

An aerial photograph of a rural landscape. The foreground shows a winding road through golden-brown fields. In the middle ground, there are rolling hills with scattered trees and a small body of water. The background features more hills under a bright blue sky with fluffy white clouds. The word "Appendix" is written in large white letters across the middle, and a large white letter "G" is on the right side.

Appendix G

Appendix G Ecological Assessment

Ecological Assessment Explanatory Note – Appendix G

An Ecological Assessment was prepared by AECOM Australia Pty Ltd (AECOM 2009) for the Gloucester Gas Project (the Project). This Ecological Assessment assessed the ecological values and potential impacts of the pipeline alignment known as Revision C, and shown in the Figures provided in AECOM (2009) in this Appendix.

Several project components have been altered since the original Ecological Assessment was prepared and as such, an Ecological Addendum has been prepared by Alison Hunt & Associates Pty Ltd (AHA 2009) to assess potential ecological impacts associated with the components of the Project which have been altered.

As such Appendix G contains two reports:

- **AECOM 2009.** Gloucester Gas Project Ecological Assessment. Gloucester to Hexham. Report prepared for AGL Gloucester LE Pty Ltd.
- **AHA 2009.** Gloucester Gas Project Gloucester to Hexham Amended Section. Addendum Ecological Report. Prepared for AGL Gloucester LE Pty Ltd.

These two reports should be read in conjunction with each other and Chapter 10 of the Environmental Assessment (Volume 1 of this EA).

The amended components of the project are listed below. Kilometre Point (KP) references were based on a previous pipeline alignment (known as Revision C) (refer to figures in AECOM (2009)).

- Expansion of the Stage 1 GFDA to encompass a total of 110 well site locations;
- Amended pipeline alignment totalling approximately 26 km between the following Kilometre Points (KPs) (refer to the Ecological Assessment prepared by AECOM (2009)):
 - KP 17 – 25: the pipeline route was realigned between these KPs to avoid a number of crossings of the Karuah River and associated riparian communities which are representative of Endangered Ecological Communities (EEC) *Lowland Rainforest on Floodplain of the NSW North and Sydney Bio-Regions*. Three crossings of the Karuah River and approximately 240 m of these EECs have been avoided by this re-alignment;
 - KP 27.5: Ramstation Creek crossing;
 - KP 71 – 82.8;
 - KP 89.5 – 95; and

Changes to the pipeline alignment are shown on **Figure 1** of the Ecological Addendum (AHA 2009). KP references in the Ecological Addendum (AHA 2009) are based on the updated pipeline alignment (Revision E), which is the revised version of the alignment proposed as part of the Project.

A KP conversion table is provided in **Table 1** which includes reference points for items discussed in the original Ecological Assessment against the revised pipeline route as discussed in the Ecological Addendum.

Figures 10.1 to 10.20 in Volume 4 of the EA reflect the revised pipeline alignment.

Table 1: Conversion Table for Kilometre Points (KPs) along Pipeline

Relevant Assessment Report	Original Route (Revision C)	Revised Route (Revision E)
AECOM 2009	0	-
AECOM 2009	0.2	0
AECOM 2009	1	0.9
AECOM 2009	16.2	16
AECOM 2009	17	16.7
AHA 2009	18	-
AHA 2009	19	-
AHA 2009	20	-
AHA 2009	21	-
AHA 2009	22	-
AHA 2009	23	-
AECOM 2009	24	24.8
AECOM 2009	26.2	27
AECOM 2009	27	27.9
AECOM 2009	28	-
AECOM 2009	28.2	29
AECOM 2009	29	29.9
AECOM 2009	30	30.9
AECOM 2009	61.2	62
AECOM 2009	63	64.1
AECOM 2009	64.1	65
AECOM 2009	65	65.9
AECOM 2009	70.1	71
AHA 2009	71	-
AHA 2009	72	-
AHA 2009	73	-
AHA 2009	74	-
AHA 2009	75	-
AHA 2009	76	-
AHA 2009	77	-
AHA 2009	78	-
AHA 2009	79	-

