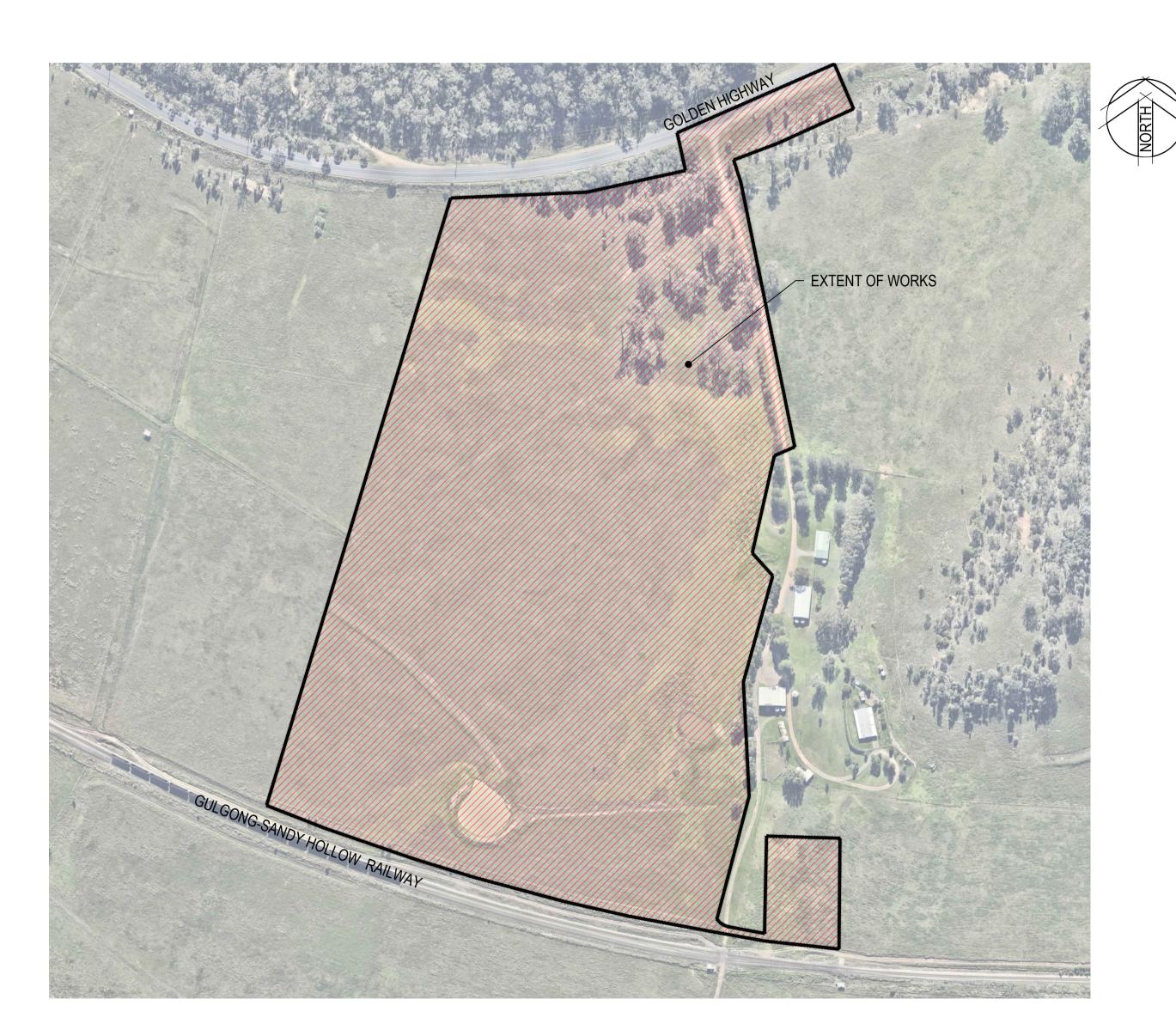


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VERNON TRUST SANDY HOLLOW SOLAR FARM DEVELOPMENT APPLICATION



3	18/10/2019	ISSUED FOR DA APPROVAL	HLD	PL	RKP
2	28/06/2019	ISSUED FOR INFORMATION	HLD	PL	RKP
1	14/06/2019	ISSUED FOR INFORMATION	HLD	PL	RKP
Rev.	Date	Description	Des.	Verif.	Appd.

SCHEDULE OF DRAWINGS

DRAWING No. 80219037-CI-1001 80219037-CI-1011 80219037-CI-1031 80219037-CI-1101 80219037-CI-1131 80219037-CI-1201 80219037-CI-1251 80219037-CI-1301 80219037-CI-1601 80219037-CI-1651 80219037-CI-2101

DESCRIPTION COVER SHEET AND DRAWING SCHEDULE GENERAL NOTES AND LEGENDS GENERAL ARRANGEMENT PLAN EROSION AND SEDIMENTATION CONTROL PLAN EROSION AND SEDIMENTATION CONTROL DETAILS SITEWORKS PLAN OSD BASIN PLAN BASIN DETAILS SITEWORKS AND STORMWATER DETAILS UTILITIES COORDINATION PLAN CATCHMENT PLAN

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t of this document.	RKP	14/06/2019	Drawing Number	Revision 3		

50

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100

150

200

250m

GENERAL

- 1. MUSWELLBROOK SHIRE COUNCIL STANDARD DETAILS TO BE USED WHERE POSSIBLE.
- 2. UTILITY ADJUSTMENTS AT DEVELOPERS EXPENSE.
- 3. CONDUITS TO BE PLACED WHERE REQUIRED BY THE RELEVANT AUTHORITIES.
- 4. SUBSOIL DRAINAGE LINES TO BE PLACED AS INDICATED ON DRAWINGS.
- 6. A MINIMUM OF 3m OF SUBSOIL LINE SHALL BE LAID INTO UPSTREAM SIDE OF COUNCIL PITS

SITEWORKS NOTES

- 1. ORIGIN OF LEVELS:- REFER SURVEY NOTES.
- 2. 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. ALL TRENCH BACKFILL MATERIAL SHALL BE COMPACTED TO THE SAME DENSITY AS THE ADJACENT MATERIAL
- 5. ALL SERVICE TRENCHES UNDER VEHICULAR PAVEMENTS SHALL BE BACKFILLED WITH SAND TO 300mm ABOVE PIPE. WHERE PIPE IS UNDER PAVEMENTS BACKFILL REMAINDER OF TRENCH TO UNDERSIDE OF PAVEMENT WITH SAND OR APPROVED GRANULAR MATERIAL COMPACTED IN 150mm LAYERS TO MINIMUM 98% MODIFIED MAXIMUM DRY DENSITY IN ACCORDANCE WITH AS 1289 5.2.1. (OR A DENSITY INDEX OF NOT LESS THAN 75)
- 6. PROVIDE 10mm WIDE EXPANSION JOINTS BETWEEN BUILDINGS AND ALL CONCRETE OR UNIT PAVEMENTS.
- 7. ASPHALTIC CONCRETE SHALL CONFORM TO R.M.S. SPECIFICATION R116.
- 8. ALL BASECOURSE MATERIAL SHALL BE IGNEOUS ROCK QUARRIED MATERIAL TO COMPLY WITH R.M.S. FORM 3051, COMPACTED TO MINIMUM 98% MODIFIED DENSITY IN ACCORDANCE WITH AS 1289 5.2.1 FREQUENCY OF COMPACTION TESTING SHALL NOT BE LESS THAN 1 TEST PER 50m³ OF BASECOURSE MATERIAL PLACED.
- 9. ALL SUB-BASE COURSE MATERIAL SHALL BE IGNEOUS ROCK QUARRIED MATERIAL TO COMPLY WITH R.M.S. FORM 3051, AND COMPACTED TO MINIMUM 95% MODIFIED DENSITY IN ACCORDANCE WITH A.S 1289 5.2.1 FREQUENCY OF COMPACTION TESTING SHALL NOT BE LESS THAN 1 TEST PER 50m³ OF SUB-BASE COURSE MATERIAL PLACED.
- 10. AS AN ALTERNATIVE TO THE USE OF IGNEOUS ROCK AS A SUB-BASE MATERIAL IN (9) A CERTIFIED RECYCLED CONCRETE MATERIAL COMPLYING WITH R.M.S. FORM 3051 WILL BE CONSIDERED. SUBJECT TO MATERIAL SAMPLES AND APPROPRIATE CERTIFICATIONS BEING PROVIDED TO THE SATISFACTION OF CARDNO.
- 11. SHOULD THE CONTRACTOR WISH TO USE A RECYCLED PRODUCT THIS SHALL BE CLEARLY INDICATED IN THEIR TENDER AND THE PRICE DIFFERENCE BETWEEN AN IGNEOUS PRODUCT AND A RECYCLED PRODUCT SHALL BE CLEARLY INDICATED.
- 12. WHERE NOTED ON THE DRAWINGS THAT WORKS ARE TO BE CARRIED 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 MONEATH & POWYS REF; 18/-127 (2/11/2018), BEING REGISTERED SURVEYORS. 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 THE SUPERINTENDENT (THE FOLLOWING NOTES HAVE BEEN TAKEN DIRECTLY FROM THE ORIGINAL SURVEY DOCUMENTS.)

