



CONSTRUCTION MANAGEMENT PLAN - MOOLERIC: WATER SUPPLY LINE

320 Mooleric Rd. Ombersley

Rev. 1: PREPARED BY

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DOCUMENT CONTROL

Reference	Date	Prepared	Checked	Authorised
Rev 0	28/04/2025	Ben Kerrison		Dern Pease
Rev 1	05/05/2025	Ben Kerrison		Dern Pease

DOCUMENT REFERENCES

ProTen CMP for Mooleric Farm 320 Birregurra Road.

Prepared and issued by ProTen

Environment Protection and Biodiversity Conservation Act 1999 referral guidelines for the vulnerable striped legless lizard, Delma impar

Barwon Water SQE Requirements

ECM ID: A25737484

Extract from planning conditions

Issued 3rd March 2025.

Cultural Heritage Management Plan (CHMP) for ProTen Mooleric Farm construction and operation.

Ecology and Heritage Partners Pty. Ltd.

APPENDICIES

Mooleric Rd. Birregurra, Flora and fauna assessment

Prepared by Biosis 31/7/2023

Preliminary design drawing set:

M0075 DR.01 – DR.09

M0075 WSCE-CS-SK-0001 – amended layout connection to pump station.

M0075 WSCE-HS-DD-0001 – amended pump station layout.

Drilling additive SDS – sample to be replaced with contractor nominated product when approved.

Environmental Incident Report Form

PRT-F-SHEQ-070

Contents

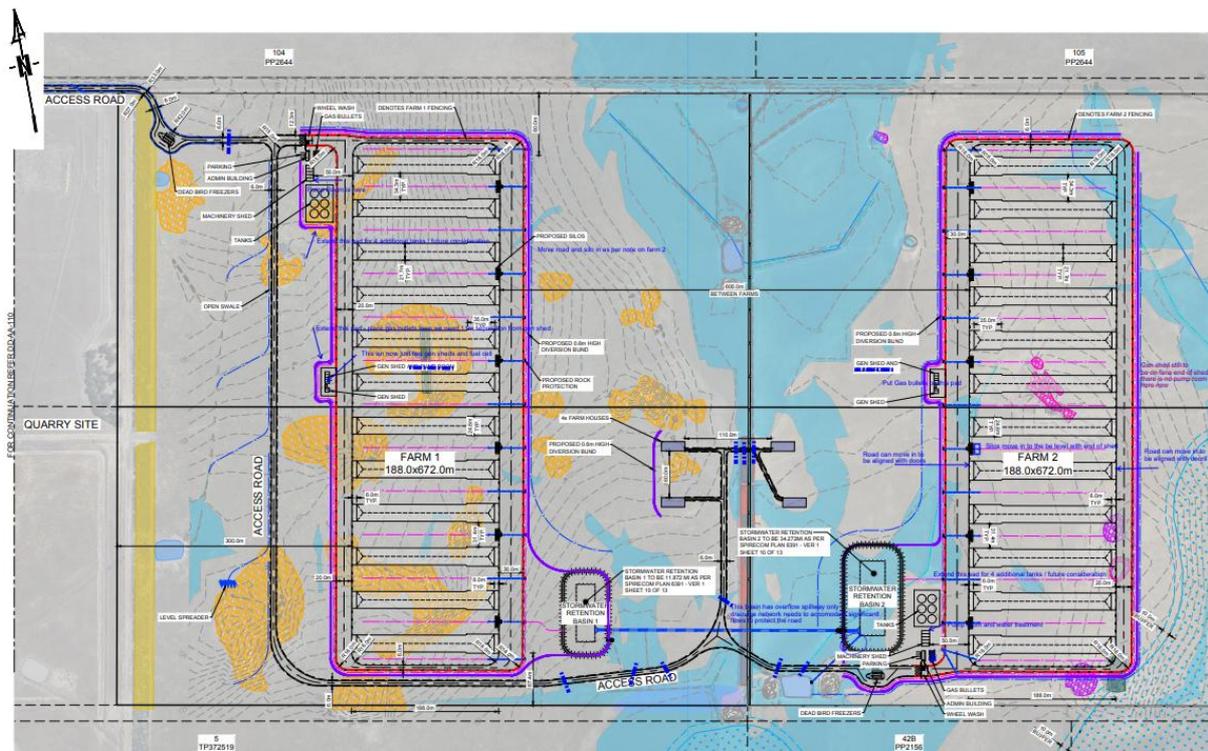
INTRODUCTION.....	4
Development Outline	4
Document Purpose and Scope.....	5
General Considerations	5
Erosion Control	5
Topsoil Retention.....	5
Working Hours	5
Traffic Management Plan	6
Driver Code of Conduct	6
Reduced Speed Limit.....	6
Release to commence work.....	6
Weekly Audit of Construction Zone.....	6
DESCRIPTION OF PIPELINE	7
ROUTE	8
Construction techniques.....	9
Specific considerations	9
Flora.....	9
Fauna.....	10
Process for horizontal directional drilling.....	11
Definitions:	11
De-watering and “mud” management.....	12
Pullback pipe installation	13
Pressure grouting	13
DEMOBILISATION	14
Appendix 1:	15
Appendix 2:	16
Appendix 3:	17
Appendix 4:	18
Appendix 5:	19

