

1 Monitoring Data

Note: Due to a suspension of works the monitoring programme has been reduced.

Those parameters still being monitored include:

1. Daily water samples for on-site analysis
2. Daily sampling, for laboratory analysis, at SP1, SP3
3. Weekly sampling, for laboratory analysis, at D22 and D62
4. Monthly sampling, for laboratory analysis of the MP series
5. Downloading the in-situ Sondes, TSS & Orthophosphate analysers and the weather station

Vibration and noise monitoring have been suspended.

All sonde and analyser downloading was completed on Friday 18th November and the results stored on a field laptop on the terminal site for further review and tabulation. However, as a result of continuing protests and site access restrictions it has not been possible to retrieve the laptop from site, and so the following information is not available for presentation in this report:

- Site sampling results.
- Weather data.
- Surface and groundwater sonde data.
- Technical problem with the PO₄ telemetry.

1.1 Rainfall Data

The weather data detailed below was downloaded from the Met Eireann Site and is for Belmullet. The on-site weather station could not be accessed for downloading.

Date	Rainfall (mm)	Max Temp	Min Temp	Sunshine (hours)	Gusts	W.Speed m/s
04/11/2005	1.6	11	7.2	5.6	0	5.9
05/11/2005	6.1	13.8	9.9	4.2	57	7.6
06/11/2005	9.5	12	7.4	2.8	46	11.2
07/11/2005	11.7	11.4	7.3	0.1	80	11.0
08/11/2005	3.4	12.2	6.3	4.6	37	6.3
09/11/2005	10.1	13.4	6.1	0.3	41	8.6
10/11/2005	3.5	13.6	9.8	0.1	41	7.2
11/11/2005	5.7	14	6.8	2	61	13.9
12/11/2005	3.4	11	6.5	3.5	40	8.0
13/11/2005	0.3	11.5	4.6	2.8	0	3.0
14/11/2005	1.3	13	9.5	0	0	6.9
15/11/2005	0.5	12.4	8.5	1.7	0	3.7
16/11/2005	0.5	9.4	5	0	0	1.4
17/11/2005	0	9.4	3.3	3.5	0	2.0

Weekly Environmental Report - Status	Week Ending: Thur. 17 th Nov 2005
Generated By: Sandra Barber	
Checked By: Leslie Finnegan	

1.2 Summary

Environment	Comments
Surface Water	<p>From the data available, on average all parameters were within the limits set.</p> <p>TSS Analyser - recalibration sample was taken on the 02nd November and the system reset on the 04th November. This action is supported by the results from the accredited lab. The TSS analyser is now fully functioning. Exceedance of the action level is detailed in Section 2.</p> <p>Phosphate analyser malfunctioned on the 12th November, detailed below in section 2.</p> <p>Sonde data not available.</p>
Groundwater	<p>Sonde data not available</p> <p>Remaining lab data for October has been included.</p>
Weather	<p>There was a total of 57.6 mm of rainfall during the reporting period, with a temperature range of 3.3 to 14 °C</p>

2 Environmental Incidents/Near misses/Complaints

There were 2 incidents and a near miss during the reporting period, the details are summarised in the below.

Date and Time	12 th November @ 13:00	12 th November @ 16:23
Location	TSS Analyser	PO ₄ Analyser
Nature of Incident	<p>Exceedances for the action level set were recorded for Total Suspended Solids.</p> <p>Mineral material from the footprint making it into the surface water drainage system.</p>	<p>The PO₄ analyser produced negative results.</p> <p>Additional problem with accessing by telemetry.</p>
Actions Taken	<ol style="list-style-type: none"> 1. Water in southern footprint recirculated into the northern footprint 2. Diverted clean site surface water into the settlement ponds. 3. Levels dropped below action limit on the 16th November. 	<ol style="list-style-type: none"> 1. The results have been forwarded to the equipment technician for review. 2. New calibration fluid added to system. 3. Daily samples will continue until further notice.
Category	Environmental Exceedance	Equipment Malfunction
Status	Closed	Open

