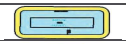
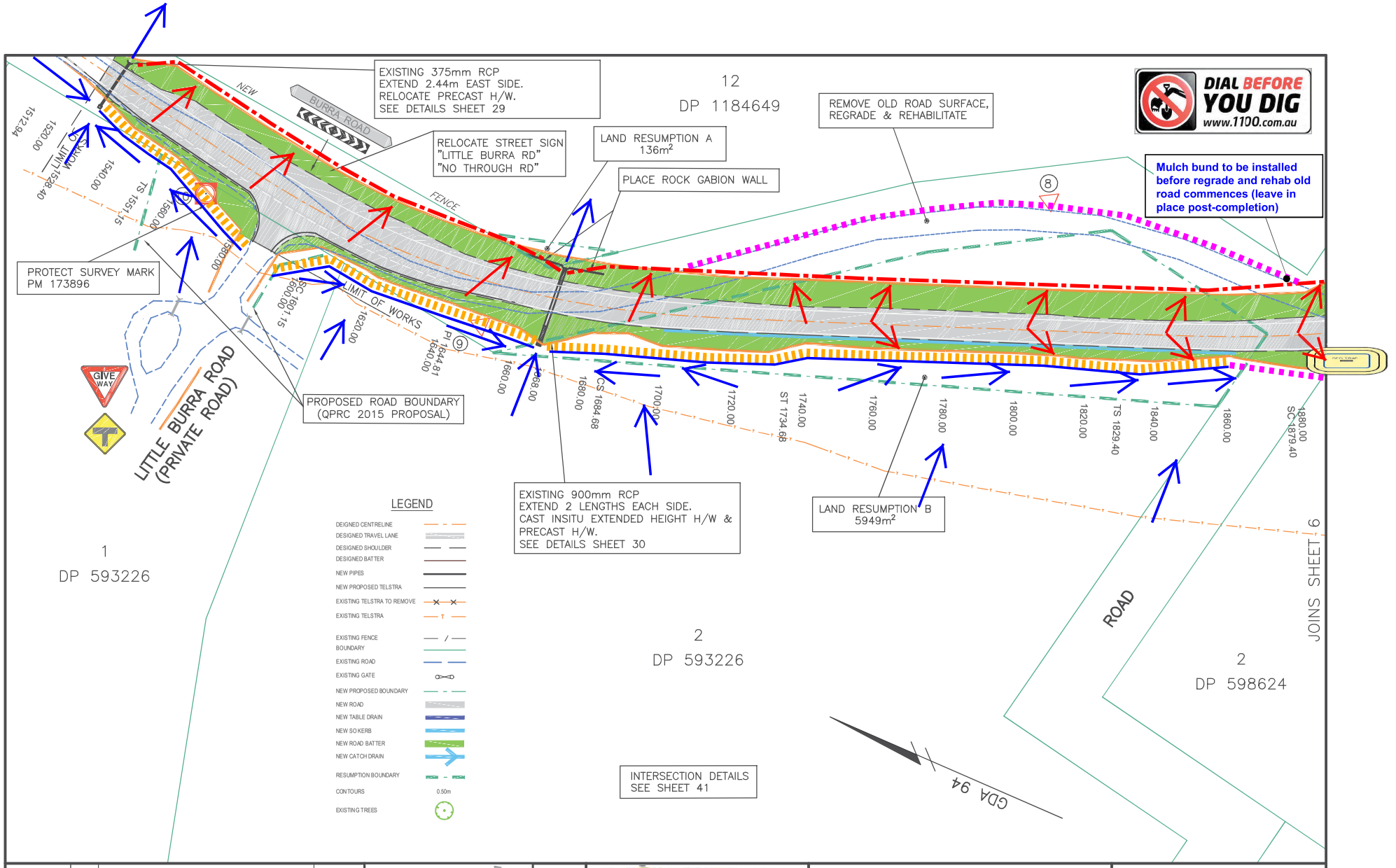
PROGRESSIVE EROSION AND SEDIMENT CONTROL PLAN 001
Burra Road Reconstruction
Activity - Road Reconstruction (incl. Clear and Grub)

PESCP 001 CONSTRUCTION NOTES:

1. THIS PLAN WILL BE READ TOGETHER WITH RELEVANT ENVIRONMENTAL DOCUMENTATION (E.G. CEMP, SWMP, EWMS)
2. WEATHER FORECASTS TO BE REGULARLY MONITORED BY THE ONSITE TEAM
3. NUMBERING INDICATES 'ORDER' OF WORKS WHERE RELEVANT (E.G. STAGE 1, 2, 3)
4. THE PRINCIPLE OF MINIMUM DISTURBANCE TO EXISTING VEGETATION TO BE IMPLEMENTED, WITH 'NO-GO' ZONES ISOLATED USING FLAGGING, SIGNAGE ETC.
5. TEMPORARY EROSION AND SEDIMENT CONTROLS TO BE INSTALLED PRIOR TO SITE DISTURBANCE WHEREVER REASONABLE AND FEASIBLE
6. ALL 'CLEAN' AND 'DIRTY' WATER DIVERSION DRAINS, MULCH BUNDS AND SEDIMENT BASINS / TRAPS TO BE CONSTRUCTED AS EARLY WORKS. ENSURE AS-BUILT SEDIMENT BASIN VOLUMES ARE CHECKED BY SURVEY AS CONFORMING WITH DESIGN VOLUMES
7. PRIORITISE CONSTRUCTION OF ALL PERMANENT DRAINAGE WORKS FOR 'CLEAN' WATER MANAGEMENT WHERE POSSIBLE. 'CLEAN' AND 'DIRTY' RUNOFF TO BE SEPARATED. REFER 'CLEAN WATER DIVERSIONS FOR CULVERT INSTALLATIONS' ADVICE ON PAGES 7 - 9
8. THE DIVERSION OF 'DIRTY' RUNOFF TO SEDIMENT BASINS IS TO BE MAXIMISED
9. IF REQUIRED, WATERWAY CROSSINGS TO BE CONSTRUCTED AS PER 'BLUE BOOK' GUIDELINES AND PRIOR TO ANY PLANT/VEHICLE MOVEMENT OVER WATERCOURSES
10. STOCKPILE LOCATIONS ARE INDICATED ON THESE PLANS WHERE RELEVANT, OR STANDALONE PESCPs, WITH TEMPORARY CONTROLS AS NECESSARY (E.G. MULCH BUNDS WITH GEOFABRIC-LINED OUTLETS)
11. SEDIMENT BASINS TO BE MANAGED IN ACCORDANCE WITH THE SWMP (E.G. REUSE OR FLOCCULATION, TESTING & DISCHARGE)
12. CULVERT INLET AND OUTLET PROTECTION TO BE CONSTRUCTED IMMEDIATELY AFTER PIPE OR BOX INSTALLATION (E.G. HEAD & WING WALLS, DISSIPATERS). SEDIMENT BASIN SPILLWAYS TO BE CONSTRUCTED PER RMS SD R0100-11 AND SCOUR PROTECTED
13. TEMPORARY CONTROLS IN ADDITION TO THOSE SHOWN ON THE DRAWINGS TO BE CONSTRUCTED AT 'KEY' LOCATIONS AS REQUIRED AND MAY CONSIST OF:
    - EROSION CONTROLS (E.G. WINDROWS OR CROSS-SLOPE DRAINS ON CONTOURS TO REDUCE SLOPE LENGTH AND SURFACE FLOW VELOCITIES); AND
    - SEDIMENT CONTROLS (E.G. SEDIMENT FENCES, MULCH SEDIMENT TRAPS, MULCH BUNDS)
14. THE ONSITE TEAM ARE TO ENSURE PROPOSED MAXIMUM SLOPE LENGTHS ARE ADHERED TO
15. DISTURBED AREAS ARE TO BE PROGRESSIVELY STABILISED AS SOON AS POSSIBLE (E.G. FINAL DESIGN TREATMENTS SUCH AS CONCRETE OR TOPSOIL / REVEGETATION)
17. ALL CONTROLS REMOVED OR DISTURBED TEMPORARILY DURING WORKS ARE TO BE REINSTATED PRIOR TO END OF DAY, WEEKENDS AND PRIOR TO FORECAST RAIN
18. AREAS TO BE FULLY 'SECURED' WITH CONTROLS PRIOR TO ANY TEMPORARY SUSPENSION OF WORKS
19. ADEQUATE PRODUCTION TIME IS TO BE ALLOWED BY THE ONSITE TEAM TO 'SECURE' THE PROJECT PRIOR TO FORECAST RAIN
20. MULCH FROM CLEARING IS TO BE STORED AND MANAGED IN ACCORDANCE WITH THE DOCUMENT – 'ENVIRONMENTAL DIRECTION: MANAGEMENT OF TANNINS FROM VEGETATION MULCH' (ROADS & MARITIME SERVICES, 2012 B)
21. DEWATERING OF SEDIMENT BASINS, EXCAVATIONS ETC TO BE CONDUCTED AS PER THE REQUIRMENTS OF THE CEMP / SWMP
22. TRACKING OF MUD / SOIL MATERIAL ONTO SEALED ROADS TO BE MONITORED AND CONTROLLED (E.G. USE ROCK SHAKER PADS)
23. DUST TO BE CONTROLLED ON SITE AND ALONG UNSEALED ROADS USING METHODS INCLUDING WATER CARTS AND / OR LIMITING VEHICLE SPEEDS
24. TEMPORARY CONTROLS TO BE INSPECTED REGULARLY WITH MAINTENANCE / REPAIRS UNDERTAKEN AS REQUIRED
25. THIS PLAN HAS BEEN PREPARED AS PER 'BLUE BOOK' GUIDELINES AND STANDARD DRAWINGS – VOLUMES 1 & 2D
26. THIS PLAN IS TO BE REVISED WHEN REQUIRED (E.G. CHANGE IN CONSTRUCTION METHODS AND/OR SITE CONDITIONS)

ErSed LEGEND (N.T.S)	
Mulch Bund	
Temporary Clean Water Pipe	
Earth Bund / Diversion Bank	
Earth Bund / Diversion Bank (Geofabric-Lined)	
Sediment Fence	
Designed Sediment Basin	
Sediment Trap (Best volume with space available)	
Stabilised Exit (Rock Shaker Pad)	
Clean Water Diversion Channel (Existing)	
Dirty Water Diversion Channel	
Dirty Water Containment (Sandbags or similar)	
Stockpile Area / Site Office & Crib / Parking	
Level Spreader (see RMS SD R0100-04)	
Temporary Access Track	
Clean Water Flow Direction	
Dirty Water Flow Direction	
Earth Bund / Diversion Bank (Vegetated)	

REVISION	PREPARED BY	DATE	COMMENTS
0	C. DEDDEN, CPESC 8127	25/08/2019	CONSTRUCT ALL CONTROLS AS SHOWN



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DATE	NO	REVISION	AUTHORISED
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PLAN REVISIONS

QPRC

DATUM AHD ORIGIN PM82503 RL 829.47
COORD.SYSTEM MGA ORIGIN

DLW LAND·SOIL·WATER

CLIENT: QUEANBEYAN–PALERANG REGIONAL COUNCIL
TITLE: BURRA ROAD
RECONSTRUCTION FROM LITTLE BURRA ROAD TO LONDON BRIDGE ROAD
EROSION & SEDIMENT CONTROL PLAN

SCALE: 1:1000

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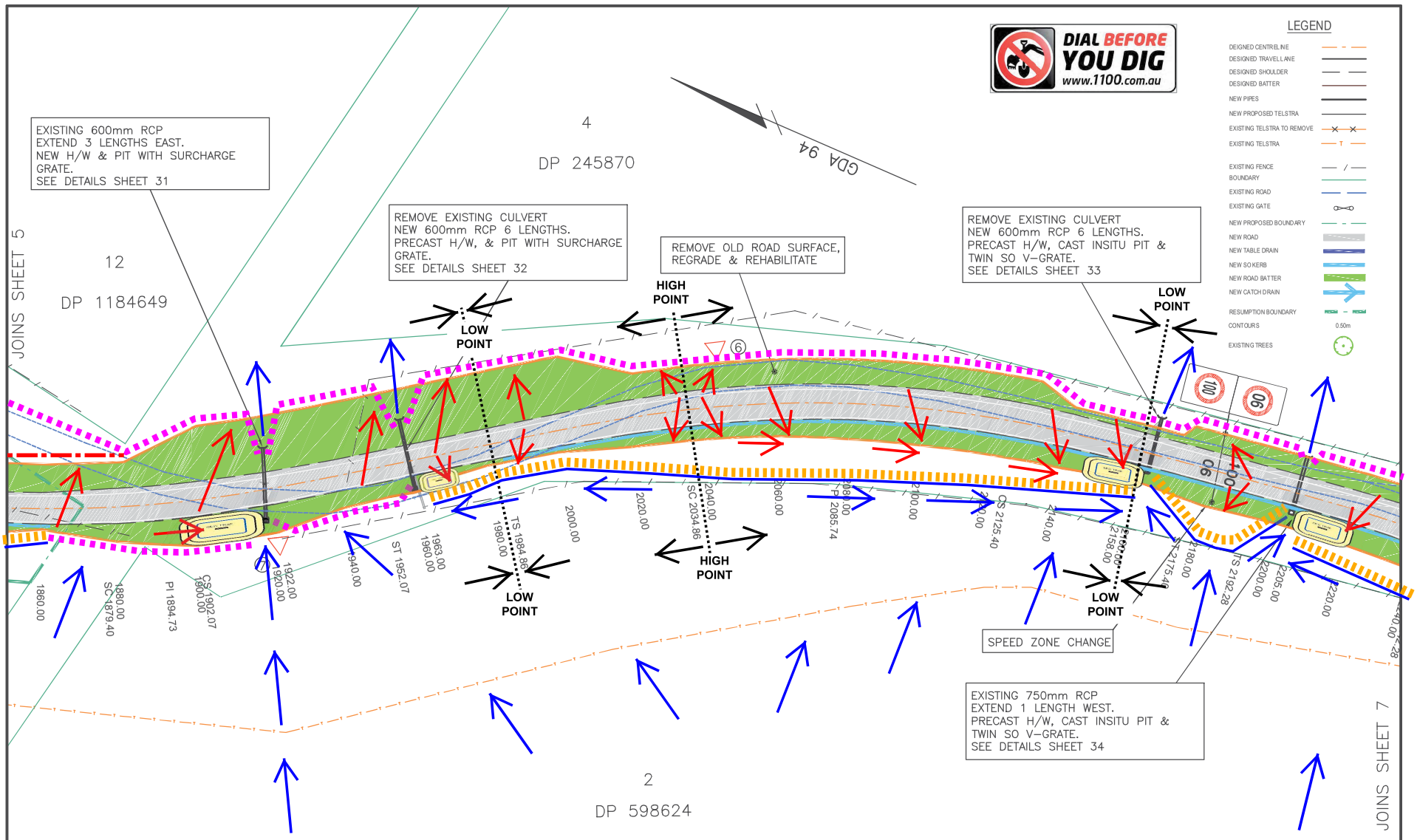
DRN: AL	CHK: AL

SHEET 1 OF 5 SHEETS



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DATE	NO	REVISION	AUTHORISED

PLAN REVISIONS

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CLIENT: QUEANBEYAN–PALERANG REGIONAL COUNCIL

TITLE: BURRA ROAD RECONSTRUCTION FROM LITTLE BURRA ROAD TO LONDON BRIDGE ROAD

EROSION & SEDIMENT CONTROL PLAN

SCALE: 1:1000

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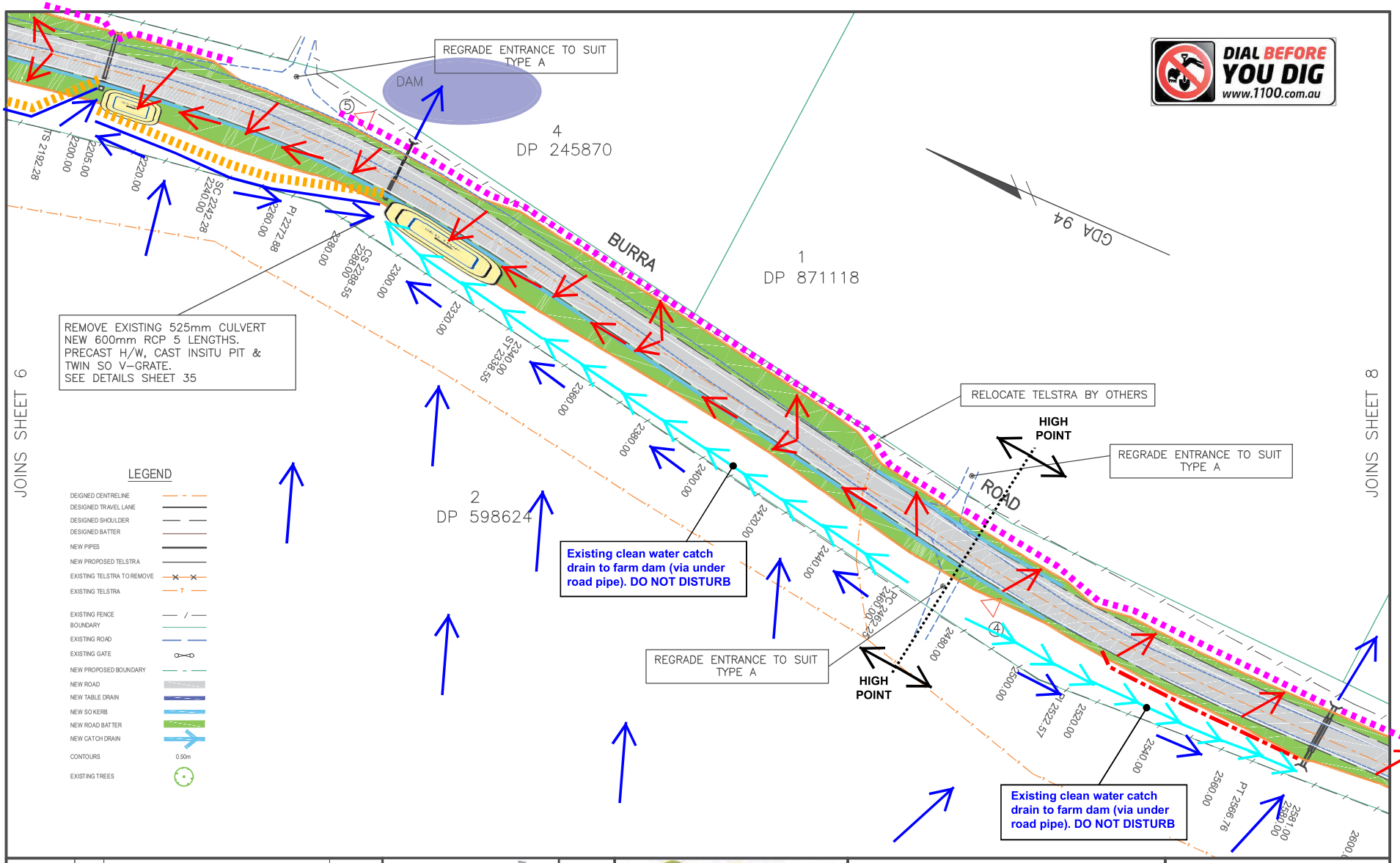

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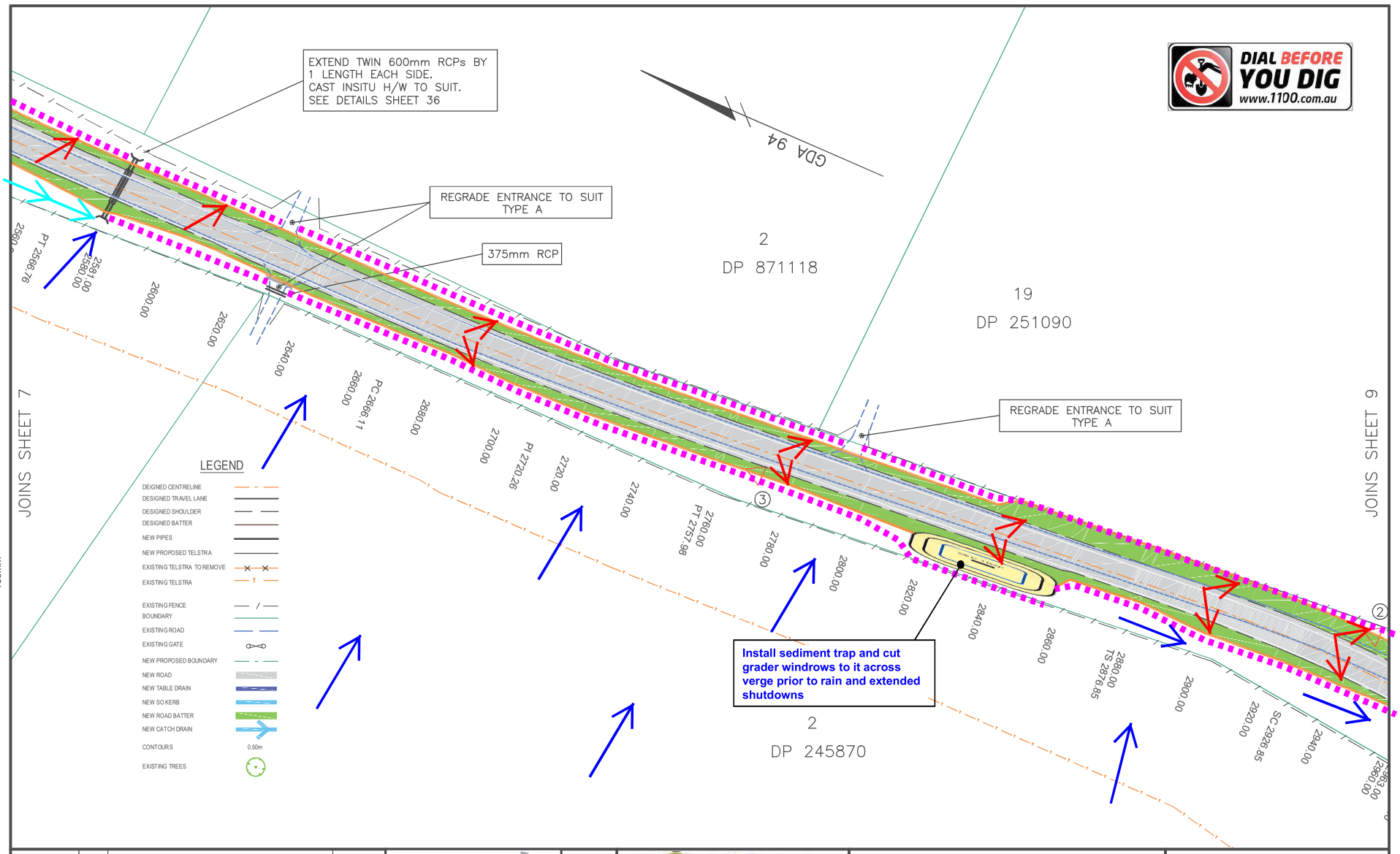

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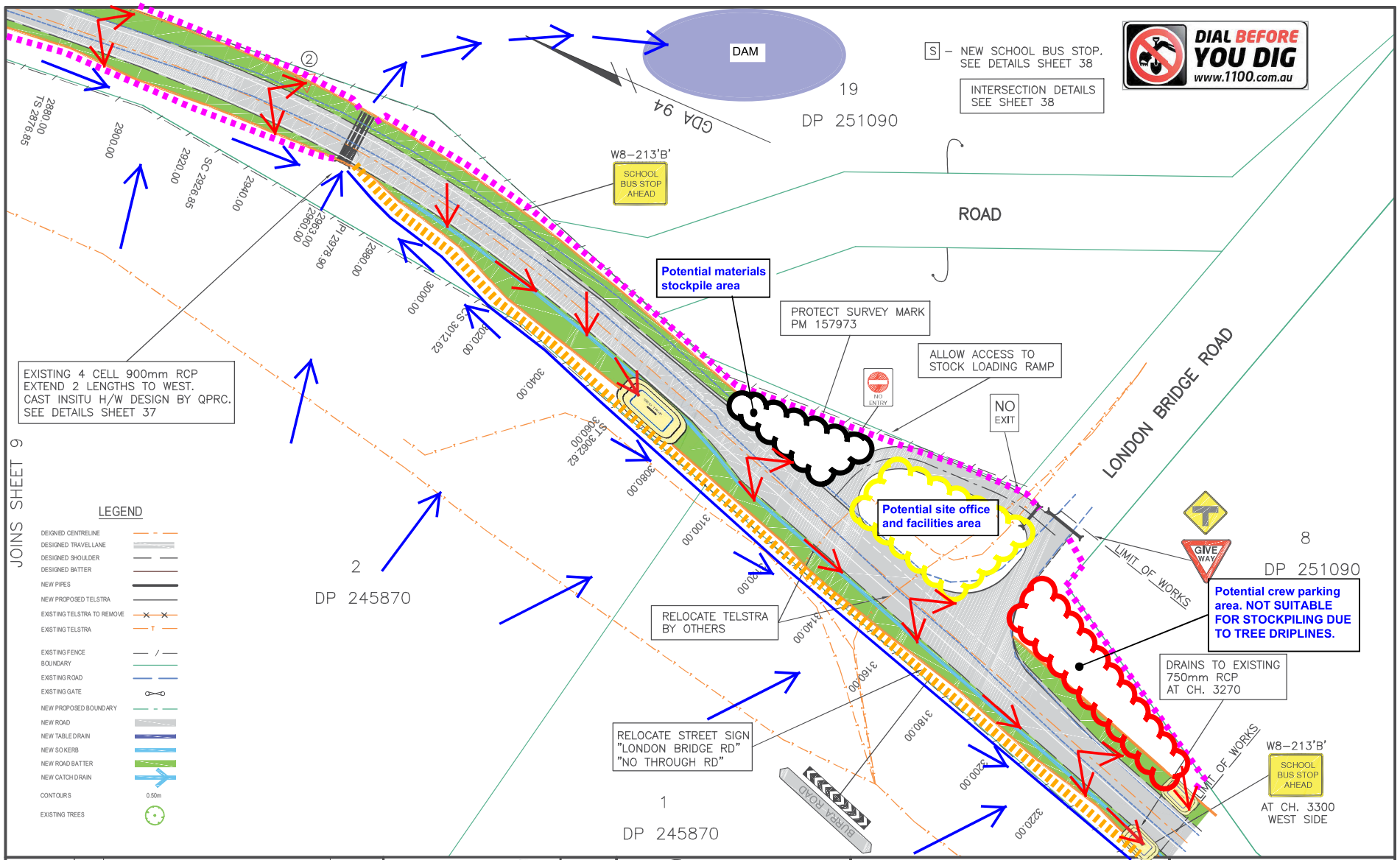

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SHEET 5 OF 5 SHEETS

Clean Water Diversions for Culvert Installations

The Burra Road Reconstruction project involves several extensions or replacements of existing pipe culverts, so as to accommodate the proposed re-aligned and widened carriageway. There are 8 culvert extension / replacement sites which convey clean water through the site along natural ephemeral flow lines at the following chainages:

- CH 1670
- CH 1920
- CH 1960
- CH 2160
- CH 2205
- CH 2288
- CH 2580
- CH 2960

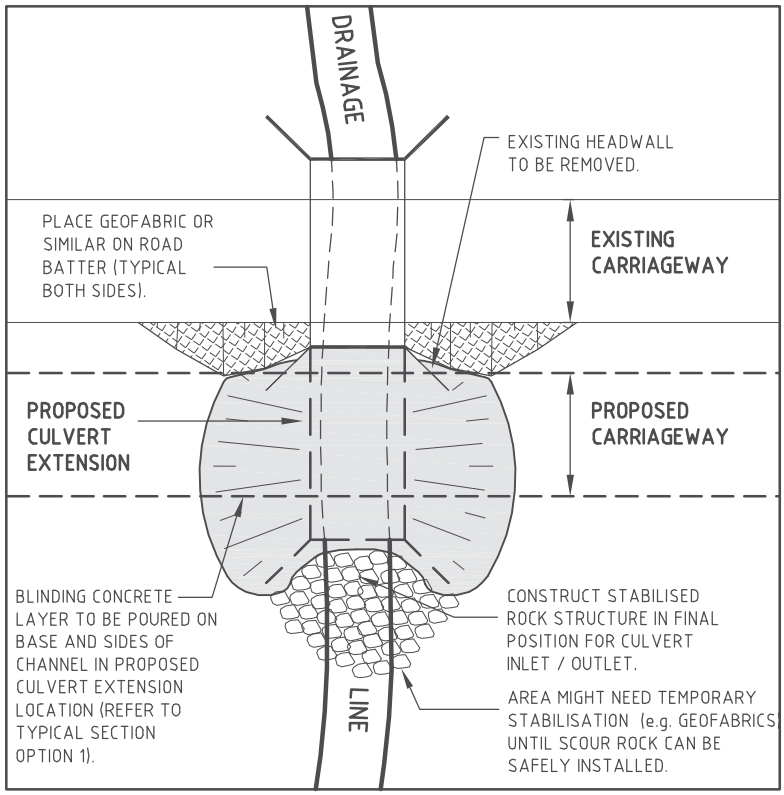
These ephemeral flow lines are capable of conveying of significant upstream peak flows. As such, each of the operations to extend or replace these pipe culverts require a heightened level of management so as to ensure clean water flows are passed through the site and are not permitted to mix with dirty site water.

The construction methodology for culvert extensions and replacements to be undertaken at these locations will be guided by *RMS Technical Guideline 11.068 - Temporary stormwater drainage for road construction.* Specifically, where pipe culverts are to be extended below new fill areas, and where it is expected that the existing roadway must remain open to traffic along the project length, the upslope flows currently being passed by existing culverts can be maintained during extensions through the covering and stabilisation of exposed subsoils at the downstream end of existing culvert where the extension is being implemented (see Drawing 3 with construction notes below).

Where pipe culverts are to be fully replaced, and where it is expected that the existing roadway must remain open to traffic along the project length, the upslope flows currently being passed by existing culverts can be maintained via the temporary upstream blocking and conveyance of clean water to downstream of the construction area using sandbag bunding and a temporary pipe (see Drawing 11 with construction notes below).

Importantly, the use of these recommended methods to pass upslope clean water through culvert extension or replacement sites should only be commenced when favourable weather conditions are forecast for the expected duration of the operation. It is also critical that the amount of exposed area is kept to only that necessary to undertake construction activities. Any areas of exposed soil will require temporary stabilisation using geofabric or similar cover prior to wet weather or during extended site shut-down periods.

CONTINUOUS CULVERT EXTENSION (ONLINE)
OPTION 1



SITE STABILISATION PROCEDURE

CONSTRUCTION NOTES

WORKS TO BE UNDERTAKEN IN THE ORDER GIVEN BELOW

Prior to undertaking any construction or earthworks ensure suitable temporary groundcover materials (e.g. geofabric or black plastic) are located on site for rapid stabilisation of exposed soils if an unexpected rain or flow event occurs.

1. Watch the weather forecast for a dry period (a period longer than the time required to complete earthworks up to the required level).
2. When a dry period is forecast, undertake earthworks quickly (preferably in less than three days).
3. Pour blinding concrete layer and lay rock inlet / outlet.
4. Lay geofabric (or similar) on existing road batter.

(Ensure steps 2, 3 and 4 occur within the forecast period of dry weather and no flow)

5. Complete culvert construction works over the top of the blinding concrete layer.
6. Maintain the blinding layer until the culvert extension is complete and stabilised. once flows are secure within the new culverts, excess blinding can be removed if desired.

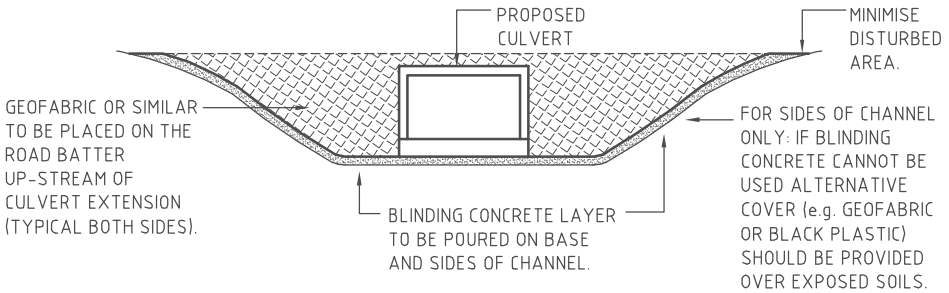
At any time during steps 1 – 4 where a significant rain or flow event is forecast or if the site is left unattended for prolonged periods temporary groundcover should be applied to all exposed soils in the works area.

OTHER NOTES

- For divided culvert extensions this stabilisation method could also be applied or alternatively the flows could be diverted as for a new online culvert.
- Note that this method is not suitable for perennial creeks unless additional measures (e.g. pumping or coffer dams) can be reliably included as well.
- This method might not be appropriate where there is a significant depth of unsuitable soil material to be removed.
- For systems with very minor flows in dry periods, temporary damming of flows might be required to hold water back for the nominated work period until the blinding concrete layer and rock is placed.
- Note that not all onsite water management and sediment controls are shown here.

ENSURE THAT 'OFFSITE' CREEK FLOWS DO NOT COME INTO CONTACT WITH EXPOSED SOIL OR 'ONSITE' WATER

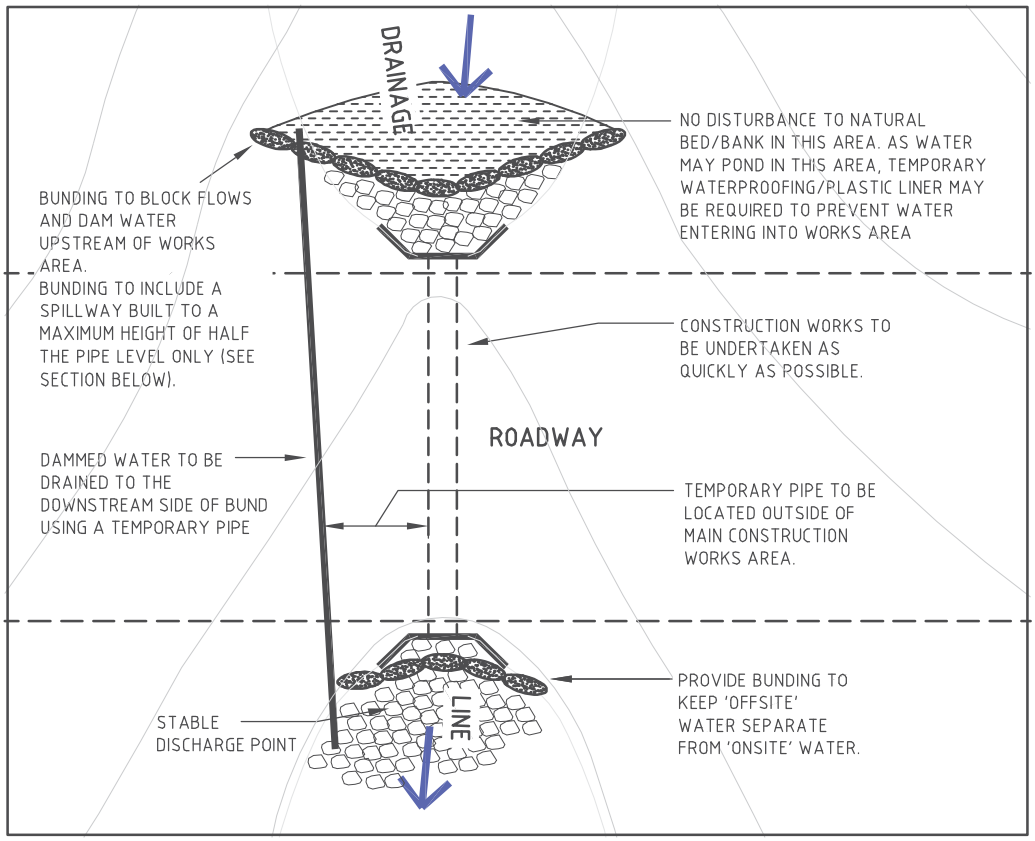
NOTE: MAINTAIN OR INSTALL TEMPORARY GROUND COVER THROUGH FLOW AREA ANYTIME FLOWS ARE IMMINENT.



TYPICAL SECTION – OPTION 1

DRAWING 3

ONLINE PIPE REPLACEMENT/INSTALLATION – SMALL INTERMITTENT DRAINAGE LINES (TEMPORARY PIPE OPTION)



SITE STABILISATION

THIS METHOD IS ONLY SUITABLE FOR SMALL CHANNELS WITH INTERMITTENT FLOWS.

TEMPORARY PIPE TO BE SIZED TO AT LEAST HALF THE PERMANENT PIPE.
e.g. – PERMANENT: 600ø
– TEMPORARY: MINIMUM 300ø

THIS METHOD (TEMPORARY PIPE SYSTEM) WILL NOT BE SUITABLE IN STEEP LOCATIONS WHERE TEMPORARY PIPE CANNOT BE LOCATED OUTSIDE OF WORKS AREA.

CONSTRUCTION NOTES

WORKS TO BE UNDERTAKEN IN THE ORDER GIVEN BELOW

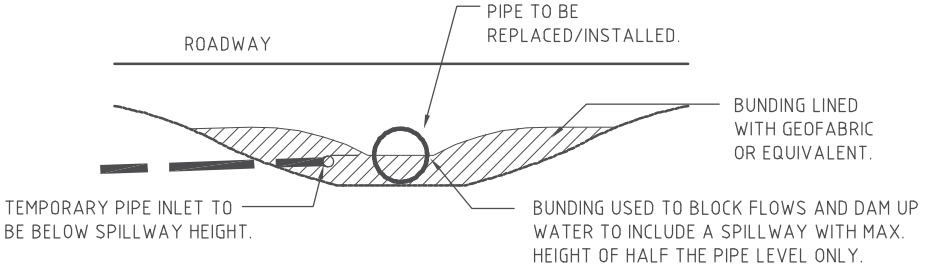
1. Ensure suitable temporary groundcover materials (eg. geofabric, blankets) are located on site.
2. Ensure a temporary pipe is available. Install temporary pipe to ensure flow, preferably by providing continuous fall.
3. Watch the weather forecast to ensure rainfall is not forecast and monitor creek flows ensuring flows are minimal.
4. Position the bunding within the channel to secure the site.
5. Undertake construction works (including inlet outlet stabilisation) as quickly as possible.

At any time during steps 4 – 5 where a significant rain or flow event is forecast or if the site is left unattended for prolonged periods temporary groundcover should be applied to all exposed soils in the works area.

LEGEND

- OFFSITE WATER DIVERSION DRAIN (SD 5-6)
- ONSITE WATER DRAINS (SD 5-6)
- SURFACE CONTOURS
- ROCK STABILISED OUTLET (SD 5-8)
- CREEK/PIPE FLOW ROUTE
- S — SEDIMENT FENCE (SD 6-8)
- BUNDS

NOTE THAT NOT ALL ONSITE WATER MANAGEMENT AND SEDIMENT CONTROLS ARE SHOWN HERE.



AT ALL TIMES DURING WORKS, ENSURE THAT 'OFFSITE' WATER IS PASSED AROUND OR THROUGH THE SITE WITHOUT COMING INTO CONTACT WITH EXPOSED SOIL OR 'ONSITE' WATER

SECTION THROUGH BUNDING LOCATION

DRAWING 11