

<b>Corrib Gas Pipeline Environmental Report</b>	Period Ending:	31 <sup>st</sup> March 2012
Compiled By:	Siobhán Sheridan	
Approved By:	Aoife Reynolds	

## 1 Monitoring Data

### 1.1 Monitoring Equipment

Noise	Seven noise monitoring locations are currently being used – NSR1 & NSR2 (compliance monitoring points) and AN1, AN2, AN3, GN1 and RN1 (information purposes). The noise meters records in the 1/3 octave band.
Vibration	There are two vibration monitoring points being used- V2 and V3
Weather Station	The data used for this reporting period was taken from the Aughoose construction site meteorological station.
TSS	There are TSS meters (SB3 line 1 and SB3 line 2) on the each of discharges on the Siltbuster.
Sonde	The results are displayed graphically for dissolved oxygen, conductivity, pH, turbidity and temperature.
Discharge pipe flow	The results are displayed graphically.

### 1.2 Rainfall Data

Date	Rainfall mm	Date	Rainfall mm	Date	Rainfall mm
01/03/2012	0.2	12/03/2012	1.0	23/03/2012	0.2
02/03/2012	0.0	13/03/2012	0.0	24/03/2012	0.0
03/03/2012	7.2	14/03/2012	0.0	25/03/2012	0.0
04/03/2012	2.6	15/03/2012	6.4	26/03/2012	0.0
05/03/2012	0.0	16/03/2012	4.4	27/03/2012	0.0
06/03/2012	16.4	17/03/2012	21.2	28/03/2012	0.0
07/03/2012	2.8	18/03/2012	0.2	29/03/2012	0.0
08/03/2012	0.6	19/03/2012	1.6	30/03/2012	0.0
09/03/2012	2.6	20/03/2012	0.2	31/03/2012	0.4
10/03/2012	1.4	21/03/2012	0.0		
11/03/2012	0.6	22/03/2012	0.0		
Total 70.0mm					

### 1.3 Summary

Environment	Comments
Vibration	There were no vibration exceedances during the reporting period
Weather	There was a total of 69.6mm of rainfall during the reporting period, with a temperature range of -1.4°C to 20.5°C.
Noise	There were periods of elevated noise at NSR2 the following times: 02/03/12: 08:00 03/03/12: 10:00 07/03/12: 07:00

**Corrib Gas Pipeline Environmental Report**Period Ending: 31<sup>st</sup> March 2012

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Environment	Comments
	<p>07/03/12: 08:00 07/03/12:18:00 12/03/12: 13:00</p> <p>The following is the outcome of the investigation into the elevated noise levels:</p> <p><b><u>March 2<sup>nd</sup></u></b> The <math>L_{Aeq, 1hour}</math> at NSR2 at 08.00 on 2/3/2012 is over 20dB higher than that measured at position GN1. It has been deduced using noise models that any noise emanating from within the Glengad site boundary could only be a maximum of 12dB higher at NSR2 than at GN1. This indicates that the elevated noise levels are due to a source local to the monitor. The <math>L_{max}</math> of 90dB at NSR2 measured during that hour period also corroborates this conclusion, so it is unlikely to have been due to site activities.</p> <p><b><u>March 3<sup>rd</sup></u></b> It was established that there was no work carried out onsite on Saturday 3<sup>rd</sup> March.</p> <p><b><u>March 7<sup>th</sup></u></b> NSR2 is situated in a farmyard close to Glengad site. The farmer confirmed that he had been using his tractor in the yard on March 7<sup>th</sup> at the times in question, beside the noise meter location. Furthermore the farmer indicated that he often left the tractor running in the yard for extended periods of time while he loaded and unloaded it.</p> <p><b><u>March 12<sup>th</sup> and 22<sup>nd</sup> - 28<sup>th</sup></u></b> There were elevated noise levels on March 12<sup>th</sup> and occasions of elevated noise between 22<sup>nd</sup> and 28<sup>th</sup> March at NSR2. The monitoring and site activity information has been submitted by SEPILS noise consultants who have analysed the data and concluded that the general activities onsite at that time (stone importation) could not have generated the elevated hourly <math>L_{Aeq}</math> and <math>L_{Amax}</math> values at the times of the elevations. This would indicate that the noise source was close to the microphone rather than site related.</p>
Surface Water - Aughoose	There were no identified surface water exceedences during the reporting period. Surface water treatment ongoing.
Surface Water - Glengad	No surface water discharge was available at SW01 for sample collection.
Groundwater Monitoring	Monitoring of groundwater undertaken during the reporting period were within the anticipated results range however, there were no results available for GW1 as there was an electrical fault caused by water ingress to the sonde. The issue has since been resolved.

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## 2 Environmental Exceedances / Incidents / Complaints / Highlights

### 2.1 Complaints

Date & time of complaint	Nature of complaint	Actions taken as a result of the complaint
26/03/2012	Complaint about excessive noise at Aughooose site – complainant sought noise monitor readings	Noise Monitor Readings (15 mins intervals) forwarded to complainant.
29/03/2012	Complaint about the Project as follows: The Role of Mayo County Council, Monitoring of the proposed project, SEPIL's complaint Procedure, IRMS, Haulage, Policing, Noise and Light Pollution, Wildlife, Impression on visitors to the area, Archaeology.	Written acknowledgement sent to complainant – Complaint Open and under consideration.

### 2.2 Exceedance

There were no identified environmental exceedances during this reporting period.

### 2.3 Incidents

There were no incidents during the reporting period.

### 2.4 Environmental Highlights

Environment	Comments
Surface Water Treatment	Surface water treatment system operational in the tunnelling area of Aughooose.
Training	Environmental Management Plan training ongoing.
Noise	Installation of acoustic barrier ongoing in Aughooose.
Monitoring	GN2 noise meter installed in Glengad

Surface Water Monitoring Results - Accredited Laboratory												
	Date	Cond.	Turbidity	DO %	pH	TSS	Orthophosph ate as PO <sub>4</sub>	Extractable HC/ DRO (C8-C40) total and dissolved	PRO (C5- C12) total and dissolved	TOC	DIN (TON as N + Ammonia as N)	COD
		µS/cm	NTU	mg/l		mg/l	mg/l	ug/l	ug/l	mg/l	mg/l	mg/l
<b>Composites</b>												
<b>SB3</b>	01/03/2012	531	0.9	69.9	7.2	2	<0.03	<100	<100	4.98	0.94	11
<b>SB3</b>	02/03/2012	506	0.9	68.5	6.9	2	<0.03	<100	<100	3.68	1.04	11
<b>SB3</b>	03/03/2012	484	1.2	67.3	7.1	2	<0.03	<100	<100	3.84	1.23	<10
<b>SB3</b>	04/03/2012	485	1.1	68.2	7.2	2	<0.03	<100	<100	4.18	1.27	485
<b>SB3</b>	05/03/2012	428	1.9	65.3	7.7	2	<0.03	<100	<100	3.20	0.57	<10
<b>SB3</b>	06/03/2012	Issue with composite sampler - no sample available										
<b>SB3</b>	07/03/2012	407	1.0	65.8	6.9	6	<0.03	<400	<100	3.64	0.80	53
<b>SB3</b>	08/03/2012	433	1.0	68.5	7.0	4	<0.03	<100	<100	3.39	0.75	79
<b>SB3</b>	09/03/2012	468	0.9	68.5	7.0	2	<0.03	252	<100	3.79	1.22	<10
<b>SB3</b>	10/03/2012	459	1.4	68.3	7.2	2	<0.03	<100	<100	3.29	1.28	19
<b>SB3</b>	11/03/2012	447	1.2	68.3	7.2	2	<0.03	<100	<100	3.16	0.99	26
<b>SB3</b>	12/03/2012	453	0.8	68.5	7.2	2	<0.03	203	<100	3.17	1.41	<10
<b>SB3</b>	13/03/2012	451	0.9	69.3	6.7	2	<0.03	139	<100	2.93	0.975	13
<b>SB3</b>	14/03/2012	424	1.0	68.1	7.3	4	<0.03	106	<100	3.52	1.27	20
<b>SB3</b>	15/03/2012	442	1.4	67.9	7.0	2	<0.03	149	<100	3.71	1.03	<10
<b>SB3</b>	16/03/2012	442	0.7	68.5	7.3	2	<0.03	<100	<100	3.58	1.06	64
<b>SB3</b>	17/03/2012	439	0.7	67.2	7.2	2	<0.03	<100	<100	4.47	1.14	54
<b>SB3</b>	18/03/2012	421	0.7	68.3	7.1	2	<0.03	<100	<100	3.44	0.86	52
<b>SB3</b>	19/03/2012	420	1.0	68.5	7.0	2	<0.03	<100	<100	3.20	0.92	69
<b>SB3</b>	20/03/2012	371	1.0	68.4	7.0	2	<0.03	<100	<100	2.46	0.81	52
<b>SB3</b>	21/03/2012	418	1.3	65.3	7.6	2	0.03	<200	<100	3.47	0.70	<10
<b>SB3</b>	22/03/2012	418	1.0	68.7	7.4	2	<0.03	<100	<100	3.21	0.67	<10
<b>SB3</b>	23/03/2012	422	1.5	65.6	7.4	2	<0.03	<100	<100	2.81	1.67	<10
<b>SB3</b>	24/03/2012	432	1.0	66.3	7.4	2	<0.03	<100	<100	2.92	0.75	<10
<b>SB3</b>	25/03/2012	455	0.9	65.8	7.3	2	<0.03	<100	<100	3.07	0.96	<10
<b>SB3</b>	26/03/2012	471	0.70	68.5	7	2	<0.03	102	<100	3.12	0.768	<10
<b>SB3</b>	27/03/2012	454	0.8	67.3	7.2	2	<0.03	140	<100	3.09	0.79	<10
<b>SB3</b>	28/03/2012	448	0.4	68.5	7.8	2	<0.03	<100	<100	3.89	0.91	26
<b>SB3</b>	29/03/2012	453	0.4	67.5	7.8	2	<0.03	<100	<100	3.62	0.91	44
<b>SB3</b>	30/03/2012	454	0.4	68.5	7.6	2	<0.03	<100	<100	3.71	1.00	16
<b>SB3</b>	31/03/2012	446	1.0	68.3	7.6	2	<0.03	<100	<1			

I.P.	= In Progress
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< LOD	= Below Limit of Detection
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> LOD	= Above Limit of Detection
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On site laboratory results included in Appendix 1

Grey shaded areas denote parameters that cannot or were not analysed on-site or the lab.

Dust Monitoring Record Sheet							
	Date Positioned	Date Removed	Ref. Number	Date Dispatched	Date Returned	Weight (mg/m <sup>2</sup> /day)	Comments
Target (Consent) Limit: 350 mg m <sup>2</sup> d <sup>-1</sup> on as a 30 day average							
AD1	09/02/2012	12/03/2012	364691	14/03/2012	14/03/2012	48	
AD2	09/02/2012	12/03/2012	364692	14/03/2012	14/03/2012	80	
AD3	09/02/2012	12/03/2012	364693	14/03/2012	14/03/2012	155	
AD4	09/02/2012	12/03/2012	364694	14/03/2012	14/03/2012	103	
		NDP = No Determination Possible					
Monitoring Results will be presented monthly							

	Date Positioned	Date Removed	Ref. Number	Date Dispatched	Date Returned	Weight (mg/m <sup>2</sup> /day)	Comments
Target (Consent) Limit: 350 mg m <sup>2</sup> d <sup>-1</sup> on as a 30 day average							
AD1	09/02/2012	12/03/2012	364691	14/03/2012	14/03/2012	48	
AD2	09/02/2012	12/03/2012	364692	14/03/2012	14/03/2012	80	
AD3	09/02/2012	12/03/2012	364693	14/03/2012	14/03/2012	155	
AD4	09/02/2012	12/03/2012	364694	14/03/2012	14/03/2012	103	
		NDP = No Determination Possible					

Monitoring Results will be presented monthly

## Groundwater Monitoring Results - Accredited Laboratory

Location	Date	DO	Temp	Cond.	pH	TDS	BOD	Suspended Solids	Turbidity	Orthophosphate as PO4 -P	Ammonia as NH3-N	Total Phosphorus as P	Nitrate as NO <sub>3</sub>	Nitrite as NO <sub>2</sub>	Phosphate as PO4	COD	Copper
		% Sat	°C	uS/cm	pH Units	mg/l	mg/l	mg/l	N.T.U	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	ug/l
GW1	08/03/2012	27	10.2	426	6.2	228	<1	822	93.0	0.705	0.40	1.32	<0.44	<0.017	2.17	35	176
GW2	08/03/2012	25	10.2	589	6.4	319	<1	146	143.0	0.115	2.55	0.81	2.81	<0.017	0.35	31	9
GW3	08/03/2012	24	10.2	464	6.2	249	<1	150	52.0	0.197	3.10	0.42	<0.44	<0.017	0.60	52	6
GW4	08/03/2012	21	10.3	434	6.3	231	<1	5	37.0	0.072	0.63	0.51	<0.44	<0.017	0.22	26	43

Location	Date	Arsenic, total	Chromium, total	Lead, total	Cadmium, total	Tin, total	Iron, total	Mercury	TOC	Total Hardness	Zinc	Extractable HC/ DRO (C8-C40) total and dissolved	PRO (C5 - C12) total and dissolved	Manganese	Chloride	Water Level
		ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	mg/l	mg/l	ug/l	ug/l	ug/l	ug/l	mg/l	m
GW1	08/03/2012	20	30	4.0	0.9	<0.5	45170	<0.05	6.79	129	118	258	<100	3504	54.5	3.0
GW2	08/03/2012	4	4	16.0	<0.5	<0.5	46080	<0.05	6.76	225	20	138	<100	1289	59.9	3.8
GW3	08/03/2012	5	4	1.0	<0.5	<0.5	72090	<0.05	5.03	90	29	<100	<100	259	58.3	3.8
GW4	08/03/2012	3	5	<0.5	2.0	<0.5	62860	<0.05	4.74	66	92	<100	<100	753	61.1	4.1

Grey shaded areas denote parameters that cannot or were not analysed on-site or at the lab.

Graphs provided for GW1 - GW4: Temperature, Conductivity, and pH.

