Attachment B

Typical RoW Layout

Attachment B: Typical RoW Layout

CONSTRUCTION ACTIVITIES

Source APA Group website: Pipeline construction process | APA Group (APA, 2023).

1. Clear and Grade

Graders, bulldozers and excavators are generally used to clear and prepare the easement ready for construction to commence. Topsoil and vegetation are stockpiled separately to assist in restoration works after the pipeline is completed. Clearing and grading works are shown in Plate 1.



Plate 1: Typical construction RoW clear and grade

2. Stringing

Pipe is transported into the easement and laid end to end next to where the trench will be dug (refer to Plate 2).



Plate 2: Stinging pipes

3. Bending

Where required, specialized machinery is used to bend the pipe to conform with the contours of the land and the pipeline route (refer to Plate 4).



Plate 3: Pipe bending

4. Welding and Non-Destructive Testing

Pipe sections are welded together. All welding is tested to ensure quality.

5. Joint Coating

The areas of weld are cleaned and pipe joints are coated to reduce the possibility of corrosion.

6. Trenching

Specialised trenching machines and excavators are used to dig the trench.

7. Lowering in and Padding

Specialist equipment (side booms) are used to lower the pipe into the trench (refer to Plate 4). The pipe is then covered by fine-grain material (padding) to protect the pipeline coating from stones or other sharp objects (refer to Plate 5).



Plate 4: Lowering pipe



Plate 5: Padding pipe

8. Restoration and Signage

Disturbed areas are reinstated to match existing landforms which include re-contouring and installation of permanent erosion control structures. Topsoil conserved during the construction process is respread over disturbed areas. Rehabilitation is undertaken in accordance with approval requirements and landholder considerations. After construction, disturbed areas will be seeded with groundcovers in line with landholder and environmental requirements. Pipeline signage is placed at line-of-sight intervals.

The RoW is maintained free of trees to ensure compliance with safety protocols. Monitoring of the project continues for the life of the asset to ensure compliance in accordance with EA conditions. As can be seen from these rehabilitation photos (Plates 6 - 8) of a recent Senex pipeline, there are very few barriers to species dispersal. Plate 6 shows native pasture for grazing prior to construction of the pipeline. Plate 7 and 8 show areas recently rehabilitated.