IMPORTANT NOTES:

- 1. ONLY VISIBLE SERVICES HAVE BEEN LOCATED BY SURVEY.
- NOT ALL SERVICE INFORMATION MAY BE SHOWN DUE TO UNAVAILABILITY OF SERVICE PLANS OR CURRENT OR CURRENT INFORMATION.
- INDEPENDENT INQUIRIES FOR UP TO DATE SERVICE LOCATIONS THROUGH THE RELEVANT AUTHORITIES MUST BE UNDERTAKEN PRIOR TO COMMENCEMENT OF ANY WORKS/EXCAVATION. EXACT SERVICE POSITIONS SHOULD BE ESTABLISHED BY APPROPRIATE MEANS. WE RECOMMEND PROFESSIONAL SERVICE LOCATIONS.
- THE BOUNDARIES ON THIS PLAN HAVE BEEN COMPILED FROM SURVEY PLANS, DP1042612, DP789310, DP809376, CP5084-1096 ON PUBLIC RECORD. NO FIELD SURVEY HAS BEEN UNDERTAKEN TO DETERMINE THE ACCURACY OF THE BOUNDARIES AS SHOWN. AS SUCH THESE DIMENSIONS COULD BE OUT OF DATE AND INCORRECT BY MODERN STANDARDS. THIS PLAN SHOULD NOT BE USED FOR BUILDING WORKS CLOSE TO OR ON THE BOUNDARY, OR TO BE PROSCRIBED SET-BACKS WITHOUT FURTHER SURVEY INVESTIGATION.
- 5. ALL TREES ARE DIAGRAMMATIC ONLY.
- 6. CONTOURS SHOWN DEPICT THE TOPOGRAPHY. CONTOURS DO NOT REPRESENT THE EXACT LEVEL AT ANY PARTICULAR POINT, EXCEPT AT SPOT LEVELS SHOWN.
- THIS PLAN MUST REMAIN UNALTERED AS ISSUED BY MONTEATH AND POWYS. ALTERING ANY PART OF THIS PLAN DESTROYS THE INTEGRITY OF THE PLAN. ANY REVISIONS REQUESTED MUST BE ISSUED BY MONTEATH AND POWYS.
- THESE NOTES ARE AN INTEGRAL PART OF THIS PLAN. REPRODUCTION OF THIS PLAN OR ANY PART OF THIS PLAN WITHOUT THE NOTES BEING INCLUDED WILL RENDER THE INFORMATION SHOWN ON SUCH REPRODUCTION INVALID AND NOT SUITABLE FOR USE.

LEGEND:

----- OHE -------OVERHEAD ELECTRICITY CABLE.

BULK EARTHWORKS NOTES

- ORIGIN OF LEVELS: REFER SURVEY NOTES
- . STRIP ALL TOPSOIL/ORGANIC MATERIAL FROM CONSTRUCTION AREA AND REMOVE FROM SITE OR STOCK PILE AS DIRECTED BY SUPERINTENDENT.
- EXCAVATED MATERIAL TO BE USED AS STRUCTURAL FILL PROVIDED THE PLACEMENT MOISTURE CONTENT OF THE MATERIAL IS +/- 2% OF THE OPTIMUM MOISTURE CONTENT.
- COMPACT FILL AREAS AND SUBGRADE TO NOT LESS THAN: LOCATION STANDARD DRY DENSITY (AS 1289 5.1.1.)

UNDER ROADS

LANDSCAPED AREAS UNLESS NOTED OTHERWISE 95%

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

98%

- BEFORE PLACING FILL, PROOF ROLL EXPOSED SUBGRADE WITH AN 12 TONNE (MIN) DEADWEIGHT SMOOTH DRUM VIBRATORY ROLLER TO DETECT THEN REMOVE SOFT SPOTS (AREAS WITH MORE THAN 2mm MOVEMENT UNDER ROLLER).
- FREQUENCY OF COMPACTION TESTING SHALL BE NOT LESS THAN :-(A) 1 TEST PER 500m³ OF FILL PLACED PER 300 LAYER OF FILL. (B) 3 TESTS PER VISIT
- (C) 1 TEST PER 2500m² OF EXPOSED SUBGRADE "LEVEL 1" TESTING SHALL BE TESTING IN ACCORDANCE WITH AS 3798 (1996).
- 3. FILLING TO BE PLACED IN MAXIMUM 150mm LOOSE LAYERS AND COMPACTED AS SPECIFIED
- 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.

GENERAL INSTRUCTIONS

- OTHERWISE DIRECTED BY THE SUPERINTENDENT. a. LOCAL AUTHORITY REQUIREMENTS b. EPA REQUIREMENTS

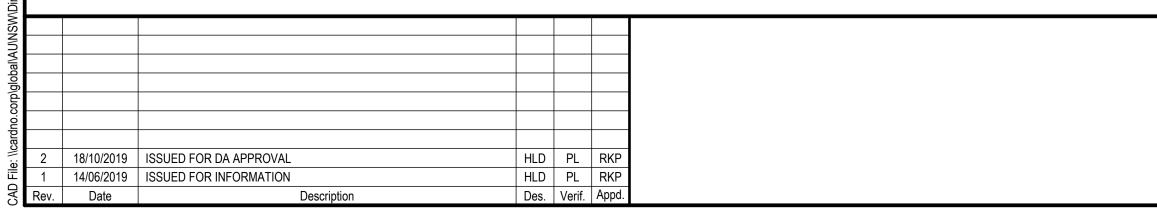
LAND DISTURBANCE

- ON PLAN. REFER DETAIL.

- AREAS OF WORKABLE SIZE.

EROSION CONTROL

- CONTROL.
- CONSTRUCTION ACTIVITIES. SEDIMENT CONTROL
- FENCING
- 10 WORKING DAYS FROM PLACEMENT
- STRUCTURE.
- REHABILITATED.
- MATERIALS AND LITTER.
- OTHER MATTERS
- INSTALLED OUTSIDE THE DRIP LINE
- CONDITIONS.
- GREATER
- THE SOIL AROUND THEM.



EROSION AND SEDIMENT CONTROL

NOTES

THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE CONTROL OF EROSION AND SEDIMENTATION TO THE SATISFACTION OF COUNCIL. NSW OFFICE OF WATER. OFFICE OF ENVIRONMENT AND HERITAGE. 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

ALL WORK SHALL BE GENERALLY CARRIED OUT IN ACCORDANCE WITH

C. NSW DEPARTMENT OF HOUSING MANUAL "MANAGING URBAN STORMWATER, SOILS AND CONSTRUCTION", 4th EDITION, MARCH 2004.

MAINTAIN THE EROSION CONTROL DEVICES TO THE SATISFACTION OF THE SUPERINTENDENT AND THE LOCAL AUTHORITY. WHEN STORMWATER PITS ARE CONSTRUCTED. PREVENT SITE RUNOFF ENTERING UNLESS SEDIMENT FENCES ARE ERECTED AROUND PITS.

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

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

b. CONSTRUCT STABILISED CONSTRUCTION ENTRANCE TO LOCATION AS DETERMINED BY SUPERINTENDENT/ENGINEER, REFER DETAIL. c. INSTALL SEDIMENT BASIN AS SHOWN ON PLAN (D) 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

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

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

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

10. ANY SAND USED IN THE CONCRETE CURING PROCESS (SPREAD OVER THE SURFACE) WILL BE REMOVED AS SOON AS POSSIBLE AND WITHIN

. WATER WILL BE PREVENTED FROM ENTERING THE PERMANENT DRAINAGE SYSTEM UNLESS IT IS RELATIVELY SEDIMENT FREE, I.E. THE CATCHMENT AREA HAS BEEN PERMANENTLY LANDSCAPED AND/OR ANY LIKELY SEDIMENT HAS BEEN FILTERED THROUGH AN APPROVED

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

3. ACCEPTABLE RECEPTORS WILL BE PROVIDED FOR CONCRETE AND MORTAR SLURRIES, PAINTS, ACID WASHINGS, LIGHT-WEIGHT WASTE

14. ANY EXISTING TREES WHICH FORM PART OF THE FINAL LANDSCAPING PLAN WILL BE PROTECTED FROM CONSTRUCTION ACTIVITIES BY:

a. PROTECTING THEM WITH BARRIER FENCING OR SIMILAR MATERIALS . ENSURING THAT NOTHING IS NAILED TO THEM

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

) ENCROACHMENT ONLY OCCURS ON ONE SIDE AND NO CLOSER TO THE TRUNK THAN EITHER 1.5 METRES OR HALF THE DISTANCE BETWEEN THE OUTER EDGE OF THE DRIP LINE AND THE TRUNK, WHICH EVER IS THE

(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 COMPACT

EXISTING (REFER SURVEY NOTES)						
PROPOSED						
• B131.7	BULK EARTHWORK LEVEL					
• F131.5	FINISHED SURFACE LEVEL					
	ASSET PROTECTION ZONE BOUNDARY					
	ELECTRICAL EASEMENT					

PROPOSED WORKS LEGEND

_____140 ____ PROPOSED CONTOUR

TIMBER EDGE STRIP

Ø 450 STORMWATER LINE

UNDERGROUND ELECTRICAL CABLE

GRASS LINED SWALE

CONCRETE HEADWALL ROCK SCOUR PROTECTION.

EXISTING TREE TO BE RETAINED

EXISTING TREE TO BE REMOVED WHERE REQUIRED. CONTRACTOR TO CONFIRM WITH SUPERINTENDENT THAT TREE RETENTION IS NOT POSSIBLE PRIOR TO ANY DEMOLITION.

BATTER SLOPE

STORMWATER DRAINAGE NOTES

STORMWATER DESIGN CRITERIA: (A) ANNUAL EXCEEDANCE PROBABILITIES (AEP): MINOR (PIPED) NETWORK 20% (1 IN 5)

MAJOR (OVERLAND FLOW) SYSTEM 1% (1 IN 100) (B) RAINFALL INTENSITIES:

ARR 2016 RAINFALL FROM BUREAU OF METEOROLOGY WEBSITE

(C) HYDROLOGIC METHOD: DRAINS WITH ARR 2016 PROCEDURES AND ILSAX HYDROLOGY MODE

- . PIPES 375 DIA. AND LARGER TO BE REINFORCED CONCRETE CLASS '2' APPROVED SPIGOT AND SOCKET WITH RUBBER RING JOINTS. U.N.O.
- PIPES 300 DIA AND LESS SHALL BE DWV GRADE (CLASS SN8) uPVC WIT SOLVENT WELDED JOINTS.
- 4. EQUIVALENT STRENGTH FRC PIPES MAY BE USED.
- 5. ALL PIPES ARE TO BE UNIFORMLY SUPPORTED ALONG THE LENGTH OF THE BARREL BY SUITABLE FILL MATERIAL. REFER TO BEDDING SUPPOR TYPE
- 6. PIPES WITH SOCKETS SHALL BE LAID IN BEDDING WHERE SUITABLE RECESSES HAVE BEEN PROVIDED TO ENSURE PIPES DO NOT BEAR ON THEIR SOCKETS.
- . ALL STORMWATER DRAINAGE LINES UNDER PROPOSED BUILDING SLAE TO BE uPVC PRESSURE PIPE GRADE 6. ENSURE ALL VERTICALS AND DOWNPIPES ARE uPVC PRESSURE PIPE, GRADE 6 FOR A MIN OF 3.0m IN HEIGHT
- 8. PIPES TO BE INSTALLED TO TYPE HS1 SUPPORT IN ACCORDANCE WITH AS 3725 (2007) IN ALL CASES BACKFILL TRENCH WITH SAND TO 300mm ABOVE PIPE. WHERE PIPE IS UNDER PAVEMENTS BACKFILL REMAINDER OF TRENCH TO UNDERSIDE OF PAVEMENT WITH SAND OR APPROVED GRANULAR MATERIAL COMPACTED IN 150mm LAYERS TO MINIMUM 98% STANDARD MAXIMUM DRY DENSITY IN ACCORDANCE WITH AS 1289 5.2.1 (OR A DENSITY INDEX OF NOT LESS THAN 75).
- REFER TO AS/NRS 3725:2007 TABLE B1 FOR REQUIRED FILL DEPTHS ABOVE PIPE BARREL PRIOR TO USE OF COMPACTION MACHINERY OR TRAVERSING OF PIPES BY GENERAL SITE EQUIPMENT.
- 10. WHERE WORKING METHODS REQUIRE HIGHER CLASS PIPE, THE CONTRACTOR SHALL REFER TO AS 3725 (2007) TO DETERMINE THE APPROPRIATE PIPE CLASS. PROPOSED PIPE CLASS SHALL BE REVIEWE BY CARDNO PRIOR TO INSTALLATION.
- 1. ALL INTERNAL WORKS WITHIN PROPERTY BOUNDARIES ARE TO COMPL WITH THE REQUIREMENTS OF AS/NZS 3500.3:2015.
- 12. PRECAST PITS MAY BE USED EXTERNAL TO THE BUILDING SUBJECT TO APPROVAL BY CARDNO.
- 13. ENLARGERS, CONNECTIONS AND JUNCTIONS TO BE PREFABRICATED FITTINGS WHERE PIPES ARE LESS THAN 300 DIA.
- 14. WHERE SUBSOIL DRAINS PASS UNDER FLOOR SLABS AND VEHICULAR PAVEMENTS, UNSLOTTED uPVC SEWER GRADE PIPE IS TO BE USED.
- 15. CARE IS TO BE TAKEN WITH LEVELS OF STORMWATER LINES. GRADES SHOWN ARE NOT TO BE REDUCED WITHOUT APPROVAL.
- 16. GRATES AND COVERS SHALL CONFORM TO AS 3996.
- 17. ALL BOX CULVERTS SHALL BE STRUCTURALLY DESIGNED BY THE MANUFACTURER AND DELIVERED TO SITE AS FIT FOR PURPOSE.
- 18. AT ALL TIMES DURING CONSTRUCTION OF STORMWATER PITS. ADEQUATE SAFETY PROCEDURES SHALL BE TAKEN TO ENSURE AGAINS THE POSSIBILITY OF PERSONNEL FALLING DOWN PITS.
- 19. ALL EXISTING STORMWATER DRAINAGE LINES AND PITS THAT ARE TO REMAIN ARE TO BE INSPECTED AND CLEANED. DURING THIS PROCESS ANY PART OF THE STORMWATER DRAINAGE SYSTEM THAT WARRANTS REPAIR SHALL BE REPORTED TO THE SUPERINTENDENT/ENGINEER FOR FURTHER DIRECTIONS.



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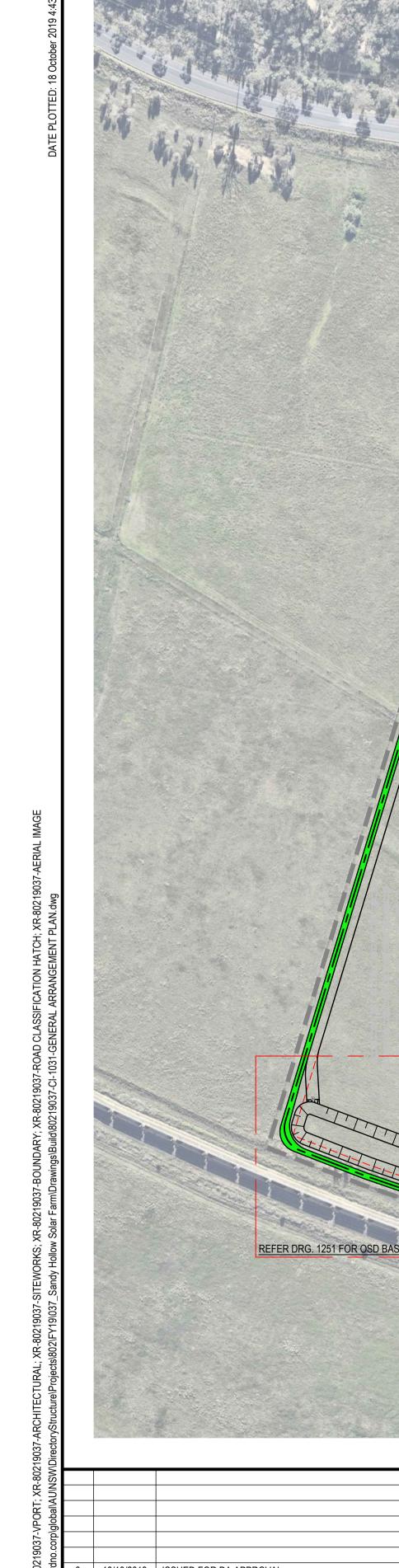
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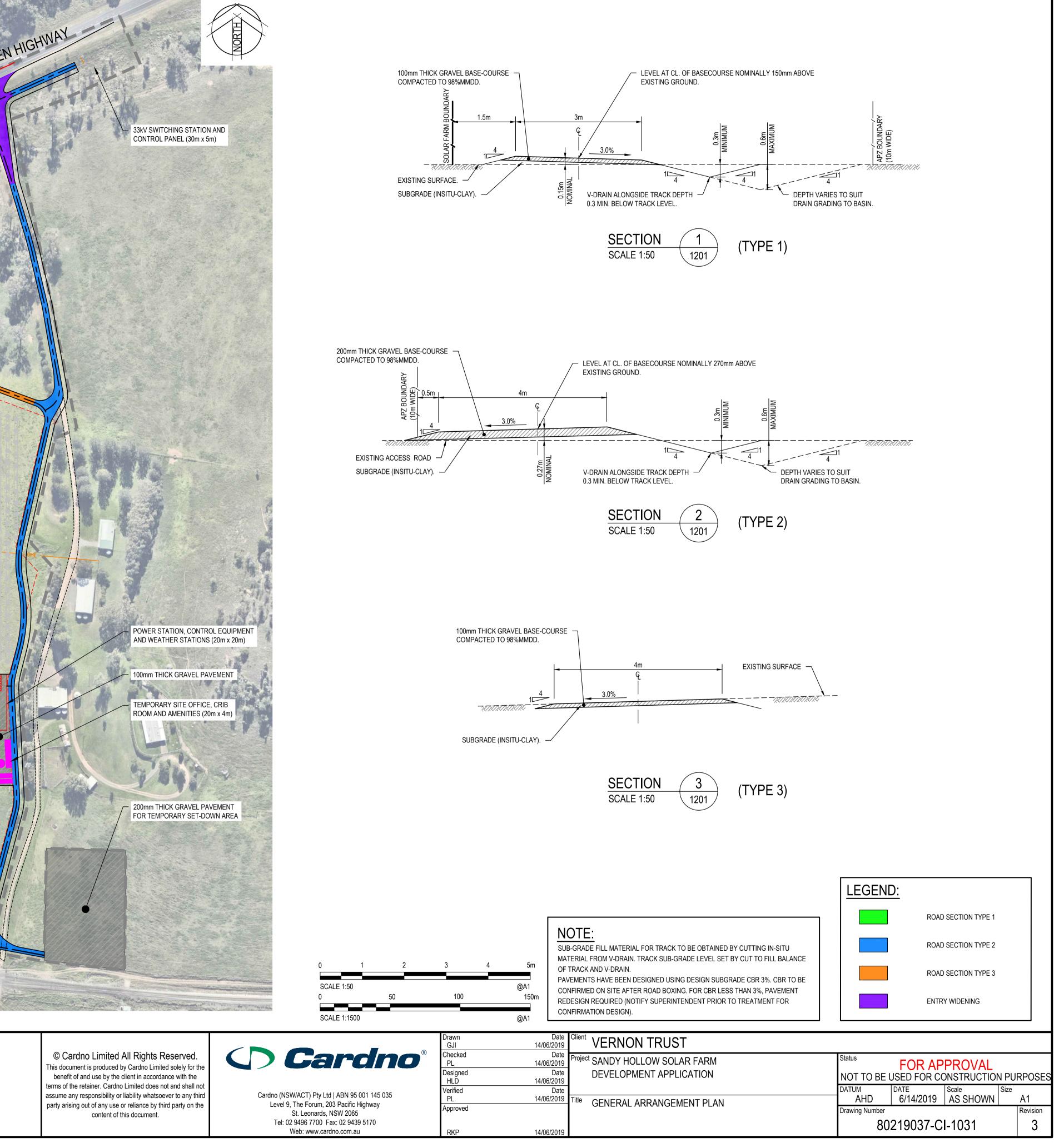
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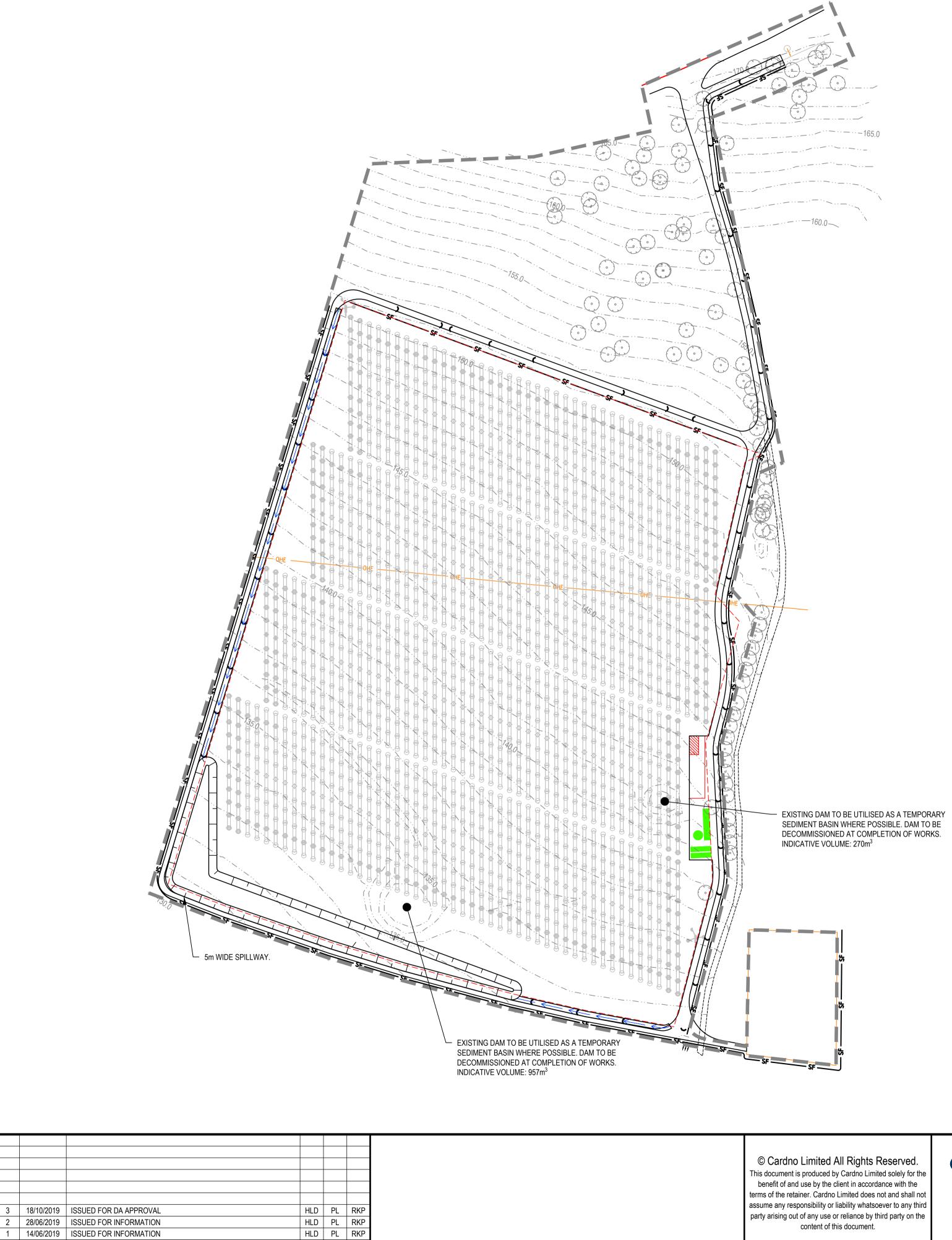
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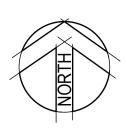