Day Time Noise Monitoring / Max Hourly or above 60dB L <sub>Aeq</sub> Record Sheet - Compliance monitoring locations													
Determinant Results													
Location	Air Temp. (Min)	Air Temp. (Max)	Start Date and Time	Duration	Wind		Results dB			*Comments			
					Speed (m/s)*	Direction (Degrees)	L <sub>Aeq</sub>	L <sub>Amax</sub>	L <sub>Amin</sub>				
NSR1	1.0	11.0	01/03/2012 08:00	1:00:00	4.3	190.0	53.4	72.0	35.0				
NSR2			01/03/2012 16:00	01:00:00	1.1	325.5	56.8	77.1	46.5				
			01/03/2012 13:00	01:00:00	4.0	147.8	60.4	76.3	40.3				
			01/03/2012 15:00	01:00:00	4.3	126.5	62.2	78.1	42.7				
NSR1	2.1	12.8	02/03/2012 16:00	01:00:00	2.6	107.8	62.9	82.3	39.3				
NSR2			02/03/2012 08:00	01:00:00	0.7	328.5	66.2	90.2	37.2	Activities onsite could not have generated the high hourly L <sub>Aeq</sub> and L <sub>Amax</sub> values.			
			02/03/2012 13:00	01:00:00	4.0	147.8	61.6	82.1	41.6				
			02/03/2012 15:00	01:00:00	4.3	126.5	61.4	81.5	41.3				
NSR1	1.1	10.6	03/03/2012 07:00	01:00:00	6.9	180.0	65.1	80.8	46.1	No Construction activities being undertaken			
			03/03/2012 08:00	01:00:00	7.9	198.3	68.2	81.6	45.7				
			03/03/2012 09:00	01:00:00	7.9	214.3	67.1	84.2	41.3				
			03/03/2012 10:00	01:00:00	4.3	245.3	62.3	79.6	36.0				
NSR2			03/03/2012 15:00	01:00:00	2.8	231.5	60.4	80.6	32.0				
			03/03/2012 16:00	01:00:00	3.8	240.5	60.2	79.2	30.3				
			03/03/2012 07:00	01:00:00	6.9	180.0	67.5	91.4	48.1				
			03/03/2012 08:00	01:00:00	7.9	198.3	68.1	89.9	48.4				
			03/03/2012 09:00	01:00:00	7.9	214.3	65.5	84.0	50.8				
			03/03/2012 10:00	01:00:00	4.3	245.3	65.2	83.7	50.3				
			03/03/2012 11:00	01:00:00	4.9	257.0	64.6	84.6	51.9				
			03/03/2012 12:00	01:00:00	4.7	254.0	61.3	81.2	52.1				
03/03/2012 13:00	01:00:00	5.1	254.8	60.9	78.1	51.7							
03/03/2012 15:00	01:00:00	2.8	231.5	62.5	83.1	50.8							
NSR1	2.4	11.0	05/03/2012 09:00	01:00:00	1.9	204.8	53.9	72.9	32.6				
NSR2			05/03/2012 16:00	01:00:00	1.7	209.3	62.9	85.8	41.5				
05/03/2012 17:00			01:00:00	1.5	208.8	63.0	90.2	49.8					
NSR1	7.2	11.8	06/03/2012 08:00	01:00:00	6.6	185.5	60.9	78.0	45.5				
			06/03/2012 13:00	01:00:00	7.4	186.3	60.1	73.4	42.7				
			06/03/2012 15:00	01:00:00	5.8	184.8	60.3	76.3	44.3				
			06/03/2012 16:00	01:00:00	9.1	182.0	63.4	79.2	44.8				
NSR2			06/03/2012 17:00	01:00:00	6.8	191.3	62.9	77.7	45.7				
			06/03/2012 18:00	01:00:00	8.1	194.0	63.3	78.6	45.6				
			06/03/2012 11:00	01:00:00	6.1	181.0	60.4	79.5	44.9				
			06/03/2012 16:00	01:00:00	9.1	182.0	60.8	84.9	46.4				
			06/03/2012 17:00	01:00:00	6.8	191.3	61.4	82.0	45.9				
			06/03/2012 18:00	01:00:00	8.1	194.0	61.1	86.7	45.6				
			NSR1	2.9	9.8	07/03/2012 08:00	01:00:00	4.3	256.8	60.5	84.7	39.9	
						07/03/2012 09:00	01:00:00	6.8	254.8	61.0	84.0	37.8	
07/03/2012 10:00	01:00:00	6.4				257.3	61.8	80.4	38.1				
07/03/2012 11:00	01:00:00	5.3				262.5	68.1	89.2	36.6	Activities onsite could not have generated the high hourly L <sub>Aeq</sub> and L <sub>Amax</sub> values.			
07/03/2012 12:00	01:00:00	6.5	255.3			63.2	82.0	39.6					
07/03/2012 13:00	01:00:00	5.2	275.8			60.0	81.4	40.1					
07/03/2012 14:00	01:00:00	5.6	272.3			62.4	82.7	41.0					
07/03/2012 15:00	01:00:00	5.2	262.5			61.7	80.1	41.5					
07/03/2012 16:00	01:00:00	7.6	257.3			64.1	85.9	39.0					
07/03/2012 17:00	01:00:00	6.1	265.3			61.4	85.0	38.8					
07/03/2012 18:00	01:00:00	3.6	277.8			61.6	83.5	38.2					
NSR2	07/03/2012 07:00	01:00:00	4.2			259.0	67.9	86.5	53.1				
	07/03/2012 08:00	01:00:00	4.3			256.8	68.8	86.1	52.9				
	07/03/2012 09:00	01:00:00	6.8			254.8	68.3	84.9	51.7				
	07/03/2012 10:00	01:00:00	6.4			257.3	67.1	85.3	51.9				
	07/03/2012 11:00	01:00:00	5.3			262.5	76.9	97.4	51.6	Local activity close to monitor confirmed as tractor. Activities onsite could not have generated the high hourly LAeq and LAmax values.			
	07/03/2012 12:00	01:00:00	6.5	255.3	69.8	88.8	53.1						
	07/03/2012 13:00	01:00:00	5.2	275.8	69.3	86.8	54.2						
	07/03/2012 14:00	01:00:00	5.6	272.3	69.6	89.1	54.9						
	07/03/2012 15:00	01:00:00	5.2	262.5	68.2	89.9	53.4						
	07/03/2012 16:00	01:00:00	7.6	257.3	70.6	89.6	55.0						
	NSR1	6.7	11.3	08/03/2012 07:00	01:00:00	6.1	265.3	70.9	89.7	54.3			
				08/03/2012 18:00	01:00:00	3.6	277.8	69.5	91.8	54.8			
08/03/2012 09:00				01:00:00	6.8	200.8	60.4	77.7	41.5				
08/03/2012 13:00				01:00:00	8.3	201.8	62.3	78.8	43.9				
NSR2	08/03/2012 14:00			01:00:00	8.3	201.5	61.2	77.0	42.4				
	08/03/2012 15:00			01:00:00	6.9	200.0	60.9	76.7	42.6				
	08/03/2012 08:00			01:00:00	5.7	205.3	61.4	84.4	52.0	Wind dominates noise data			
	08/03/2012 10:00			01:00:00	6.7	208.0	62.7	83.2	51.2				
	08/03/2012 11:00			01:00:00	7.6	199.0	62.8	81.3	51.0				
	08/03/2012 12:00			01:00:00	7.9	206.8	63.4	81.1	52.1				
	08/03/2012 13:00			01:00:00	8.3	201.8	66.0	88.6	52.2				
	08/03/2012 14:00			01:00:00	8.3	201.5	63.6	83.7	51.0				
08/03/2012 15:00	01:00:00	6.9	200.0	60.5	78.8	51.1							
08/03/2012 16:00	01:00:00	7.6	195.5	60.8	84.4	50.5							
NSR1	10.6	12.3	08/03/2012 17:00	01:00:00	6.6	199.0	61.0	93.3	50.2				
			08/03/2012 19:00	01:00:00	5.8	193.8	61.0	82.5	50.2				
			09/03/2012 07:00	01:00:00	7.6	202.0	64.8	81.0	46.2				
			09/03/2012 08:00	01:00:00	8.7	204.8	63.4	79.5	44.7				
NSR2			09/03/2012 09:00	01:00:00	3.5	214.0	61.1	76.4	42.4				
			09/03/2012 10:00	01:00:00	6.5	213.0	61.3	76.5	41.4				
			09/03/2012 07:00	01:00:00	7.6	202.0	63.7	83.2	50.6				
			09/03/2012 08:00	01:00:00	8.7	204.8	63.4	80.8	51.6				
			09/03/2012 09:00	01:00:00	3.5	214.0	61.9	81.1	51.9				
			09/03/2012 10:00	01:00:00	6.5	213.0	61.0	78.0	51.3				
09/03/2012 17:00			01:00:00	2.8	219.0	62.7	78.2	48.0					
09/03/2012 18:00			01:00:00	2.8	218.0	60.3	72.8	48.9					
Use readings (as per EPA Guidance Note on Noise Measurement).													
Sound level meter (ref: IEC 61672 (2002-2005))													
09:00													
NSR1													
NSR2													

Day Time Noise Monitoring / Max Hourly or above 60dB L <sub>Aeq</sub> Record Sheet - Compliance monitoring locations										
Determinant Results										
Location	Air Temp. (Min)	Air Temp. (Max)	Start Date and Time	Duration	Wind		Results dB			*Comments
					Speed (m/s)*	Direction (Degrees)	L <sub>Aeq</sub>	L <sub>Amax</sub>	L <sub>Amin</sub>	
NSR1	7.8	10.6	12/03/2012 12:00	01:00:00	1.9	150.8	53.2	72.1	36.9	Activities onsite could not have generated the high hourly L <sub>Aeq</sub> and L <sub>Amax</sub> values.
NSR2			12/03/2012 09:00	01:00:00	2.1	150.3	60.4	85.6	40.0	
			12/03/2012 12:00	01:00:00	1.9	150.8	63.6	86.3	37.8	
			12/03/2012 13:00	01:00:00	1.5	162.5	67.4	87.1	38.9	
			12/03/2012 15:00	01:00:00	1.7	130.0	61.3	78.6	41.4	
NSR1	7.6	10.8	13/03/2012 09:00	01:00:00	1.4	129.0	53.7	73.9	36.5	
NSR2			13/03/2012 07:00	01:00:00	0.7	117.5	59.4	84.4	33.7	
NSR1	8.1	11.3	14/03/2012 15:00	01:00:00	5.1	183.0	56.0	75.9	37.9	
NSR2			14/03/2012 08:00	01:00:00	2.4	157.3	61.3	79.7	42.5	
			14/03/2012 18:00	01:00:00	3.7	169.5	63.6	82.5	43.6	
NSR1	8.1	10.3	15/03/2012 07:00	01:00:00	4.8	179.3	54.8	73.7	37.2	
NSR2			15/03/2012 12:00	01:00:00	4.1	192.8	63.8	81.8	40.8	
			15/03/2012 13:00	01:00:00	5.2	186.3	60.0	80.1	38.8	
NSR1	1.9	8.1	16/03/2012 15:00	01:00:00	5.2	209.0	56.4	76.3	37.0	No Construction - CIF holiday
NSR2			16/03/2012 07:00	01:00:00	1.0	215.5	60.6	85.2	50.7	
			16/03/2012 08:00	01:00:00	2.8	210.0	65.2	85.8	49.2	
			16/03/2012 09:00	01:00:00	4.2	197.8	63.8	85.7	48.6	
			16/03/2012 16:00	01:00:00	3.6	222.0	65.7	81.1	49.6	
			16/03/2012 17:00	01:00:00	2.3	230.3	64.8	82.0	49.5	
			16/03/2012 18:00	01:00:00	3.0	234.3	61.2	78.8	49.0	
			19/03/2012 10:00	01:00:00	7.6	195.8	61.2	76.5	40.9	
NSR1	6.1	9.8	19/03/2012 11:00	01:00:00	7.1	188.0	63.2	79.1	43.4	
NSR2			19/03/2012 15:00	01:00:00	7.0	190.0	62.1	83.0	48.3	
			19/03/2012 16:00	01:00:00	6.4	193.5	60.4	82.6	47.0	
NSR1	9.9	10.8	20/03/2012 12:00	01:00:00	7.2	184.3	61.7	78.1	40.8	
			20/03/2012 13:00	01:00:00	5.7	184.0	60.5	74.8	41.3	
			20/03/2012 15:00	01:00:00	8.2	196.3	61.2	77.1	43.2	
			20/03/2012 16:00	01:00:00	7.4	194.5	61.6	79.8	44.6	
			20/03/2012 09:00	01:00:00	6.5	197.5	59.8	83.9	46.7	
NSR1	9.5	10.1	21/03/2012 16:00	01:00:00	3.1	183.0	55.8	80.5	34.5	
NSR2			21/03/2012 09:00	01:00:00	5.0	176.8	59.7	84.6	43.5	
NSR1	4.6	16.1	22/03/2012 13:00	01:00:00	3.6	129.5	61.3	82.1	42.7	
NSR2			22/03/2012 10:00	01:00:00	2.2	123.3	62.9	82.3	33.3	
NSR1	7.8	13.8	23/03/2012 12:00	01:00:00	2.8	193.5	57.2	71.8	42.7	
NSR2			23/03/2012 11:00	01:00:00	2.1	88.0	59.4	83.1	36.5	
NSR1	9.3	17.1	24/03/2012 08:00	01:00:00	3.1	114.3	56.8	75.3	36.7	
NSR2			24/03/2012 12:00	01:00:00	1.9	188.3	57.1	84.6	36.0	
NSR1	5.4	20.5	26/03/2012 09:00	01:00:00	1.4	145.3	54.6	77.4	36.5	
NSR2			26/03/2012 16:00	01:00:00	1.8	139.3	64.1	83.7	42.4	
			26/03/2012 17:00	01:00:00	2.9	129.0	69.8	87.6	33.0	
NSR1	5.2	21.8	27/03/2012 07:00	01:00:00	0.6	292.3	53.8	72.7	32.8	Activities onsite could not have generated the high hourly L <sub>Aeq</sub> and L <sub>Amax</sub> values.
NSR2			27/03/2012 11:00	01:00:00	1.4	151.8	65.5	91.3	46.1	
			27/03/2012 15:00	01:00:00	3.3	134.0	61.7	88.6	36.2	
NSR1	0.4	17.6	28/03/2012 08:00	01:00:00	0.7	231.5	53.2	74.5	38.4	Activities onsite could not have generated the high hourly L <sub>Aeq</sub> and L <sub>Amax</sub> values.
NSR2			28/03/2012 09:00	01:00:00	0.4	134.8	65.3	101.8	43.8	
NSR1	-0.3	6.7	29/03/2012 13:00	01:00:00	3.1	296.5	52.7	75.5	29.5	
NSR2			29/03/2012 13:00	01:00:00	3.1	296.5	60.9	82.5	44.8	
NSR1	8.9	9.8	30/03/2012 09:00	01:00:00	2.7	321.5	54.5	73.9	28.7	
NSR2			30/03/2012 14:00	01:00:00	2.6	336.0	59.8	84.1	42.0	
Use readings (as per EPA Guidance Note on Noise Measurement).										
Sound level meter (ref: IEC 61672 (2002-2005))										
The results show Laeq(1hr) for maximum daily values or values over 60dB for each day of monitoring										
NSR1										
NSR2										



