

Mr Brian Sweeney
Environment Section
Kerry County Council
Áras an Chontae
Rathass
Tralee
County Kerry

Headquarters, PO Box 3000
Johnstown Castle Estate
County Wexford, Ireland

Ceanncheathrú, Bosca Poist 3000
Eastát Chaisleán Bhaile Sheáin
Contae Loch Garman, Éire

T: +353 53 9160600

F: +353 53 9160699

E: info@epa.ie

W: www.epa.ie

LoCall: 1890 33 55 99

1st February 2013

Reg No: W0001-04

Dear Mr Sweeney

I am to advise you that the Agency received on 14/6/2011 an application from Kerry County Council for a technical amendment of their waste licence for a facility located at North Kerry Landfill Site, Muingnaminnane, Tralee, County Kerry. Waste licence Reg no. W0001-04.

The applicant proposes, as part of this application, to provide for the discharge of process effluent to a sewer, which the applicant has stated is vested in, or controlled by, your Council. Process effluent includes trade effluent or other matter (other than domestic sewage or storm water). I enclose copy extracts from the application form, which detail proposed discharges.

The provisions of Section 52 of the Waste Management Acts, 1996 to 2012, provides that the Agency shall obtain the consent of the sanitary authority to the proposed discharge from an activity which involves the discharge of trade effluent or other matter (other than domestic sewage or storm water), to a sewer vested in or controlled by a sanitary authority.

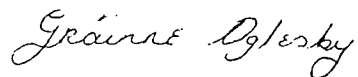
In order to expedite the Agency's consideration of this waste licence application, I am to request your authority's consent to the proposed discharge/s. It should be noted that, your authority's consent may be subject to such conditions as your authority considers appropriate as provided for in Section 52 of the Waste Management Acts, 1996 to 2012 and Section 99E(3) of the Environmental Protection Agency Acts, 1992 and 2007. Your attention is drawn to paragraphs (3) and (4) of the attached copy of the relevant section of the Act. For your convenience please find attached a reply form including a list of draft conditions compiled by the Agency.



In accordance with paragraph (2) of this section of the Act, you are requested to forward your response within 5 weeks of the date of this letter. Please note that any decision given after the expiry period shall be invalid and in those circumstances the Agency may proceed to determine the application concerned as if consent was obtained. Brian Meaney is dealing with this matter and can be contacted at the Licensing Unit, Office of Climate, Licensing & Resource Use , Johnstown Castle Estate, County Wexford (Tel. No. 053-9160600), if you have any queries.

Your co-operation in this matter is appreciated.

Yours sincerely,



Gráinne Oglesby
Programme Officer
Office of Climate, Licensing & Resource Use

Section 99E (3) & (4) of the Environmental Protection Agency Acts, 1992 to 2012

- (3) Subject to subsection (4), a consent under subsection (1) may be granted subject to or without conditions and if it is granted subject to conditions the Agency shall include in the licence or revised licence concerned conditions corresponding to them or, as the Agency may think appropriate, conditions more strict than them.
- (4) The conditions that may be attached to a consent by a sanitary authority under this section are the following and no other conditions, namely conditions-
- (a) relating to-
 - (i) the nature, composition, temperature, volume, level, rate, and location of the discharge concerned and the period during which the discharge may, or may not, be made,
 - (ii) the provision, operation, maintenance and supervision of meters, gauges, manholes, inspection chambers and other apparatus and other means for monitoring the nature, extent and effect of emissions,
 - (iii) the taking and analysis of samples, the keeping of records and furnishing of information to the sanitary authority,
 - (b) providing for the payment by the licensee to the sanitary authority concerned of such amount or amounts as may be determined by the sanitary authority having regard to the expenditure incurred or to be incurred by it in monitoring, treating and disposing of discharges of trade effluent, sewage effluent and other matter to sewers in its functional area or a specified part of its functional area,
 - (c) specifying a date not later than which any conditions attached under this section shall be complied with,
 - (d) relating to, providing for or specifying such other matter as may be prescribed.