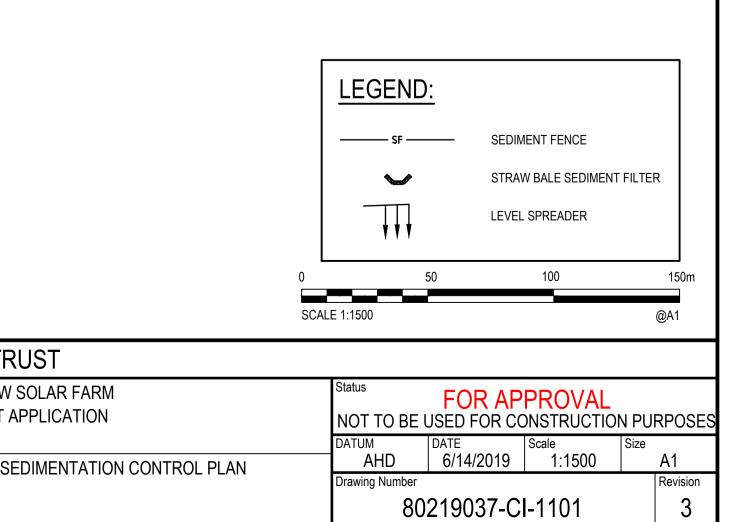
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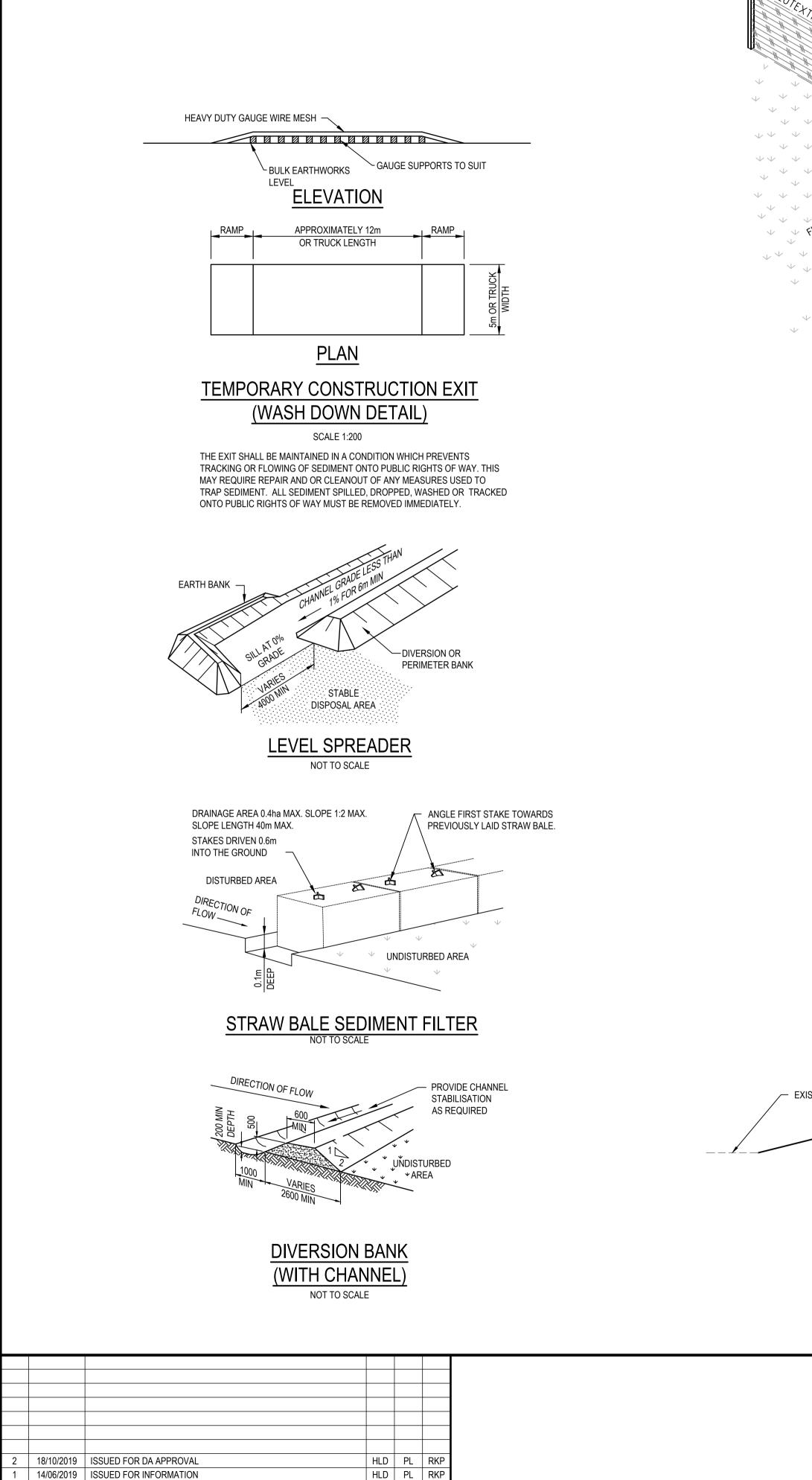


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Drawn GJI	Date 14/06/2019	Client	VERNON TRUST
Checked PL	Date 14/06/2019	Project	SANDY HOLLOW SOLAR
Designed HLD	Date 14/06/2019		DEVELOPMENT APPLICA
Verified	Date		
PL Approved	14/06/2019	Title	EROSION AND SEDIMENT
RKP	14/06/2019		



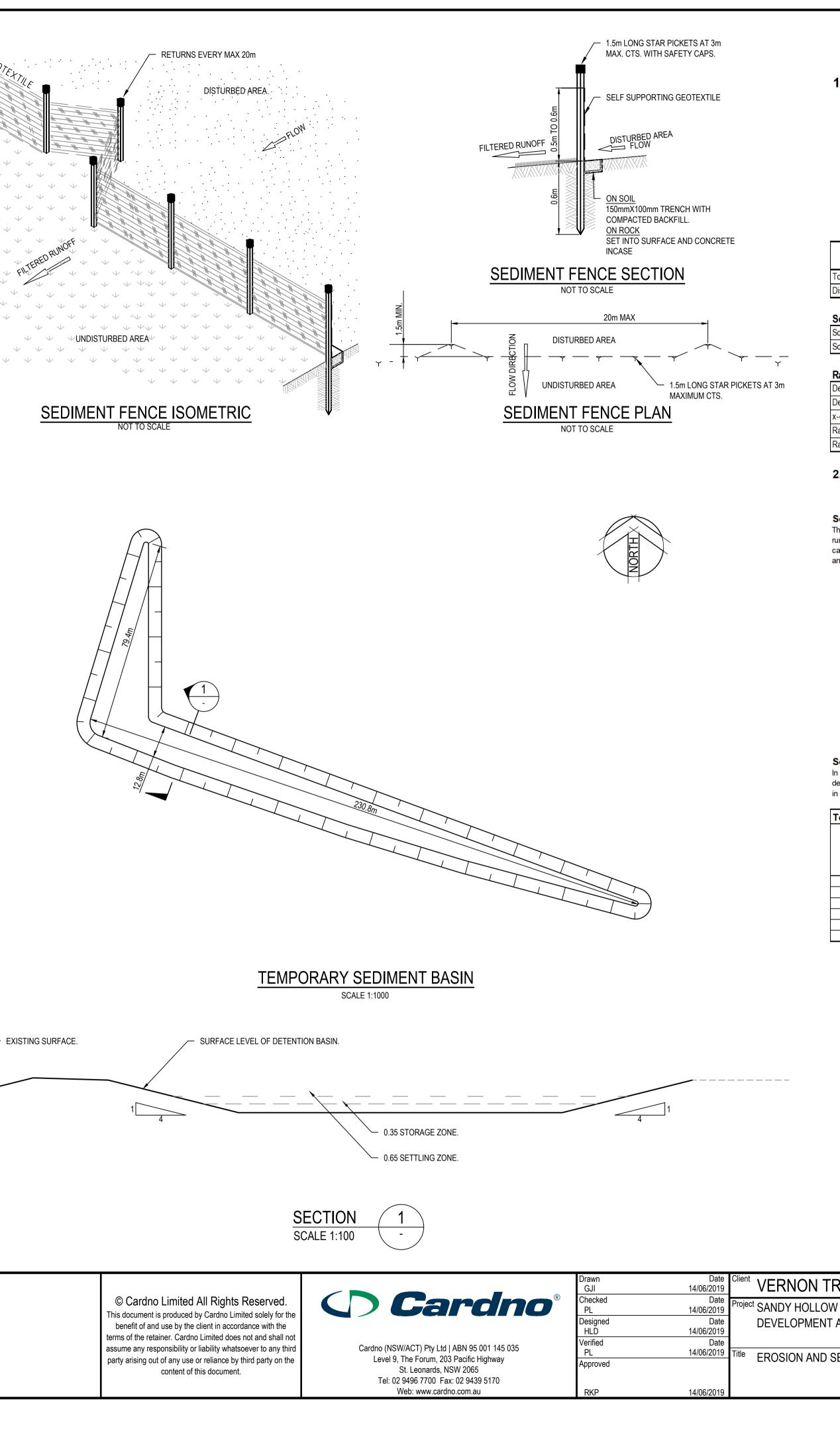




Des. Verif. Appd.

