NO EARTHWORKS TO BE UNDERTAKEN IN THE ENVIROMENTAL PROTECTION AREA. EXTENT OF THE PROTECTION AREA TO BE CLEARLY MARKED / SURVEYED ON SITE PRIOR TO EARTHWORKS CONSTRUCTION COMMENCING.

TEMPORARY SWALE TO DIRECT FLOW INTO SEDIMENT BASIN

NO EARTHWORKS TO BE UNDERTAKEN IN THE ENVIROMENTAL PROTECTION AREA. EXTENT OF THE PROTECTION AREA TO BE CLEARLY MARKED / SURVEYED ON SITE PRIOR TO EARTHWORKS CONSTRUCTION COMMENCING.

EXTENDED BORROW AREA TO ALLOW FOR ADDITIONAL SSPP SITE REQUIRED FILL MATERIAL.

PRECINCT 9

SANDY ROAD

SP

LEGEND

- PROPOSED SURFACE CONTOURS
- TOP/TOE OF BATTER
- TEMPORARY SWALE
- CUT (BORROW MATERIAL)
- PRECINCT BOUNDARY

BULK EARTHWORKS NOTES

1. ALL EARTHWORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH T.S.C. STANDARD SPECIFICATIONS.
2. ALL EARTHWORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH AS3798-2007 UNDER LEVEL 1 SUPERVISION.
3. FREQUENCY OF FIELD DENSITY TESTS SHALL BE CARRIED OUT IN ACCORDANCE WITH TABLE 8.1 "TYPE 1" OF AS3798-2007, UNDER THE BASIS OF LEVEL 1 SAMPLING AND TESTING. RELATIVE COMPACTION REQUIRED FOR PLACED FILL MATERIAL IS 95% STD DENSITY RATIO.
4. ALL NEW WORKS TO MATCH NEATLY WITH EXISTING. THE CONTRACTOR SHALL CONFIRM LOCATION OF ALL EXISTING SERVICES AND PROTECT THESE SERVICES DURING CONSTRUCTION. DAMAGED SERVICES SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE.
5. ALL OF THE SITE SHALL BE KEPT FREE DRAINING DURING ALL PHASES OF THE PROJECT.
6. MINIMUM TOPSOIL THICKNESS 100mm
7. UNLESS DIRECTED OTHERWISE BY THE SUPERINTENDENT ALL FILL SHALL BE PLACED AT BETWEEN +2% AND -2% OF OPTIMUM MOISTURE CONTENT.

FOR EARTHWORKS SECTIONS REFER DRAWING YC0229-1E1-ES08

STATUS: CONSTRUCTION CERTIFICATE — FOR APPROVAL

REV	DESCRIPTION	DRAWN	DATE
C	BORROW AREA EXTENDED	M.B.	11.07.14
B	RESPONSE TO TSC COMMENTS (RE: MP08_0200 Mod 2)	C.S.	10.03.14
A	ORIGINAL ISSUE	G.S.	11.12.13