SANITARY AUTHORITY RESPONSE

re: SECTION 52 OF THE WASTE MANAGEMENT ACTS, 1996 to 2012

Name & Address of Sanitary Authority: Kerry County Council, Áras an Chontae, Rathass,
Tralee, County Kerry.

Waste Reg. No. W0001-04

Waste Facility: North Kerry Landfill Site, Muingnaminnane, Tralee, Co.
Kerry,

Waste Licence Applicant: Kerry County Council

Consent: Indicate Yes to one of the following statements:

Consent granted subject to the consent conditions outlined below	
Consent granted without conditions	
Consent refused <small>Note 1</small>	

Note 1 Where it is proposed to refuse permission the reasons for the refusal should be clearly outlined in the response.

GENERAL CONSENT CONDITIONS	Condition to be included <i>(Yes/No)</i>
1. No specified emission from the installation shall exceed the emission limit value set out in <i>Schedule B: Emissions Limits to Sewer</i> . There shall be no other emission to sewer of environmental significance.	✓
2. The licensee shall carry out such sampling, analyses, measurements, examinations, maintenance and calibrations as out in <i>Schedule C</i> .	✓
3. Monitoring and analytical equipment shall be operated and maintained as necessary so that monitoring accurately reflects the discharge or emission.	✓
4. The licensee shall permit authorised persons of the Agency and the Sanitary Authority to inspect, examine and test, at all reasonable times, any works and apparatus installed, in connection with the process effluent, and to take samples of the process effluent.	8.17
5. All automatic monitors and samplers shall be functioning at all times (except during maintenance and calibration) when the activity is being carried on unless alternative sampling or monitoring has been agreed in writing by the Agency for a limited period. In the event of the malfunction of any continuous monitor, the licensee shall contact the Agency as soon as practicable, and alternative sampling and monitoring facilities shall be put in place. Prior written agreement for the use of alternative equipment, other than in emergency situations, shall be obtained from the Agency.	8.18
6. The licensee shall record all sampling, analyses, measurements, examinations, calibrations and maintenance carried out in accordance with the requirements of this licence.	11.9.
7. The licensee shall provide safe and permanent access to all on-site sampling and monitoring points and to off-site points as required by the Agency.	✓
8. The licensee shall at no time discharge or permit to be discharged into the sewer any liquid matter or thing which is or may be liable to set or congeal at average sewer temperature or is capable of giving off any inflammable or explosive gas or any acid, alkali or other substance in sufficient concentration to cause corrosion to sewer pipes, penstock and sewer fittings or the general integrity of the sewer.	6.8
9. In the event of any incident which relates to discharges to sewer, having taken place, the licensee shall notify the Agency, Local Authority and Sanitary Authority as soon as practicable after the incident.	10.8

Frequency of Monitoring Process Effluent to Sewer

Schedule C

Waste Licence application Register No. W0001-04

Emission Point Reference No: _____

Parameter <i>(delete parameters which are not applicable)</i>	Monitoring Frequency <i>(e.g. monthly, quarterly, annually)</i>	Sampling Type <i>(grab, composite)</i>
Flow to sewer		
Temperature		
pH		
BOD		
COD		
Suspended Solids		
ADDITIONAL PARAMETERS <i>(if required)</i>		

SANITARY AUTHORITY CHARGES	
Charge per cubic metre of process effluent (per s52 of the Waste Management Acts, 1996 to 2011)	
Payment Frequency	
Annual Monitoring Costs	

Signed on behalf of Kerry County Council

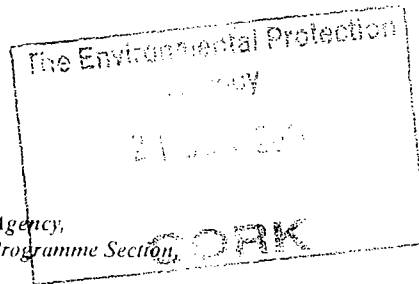
Date _____





COMHAIRLE CONTAE CHIARRAÍ
KERRY COUNTY COUNCIL

Guthán | Tel 066 7162000 Faics | Fax 066 7162001 Rphost | Email environ@kerrycoco.ie | Rphost | Web www.kerrycoco.ie



Environmental Protection Agency,
Environmental Licencing Programme Section,
EPA Headquarters,
PO Box 3000,
Johnstown Castle Estate,
County Wexford.