INTRODUCTION

Development Outline

ProTen is developing a new farm site located at 320 Birregurra Road. Flora, Fauna, Cultural Heritage, noise and odour investigations and surveys have formed an integral part of the early planning process. There are considerations for all of these aspects required in managing the construction and operation of the new farm site.

The site proposes two operating nodes of 12 sheds each. There are associated administrative and maintenance buildings and residential housing also to be constructed. Water infrastructure is generally concentrated at the south of the property where storage, treatment and distribution equipment will manage the water on site.



ProTen will develop and deliver an environmental and cultural heritage induction package for the pipeline construction. All personnel involved in this construction will be required to complete this induction.

Document Purpose and Scope

This Pipeline Construction Management Plan will support the overarching site construction CMP for the broiler farm located at 320 Birregurra Road, Ombersley. The objective of this Pipeline CMP is to outline the particular considerations for construction of the water supply pipeline between the township of Birregurra and the construction site.

The CMP for construction of the farm site reflects the requirements contained within the Code and the EPA guidelines for Environmental Management – Civil construction, building and demolition guide. (Publication 1834.1 | 12 September 2023). It incorporates to the maximum current practical extent the requirements of the Code and EPA guidelines and is subject to a process of continuous improvement. It reflects the following principles:

- Pursuit of continuous improvement in environmental performance;
- Provision of flexibility but without vagueness that could permit selective interpretation of acceptable performance;
- Provision where possible of plans or actions, not merely statements of good intentions;
- Compatibility with the need for objective independent auditing; and
- Support to the Code objective, which encourages investment decisions consistent with a long-term strategy for the industry.

The construction management plan (CMP) for the farm site will cover details of all controls required including response to incidents. Relevant incident reporting forms are attached to this Pipeline CMP for easy access.

General Considerations

Following are a number of general controls that must be completed prior to commencing and / or adhered to during construction of the pipeline.

Erosion Control

All works must be undertaken in a manner that minimises soil erosion to the greatest extent practicable, and any exposed areas of soil must be stabilised to prevent soil erosion, to the satisfaction of the responsible authority.

Topsoil Retention

All topsoil removed during the earthworks must be stockpiled, maintained in a weed-free condition, respread on disturbed ground after completion of the earthworks and revegetated to prevent erosion, all to the satisfaction of the responsible authority.

Working Hours

Working hours will not be outside

07:00 to 18:00 Mon-Fri.

07:00 to 13:00 Saturdays

No work Sundays and public holidays.

