

The logo consists of a large tan square at the top containing the text "Energy in action.™" in blue. Below this are three smaller tan squares of varying sizes, and at the bottom right is the AGL logo, which is a blue square with a white sun icon and the letters "AGL" in white.

Energy in  
action.™

AGL

AGL UPSTREAM INVESTMENTS PTY LTD

GLOUCESTER GAS PROJECT

**October 2015 Monitoring Report:  
Tiedman Irrigation Program  
EPL 20358**

Reporting Period: August 2015

AGL Upstream Investments Pty Ltd

ABN 58 115 063 744

Locked Bag 1837, St Leonards NSW 2065

Level 22, 101 Miller Street, North Sydney NSW 2060

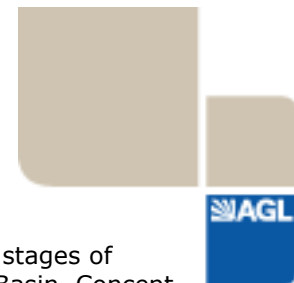
Telephone: 02 9921 2999 Facsimile: 02 9921 2474

Complaints Line (24 hours): 1300 799 716



## Foreword

<b>PREMISES</b>	Gloucester Coal Seam Gas Project Bucketts Way Gloucester NSW 2422
<b>LICENCE DETAILS</b>	<a href="#"><u>Environment Protection Licence 20358</u></a>
<b>LICENCEE</b>	AGL Upstream Investments Pty Limited (AGL)
<b>LICENCEE'S ADDRESS</b>	Locked Bag 1837, North Sydney, NSW 2060
<b>MONITORING DATE</b>	25 and 26 August 2015
<b>MONITORING BY</b>	Parsons Brinckerhoff, on behalf of AGL
<b>ANALYSIS BY</b>	ALS Laboratory, Smithfield (Work orders: ES1529279, ES1529386)
<b>DATE AGL OBTAINED DATA</b>	9 and 16 October 2015
<b>REPORT DATE</b>	26 October 2015
<b>REPORT PREPARED BY</b>	Nicola Fry, Hydrogeologist



## Introduction

AGL is proposing to build the Gloucester Gas Project (GGP) which comprises several stages of development facilitating the extraction of coal seam gas (CSG) from the Gloucester Basin. Concept plan and project approval (Part 3A Approval) for the Stage 1 Gas Field Development Area (GFDA) was granted on 22 February 2011 under Part 3A of the Environmental Planning and Assessment Act (1979) (EP&A Act). In addition the project received approval under the Environment Protection and Biodiversity Conservation Act (1999) (EPBC Act) (EPBC Approval) on 11 February 2013.

The GGP will involve depressurising of deep groundwater and the extraction of gas from multiple coal seams within the Gloucester coal measures. Target coal seam depths will vary from site to site but are expected to range between 200 and 1,000 m below ground level (mbgl). The current GGP includes the construction, operation, and decommissioning of not more than 110 coal seam gas wells and associated infrastructure, including gas and water gathering lines within the Stage 1 GFDA. A comprehensive groundwater investigation (Phase 2 Groundwater Investigations) was completed in early 2012 to confirm the hydrogeological conceptual model across the Stage 1 GFDA (PB, 2012). Surface water and groundwater investigations are ongoing.

This Monitoring Report relates to the water monitoring activities specified in Part 5, Monitoring and Recording Conditions, of the Environment Protection Licence 20358. This report relates specifically to the monitoring surrounding the Tiedman Irrigation Program, and details:

1. Monitoring results from the quarterly water sampling event at the Tiedman Irrigation Program (25 and 26 August 2015).

As per the Licence, the monitoring encompasses the monitoring points at the locations as shown in Table 1 and Figure 1. The specific analytes and frequency tested are shown in Table 2. The monitoring results for this reporting period are shown in Table 3, Table 4, Table 5, and Table 6.

The monitoring points that are the subject of this report are part of the GGP groundwater monitoring network, as described in AGL's Water Management Plan for the Tiedman Irrigation Program (AGL, 2012a) and Soil Quality Monitoring and Management Program (AGL, 2012b)). Water monitoring results for the irrigation program are presented in a baseline water monitoring report (PB, 2013a) and six-monthly compliance reports (PB, 2013a, 2013b, 2014a, 2014b, 2015a, and 2015b).