North Kerry Landfill,
Muingnaminnane,
Tralee,
County Kerry.

Your Ref: W0001-04:gc04pos{SEW 4 leachate pipeline}.doc

June 14th 2011

Re: Proposal to convey leachate to Castlesland WWTP via pipeline in lieu of road tankering.

A Chara.

Further to the above mentioned correspondence from the Agency dated December 10th and on foot of the meeting held at EPA offices Inniscarra on that date attached please find the information as requested.

This reply is referenced as per the original query (copy attached in Appendix A for reference)

Introduction.

The Environmental Section of Kerry County Council (KCC) request that the Agency process any alterations as a Technical Amendment to waste licence W0001-04. It is hoped when the proposal is considered in the context of the SEW No 4 already submitted and the attached information that the nature of the required alteration will be such as to be accommodated within a Technical Amendment procedure.

The substantive issue is the change in conveyance method of leachate from road tankering to a pipeline system – it does not refer to any change in receiving treatment facility (see Condition 6.7.2).

Within the Inspectors Report, considered as part of the recent licence review, it is stated in Section 4.2 that '...the leachate will be transported via tanker to the wastewater treatment plant at Castlesland or Tralee. A letter of agreement from Water Services Section of Kerry County Council to accept the leachate generated from both the existing and proposed extension has been submitted as part of the current application.'

It is the view of KCC that the pipeline system will improve the environmental performance of both the landfill and receiving WWTP and also remove negative impacts of the current tankering system.

1. Details of the requested change(s), including details of the expected daily/hourly leachate flow volumes, and a characterisation of the leachate composition.

1a) Requested change.

Kerry County Council requested that the method of transportation of leachate be changed from the current system of tankering by road to a purpose built dedicated pipeline from North Kerry Landfill (NKL) directly to the Castlesland wastewater treatment plant (WWTP).

It is the method of transportation of the leachate that is the requested change.

The details of the proposal have been outlined in the SEW No 4.

In summary the project involves the laying of a welded fully sealed and contained HDPE pipeline from NKL to Castelisland WWTP.

It will directly connect both facilities – there will be no other connections to the pipeline.

The purpose of the pipeline is to convey leachate from the existing reinforced concrete holding tank at the landfill to the WWTP for disposal.

The pipeline is approximately 10.8km in length. The outside diameter of the HDPE pipeline will range from 110mm to 160mm.

The route of the pipeline will be through the NKL site and adjacent private lands and then follow the public roadway for the remainder of the route. The in-line structures and installations will require in some instances to be constructed on private lands.

Works within the confines of NKL include new interconnecting pipework, manholes and pump sumps between the existing holding lagoons and the reinforced concrete holding tank. An existing pump sump will be refitted with new pumps for the head of the pipeline. Ancillary site works include, new roof opes to the holding lagoon and telemetry infrastructure.

A second two chamber pump station will be constructed along the route as shown on the drawings (part of SEW).

There will be two break pressure points on the line – these will be in line reinforced concrete structures which when complete will have their roof at ground level. A vent column will finish 4m above ground level at each tank.

A series of Cleaning Chambers will also be constructed along the line approximately every 500-700m – these will be in line reinforced concrete structures which will have their roof at ground level, a 4m vent column will be constructed at each location.

Other installations on the line will include air valves with a vent column to each (finishing 4m above ground level) and flow meters in chambers (adjacent to the pump stations).

The construction duration is expected to be in the order of 40 weeks with completion date in 2012.

A specific Operational Methodology and Standard Operating Procedures have been developed to manage the system.