Day Time Noise Monitoring / Max Hourly or above 60dB L <sub>Aeq</sub> Record Sheet									
Determinant Results									
Location	Air Temp. (Min)	Air Temp. (Max)	Start Date and Time	Duration	Wind		Results dB		
					Speed (m/s)*	Direction (Degrees)	L <sub>Aeq</sub>	L <sub>Amax</sub>	L <sub>Amin</sub>
AN1	1.0	11.0	01/03/2012 08:00	1:00:00	4.3	190.0	69.9	91.0	53.8
			01/03/2012 09:00	1:00:00	2.8	312.3	69.8	96.5	52.1
			01/03/2012 10:00	1:00:00	4.2	296.5	71.2	92.9	50.9
			01/03/2012 12:00	1:00:00	3.9	294.0	69.4	91.3	55.0
			01/03/2012 13:00	1:00:00	3.3	298.0	66.1	92.0	50.5
			01/03/2012 15:00	1:00:00	2.0	333.0	66.8	90.1	52.2
			01/03/2012 16:00	1:00:00	1.1	325.5	67.8	91.2	54.2
			01/03/2012 17:00	1:00:00	0.6	22.5	69.3	105.2	50.0
			01/03/2012 18:00	1:00:00			62.4	89.1	48.9
			AN2	01/03/2012 11:00	1:00:00	3.5	308.0	57.6	74.7
AN3	01/03/2012 11:00	1:00:00	3.5	308.0	50.5	80.6	36.2		
GN1	01/03/2012 18:00	1:00:00			52.4	86.8	36.9		
RN1	01/03/2012 07:00	1:00:00	3.8	163.8	57.5	80.7	34.5		
AN1	2.1	12.8	02/03/2012 08:00	1:00:00	0.7	328.5	67.7	93.4	54.7
			02/03/2012 09:00	1:00:00	1.1	137.3	69.7	89.9	55.1
			02/03/2012 10:00	1:00:00	2.0	122.0	69.7	88.7	53.6
			02/03/2012 11:00	1:00:00	3.2	166.0	73.5	89.5	59.3
			02/03/2012 12:00	1:00:00	4.2	132.5	76.2	90.6	58.7
			02/03/2012 13:00	1:00:00	4.0	147.8	70.5	89.4	51.5
			02/03/2012 14:00	1:00:00	4.8	124.0	65.3	86.7	52.5
			02/03/2012 15:00	1:00:00	4.3	126.5	67.4	86.9	56.2
			02/03/2012 16:00	1:00:00	2.6	107.8	66.3	84.4	49.3
			02/03/2012 17:00	1:00:00	2.2	140.8	62.1	97.5	49.0
AN2	02/03/2012 11:00	1:00:00	3.2	166.0	65.7	94.7	47.6		
	02/03/2012 12:00	1:00:00	4.2	132.5	66.6	87.6	49.6		
	02/03/2012 13:00	1:00:00	4.0	147.8	65.8	90.4	39.9		
	02/03/2012 14:00	1:00:00	4.8	124.0	64.6	88.5	36.8		
AN3	02/03/2012 15:00	1:00:00	4.3	126.5	65.4	96.0	41.7		
	02/03/2012 16:00	1:00:00	2.6	107.8	60.7	80.4	39.1		
GN1	02/03/2012 16:00	1:00:00	2.6	107.8	46.5	66.2	32.6		
RN1	02/03/2012 15:00	1:00:00	4.3	126.5	53.7	78.2	40.3		
	02/03/2012 13:00	1:00:00	4.0	147.8	61.0	75.8	45.4		
	02/03/2012 14:00	1:00:00	4.8	124.0	60.1	74.9	44.2		
	02/03/2012 15:00	1:00:00	4.3	126.5	63.4	76.9	47.2		
AN1	1.1	10.6	03/03/2012 07:00	1:00:00	6.9	180.0	66.8	92.8	44.7
			03/03/2012 08:00	1:00:00	7.9	198.3	64.5	90.1	43.6
			03/03/2012 09:00	1:00:00	7.9	214.3	64.8	91.3	49.5
			03/03/2012 10:00	1:00:00	4.3	245.3	63.4	87.4	49.6
			03/03/2012 11:00	1:00:00	4.9	257.0	63.0	81.3	49.4
			03/03/2012 13:00	1:00:00	5.1	254.8	60.2	80.1	49.2
			03/03/2012 14:00	1:00:00	4.9	246.3	61.0	84.9	48.4
			03/03/2012 15:00	1:00:00	2.8	231.5	60.9	87.1	47.9
			03/03/2012 16:00	1:00:00	3.8	240.5	60.9	82.4	48.3
			03/03/2012 07:00	1:00:00	6.9	180.0	60.4	84.3	45.3
AN2	03/03/2012 08:00	1:00:00	7.9	198.3	64.2	83.7	44.9		
	03/03/2012 09:00	1:00:00	7.9	214.3	65.4	85.5	41.9		
	03/03/2012 10:00	1:00:00	4.3	245.3	59.6	77.6	35.2		
	03/03/2012 07:00	1:00:00	6.9	180.0	62.6	87.4	42.0		
GN1	03/03/2012 09:00	1:00:00	7.9	214.3	69.4	85.1	48.6		
	03/03/2012 10:00	1:00:00	4.3	245.3	62.9	79.8	48.2		
	03/03/2012 11:00	1:00:00	4.9	257.0	62.3	77.1	48.0		
	03/03/2012 12:00	1:00:00	4.7	254.0	60.5	77.8	46.9		
	03/03/2012 15:00	1:00:00	2.8	231.5	61.4	82.5	44.5		
	03/03/2012 16:00	1:00:00	3.8	240.5	61.4	84.7	43.4		
	03/03/2012 07:00	1:00:00	6.9	180.0	64.2	82.3	51.0		
	RN1	03/03/2012 07:00	1:00:00	6.9	180.0	64.2	82.3	51.0	
AN1	2.4	11.0	05/03/2012 07:00	1:00:00	1.1	212.3	66.2	89.9	49.0
			05/03/2012 08:00	1:00:00	1.6	170.8	73.3	90.6	57.7
			05/03/2012 09:00	1:00:00	1.9	204.8	74.1	90.7	53.7
			05/03/2012 10:00	1:00:00	2.1	241.8	73.2	95.4	52.6
			05/03/2012 11:00	1:00:00	1.6	249.0	74.6	92.3	58.7
			05/03/2012 12:00	1:00:00	2.4	226.5	73.0	93.7	54.7
			05/03/2012 13:00	1:00:00	2.2	260.3	63.1	82.7	51.7
			05/03/2012 14:00	1:00:00	3.1	230.0	60.7	83.9	51.1
			05/03/2012 15:00	1:00:00	2.5	240.8	72.2	91.6	55.6
			05/03/2012 16:00	1:00:00	1.7	209.3	72.6	90.1	58.7
AN2	05/03/2012 17:00	1:00:00	1.5	208.8	71.7	90.1	56.9		
AN3	05/03/2012 15:00	1:00:00	2.5	240.8	56.9	76.8	36.5		
GN1	05/03/2012 09:00	1:00:00	1.9	204.8	45.1	71.0	28.7		
GN1	05/03/2012 17:00	1:00:00	1.5	208.8	54.2	90.8	39.1		
RN1	05/03/2012 07:00	01:00:00	1.1	212.3	50.3	84.5	22.7		
* Wind speeds in excess of 5 m/s negatively impact noise readings (as per EPA Guidance Note on Noise Measurement).									
**Allowance of +/- 1.5dB accuracy of sound level meter (ref: IEC 61672 (2002-2005))									
The results show Laeq(1hr) for maximum daily values or values over 60dB for each day of monitoring									
	AN1		AN2		AN3		GN1		RN1

Day Time Noise Monitoring / Max Hourly or above 60dB L <sub>Aeq</sub> Record Sheet										
Determinant Results										
Location	Air Temp. (Min)	Air Temp. (Max)	Start Date and Time	Duration	Wind		Results dB			
					Speed (m/s)*	Direction (Degrees)	L <sub>Aeq</sub>	L <sub>Amax</sub>	L <sub>Amin</sub>	
AN1	7.2	11.8	06/03/2012 07:00	1:00:00	4.0	175.3	69.6	89.7	53.4	
			06/03/2012 08:00	1:00:00	6.6	185.5	76.3	90.1	55.9	
			06/03/2012 09:00	1:00:00	7.8	194.0	72.7	91.1	58.7	
			06/03/2012 10:00	1:00:00	6.2	183.8	66.3	96.5	54.4	
			06/03/2012 11:00	1:00:00	6.1	181.0	69.7	90.8	58.8	
			06/03/2012 12:00	1:00:00	6.2	185.3	67.2	93.7	57.9	
			06/03/2012 13:00	1:00:00	7.4	186.3	72.6	91.5	56.9	
			06/03/2012 14:00	1:00:00	4.0	182.3	68.3	88.0	55.8	
			06/03/2012 15:00	1:00:00	5.8	184.8	65.8	86.5	56.3	
			06/03/2012 16:00	1:00:00	9.1	182.0	70.0	87.8	57.9	
			06/03/2012 17:00	1:00:00	6.8	191.3	69.7	91.9	56.6	
			06/03/2012 18:00	1:00:00	8.1	194.0	65.4	87.6	50.3	
			AN2	06/03/2012 09:00	1:00:00	7.8	194.0	60.5	83.7	42.9
			AN3	06/03/2012 18:00	1:00:00	8.1	194.0	51.9	76.2	35.6
			GN1	06/03/2012 13:00	1:00:00	7.4	186.3	61.7	84.9	42.5
				06/03/2012 14:00	1:00:00	4.0	182.3	62.1	85.9	42.4
				06/03/2012 15:00	1:00:00	5.8	184.8	62.7	83.2	40.9
				06/03/2012 16:00	1:00:00	9.1	182.0	65.6	84.5	41.9
06/03/2012 17:00	1:00:00	6.8		191.3	66.5	87.3	42.1			
06/03/2012 18:00	1:00:00	8.1		194.0	67.7	88.7	40.9			
RN1	06/03/2012 14:00	1:00:00	4.0	182.3	60.0	81.4	46.5			
	06/03/2012 17:00	1:00:00	6.8	191.3	65.2	84.1	52.2			
AN1	2.9	9.6	06/03/2012 18:00	1:00:00	8.1	194.0	64.9	84.3	53.5	
			07/03/2012 07:00	1:00:00	4.2	259.0	66.6	86.9	52.8	
			07/03/2012 08:00	1:00:00	4.3	256.8	71.9	90.2	59.3	
			07/03/2012 09:00	1:00:00	6.8	254.8	67.6	84.8	56.4	
			07/03/2012 10:00	1:00:00	6.4	257.3	67.5	83.2	58.7	
			07/03/2012 11:00	1:00:00	5.3	262.5	73.9	93.7	57.6	
			07/03/2012 12:00	1:00:00	6.5	255.3	73.7	90.3	57.3	
			07/03/2012 13:00	1:00:00	5.2	275.8	76.0	92.1	56.3	
			07/03/2012 14:00	1:00:00	5.6	272.3	77.8	90.8	55.7	
			07/03/2012 15:00	1:00:00	5.2	262.5	70.1	94.3	56.3	
			07/03/2012 16:00	1:00:00	7.6	257.3	70.3	95.7	58.6	
			07/03/2012 17:00	1:00:00	6.1	265.3	70.4	88.6	54.2	
			07/03/2012 18:00	1:00:00	3.6	277.8	66.7	85.8	52.3	
			AN2	07/03/2012 11:00	1:00:00	5.3	262.5	63.5	88.1	43.9
				07/03/2012 12:00	1:00:00	6.5	255.3	63.0	82.3	47.0
				07/03/2012 13:00	1:00:00	5.2	275.8	62.0	81.3	46.5
				07/03/2012 14:00	1:00:00	5.6	272.3	62.4	81.9	46.2
				07/03/2012 15:00	1:00:00	5.2	262.5	61.8	80.6	46.3
07/03/2012 17:00	1:00:00	6.1		265.3	61.3	83.5	42.7			
AN3	07/03/2012 18:00	1:00:00	3.6	277.8	60.5	83.5	41.7			
	07/03/2012 12:00	1:00:00	6.5	255.3	68.5	91.5	33.4			
	07/03/2012 13:00	1:00:00	5.2	275.8	64.8	84.5	37.4			
	07/03/2012 14:00	1:00:00	5.6	272.3	62.4	79.8	38.7			
	07/03/2012 15:00	1:00:00	5.2	262.5	62.8	81.9	37.2			
	07/03/2012 17:00	1:00:00	6.1	265.3	61.3	80.3	38.2			
GN1	07/03/2012 18:00	1:00:00	3.6	277.8	60.1	77.9	35.8			
	07/03/2012 07:00	1:00:00	4.2	259.0	66.9	83.1	52.8			
	07/03/2012 08:00	1:00:00	4.3	256.8	66.8	81.8	51.6			
	07/03/2012 09:00	1:00:00	6.8	254.8	67.2	83.4	51.0			
	07/03/2012 10:00	1:00:00	6.4	257.3	66.7	85.2	51.0			
	07/03/2012 11:00	1:00:00	5.3	262.5	71.3	89.9	50.4			
	07/03/2012 12:00	1:00:00	6.5	255.3	68.5	85.2	53.0			
	07/03/2012 13:00	1:00:00	5.2	275.8	68.2	84.0	52.1			
	07/03/2012 14:00	1:00:00	5.6	272.3	68.4	86.2	52.8			
	07/03/2012 15:00	1:00:00	5.2	262.5	66.7	84.6	52.0			
	07/03/2012 16:00	1:00:00	7.6	257.3	68.5	86.8	51.7			
	07/03/2012 17:00	1:00:00	6.1	265.3	68.4	90.4	51.1			
RN1	07/03/2012 18:00	1:00:00	3.6	277.8	68.8	88.2	51.5			
	07/03/2012 07:00	1:00:00	4.2	259.0	61.7	82.2	44.5			
			07/03/2012 08:00	1:00:00	4.3	256.8	61.3	84.2	44.1	
* Wind speeds in excess of 5 m/s negatively impact noise readings (as per EPA Guidance Note on Noise Measurement).										
**Allowance of +/- 1.5dB accuracy of sound level meter (ref: IEC 61672 (2002-2005))										
The results show Laeq(1hr) for maximum daily values or values over 60dB for each day of monitoring										
	AN1		AN2		AN3		GN1		RN1	

Day Time Noise Monitoring / Max Hourly or above 60dB L <sub>Aeq</sub> Record Sheet										
Determinant Results										
Location	Air Temp. (Min)	Air Temp. (Max)	Start Date and Time	Duration	Wind		Results dB			
					Speed (m/s)*	Direction (Degrees)	L <sub>Aeq</sub>	L <sub>Amax</sub>	L <sub>Amin</sub>	
AN1	6.7	11.3	08/03/2012 07:00	01:00:00	6.2	193.3	62.8	83.1	55.4	
			08/03/2012 08:00	01:00:00	5.7	205.3	69.0	90.1	54.7	
			08/03/2012 09:00	01:00:00	6.8	200.8	66.2	86.1	47.9	
			08/03/2012 10:00	01:00:00	6.7	208.0	68.5	93.4	52.3	
			08/03/2012 11:00	01:00:00	7.6	199.0	71.2	94.2	58.0	
			08/03/2012 12:00	01:00:00	7.9	206.8	73.1	94.1	54.3	
			08/03/2012 13:00	01:00:00	8.3	201.8	63.8	92.7	48.8	
			08/03/2012 14:00	01:00:00	8.3	201.5	67.1	88.5	51.0	
			08/03/2012 15:00	01:00:00	6.9	200.0	65.7	85.5	56.1	
			08/03/2012 16:00	01:00:00	7.6	195.5	65.8	92.6	57.5	
			08/03/2012 17:00	01:00:00	6.6	199.0	65.7	88.3	54.8	
			08/03/2012 18:00	01:00:00	4.5	196.5	62.9	85.9	51.8	
AN2	08/03/2012 14:00	01:00:00	8.3	201.5	59.7	78.7	45.0			
AN3	08/03/2012 12:00	1:00:00	7.9	206.8	52.5	34.4	73.6			
GN1			08/03/2012 08:00	01:00:00	5.7	205.3	63.0	78.2	48.2	
			08/03/2012 09:00	01:00:00	6.8	200.8	67.6	81.9	49.8	
			08/03/2012 10:00	01:00:00	6.7	208.0	66.9	81.6	50.4	
			08/03/2012 11:00	01:00:00	7.6	199.0	66.4	84.0	50.8	
			08/03/2012 12:00	01:00:00	7.9	206.8	66.7	80.7	49.3	
			08/03/2012 13:00	01:00:00	8.3	201.8	68.5	82.8	50.2	
			08/03/2012 14:00	01:00:00	8.3	201.5	68.1	82.9	50.4	
			08/03/2012 15:00	01:00:00	6.9	200.0	65.8	82.7	47.5	
			08/03/2012 16:00	01:00:00	7.6	195.5	66.5	81.5	49.1	
			08/03/2012 17:00	01:00:00	6.6	199.0	66.8	86.2	45.6	
			08/03/2012 18:00	01:00:00	4.5	196.5	65.6	83.4	45.5	
			08/03/2012 19:00	01:00:00	5.8	193.8	66.2	81.5	47.5	
AN1	10.6	12.3	09/03/2012 07:00	01:00:00	7.6	202.0	70.1	92.8	52.7	
			09/03/2012 08:00	01:00:00	8.7	204.8	70.0	95.1	56.5	
			09/03/2012 09:00	01:00:00	3.5	214.0	71.0	92.5	54.5	
			09/03/2012 10:00	01:00:00	6.5	213.0	65.6	93.1	54.7	
			09/03/2012 11:00	01:00:00	5.0	210.5	70.1	93.1	58.0	
			09/03/2012 12:00	01:00:00	3.1	243.3	66.7	84.6	58.1	
			09/03/2012 13:00	01:00:00	2.9	235.0	70.1	89.3	58.3	
			09/03/2012 14:00	01:00:00	2.5	236.8	74.2	95.5	59.0	
			09/03/2012 15:00	01:00:00	2.6	221.8	72.3	94.3	57.6	
			09/03/2012 16:00	01:00:00	4.7	237.5	62.2	84.9	53.6	
			AN2	09/03/2012 07:00	01:00:00	7.6	202.0	62.8	82.4	45.9
			AN3	09/03/2012 08:00	01:00:00	8.7	204.8	62.0	81.3	46.3
GN1	09/03/2012 08:00	01:00:00	8.7	204.8	50.6	73.0	33.2			
RN1			09/03/2012 07:00	01:00:00	7.6	202.0	64.9	78.3	47.6	
			09/03/2012 08:00	01:00:00	8.7	204.8	65.9	81.1	49.0	
			09/03/2012 09:00	01:00:00	3.5	214.0	64.0	87.1	49.9	
			09/03/2012 10:00	01:00:00	6.5	213.0	63.9	77.6	49.4	
			09/03/2012 18:00	01:00:00	2.8	218.0	49.9	83.5	32.2	
AN1	8.1	11.3	12/03/2012 11:00	01:00:00	3.3	170.5	67.4	89.4	57.7	
			12/03/2012 12:00	01:00:00	1.9	150.8	71.1	92.9	59.6	
			12/03/2012 13:00	01:00:00	1.5	162.5	69.4	91.7	55.4	
			12/03/2012 14:00	01:00:00	1.9	154.0	65.1	85.6	56.7	
			12/03/2012 15:00	01:00:00	1.7	130.0	69.2	88.9	58.5	
			12/03/2012 16:00	01:00:00	2.9	187.8	69.5	94.7	58.9	
			12/03/2012 17:00	01:00:00	2.4	182.5	69.4	90.9	57.7	
			12/03/2012 18:00	01:00:00	1.8	199.8	60.2	84.9	53.7	
			AN2	12/03/2012 17:00	01:00:00	2.4	182.5	56.0	74.5	35.5
			AN3	12/03/2012 17:00	01:00:00	2.4	182.5	43.9	28.7	65.1
			GN1	12/03/2012 17:00	01:00:00	2.4	182.5	50.6	33.0	89.1
			RN1	12/03/2012 09:00	01:00:00	2.1	150.3	57.0	28.0	81.8
AN1	7.6	10.8	13/03/2012 07:00	01:00:00	0.7	117.5	64.7	86.3	55.5	
			13/03/2012 08:00	01:00:00	0.8	139.5	70.3	89.7	57.9	
			13/03/2012 09:00	01:00:00	1.4	129.0	70.8	92.6	58.4	
			13/03/2012 10:00	01:00:00	1.5	131.0	69.0	91.5	56.2	
			13/03/2012 11:00	01:00:00	2.2	145.5	68.2	92.5	57.6	
			13/03/2012 12:00	01:00:00	1.9	114.8	65.6	84.0	57.6	
			13/03/2012 13:00	01:00:00	2.2	171.0	68.5	90.2	56.5	
			13/03/2012 14:00	01:00:00	2.3	157.8	69.0	91.8	56.2	
			13/03/2012 15:00	01:00:00	2.4	204.0	70.2	94.4	57.6	
			13/03/2012 16:00	01:00:00	1.9	180.8	66.7	92.0	58.3	
			13/03/2012 17:00	01:00:00	0.6	139.3	68.5	91.9	55.4	
			13/03/2012 18:00	01:00:00	0.9	155.3	65.9	90.4	53.5	
			AN2	13/03/2012 17:00	01:00:00	0.6	139.3	53.1	74.8	34.0
			AN3	13/03/2012 10:00	01:00:00	1.5	131.0	44.2	72.4	29.0
			GN1	13/03/2012 17:00	01:00:00	0.6	139.3	57.1	89.7	27.1
			RN1	13/03/2012 07:00	01:00:00	0.7	117.5	58.5	79.2	29.1
AN1	8.1	11.3	14/03/2012 07:00	01:00:00	2.8	147.0	67.4	89.3	54.6	
			14/03/2012 08:00	01:00:00	2.4	157.3	72.0	90.2	59.9	
			14/03/2012 09:00	01:00:00	2.8	152.8	67.5	89.4	57.4	
			14/03/2012 10:00	01:00:00	3.5	181.3	65.7	91.6	57.7	
			14/03/2012 11:00	01:00:00	5.7	183.0	69.4	90.5	59.6	
			14/03/2012 12:00	01:00:00	5.9	187.0	70.3	90.5	60.4	
			14/03/2012 13:00	01:00:00	6.2	189.5	68.8	91.6	54.7	
			14/03/2012 14:00	01:00:00	6.1	197.3	64.2	82.0	55.3	
			14/03/2012 15:00	01:00:00	5.1	183.0	72.3	94.3	60.3	
			14/03/2012 16:00	01:00:00	5.9	190.3	73.3	94.9	59.8	
			14/03/2012 17:00	01:00:00	6.2	196.8	71.4	94.2	55.8	
			14/03/2012 18:00	01:00:00	3.7	169.5	64.1	90.2	50.8	
			AN2	14/03/2012 15:00	01:00:00	5.1	183.0	58.0	82.7	40.8
			AN3	14/03/2012 07:00	01:00:00	2.8	147.0	47.2	71.2	28.7
			GN1	14/03/2012 15:00	01:00:00	5.1	183.0	59.2	79.5	38.3
			RN1	14/03/2012 18:00	01:00:00	3.7	169.5	59.9	86.6	33.6
* Wind speeds in excess of 5 m/s negatively impact noise readings (as per EPA Guidance Note on Noise Measurement).										
**Allowance of +/- 1.5dB accuracy of sound level meter (ref: IEC 61672 (2002-2005))										
The results show Laeq(1hr) for maximum daily values or values over 60dB for each day of monitoring										
	AN1		AN2		AN3		GN1		RN1	