The following sampling methods were used to obtain surface water and groundwater samples:

- Submersible 12V pump at the groundwater monitoring bores screened within relatively permeable geological materials: TMB01, TMB02 and TMB03. A minimum of three well volumes was purged prior to sampling.
- Submersible 12V pump at the seepage monitoring bores TMB04 and TMB05 which are screened within material of very low permeability. The physical parameters of the purged groundwater were initially tested, then the bores were purged dry and if any inflow was observed within 12 hours then physical parameters were tested again and a sample taken for analysis.
- Disposable bailer at the shallow perched soil water piezometers (with piezometers purged dry and if any inflow was observed within 12 hours then physical parameters were tested again and a sample taken for analysis).
- In-situ snap sampler for groundwater monitoring bore S4MB01, screened within material of relatively low permeability.
- Grab sample using a telescopic sampler for surface water and dam water samples.

EC and pH were monitored during purging to ensure that they had stabilised prior to sample collection. The water quality samples are analysed by an external NATA certified laboratory (ALS Environmental, Smithfield), in accordance with the EPA Approved Methods Publication "*Approved Methods for the Sampling and Analysis of Water Pollutants in New South Wales*" (EPA, 2004), with the exception of calcium, which underwent filtration rather than acid extraction as a preliminary treatment prior to analysis.

This report is prepared in accordance with the *Requirements for Publishing Pollution Monitoring Data* (EPA, 2012) (Publication Requirements).

The remaining water and land monitoring points in EPL 20358 will be reported in subsequent reports when the requirement for monitoring is triggered.

More information on the groundwater monitoring of the GGP is available on the project website: [agl.com.au/Gloucester](http://agl.com.au/Gloucester)

Table 1: Water quality monitoring points: Irrigation Program (as per EPL 20358)

EPA ID no.	Monitoring Point	Type of monitoring point	Easting (m)	Northing (m)
27	TND	Produced water storage dam	Tiedman property	
28	TSD	Produced water storage dam	Tiedman property	
29	TED	Produced water storage dam	Tiedman property	
30	TMB04	Groundwater quality monitoring	402558.1	6448921.7
31	TMB05	Groundwater quality monitoring	402650.1	6448725.3
33	CDE	Surface water quality monitoring – catch dam east	Tiedman property	
34	CDW	Surface water quality monitoring – catch dam west	Tiedman property	
35	FSW01	Surface water quality monitoring	402001	6449646
36	ASW01	Surface water quality monitoring	401711.09	6449092.2
37	TSW01	Surface water quality monitoring	401993.98	6449416.7
38	TSW02	Surface water quality monitoring	401922.1	6448740.9
39	TMB01	Groundwater quality monitoring	401996.98	6449419.7
40	TMB02	Groundwater quality monitoring	401905.11	6449100.6
41	TMB03	Groundwater quality monitoring	401969.53	6448755
42	S4MB01	Groundwater quality monitoring	402581.88	6449409.7
43	TCMB01	Groundwater quality monitoring	402501.7	6448899
44	TTMB02	Groundwater quality monitoring	402699	6449358
45	SP1B	Soil water quality monitoring	402570.3	6449381.3
46	SP2B	Soil water quality monitoring	402444.2	6449100.1
47	SP4B	Soil water quality monitoring	402252	6449131.3
48	SP6B	Soil water quality monitoring	402103.5	6449178.6
49	SP7B	Soil water quality monitoring	402144.8	6449292.1
50	SP8B	Soil water quality monitoring	402159.1	6449454.8
51	SP9B	Soil water quality monitoring	402387.5	6449016.9
52	SP10B	Soil water quality monitoring	402344.2	6448840.6

Coordinate reference system: Map Grid of Australia 1994

Figure 1: Location of groundwater and surface water quality monitoring points: Irrigation Program (as per EPL 20358)