DRAWING IS NOT TO BE SCALED

SCALE (AT ORIGINAL SHEET SIZE) 1:1000 — ORIGINAL SHEET SIZE: A1

CLIENT: LEDA MANORSTEAD Pty Ltd

PROJECT: COBAKI, TWEED HEADS WEST
CENTRAL OPEN SPACE
BULK EARTHWORKS
CONSTRUCTION CERTIFICATE
CIVIL ENGINEERING DRAWINGS

SEDGMAN YEATS
LEVEL 1, 193 FERRY ROAD SOUTHPORT QLD 4215 AUSTRALIA
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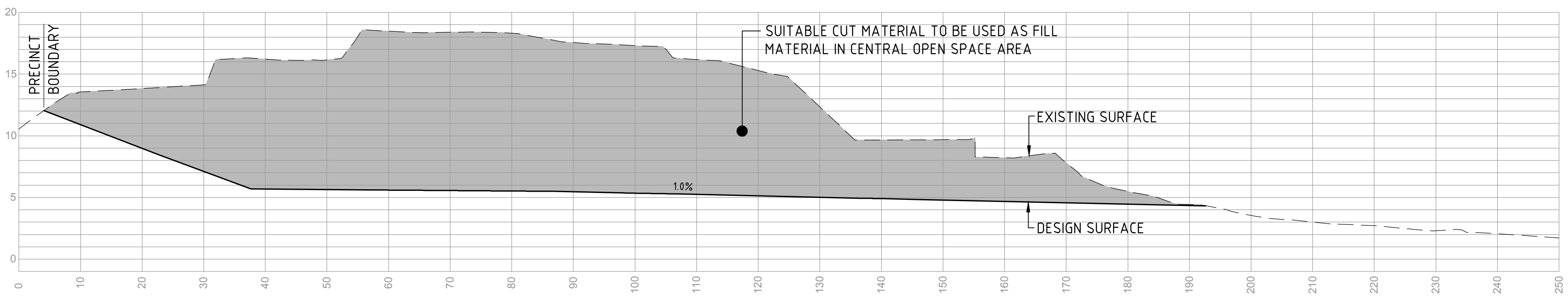
TITLE: PRECINCT 9
BORROW AREA EARTHWORKS PLAN

TASK	BY	INITIAL	DATE
REVIEW	CS		11.12.13
DESIGN	CJE		11.12.13
DRAWN	GS		11.12.13

APPROVED — RPEQ No

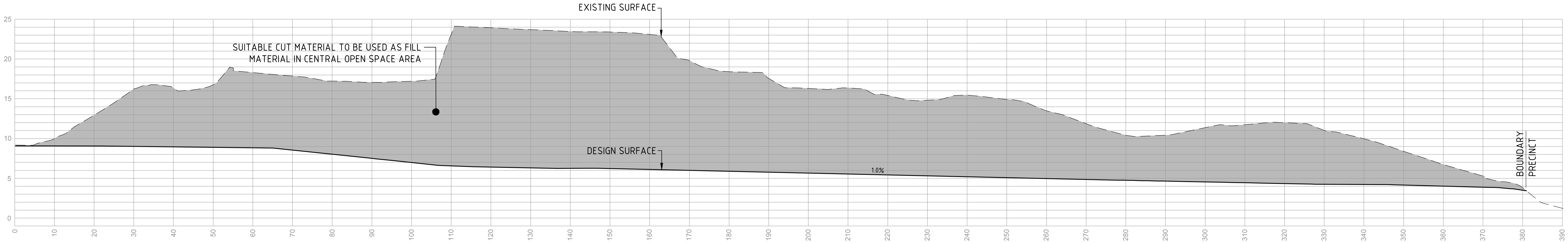
DRAWING NUMBER: YC0229-1E1-EW13 — REVISION: C