Relevant Assessment Report	Original Route (Revision C)	Revised Route (Revision E)
AECOM 2009	80	82.9
AECOM 2009	83	85.9
AECOM 2009	80	82.9
AECOM 2009	83	85.9
AECOM 2009	83.1	86
AHA 2009	84	-
AHA 2009	85	-
AECOM 2009	86	88.9
AECOM 2009	86.1	89
AHA 2009	87	-
AHA 2009	88	-
AHA 2009	89	-
AHA 2009	90	-
AHA 2009	91	-
AHA 2009	92	-
AHA 2009	-	95
AHA 2009		

Table 2 details the vegetation to be removed along the revised pipeline route and incorporates findings and recommendations from both AECOM (2009) and AHA (2009) reports, utilising the KPs for the proposed pipeline route as detailed in the Environmental Assessment.

Table 2: Lengths of Remnant Vegetation Transected and Potential Areas to be Cleared along Proposed Pipeline

KP start	KP end	Length (km)	Area to be Cleared (ha)			Location Notes	Vegetation	Landform
			30m ROW	20 m ROW	15m ROW			
3.8	3.86	0.06			0.06		Dry foothills Spotted Gum	Plain
8.16	8.19	0.03		0.06		Bull Creek	Riparian	Stream
14.4	15.05	0.65	0.795				South Coast Shrubby Grey Gum	Hillslope / Plain
18.55	18.7	0.15	0.3				Spotted Gum / Ironbark Forest	Hillslope / Plain
19.3	19.4	0.1	0.15				Spotted Gum / Ironbark Forest	Hillslope
19.64	20	0.36	0.38				Spotted Gum / Ironbark Forest	Hillslope
23	23.15	0.15			0.225		Spotted Gum / Ironbark Forest	Hillslope
24.2	24.35	0.15	0.45				Spotted Gum / Ironbark Forest	Hillslope
27.49	27.57	0.08		0.08			Riparian	Stream
28.54	28.54 2	0.02		0.04			Riparian	Stream
28.84	28.86	0.02		0.04			Riparian	Stream
29.47	29.65	0.18		0.36			Ironbark	Plain
30.5	30.9	0.4		0.08			Ironbark	Plain
31.88	31.92	0.04		0.4			Ironbark	Stream
32.24	37.27	5.03		7.545			Dry foothills Spotted Gum	Hillslope
37.27	37.68	0.41		0.615			South Coast Shrubby Grey Gum	Hillslope

37.68	37.75	0.07		0.105		Black Camp Creek	Rainforest	Hillslope / Stream
37.75	38.81	1.06		1.59			Dry foothills Spotted Gum	Hillslope
39.04	39.07	0.03		0.06			Rainforest	Stream
41.01	41.08	0.07		0.07		Cedar Tree Creek	Rainforest	Stream
46.6	46.7	0.1		0.1		Little Black Camp Creek	Redgum / apple	Stream
46.8	47	0.2	0.2				Ironbark	Plain
50.45	50.85	0.04		0.04			Rainforest	Stream
59	60.37	1.37	1.37				Ironbark	Hillslope / Plain
65.25	65.34	0.09	0.18			Roadside Environment Area	Ironbark	Plain
71.5	71.7	0.2		0.4			Grey Gum / Stringybark / Bloodwood Forest	Hillslope
71.8	72.5	0.7	1.4				Grey Gum / Stringybark / Bloodwood Forest	Hillslope
72.6	73.44	0.84	0.84				Grey Gum / Stringybark / Bloodwood Forest	Hillslope
75.74	76.18	0.46		0.23			Forest Red Gum / Spotted Gum Woodland	Plain
Total		13.17	6.065	11.815	0.285		Total to be Cleared	18.17