Date

Description



1. Site Data Sheet

Site name:	Sandy Hollow Solar Farm
Site location:	Muswellbrook Shire Council
Precinct:	Sandy Hollow Solar Farm

.

Description of site: Renewable Energy project

Site area			Si	te		Remarks
Site area	1	2	3	4		Remarks
otal catchment area (ha)	17.247					
Disturbed catchment area (ha)	17.247					

Soil analysis

Soil landscape						DIPNR mapping (if relevant)	
Soil Texture Group	F						Sections 6.3.3(c), (d) and (e)

Rainfall data

Design rainfall depth (days)	5			See Sections 6.3.4 (d) and (e)
Design rainfall depth (percentile)	80			See Sections 6.3.4 (f) and (g)
α-day, y-percentile rainfall event	22.6			See Section 6.3.4 (h)
Rainfall intensity: 2-year, 6-hour storm	6.07			See IFD chart for the site
Rainfall erosivity (R-factor)	1040			Automatic calculation from abov e data

2. Volume of Sediment Basins, Type D and Type F Soils

Basin volume = settling zone volume + sediment storage zone volume

Settling Zone Volume

The settling zone volume for *Type F* and *Type D* soils is calculated to provide capacity to contain all runoff expected from up to the y-percentile rainfall event. The volume of the basin's settling zone (V) can be determined as a function of the basin's surface area and depth to allow for particles to settle and can be determined by the following equation:

 $V = 10 x C_v x A x R_{y-\% ile, x-day} (m^3)$

where:

10 = a unit conversion factor

- C_v = the volumetric runoff coefficient defined as that portion of rainfall that runs off as stormwater over the x-day period
- R = is the x-day total rainfall depth (mm) that is not exceeded in y percent of rainfall events. (See Sections 6.3.4(d), (e), (f), (g) and (h)).
- A = total catchment area (ha)

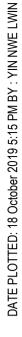
Sediment Storage Zone Volume

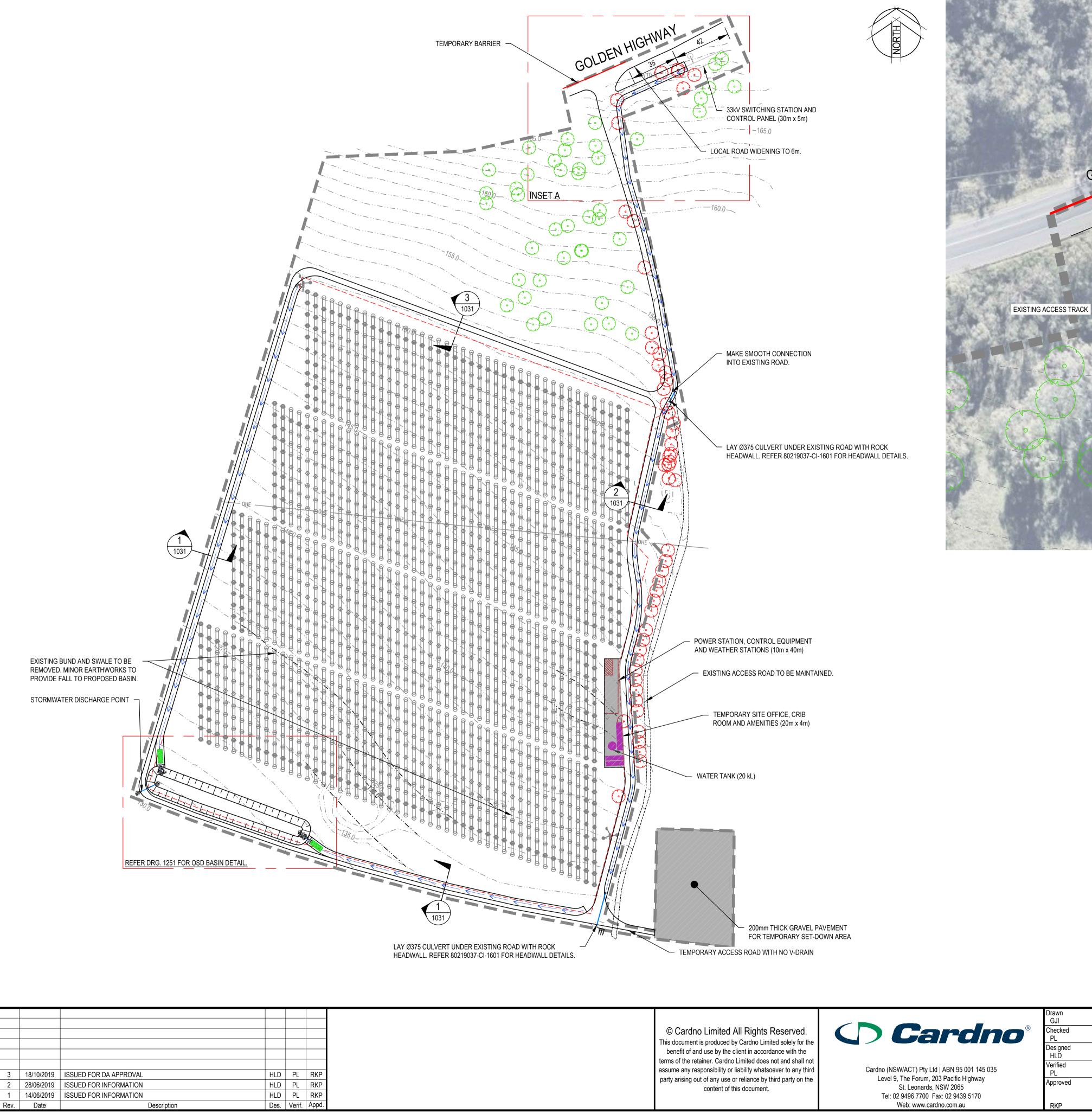
In the standard calculation, the sediment storage zone is 50 percent of the setting zone. However, designers can work to capture the 2-month soil loss as calculated by the RUSLE (Section 6.3.4(i)(ii)), in which case the "Detailed Calculation" spreadsheets should be used.

Total Basin Volume									
Site	Cv	R x-day y-%ile	T otal catchment area (ha)	Settling zone volume (m ³)	Sediment storage volume (m ³)	Total basin volume (m ³)			
1	0.51	22.6	17.2468	1987.866168	994	2981.799252			

NOTE:	
1.	TEST ANY STORED WATER AND FLOCCULATE AS REQUIRED TO ENSURE
	WATER QUALITY MEETS THE REQUIREMENTS OF COUNCIL PRIOR TO
	PUMPING FOR DUST CONTROL. REFER TO APENDIX E OF 'BLUE BOOK' FOR
	FLOCCULATION DETAILS.
2.	TEMPORARY BASIN IS REFERRED TO AS 'SITE 1' IN BASIN CALCULATIONS