SECTION S

SCALE 1:500 h
SCALE 1:250 v

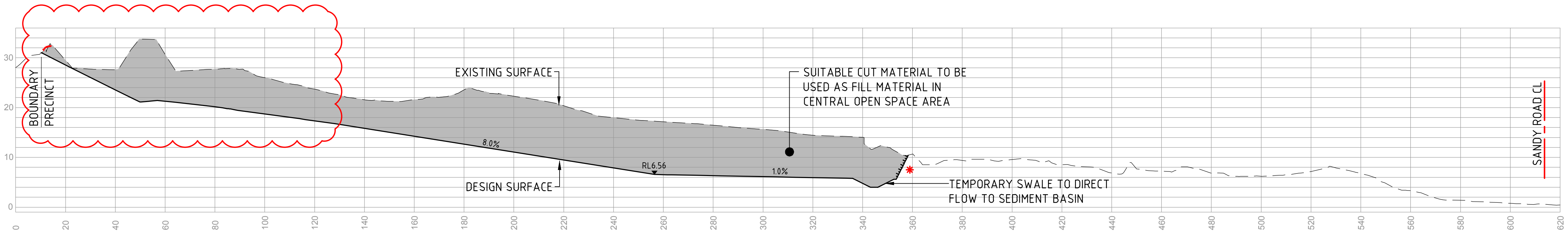
EC01



SECTION T

SCALE 1:500 h
SCALE 1:250 v

EC01



SECTION R

SCALE 1:1000 h
SCALE 1:500 v

EC01

NOTE

* CONTRACTOR TO APPLY A TEMPORARY 1 in 2 BATTER AT THIS LOCATION DURING BULK EARTHWORKS PHASE. LANDFORMING OF FUTURE EARTHWORKS IS TO BE UNDERTAKEN AS PART OF FUTURE WORKS OF PRECINCT 9 AND SHALL NOT BE INCLUDED IN THE BORROW AREAS FOR THE CENTRAL OPEN SPACE.

LEGEND

- FINAL DESIGN SURFACE
- EXISTING DESIGN SURFACE
- TEMPORARY 1 in 2 BATTER
- CUT (BORROW MATERIAL)

STATUS: CONSTRUCTION CERTIFICATE — FOR APPROVAL

REV	DESCRIPTION	DRAWN	DATE
D	EXTENDED BORROW AREA	M.B.	11.07.14
C	AS CONSTRUCTED DTM ADDED	M.B.	20.05.14
B	RESPONSE TO TSC COMMENTS (RE: MP08_0200 Mod 2)	C.S.	10.03.14
A	ORIGINAL ISSUE	G.S.	11.12.13

SCALE (AT ORIGINAL SHEET SIZE): AS SHOWN
ORIGINAL SHEET SIZE: A1

CLIENT: LEDA MANORSTEAD Pty Ltd

PROJECT: COBAKI, TWEED HEADS WEST
CENTRAL OPEN SPACE
BULK EARTHWORKS
CONSTRUCTION CERTIFICATE
CIVIL ENGINEERING DRAWINGS

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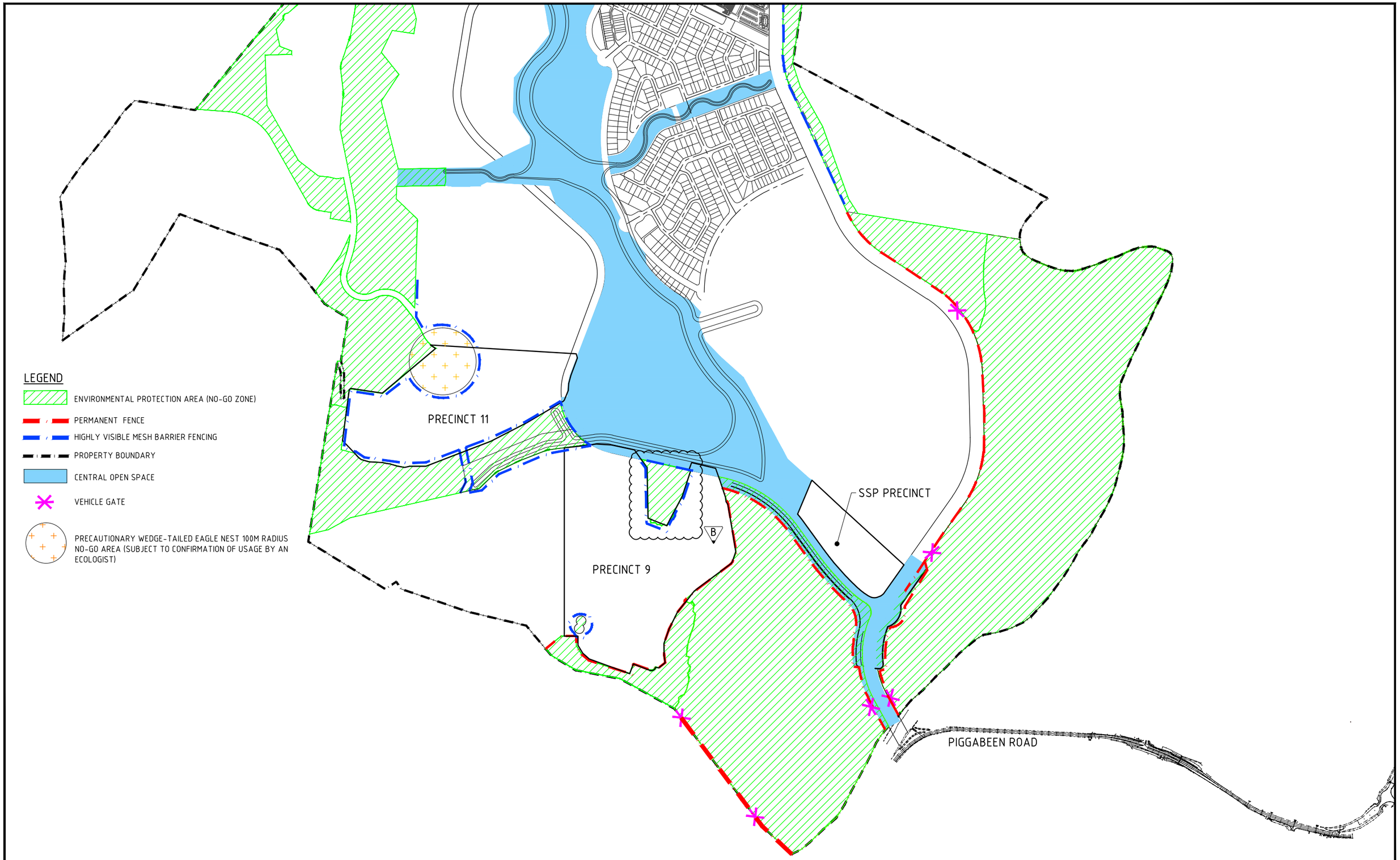
TITLE: PRECINCT 9
BORROW AREA EARTHWORKS SECTIONS

