

## 12. Summary of Triple Bottom Line Assessment for the Effluent Pipeline

A summary of impacts associated with each element of the construction and operation of the effluent pipeline is provided below. Social and Economic affects are considered in Volume 2 of the Draft IIS.

Potential Impact	Potential Impact Rating	Proposed Management	Management Impact	Overall Rating
<b>Land Use and Planning</b>				
Inconsistencies in definitions within the George Town Planning Scheme	Minor negative impact	Planning Scheme amendment	Minor positive impact	Insignificant impact
<b>Infrastructure and Services</b>				
Disruption to major infrastructure and services	Major negative impact	Avoid major infrastructure and services;	Insignificant impact	Insignificant impact
Localised temporary disruption to sewerage, water, optic routes and power supply.	Moderate negative impact	Determine the location of the effluent pipeline during detailed design	Minor positive impact	Minor negative impact
	Moderate negative impact	Determine the temporary disruption to services, potential relocation requirements, the likely timing and duration	Minor positive impact	Minor negative impact
	Moderate negative impact	Prior to implementation of the proposal, negotiate with service providers and owners regarding any relocation of utilities required	Minor positive impact	Minor negative impact
	Moderate negative impact	Consult with potentially affected service providers and users prior to commencement of works	Minor positive impact	Minor negative impact
Relocation of services	Moderate negative impact	Obtain any permits required to relocate services	Minor positive impact	Minor negative impact
Disruption to road and rail services	Moderate negative impact	Develop a Traffic Management Plan prior to the commencement of construction activities	Minor positive impact	Minor negative impact
Protect pipeline from future third party construction works	Moderate negative impact	Register the pipeline with Dial-before-you-dig.	Minor positive impact	Minor negative impact

Potential Impact	Potential Impact Rating	Proposed Management	Management Impact	Overall Rating
<b>Topography, Climate and Meteorology</b>				
Sediment and erosion of pipeline corridor	Minor negative impact	Preparation of a construction phase Environmental Management Plan	Minor positive impact	Insignificant impact
Erosion and dune disturbance at shore crossing	Major negative impact	Preparation of a construction phase Environmental Management Plan	Moderate positive impact	Minor negative impact
Long-term stability of foredunes	Major negative impact	Preparation of a Remediation and Revegetation Plan	Moderate positive impact	Minor negative impact
<b>Air Quality</b>				
Dust generation during earthworks	Minor negative impact	Construction EMP	Minor positive impact	Insignificant impact
Dust generation from access roads	Minor negative impact	Construction EMP	Minor positive impact	Insignificant impact
Vehicle emissions	Minor negative impact	Construction EMP	Minor positive impact	Insignificant impact
<b>Geology and Soils</b>				
Soil erosion	Minor negative impact	Construction Environmental Management Plan	Minor positive impact	Insignificant impact
	Minor negative impact	Minimise area of disturbance	Minor positive impact	Insignificant impact
	Minor negative impact	Use existing roads and tracks	Minor positive impact	Insignificant impact
	Minor negative impact	Erosion control measures to be installed prior to significant disturbance	Minor positive impact	Insignificant impact
Long-term foredune stability	Major negative impact	Preparation of a construction phase Environmental Management Plan	Moderate positive impact	Minor negative impact
<b>Groundwater and Hydrology</b>				
Localised groundwater impacts as a result of construction activities	Moderate negative impact	Construction EMP and sub-plans	Minor positive impact	Minor negative impact