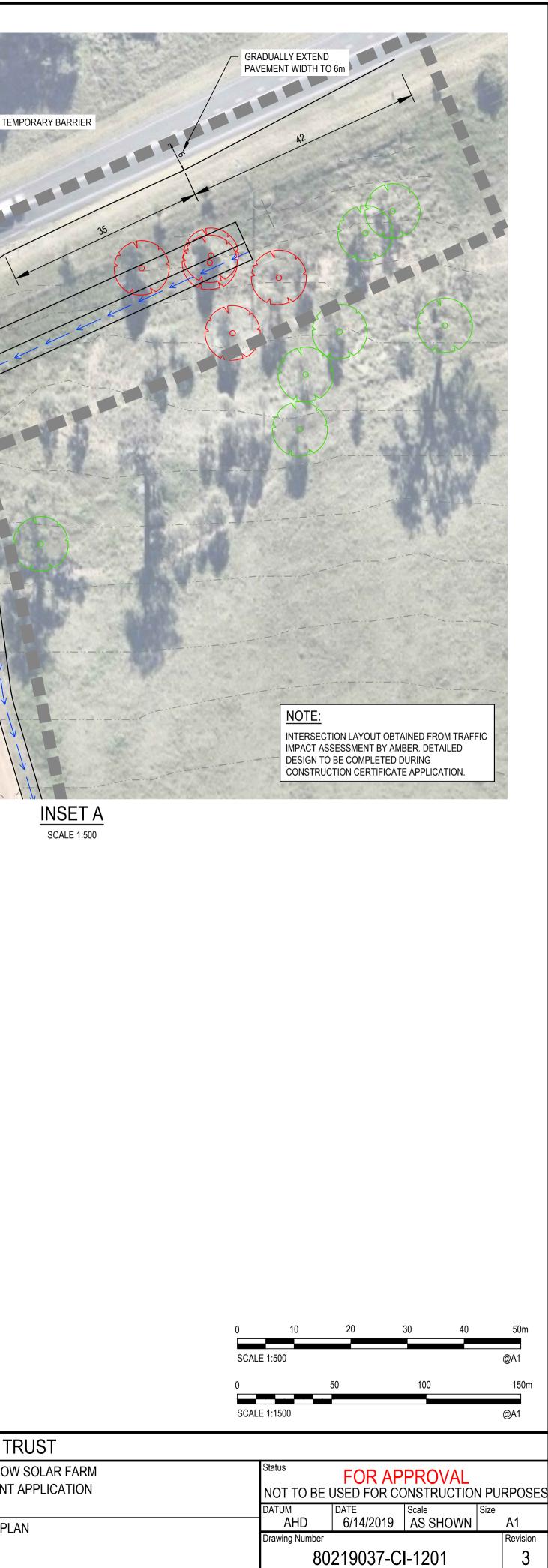
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0	5	10	15	20m
SCA	LE 1:200			@A1
0	20	40	60 80	100m
SCA	LE 1:1000			@A1
RUST				
V SOLAR FARM APPLICATION			PPROVAL	
	DATUM			JN PURPUSE
SEDIMENTATION CONTROL DETAILS	AHD	6/14/2019		
	Drawing Number			Revision
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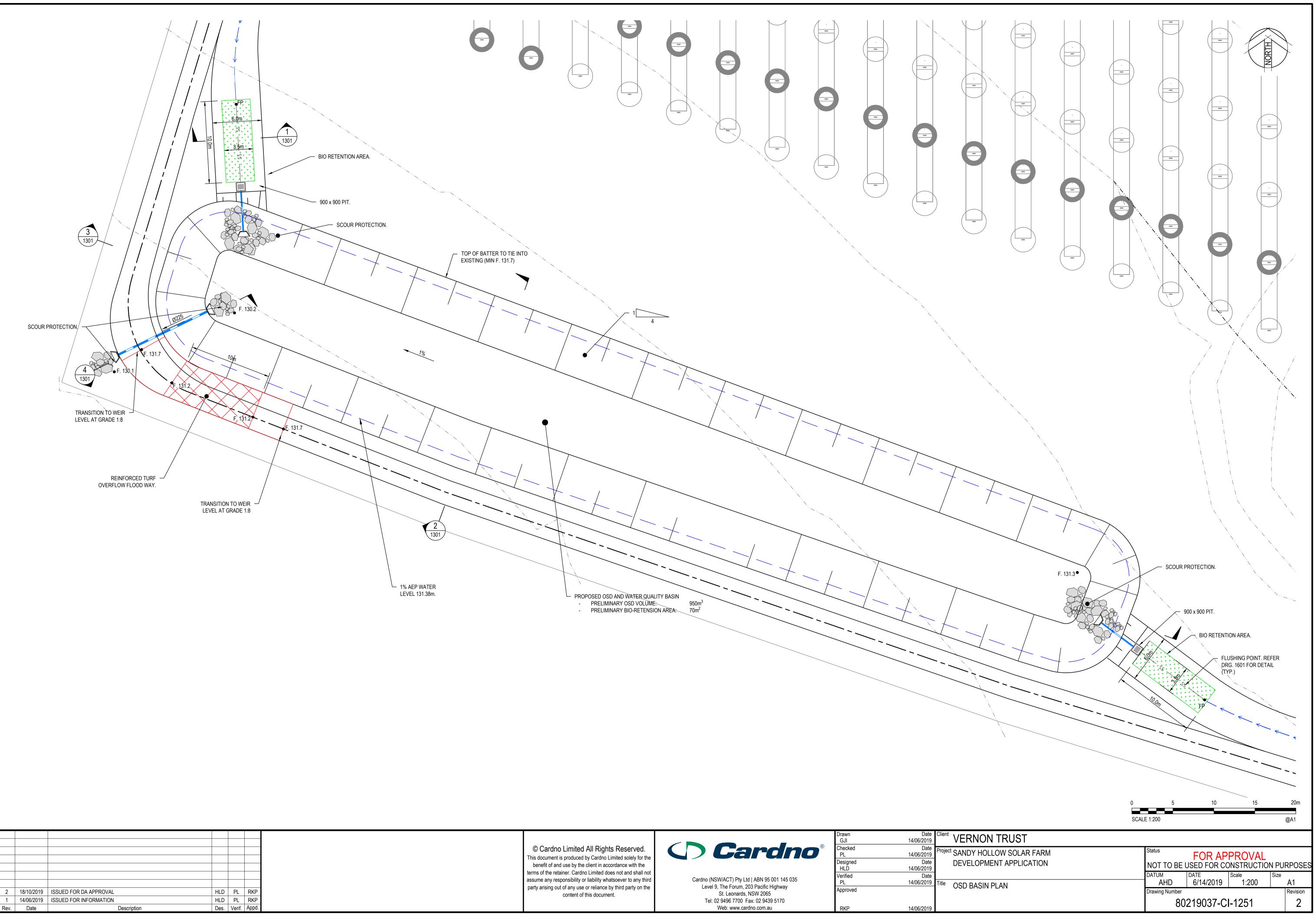




Drawn GJI	Date 14/06/2019	Client	VERNON TRU
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Verified PL	Date 14/06/2019	Title	
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RKP	14/06/2019		

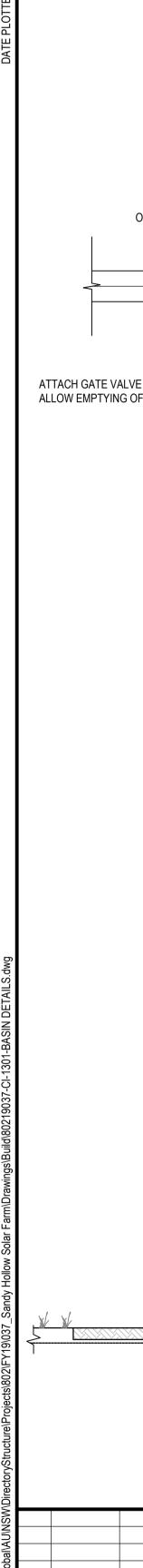
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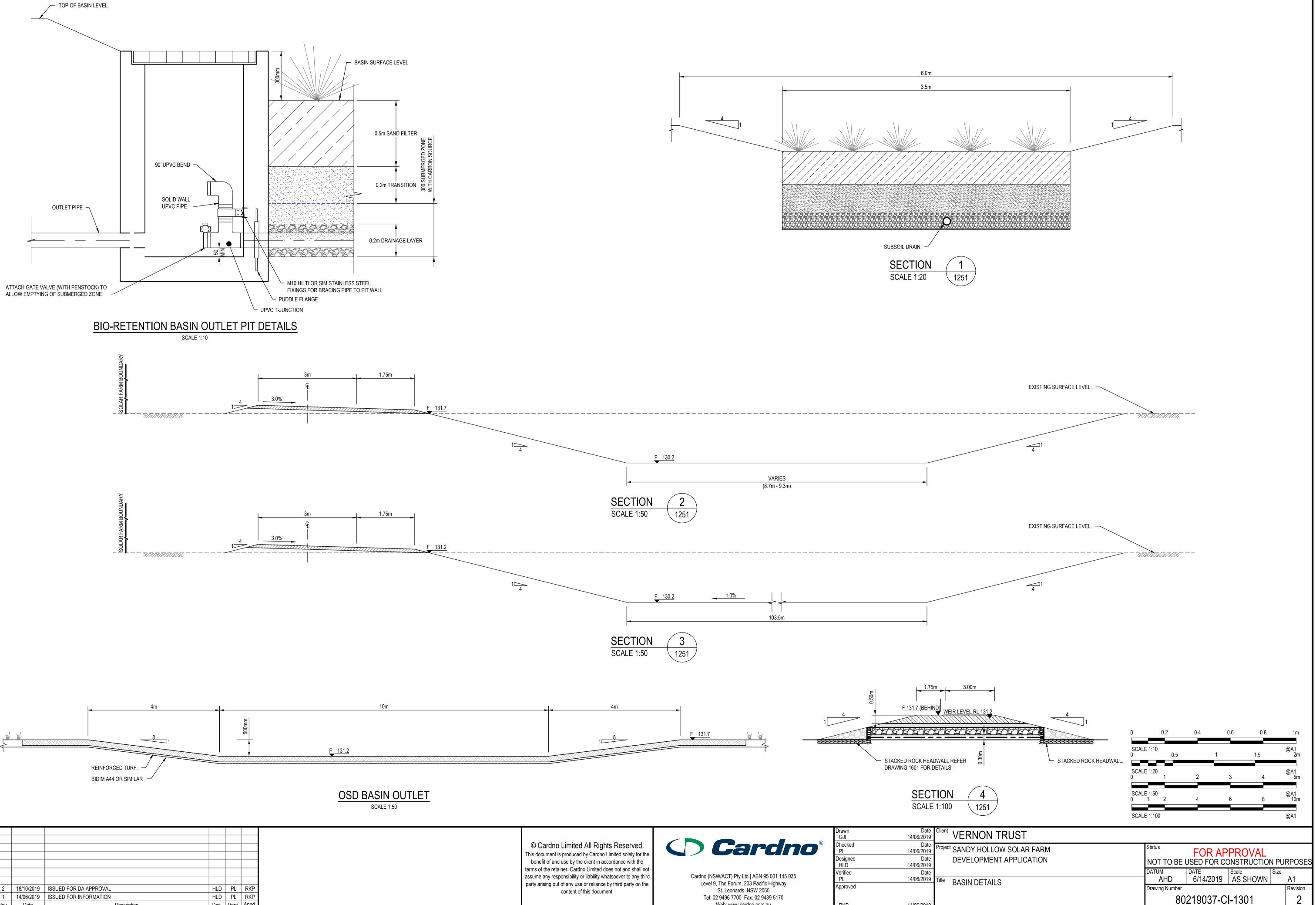




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		Drawn GJI	Date 0 14/06/2019	VERNON TRUST
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	Web: www.cardno.com.au	RKP	14/06/2019	