Traffic Management Plan

Contractor is required to develop and implement a traffic management plan in accordance with the Road Management Act 2004 (A Code of Practice for Worksite Safety – Traffic Management), the Road Safety Act 1986 and Australian Standard AS 1742.3 2009 (Traffic Control Devices for Works on Roads) must be submitted to and approved by the Responsible Authority.

Driver Code of Conduct

The operator of the broiler farm must adopt, operate, and use its best endeavours to enforce a Code of Conduct for drivers of vehicles involved in the use to the satisfaction of the Responsible Authority, and must also make drivers of vehicles not under the operator's control aware of this Code and encourage their compliance. The Code must address the minimisation of truck noise on Mooleric Road.

Reduced Speed Limit

All construction traffic – including light vehicles – must observe a 40km/hr speed limit on Mooleric Road.

Release to commence work.

Prior to mobilising a photographic survey of the entire route shall be recorded for reference post construction. Prior to commencing excavation work, the contractor must have written permission to proceed from the superintendent. This will not be unreasonably withheld but will require a joint inspection of the construction zone to ensure all required protective measures have been taken.

Weekly Audit of Construction Zone.

On a weekly basis, the contractor will join the superintendent or their delegate in completing an audit of the construction zone. This will include any area where construction is actively underway and the balance of the construction window where protective measures remain in place. Compliance to the CMP, the contractor's safety management plan and traffic management plans will also be assessed and recorded.

DESCRIPTION OF PIPELINE

The pipeline is designed to transfer water from the Barwon Water network in Birregurra to the farm site at 320 Birregurra Road Ombersley. In total, the pipeline will be approximately 7km from inlet point to the battery limit at the construction footprint at the farm. Once within that construction footprint, trenching will be conducted as part of the civil construction works managed under the CMP approved for construction.

The pipeline will be constructed primarily from DN110 PE100 SDR11 pressure piping. Joints will typically be butt weld in plain pipe with fusion welded fittings.

The connection agreement offered by Barwon Water nominates point of connection at the end of their existing network east of the rail crossing on Birregurra Road, at Birregurra Victoria.

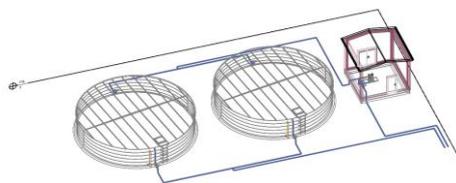
The point of connection requires the installation of a pit for piping connection, isolation and metering devices.

The nominated connection point on the Barwon Water network does not have the pressure and flow capacity required to supply the farm water demand and consequently a pumping station is required to boost pressure and achieve the daily flow required. The pump station is to be built within the Barwon Water property at 270 Birregurra Road. The area for the pump station is to be leased from Barwon Water on a long term agreement.

The pump station will be comprised of;

- a single small building housing 2 x 11kW pumps, and
- 2 x 250kL lined and enclosed tanks

The pumps will be automated via telemetry to start and stop on high and low water levels at the farm site.



6 ISOMETRIC 3D VIEW - TANK & PUMP STATION
Scale N.T.S



From the pump station, the pipeline will be a privately owned pressure main delivering potable water to the farm site.

The pipeline and pump station will be owned and operated by ProTen.

ROUTE

The pipeline route is outlined in the preliminary design drawings M0075 DR.01 thru DR.09 and variations at appendix 2 and 3. This corresponds with Biosis report Study Area sheets 4, 6 and 7-14, report at appendix 1.