TASK	BY	INITIAL	DATE
REVIEW	CS		11.12.13
DESIGN	MB		11.12.13
DRAWN	GS		11.12.13

APPROVED — RPEQ No

DRAWING NUMBER: YC0229-1E1-ES08 — REVISION: D

APPENDIX B – EARTHWORKS FENCING PLAN



REVISION		DATE	DES/DFT	APP'D
B	Barrier Fencing Amended	10.12.13	SS/DK	
A	Issued for Approval	24.10.13	SS/JF	

LEDA

Principal
Leda Developments
Suite 14, Level 1, 46 Cavill Avenue
Surfers Paradise

Project Leader
S.Sandford
Designed
S.Sandford
Drawn
J.Flynn
Checked

Authorised

Date
September 2011

Scale @ A1

smec urban consulting group

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COBAKI ESTATE
OVERALL
Tweed Shire Council

Fencing Plan Precinct 9,11 and SSP
Drawing No. 3310071E-044 **Rev B**

Sheet No. 1 of 1

Subject to Approval
Not to be used for construction

APPENDIX C – NON-COMPLIANCE AND CORRECTIVE ACTION REGISTER

Non Conformance Number	Date	Location	Description	Works required	Allowance of action (days)	Photo log number	Date closed out	Closed out by (name and signature)
								Name: Signature:
								Name: Signature:
								Name: Signature:
								Name: Signature:
								Name: Signature:
								Name: Signature:
								Name: Signature:
								Name: Signature:
								Name: Signature:
								Name: Signature:
								Name: Signature:
								Name: Signature:

APPENDIX D – COMPLAINTS REGISTER

COMPLAINTS REGISTER

Complainants Name	Address	Contact Phone Number	Brief Description of Complaint	Resolved (Date)

APPENDIX E – ENVIRONMENTAL INCIDENT REGISTER

ENVIRONMENTAL INCIDENT REPORT

Date of Incident:	
Type of Incident:	
Names of Staff Interviewed:	
Incident Witnessed by:	
Description of Incident:	
Damage to plant and equipment:	
Method of Clean up?:	
Authorities/Community Informed?:	
Finding from Investigation:	
Recommended Correct Actions (tick):	
	Education or persons involved
	Improve Construction Methods
	Improve inspection/maintenance
	Change work method
	Equipment repair/replacement
Other:	
Follow Up Evaluation (date):	
General Comments:	
Signed: Project Environmental Officer	
Date:	

