

**NOTES - Administration & General**

1. This progressive plan is to be read in conjunction with the requirements of the;
  - a. Robson Civil Projects – ‘Project Management Plan’
  - b. ADE Consulting Group Pty Ltd - ‘Salinity Management Plan - Mamre Road, Abbotts Road and Aldington Road Upgrade, Kemps Creek NSW’, specifically ‘Section 5.1.1 – Bulk Earthworks’ – August 2024,
  - c. NSW Department of Planning and Environment – ‘Technical guidance for achieving Wianamatta–South Creek stormwater management targets’ - September 2022
  - d. Other relevant specifications, guidelines and procedures.
2. Works programming to maximise the mitigation of erosion by the early implementation of permanent drainage measures, temporary and permanent soil surface stabilisation measures, and minimising the area and duration of soil disturbance.
3. Bureau of Meteorology weather forecasting to be monitored daily for the local 7-Day weather outlook. Site management measures to be planned for imminent storm/rainfall/flood/wind events include, but are not limited to;
  - avoiding additional soil disturbance immediately prior to an event,
  - provision of additional erosion and sediment controls in critical locations,
  - installing, repairing, and/or adjusting ‘clean’ (off site water) and ‘dirty’ (on site) water drainage measures,
  - desilting and re-instating sediment controls as required,
  - implementing stockpile protection measures,
  - stabilising and sealing disturbed soil surfaces,
  - minimising dry soil handling in windy conditions,
  - evacuating or protecting erodible materials in lower lying area.
4. The plan is to be revised as necessary (i.e., progression of works, altered site conditions or weather). **The controls depicted are subject to staging and the controls may be progressively implemented or removed according to progression of works.**
5. All erosion and sediment controls generally to be constructed in accordance with ‘Blue Book’ specifications and standard drawings & RMS Specifications being:
  - MANAGING URBAN STORM WATER: SOILS AND CONSTRUCTION - 4<sup>th</sup> EDITION, LANDCOM, MARCH 2004;
  - MANAGING URBAN STORM WATER: SOILS AND CONSTRUCTION – VOLUME 2D MAIN ROAD CONSTRUCTION, DEC, 2008;
  - RMS QA SPECIFICATION G36 - ENVIRONMENTAL MANAGEMENT (SOIL AND WATER MANAGEMENT PLAN)
  - RMS QA SPECIFICATION G38 - SOIL AND WATER MANAGEMENT (EROSION AND SEDIMENT CONTROL PLAN).
6. Substitute materials may be utilised in the construction of erosion or sediment controls where functionality is not affected, i.e., compacted mulch bunds in place of sediment fences, stabilised earth berms in place of excavated drains near underground services or timber pegs in place of star pickets where electrical or gas hazards exist.
7. Personnel constructing controls to have demonstrated competence and experience. Specific awareness training and workshops to be undertaken by personnel with direct involvement with erosion and sediment control. Toolbox talks to regularly focus on erosion and sediment control for specific works, associated risks, potential impacts and mitigation measures.
8. All existing vegetated or undisturbed areas outside of the works area to be regarded as Exclusion zones and to be delineated with fencing, tape, or other markers, as required. All site personnel to be instructed to avoid Exclusion zones or damaging installed controls.

**Erosion Control**

9. During the process of clearing, maintain a control bund of cleared vegetation to control run-off as works progress. Boundary sediment controls to be installed as soon as practical as the clearing front advances. Maintain clearing slash and minimise disturbance of ground vegetation, where possible.
10. Prior to commencement of topsoil stripping in a catchment, install sediment basins, sediment sumps & traps, surface drains, sediment filter devices and other surface runoff control measures to control runoff onto, across, and from the works zones to prevent the loss of sediment from the site. Note topsoil stripping can be undertaken within the footprints of the controls described above.
11. Construction zones in constrained areas to be managed in smaller, defined sub-catchments to reduce slope lengths and minimise sediment loads to boundary controls.
12. Stripped topsoil to be stripped and stockpiled generally as per SD 4-1. Any viable stripped topsoil to be stored in stockpiles, preferably less than two metres in height.
13. Short term on-site stockpiles to be located away from drains and flow lines and be controlled with sediment fence or storm covers.
14. Vehicles transporting bulk materials on public roads are to correctly cover loads to prevent loss of load and/or dust generation

15. Any significant (long & steep) cut/fill batters should be progressively overlaid with Rolled Erosion Control Products (RECP’s such as jute mesh, coir fibre mesh, etc), mulching, Organic Fibre Mulches (OFM’s) or geobinders to reduce erosion and rilling, prior to permanent stabilisation with cover crops, mulching or other long-term surface protection.
16. Temporary controls in addition to those shown may be required at strategic locations as required by the progression of works or weather conditions

**Water Management**

17. Maximise the interception and diversion of ‘clean’ (off site water) away from works areas. The ‘clean’ flows to be conveyed in stabilised drainage lines to suitable discharge points. The flows to be discharged to off-site areas at non-erosive velocities with adequate diffusers, level spreaders, etc. Ensure drainage paths and controls are adjusted as required to maximise the separation of ‘clean’ (off site) and ‘dirty’ (on site) water flows through/off site.
18. Flows paths with high velocity flows over unstabilised areas to be controlled with
  - applied soil surface stabilisers i.e., geotextile lining, applied soil binders, coarse rock lining, etc.
  - suitably constructed check dams placed at intervals to maximise flow suppression and settling of coarse sediment.
19. Where possible, provide sandbag or other bunding controls at on-site collection points & pit inlets to prevent flows bypassing controls to downslope areas.
20. Protect all existing and constructed inlets to pits & culverts from sediment ingress.
21. Where practical, maintain and/or improve existing stabilised drains to assist in the diversion of ‘clean’ (off site) flows.
22. Flooded excavations, ponded water, etc. to be extracted where required and utilised for site purposes or treated to achieve acceptable water quality prior to discharge.

**Sediment Control**

23. Vegetation to be progressively cleared to minimise disturbance by area and duration. Cleared vegetation to be windrowed parallel to the contour until mulching/removal to control flows across cleared areas.
24. The installation of preliminary sediment controls such as perimeter sediment fencing, windrowed vegetation/mulch, excavated sediment traps, check dams, straw bale filters, etc, will be implemented prior to soil disturbance within the catchment.
25. Accumulated water in sediment traps/sumps cannot be pumped, discharged, or released from site without completing a dewatering checklist.
26. Appropriate sediment tracking controls such as an aggregate/geotextile apron, shaker grid, etc. will be installed at exit points from the site. Personnel to monitor roadways & tracked sediments to be removed as required.
27. Personnel to ensure visual dust monitoring is maintained during works, and dust suppression is undertaken regularly. Dust control to be regularly conducted with water carts and soil stockpiles to suitably covered. Additional dust suppression measures to be utilised to minimise dust pollution during periods of high winds.
28. Temporary ‘dirty’ water drainage will be adjusted progressively to maximise flows to sediment control devices.

**Contamination**

29. Excavation of sub-soils to be inspected and monitored as works proceeds, to identify potential contamination. Any potentially contaminated soils to be stripped or excavated separately and transported directly to the designated stockpile, treatment area or licensed waste facility.
30. Potentially contaminated soils are to be stored within an appropriately bunded area and covered with heavy grade plastic or other impermeable covers for the duration of rainfall.
31. Ground disturbance and machinery/vehicle movements in potentially contaminated areas will be minimised to essential works.

**Monitoring & Reporting and Inspection & Maintenance**

32. Inspections of erosion and sediment controls will occur following rainfall events >10mm (daily on workdays or as soon as practical during site shutdown periods), with any necessary repairs implemented as soon as possible.
33. Relevant checklists and records to be maintained noting details such as rainfall received, repairs to controls and amounts of sediments cleaned from controls.
34. Sediment traps, sumps and filters are to be desilted when 60% of storage capacity is reached.
35. All site personnel to report any spill, leaks, or other failure to relevant response staff as soon as possible.

**Stabilisation**

36. Erosion and sediment controls are to be maintained until the relevant catchments are stabilised, re-vegetated, or sealed adequately to achieve soil surface protection factors as per the ‘Blue Book’ and SWMP requirements.
37. Completed earthworks areas will be backfilled and compacted in a staged manner as soon as possible. Adjacent disturbed areas will be suitably trimmed and stabilised as required.
38. Stabilisation of areas is to occur progressively in conjunction with the completion of earthworks.
39. Areas subject to heavy compaction and disturbance from vehicle movements and machinery to be scarified to a depth >100mm prior to topsoiling and seeding.

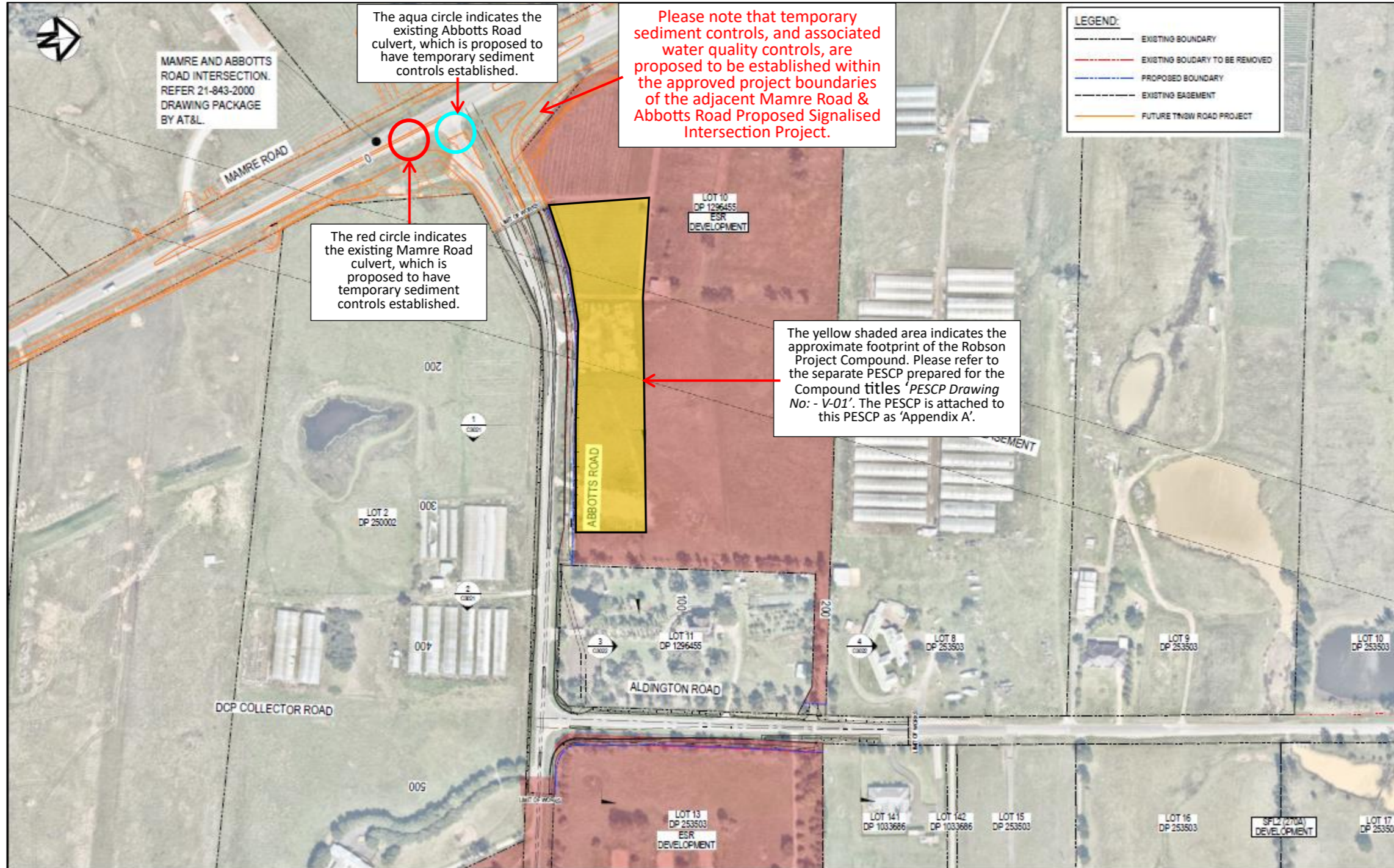
**Statement of Compliance**

This plan has been developed, and is certified by, an appropriately qualified and experienced professional in erosion and sediment control. The plan and associated documents, calculations, and drawings, have been prepared to a standard which, if properly implemented, will achieve the water quality objectives described in ‘Managing Urban Stormwater – Soils & Construction’ Volumes 1 & 2 – NSW Landcom 2006 & NSW DECC 2008. The key elements of the ‘Technical guidance for achieving Wianamatta–South Creek stormwater management targets’ - NSW DPHIE 2022 cannot be implemented due to Project boundary constraints, however, the approximate area of maximum disturbance is 5000m<sup>2</sup>, and disturbed areas will be progressively stabilised within three months of disturbance. All erosion and sediment control measures are designed to be in accordance with the requirements of the aforementioned documents and the Penrith City Council Development Control Plan 2014.

Signed: Andrew Littlewood - CPESC No. 5988      Date: 7<sup>th</sup> February 2025

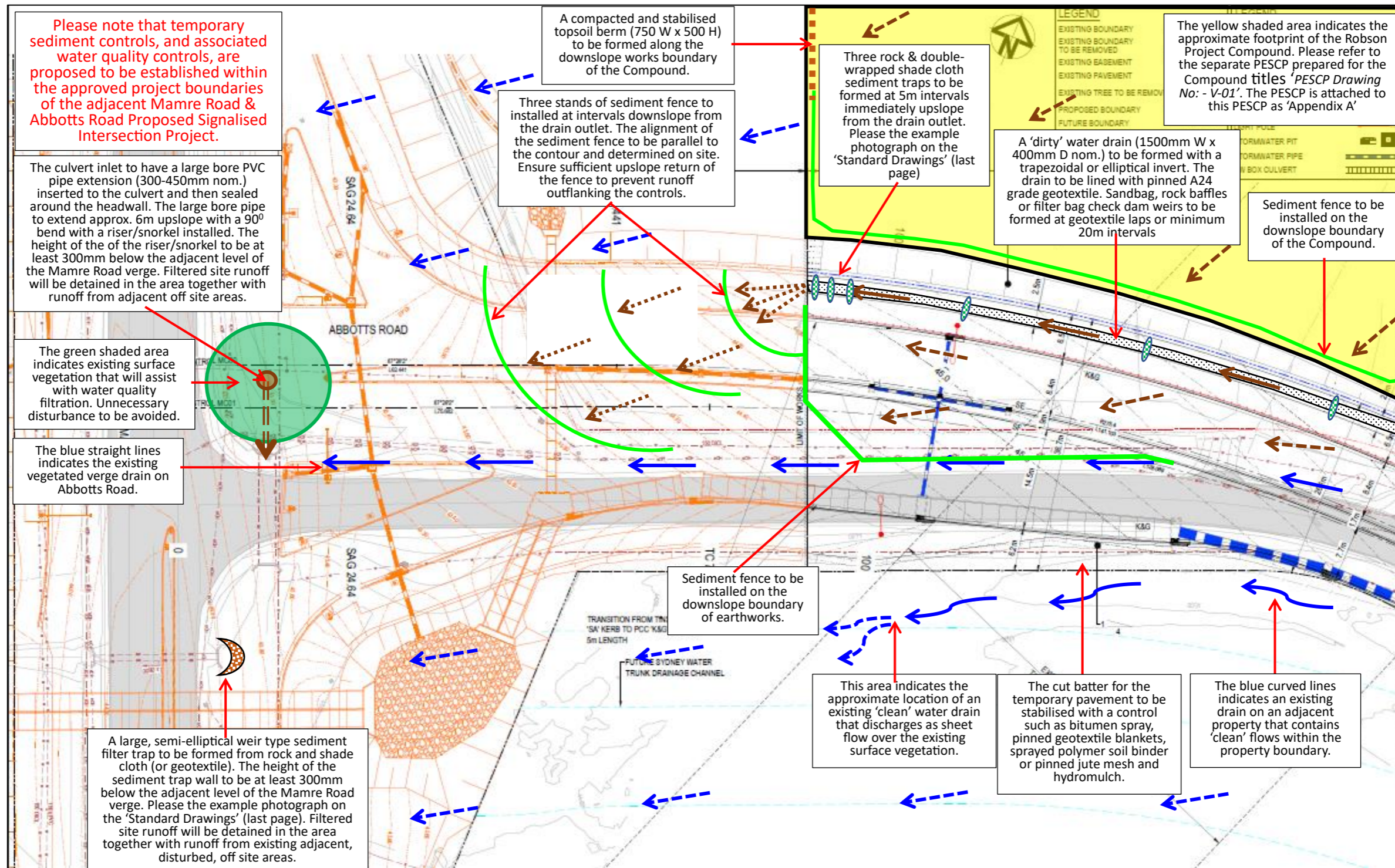
Version	Drawn by	Date	Signed	Reviewed by	Date
01	A. Littlewood	07/02/2025			

## Key Map for Progressive Erosion & Sediment Control Plans for the Abbots & Aldington Road Upgrade - Stage 1:



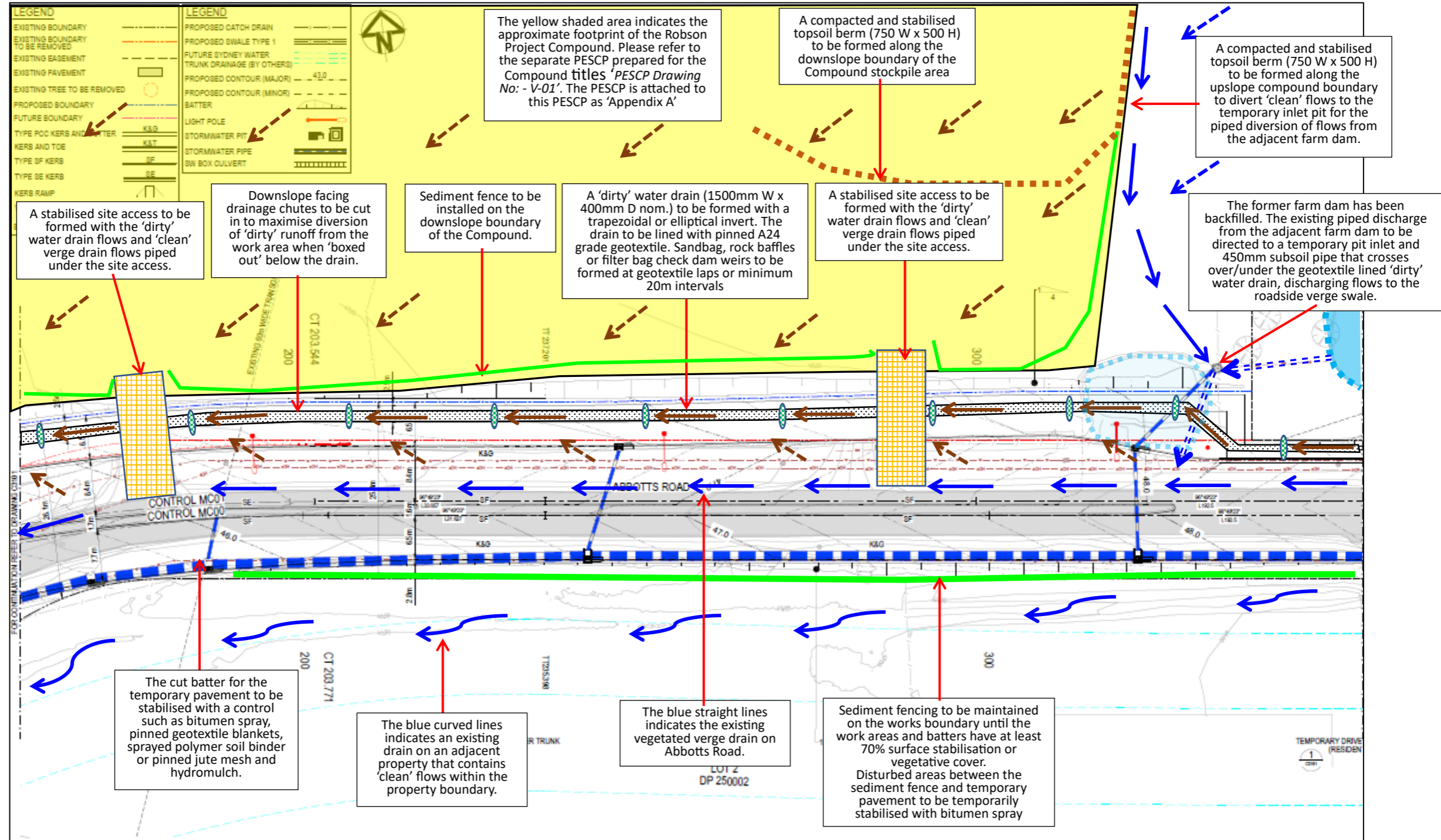
Legend											
'Clean' Water – Sheet Flows		'Clean' water Piped Drainage		Stabilised Topsoil Berm (geotextile/jute/seed)		Sediment basin / large sump		Filter bag or sediment fence inlet filter – gully pit		Controlled site access	
'Clean' Water – Concentrated Flow/Drain		'Dirty' water Piped Drainage		Geotextile lined drain		Filter bag / rock & shade cloth sediment filter		Compacted mulch bund		Stabilised Haul Road/Compound/Access Track	
'Dirty' Water - Concentrated Flow/Drain		'Clean' water exclusion bank/berm		Vegetated drain		Rock & Geotextile / Rock & shade cloth sediment trap		Coir Log/s		Traffic Barrier	
'Dirty' Water – Sheet Flows		Level Spreader / Diffuser		Rock lined drain		Excavated sediment trap with spill weir		Straw bale or coir log filter		Vegetated filter	
				Coarse rock / sandbag check dam				Sediment Fence Geotextile Apron			

## Progressive ESCP - Stage 1: Abbotts Road - Chainage 95 to 165



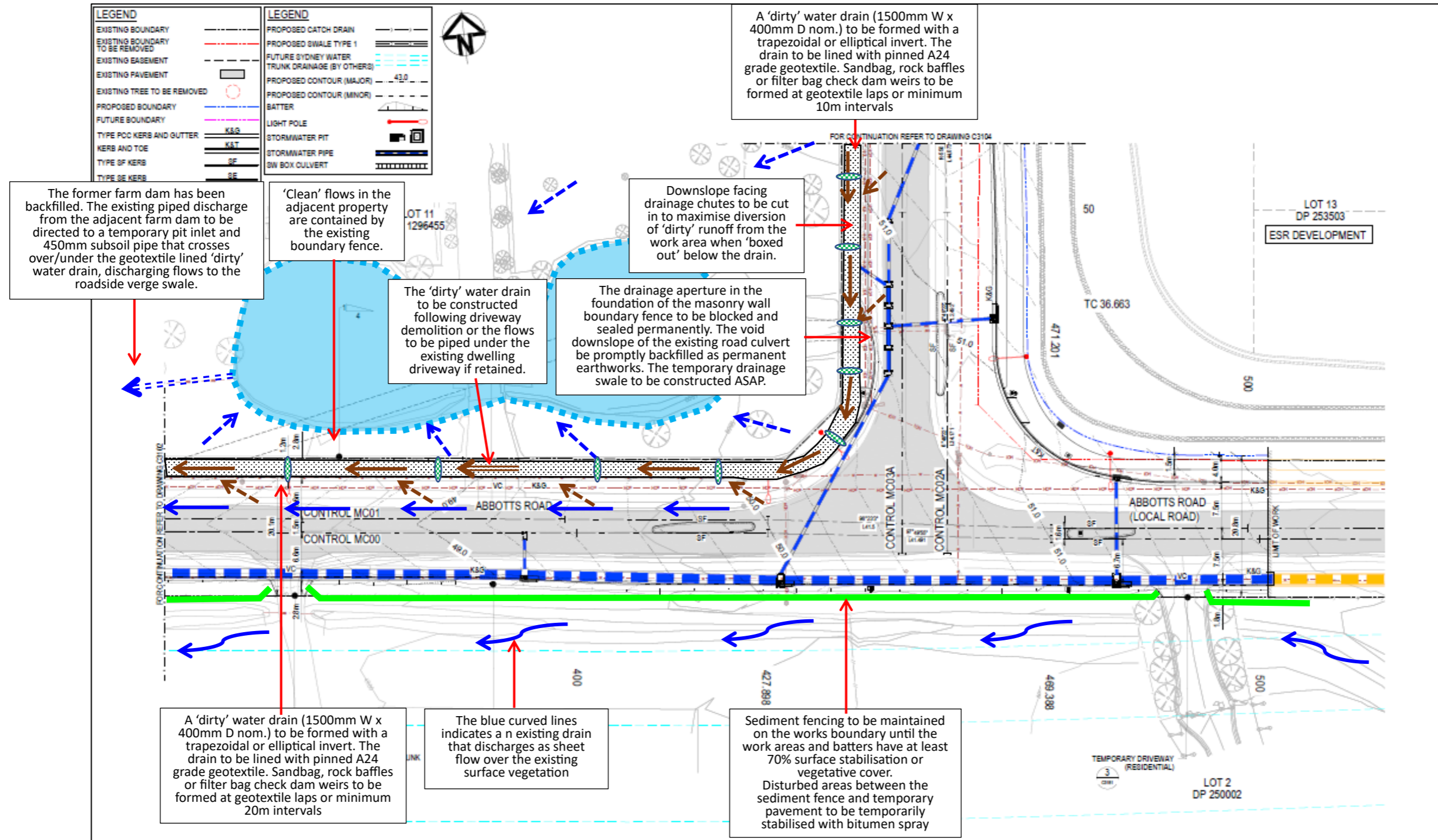
Legend												
'Clean' Water – Sheet Flows		'Clean' water Piped Drainage		Stabilised Topsoil Berm (geotextile/jute/seed)		Sediment basin / large sump		Filter bag or sediment fence inlet filter – gully pit		Controlled site access		
'Clean' Water – Concentrated Flow/Drain		'Dirty' water Piped Drainage		Geotextile lined drain		Filter bag / rock & shade cloth sediment filter		Compacted mulch bund		Stabilised Haul Road/Compound/Access Track		
'Dirty' Water - Concentrated Flow/Drain		'Clean' water exclusion bank/berm		Vegetated drain		Rock & Geotextile / Rock & shade cloth sediment trap		Coir Log/s		Traffic Barrier		
'Dirty' Water – Sheet Flows		Level Spreader / Diffuser		Rock lined drain		Excavated sediment trap with spill weir		Straw bale or coir log filter		Sediment Fence Geotextile Apron		
				Coarse rock / sandbag check dam							Vegetated filter	

## Progressive ESCP - Stage 1: Abbotts Road - Chainage 165 to 350



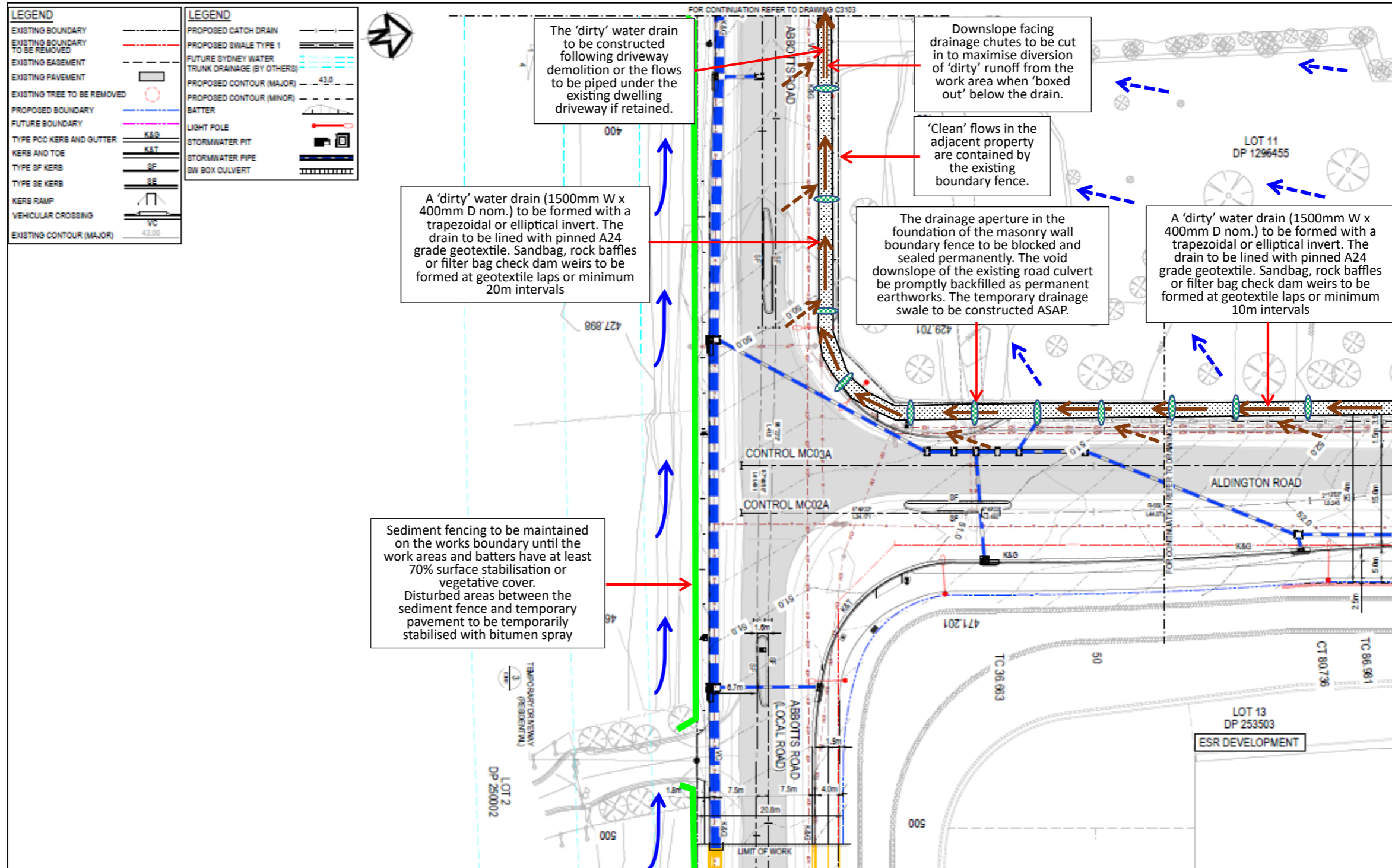
Legend											
'Clean' Water – Sheet Flows	---	'Clean' water Piped Drainage	==>	Stabilised Topsoil Berm (geotextile/jute/seed)	■ ■ ■ ■	Sediment basin / large sump	○	Filter bag or sediment fence inlet filter – gully pit	□	Controlled site access	■ ■ ■ ■
'Clean' Water – Concentrated Flow/Drain	→	'Dirty' water Piped Drainage	==>	Geotextile lined drain	■ ■ ■ ■	Filter bag / rock & shade cloth sediment filter	○	Compacted mulch bund	---	Stabilised Haul Road/Compound/Access Track	■ ■ ■ ■
'Dirty' Water - Concentrated Flow/Drain	→	'Clean' water exclusion bank/berm	---	Vegetated drain	■ ■ ■ ■	Rock & Geotextile / Rock & shade cloth sediment trap	○	Coir Log/s	---	Traffic Barrier	---
'Dirty' Water – Sheet Flows	→	Level Spreader / Diffuser	---	Rock lined drain	■ ■ ■ ■	Excavated sediment trap with spill weir	○	Straw bale or coir log filter	---		
				Coarse rock / sandbag check dam	■ ■ ■ ■			Sediment Fence Geotextile Apron	---	Vegetated filter	■ ■ ■ ■

Progressive ESCP - Stage 1: Abbots Road - Chainage 350 to 500



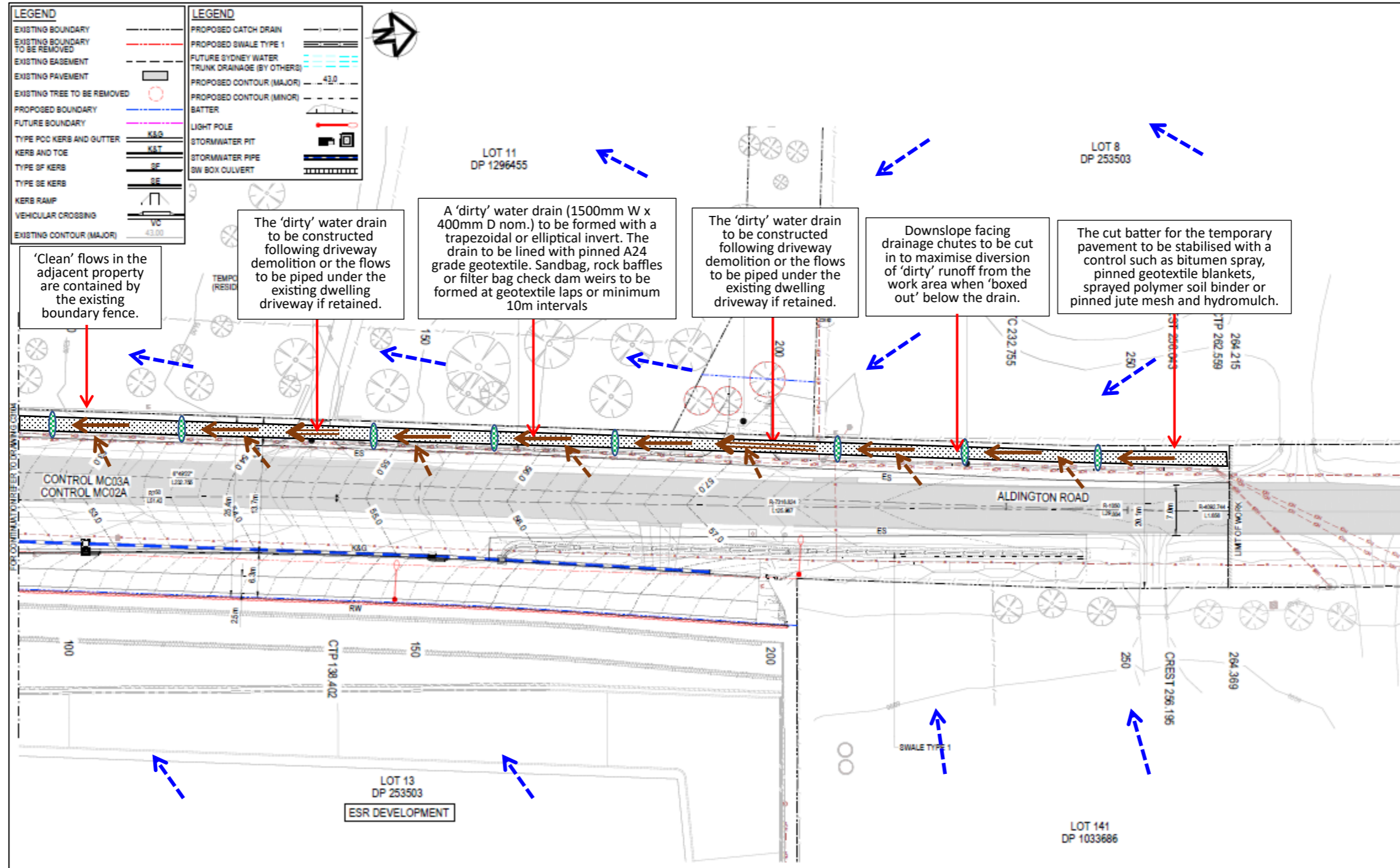
Legend											
'Clean' Water – Sheet Flows	---	'Clean' water Piped Drainage	==>	Stabilised Topsoil Berm (geotextile/jute/seed)	■ ■ ■ ■	Sediment basin / large sump	○	Filter bag or sediment fence inlet filter – gully pit	□	Controlled site access	■ ■ ■ ■
'Clean' Water – Concentrated Flow/Drain	→	'Dirty' water Piped Drainage	==>	Geotextile lined drain	■ ■ ■ ■	Filter bag / rock & shade cloth sediment filter	○	Compacted mulch bund	▬▬▬	Stabilised Haul Road/Compound/Access Track	■ ■ ■ ■
'Dirty' Water - Concentrated Flow/Drain	→	'Clean' water exclusion bank/berm	---	Vegetated drain	■ ■ ■ ■	Rock & Geotextile / Rock & shade cloth sediment trap	○	Coir Log/s	▬▬▬	Traffic Barrier	---
'Dirty' Water – Sheet Flows	→	Level Spreader / Diffuser	■ ■ ■ ■	Rock lined drain	■ ■ ■ ■	Excavated sediment trap with spill weir	○	Straw bale or coir log filter	▬▬▬	Vegetated filter	■ ■ ■ ■
				Coarse rock / sandbag check dam	■ ■ ■ ■			Sediment Fence Geotextile Apron	▬▬▬		

## Progressive ESCP - Stage 1: Aldington Road - Chainage 40 to 90



Legend											
'Clean' Water – Sheet Flows	---	'Clean' water Piped Drainage	==>	Stabilised Topsoil Berm (geotextile/jute/seed)	■ ■ ■ ■	Sediment basin / large sump	○	Filter bag or sediment fence inlet filter – gully pit	□	Controlled site access	■ ■ ■ ■
'Clean' Water – Concentrated Flow/Drain	→	'Dirty' water Piped Drainage	==>	Geotextile lined drain	■ ■ ■ ■	Filter bag / rock & shade cloth sediment filter	○	Compacted mulch bund	---	Stabilised Haul Road/Compound/Access Track	■ ■ ■ ■
'Dirty' Water - Concentrated Flow/Drain	→	'Clean' water exclusion bank/berm	---	Vegetated drain	■ ■ ■ ■	Rock & Geotextile / Rock & shade cloth sediment trap	○	Coir Log/s	---	Traffic Barrier	---
'Dirty' Water – Sheet Flows	→	Level Spreader / Diffuser	---	Rock lined drain	■ ■ ■ ■	Excavated sediment trap with spill weir	○	Straw bale or coir log filter	---	Vegetated filter	---
				Coarse rock / sandbag check dam	■ ■ ■ ■			Sediment Fence	---		
								Geotextile Apron	---		

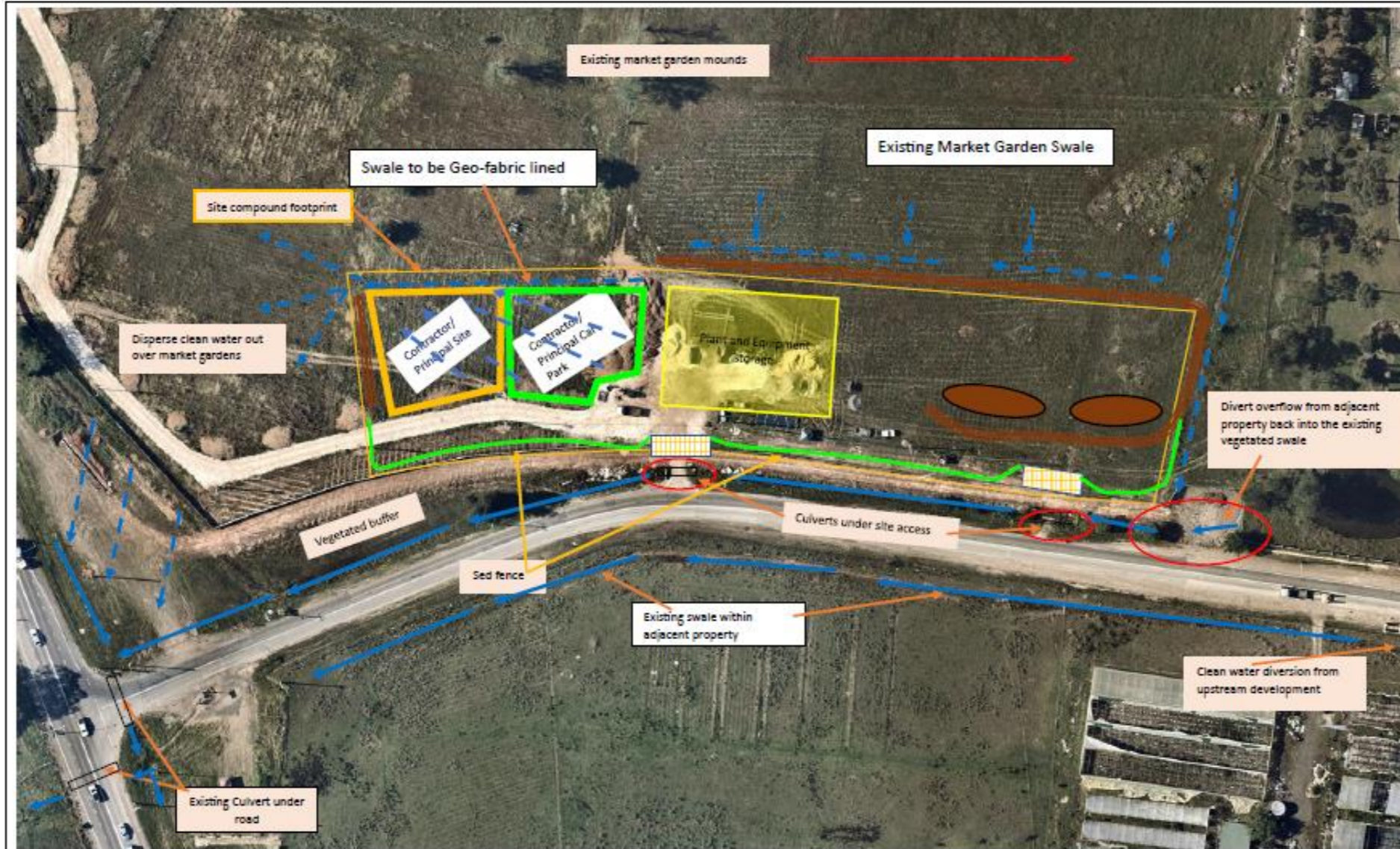
## Progressive ESCP - Stage 1: Aldington Road - Chainage 90 to 260



Legend											
'Clean' Water – Sheet Flows	---	'Clean' water Piped Drainage	==>	Stabilised Topsoil Berm (geotextile/jute/seed)	■ ■ ■ ■	Sediment basin / large sump	○	Filter bag or sediment fence inlet filter – gully pit	□	Controlled site access	■ ■ ■ ■
'Clean' Water – Concentrated Flow/Drain	→	'Dirty' water Piped Drainage	==>	Geotextile lined drain	■ ■ ■ ■	Filter bag / rock & shade cloth sediment filter	○	Compacted mulch bund	---	Stabilised Haul Road/Compound/Access Track	■ ■ ■ ■
'Dirty' Water - Concentrated Flow/Drain	→	'Clean' water exclusion bank/berm	---	Vegetated drain	■ ■ ■ ■	Rock & Geotextile / Rock & shade cloth sediment trap	○	Coir Log/s	---	Traffic Barrier	---
'Dirty' Water – Sheet Flows	---	Level Spreader / Diffuser	---	Rock lined drain	■ ■ ■ ■	Excavated sediment trap with spill weir	○	Straw bale or coir log filter	---		
				Coarse rock / sandbag check dam	■ ■ ■ ■			Sediment Fence	---	Vegetated filter	■ ■ ■ ■
								Geotextile Apron	---		

Appendix A

**Abbotts Rd Kemps Creek Compound**  
Progressive Erosion Sediment Plan (PESCP)



**NOTES**

- Sed fence to comply with Blue Book standard drawing SD 6-8 with an offset every 20m on a straight run.
- Each stockpile is to have an independent bund at the upslope with a sed fence at the lower level.
- Stockpiles dormant greater than 10 days are to be covered (polymer/Geo fabric/ grass seed)
- Each entry point to comply with RCP EIS-018 (stabilised site access).
- Contractor/Principal Car Park to be constructed with stabilised material, sealed with chip spray
- Disperse clean water to the West over the redundant market garden.
- Check culverts under site access, ensure they are free flowing.
- Preserve the vegetation on the Northern side of the swale as a buffer.

**Legend**

'Clean' Water – Sheet Flows		Piped Drainage		Stabilised Topsoil Berm (Polymer/geo)ute/seed)		Designated Stockpiles		Filter bag or sediment fence inlet filter – gully pit		Controlled site access	
'Clean' Water – Concentrated Flow/Drain		'Clean' water exclusion bank/berm		Stabilised spillway or		Filter bag / rock & shade cloth sediment filter		Compacted mulch bund		Stabilised Haul Road/Compound/Access Track	
'Dirty' Water - Concentrated Flow/Drain		Geotextile lined drain		Vegetated drain		Compacted Mulch / Rock & Geotextile / or topsoil sediment trap		Coir Log/s		Traffic Barrier	
'Dirty' Water – Sheet Flows		Level Spreader / Diffuser		Coarse rock / sandbag check dam		Excavated sediment trap with spill weir		Sediment Fence Geotextile Apron		Vegetated filter	

# Standard Drawings

**Construction Notes**

- Place stockpiles more than 2 (preferably 5) metres from existing vegetation, concentrated water flow, roads and hazard areas.
- Construct on the contour as low, flat, elongated mounds.
- Where there is sufficient area, topsoil stockpiles shall be less than 2 metres in height.
- Where they are to be in place for more than 10 days, stabilise following the approved ESCP or SWMP to reduce the Collector to less than 1:10.
- Construct earth banks (Standard Drawing 5-5) on the upslope side to divert water around stockpiles and sediment fences (Standard Drawing 6-8) 1 to 2 metres downslope.

**STOCKPILES** **SD 4-1**

**Construction Notes**

- Remove any rocks, clods, sticks or grass from the ground surface before laying the matting.
- Spread topsoil to at least 75 mm depth.
- Where appropriate, complete fertilising and seeding on a properly prepared seedbed (Standard Drawing 7-1) before laying the matting.
- Ensure the fabric can be continuously in contact with the soil by grading the surface carefully first.
- Lay the matting in "single-fashion" with the ends of each upstream roll overlapping the next roll downslope.
- Ensure sufficient staples are used to maintain a good contact between the soil and the matting.

**RECP : SHEET FLOW** **SD 5-2**

**Construction Notes**

- Remove any rocks, clods, sticks or grass from the surface before laying matting.
- Ensure that topsoil is at least 75 mm deep.
- Complete fertilising and seeding before laying the matting.
- Ensure fabric will be continuously in contact with the soil by grading the surface carefully first.
- Lay the fabric in "double-fashion", with the end of each upstream roll overlapping those downstream. Ensure each roll is anchored properly at its upslope end (Standard Drawing 5-7).
- Ensure that the full width of flow in the channel is covered by the matting up to the design storm event, usually in the 10-year ARI time of concentration storm event.
- Divert water from the structure until vegetation is stabilised properly.

**RECP : CONCENTRATED FLOW** **SD 5-7**

**Construction Notes**

- Check dams can be built with various materials, including rocks, logs, sandbags and straw bales. The maintenance program should ensure their integrity is retained, especially where constructed with straw bales. In the case of bales, this might require their replacement each two to four months.
- Trench the check dam 200 mm into the ground across its whole width. Where rock is used, fill the trenches to at least 100 mm above the ground surface to reduce the risk of undercutting.
- Normally, their maximum height should not exceed 600 mm above the puffy floor. The centre should act as a spillway, being at least 150 mm lower than the outer edges.
- Space the dams so the top of the upstream dam is level with the spillway of the next downstream dam.

**ROCK CHECK DAM** **SD 5-4**

**Construction Notes**

- Build with gradients between 1 percent and 5 percent.
- Avoid removing trees and shrubs if possible - work around them.
- Ensure the structures are free of projections or other irregularities that could impede water flow.
- Build the drains with circular, parabolic or trapezoidal cross sections, not V-shaped, at the dimensions shown on the SWMP.
- Ensure the banks are properly compacted to prevent failure.
- Complete permanent or temporary stabilisation within 10 days of construction.

**EARTH BANK (LOW FLOW)** **SD 5-5**

**Construction Notes**

- Construct at the gradient specified on the ESCP or SWMP, normally between 1 and 5 percent.
- Avoid removing trees and shrubs if possible - work around them.
- Ensure the structures are free of projections or other irregularities that could impede water flow.
- Build the drains with circular, parabolic or trapezoidal cross sections, not V-shaped, at the dimensions shown on the SWMP.
- Ensure the banks are properly compacted to prevent failure.
- Complete permanent or temporary stabilisation within 10 days of construction following Table 5.2 in Landcom (2004).
- Where discharging to erodible lands, ensure they outlet through a properly constructed level spreader.
- Construct the level spreader at the gradient specified on the ESCP or SWMP, normally less than 1 percent or level.
- Where possible, ensure they discharge waters onto either stabilised or undisturbed disposal sites within the same subcatchment area from which the water originated. Approval might be required to discharge into other subcatchments.

**EARTH BANK (HIGH FLOWS)** **SD 5-6**

**Construction Notes**

- Strip the topsoil, level the site and compact the subgrade.
- Cover the area with needle-punched geotextile.
- Construct a 200-mm thick pad over the geotextile using road base or 30-mm aggregate.
- Ensure the structure is at least 15 metres long or to building alignment and at least 3 metres wide.
- Where a sediment fence joins onto the stabilised access, construct a hump in the stabilised access to divert water to the sediment fence.

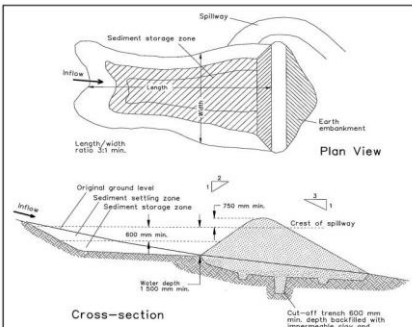
**STABILISED SITE ACCESS** **SD 6-14**

**Construction Notes**

- Strip the topsoil, level the site and compact the subgrade.
- Cover the area with needle-punched geotextile.
- Construct a 200-mm thick pad over the geotextile using road base or 30-mm aggregate.
- Ensure the structure is at least 15 metres long or to building alignment and at least 3 metres wide.
- Where a sediment fence joins onto the stabilised access, construct a hump in the stabilised access to divert water to the sediment fence.

**STABILISED SITE ACCESS** **SD 6-14**

# Standard Drawings

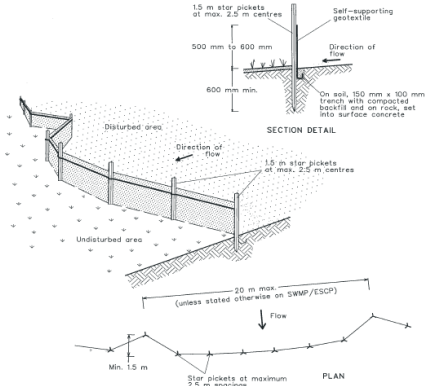


### Construction Notes

1. Remove all vegetation and topsoil from under the dam wall and from within the storage area.
2. Construct a cut-off trench 500 mm deep and 1 200 mm wide along the centreline of the embankment extending to a point on the gully wall level with the rear crest.
3. Maintain the trench free of water and recompact the materials with equipment as specified in the SWMP to 95 per cent Standard Proctor Density.
4. Select fill following the SWMP that is free of roots, wood, rock, large stone or foreign material.
5. Prepare the site under the embankment by ripping to at least 100 mm to help bond compacted fill to the existing substrate.
6. Spread the fill in 100 mm to 150 mm layers and compact it at optimum moisture content following the SWMP.
7. Construct the emergency spillway.
8. Rehabilitate the structure following the SWMP.

**EARTH BASIN - WET**  
(APPLIES TO TYPE 'B' AND TYPE 'F' BOLS ONLY)

SD 6-4

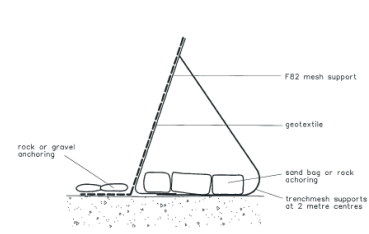


### Construction Notes

1. Construct sediment fences as close as possible to being parallel to the contours of the site, but with small returns as shown in the drawing to limit the catchment area of any one section. The catchment area should be small enough to limit water flow if concentrated at one point to 50 litres per second in the design storm event, usually the 10-year event.
2. Cut a 150-mm deep trench along the upslope line of the fence for the bottom of the fabric to be entrenched.
3. Drive 1.5 metre long star pickets into ground at 2.5 metre intervals (max) at the downslope edge of the trench. Ensure any star pickets are fitted with safety caps.
4. Fix self-supporting geotextile to the upslope side of the posts ensuring it goes to the base of the trench. Fix the geotextile with wire ties or as recommended by the manufacturer. Only use geotextile specifically produced for sediment fencing. The use of shade cloth for this purpose is not satisfactory.
5. Join sections of fabric at a support post with a 150-mm overlap.
6. Backfill the trench over the base of the fabric and compact it thoroughly over the geotextile.

**SEDIMENT FENCE**

SD 6-8

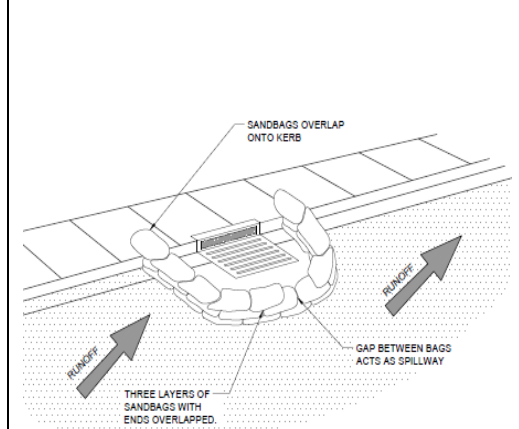


### Construction Notes

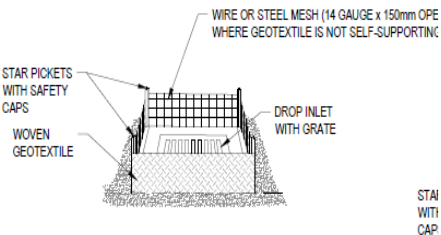
1. Install this type of sediment fence when use of support posts is not desirable or not possible. Such conditions might apply, for example, where approval is granted from the appropriate authorities to place these fences in highly sensitive estuarine areas.
2. Use bent trench mesh to support the FB2 mesh support as shown on the drawing above. Attach the geotextile to the welded mesh facing using UV resistant cable ties.
3. Stabilise the whole structure with sandbag or rock anchoring over the trench mesh and the leading edge of the geotextile. The anchoring should be sufficiently large to ensure stability of the structure in the design storm event, usually the 10 year event.

**ALTERNATIVE SEDIMENT FENCE**

SD 6-9

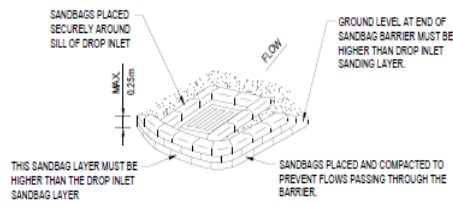


**SANDBAG SEDIMENT TRAP FOR KERB INLET**  
N.T.S.



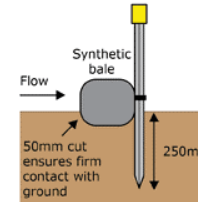
**GEOTEXTILE INLET FILTER (SD 6-12) - PERSPECTIVE**  
NTS

STAI WITH CAP

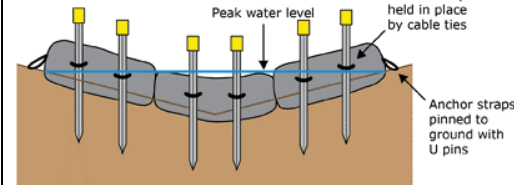


**SEDIMENT BARRIER (SD 5-4) DETAIL**

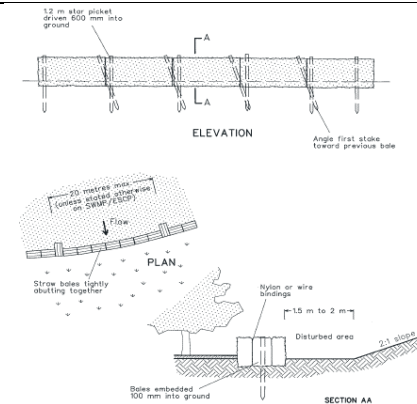
## Coir Log Filter



Star pickets / wooden stakes  
35mm x 38mm x 900mm min  
Minimum 2 per bale



Anchor straps pinned to ground with U pins



### Construction Notes

1. Construct the straw bale filter as close as possible to being parallel to the contours of the site.
2. Place bales lengthwise in a row with ends tightly abutting. Use straw to fill any gaps between bales. Straws are to be placed parallel to ground.
3. Ensure that the maximum height of the filter is one bale.
4. Embed each bale in the ground 75 mm to 100 mm and anchor with two 1.2 metre star pickets or stakes. Angle the first star picket or stake in each bale towards the previously laid bale. Drive them 600 mm into the ground and, if possible, flush with the top of the bales. Where star pickets are used and they protrude above the bales, ensure they are fitted with safety caps.
5. Where a straw bale filter is constructed downslope from a disturbed batter, ensure the bales are placed 1 to 2 metres downslope from the toe.
6. Establish a maintenance program that ensures the integrity of the bales is retained - they could require replacement each two to four months.

**STRAW BALE FILTER**

SD 6-7

# Standard Drawings

**MESH AND GRAVEL INLET FILTER** **SD 6-11**

**Construction Notes**

1. Install filters to kerb inlets only at sag points.
2. Fabricate a sleeve made from geotextile or wire mesh longer than the length of the inlet pit and fill it with 25 mm to 50 mm gravel.
3. Form an elliptical cross-section about 150 mm high x 400 mm wide.
4. Place the filter at the opening leaving at least a 100-mm space between it and the kerb inlet. Maintain the opening with spacer blocks.
5. Form a seal with the kerb to prevent sediment bypassing the filter.
6. Sandbags filled with gravel can substitute for the mesh or geotextile providing they are placed so that they firmly abut each other and sediment-laden waters cannot pass between.

## Mulch filter berm

**Mulch filter berm**

## Example photo of a compacted mulch berm on low grades.

## Example photo of a compacted mulch berm on steeper grade with an upslope facing groyne

## Example photo of a shade cloth and rock sediment filter.

## Example photo of an excavated sediment trap with mulch filter berm.

**REPLACING TOPSOIL** **SD 4-2**

**Construction Notes**

1. Scarify the ground surface along the line of the contour to a depth of 50 mm to 100 mm to break up any hardsetting surfaces and to provide a good bond between the respread material and subsoil.
2. Add soil ameliorants as required by the ESCP or SWMP.
3. Rip to a depth of 300 mm if compacted layers occur.
4. Where possible, replace topsoil to a depth of 40 to 60 mm on lands where the slope exceeds 4(H):1(V) and to at least 75 mm on lower gradients.

**SEEDBED PREPARATION** **SD 7-1**

**Construction Notes**

1. Loosen compacted soil before sowing any seed. If necessary, rip the soil to a depth of 300 mm. Avoid rotary top cultivation.
2. Work the ground only as much as necessary to achieve the desired till and prepare a good seedbed.
3. Avoid cultivation in very wet or very dry conditions.
4. Cultivate on or close to the contour where possible, not up and down the slope.