Surface Water Monitoring Record Sheet											no...		1 of 1	
Conducted by								Approved by						
Name: Sandra Barber				Signed				Name Leslie Finnegan				Signed		
Determinant Results														
	Date	Cond. µS/cm	Temp °C	Turbidity NTU	DO % Sat	TSS mg l ⁻¹	pH	Ortho- phosphate as P µg l ⁻¹	Nitrate as N mg l ⁻¹	Total Phosphorus as P (sw) mg l ⁻¹	Ammonia as NH ₃ -N mg l ⁻¹	Ammonium as NH ₄ mg l ⁻¹	Nitrite as N mg l ⁻¹	Comments
Action Limits		400		150		25	<3.5 or >7.5	40			0.2			
Target Limits		500		200		35	<3 or >8	70			0.5			
Settlement Pond Monitoring														
SP1	04-Nov-05	136		17		12	6.9	34	0.12	0.061	0.073	0.0940	0.005	
SP3	04-Nov-05	156		37		25	6.6	41	0.22	0.062	0.106	0.1370	0.005	
SP1	07-Nov-05	146		17		11	7.4	52	0.10	0.064	0.061	0.0780	0.017	
SP3	07-Nov-05	151		32		18	7.1	55	0.58	0.074	0.123	0.1580	0.015	
SP1	08-Nov-05	152		20		14	6.3	41	2.83	0.05	0.026	0.0330	0.006	
SP3	08-Nov-05	190		57		33	6.3	58	0.12	0.072	0.118	0.1520	0.008	
SP1	09-Nov-05	159		24		13	6.4	45	0.10	0.062	0.039	0.0510	0.006	
SP3	09-Nov-05	191		63		42	6.4	54	0.13	0.074	0.135	0.1740	0.008	
SP1	10-Nov-05	174		25		17	6.7	13	0.10	0.051	0.042	0.0540	0.008	
SP3	10-Nov-05	192		16		48	6.7	17	0.12	0.078	0.089	0.1140	0.011	
SP1	11-Nov-05	178		35		22	6.7	13	0.10	0.063	0.042	0.0540	0.008	
SP3	11-Nov-05	188		55		44	6.7	19	0.10	0.157	0.116	0.1500	0.008	
SP1	14-Nov-05	200		36		18	6.5	44	0.11	0.075	0.005	0.0100	0.008	
SP3	14-Nov-05	219		56		35	6.5	51	0.15	0.098	0.077	0.0990	0.01	
SP1	15-Nov-05	203		37		20	6.5	36	Not Finished	0.068	0.096	0.1240	0.009	
SP3	15-Nov-05	215		55		32	6.7	56	0.18	0.101	0.087	0.1120	0.008	
SP1	16-Nov-05	208		38		22	6.6	38	0.21	0.066	0.013	0.0170	0.009	
SP3	16-Nov-05	228		11		4	6.5	57	0.13	0.081	0.132	0.1710	0.008	
Additional Surface Water Monitoring														
D22	04-Nov-05	153		2		4	5.6	93	0.10	0.141	0.039	0.0510	0.005	
D62	04-Nov-05	115		1		40	4.7	58	0.10	0.074	0.033	0.0430	0.005	
D22	09-Nov-05	168		1		4	5.7	111	0.10	0.12	0.090	0.1160	0.005	
D62	09-Nov-05	132		1		4	4.5	47	0.52	0.074	0.079	0.1020	0.005	
D22	14-Nov-05	183		1		4	6.1	102	0.58	0.125	0.020	0.0260	0.005	
D62	14-Nov-05	153		1		4	4.3	36	0.10	0.063	0.012	0.0160	0.005	
Only Lab Data available for the reporting period - site analysis note book on site and site is not accessible.														

Note: LAB - Carried out by CLS Laboratories
 Grey shaded areas denote parameters that cannot be analysed on-site or the lab.
 Results detailed above are from on site grab samples only

Groundwater Monitoring Record Sheet											no...			1	of	1
Conducted by						Approved by										
Name: Sandra Barber			Signed			Name Leslie Finnegan			Signed							
Determinant Results																
Location	Date	DO % Sat	Temp °C	Cond. uS/cm	pH	TDS mg l ⁻¹	BOD mg l ⁻¹	TSS mg l ⁻¹	Phosphate as P ug l ⁻¹	Total Hardness mg/l CaCO3	Nitrite as NO ₂ mg l ⁻¹	Nitrate as NO ₃ mg l ⁻¹	Phosphate as PO ₄ mg l ⁻¹			
MP 1																
MP 2	27/10/2005	15	12	416	6.2	243	9	<4	<0.01	114.1	<0.017	0.442	<0.03			
MP 3																
MP 4	27/10/2005	20	11.6	385	5.8	223	13	642	<0.01	71.8	<0.017	4.549	<0.03			
MP 5																
MP 6	27/10/2005	11	11.1	400	6.1	233	8	64	0.109	93.1	<0.017	<0.44	0.334			
MP 7	27/10/2005	10	12.1	256	6.8	206	21	177	0.023	52.9	<0.017	<0.44	0.071			
MP 8																
MP 9																
MP 10a																
MEL BR4a																