Day Time Noise Monitoring / Max Hourly or above 60dB L <sub>Aeq</sub> Record Sheet										
Determinant Results										
Location	Air Temp. (Min)	Air Temp. (Max)	Start Date and Time	Duration	Wind		Results dB			
					Speed (m/s)*	Direction (Degrees)	L <sub>Aeq</sub>	L <sub>Amax</sub>	L <sub>Amin</sub>	
AN1	8.1	10.3	15/03/2012 08:00	01:00:00	5.1	175.0	68.4	90.2	56.6	
			15/03/2012 09:00	01:00:00	5.4	184.5	70.3	92.2	59.2	
			15/03/2012 10:00	01:00:00	4.2	195.0	70.7	92.9	59.1	
			15/03/2012 11:00	00:58:59	4.0	192.5	73.8	93.7	60.5	
			15/03/2012 13:00	01:00:00	5.2	186.3	65.9	83.7	53.3	
			15/03/2012 16:00	01:00:00	2.0	190.8	58.8	74.3	34.8	
			15/03/2012 14:00	01:00:00	3.5	173.5	45.0	69.7	29.4	
			15/03/2012 15:00	01:00:00	3.0	188.0	61.9	91.3	33.5	
GN1			15/03/2012 09:00	01:00:00	5.4	184.5	57.4	83.2	37.3	
AN1	1.9	8.1	16/03/2012 19:00	01:00:00	1.3	226.8	57.9	60.9	55.5	
AN2			16/03/2012 16:00	01:00:00	3.6	222.0	55.8	78.4	39.3	
AN3			16/03/2012 17:00	01:00:00	2.3	230.3	44.5	71.5	30.1	
GN1			16/03/2012 15:00	01:00:00	5.2	209.0	57.2	73.1	40.6	
RN1			16/03/2012 18:00	01:00:00	3.0	234.3	59.7	83.4	33.4	
AN1	-1.4	3.9	17/03/2012 12:00	01:00:00	1.5	250.0	60.3	81.9	52.6	
AN2			17/03/2012 13:00	01:00:00	2.1	271.3	64.4	82.8	52.5	
AN3			17/03/2012 12:00	01:00:00	1.5	250.0	57.2	79.3	40.5	
AN3			17/03/2012 07:00	01:00:00	0.6	202.3	49.4	83.5	28.8	
GN1			17/03/2012 19:00	01:00:00	1.6	256.5	61.5	92.3	38.0	
RN1			17/03/2012 07:00	01:00:00	0.6	202.3	63.2	81.4	25.4	
AN1	6.1	9.8	19/03/2012 09:00	01:00:00	6.8	201.8	60.6	83.1	51.5	
			19/03/2012 10:00	01:00:00	7.6	195.8	63.4	87.7	51.7	
			19/03/2012 11:00	01:00:00	7.1	188.0	64.7	85.6	51.9	
			19/03/2012 12:00	01:00:00	6.4	197.8	62.3	84.2	51.4	
			19/03/2012 13:00	01:00:00	5.9	203.0	61.5	84.8	51.8	
			19/03/2012 14:00	01:00:00	4.1	159.8	61.1	83.8	51.4	
			AN2	19/03/2012 11:00	01:00:00	7.1	188.0	60.7	81.1	44.0
			AN3	19/03/2012 12:00	01:00:00	6.4	197.8	50.2	72.2	33.5
			GN1	19/03/2012 07:00	01:00:00	5.3	194.8	62.7	82.1	41.8
				19/03/2012 08:00	01:00:00	6.9	200.0	63.4	78.9	43.0
				19/03/2012 09:00	01:00:00	6.8	201.8	63.5	85.3	37.7
				19/03/2012 10:00	01:00:00	7.6	195.8	65.2	84.3	40.4
				19/03/2012 11:00	01:00:00	7.1	188.0	67.6	88.5	41.8
				19/03/2012 12:00	01:00:00	6.4	197.8	65.9	82.8	42.0
				19/03/2012 13:00	01:00:00	5.9	203.0	67.7	86.2	43.4
				19/03/2012 14:00	01:00:00	4.1	159.8	67.5	83.9	44.4
				19/03/2012 15:00	01:00:00	7.0	190.0	69.4	88.7	51.2
				19/03/2012 16:00	01:00:00	6.4	193.5	70.0	84.4	43.3
				19/03/2012 17:00	01:00:00	5.5	199.5	66.3	81.4	41.7
				19/03/2012 18:00	01:00:00	5.6	196.5	67.7	86.7	46.2
19/03/2012 19:00	01:00:00	5.4	198.8	67.0	82.1	45.7				
RN1	19/03/2012 07:00	01:00:00	5.3	194.8	59.9	85.3	40.7			
AN1	9.9	10.8	20/03/2012 07:00	01:00:00	4.2	201.5	63.7	91.2	51.2	
			20/03/2012 08:00	01:00:00	3.7	204.5	73.1	95.1	56.8	
			20/03/2012 09:00	01:00:00	6.5	197.5	74.4	94.9	59.0	
			20/03/2012 10:00	01:00:00	5.2	195.0	70.3	94.1	57.2	
			20/03/2012 11:00	01:00:00	6.1	194.8	72.6	92.2	60.7	
			20/03/2012 12:00	01:00:00	7.2	184.3	77.3	92.4	60.9	
			20/03/2012 13:00	01:00:00	5.7	184.0	78.7	94.8	59.2	
			20/03/2012 14:00	01:00:00	6.3	200.5	69.8	92.9	57.0	
			20/03/2012 15:00	01:00:00	8.2	196.3	70.2	98.7	60.1	
			20/03/2012 16:00	01:00:00	7.4	194.5	73.0	95.4	60.5	
			20/03/2012 17:00	01:00:00	6.8	194.0	73.4	93.9	57.1	
			20/03/2012 18:00	01:00:00	8.1	188.3	64.1	84.2	50.9	
			20/03/2012 19:00	01:00:00	9.8	188.5	62.7	86.6	48.9	
			AN2	20/03/2012 15:00	01:00:00	8.2	196.3	59.3	80.2	44.5
			AN3	20/03/2012 09:00	01:00:00	6.5	197.5	61.4	81.7	31.2
				20/03/2012 10:00	01:00:00	5.2	195.0	64.6	82.8	41.6
				20/03/2012 11:00	01:00:00	6.1	194.8	63.5	83.3	40.7
				20/03/2012 12:00	01:00:00	7.2	184.3	66.3	81.5	41.7
				20/03/2012 13:00	01:00:00	5.7	184.0	66.9	83.9	42.5
				20/03/2012 14:00	01:00:00	6.3	200.5	64.1	84.8	40.8
20/03/2012 15:00	01:00:00	8.2		196.3	65.5	86.0	39.4			
20/03/2012 16:00	01:00:00	7.4		194.5	66.5	85.5	42.6			
GN1	20/03/2012 17:00	01:00:00	6.8	194.0	66.8	85.9	43.0			
	20/03/2012 18:00	01:00:00	8.1	188.3	63.9	86.1	39.7			
	20/03/2012 07:00	01:00:00	4.2	201.5	60.4	80.8	41.1			
	20/03/2012 08:00	01:00:00	3.7	204.5	64.9	81.3	44.2			
	20/03/2012 09:00	01:00:00	6.5	197.5	65.8	82.8	41.6			
	20/03/2012 10:00	01:00:00	5.2	195.0	63.7	83.3	42.0			
	20/03/2012 11:00	01:00:00	6.1	194.8	65.9	81.5	40.7			
	20/03/2012 12:00	01:00:00	7.2	184.3	66.6	83.9	45.1			
	20/03/2012 13:00	01:00:00	5.7	184.0	64.6	84.8	40.8			
	20/03/2012 14:00	01:00:00	6.3	200.5	64.9	86.0	39.4			
GN1	20/03/2012 15:00	01:00:00	8.2	196.3	66.7	85.5	43.9			
	20/03/2012 16:00	01:00:00	7.4	194.5	65.9	85.6	42.6			
	20/03/2012 17:00	01:00:00	6.8	194.0	66.0	86.1	39.7			
	RN1	20/03/2012 17:00	01:00:00	6.8	194.0	60.1	87.9	48.2		
			20/03/2012 18:00	01:00:00	8.1	188.3	63.5	89.6	46.9	
* Wind speeds in excess of 5 m/s negatively impact noise readings (as per EPA Guidance Note on Noise Measurement).										
**Allowance of +/- 1.5dB accuracy of sound level meter (ref: IEC 61672 (2002-2005))										
The results show Laeq(1hr) for maximum daily values or values over 60dB for each day of monitoring										
	AN1		AN2		AN3		GN1		RN1	