APPENDIX F – ENVIRONMENTAL TRAINING REGISTER

Name	Company	Position on Project	Site Induction	Training Details	CEMP Version

APPENDIX G – SITE INSPECTION CHECKLISTS

Project:	
Inspection Date:	**Area:**

PRE-CLEARING CHECKLIST

#	Control Measure	Yes	No	N/A	Comment/Corrective Action
1	Has the boundary of the clearing zone been fenced/delineated				
2	Has the ecologist marked the communities and or individuals of threatened plants?				
3	Has the seed and plant material collection been undertaken?				
4	Has the in situ significant plants been fenced?				
5	Have habitat trees been identified?				
6	Has weed mapping and eradication been completed?				
7	Have areas of weed infected topsoil been separated/removed?				
8	Has vegetation and topsoil to be salvaged been identified?				
9	Mulching and chipping plant established?				
10	Have clearing contractors been educated on the no-go/ environmental protection areas?				
11	Have heritage items been identified and protected?				
12	Have permits to remove saltmarsh been gained from Fisheries?				
13	Have threatened fauna surveys been undertaken?				
14	Have all sediment control measures been installed?				
15	Have habitat trees been flagged for removal as stage 2 of the clearing works?				
16	Are WIRES and the spotter/catcher organised for clearing/				
17	Any other issues to add or delete from the checklist?				
Completed by:			**Signature:**		

Project:	COBAKI ESTATE
Inspection Date:	Area/Precinct:

WEEKLY CONSTRUCTION CHECKLIST

#	Control Measure	Yes	No	N/A	Comments/Corrective Action
1	Is drainage from the project site being directed through necessary controls prior to entering any watercourse?				
2	Is vegetation being protected with Environmental Protection Zones?				
3	Is the integrity of the delineation fencing along the Environmental Protection Zone buffer satisfactory?				
4	Are fauna structures (koala posts and nest boxes) in place?				
5	Have hollows been salvaged for re-use?				
6	Have hollows been inspected by the fauna specialist?				
7	Has the area been inspected for threatened fauna?				
8	Has flora monitoring been undertaken?				
9	Is monitoring of water quality being undertaken?				
10	Is riparian and wetland monitoring being undertaken?				
11	Are disturbed areas being rehabilitated as soon as practical?				
12	Are suitable sedimentation and erosion control devices in place where necessary?				
13	Are protected areas being protected from sediment and erosion impacts?				
14	Are areas surrounding waterways satisfactorily stable?				
15	Is there evidence to suggest changes should be made to the site induction relating to flora and fauna aspects? (i.e. reoccurring issues, prevention measures, etc)				
16	Have any injuries or death to wildlife been identified or reported?				
17	Have any weed infestations been identified?				
18	Any other issues to add to the checklist?				
Completed by:		**Signature:**			

HOLLOW INSPECTION CHECKLIST	
Part 1 (To be completed prior to clearing)	
Inspection Date:	Location:
Project Ecologist:	
Tree Number:	Tree Location:
Tree species:	
Size of entrance: (Small: ≤5cm; Medium: 5-15cm; Large: 15-30cm; Extra Large: >30cm)	
Height of hollow from ground:	
Are there any additional hollows on same tree:	
Fauna species inhabiting hollow (if present) or species most likely to utilize the hollow:	
Can the hollow be soft-felled and relocated? If so, provide recommended GPS location for relocation:	
Part 2 (To be completed during clearing of the identified hollow)	
If an animal was present in the hollow, is it injured?	
Does it require immediate attention?	
Can it be released and, if so, where will it be released?	
If not, what time was the fauna rescue agency called?	
What was the outcome of the fauna rescue?	
Will a compensatory nest box be required? If so, specify the type/size and recommended GPS location:	
Additional Notes/Comments:	
Completed By:	Signed:

APPENDIX H – EROSION AND SEDIMENT CONTROL DRAWINGS

APPENDIX I – WASTE REGISTER

Date	Type of Waste	Destination			Contractor
		Recycle		Disposal	
		Onsite	Offsite		

APPENDIX J – MONITORING CHECKLIST

Monitoring Issue	Location	Frequency	Activity	Action Completed?	Signature
Pre- Construction					
Fauna	SSPP	Within one week prior to the commencement of clearing.	Inspection of fauna protection/exclusion fencing and erosion and sediment controls.		
		During all clearing activities.	Inspection of clearing area and habitat features for the presence of fauna.		
Flora	SSPP	Once	Inspection of all construction environmental controls.		
		During Clearing	Inspection for integrity of construction environmental controls		
		Every 6 months	Inspection for the presence of weeds		
Baseline Groundwater Water Quality Monitoring	Groundwater Bores and Sediment Basins	Monthly	Data collected for pH, turbidity, suspended solids, salinity, dissolved oxygen, dissolved organic compounds, magnesium and calcium hardness and temperature in accordance with the Groundwater Management Plan (SMEC, 2012f).		
Acid Sulfate Soils	ASS identified areas	Once	One sample per 250m^3 collected to determine the net acidity and appropriate liming rate for the disturbed soil in the ASS risk area in accordance with the Acid Sulfate Soil Management Plan (SMEC, 2012a).		
Construction					
Fauna	Work areas	Daily	Inspection of fauna protection/exclusion fencing		
		Weekly general inspection	A general inspection completed for fencing associated with fauna. Rectifications reported and completed.		
		Monthly monitoring of Boyd Street, Cobaki Parkway and the Pacific Highway Tugun Bypass on	Monitoring for road strike		

Monitoring Issue	Location	Frequency	Activity	Action Completed?	Signature
		road strike.			
Groundwater	Allocated bores	Monthly measurement of water levels, water quality testing and analysis of samples.	Water quality monitoring and sampling		
Surface Water Quality	Boards 1 to 4	Monthly	Water quality monitoring and sampling		
Groundwater during De-Watering	Where any groundwater seepage into any excavation occurs	Daily	Water quality monitoring and sampling		
Storm Water	Stormwater retention basis	Weekly/ 12 hourly during rainfall events (>25 mm)/ when pH is recorded < 6.5	Water quality monitoring and sampling		
Contaminated Lands	Where potential for contamination is identified	Weekly	Inspection and sampling for potential contamination		
Noise	Nearest possible location to likely affected residence or boundary of.	Reactive (complaint based)	Noise monitoring		
Cultural Heritage	Entire site	As detected	Detection of Aboriginal objects or Aboriginal human remains reported and addressed.		

Monitoring Issue	Location	Frequency	Activity	Action Completed?	Signature
Erosion and Sediment Control	Work Areas	Daily	Inspection of erosion and sediment controls		
Air Quality	Work Areas	Daily	Visual observations for dust assessed, reported and managed		
Waste	Work Areas	Daily Monthly	Inspection of receptacles Monitoring of monthly volumes of waste streams		
Acid Sulfate Soils	Where water has ponded	Twice Weekly	Testing undertaken for pH, turbidity and dissolved oxygen to determine ASS potential		
	Following Liming	Once	One sample per 250m^3 and testing to ensure that treated soils have sufficient acid neutralising capacity and a pH > 5.5 and < 8.5		
	Commencement of tyning and operations of final cut platforms	Once	One sample per 250m^3 and testing to ensure that treated soils have sufficient acid neutralising capacity and a pH > 5.5 and < 8.5		
Traffic and Pedestrian Management	Work Areas	Daily	Inspection of washing facilities, road traffic and public access roads.		
Biting Midge and Mosquito Control	Surface waters	Weekly	Inspection for presence of mosquito larvae undertaken in accordance with the Biting Midge and Mosquito Control Management Plan (McGinn, 2008).		

Comments:

Signed: