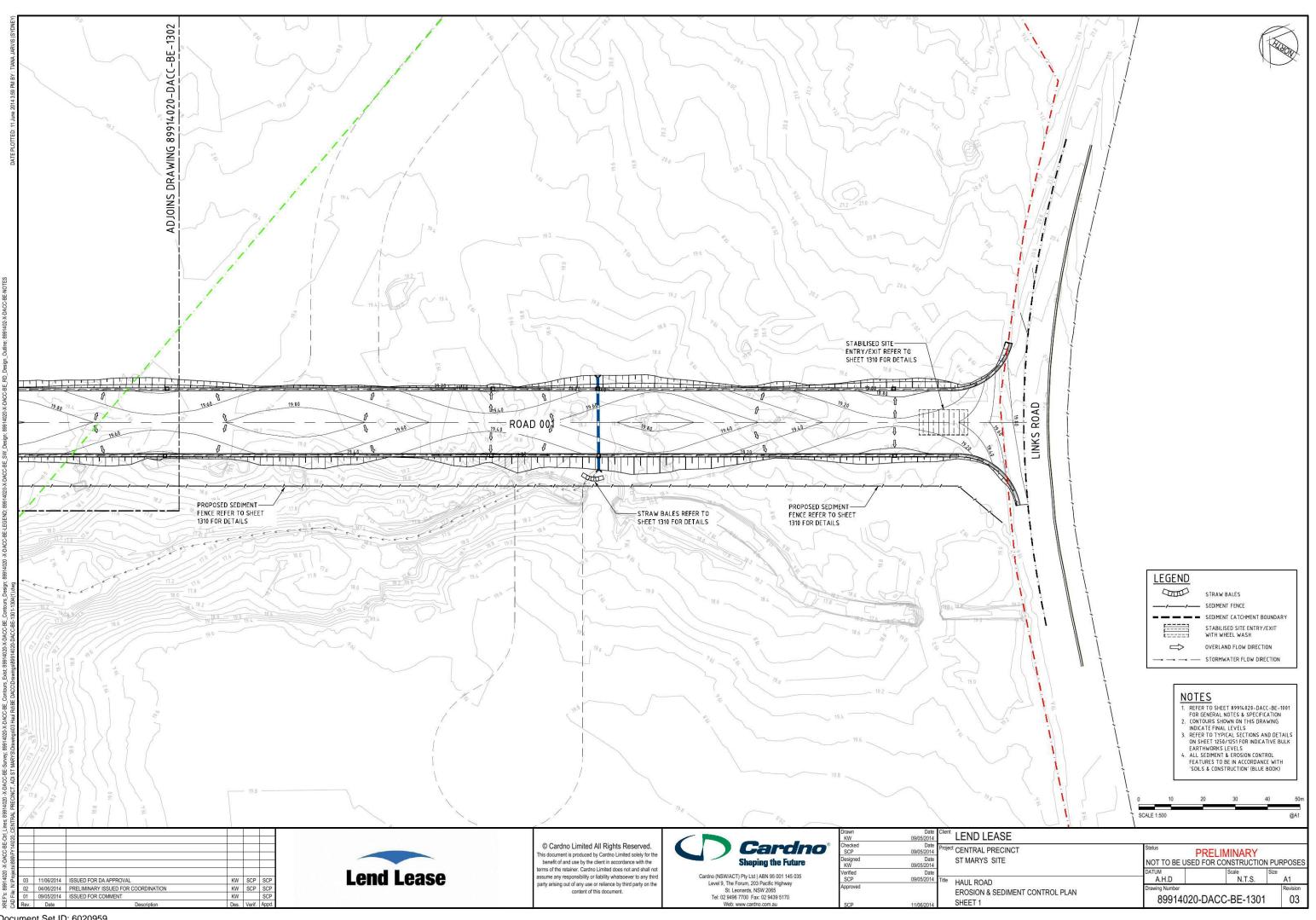
Document Set ID: 6020959 Version: 1, Version Date: 01/07/2014