Day Time Noise Monitoring / Max Hourly or above 60dB L <sub>Aeq</sub> Record Sheet										
Determinant Results										
Location	Air Temp. (Min)	Air Temp. (Max)	Start Date and Time	Duration	Wind		Results dB			
					Speed (m/s)*	Direction (Degrees)	L <sub>Aeq</sub>	L <sub>Amax</sub>	L <sub>Amin</sub>	
AN1	9.5	10.1	21/03/2012 07:00	01:00:00	3.0	189.5	71.5	93.7	49.2	
			21/03/2012 08:00	01:00:00	4.5	183.5	76.6	91.1	60.1	
			21/03/2012 09:00	01:00:00	5.0	176.8	74.5	91.7	57.2	
			21/03/2012 10:00	01:00:00	4.0	177.0	67.9	92.4	55.9	
			21/03/2012 11:00	01:00:00	5.3	165.5	68.2	89.7	58.1	
			21/03/2012 12:00	01:00:00	7.0	184.3	71.4	94.8	59.6	
			21/03/2012 13:00	01:00:00	5.1	199.5	72.7	94.0	51.4	
			21/03/2012 14:00	01:00:00	5.8	163.8	66.0	87.5	54.0	
			21/03/2012 15:00	01:00:00	5.8	186.5	71.6	94.7	58.8	
			21/03/2012 16:00	01:00:00	3.1	183.0	73.8	92.4	56.8	
			21/03/2012 17:00	01:00:00	2.8	179.0	72.3	91.2	53.3	
			21/03/2012 18:00	01:00:00	1.8	152.5	67.0	91.0	45.7	
			AN2	21/03/2012 11:00	01:00:00	5.3	165.5	57.7	81.9	38.7
			AN3	21/03/2012 12:00	01:00:00	7.0	184.3	46.0	71.3	30.1
GN1	21/03/2012 11:00	01:00:00	5.3	165.5	54.9	89.4	35.9			
RN1	21/03/2012 07:00	01:00:00	3.0	189.5	63.6	87.7	36.6			
	21/03/2012 08:00	01:00:00	4.5	183.5	60.6	83.7	38.7			
AN1	4.6	16.1	22/03/2012 07:00	01:00:00	2.7	181.0	63.2	86.1	42.8	
			22/03/2012 08:00	01:00:00	1.4	140.0	67.8	91.6	53.4	
			22/03/2012 09:00	01:00:00	1.5	168.0	69.4	92.7	53.7	
			22/03/2012 10:00	01:00:00	2.2	123.3	70.1	92.4	55.9	
			22/03/2012 11:00	01:00:00	2.4	153.8	68.2	93.0	57.9	
			22/03/2012 12:00	01:00:00	2.6	111.0	72.1	92.8	54.2	
			22/03/2012 13:00	01:00:00	3.6	129.5	70.6	90.9	52.9	
			22/03/2012 14:00	01:00:00	1.9	109.5	74.3	92.9	55.9	
			22/03/2012 15:00	01:00:00	2.6	105.0	72.3	91.8	52.5	
			22/03/2012 16:00	01:00:00	1.8	166.3	69.9	92.0	54.5	
			22/03/2012 17:00	01:00:00	1.6	107.5	62.9	91.8	44.3	
			AN2	22/03/2012 13:00	01:00:00	3.6	129.5	60.2	84.0	38.5
			AN3	22/03/2012 16:00	01:00:00	1.8	166.3	47.7	66.7	30.4
			GN1	22/03/2012 12:00	01:00:00	2.6	111.0	51.1	87.6	30.6
RN1	22/03/2012 17:00	01:00:00	1.6	107.5	59.3	83.3	37.5			
AN1	7.8	13.8	23/03/2012 07:00	01:00:00	2.3	161.8	71.0	90.4	57.9	
			23/03/2012 08:00	01:00:00	2.1	140.5	73.1	92.0	56.6	
			23/03/2012 09:00	01:00:00	1.2	128.0	68.6	89.6	56.7	
			23/03/2012 10:00	01:00:00	2.1	124.3	73.7	93.5	58.6	
			23/03/2012 11:00	01:00:00	2.1	88.0	75.5	89.1	60.5	
			23/03/2012 12:00	01:00:00	2.8	193.5	70.1	93.6	47.9	
			23/03/2012 13:00	01:00:00	2.8	107.8	65.0	86.8	49.4	
			23/03/2012 14:00	01:00:00	3.2	130.5	67.7	83.1	56.3	
			23/03/2012 15:00	01:00:00	2.1	122.0	65.7	86.4	47.9	
			23/03/2012 14:00	01:00:00	3.2	130.5	55.7	75.5	33.6	
			AN2	23/03/2012 08:00	01:00:00	2.1	140.5	48.7	80.0	29.4
			AN3	23/03/2012 12:00	01:00:00	2.8	193.5	53.7	88.8	32.6
			GN1	23/03/2012 07:00	01:00:00	2.3	161.8	62.9	83.2	34.5
				23/03/2012 14:00	01:00:00	3.2	130.5	61.8	89.1	43.8
RN1	23/03/2012 18:00	01:00:00	1.7	119.0	60.1	85.7	38.4			
AN1	9.3	17.1	24/03/2012 07:00	01:00:00	2.5	125.0	60.4	86.1	46.7	
AN2			24/03/2012 08:00	01:00:00	3.1	114.3	59.3	79.8	37.6	
AN3			24/03/2012 08:00	01:00:00	3.1	114.3	44.7	66.1	31.2	
GN1			24/03/2012 14:00	01:00:00	2.3	142.5	53.4	77.7	35.3	
RN1			24/03/2012 08:00	01:00:00	3.1	114.3	61.6	82.2	43.9	
			24/03/2012 19:00	01:00:00	2.0	135.5	60.3	87.2	31.4	
AN1	5.4	20.5	26/03/2012 07:00	01:00:00	0.6	148.8	67.4	92.3	47.2	
			26/03/2012 08:00	01:00:00	0.9	110.0	72.6	94.7	57.5	
			26/03/2012 09:00	01:00:00	1.4	145.3	73.1	90.6	55.7	
			26/03/2012 10:00	01:00:00	1.2	98.3	69.1	90.9	55.7	
			26/03/2012 11:00	01:00:00	2.7	125.8	66.5	89.5	56.0	
			26/03/2012 12:00	01:00:00	1.5	118.8	70.9	91.3	55.4	
			26/03/2012 13:00	01:00:00	2.5	138.3	71.4	92.3	55.3	
			26/03/2012 14:00	01:00:00	2.8	145.0	69.3	92.5	55.0	
			26/03/2012 15:00	01:00:00	2.3	121.3	72.5	91.2	54.3	
			AN2	26/03/2012 17:00	01:00:00	2.9	129.0	54.5	73.9	29.1
			AN3	26/03/2012 09:00	01:00:00	1.4	145.3	46.4	70.3	29.3
			GN1	26/03/2012 12:00	01:00:00	1.5	118.8	51.6	91.1	31.2
			RN1	26/03/2012 08:00	01:00:00	0.9	110.0	58.3	88.7	37.0
			AN1	5.2	21.8	27/03/2012 12:00	01:00:00	3.6	129.5	68.7
27/03/2012 13:00	01:00:00	2.1				151.5	66.7	96.7	52.6	
27/03/2012 14:00	01:00:00	1.5				118.0	66.7	90.6	54.2	
27/03/2012 15:00	01:00:00	3.3				134.0	67.4	90.4	55.7	
27/03/2012 16:00	01:00:00	1.5				123.5	73.2	91.4	57.0	
27/03/2012 17:00	01:00:00	1.3				151.3	72.1	90.4	46.6	
AN2	27/03/2012 14:00	01:00:00				1.5	118.0	61.8	82.2	29.5
27/03/2012 16:00	01:00:00	1.5				123.5	63.0	90.2	32.8	
AN3	27/03/2012 07:00	01:00:00				0.6	292.3	48.3	67.0	26.2
GN1	27/03/2012 09:00	01:00:00				0.8	102.3	50.2	71.1	33.2
RN1	27/03/2012 08:00	01:00:00	0.3	113.8	56.8	82.5	34.2			
* Wind speeds in excess of 5 m/s negatively impact noise readings (as per EPA Guidance Note on Noise Measurement).										
**Allowance of +/- 1.5dB accuracy of sound level meter (ref: IEC 61672 (2002-2005))										
The results show Laeq(1hr) for maximum daily values or values over 60dB for each day of monitoring										
	AN1		AN2		AN3		GN1		RN1	

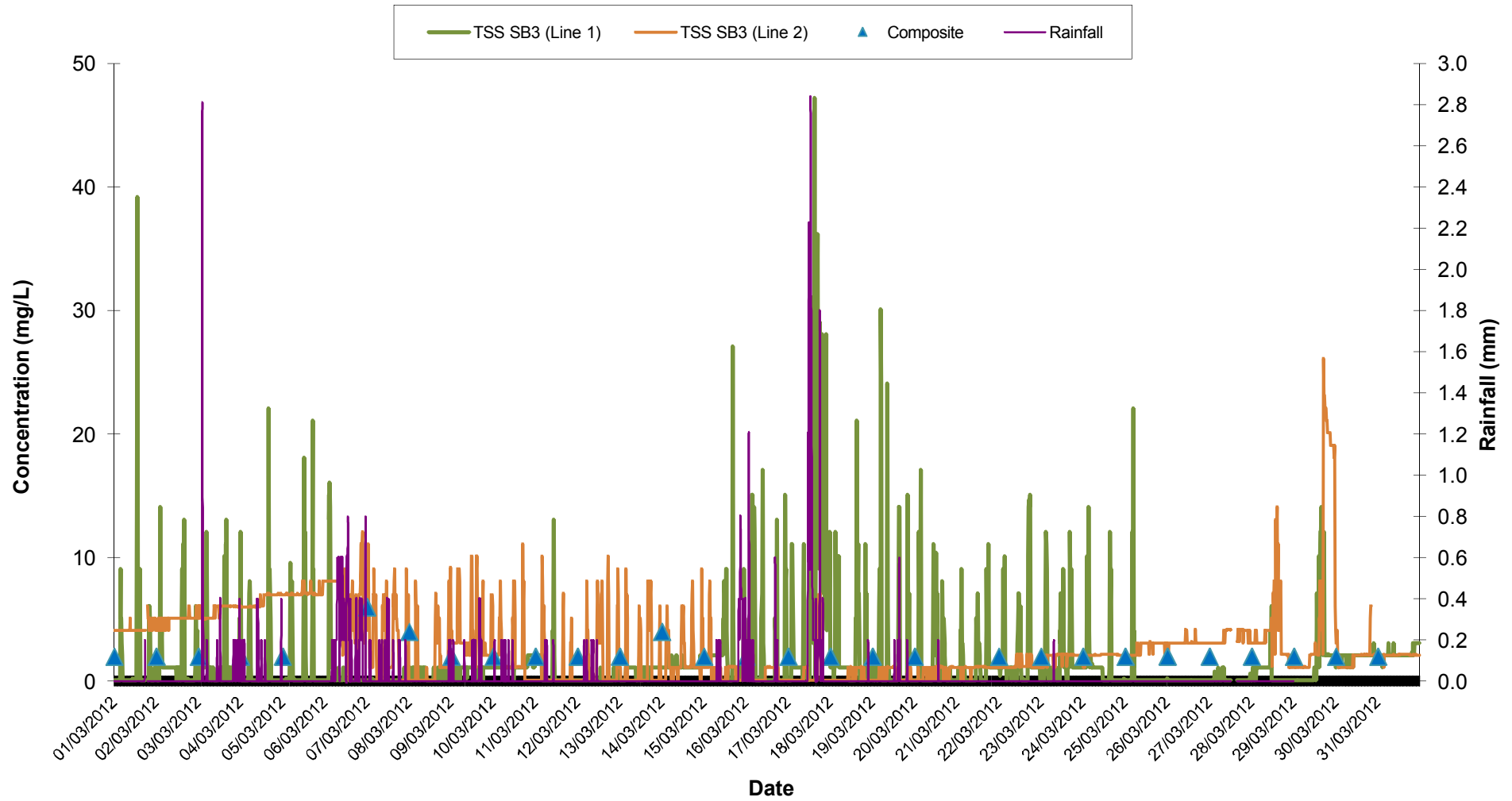
Day Time Noise Monitoring / Max Hourly or above 60dB L <sub>Aeq</sub> Record Sheet											
Determinant Results											
Location	Air Temp. (Min)	Air Temp. (Max)	Start Date and Time	Duration	Wind		Results dB				
					Speed (m/s)*	Direction (Degrees)	L <sub>Aeq</sub>	L <sub>Amax</sub>	L <sub>Amin</sub>		
AN1	0.4	17.6	28/03/2012 07:00	01:00:00	0.8	169.8	61.5	82.3	51.1		
			28/03/2012 08:00	01:00:00	0.7	231.5	68.3	91.2	57.2		
			28/03/2012 09:00	01:00:00	0.4	134.8	66.8	94.2	50.7		
			28/03/2012 10:00	01:00:00	0.6	182.3	68.1	91.7	52.0		
			28/03/2012 11:00	01:00:00	1.5	245.8	68.9	90.0	55.1		
			28/03/2012 12:00	01:00:00	1.8	305.5	70.3	92.2	54.9		
			28/03/2012 13:00	01:00:00	2.9	312.3	70.9	90.5	51.9		
			28/03/2012 14:00	01:00:00	3.6	299.5	64.5	98.0	51.7		
			28/03/2012 15:00	01:00:00	3.7	320.0	66.1	92.6	52.6		
			28/03/2012 16:00	01:00:00	1.9	254.0	72.1	96.2	53.9		
28/03/2012 17:00			01:00:00	2.6	248.5	70.9	91.9	53.9			
28/03/2012 18:00			01:00:00	1.6	238.3	67.1	90.7	45.6			
AN2			28/03/2012 08:00	01:00:00	0.7	231.5	63.4	91.1	37.4		
			28/03/2012 09:00	01:00:00	0.4	134.8	70.7	91.0	49.6		
			28/03/2012 11:00	01:00:00	1.5	245.8	64.7	91.5	34.3		
			28/03/2012 13:00	01:00:00	2.9	312.3	63.0	92.9	35.7		
			28/03/2012 14:00	01:00:00	3.6	299.5	67.7	91.1	36.1		
			28/03/2012 15:00	01:00:00	3.7	320.0	69.5	95.5	38.4		
AN3			28/03/2012 16:00	01:00:00	1.9	254.0	67.6	95.2	34.8		
GN1			28/03/2012 08:00	01:00:00	0.7	231.5	47.6	62.8	30.8		
RN1			28/03/2012 18:00	01:00:00	1.6	238.3	54.4	87.9	33.9		
			28/03/2012 19:00	01:00:00	1.5	239.8	59.5	87.2	23.6		
AN1	-0.3	6.7	29/03/2012 07:00	01:00:00	0.4	139.3	63.4	89.3	47.0		
			29/03/2012 08:00	01:00:00	0.3	108.5	68.7	91.8	54.7		
			29/03/2012 09:00	01:00:00	0.4	197.8	71.9	92.0	52.1		
			29/03/2012 10:00	01:00:00	0.6	253.3	65.7	93.5	51.7		
			29/03/2012 11:00	01:00:00	1.4	291.5	70.9	90.5	54.9		
			29/03/2012 12:00	01:00:00	2.3	286.5	74.8	90.8	55.4		
			29/03/2012 13:00	01:00:00	3.1	296.5	76.2	94.1	50.6		
			29/03/2012 14:00	01:00:00	3.1	298.8	62.0	87.6	47.0		
			29/03/2012 15:00	01:00:00	3.3	298.0	63.5	87.0	54.9		
			29/03/2012 16:00	01:00:00	2.7	324.0	71.9	96.3	54.1		
29/03/2012 17:00			01:00:00	2.2	333.0	68.1	92.3	53.1			
29/03/2012 18:00			01:00:00	2.1	252.5	65.5	93.2	45.0			
AN2			29/03/2012 17:00	01:00:00	2.2	333.0	56.9	78.7	34.1		
AN3			29/03/2012 08:00	01:00:00	0.3	108.5	48.1	71.1	32.8		
GN1			29/03/2012 13:00	01:00:00	3.1	296.5	52.9	89.1	32.2		
RN1			29/03/2012 08:00	01:00:00	0.3	108.5	58.5	81.4	35.8		
AN1	8.9	9.8	30/03/2012 07:00	01:00:00	1.6	257.5	67.8	91.9	45.9		
			30/03/2012 08:00	01:00:00	2.4	328.8	69.0	91.0	54.4		
			30/03/2012 09:00	01:00:00	2.7	321.5	74.4	92.7	56.0		
			30/03/2012 10:00	01:00:00	2.0	327.5	67.6	88.1	50.1		
			30/03/2012 11:00	01:00:00	3.1	320.0	69.4	93.1	53.1		
			30/03/2012 12:00	01:00:00	2.9	324.0	71.9	96.0	55.9		
			30/03/2012 13:00	01:00:00	2.6	321.3	67.4	92.1	45.8		
			AN2	30/03/2012 09:00	01:00:00	2.7	321.5	53.0	68.0	39.8	
			AN3	30/03/2012 12:00	01:00:00	2.9	324.0	47.1	63.8	25.2	
			GN1	30/03/2012 11:00	01:00:00	3.1	320.0	52.5	90.1	33.2	
RN1			30/03/2012 07:00	01:00:00	1.6	257.5	58.8	84.0	21.7		
* Wind speeds in excess of 5 m/s negatively impact noise readings (as per EPA Guidance Note on Noise Measurement).											
**Allowance of +/- 1.5dB accuracy of sound level meter (ref: IEC 61672 (2002-2005))											
The results show Laeq(1hr) for maximum daily values or values over 60dB for each day of monitoring											
			AN1		AN2		AN3		GN1		RN1

**Vibration Monitoring Record Sheet**

Minimum Criterion 8mm/s							
Date	Location	PPV max	Comment	Date	Location*	PPV max (mm/s)	Comment
01/03/2012	V3	0.40		01/03/2012	V2	2.09	
02/03/2012	V3	-	Data Corrupted	02/03/2012	V2	1.29	
03/03/2012	V3	0.40		03/03/2012	V2	0.48	
05/03/2012	V3	0.32		05/03/2012	V2	1.37	
06/03/2012	V3	0.40		06/03/2012	V2	1.12	
07/03/2012	V3	0.40		07/03/2012	V2	3.70	
08/03/2012	V3	0.32		08/03/2012	V2	4.66	
09/03/2012	V3	0.40		09/03/2012	V2	4.18	
10/03/2012	V3	0.40		10/03/2012	V2	0.24	
12/03/2012	V3	0.32		12/03/2012	V2	2.41	
13/03/2012	V3	0.40		13/03/2012	V2	0.80	
14/03/2012	V3	0.40		14/03/2012	V2	3.61	
15/03/2012	V3	0.40		15/03/2012	V2	5.38	
20/03/2012	V3	0.40		20/03/2012	V2	0.40	
21/03/2012	V3	0.40		21/03/2012	V2	0.96	
22/03/2012	V3	0.40		22/03/2012	V2	3.45	
23/03/2012	V3	0.32		23/03/2012	V2	0.96	
24/03/2012	V3	0.32		24/03/2012	V2	0.40	
26/03/2012	V3	0.40		26/03/2012	V2	3.21	
27/03/2012	V3	0.40		27/03/2012	V2	2.20	
28/03/2012	V3	0.40		28/03/2012	V2	4.90	
29/03/2012	V3	0.56		29/03/2012	V2	4.10	
30/03/2012	V3	0.40		30/03/2012	V2	4.10	
31/03/2012	V3	0.40		31/03/2012	V2	0.40	