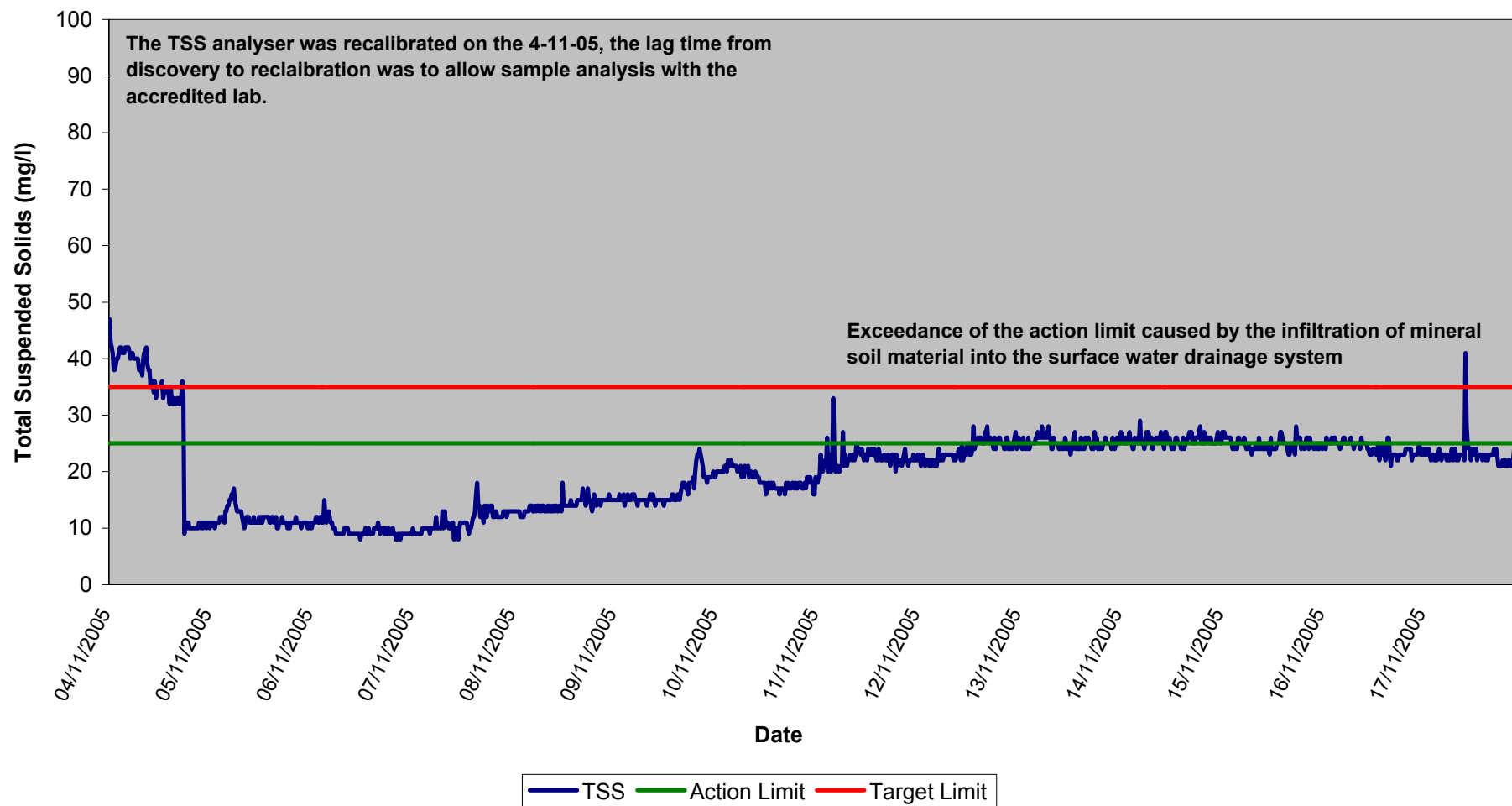
Location	Date	Ammonia mg l ⁻¹	Arsenic ug l ⁻¹	Mercury ug l ⁻¹	Lead ug l ⁻¹	Aluminium ug l ⁻¹	Zinc ug l ⁻¹	Chromium ug l ⁻¹	Copper ug l ⁻¹	Cadmium ug l ⁻¹	Iron ug l ⁻¹	Tin ug l ⁻¹	
MP 1													
MP 2	27/10/2005		<1	<0.05	<1	<2	41	3	3	<1	<2	<1	
MP 3													
MP 4	27/10/2005		<1	<0.05	<1	<2	52	2	3	<1	<2	<1	
MP 5													
MP 6	27/10/2005		<1	<0.05	<1	<2	95	4	2	<1	<2	<1	
MP 7	27/10/2005		<1	<0.05	<1	10	199	1	<1	<1	15	<1	
MP 8													
MP 9													
MP 10a													
MEL BR4a													

