

**Port of Gladstone  
Gatcombe and Golding Cutting  
Channel Duplication Project**

Environmental Impact Statement



Gladstone Ports Corporation  
*Growth, Prosperity, Community.*

**aurecon**

**Appendix L  
Pavement Impact  
Assessment**

# Appendix L

## Pavement Impact Assessment

The pavement impact assessment was completed using the spreadsheet published by the Department of Transport and Main Roads (DTMR). Version 28 of the spreadsheet was used being the version available as of March 2018.

The purpose of the pavement impact assessment is to determine the effect that the traffic associated with Project activities has on the road network. The two roads most affected by the Project are Guerassimoff Road (0.5km) and Landing Road (3km). There is short section of private road connecting Landing Road to the site, however this road is unsealed and was therefore excluded from the investigation.

Firstly, the current condition of the road was assessed using various parameters such as the current traffic, predicted growth rates, roughness, etc. Next, the loading due to the Project traffic was calculated by determining the number of truck movements in each direction that are predicted as a result of Project activities. The reduction in pavement life and the maintenance costs as a result of the additional traffic were then calculated.

Below is a list of parameters used in the calculations and how they were calculated/sourced.

Parameter	Value	Source
Start of Development Traffic	2020	Stated in report
ESA increase trigger	5%	Assumed – standard value
Treasury discount rate	6%	Default value as specified by TMR
Inflation	7%	Default value as specified by TMR
Development duration	3 years	As per the report (18 months southern section, 18 months northern section)
Roughness Increase	3 counts/year	Assumed typical value
AADT 2018 and % Heavy Vehicles		Obtained by summing weekday 14 hour counts and averaging, applying a factor of 1.1 to obtain 24 hour counts and assumed this was representative (conservative) as an AADT
Growth adopt	3%	Assumed
ESA/HV	3.2	The Average ESA value for the Heavy Vehicles (HV), if no value is available a value of 3.2 is used (as recommended by DTMR)
Existing roughness		Landing Road – Received counts from Gladstone Regional Council and took the 90th Percentile of the values of the affected section Guerasimoff Road - Assumed 80
Terminal roughness	120	Assumed typical value
Seal width	10m	As stated in the report

The results of the assessment are summarised below.

Road name	Dev. Contribution (@ the PV Base year)						
	Reduced Pvt Life		Rehabilitation (\$)		Maintenance (\$)		Total
	To	From	To	From	To	From	(\$)
Guerassimoff Road	7.8%	0.6%	\$9,685		\$14,979	\$904	\$25,568
Landing Road	3.3%	0.3%			\$41,677	\$0	\$41,677
<b>Total</b>			<b>\$9,685</b>	<b>\$0</b>	<b>\$56,656</b>	<b>\$904</b>	<b>\$67,245</b>