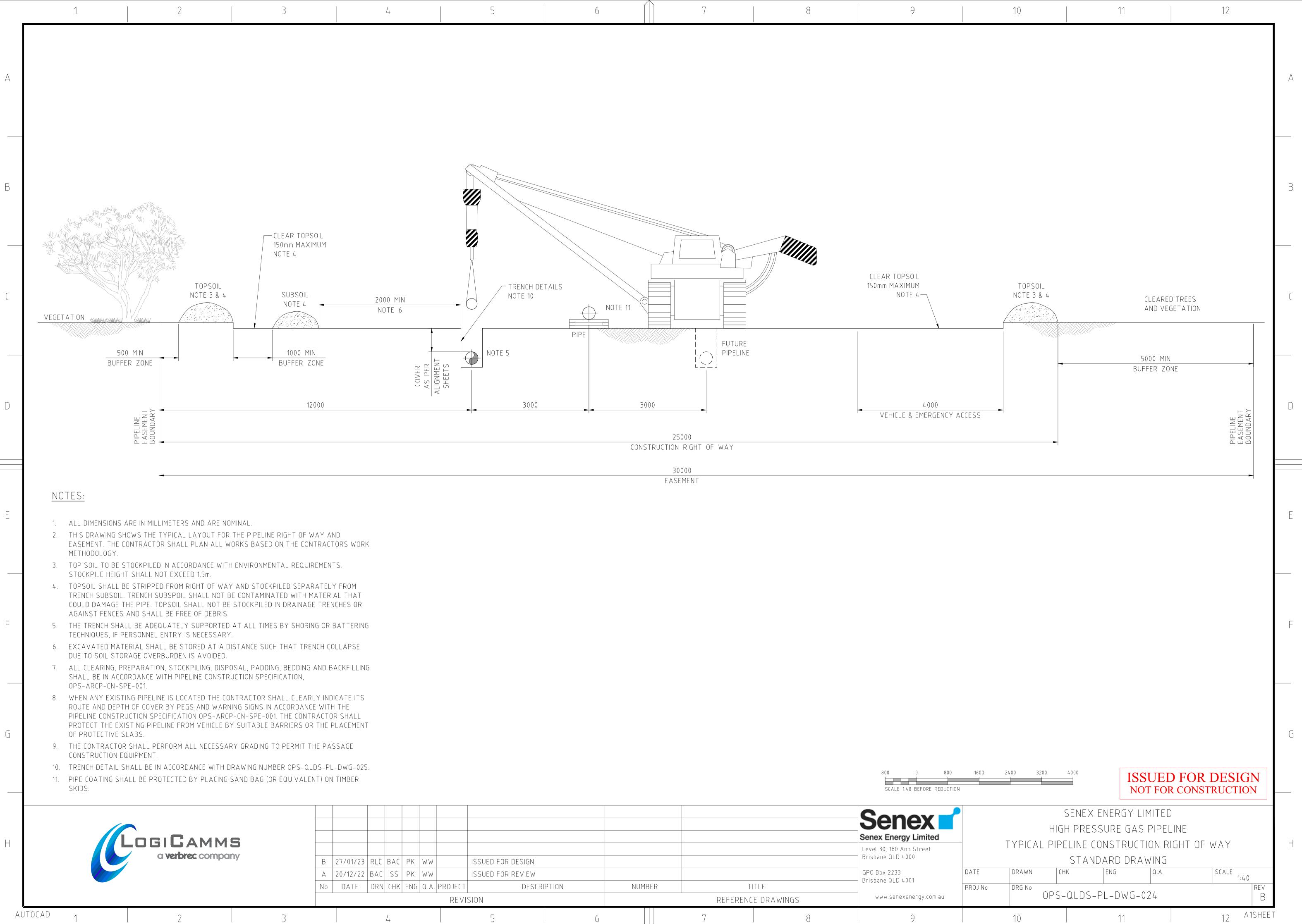
Plate 6: Grazing native pasture



Plate 7: Typical post-rehabilitation cover

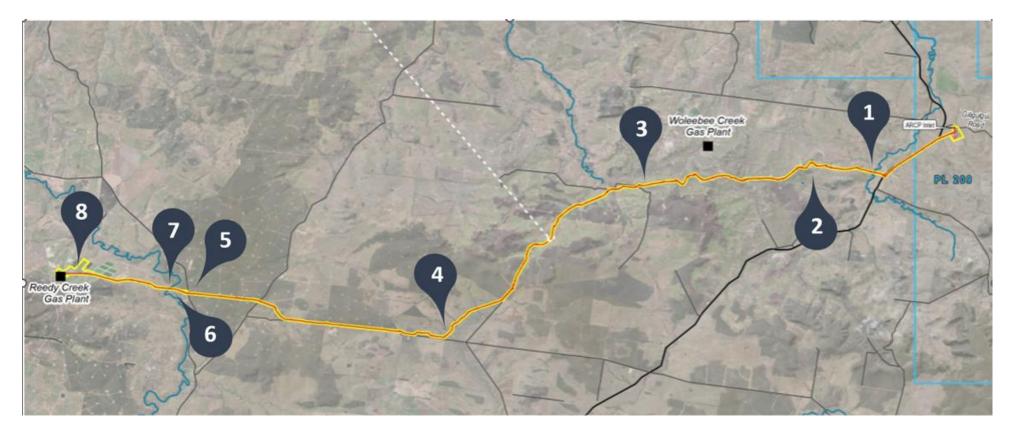


Plate 8: Photos of recent rehabilitation of areas disturbed during pipeline construction



		\wedge				
5	6		7	8	9	

Locational map of following photos

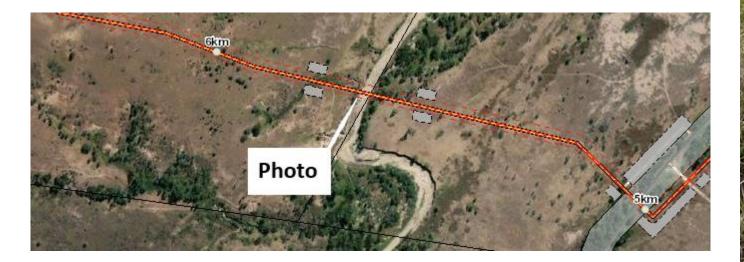


- 1. Woleebee Creek at HDD crossing location
- 2. Looking west across QGC gas field development area
- 3. Crossing local roads and running parallel to PPL2040
- 4. 85% of alignment is in previously cleared area

- 5. Traversing Combabula State Forest
- 6. Traversing Combabula State Forest
- 7. Yuleba Creek at HDD crossing location
- 8. Approaching Reedy Creek facility area

Woleebee Creek at HDD crossing location

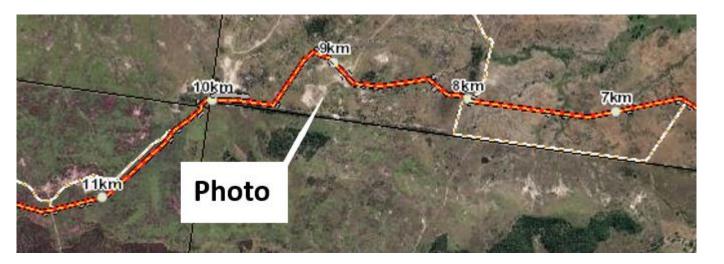
Horizontal Directional Drilling allows avoidance of all riparian vegetation associated with Woleebee Creek. Avoiding potential impacts associated with the Project demonstrating good stewardship. (Looking eastwards)





Looking west across existing QGC gas field development area

Alignment selected across landscapes that include other gas operations. Most areas have been cleared since the 1980's and the impact from ARCP will be immaterial. (Looking westwards)