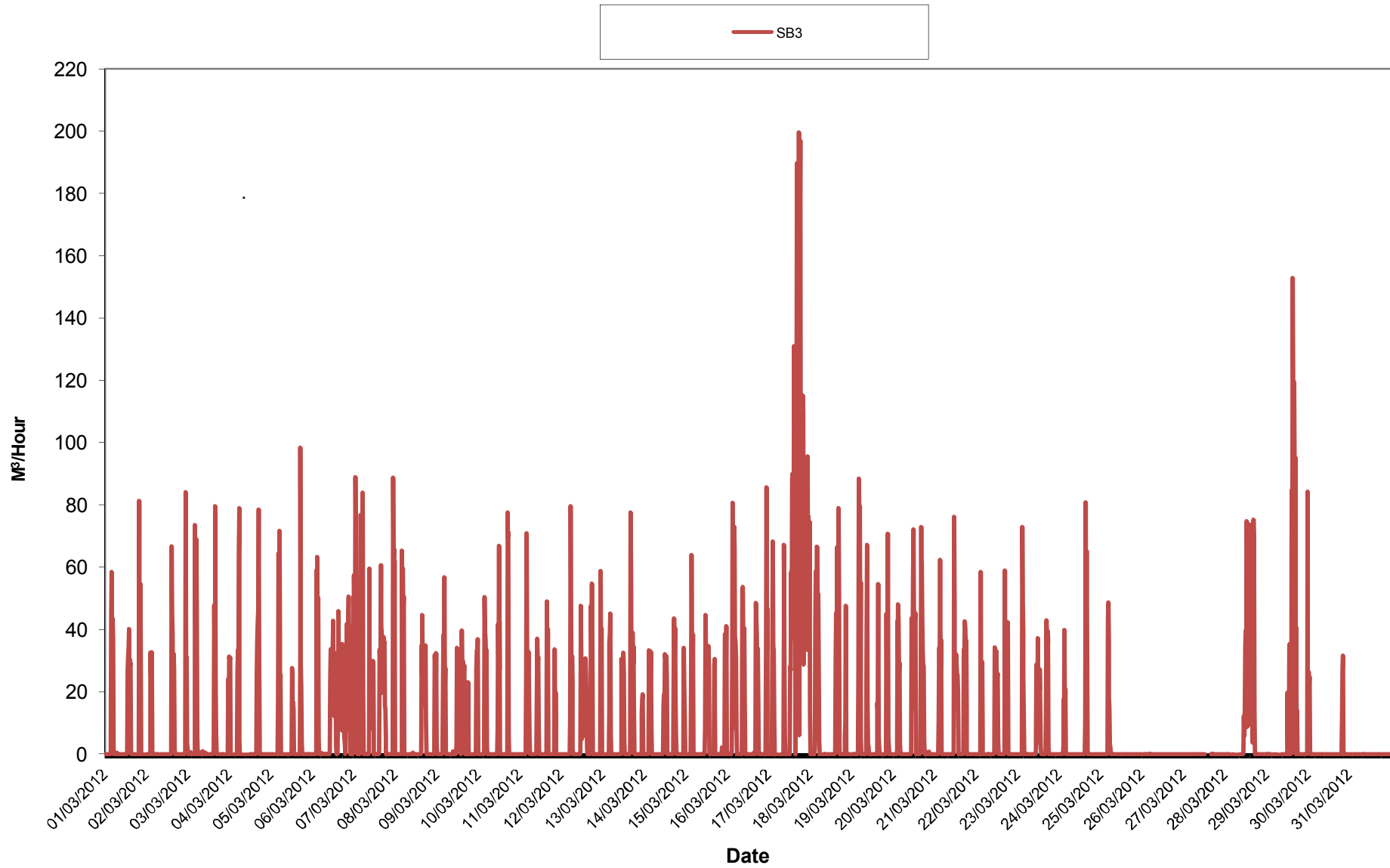
\*Vibration events due to personnel activity in and around cage at V2 have been excluded from this data

# Total Suspended Solids March 2012



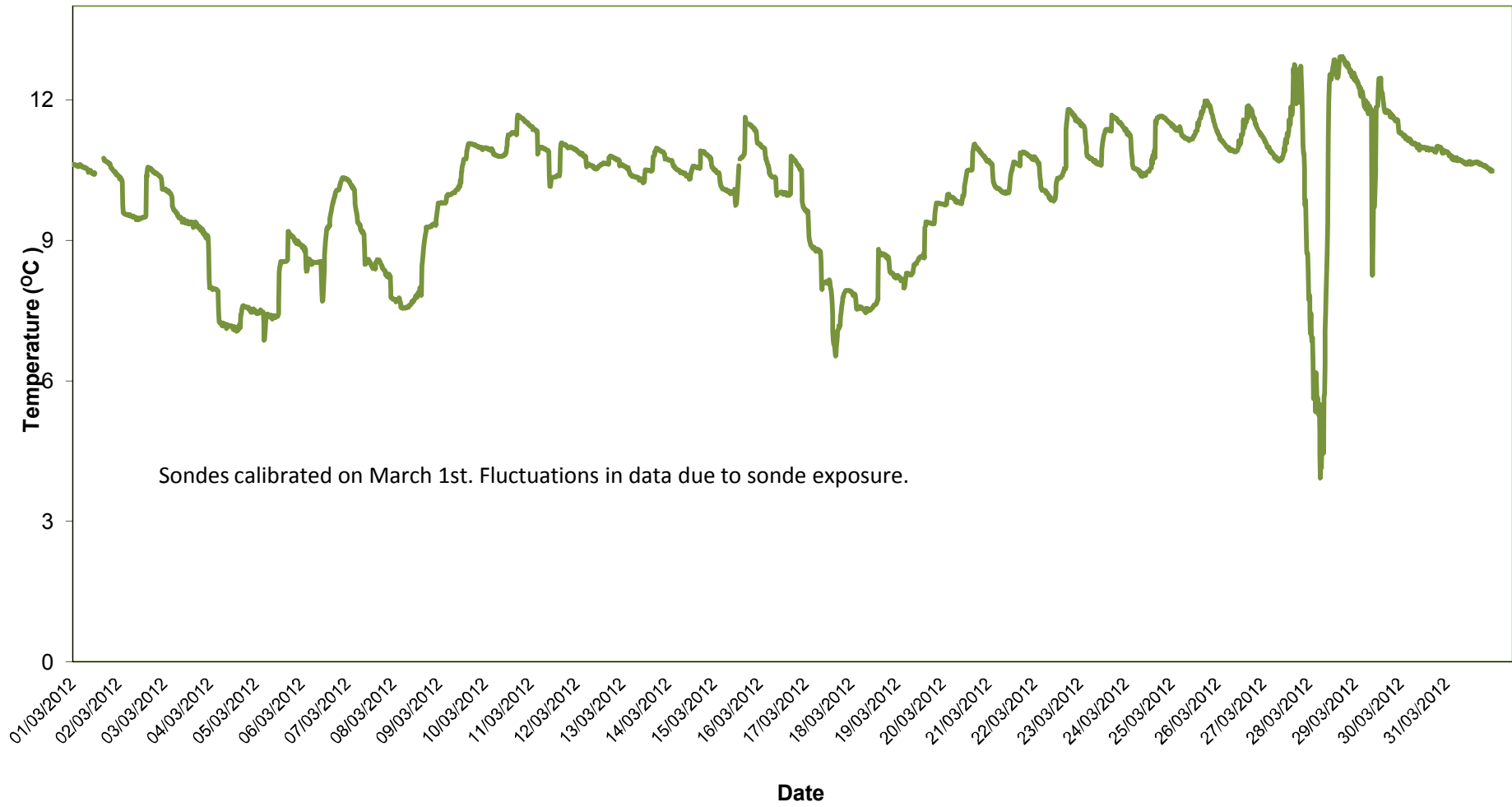


# Surface Water Discharge March 2012

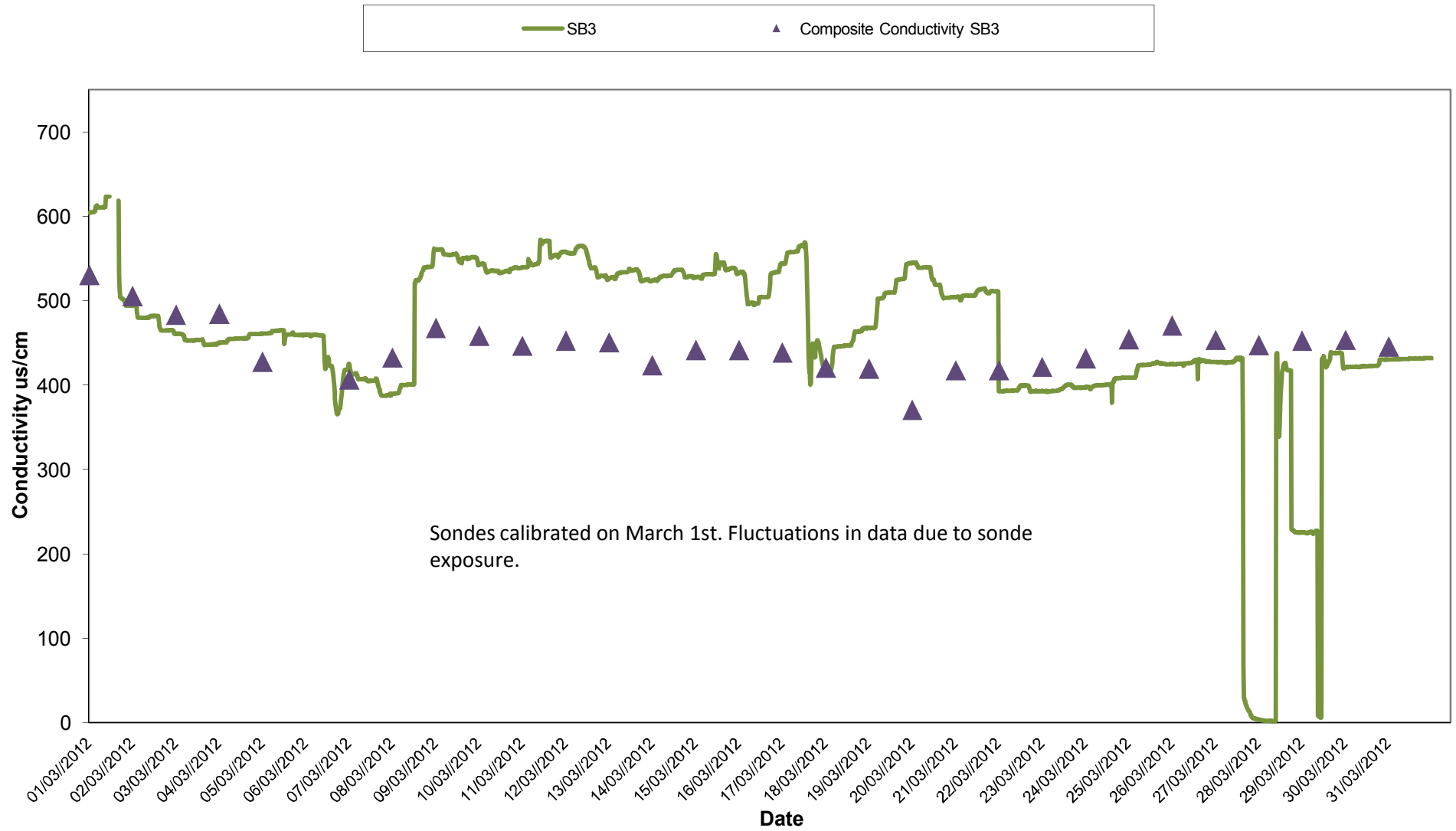


# Temperature - Surface Water Discharge March 2012

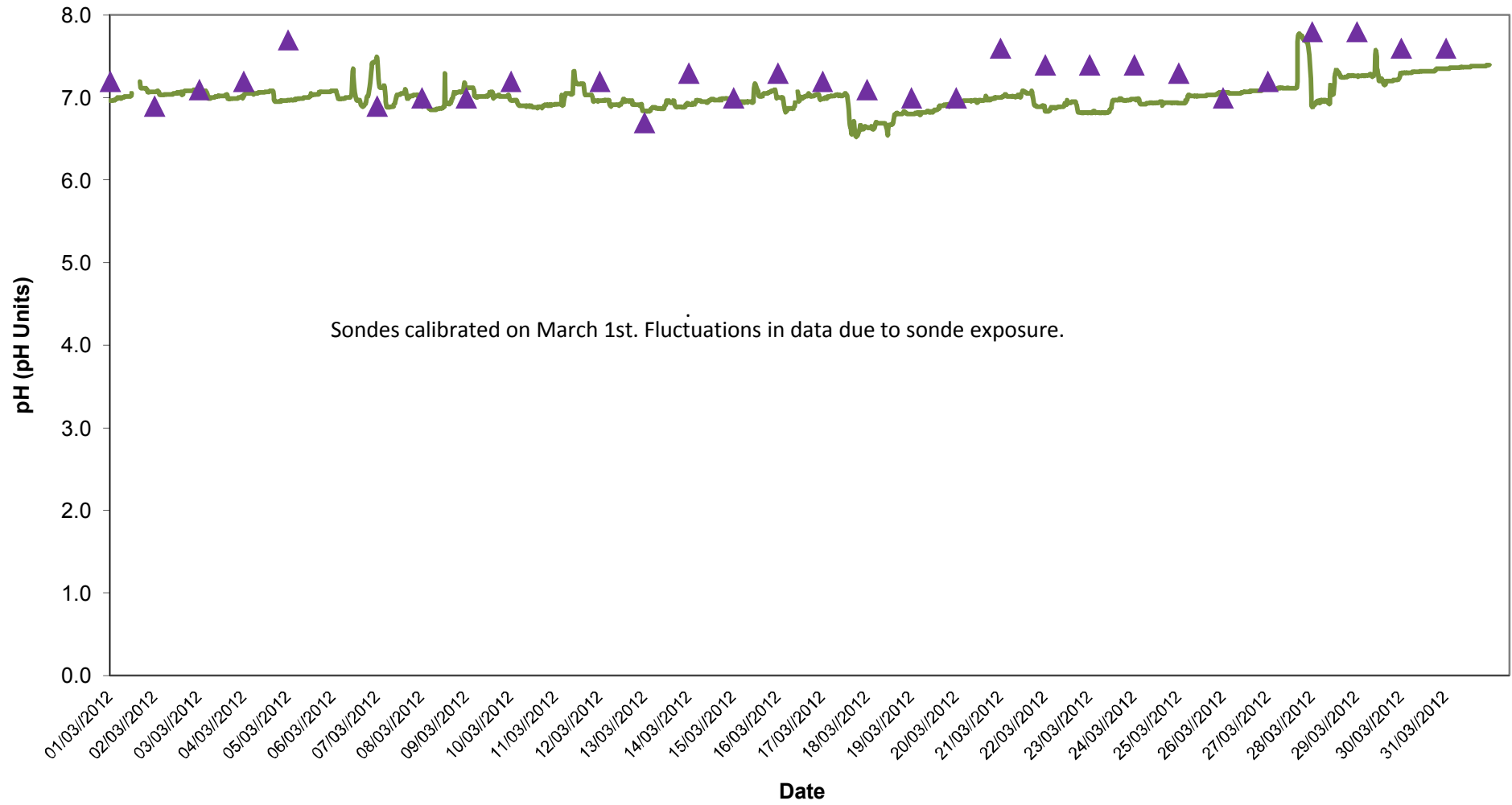
SB3



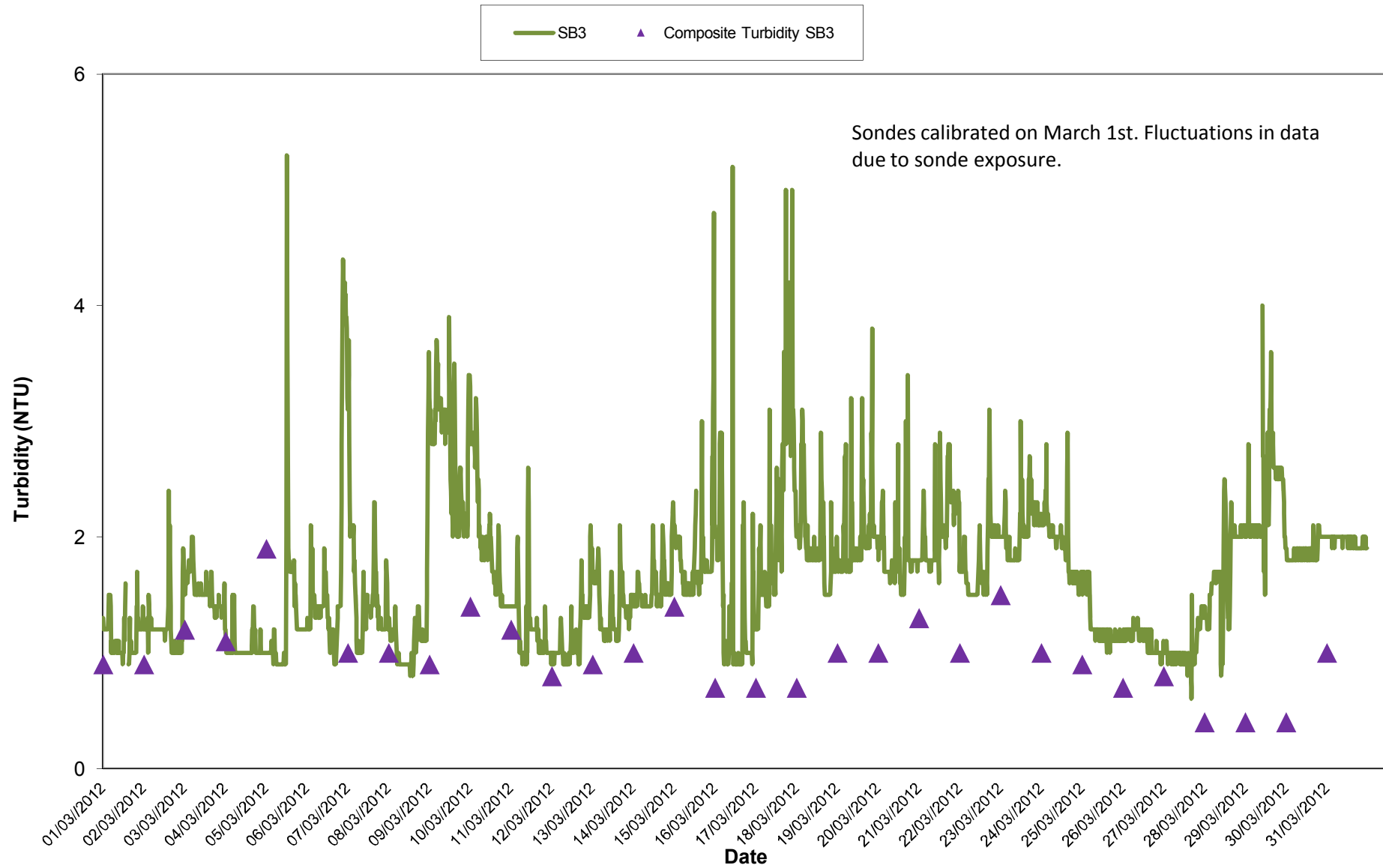
# Conductivity - Surface Water Discharge March 2012



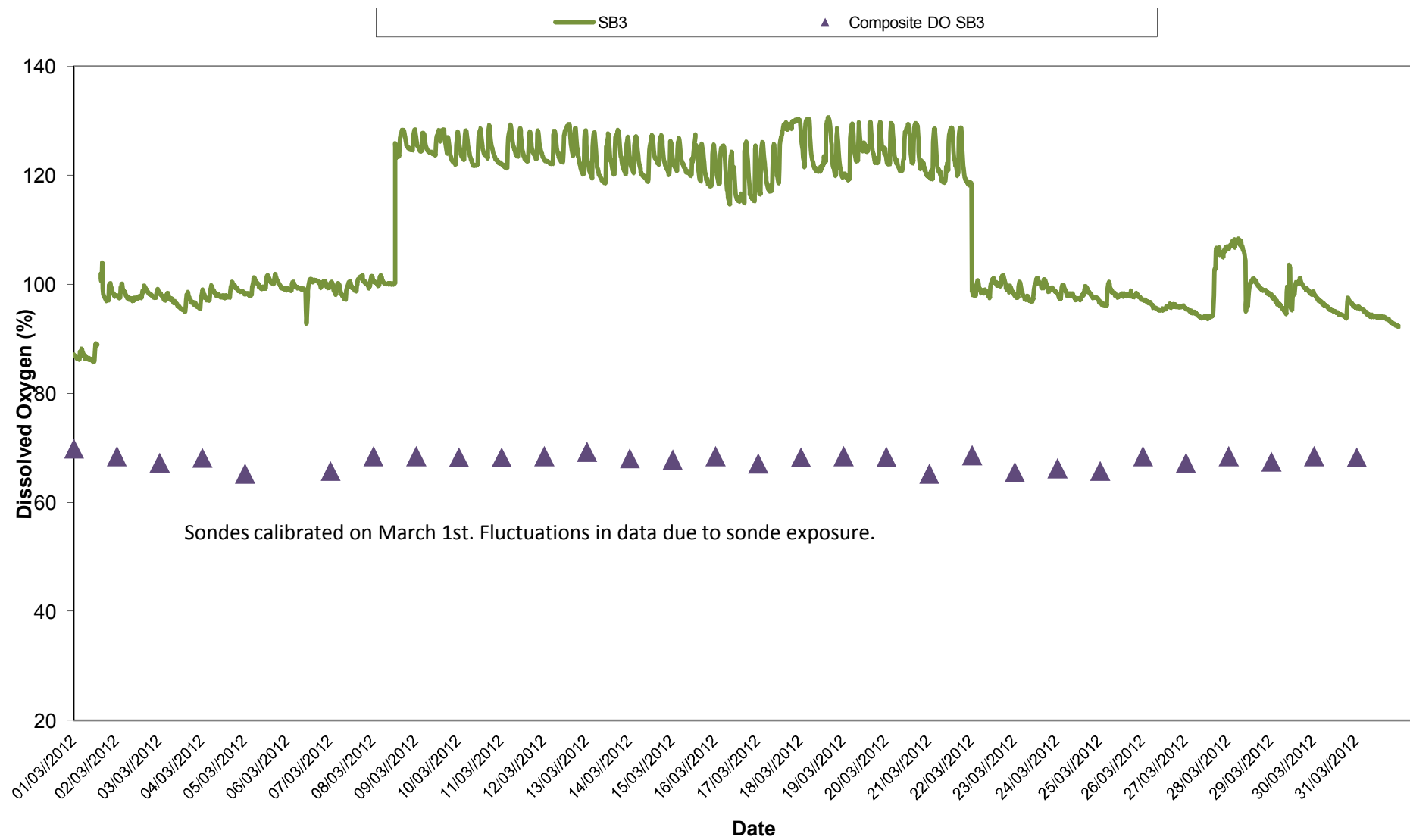
# pH - Surface Water Discharge March 2012



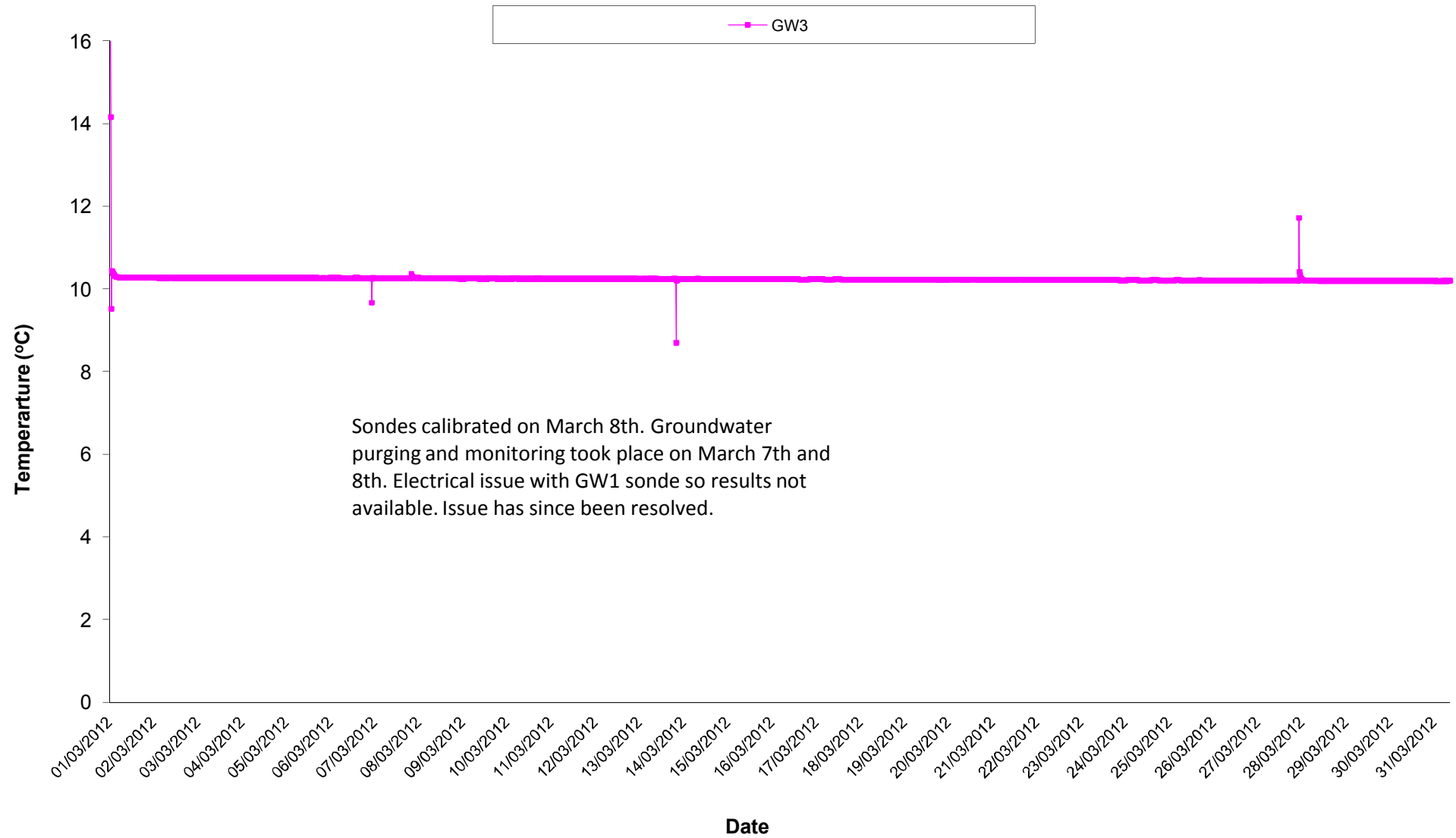
# Turbidity- Surface Water Discharge March 2012



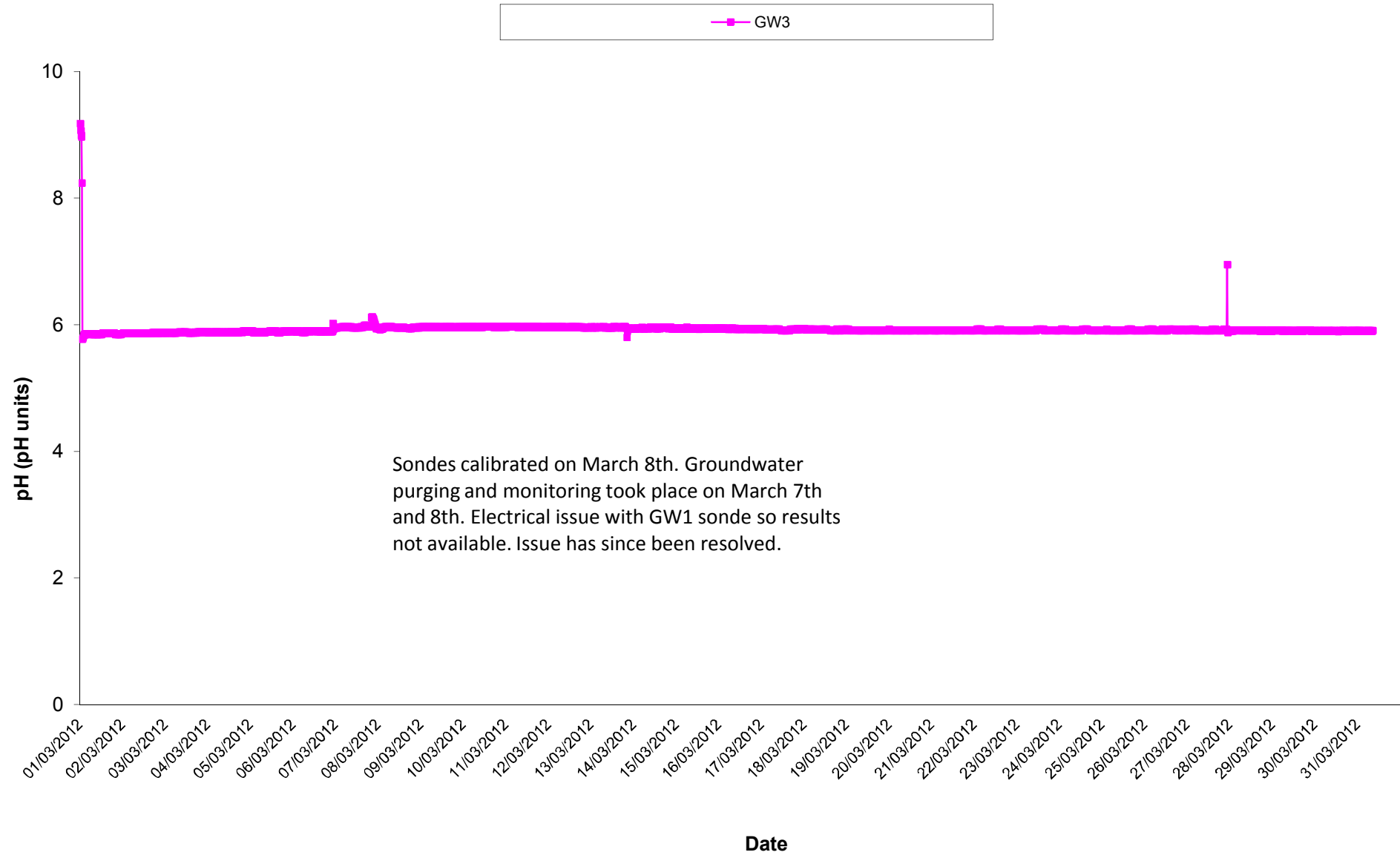
## Dissolved Oxygen - Surface Water Discharge March 2012



## Temperature - Groundwaters March 2012

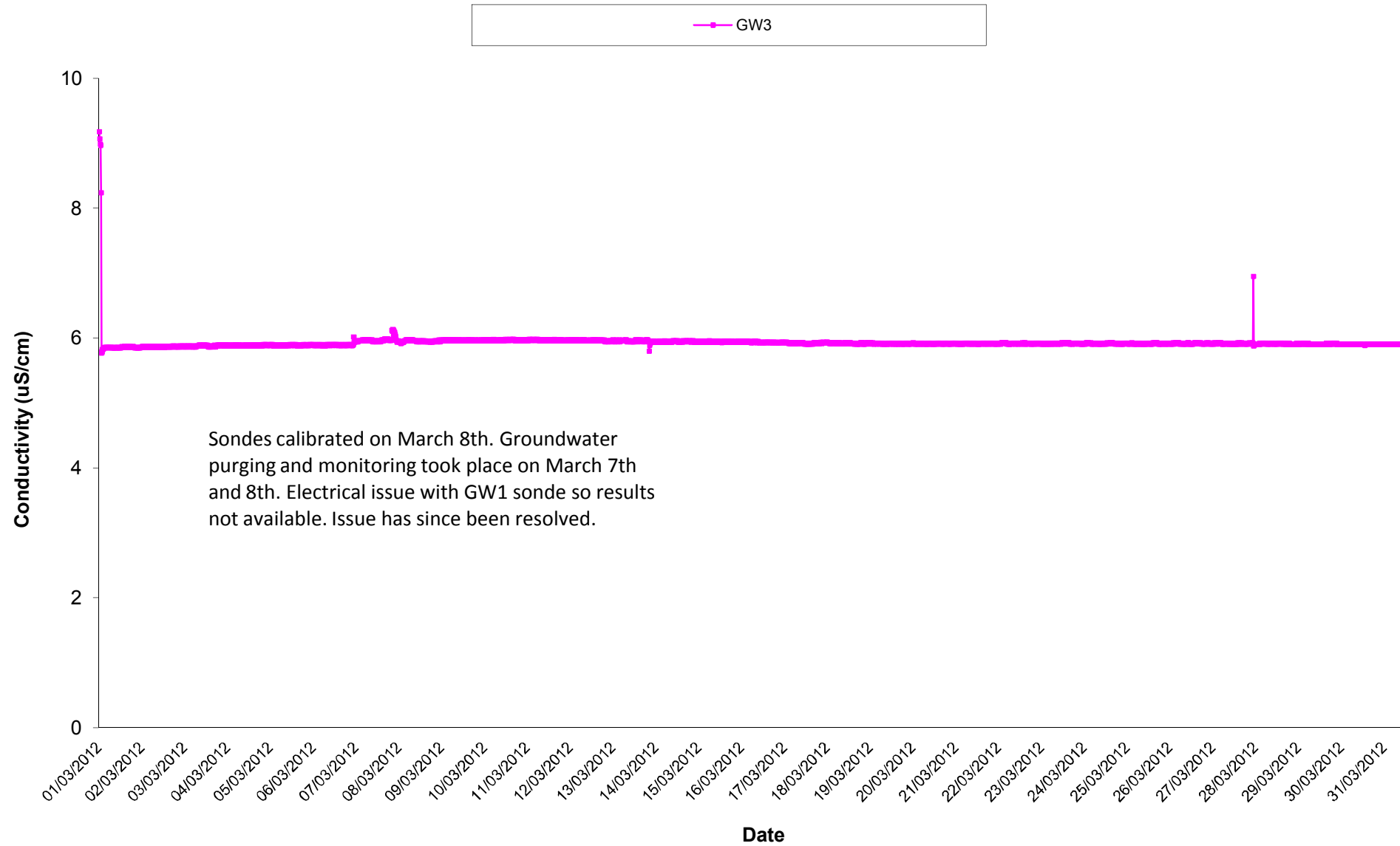


# pH - Groundwaters March 2012





## Conductivity - Groundwaters March 2012



## **Appendix 1**

Appendix 1: Surface Water Monitoring Record Sheet- Onsite Monitoring						
	Date	Temp	DO	Cond.	Turbidity	pH
		oC	% Sat	µS/cm	NTU	
<b>Grab samples</b>						
DL 2	01/03/2012	10.5	34.7	520	1.0	7.1
DL 2	02/03/2012	9.2	45.3	530	3.4	7.0
DL 2	05/03/2012	7.0	56.4	448	5.5	6.5
DL 2	06/03/2012	8.4	56.6	521	18.7	6.7
DL 2	07/03/2012	8.0	84.9	468	4.0	6.8
DL 2	08/03/2012	10.1	94.9	417	6.6	6.8
DL 2	09/03/2012	11.3	54.9	483	3.0	6.7
DL 2	12/03/2012	10.8	96.0	533	13.0	6.8
DL 2	13/03/2012	10.1	83.5	499	1.8	6.6
DL 2	14/03/2012	10.3	49.9	485	9.8	6.7
DL 2	15/03/2012	10.4	58.1	549	2.4	6.6
DL 2	20/03/2012	10.6	96.2	495	2.0	6.7
DL 2	21/03/2012	11.0	56.5	452	2.0	6.9
DL 2	22/03/2012	10.0	57.6	465	2.0	6.9
DL 2	23/03/2012	10.9	58.9	500	0.9	7.1
DL 2	26/03/2012	10.6	56.3	459	3.5	6.6
DL 2	27/03/2012	9.3	59.7	484	11.6	6.9
DL 2	28/03/2012	8.9	61.4	491	14.3	7.1
DL 2	29/03/2012	9.6	62.6	463	5.0	7.8
<b>Sruwaddaon Bay</b>						
Sbay 1	14/03/2012	9.6	100.9	>LOD	2.6	7.1
Sbay 3	14/03/2012	9.5	97.6	>LOD	5.3	7.6
Sbay 4	14/03/2012	9.6	96.7	>LOD	6.1	7.8
Sbay 6	14/03/2012	9.6	100.6	>LOD	8.4	7.9
	= Indicative Only					
I.P.	= In Progress					
< LOD	= Below Limit of Detection					
> LOD	= Above Limit of Detection					

## **Appendix 2**

## 1. MONITORING PERIOD

Ecological monitoring activities undertaken during March 2012 included:

- Site inspections at the Aughooose and Glengad compounds;
- Ongoing weekly bird monitoring of the Sruwaddacon Bay area and onshore pipeline area in general;
- Ongoing non-avian faunal checks;
- Freshwater macro-invertebrate sampling

## 2. AUGHOOSE SITE INSPECTIONS

Site visits included walkover inspections of the compound at Aughooose on 7<sup>th</sup> and 28<sup>th</sup> March by the Project Ecologist, during which interior walkways and the perimeter fence were walked. Any changes since the previous walkovers were noted, as was any matter requiring attention. The main purpose of these site inspections was to:

- Inspect the condition of the stored surface vegetation layer in the peat storage areas.
- Check the avian and non-avian mitigation measures, including: fencing, screening and wildlife proofing on the perimeter security fence; and others such as the status of covers on the settlement ponds / silt traps etc.
- Discuss with site personnel these and any other measures which might have been required.

It was noted that previously flagged required actions had largely been addressed, and that additional work (where required) and maintenance was ongoing.

Inspections of the exterior of the perimeter fence, with regard to faunal (avian and non-avian) mitigation measures, were also made during the weekly bird survey visits in March.

### 2.1 Peat storage areas - vegetation layer

On 28<sup>th</sup> March the condition of the surface vegetation layer was examined in the context of the dry, sunny weather towards the end of the month. It was noted that the surface would need to be watered if no significant rain fell within a few days following the site inspection.

Spring growth of *Molinia caerulea* (Purple Moor-grass) on the surface vegetation was noted, both on the top of, and on, the side slopes of the peat storage areas.

### 3. GLENGAD SITE INSPECTIONS

Site inspections were undertaken by the Project Ecologist at Glengad on 7<sup>th</sup> March in extremely windy conditions with occasional heavy hail storms, and on 28<sup>th</sup> of the month in fair weather. The purpose of the site walkovers was to:

- Check faunal (avian and non-avian) mitigation measures - screening and mammal gates;
- Conduct a general site inspection in relation to habitats and vegetation, including the condition of SAC habitats to the north of, and adjacent to, the fencing;
- Check known faunal burrows for evidence of activity.

#### 3.1 SAC Habitats

No change in habitat quality or condition was noted during the site inspection visits.

### 4. BIRDS

#### 4.1 Sruwaddacon Bay area – water birds and waders

Weekly low water and high water counts continued throughout March in the Sruwaddacon Bay area as scheduled. To summarise:

- Brent Goose numbers were relatively low throughout the month of March compared with recent survey years. However the counts have shown the characteristic upward trend in numbers towards the end of the month. As in recent years the 'resident' overwintering birds are supplemented by birds arriving on their west coast staging grounds (during March) prior to migration. A monthly peak of 185 individuals was recorded on March 27<sup>th</sup> with over 100 Brent Geese present throughout the month. One colour-ring bird was present and the ring markings were successfully read. This information will be submitted to the Irish Brent Goose Research Group.
- Brent Geese continued to feed on marginal intertidal areas from Count Section 1 to Count Section 5. This grazing behaviour appears to have also extended onto the fields at Glengad where Brent Geese were reported feeding on the grass by several observers. This behaviour is commonplace elsewhere in Ireland, especially in the east of the country, but until 2012 it had not been recorded in the Mayo flock. However it is understood, from an independent observer, that similar behaviour had been noted recently on the Mullet peninsula - again for the first time. Field-feeding has not been observed during the weekly site surveys.
  - As noted previously, preferred feeding areas (shingle banks) just off Glengad strand have been substantially diminished in size this winter as a result of the natural deposition of large amounts of sand in this area. Brent Geese continue to feed on the remaining exposed shingle during the low tide period.
  - No construction-related disturbance of Brent Geese was recorded.

- It is noteworthy that, during a visit to Rinroe Sand Martin colony, on the evening of March 27<sup>th</sup>, Brent Geese were observed feeding at an intertidal site on Rinroe Strand. Their feeding location was passed (<100 m) by four separate walkers over a period of 10-15 minutes and there was no visible response from the flock.
- As expected, the numbers of small wading birds species declined dramatically throughout March as species such as Redshank and Dunlin departed to return to their breeding grounds. Both of these species were almost entirely absent from the study area in March. Conversely, numbers of Black-headed Gulls rose throughout the month, with a peak of 61 individuals present on March 27<sup>th</sup> 2012.
- Iceland Gull, first observed at the site in February 2012 was again recorded in March (27<sup>th</sup> March 2012)
- Godwits of both species were present in each survey week, but predictably numbers have declined somewhat from early March.
- Two other noteworthy observations on the March bird count data were the noticeably higher than usual number of Shags feeding within Sruwaddacon Bay and the relatively high peak count of 12 Red-Breasted Mergansers recorded at high water on the 28<sup>th</sup> March.

#### **4.2 Sand Martin**

The Sand Martin colonies have been visited and photographed in advance of the 2012 breeding season. No Sand Martins were observed in the study area in March 2012. Typical return dates for this site have been from late March to the first weeks in April. The colonies will be monitored on a weekly basis throughout the breeding season.

#### **4.3 Bird behaviour and noise**

As stated above, weekly bird surveys were conducted throughout March.

Despite increases in recorded noise levels at AN1 as a result of an increased level of construction activity close to that location at Aughooose, observations have shown no recorded incidents of birds taking flight or showing avoidance of areas close to the compound. Indeed, the behaviour of wading bird species has not changed, but has been normal and as observed in previous years.

It is noteworthy that, as Brent Goose numbers increase with their approaching migration in April and as their feeding resources at Glengad are becoming diminished, they continue to move further into Sruwaddacon Bay to feed (as far as count section 5) bringing them into closer proximity of, and directly across the bay from, the Aughooose compound. Weekly observations have confirmed that they show no behavioural reaction to construction activities at Aughooose in terms of avoidance or taking flight.

#### **4.4 Areas of tree felling (Aughoose / Bellagelly)**

Visual checks were made on the tree felled areas during March. It was noted that the work on the felled material, as previously reported, had been completed satisfactorily.

### **5. NON-AVIAN FAUNA**

The next cycle of faunal monitoring surveys, including targeted otter surveys, is due to commence in late April.

#### **5.1 Aughoose**

- Frog translocations were made on a number of occasions during March, in accordance with the current wildlife licence.
- Gaps with potential for mammal access into the Aughoose compound site had been identified previously. It was noted this had been addressed, and that additional work (as required) and maintenance was ongoing.
- A Common Lizard was observed by the main gate during the unseasonably warm weather in late March.

#### **5.2 Glengad**

Faunal burrows were checked regularly in March, including during the site inspection visits. No change in faunal activity since previous surveys/inspections, including at the burrows, was noted

### **6.0 FRESHWATER ECOLOGY**

Freshwater macroinvertebrate sampling was undertaken on 20<sup>th</sup> March at six sites as follows:

- Leenamore at the upper estuarine side of the pipeline crossing
- Leenamore, just upstream of the crossing in fully freshwater conditions
- Forest Stream
- Small Leenamore tributary crossing the bog mats road stream/drain
- Upper Leenamore immediately upstream of the confluence of stream/drain
- Upper Leenamore immediately downstream of the confluence of stream/drain

At each site, GPS positions were recorded, as well as substrate, in-stream and bankside vegetation and flow conditions. A 2-minute kick-sample was collected at each and preserved for later faunal enumeration and identification. Representative photographs were taken at each site.



All sites appeared natural with the exception of the Forest Stream where there was evidence of bankside heavy vehicle activity, possibly associated with recent tree felling.

A preliminary examination of samples from all sites during collection, showed them to have characteristic macroinvertebrate communities for those site types. The Leenamore samples suggested good to high quality water quality conditions, with seasonally typical pollution-sensitive species present.

## **Appendix 3**

**Corrib Onshore Pipeline**  
Monthly Archaeological Report

**Aughoose and Glengad**

DAHG Licence Reference: 11E0214  
DAHG Metal Detection Licence Reference: 11R0090

Director: James Kyle

Month Ending: 31<sup>st</sup> March 2012

**COURTNEYDEERY**   
Heritage Consultancy

**IAC** Irish Archaeological  
Consultancy

## **1.0 General Review of Works**

### **1.1 Works**

Works commenced Monday the 25<sup>th</sup> of July 2011 at the Aughooose Compound.  
Works commenced Monday the 6<sup>th</sup> of February 2012 at Glengad.

## **2.0 Staffing Levels**

The following licenced archaeologists are present to monitor all ground breaking and excavation:

Site Director: James Kyle,  
Archaeologist: David Bayley.

## **3.0 Areas Investigated**

### **3.1 Aughooose**

Construction works were carried out at several areas of the Aughooose site, these were monitored under strict archaeological supervision. These works (Figure 1) comprised:

- The removal of the surface vegetation of peat into turves from the stringing area (Plate 1). This enabled its transport and safe storage. This activity took place in advance of all bulk peat excavation works.
- Bulk excavation of peat (1.5m-2m in depth) was completed from the filter press area between IR 3 and IR 4 (Plate 2). The bulk excavation of peat from this area, and on site was completed Wednesday 21<sup>st</sup> March.
- Bulk excavation of mineral soil (3m below present ground level) from the filter press area (Plate 3) in the area between IR 3 and IR 4 corner of the site was undertaken. This work is on-going.
- Monitoring of core piling was undertaken within the tunnel starter pit compound on site. Piles were drilled to between 11m and 14m deep. The monitoring of the piling was limited to inspection of the excavated material as it was deposited into a series of skips (Plate 4) within the compound area.
- Bulk excavation of mineral soil adjacent to the corner of IR 1 & IR 3 was undertaken to facilitate the construction of the petrol interceptor in this location. Excavation proceeded through the mineral soil and into the underlying bedrock to a depth of 3m below Present Ground Level (Plate 5).
- Bulk excavation facilitating the construction of foundations for the retaining walls in the corner of IR 1 & 2. This involved the excavation of 0.5m of mineral soil and the overlying peat stone matrix employed as part of the construction of IR 1& 2 (Plate 6). This work is on-going.

In addition to the above; all construction works which had any impact on the peat and the underlying residual ground substrate were monitored and nothing of archaeological significance was revealed.

### **3.2 Glengad**

Construction works were carried out at several areas of the Glengad site, these were monitored under strict archaeological supervision. These works (Figure 2) comprised:

- The removal of the topsoil layer (0.4-0.5m in depth) in advance of access road/haulage road construction (Plate 7).
- The excavation of topsoil (0.2-0.38m in depth), and re-deposited material (0.4-1.2m in depth) previously disturbed by construction works from the LVI compound area and the widening of the haul road (Plate 8).
- No further excavation or construction works of any kind were carried at the southern end of the access road in the vicinity of the enclosure site (MA004-015) this month. Archaeological monitoring has taken place on two separate occasions in the vicinity of this site, (Frazer 2002 and Kieran 2009)<sup>1</sup>. No archaeological features or finds were revealed.

In addition to the above; all construction works which had any impact on the underlying residual ground substrate were monitored and nothing of archaeological significance was revealed.

### **4.0 Projected Future Work and Staff**

Archaeological monitoring, and where deemed necessary metal detection, will be undertaken during the construction phase of the project to determine the presence (if any) of below ground archaeological features or the presence of artefacts of an archaeological nature. This will be conducted by two licenced archaeologists, James Kyle and David Bayley, on a rotational basis between the Aughooose and Glengad sites.

### **5.0 Reporting**

The monthly report records the extent of works requiring archaeological monitoring and metal detection. In the event of archaeological material being revealed, archaeologists will record, photograph and map any new discovery. As part of the licensing requirement a final report will be completed upon the cessation of ground breaking and excavation works. This report will describe in detail the results of the archaeological monitoring programme and will be sent to the statutory authorities in accordance to the licensing agreement.

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<sup>1</sup> Monitoring of topsoil removal Glengad (Licence Ref. 02E0568, W. Frazer) Margaret Gowen Ltd.  
Archaeological monitoring of construction works associated with the Corrib Gas Pipeline at Broadhaven Bay (Licence Ref. 09E176 and 09E177, E. Kieran) Moore Marine.

## **6.0 Location of Artefacts and Samples**

To date no artefacts or samples have been retrieved from Glengad or Aughooose.

## **7.0 Information any Unforeseen Difficulties**

At Glengad work practices observed tidal restrictions in the SAC area. These restrictions were lifted 10am Tuesday 20<sup>th</sup> March, due to the erection of sufficient visibility screening along the northern and western sections of the site perimeter fence.

## **8.0 Health and Safety Issues**

Both on-site archaeologists have been inducted after receiving the requisite conflict management training and manual handling training.

## **Summary**

Nothing of an archaeological significance has been uncovered as a result of monitoring or metal detection of materials excavated from construction works on either site to date.



Plate 1 Aughoose: Turving in the stringing area, facing northeast.



Plate 2 Aughoose: Bulk excavation of peat from filter press area, facing west.





Plate 3 Aughooose: Mineral soil excavation from the filter press area, facing south.



Plate 4 Aughooose: Excavated material from core piling.





Plate 5 Aughooose: Bulk excavation of mineral soil from the petrol interceptor tank, facing north.



Plate 6 Aughooose: Excavation of retaining wall foundation, facing west.



Plate 7 Glengad: Topsoil stripping, northern side of haul road, facing west.



Plate 8 Glengad: Topsoil stripping of LVI compound area, facing north.