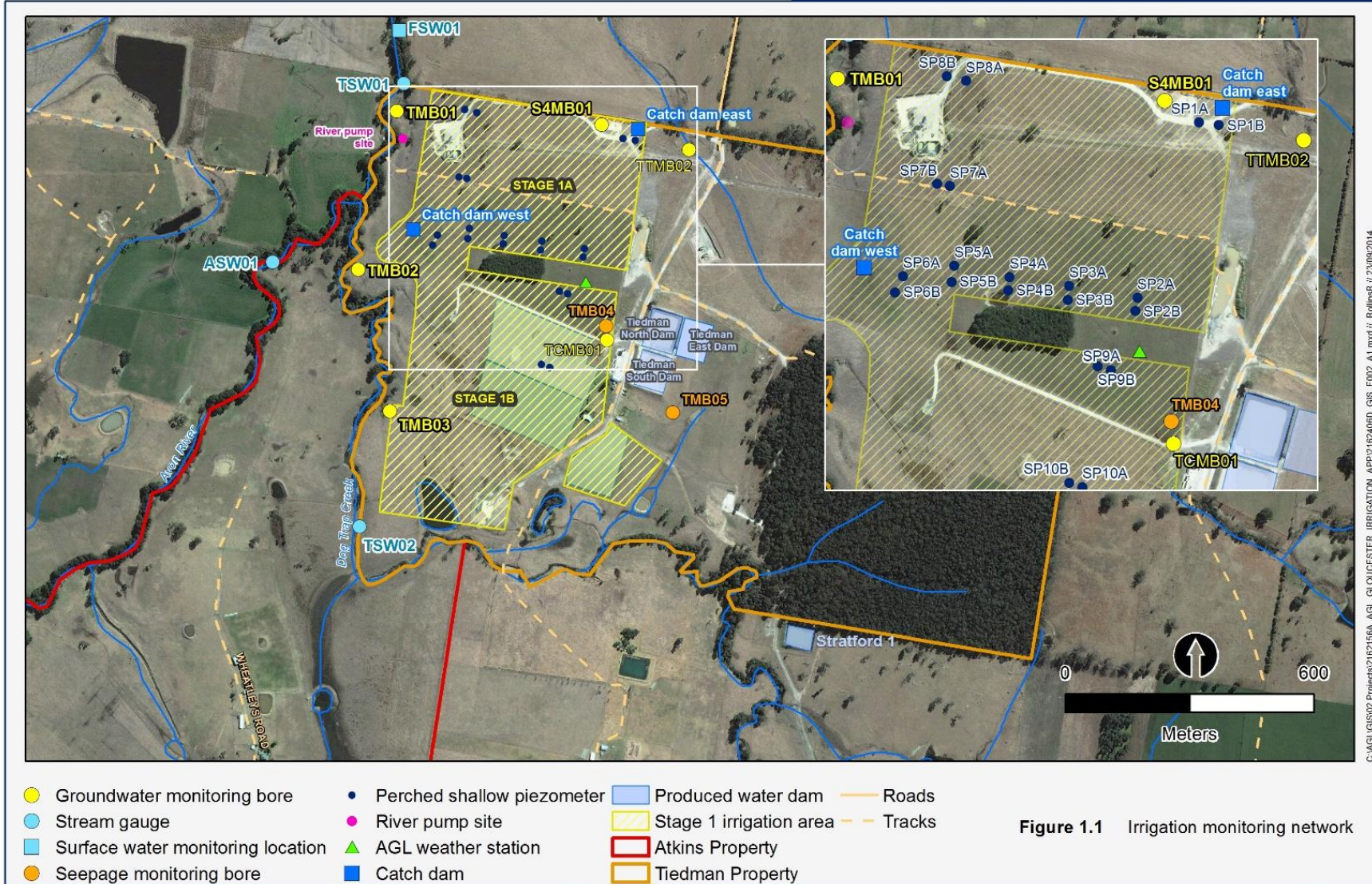


Figure 1.1 Irrigation monitoring network

C:\AGL\GIS02\Projects\2162156A\_AGL\_GLOUCESTER\_IRRIGATION\_APP\2162409D\_GIS\_F002\_A1.mxd // RollinR // 23/09/2014



