

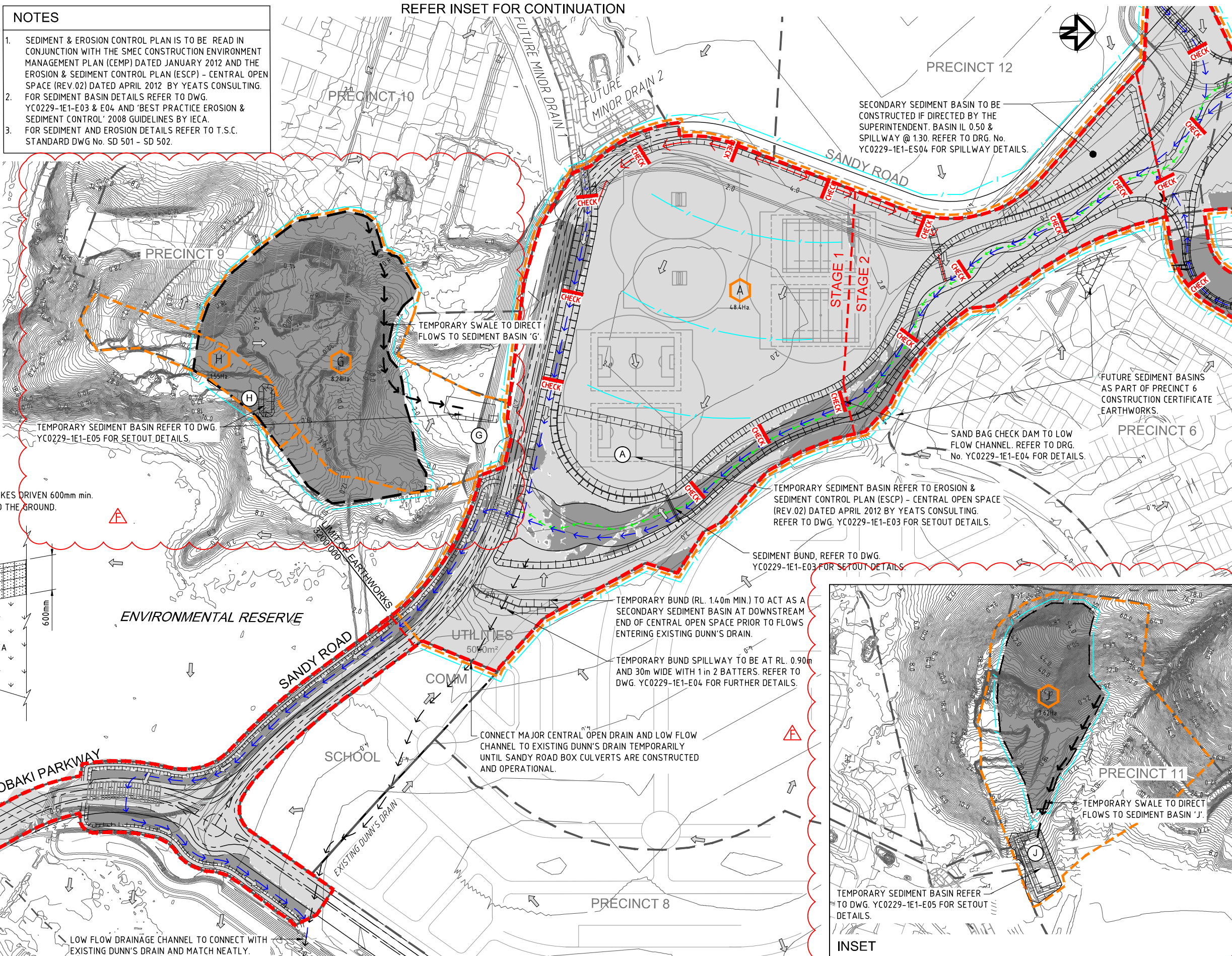
LEGEND

- PROPOSED SURFACE CONTOURS
- TOP/TOE OF BATTER
- SEDIMENT FENCE. REFER TO DETAIL.
- CENTRELINE OF OPEN DRAIN
- CENTRELINE OF LOW FLOW CHANNEL
- EXISTING DUNN'S DRAIN
- STAGE BOUNDARY
- OPEN SPACE BOUNDARY
- PRECINCTS 1 & 2 BORROW AREA
- STATE BOUNDARY
- GRAVEL CHECK DAM. REFER TO DRG. No. YC0229-1E1-E04 FOR DETAILS.
- DIRECTION OF OVERLAND FLOW
- SEDIMENT POND. REFER TO DRG. No. YC0229-1E1-E03 & E04 FOR DETAILS.
- CATCHMENT BOUNDARY
- CATCHMENT LABEL
- FILL
- CUT

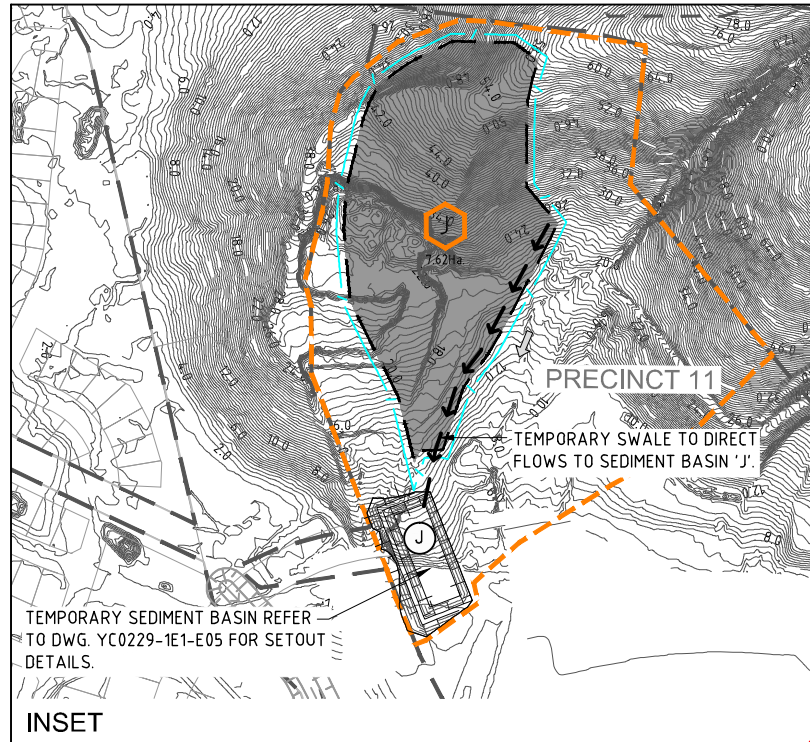
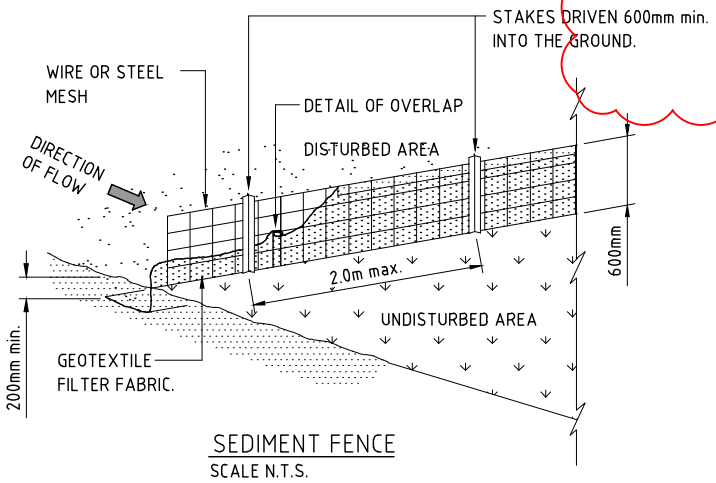
NOTES

1. SEDIMENT & EROSION CONTROL PLAN IS TO BE READ IN CONJUNCTION WITH THE SMEC CONSTRUCTION ENVIRONMENT MANAGEMENT PLAN (CEMP) DATED JANUARY 2012 AND THE EROSION & SEDIMENT CONTROL PLAN (ESCP) - CENTRAL OPEN SPACE (REV.02) DATED APRIL 2012 BY YEATS CONSULTING. FOR SEDIMENT BASIN DETAILS REFER TO DWG. YC0229-1E1-E03 & E04 AND 'BEST PRACTICE EROSION & SEDIMENT CONTROL' 2008 GUIDELINES BY IECA.
2. FOR SEDIMENT AND EROSION DETAILS REFER TO T.S.C. STANDARD DWG No. SD 501 - SD 502.

REFER INSET FOR CONTINUATION



DRAINAGE AREA 0.6ha. MAX. SLOPE GRADIENT 1 : 2 MAX. SLOPE LENGTH 60m MAX.



STATUS	CONSTRUCTION CERTIFICATE	FOR APPROVAL
F	PRECINCT 9 AND PRECINCT 11 BORROW AREAS ADDED	M.B. 11.12.13
E	MINOR OPEN DRAIN 5 ADDED TO DRAWING SET	T.W. 02.10.13
D	BULK EARTHWORKS CONSTRUCTION CERTIFICATE	M.G. 15.02.13
C	RESPONSE TO 3rd PARTY SWMP REVIEW	H.W. 18.10.12
B	RESPONSE TO TSC REQUEST FOR INFORMATION (RFI)	H.W. 04.05.12
A	ORIGINAL ISSUE	G.S. 18.03.11
REV	DESCRIPTION	DRAWN DATE

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SCALE (AT ORIGINAL SHEET SIZE)

SCALE 50 0 50 100 1:2500

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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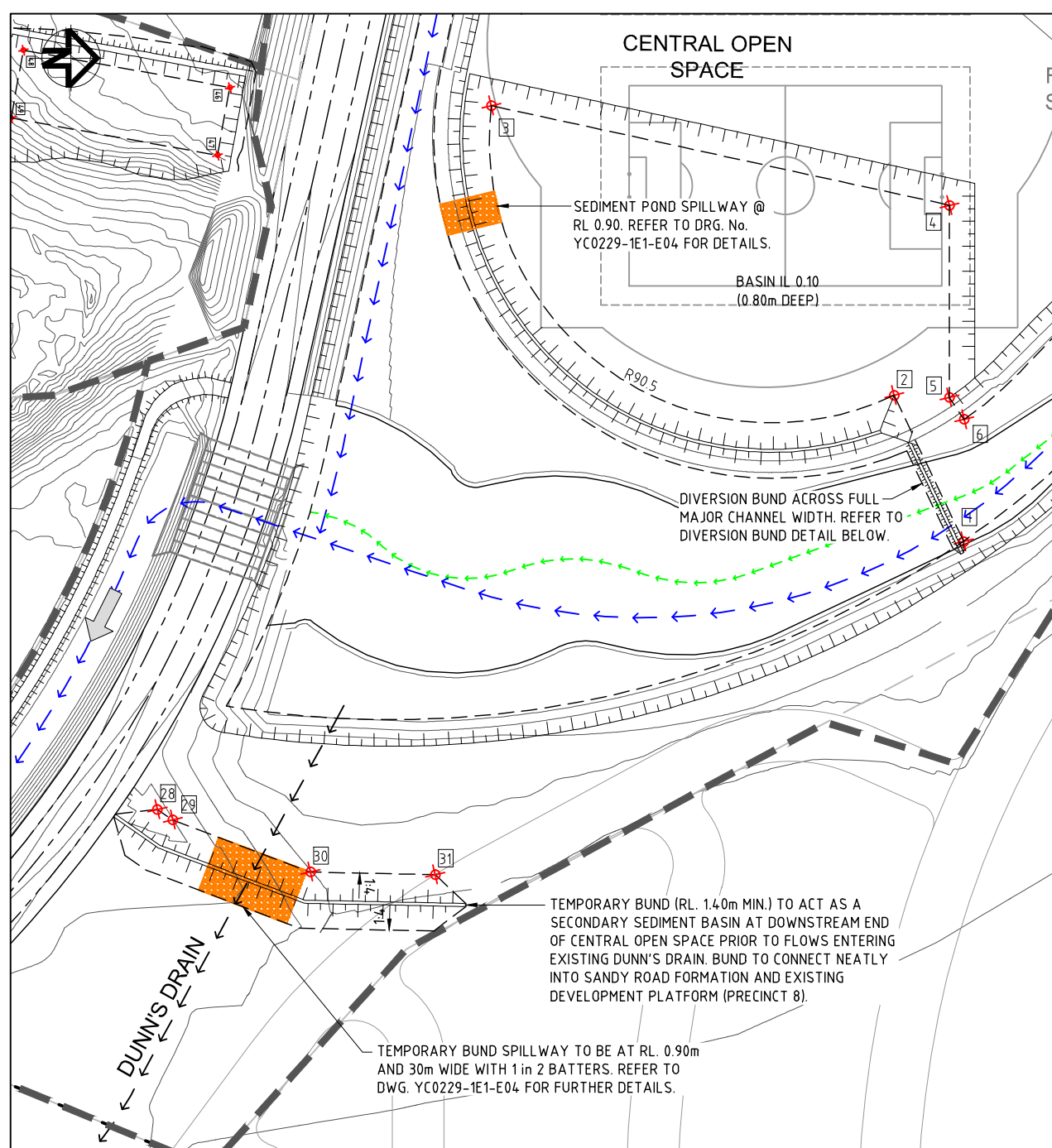
TASK	BY	INITIAL	DATE	APPROVED	RPEQ No	7817
REVIEW	CS		18.03.11			
DESIGN	CJE		18.03.11			
DRAWN	GS		18.03.11			

TITLE

EROSION & SEDIMENT CONTROL PLAN
SHEET 1 OF 2

DRAWING NUMBER YC0229-1E1-E01

REVISION F



SEDIMENT BASIN A & TEMPORARY BUND
SCALE 1:1000

SEDIMENT POND A SIZING DETAILS

CATCHMENT AREA = 48.4ha
TOTAL SEDIMENT YIELD = 664m³/year

MINIMUM REQUIRED DEPTH, SURFACE AREA AND VOLUME

SEDIMENT POND DEPTH = 0.65m
SEDIMENT POND AREA = 8877m²
SEDIMENT POND VOLUME = 5791m³

SEDIMENT POND B SIZING DETAILS

CATCHMENT AREA = 9.9ha
TOTAL SEDIMENT YIELD = 136m³/year

MINIMUM REQUIRED DEPTH, SURFACE AREA AND VOLUME

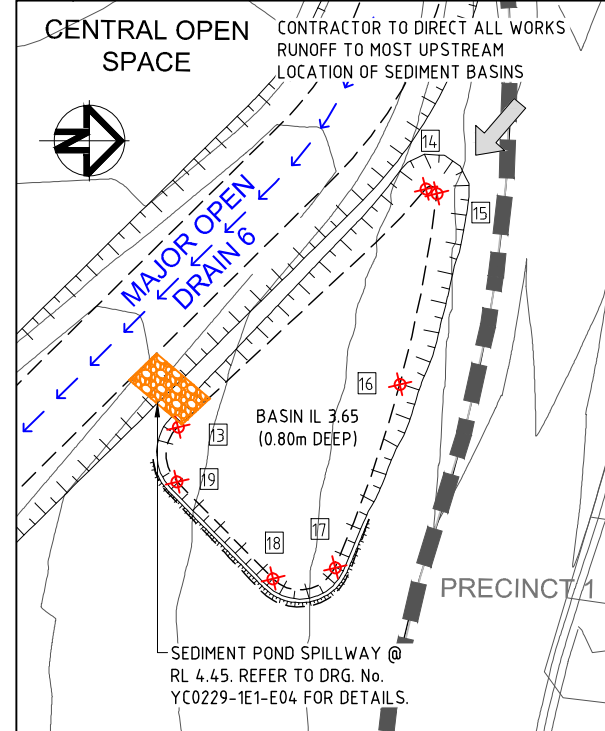
SEDIMENT POND DEPTH = 0.65m
SEDIMENT POND AREA = 1816m²
SEDIMENT POND VOLUME = 1184m³

SEDIMENT POND C SIZING DETAILS

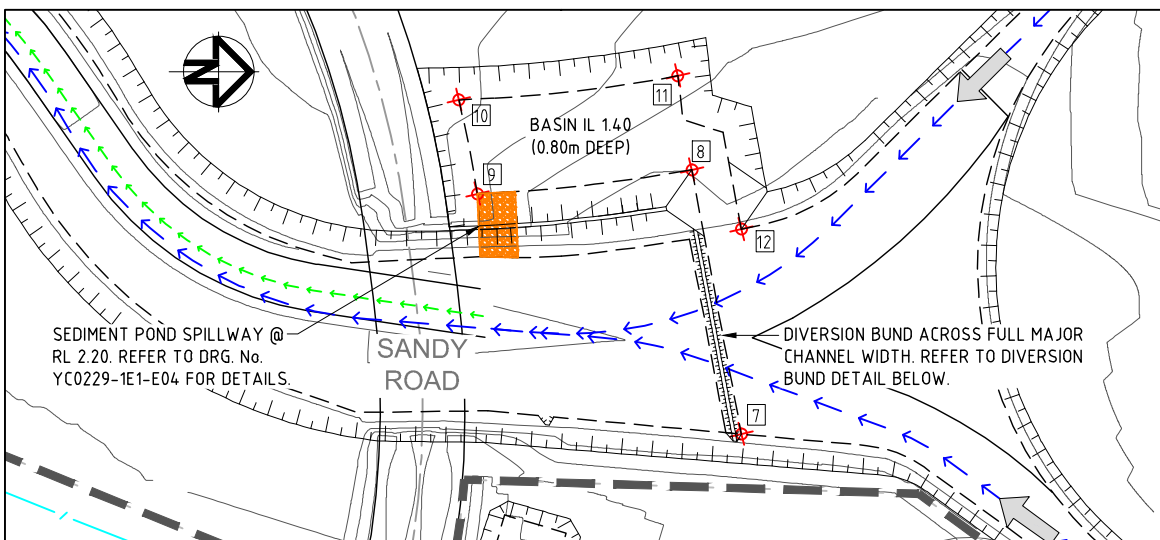
CATCHMENT AREA = 6.7ha
TOTAL SEDIMENT YIELD = 92m³/year

MINIMUM REQUIRED DEPTH, SURFACE AREA AND VOLUME

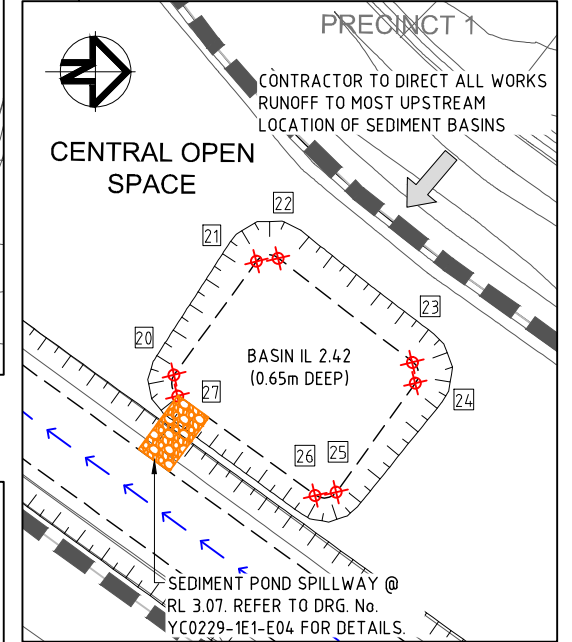
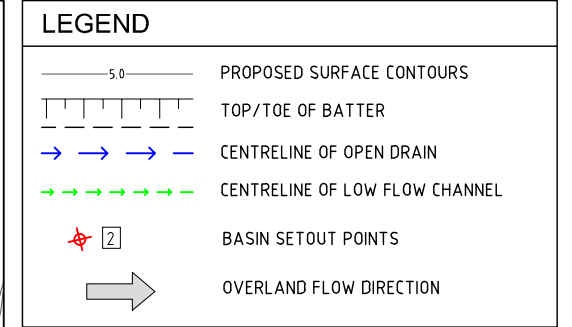
SEDIMENT POND DEPTH = 0.65m
SEDIMENT POND AREA = 1229m²
SEDIMENT POND VOLUME = 802m³



SEDIMENT BASIN B
SCALE 1:500



SEDIMENT BASIN C
SCALE 1:1000



SEDIMENT BASIN D
SCALE 1:500

SEDIMENT BASIN SET OUT

POINT	EASTING	NORTHING
1	47027.224	81571.402
2	46980.506	81549.199
3	46887.968	81420.473
4	46919.841	81566.892
5	46981.202	81566.859
6	46988.220	81571.607
7	46619.513	83091.685
8	46549.702	83078.559
9	46556.046	83021.835
10	46531.227	83016.920
11	46524.847	83074.840
12	46565.379	83091.679
13	46487.054	83213.688
14	46455.578	83246.435
15	46456.175	83247.870
16	46481.404	83243.000
17	46505.631	83234.442
18	46507.148	83226.226
19	46494.299	83213.536
20	46696.608	83269.765
21	46681.613	83280.634
22	46681.227	83283.504
23	46694.957	83301.218
24	46697.731	83301.638
25	46711.998	83291.342
26	46712.586	83288.400
27	46699.401	83270.210
28	47112.803	81313.782
29	47116.118	81318.697
30	47132.762	81362.683
31	47133.641	81402.533

SILT MANAGEMENT PROGRAM

PHASE	DESCRIPTION
ALL WORKS	• SILT FENCES TO BE ERECTED AT THE LOCATIONS SHOWN ON DWG'S YC0229-1E1-E01 & E02.
ROADWORKS	• MEASURES ARE TO BE TAKEN TO PREVENT SILT INGRESS TO STORMWATER SYSTEM.
MAINTENANCE PERIOD	• EROSION CONTROL MEASURES ARE TO BE INSPECTED AFTER MAJOR EVENTS (> 25mm). ANY REPAIRS REQUIRED ARE TO BE EFFECTED IMMEDIATELY.

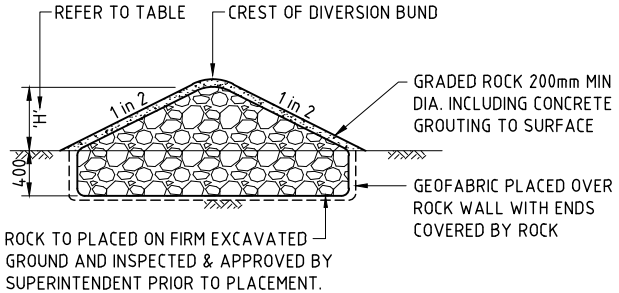
- GENERAL NOTES**
1. THE CONTRACTOR IS TO TAKE ALL NECESSARY PRECAUTIONS TO CONTROL EROSION AND DOWNSTREAM SEDIMENTATION DURING ALL STAGES OF CONSTRUCTION INCLUDING THE MAINTENANCE PERIOD.
 2. ALL SEDIMENT CONTROL DEVICES TO T.S.C. STANDARDS AND SPECIFICATIONS REFER DWG No. S.D.501 - S.D.502.
 3. CONTRACTOR TO DIRECT ALL WORKS RUNOFF TO SEDIMENT BASINS TO THE MOST UPSTREAM LOCATION OF THE BASIN FROM THE SPILLWAY OUTLET.
 4. SEDIMENT BASINS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE DETAILS DESCRIBED IN 'BEST PRACTICE EROSION & SEDIMENT CONTROL' 2008 GUIDELINES BY THE INTERNATIONAL EROSION CONTROL ASSOCIATION (IECA).
 5. FOR SEDIMENT BASIN LOCATION, REFER DWGS YC0229-1E1-E01 & 02.

SEDIMENT POND D SIZING DETAILS

CATCHMENT AREA = 3.5ha
TOTAL SEDIMENT YIELD = 48m³/year

MINIMUM REQUIRED DEPTH, SURFACE AREA AND VOLUME

SEDIMENT POND DEPTH = 0.65m
SEDIMENT POND AREA = 642m²
SEDIMENT POND VOLUME = 419m³



DIVERSION BUND DETAIL
N.T.S.

CONSTRUCTION CERTIFICATE FOR APPROVAL

STATUS	DESCRIPTION	DRAWN	DATE
D	TITLE REVISED	M.B.	16.12.13
C	BULK EARTHWORKS CONSTRUCTION CERTIFICATE	M.G.	15.02.13
B	RESPONSE TO 3rd PARTY SWMP REVIEW	H.W.	18.10.12
A	ORIGINAL ISSUE	G.S.	18.03.11
REV	DESCRIPTION	DRAWN	DATE

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SCALE (AT ORIGINAL SHEET SIZE)

AS SHOWN

CLIENT

LEDA MANORSTEAD Pty Ltd

PROJECT

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

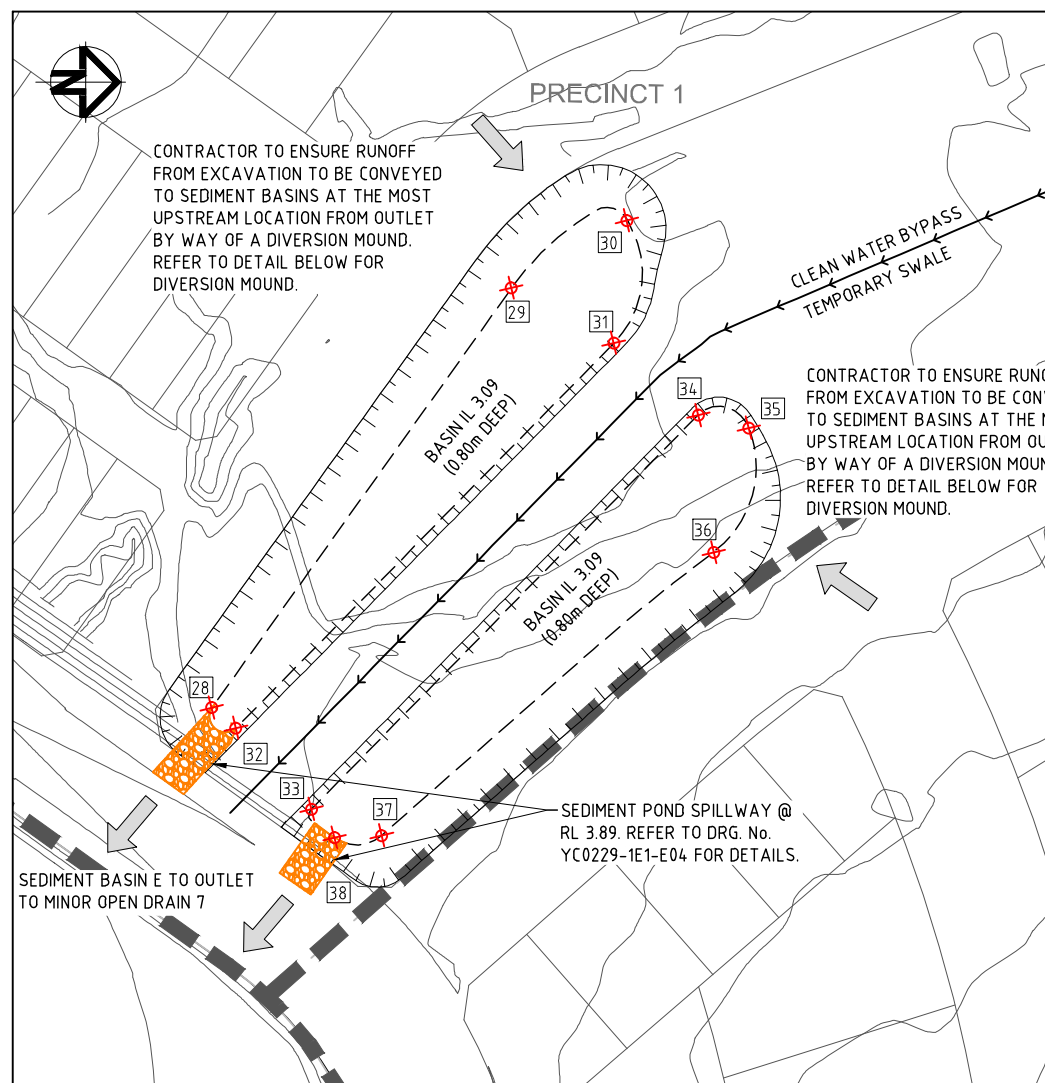
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SEDIMENT BASIN SETOUT DETAILS SHEET 1 OF 3

TASK	BY	INITIAL	DATE	APPROVED	RPEQ No	7817
REVIEW	CS		18.03.11			
DESIGN	CJE		18.03.11			
DRAWN	GS		18.03.11			

DRAWING NUMBER: **YC0229-1E1-E03**

REVISION: **D**



SEDIMENT BASIN E
SCALE 1:500

SEDIMENT BASIN SET OUT

POINT	EASTING	NORTHING
28	46727.151	83414.755
29	46671.655	83454.384
30	46662.743	83469.658
31	46678.941	83467.927
32	46729.842	83417.963
33	46740.601	83427.860
34	46688.473	83479.029
35	46690.144	83485.702
36	46706.604	83481.074
37	46744.088	83437.156
38	46744.374	83430.912
39	46914.519	83348.764
40	46861.498	83362.253
41	46860.776	83363.467
42	46869.210	83396.618
43	46870.582	83397.285
44	46901.348	83376.522
45	46915.726	83350.006

SEDIMENT POND E SIZING DETAILS

CATCHMENT AREA = 16.7ha
TOTAL SEDIMENT YIELD = 229m³/year

MINIMUM REQUIRED DEPTH, SURFACE AREA AND VOLUME

SEDIMENT POND DEPTH = 0.65m
SEDIMENT POND AREA = 3063m²
SEDIMENT POND VOLUME = 1998m³

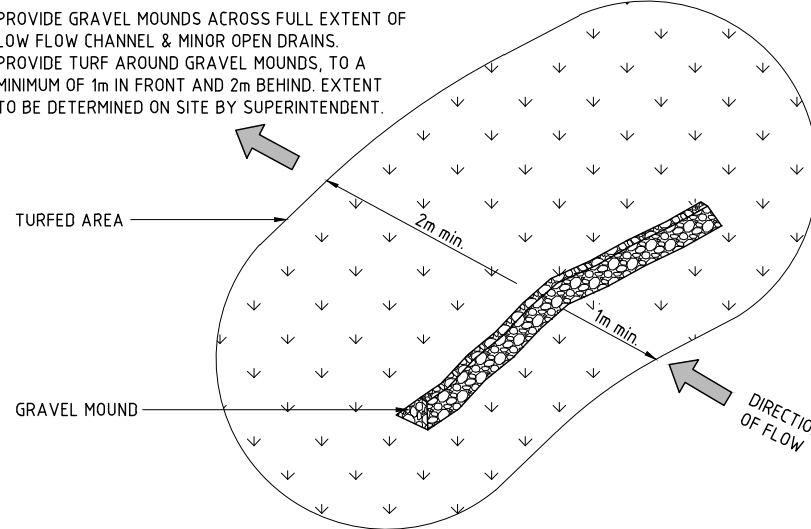
SEDIMENT POND F SIZING DETAILS

CATCHMENT AREA = 8.7ha
TOTAL SEDIMENT YIELD = 119m³/year

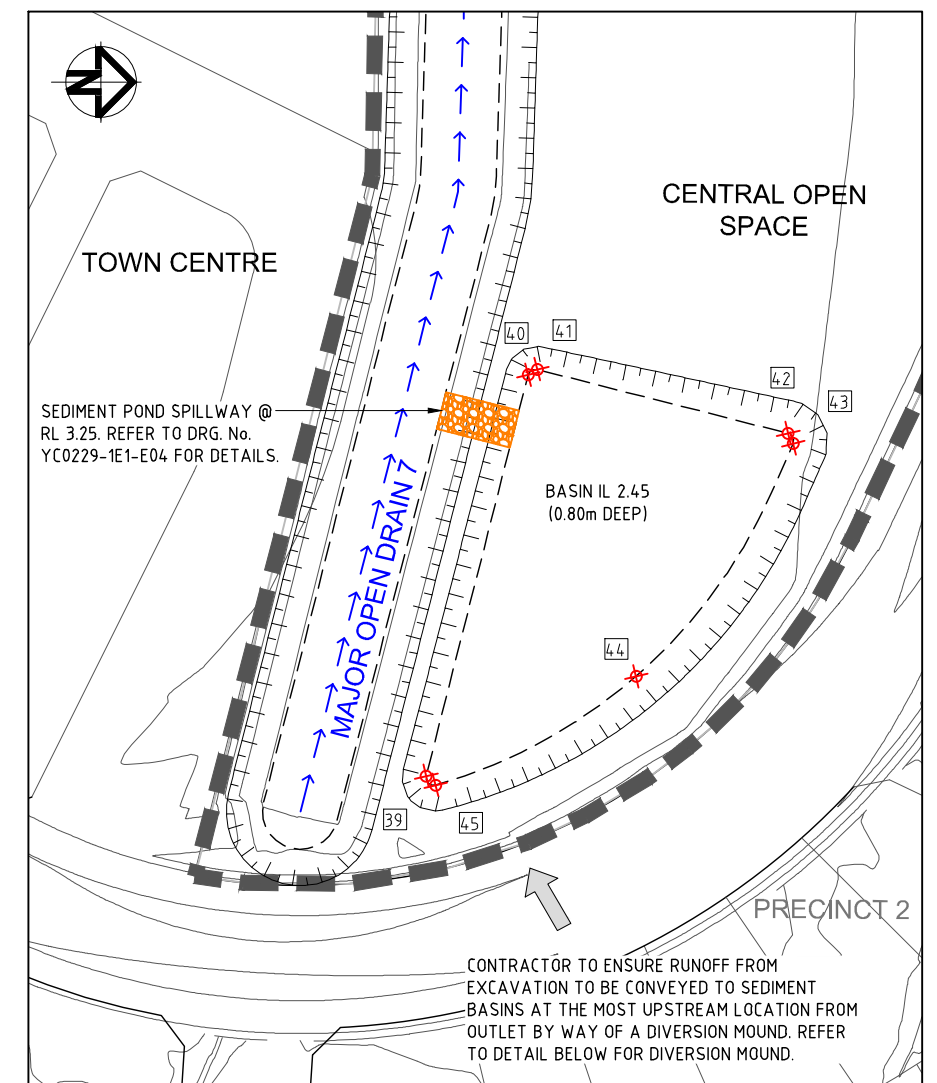
MINIMUM REQUIRED DEPTH, SURFACE AREA AND VOLUME

SEDIMENT POND DEPTH = 0.65m
SEDIMENT POND AREA = 1596m²
SEDIMENT POND VOLUME = 1041m³

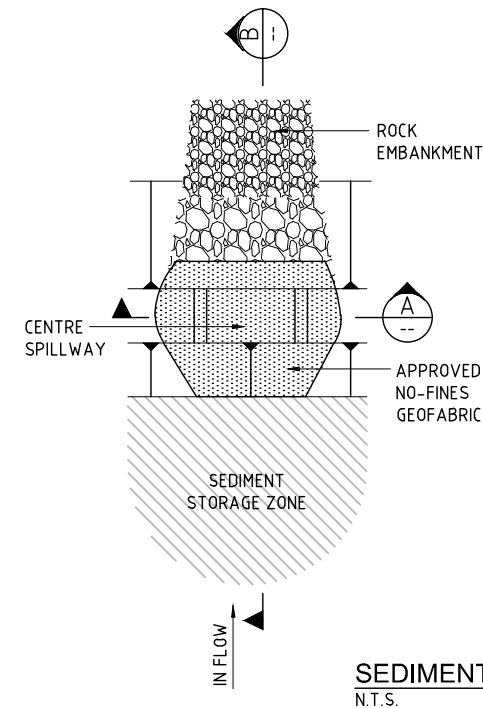
PROVIDE GRAVEL MOUNDS ACROSS FULL EXTENT OF LOW FLOW CHANNEL & MINOR OPEN DRAINS. PROVIDE TURF AROUND GRAVEL MOUNDS, TO A MINIMUM OF 1m IN FRONT AND 2m BEHIND. EXTENT TO BE DETERMINED ON SITE BY SUPERINTENDENT.



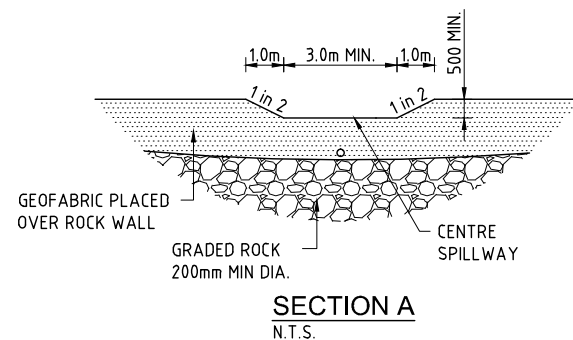
GRAVEL CHECK DAM - OPEN DRAINS
SCALE N.T.S.



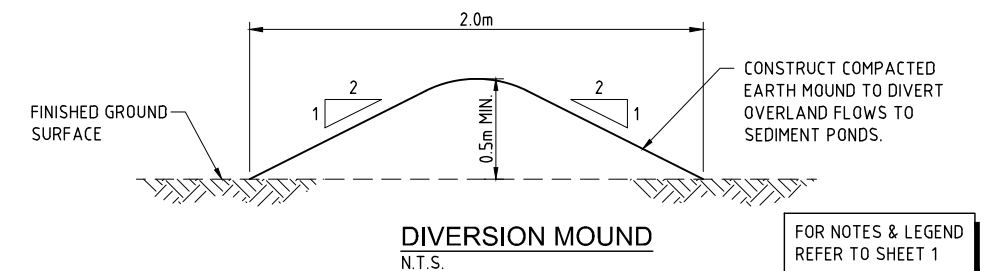
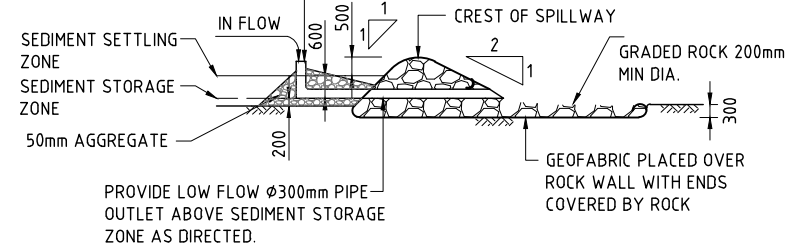
SEDIMENT BASIN F
SCALE 1:500



SEDIMENT BASIN DETAILS
N.T.S.



PERFORATED RISER $\phi 300$ mm
SLOTTED DRAIN TO BE 300mm LOWER THEN CREST OF SPILL WAY. REFER TO TABLE BELOW FOR No. OF RISERS AND HOLES PER BASIN.



STATUS	CONSTRUCTION CERTIFICATE FOR APPROVAL	DATE
D	TITLE REVISED	M.B. 16.12.13
C	BULK EARTHWORKS CONSTRUCTION CERTIFICATE	M.G. 15.02.13
B	RESPONSE TO 3rd PARTY SWMP REVIEW	H.W. 18.10.12
A	ORIGINAL ISSUE	G.S. 18.03.11
REV	DESCRIPTION	DRAWN DATE

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AS SHOWN

CLIENT

LEDA MANORSTEAD Pty Ltd

LEDA

ORIGINAL SHEET SIZE

A1

PROJECT

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

SEDGMAN YEATS

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TASK	BY	INITIAL	DATE	APPROVED	RPEQ No
REVIEW	CS		18.03.11		7817
DESIGN	CJE		18.03.11		
DRAWN	GS		18.03.11		

TITLE

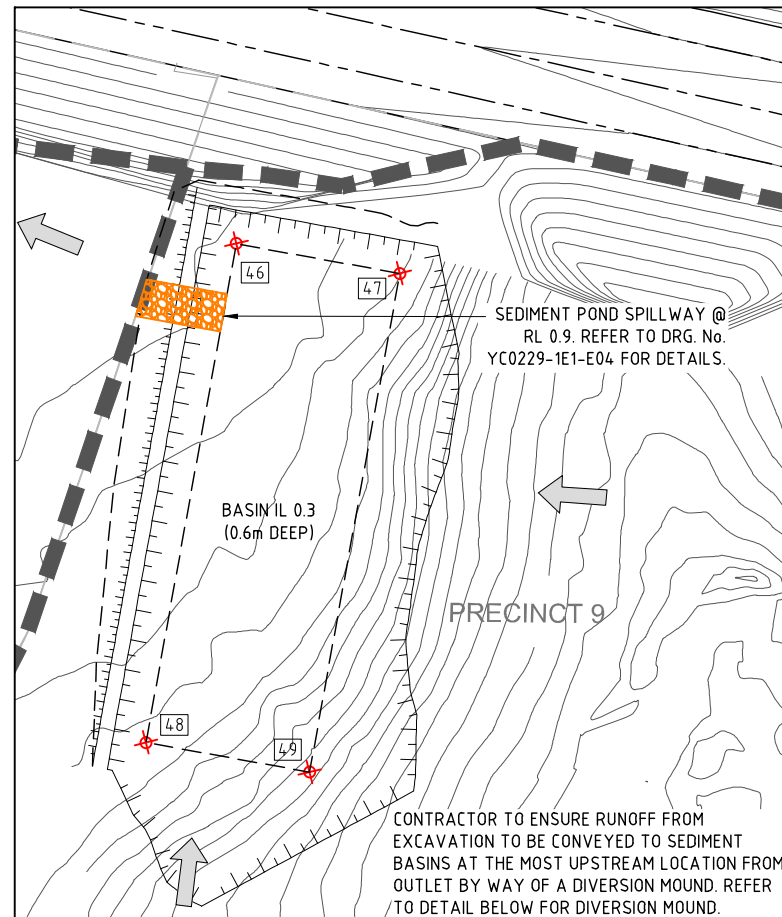
SEDIMENT BASIN SETOUT DETAILS
SHEET 2 OF 3

DRAWING NUMBER

YC0229-1E1-E04

REVISION

D



SEDIMENT BASIN G

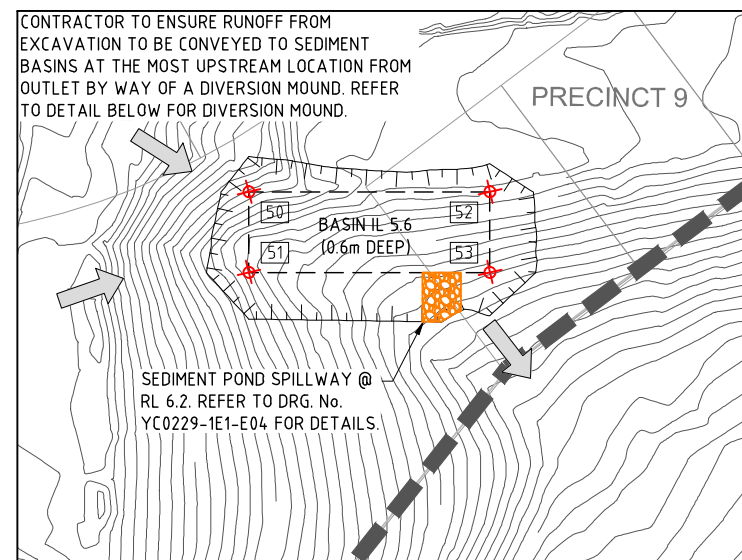
SCALE 1:500

SEDIMENT POND G SIZING DETAILS

CATCHMENT AREA = 8.28ha
TOTAL SEDIMENT YIELD = 114m³/year

MINIMUM REQUIRED DEPTH, SURFACE AREA AND VOLUME

SEDIMENT POND DEPTH = 0.6m
SEDIMENT POND AREA = 1519m²
SEDIMENT POND VOLUME = 991m³



SEDIMENT BASIN H

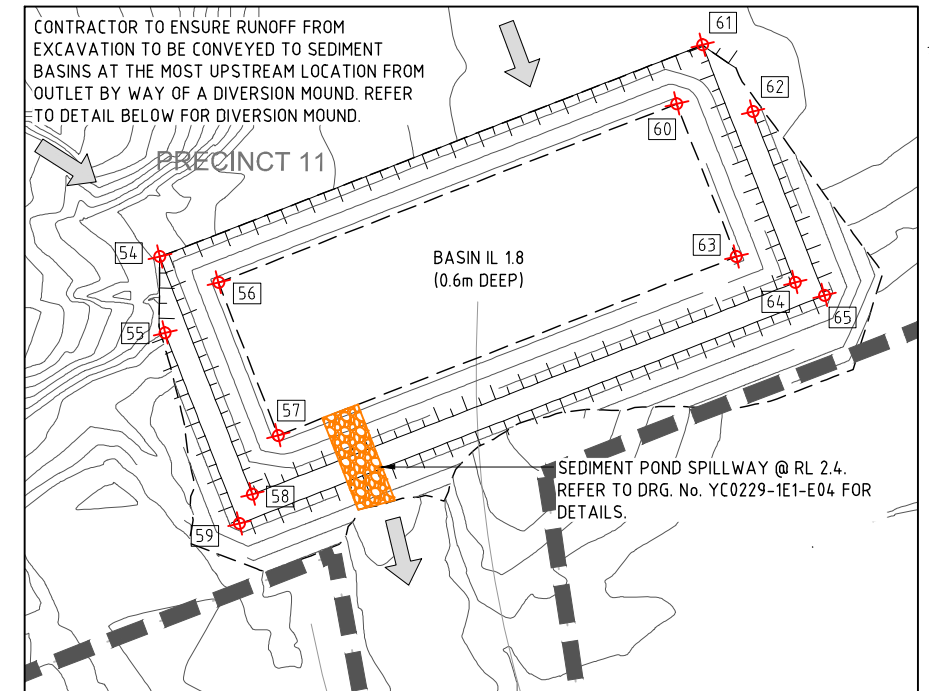
SCALE 1:500

SEDIMENT POND H SIZING DETAILS

CATCHMENT AREA = 1.55ha
TOTAL SEDIMENT YIELD = 25m³/year

MINIMUM REQUIRED DEPTH, SURFACE AREA AND VOLUME

SEDIMENT POND DEPTH = 0.6m
SEDIMENT POND AREA = 284m²
SEDIMENT POND VOLUME = 188m³



SEDIMENT BASIN J

SCALE 1:500

SEDIMENT POND J SIZING DETAILS

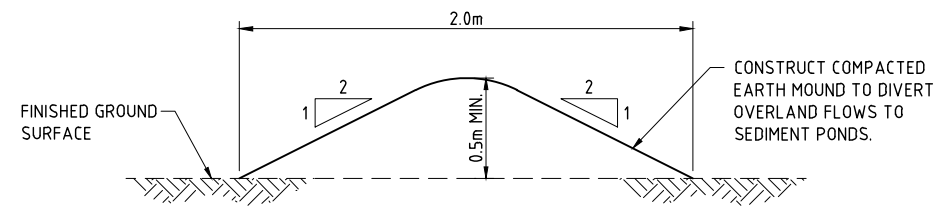
CATCHMENT AREA = 7.62ha
TOTAL SEDIMENT YIELD = 104m³/year

MINIMUM REQUIRED DEPTH, SURFACE AREA AND VOLUME

SEDIMENT POND DEPTH = 0.6m
SEDIMENT POND AREA = 1398m²
SEDIMENT POND VOLUME = 912m³

SEDIMENT BASIN SET OUT

POINT	EASTING	NORTHING
46	46882.1893	81336.9018
47	46898.3567	81333.9720
48	46873.4001	81288.3998
49	46889.5674	81285.4700
50	46855.2075	81036.3076
51	46855.2075	81025.6850
52	46887.0753	81036.3076
53	46887.0753	81025.6850
54	46196.1816	81450.9235
55	46196.8797	81440.8717
56	46203.9509	81447.5121
57	46211.8270	81427.3050
58	46208.4156	81419.5357
59	46206.7099	81415.6510
60	46264.5723	81471.1404
61	46267.9837	81478.9098
62	46274.6409	81470.0907
63	46272.4484	81450.9333
64	46280.2177	81447.5219
65	46284.1024	81445.8162



FOR NOTES & LEGEND
REFER TO SHEET 1

FOR NOTES & LEGEND
REFER TO SHEET 1

STATUS	CONSTRUCTION CERTIFICATE	FOR APPROVAL
A	ORIGINAL ISSUE	G.S. 11.12.13
REV	DESCRIPTION	DRAWN DATE

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SCALE 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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TASK	BY	INITIAL	DATE	APPROVED	RPEQ No	7817
REVIEW	CS		18.03.11			
DESIGN	CJE		18.03.11			
DRAWN	GS		18.03.11			

TITLE
SEDIMENT BASIN SETOUT DETAILS
SHEET 3 OF 3

DRAWING NUMBER
YC0229-1E1-E05

REVISION
A