Chainage is marked from the connection point through to the terminal point and is summarised below:

- Ch 00: Connection, isolation and metering point at end of Barwon Water network.
- Ch 00-380: Open trenching installation on west side Birregurra Road.
- Ch 380-500: EVC 175 grassy woodland habitat to be protected.
- Ch 500-650: HDD proposed to avoid EVC 175 grassy woodland habitat.
- Ch 650-880: EVC 647 plains sedgy wetland habitat to be protected.
- Ch 693.999: Scour valve in pit (low point) may be relocated based on HDD at Ch500.*
- Ch 880-1400: Open trenching installation on west side of Birregurra Road.
- Ch 999.987: Stop valve and air vent in pit. See M0075 WSCE-CS-SK-0001.*
- Ch 1400: Diversion across road reserve into Barwon Water site and pump station.
- Ch 1400: Pump station. See drawing M0075 WSCE-HS-DD-0001.
- Ch 1400: Crossing road reserve to west / north side of Birregurra road for continuation.
- Ch 1400-3250: Open trenching on west / north side of Birregurra road.
- Ch 3250: EVC 175 grassy woodland habitat to be protected opposite side of Birregurra Rd.
- Ch 3250-3500: Open trenching installation on west / north side Birregurra Rd.
- Ch 3500: Road crossing to east side of Birregurra Rd.
- Ch 3500: Birregurra Creek. Proposing HDD, assessing reduced impact by placing pipe on the existing concrete road and culvert structure if approved by Council.
- Ch 3500-4440: East side of road - combination open trench and HDD to suit.
- Ch 3500-4440: Opposite side of road nominated as Growling Grass Frog movement corridor – no parking and no traffic on west side of road reserve.
- Ch 4440-4566: HDD crossing below Prices Highway M1.
- Ch 4566-4900: Open trenching installation in Darcys Lane road reserve.
- Ch 4900-4950: Crossing APA natural gas transmission line, HDD proposed, trench over only with APA approval.
- Ch 4950-5275: Open trenching installation in Darcys Lane road reserve.
- Ch 5275: Transition onto easement / lease secured on private land.
- Ch 5275-5440: Open trenching installation to pot hole. Fence off zone north of this to protect areas identified in flora and fauna report and cultural heritage report.
- Ch 5440-5780: No vehicle access in this zone. Pothole each end for HDD.
- Ch 5780 – 6540: Open trenching installation accessed from the north only (farm side).
- Ch 6540-6740: HDD to avoid disturbing EVC 125 Plains Grassy Wetland. Zone to be fenced to exclude vehicle traffic.
- Ch 6740-6830: Open trenching installation accessed from the north only (farm side) transitioning into ProTen farm construction zone.

Further trenching within the farm construction zone will be managed under the CMP for the farm construction.

Construction techniques

Construction of this pipeline will be a combination of open trenching and directional drilling.

Controls and considerations below must be implemented as required by location and construction type.

Specific considerations

Following feature survey there are two sets of data to be reviewed by *Biosis*. These are;

- 1) Review of bore hole locations for geotechnical investigation and contamination assessment.
- 2) Review of proposed pot hole locations for HDD construction. Some of these will by necessity be located in proximity to the Growling Grass Frog movement corridor. Proposed locations to be assessed and agreed as lowest impact and then recorded via spatial survey for future reference.
- 3) Each buried connection (butt weld and fusion weld) is to be recorded utilising the drawing coordinate system for further location and maintenance.

Flora

Where the flora and fauna assessment indicates zones of flora with protected status, the following additional precautions are required.

1. Zone is to be identified and marked by careful installation of posts and flagging. It is preferred that posts are heavily weighted rather than driven. Driven posts will be approved only after inspection by the superintendent or their delegate.
2. Protected zone may be on the opposite side of the road but must still be marked while construction is within site line of the protected zone.
3. Where protected zone is within a fenced boundary, signage is required to be mounted to the existing fence defining zone and excluding access.
4. No clearing of protected vegetation is allowed without first receiving permit to do so from the appropriate authority.
5. No trimming of any overhang is permitted without consultation and approval.
6. No excavation within the drip line of native vegetation is permitted.
7. In cases where item 4-6 above cannot be achieved, an alternate route or construction technique (HDD) will be assessed and approved. No pothole is to be excavated in sensitive areas without those being approved in writing following review by *Biosis*.