Potential Impact	Potential Impact Rating	Proposed Management	Management Impact	Overall Rating
<b>Estuarine Ecology</b>				
Impacts on benthic and foreshore environment during construction	Moderate negative impact	Construction Management Plan	Minor positive impact	Minor negative impact
<b>Marine Ecology (Construction)</b>				
Impacts to marine environment	Major negative impact	Final route selection to minimise disturbance to reef areas	Moderate positive impact	Minor negative impact
	Major negative impact	Construction EMP	Minor positive impact	Moderate negative impact
<b>Marine Ecology (Operation)</b>				
Impacts to marine environment	Moderate negative impact	Maintaining high effluent quality Monitoring Plan	Minor positive impact	Minor negative impact
<b>Terrestrial Flora</b>				
Native Vegetation Community Loss	Major negative impact	Offsets	Minor positive impact	Major negative impact
	Major negative impact	Construction EMP and Revegetation Plan	Minor positive impact	Major negative impact
Fragmentation of vegetation	Moderate negative impact	Construction EMP	Minor positive impact	Minor negative impact
Impacts on significant species/communities	Major negative impact	Construction EMP and Revegetation Plan	Minor positive impact	Moderate negative impact
Introduced pests	Major negative impact	Construction EMP and Revegetation Plan	Minor positive impact	Moderate negative impact
Introduction of <i>Phytophthora cinnamomi</i>	Major negative impact	Construction EMP and Revegetation Plan	Minor positive impact	Major negative impact
Erosion and Sedimentation	Minor negative impact	Construction EMP and Revegetation Plan	Minor positive impact	Insignificant impact
Dust impacts on vegetation	Minor negative impact	Construction EMP	Minor positive impact	Insignificant impact

<b>Potential Impact</b>	<b>Potential Impact Rating</b>	<b>Proposed Management</b>	<b>Management Impact</b>	<b>Overall Rating</b>
Changes in hydrology	Major negative impact	Construction EMP and Revegetation Plan	Minor positive impact	Major negative impact
<b>Terrestrial Flora</b>				
Habitat Loss	Major negative impact	Offsets	Moderate positive impact	Minor negative impact
	Moderate negative impact	Construction Environmental Management Plan	Minor positive impact	Minor negative impact
Fragmentation of habitat	Moderate negative impact	Construction Environmental Management Plan	Minor positive impact	Minor negative impact
Impacts on significant species/communities	Major negative impact	Construction Environmental Management Plan	Minor positive impact	Moderate negative impact
Erosion and Sedimentation	Minor negative impact	Construction Environmental Management Plan	Minor positive impact	Insignificant impact
Changes in air quality	Minor negative impact	Construction Environmental Management Plan	Minor positive impact	Insignificant impact
Changes In noise	Minor negative impact	Construction Environmental Management Plan	Minor positive impact	Insignificant impact
Changes in hydrology	Moderate negative impact	Construction Environmental Management Plan	Minor positive impact	Minor negative impact
<b>Reserves and Protected Areas</b>				
Impacts on reserve values	Minor negative Impact	Construction EMP	Minor positive impact	Insignificant impact
<b>Health</b>				
Human health effects	Minor negative impact	ECF Bleaching and BAT effluent treatment as specified in Volume 1 Section 6 of the Draft IIS	Minor positive impact	Insignificant impact
<b>Transport Infrastructure, Traffic and Access</b>				
Additional construction traffic and traffic management	Minor negative impact	Construction Traffic Management Plan	Minor positive impact	Insignificant impact

<b>Potential Impact</b>	<b>Potential Impact Rating</b>	<b>Proposed Management</b>	<b>Management Impact</b>	<b>Overall Rating</b>
Restricted property access during construction	Minor negative impact	Construction Traffic Management Plan	Minor positive impact	Insignificant impact
Maintenance phase pipeline access	Minor negative impact	Access agreement with landowners	Minor positive impact	Insignificant impact
<b>Visual Amenity</b>				
Visible impact of cleared easement	Moderate negative impact	Minimise clearing and maintain screening	Minor positive impact	Minor negative impact
	Minor negative impact	Construction EMP	Minor positive impact	Insignificant impact
Visible impact of structures	Minor negative impact	Maintain screening, painting and landscaping	Minor positive impact	Insignificant impact
<b>Aboriginal and Historic Heritage</b>				
Potential impacts on Aboriginal heritage sites	Minor negative impact	Cultural Heritage Management Plan	Minor positive impact	Insignificant impact
Potential impacts on historic heritage sites	Minor negative impact	Cultural Heritage Management Plan	Minor positive impact	Insignificant impact
	Minor negative impact	Assess risk to sites after detailed design	Minor positive impact	Insignificant impact

# Workers Accommodation Facility