## Groundwater and surface water monitoring results

Table 3: August 2015 water monitoring results for monitoring points 27 – 39

		Monitoring points											
		27	28	29	30	31	35	36	37	38	39		
		Location	TND	TSD	TED	TMB04	TMB05	FSW01	ASW01	TSW01	TSW02	TMB01	
		Sampled date	25/08/2015	25/08/2015	25/08/2015	25/08/2015	25/08/2015	25/08/2015	26/08/2015	25/08/2015	25/08/2015	25/08/2015	
		Date AGL obtained data	9/10/2015	9/10/2015	9/10/2015	9/10/2015	9/10/2015	9/10/2015	9/10/2015	9/10/2015	9/10/2015	9/10/2015	
Analyte	Units of measure	Limit of reporting											
Aluminium	mg/L	0.01	0.01	<0.01	0.01	0.01	0.08	<0.01	<0.01	<0.01	<0.01	<0.01	
Ammonia	mg/L	0.01	0.01	<0.01	0.82	0.1	0.26	0.01	0.03	<0.01	0.02	0.12	
Arsenic	mg/L	0.001	0.003	0.002	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Barium	mg/L	0.001	0.15	0.146	0.111	0.074	0.1	0.056	0.049	0.064	0.117	0.2	
Benzene	ug/L	1			<1	<1	<1	<1	<1	<1	<1	<1	
Beryllium	mg/L	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Bicarbonate	mg/L	1	108	130	61	190	90						
Boron	mg/L	0.05	0.08	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Cadmium	mg/L	0.0001	<0.0001	<0.0001	<0.0001	0.0002	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
Calcium	mg/L	1	50	13	18	112	62	17	15	19	26	215	
Chloride	mg/L	0.1	84	146	7.35	2050	2380						
Chromium	mg/L	0.001						<0.001	<0.001	<0.001	<0.001	<0.001	
Cobalt	mg/L	0.001	<0.001	<0.001	<0.001	0.038	0.1	<0.001	<0.001	<0.001	0.002	<0.001	
Copper	mg/L	0.001	0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Dissolved oxygen <sup>a</sup>	mg/L	0.01	7.32	7.58	6.48	2.09	6.34	9.48	10.9	6.59	7.13	3.31	
Electrical conductivity	µS/cm	1	920	973	180	7650	7890	462	381	497	1100	8000	
Ethyl benzene	ug/L	2			<2	<2	<2	<2	<2	<2	<2	<2	
Iron	mg/L	0.05	<0.05	<0.05	<0.05	15.4	43	0.07	0.24	0.18	0.05	2.25	
Lead	mg/L	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Magnesium	mg/L	1	12	4	3	217	244	11	9	12	29	200	
Manganese	mg/L	0.001	0.002	0.003	0.005	10.6	22.4	0.088	0.04	0.273	0.345	0.887	
Mercury	mg/L	0.0001						<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	
Molybdenum	mg/L	0.001	0.004	0.005	0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Nickel	mg/L	0.001	0.001	<0.001	0.001	0.019	0.041	<0.001	<0.001	<0.001	<0.001	<0.001	
Nitrate	mg/L	0.01	0.04	0.04	0.09	0.1	0.07	0.06	0.06	0.06	0.13	0.1	
Nitrite	mg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
pH <sup>a</sup>	pH	0.01	8.89	9.43	7.95	6.15	5.80	7.37	7.34	7.14	6.85	6.50	
Phosphorus (total)	mg/L	0.01	0.66	0.62	0.34	0.11	1.49	0.03	0.05	0.05	0.06	0.04	
Potassium	mg/L	1	32	41	3	17	15	3	4	4	6	2	
Reactive Phosphorus	mg/L	0.01	0.42	<0.01	<0.01	<0.05	<0.05						
Redox potential <sup>a</sup>	mV	0.1	-122.6	-154.1	-68.6	35	55.7	76.2	-115.4	-21.3	76.6	-28.4	
Selenium	mg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Silica	mg/L	0.05						8.67	12.3	12.9	7.36	36.9	
Sodium	mg/L	1	104	163	9	1100	1020	53	41	54	128	1090	
Sodium Adsorption Ratio	ratio	0.01		10.1									
Standing water level	m AHD	-				Refer to Table 6	Refer to Table 6					Refer to Table 6	
Strontium (dissolved)	mg/L	0.001	0.375	0.189	0.179	1.22	0.816	0.23	0.192	0.244	0.452	4.97	
Sulfate	mg/L	1	196	12	16	632	187	19	11	17	104	77	
Toluene	ug/L	2			<2	<2	9	<2	<2	<2	<2	<2	
Total alkalinity	mg/L	1										534	
Total dissolved solids	mg/L	10	552	539	101	4510	4670	237	235	268	615	4590	
Total organic carbon	mg/L	1	19	22	15	5	27						
Total suspended solids	mg/L	5						<5	<5	<5	12		
Uranium	mg/L	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	
Vanadium	mg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Xylene	ug/L	2			<2	<2	<2	<2	<2	<2	<2	<2	
Zinc	mg/L	0.005				0.117	0.16	<0.005	<0.005	<0.005	<0.005	0.023	

Shaded grey = not required to be analysed

<sup>a</sup> measured with calibrated field meter

na - not analysed as no sample collected



Groundwater and surface water monitoring results

Table 4: August 2015 water monitoring results for monitoring points 40 – 52

Monitoring points		40	41	42	43	44	45	46	47	48	49	50	51	52
Location		TMB02	TMB03	S4MB01	TCMB01	TTMB02	SP1B <sup>b</sup>	SP2B <sup>b</sup>	SP4B <sup>b</sup>	SP6B <sup>b</sup>	SP7B <sup>b</sup>	SP8B <sup>b</sup>	SP9B <sup>b</sup>	SP10B <sup>b</sup>
Sampled date		25/08/2015	25/08/2015	25/08/2015	25/08/2015	25/08/2015	25/08/2015	25/08/2015	25/08/2015	25/08/2015	25/08/2015	25/08/2015	25/08/2015	25/08/2015
Date AGL obtained data		9/10/2015	9/10/2015	9/10/2015	9/10/2015	9/10/2015	9/10/2015	9/10/2015	9/10/2015	9/10/2015	9/10/2015	9/10/2015	9/10/2015	9/10/2015
Analyte	Units of measure	Limit of reporting												
Aluminium	mg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	na	na	na	na	na	na	na
Ammonia	mg/L	0.01	0.32	0.11	1.65	1.22	0.52	na	na	na	na	na	na	na
Arsenic	mg/L	0.001	0.003	0.002	<0.001	<0.001	<0.001	na	na	na	na	na	na	na
Barium	mg/L	0.001	0.891	0.183	9.52	8.24	0.767	na	na	na	na	na	na	na
Benzene	µg/L	1	<1	<1	<1	<1	<1	na	na	na	na	na	na	na
Beryllium	mg/L	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	na	na	na	na	na	na	na
Bicarbonate	mg/L	1												
Boron	mg/L	0.05	<0.05	<0.05	0.18	<0.05	<0.05	na	na	na	na	na	na	na
Cadmium	mg/L	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	na	na	na	na	na	na	na
Calcium	mg/L	1	159	195	349	250	176	na	na	na	na	na	na	na
Chloride	mg/L	0.1												
Chromium	mg/L	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	na	na	na	na	na	na	na
Cobalt	mg/L	0.001	0.001	0.004	<0.001	<0.001	<0.001	na	na	na	na	na	na	na
Copper	mg/L	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	na	na	na	na	na	na	na
Dissolved oxygen <sup>a</sup>	mg/L	0.01	1.25	6.05	0.44	0.66	0.69	na	na	na	na	na	na	na
Electrical conductivity	µS/cm	1	4010	6010	5070	3160	2390	na	na	na	na	na	na	na
Ethyl benzene	µg/L	2	<2	<2	<2	<2	<2	na	na	na	na	na	na	na
Iron	mg/L	0.05	7.64	1.28	1.76	1.71	1.96	na	na	na	na	na	na	na
Lead	mg/L	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	na	na	na	na	na	na	na
Magnesium	mg/L	1	93	131	60	72	50	na	na	na	na	na	na	na
Manganese	mg/L	0.001	1.03	1.41	0.16	0.034	0.104	na	na	na	na	na	na	na
Mercury	mg/L	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	na	na	na	na	na	na	na
Molybdenum	mg/L	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	na	na	na	na	na	na	na
Nickel	mg/L	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	na	na	na	na	na	na	na
Nitrate	mg/L	0.01	0.05	0.06	0.05	0.06	0.06	na	na	na	na	na	na	na
Nitrite	mg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	na	na	na	na	na	na	na
pH <sup>b</sup>	pH	0.01	6.26	6.64	7.66	7.01	6.56	na	na	na	na	na	na	na
Phosphorus (total)	mg/L	0.01	0.07	0.02	0.07	<0.01	0.3	na	na	na	na	na	na	na
Potassium	mg/L	1	3	2	5	4	3	na	na	na	na	na	na	na
Reactive Phosphorus	mg/L	0.01												
Redox potential <sup>a</sup>	mV	0.1	-21.6	7.7	-137.1	-114.0	-89.1	na	na	na	na	na	na	na
Selenium	mg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	na	na	na	na	na	na	na
Silica	mg/L	0.05	35.9	32	28.7	21.8	34.3	na	na	na	na	na	na	na
Sodium	mg/L	1	439	831	630	284	228	na	na	na	na	na	na	na
Sodium Adsorption Ratio	ratio	0.01												
Standing water level	m AHD	-	Refer to Table 6	Refer to Table 6	Refer to Table 6	Refer to Table 6	Refer to Table 6	na	na	na	na	na	na	na
Strontium (dissolved)	mg/L	0.001	3.38	4.28	22.9	15	2.81	na	na	na	na	na	na	na
Sulfate	mg/L	1	22	220	21	<1	46	na	na	na	na	na	na	na
Toluene	µg/L	2	<2	<2	4	<2	<2	na	na	na	na	na	na	na
Total alkalinity	mg/L	1	180	553	526	306	378	na	na	na	na	na	na	na
Total dissolved solids	mg/L	10	2440	3240	3210	2160	1480	na	na	na	na	na	na	na
Total organic carbon	mg/L	1												
Total suspended solids	mg/L	5												
Uranium	mg/L	0.001	<0.001	0.008	<0.001	<0.001	<0.001	na	na	na	na	na	na	na
Vanadium	mg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	na	na	na	na	na	na	na
Xylene	µg/L	2	<2	<2	<2	<2	<2	na	na	na	na	na	na	na
Zinc	mg/L	0.005	0.007	0.006	<0.005	<0.005	0.011	na	na	na	na	na	na	na