Date

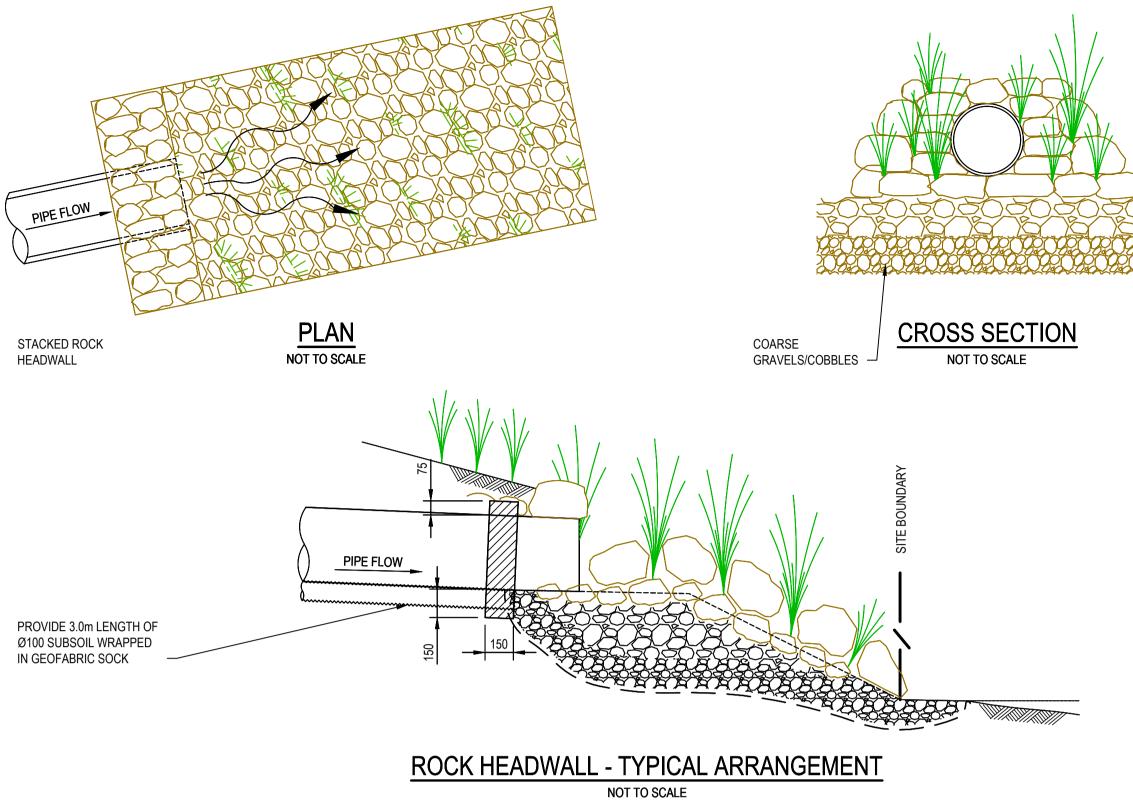
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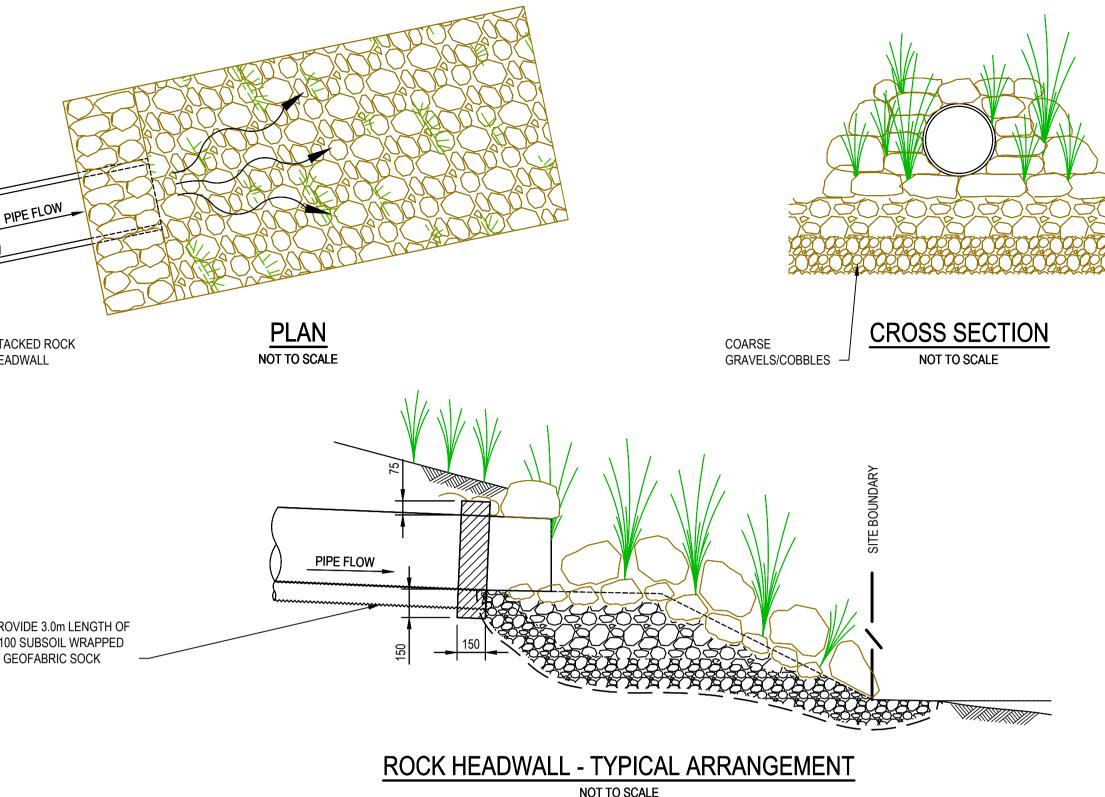
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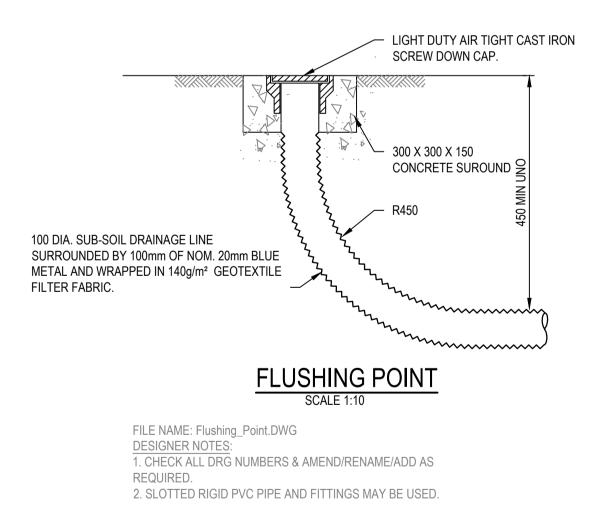
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RKP 14/06/2019

3	18/10/2019	ISSUED FOR DA APPROVAL		HLD	PL	RKP
2	28/06/2019	ISSUED FOR INFORMATION		HLD	PL	RKP
1	14/06/2019	ISSUED FOR INFORMATION		HLD	PL	RKP
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		Drawn GJI	Date Cl 14/06/2019	VERNON TRUST	<u>.</u>				
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	Verified PL	Date 14/06/2019 Tit	itle SITEWORKS AND STORMWATER DETAILS		HD 6/14/2	2019 Scale AS S	HOWN	A1	
	St. Leonards, NSW 2065 Tel: 02 9496 7700 Fax: 02 9439 5170	Approved RKP	14/06/2019		Drawin	g Number 8021903	87-CI-160	1	Revisio

NOTE:

SUB-GRADE FILL MATERIAL FOR TRACK TO BE OBTAINED BY CUTTING IN-SITU MATERIAL FROM V-DRAIN. TRACK SUB-GRADE LEVEL SET BY CUT TO FILL BALANCE OF TRACK AND V-DRAIN.

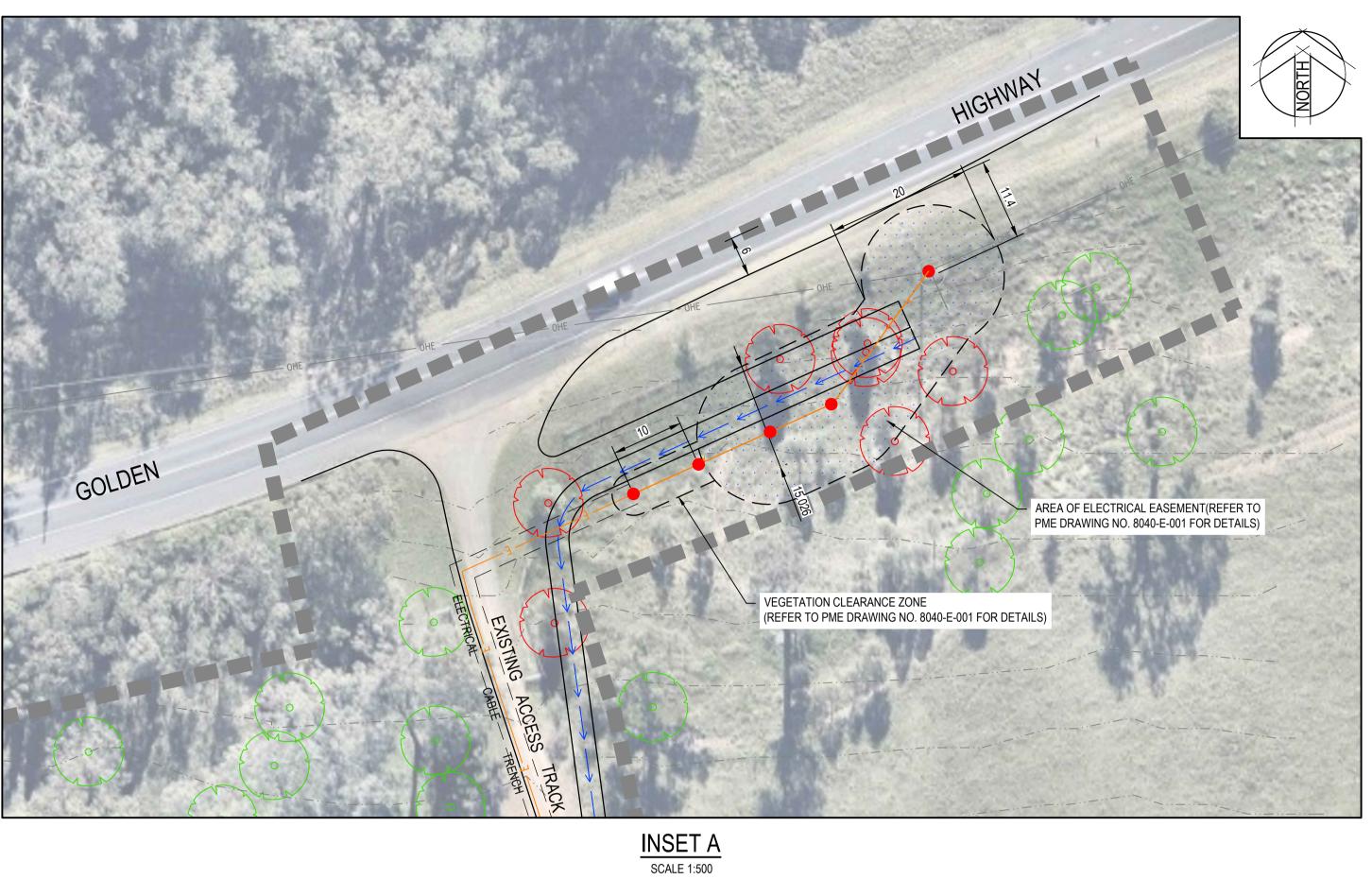
PAVEMENTS HAVE BEEN DESIGNED USING DESIGN SUBGRADE CBR 3%. CBR TO BE CONFIRMED ON SITE AFTER ROAD BOXING. FOR CBR LESS THAN 3%, PAVEMENT REDESIGN REQUIRED (NOTIFY SUPERINTENDENT PRIOR TO TREATMENT FOR CONFIRMATION DESIGN).