Note: Results detailed above are from on site grab samples only. Data recorded continuously is shown on the following graphs
 Graphs provided for MP1, MP2, MP4, MP6 and MP7 for: Temperature, Conductivity, and pH.

Dust Monitoring Record Sheet					no... 1 of 1		
Conducted by				Approved by			
Name: Sandra Barber		Signed		Name: Leslie Finnegan		Signed	
Determinant Results							
	Date Positioned	Date Removed	Ref. Number	Date Dispatched	Date Returned	Weight (mg/sq.m/day)	Comments
Target (Consent) Limit 350 mg m ² d ⁻¹ on as a 30 day average							
D1	31/01/2005	02/03/2005	59793	02/03/2005	24/03/2005	36	
D2	31/01/2005	02/03/2005	59794	02/03/2005	24/03/2005	10	
D3	31/01/2005	02/03/2005	59795	02/03/2005	24/03/2005	25	
D4	31/01/2005	02/03/2005	59796	02/03/2005	24/03/2005	22	
D1	02/03/2005	01/04/2005	61907	01/04/2005	08/04/2005	15	
D2	02/03/2005	01/04/2005	61908	01/04/2005	08/04/2005	15	
D3	02/03/2005	01/04/2005	61909	01/04/2005	08/04/2005	16	
D4	02/03/2005	01/04/2005	61910	01/04/2005	08/04/2005	14	
D1	01/04/2005	04/05/2005	64400	04/05/2005	09/05/2005	9	
D2	01/04/2005	04/05/2005	64401	04/05/2005	09/05/2005	23	
D3	01/04/2005	04/05/2005	64402	04/05/2005	09/05/2005	16	
D4	01/04/2005	04/05/2005	64403	04/05/2005	09/05/2005	7	
D1	04/05/2005	07/06/2005	67524	07/06/2005	10/06/2006	49	
D2	04/05/2005	07/06/2005	67525	07/06/2005	10/06/2006	29	
D3	04/05/2005	07/06/2005	67526	07/06/2005	10/06/2006	83	
D4	04/05/2005	07/06/2005	67527	07/06/2005	10/06/2006	44	
D1	07/06/2005	13/07/2005	70512	13/07/2005	18/07/2005	298	
D2	07/06/2005	13/07/2005	70513	13/07/2005	18/07/2005	354	
D3	07/06/2005	13/07/2005	70514	13/07/2005	18/07/2005	289	
D4	07/06/2005	13/07/2005	70515	13/07/2005	18/07/2005	270	
D1	13/07/2005	11/08/2005	77419	12/10/2005	24/10/2005	253	
D2	13/07/2005	11/08/2005	77420	12/10/2005	24/10/2005	111	
D3	13/07/2005	11/08/2005	77421	12/10/2005	24/10/2005	319	
D4	13/07/2005	11/08/2005	77422	12/10/2005	24/10/2005	123	

Monitoring Points are numbered clockwise through the Cardinal Marks (N, E, S, W)
Monitoring Results will be presented monthly

Total Suspended Solids @ SP1, Weeks 45/46 2005



Orthophosphate @ SP1 Weeks 45/46 2005