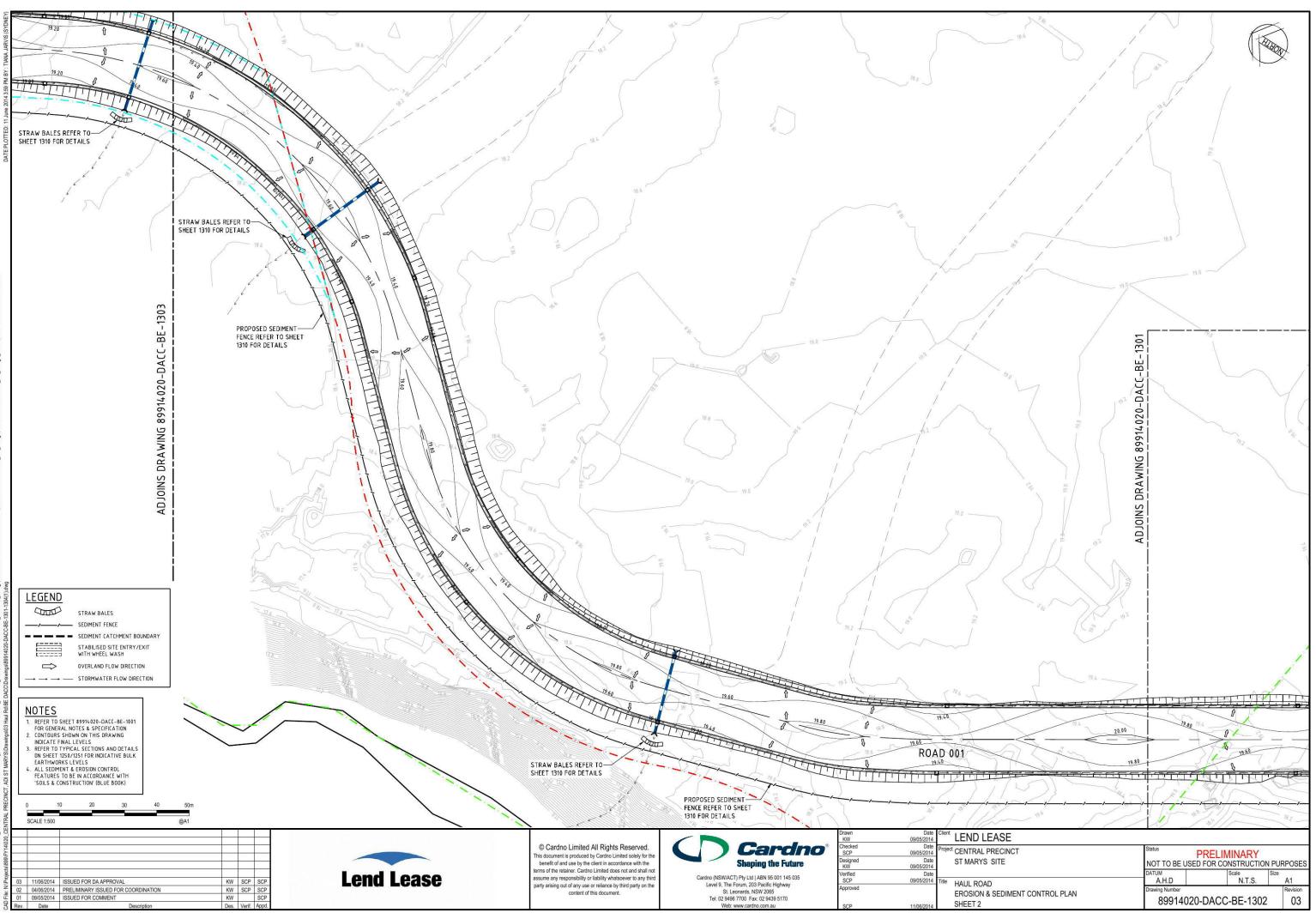
DATUM RL 15m

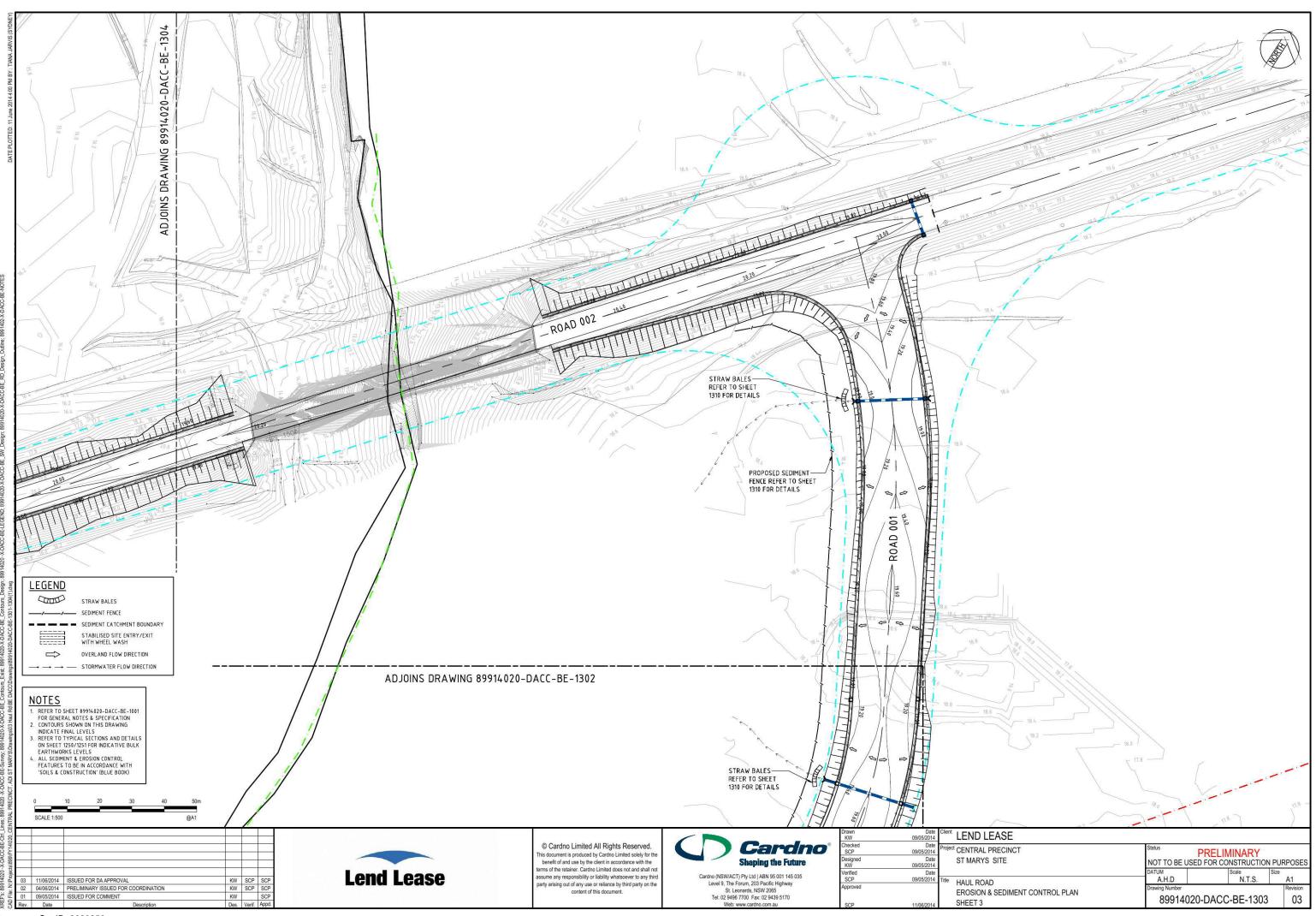
DESIGN SURFACE LEVEL

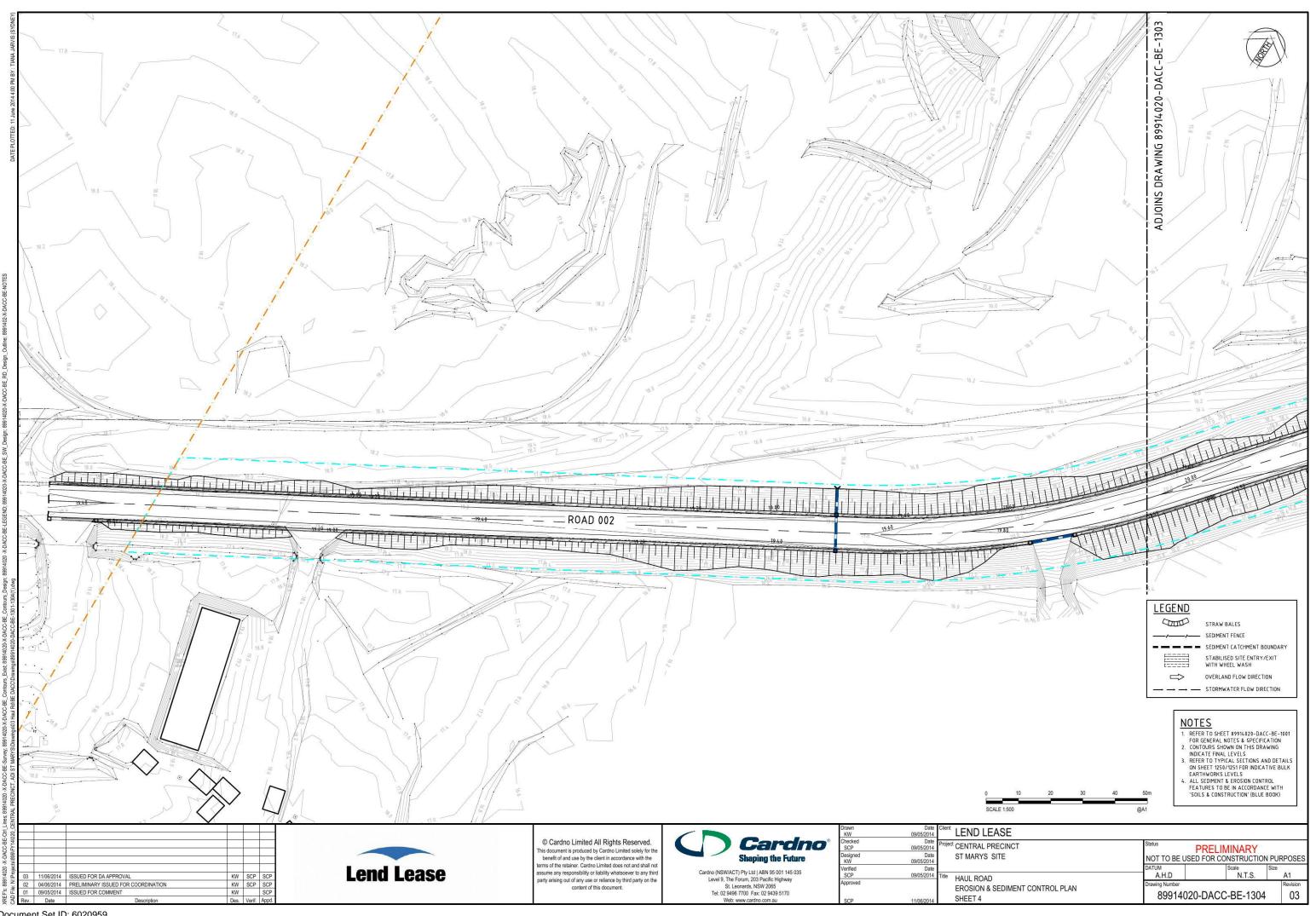
RELATIVE EARTHWORKS SURFACE LEVEL

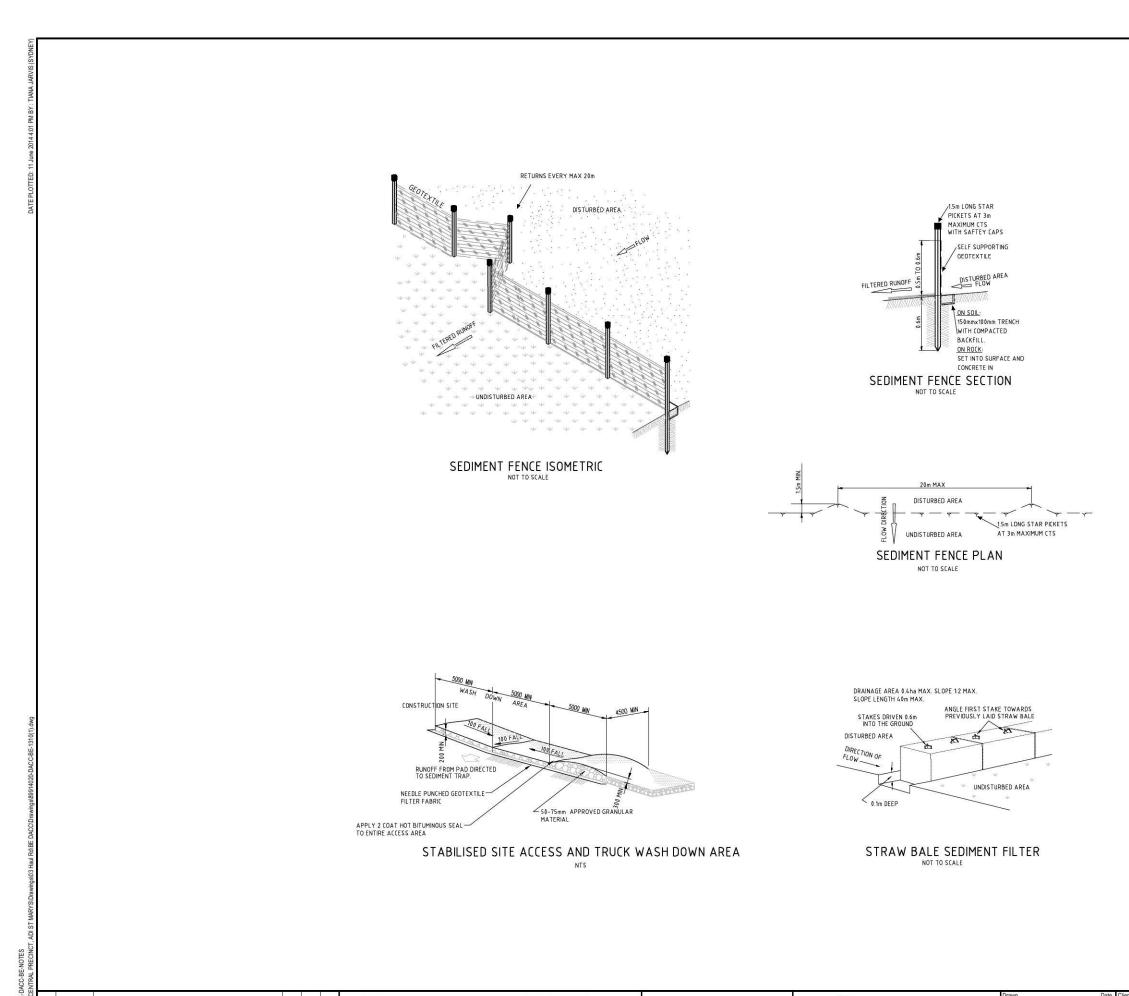
OFFSET











**NOTES** 

REFER TO SHEET 89914020-DACC-BE-1001 FOR GENERAL NOTES AND LEGEND

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Lend KW SCP SCP KW SCP SCP

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Web: www.cardno.com.au	

KW	09/05/2014
Checked	Date
SCP	09/05/2014
Designed	Date
KW	09/05/2014
Verified	Date
SCP	09/05/2014

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**EROSION & SEDIMENT CONTROL TYPICAL DETAILS** 

Client LEND LEASE CENTRAL PRECINCT Status
PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION PURPOSES ST MARYS SITE A.H.D N.T.S. HAUL ROAD 89914020-DACC-BE-1310