Shaded grey = not required to be analysed

<sup>a</sup> measured with calibrated field meter

<sup>b</sup> No water present at this location at the time of sampling

na - not analysed as no sample collected





**Table 5: Continuous electrical conductivity monitoring results for monitoring points 33, 34, 36, 37 and 38 for the period 31 March 2015 – 24 August 2015\***

Monitoring point	33	34	36	37	38
Location	CDE	CDW	ASW01	TSW01	TSW02
Data type	Electrical conductivity				
Units	µS/cm				
Data date range	31/03/15 – 24/8/2015		13/05/15 – 30/6/2015*		
Date data downloaded	24/08/2015	24/08/2015	30/06/15	30/06/15	30/06/15
Date data supplied to AGL	16/10/15	16/10/15	16/10/15	16/10/15	16/10/15
Monitoring frequency required by EPL 20358	Every 6 hours	Every 6 hours	Every 6 hours	Every 6 hours	Every 6 hours
Actual monitoring frequency	Every 1 hour	Every 1 hour	Every 15 minutes	Every 15 minutes	Every 15 minutes
No. of times measured during monitoring period	1970	3520	4654	4649	4702
Min. value	15.7	35	103.7	89.8	123
Mean value	388.8	857.4	277.7	296.3	276.5
Median value	363.1	737.5	288.8	298.3	296
Max. value	1822.3	2800.0	370.4	440	427

\*Following 1 July 2015 revision of EPL20358, continuous monitoring of electrical conductivity at monitoring points 36, 37, and 38 is no longer required.

