

What the flora and native vegetation impact assessment study found

A total of 1,220 habitat zones, comprising six ecological vegetation classes (EVCs) were recorded, mapped and assessed in the study area. The study found that there will be impacts to native vegetation; listed threatened flora species; protected flora species; and listed threatened ecological communities. The redesign of the mine area and conceptual water pipeline route has resulted in saving the potential loss of 60 hectares of native vegetation and 2,843 large trees.

Potential direct impacts

- Direct impacts to native vegetation (mine site)
 - 14.36 hectares of native vegetation
 - 568 large trees considered lost*
- Direct impacts to native vegetation (water pipeline route)
 - 4.289 hectares
 - 61 trees considered lost*
- Direct impacts to listed threatened flora species
 - Buloke, Umbrella wattle, Yarran
 - Bush Minuria, Dwarf Myall, Frosted Goosefoot (mallee subspecies)
- Direct impacts to threatened ecological communities
 - Buloke Woodlands of the Riverina and Murray-Darling Depression

* Considered lost due to more than 10 percent encroachment to Tree Protection Zone (TPZ).

Mitigation and contingency measures

Avoid, minimise and offset principles towards vegetation protection are to be applied throughout the project:

Prior to works:

- vegetation protection zones will be established around areas of native vegetation to be retained
- appropriate tree protection zones will be established around scattered native trees
- all construction personnel will be appropriately briefed and no machinery/equipment to be placed inside vegetation/tree protection zones

During construction and operation:

- appropriate dust minimisation and fire management measures will be in place
- establish appropriate mitigation measures that restrict any changes to surface water drainage and any saline discharge to areas adjacent to native vegetation
- establish appropriate hygiene controls for personnel and machinery to control spread of weeds

Potential indirect impacts

- Introduction or spread of weeds or pathogens
- Fragmentation
- Edge effects
- Dust deposition
- Erosion
- Contamination by saline water, chemicals or hydrocarbons



Above: Typical roadside showing remnant Mallee vegetation on left and isolated trees on the right. To reduce impacts to vegetation, VHM intends to place the water pipeline within the road surface.

Residual impacts

- Loss of vegetation reduced from more than 70 hectares to less than 20 hectares – this is significant to protect the rarity of habitat in the area
- Retention of vegetation within Area 1 and Area 3
- Pipeline siting to reduce tree loss

Offsets

Under the State and Federal legislation, all applicants for permits for native vegetation removal are required to find suitable offsets prior to the removal of native vegetation. Once offsets are secured, the impacts of the project will be in line with the overarching objective of the Victorian native vegetation retention controls, namely, there will be 'no net loss' of biodiversity as a consequence of native vegetation removal for the project.

Fauna survey results

Six Ecological Vegetation Classes (EVCs) have been mapped within the project footprint. Native vegetation that supports fauna habitat is confined to road reserves and paddock fence lines. A total of 97 species have been recorded during the surveys undertaken. The fauna groups included five native mammals, eight bat species, seven introduced mammal species, 69 native bird species, three introduced bird species and five reptiles.

The Plains-wanderer survey did not record this species – paddocks lacked the native/non-native vegetation habit structure needed to support the Plains-wanderer. Only common birds known to use derived grasslands and cropped areas were observed.

What the fauna ecology impact assessment study found

Potential impacts identified:

- Loss of fauna habitat on road reserves adjacent to transport routes as a result of pruning foliage of canopy trees
- Loss of fauna habitat on road reserves adjacent to the proposed pipeline alignment due to trenching within the tree protection zone of canopy trees
- Fragmentation of vegetation corridors as a result of native vegetation loss
- Indirect impacts such as vehicle collisions, dust, light pollution, fauna in pipeline trench, chemical spills and noise



Above: Superb parrot recorded in the project area

Minimising impacts to fauna and fauna habitat

Planning phase:

- Further refinement of water pipeline alignment
- Qualified arborist to assess tree protection zone for transport routes and water pipeline alignment

Construction phase:

- Turning and passing areas to be clearly identified along transport routes
- Erect a fauna fence along open trenches and engage a fauna spotter for the duration of water pipeline construction

Operational phase:

- Establish speed restrictions to minimise likelihood of vehicle and fauna collisions

Conclusion

- The project area does not provide critical habitat for any listed conservation fauna species
 - it is unlikely that the Plains-wanderer, or suitable habitat for the species, is present within the study area
 - it is unlikely that Corben's Long-eared Bat, or habitat suitable to support the species, is present within the study area
- Conservation significant bird species and reptiles may utilise roadside remnant vegetation
- It is envisaged that there will not be any significant change to the remnant vegetation along road reserves with mitigation measures applied