Fauna

It should be noted that the pipeline route does interact with Growling Grass Frog habitat and likely movement corridors. Construction technique proposed HDD adjacent to the protected habitat for this species. Potholes will be required in the zone marked as movement corridor for this species. Pothole locations are to be approved and witnessed by superintendent or their delegate prior to excavation. In this movement corridor, as far as reasonably practicable, construction equipment is to be parked on the opposite side of the road to minimise any impact on the sensitive zone.

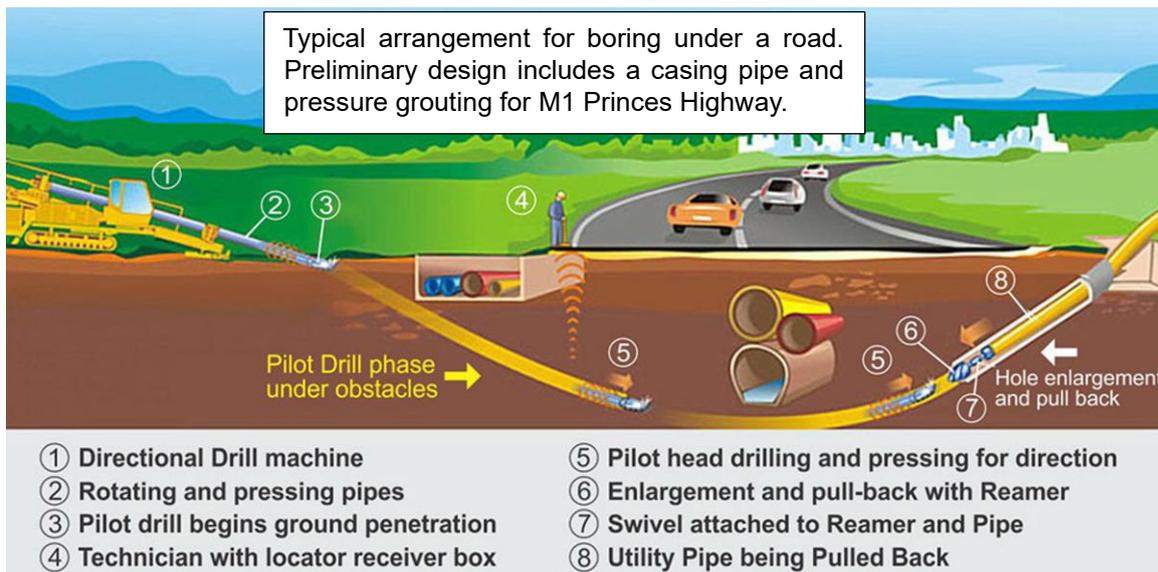
It should further be noted that the pipeline route has been reworked to avoid interaction with identified habitat and movement corridors for Striped Legless Lizards which are concentrated on the northern end of the construction site at 320 Birregurra Road. In particular, note sheet 4,6 and 7 of the survey area within the flora and fauna report at appendix 1.

Where the flora and fauna assessment identifies areas where protected species may be present the following additional precautions will be taken.

1. Open trench is to be limited as far as practicable to the extent which can be laid and backfilled on the same day.
2. Any open pothole or trench will be protected by either:
 - a. Construction of an anti-climb fence comprising high slip polymer membrane supported to a minimum height of 450mm and weighed at the bottom edge to limit the possible entry of small animals.
 - b. Cover opening with continuous membrane weighted on all edges to prevent entry of small animals below the membrane into the excavation. In this case the cover must not be impervious so that rain can pass through without dislodging the cover.
 - c. At the resumption of work, the excavation is to be inspected for the presence of any protected species. Protected species will be identified during the environmental and cultural heritage induction.
 - i. If protected species are found in the excavation or surrounding area they are to be relocated to suitable habitat by approved personnel only.
 - ii. Environmental incident report is to be completed.
 - d. For extended periods of absence (long weekend / public holiday), inspection of protective structures is required following any significant weather event (wind reported higher than 60km/hr or rain reported at more than 10mm in an hour or 25mm in a day).
 - i. Where protective structures are found to be damaged, the excavation must be inspected for the presence of any protected species and should any be found an environmental incident report shall be recorded and reported to the superintendent.
 - ii. Any damage to protective structures is to be restored to a functional condition.
3. Where top soil is stockpiled on site for more than 1 day it is to be inspected prior to being disturbed for back fill. Where protected fauna is identified it is to be relocated to suitable habitat by approved personnel prior to disturbing the stockpile.

Process for horizontal directional drilling.

Horizontal directional drilling (HDD) is a technique for installation of underground services without open trenching. It is commonly used for crossing existing assets such as roadways without affecting the asset. This pipeline construction will utilise HDD for crossing existing assets and to avoid disturbing areas of natural or cultural sensitivity. Micro tunnelling is a slightly different technique but with the same end result, installation of new infrastructure with surface disturbance limited to both end locations.



Definitions:

- **Entry point:** The origin of the bore the location of the drill rig.
- **Exit point:** The terminal point of the bore, where pipeline will be strung out to be pulled back by the drill rig to install piping in the completed directional drill.
- **Pothole / Potholing:** This is a small excavation at the entry and exit point of the drill alignment. Potholes have two main purposes; i) to enable the drill rig to enter a vertical face and place the pipeline at the right depth below surface, and ii) control water and mud used in the drilling process.
- **Stringing:** Connecting enough pipe end to end or placing enough continuous pipe at the exit point of the bore to allow it to be drawn back into the direction bore.
- **Honing:** Where required, the bore diameter is increased by use of a hone to enlarge the hole or by a barrel attachment drawn back through the bore hole by the drill rig.
- **Encasing:** Construction with a conduit or casing pipe installed in the HDD and the process or pressure pipe then installed within the casing.
- **Pressure grouting:** Process where the annulus between the pressure piping and the bore or the pressure piping and the casing is filled with highly flowable grout to protect against future subsidence – critical infrastructure such as roads and rail lines.

De-watering and “mud” management.

As directional drilling is a wet process, there is a requirement to manage all water and mud on site. Suitable pumping and transport equipment is to be on hand at all times while drilling is in progress. Potholes at both the entry and exit point are to be monitored to maintain a water level that will ensure no overflow to adjacent surfaces and drains.

To avoid any issue with contamination from existing conditions, a core sample is required to be taken and tested for contamination prior to commencing potholing. Should test results show that soil is contaminated to an unacceptable level (industrial waste), all material from the drill process will be disposed of at EPA (Vic) approved disposal sites. In this case all required transport and disposal documentation will be required.

Anticipating no unacceptable contamination results from testing, the water and mud extracted from drilling processes can be transported to the construction site at 320 Biregurra Road to be incorporated into subgrade structures as moisture control. At site, contractor is to ensure that the water and mud is discharged either directly onto approved formations or into a control pond so that there is no risk of this material entering surface drains or flood ways on site.

The additive used by the construction contractor is to be submitted to ProTen for approval prior to mobilisation. Only suitable materials will be approved to eliminate potential for environmental harm. Generally this is expected to be a Bentonite compound and other lubricant additives. The SDS at appendix 4 are to be replaced with contractors approved material SDS prior to commencement.

No chemical material is to be left stored at road side. Only sufficient material for daily use with a reasonable surplus is to be taken to site. Storage and transport of all chemicals is to comply with the SDS conditions and any EPA or Worksafe Victoria requirements.

At the completion of each day, any open excavation is to be mechanically protected using barricades as nominated in traffic management plan. Road side is to be assessed for any remaining hazards and have all such hazards controlled. This will include (but not be limited to) signage and overnight lighting to ensure construction zone is clearly visible and defined in compliance with traffic management plan.

Where the chainage map indicates the potential presence of protected fauna species, additional precautions are required for any open excavation. See *Specific Considerations – Fauna* above for minimum requirements.