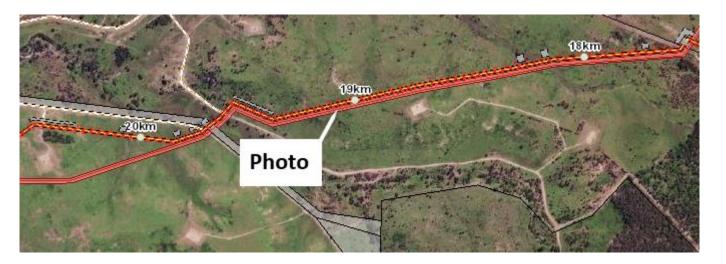




Crossing local roads and running parallel to existing Jemena gas pipeline (PPL2040)

Construction to occur parallel (and as close as safely practicable) to other pipeline easements where possible.

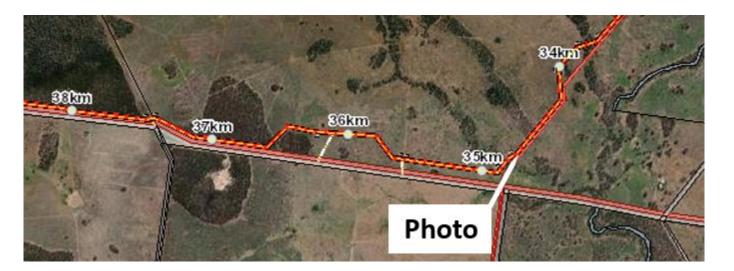
PPL2040 was constructed and rehabilitated approximately 3 years ago. This photo illustrates that once rehabilitated the buried pipeline does not represent a barrier to fauna dispersal and long-term impacts are immaterial. (Looking westwards)





85% alignment is within previously cleared area

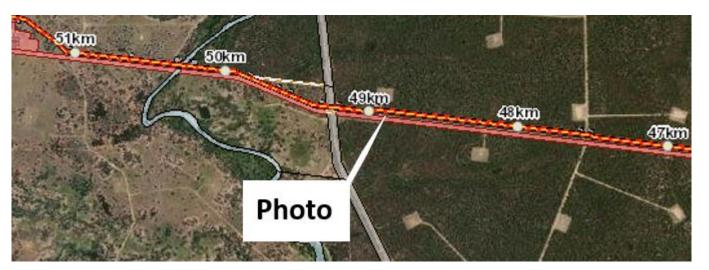
Wherever possible, the pipeline corridor and additional workspaces have been sited in cleared pastureland which has been cleared since the 1980's minimizing potential environmental impacts. (Looking southwards)





Traversing Combabula State Forest

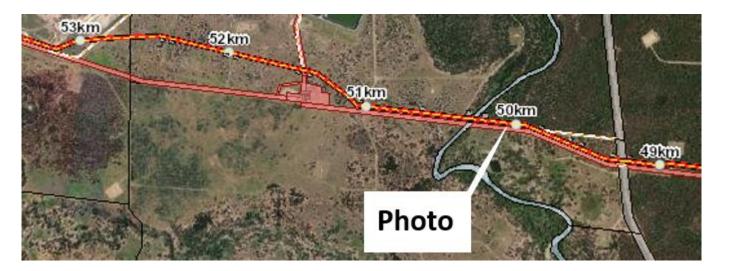
The ARCP alignment parallels existing Australia Pacific LNG gas pipeline (PPL163) through most of the Combalula State Forest (near the western end of the Project Area). This represents good stewardship by restricting impacts to the existing disturbed edge. (Looking eastwards)





Traversing Combabula State Forest

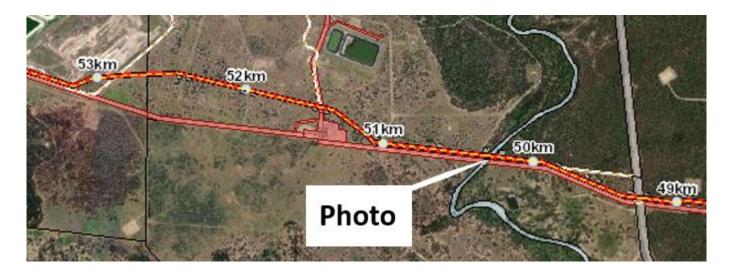
Some areas including mature habitat trees are unavoidable in this State Forest. The ARCP right of way will parallel the existing cleared corridor to restrict impacts to the existing disturbed edge. (Looking westwards)





Yuleba Creek at HDD crossing location

Horizontal Directional Drilling allows avoidance of all riparian vegetation associated with Yuleba Creek. Avoiding potential impacts associated with the Project demonstrating good stewardship. (Looking northwards)





Approaching Reedy Creek facility area

Pipeline approach to avoid existing infrastructure within Reedy Creek facility area. This area is already highly disturbed and ARCP impacts will be immaterial. (Looking eastwards)