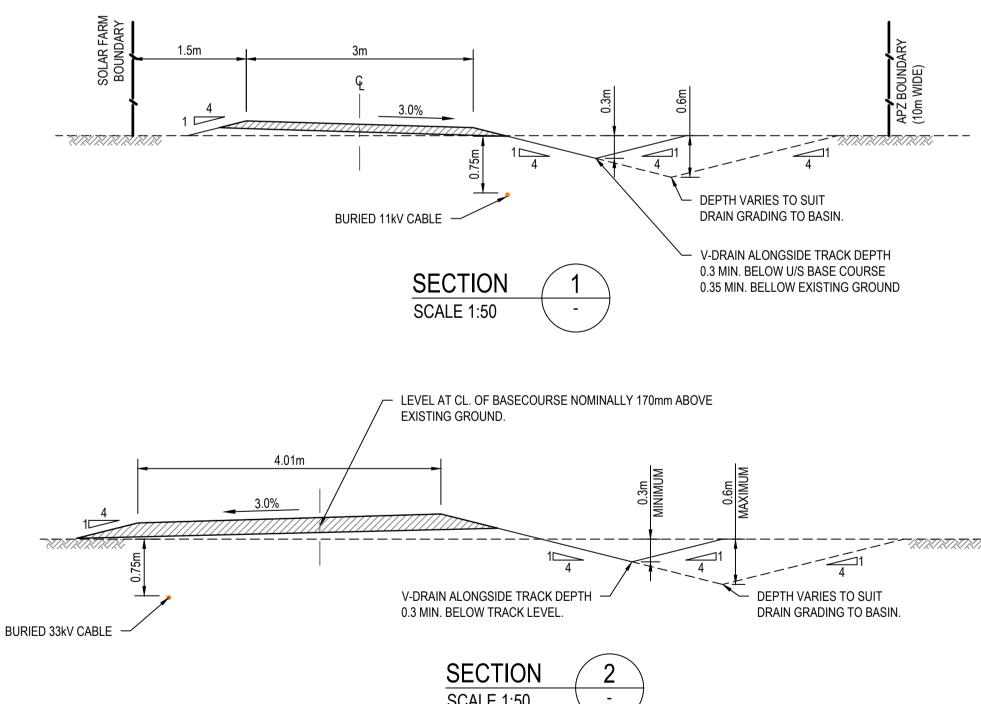


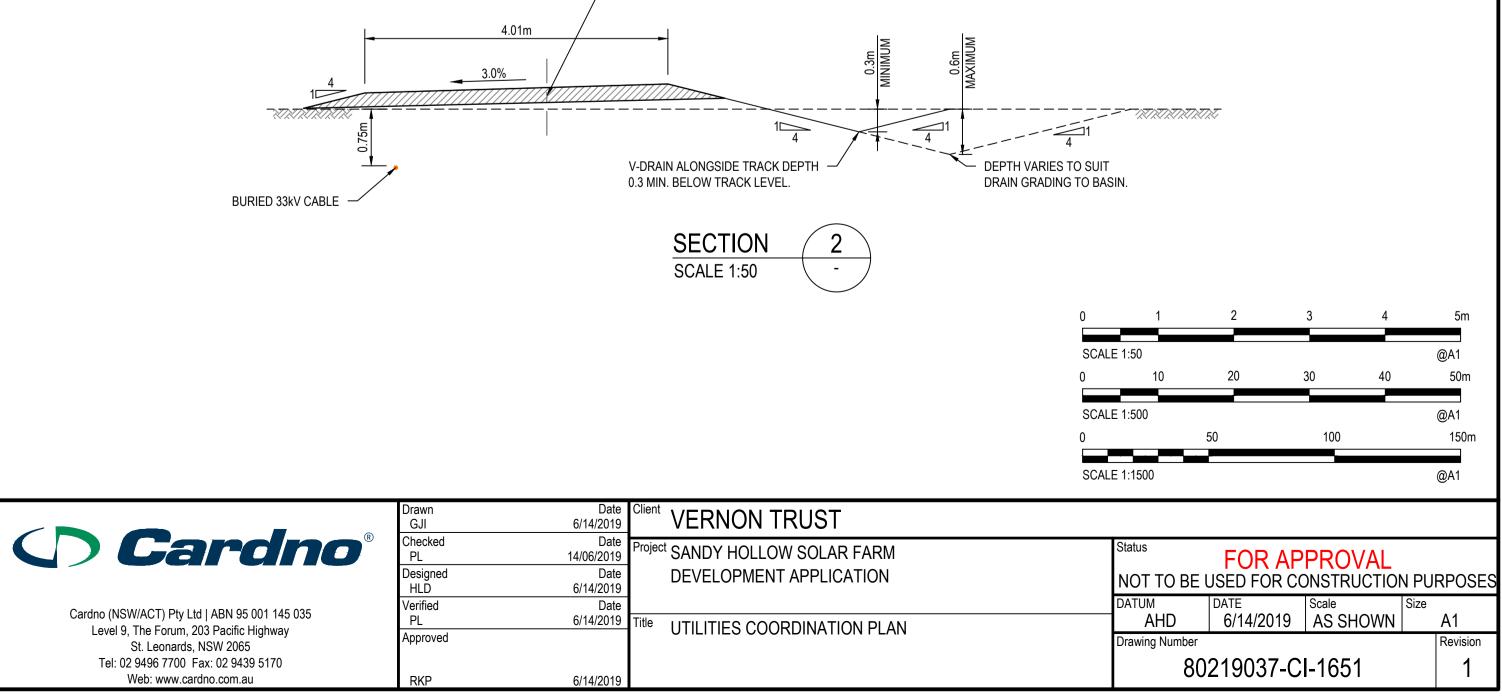
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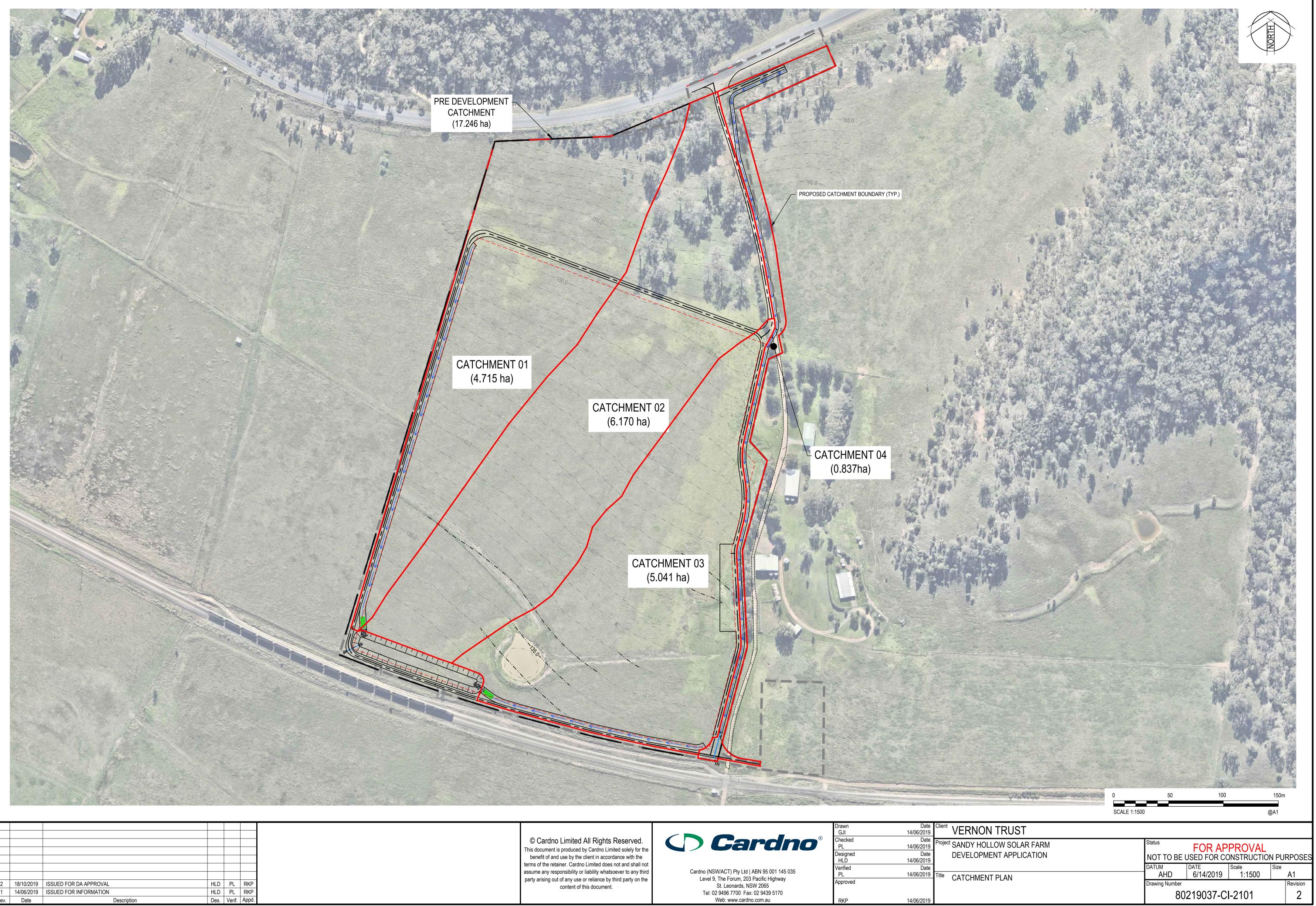






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Drawn GJI	Date 14/06/2019	Client VERNON TRU
Checked PL	Date 14/06/2019	Project SANDY HOLLOW S
Designed HLD	Date 14/06/2019	DEVELOPMENT A
Verified PL	Date 14/06/2019	Title CATCHMENT PLAN
Approved		
RKP	14/06/2019	