**Table 6: Continuous water level monitoring results for monitoring points 39 - 44 for the period 13 May 2015 – 8 October 2015**

Monitoring point	30	31	39	40	41	42	43	44
Location	TMB04	TMB05	TMB01	TMB02	TMB03	S4MB01	TCMB01	TTMB02
Data type	Standing water level							
Units	mAHD							
Data date range	13/05/15 – 08/10/15							
Date data downloaded	8/10/2015	8/10/2015	7/10/2015	7/10/2015	7/10/2015	7/10/2015	8/10/2015	7/10/2015
Date data supplied to AGL	16/10/15	16/10/15	16/10/15	16/10/15	16/10/15	16/10/15	16/10/15	16/10/15
Monitoring frequency required by EPL 20358	Every 6 hours	Every 6 hours	Every 6 hours	Every 6 hours	Every 6 hours	Every 6 hours	Every 6 hours	Every 6 hours
Actual monitoring frequency	Every 6 hours	Every 6 hours	Every 6 hours	Every 6 hours	Every 6 hours	Every 6 hours	Every 6 hours	Every 6 hours
No. of times measured during monitoring period	595	595	591	591	591	590	595	591
Min. value	111.9	114.7	102.7	102.6	103.5	110.4	113.7	113.9
Mean value	113.2	119	102.9	102.8	103.6	113	113.8	114
Median value	113.3	119.1	102.9	102.8	103.6	113	113.7	113.9
Max. value	113.3	119.2	103.4	103.1	103.8	113.1	113.8	114