Other than crossing other structures and the Birregurra Creek, HDD operations are planned to avoid disturbing areas of native flora with protected status. In no case shall any excavation encroach within the greater of 6m or 2.5x canopy radius from any area or native flora to be protected. Hard barriers are required to ensure no construction vehicles (or other vehicles) can encroach on the protected zone within 50m of either the entry or exit point. Contractor is to have administrative controls in place to ensure construction equipment does not encroach onto the protected zone at any other place on the directional drill alignment.

See *Specific Considerations – Flora* above for further detail.

Pullback pipe installation

As piping being installed is HDPE there is limited reason to install rollers for the pullback installation of the pipe. It is preferred the pipe is installed in the HDD directly from the pipe reel mounted on a suitable vehicle or trailer.

However, should the contractor require to string the pipe out away from the HDD further care must be taken.

- Surface conditions are to be checked prior to the pull to ensure there are no sharp rocks or formations that will damage the pipe during installation.
- The tail of the pipe must at all time be controlled so that it cannot enter either the adjacent road formation or adjacent flora and fauna habitat.

This is separate from the safety management consideration that will be part of the contractors safety management plan.

When the pipe is drawn back far enough to enable welding to the next pipe length, the pipe can be cut checked. Air leakdown test is required at this point to ensure the pipe is sound prior to continuing.

Pressure grouting

Where required to asset owner (e.g. Vicroads / Department Transport Planning), the bore will be honed to allow for casing and / or pressure grouting as per Department Transport Planning standards section 706 and 173.

Pressure grouting may be conducted from either ends of the HDD. Grout specification will be as per engineering design with testing performed as required in DPT standard 173.

At the grout pump location, the area will be prepared to ensure grout is contained. This will include sandbagging and plastic sheeting around pumps and sand bagging or trenching around the bore annulus to capture any overflow or expelled material.

Adequate waste water storage shall be provided on site for any washout of pumps and equipment. Contaminated water is not be deposited on the ground.

Residual mixed grout is to be poured into suitable impermeable bags for disposal once set. Agitator trucks (if used) can be sent to the construction site at 320 Mooleric Road to discharge any remnant and wash water. Such discharge will only be in the site location approved for concrete spill and avoid any discharge into surface or storm water drains.

DEMobilISATION

Contractor shall maintain all protective controls throughout the construction zone in a tidy and effective condition until such time as work is confirmed complete.

Demobilisation of equipment including barriers may be conducted progressively. When contractor has confirmed data records for a section are finalised and all remedial work is completed, the superintendent will vary the construction zone with the contractor. All construction equipment including signs and barricades will then be removed from the excluded zone, and there shall be no further construction access.

Photo records are required at this point to define condition of the site at "handover".

Upon completion of the entire scope, the contractor shall undertake a final inspection with the superintendent. Any punch list items identified are to be remedied promptly (within 3 days). The initial photographic survey report and subsequent "hand over" photo reports will be assessed to ensure there is no residual impact requiring action by the construction team.

A certificate of completion will then be issued and stored with a copy of the relevant construction data and survey reports for future reference.

Appendix 1:

Mooleric Rd. Birregurra, Flora and fauna assessment

Prepared by Biosis 31/7/2023



Pipeline Construction Management Plan

Mooleric Farm Water Supply Line

Appendix 2:

Preliminary design drawing set:
M0075 DR.01 – DR.09



Pipeline Construction Management Plan

Mooleric Farm Water Supply Line

Appendix 3:

Design revision – pump station location and layout.

M0075 WSCE-CS-SK-0001 – amended layout connection to pump station.

M0075 WSCE-HS-DD-0001 – amended pump station layout.



Pipeline Construction Management Plan

Mooleric Farm Water Supply Line

Appendix 4:

Preliminary HDD material SDS

(to be replaced with approved materials when nominated by contractor)



Pipeline Construction Management Plan

Mooleric Farm Water Supply Line

Appendix 5:

ProTen incident report forms.

Available from document hub or superintendent.