## References

- 
- AGL, 2012a. Water Management Plan for the Tiedman Irrigation Program AGL. Available online: <http://www.agl.com.au/~media/AGL/About%20AGL/Documents/How%20We%20Source%20Energy/CSG%20and%20the%20Environment/Gloucester/Plans%20and%20Proposals/2013/May/AGL%20WMP%20Tiedman%20Irrigation%20V1%203%20140512%20Final%20Compiled%20LowRes.pdf>
- AGL, 2012b. Soil Quality Monitoring and Management Program. Available online: <http://www.agl.com.au/~media/AGL/About%20AGL/Documents/How%20We%20Source%20Energy/CSG%20and%20the%20Environment/Gloucester/Plans%20and%20Proposals/2013/May/Gloucester%20Soil%20Management.pdf>
- Environment Protection Authority (EPA), 2004. Approved Methods for the Sampling and Analysis of Water Pollutants in New South Wales, The Department of Environment and Conservation, Sydney, Australia. Available online: <http://www.environment.nsw.gov.au/resources/water/approvedmethods-water.pdf>
- Parsons Brinckerhoff (PB) 2012. Phase 2 Groundwater Investigations – Stage 1 Gas Field Development Area, Gloucester Gas Project. Report dated January 2012, PR\_5630. Available online: <http://www.agl.com.au/~media/AGL/About%20AGL/Documents/How%20We%20Source%20Energy/CSG%20and%20the%20Environment/Gloucester/Assessments%20and%20Reports/2012/January/PB%20Gloucester%20Groundwater%20Report%20Phase%202%20Appendices%20E-P.pdf>
- Parsons Brinckerhoff (PB) 2013a. Gloucester Gas Project – Tiedman Irrigation Trial Baseline Water Monitoring Program. Report dated January 2013, 2162406D PR\_6306. Available online: [http://www.agl.com.au/~media/AGL/About%20AGL/Documents/How%20We%20Source%20Energy/CSG%20and%20the%20Environment/Gloucester/Plans%20and%20Proposals/2013/May/Gloucester%20Irrigation\\_PR.pdf](http://www.agl.com.au/~media/AGL/About%20AGL/Documents/How%20We%20Source%20Energy/CSG%20and%20the%20Environment/Gloucester/Plans%20and%20Proposals/2013/May/Gloucester%20Irrigation_PR.pdf)
- Parsons Brinckerhoff (PB) 2013b. Tiedman Irrigation Trial – August 2013 Water Compliance Report, Gloucester Gas Project. Report dated August 2013, 2162406F-WAT-RTP-7408 RevC. [http://www.agl.com.au/~media/AGL/About%20AGL/Documents/How%20We%20Source%20Energy/CSG%20Community%20News/Gloucester/Community%20Updates/2013/September/2162406F%20WAT%20RPT%207408%20FINAL\\_LowRes.pdf](http://www.agl.com.au/~media/AGL/About%20AGL/Documents/How%20We%20Source%20Energy/CSG%20Community%20News/Gloucester/Community%20Updates/2013/September/2162406F%20WAT%20RPT%207408%20FINAL_LowRes.pdf)
- Parsons Brinckerhoff (PB) 2014a. Tiedman Irrigation Program – Water Compliance Report for the Period 1 July to 31 December 2013, Gloucester Gas Project. Report dated January 2014, 2162406F-WAT-RPT-7674 RevB. Available online: [http://www.agl.com.au/~media/AGL/About%20AGL/Documents/How%20We%20Source%20Energy/CSG%20and%20the%20Environment/Gloucester/Assessments%20and%20Reports/2014/20140131\\_Tiedman%20Irrigation%20Program%20%20%20Water%20Compliance%20Report.pdf](http://www.agl.com.au/~media/AGL/About%20AGL/Documents/How%20We%20Source%20Energy/CSG%20and%20the%20Environment/Gloucester/Assessments%20and%20Reports/2014/20140131_Tiedman%20Irrigation%20Program%20%20%20Water%20Compliance%20Report.pdf)
- Parsons Brinckerhoff (PB) 2014b. Tiedman Irrigation Program – Water Compliance Report for the Period 1 January to 4 July 2014, Gloucester Gas Project. Report dated August 2014, 2162406F-WAT-RPT-7674 001 RevD. Available online: [http://www.agl.com.au/~media/AGL/About%20AGL/Documents/How%20We%20Source%20Energy/Gloucester%20Document%20Repository/Irrigation%20Program/20140828\\_Tiedman%20Irrigation%20Program%20%20%20Water%20Compliance%20Report.pdf](http://www.agl.com.au/~media/AGL/About%20AGL/Documents/How%20We%20Source%20Energy/Gloucester%20Document%20Repository/Irrigation%20Program/20140828_Tiedman%20Irrigation%20Program%20%20%20Water%20Compliance%20Report.pdf)
- Parsons Brinckerhoff (PB) 2015a. Tiedman Irrigation Program – Water Compliance Report for the Period 1 January to 3- June 2015, Gloucester Gas Project. Report dated 13 August 2015, 2268517A-WAT-RPT-001 Rev C. Available online: [http://www.agl.com.au/~media/AGL/About%20AGL/Documents/How%20We%20Source%20Energy/Gloucester%20Document%20Repository/Irrigation%20Program/20150226\\_Tiedman%20Irrigation%20Program%20%20%20Water%20Compliance%20Report.pdf](http://www.agl.com.au/~media/AGL/About%20AGL/Documents/How%20We%20Source%20Energy/Gloucester%20Document%20Repository/Irrigation%20Program/20150226_Tiedman%20Irrigation%20Program%20%20%20Water%20Compliance%20Report.pdf)
- Parsons Brinckerhoff (PB) 2015b. Tiedman Irrigation Program – Water Compliance Report for the Period 5 July – 31 December 2014, Gloucester Gas Project. Report dated February 2015, 2268517B-WAT-RPT-001 Rev D. Available online: [http://www.agl.com.au/~media/AGL/About%20AGL/Documents/How%20We%20Source%20Energy/Gloucester%20Document%20Repository/Irrigation%20Program/20150813\\_Tiedman%20Irrigation%20Program%20%20%20Water%20Compliance%20Report%20for%20the%20Period%201%20Jan%20to%2030%20June%202015.pdf](http://www.agl.com.au/~media/AGL/About%20AGL/Documents/How%20We%20Source%20Energy/Gloucester%20Document%20Repository/Irrigation%20Program/20150813_Tiedman%20Irrigation%20Program%20%20%20Water%20Compliance%20Report%20for%20the%20Period%201%20Jan%20to%2030%20June%202015.pdf)
- The State of NSW and Environment Protection Authority (EPA), 2012. Requirements for publishing pollution monitoring data. Environment Protection Authority, Sydney, Australia. Available online: <http://www.epa.nsw.gov.au/resources/licensing/130742reqpubpmdata.pdf>