In outline, control of the system will be co-ordinated by the operator of the WWTP – only when there is available capacity at the WWTP will any leachate discharge be approved. Examples of off-line periods would include significant storm events when the WWTP could be hydraulically overloaded.

The operator of the WWTP will confirm to the landfill the quantity and flow duration for any scheduled discharge.

If it were necessary to shut down the pipeline any leachate within it can be safely contained until discharge can resume – it is a fully sealed and contained pipeline.

Blending and balancing of the leachate will take place at NKL using the existing lagoons and reinforced concrete holding tank – this will ensure a consistency in the composition and strength of the leachate. All nuisance mitigation measures will take place at the landfill.

1b) Daily and hourly leachate volumes.

The following tables indicates the flow rates that are anticipated at the landfill – these are the generation rates on site – discharge rates and timings will be confirmed by the WWTP operator in advance of any discharge.

Steady state conditions will have been achieved by 2019 approximately.

Table 1 and 2: Daily and hourly generation rates at NKL. (m³d⁻¹)

<i>Hydraulic flows m³d⁻¹</i>														
	<i>Jan</i>	<i>Feb</i>	<i>March</i>	<i>April</i>	<i>May</i>	<i>June</i>	<i>July</i>	<i>Aug</i>	<i>Sept</i>	<i>Oct</i>	<i>Nov</i>	<i>Dec</i>	<i>Max</i>	<i>Average</i>
<i>2010</i>									179	223	246	238	246	222
<i>2011</i>	178	131	85	74	56	57	71	100	134	167	184	187	187	119
<i>2012</i>	147	115	75	65	49	50	63	88	118	147	162	171	171	104
<i>2013</i>	140	115	75	65	49	50	63	88	118	146	161	168	168	103
<i>2014</i>	135	109	71	61	46	47	60	84	111	139	153	172	172	99
<i>2015</i>	147	128	83	72	54	55	70	98	130	162	179	188	188	114
<i>2016</i>	152	124	81	70	53	53	67	95	126	157	174	180	180	111
<i>2017</i>	143	115	75	65	49	50	63	88	118	147	162	154	162	102
<i>2018</i>	112	80	52	45	34	35	44	61	82	102	112	113	113	73
<i>2019</i>	88	68	45	38	29	30	37	52	70	87	96	102	102	62
<i>2020</i>	83	69	45	39	29	30	38	53	70	88	97	103	103	62
<i>2021</i>	84	69	45	39	30	30	38	53	71	88	98	68	98	60

<i>Hydraulic Flows m³h⁻¹</i>														
<i>2010</i>									7.47	9.30	10.26	9.94	10.26	9.24
<i>2011</i>	7.43	5.45	3.55	3.07	2.32	2.36	2.98	4.18	5.57	6.94	7.66	7.79	7.79	4.94
<i>2012</i>	6.11	4.80	3.13	2.70	2.04	2.08	2.62	3.68	4.91	6.11	6.74	7.14	7.14	4.34
<i>2013</i>	5.82	4.79	3.12	2.70	2.04	2.07	2.61	3.67	4.90	6.10	6.72	7.01	7.01	4.29
<i>2014</i>	5.62	4.54	2.96	2.56	1.93	1.96	2.48	3.48	4.65	5.78	6.38	7.16	7.16	4.13
<i>2015</i>	6.11	5.32	3.47	2.99	2.26	2.30	2.90	4.07	5.44	6.77	7.47	7.83	7.83	4.74
<i>2016</i>	6.32	5.15	3.36	2.90	2.19	2.23	2.81	3.95	5.27	6.56	7.23	7.49	7.49	4.62
<i>2017</i>	5.98	4.80	3.13	2.70	2.04	2.07	2.62	3.68	4.91	6.11	6.74	6.40	6.74	4.26
<i>2018</i>	4.69	3.33	2.17	1.88	1.42	1.44	1.82	2.55	3.41	4.24	4.68	4.71	4.71	3.03
<i>2019</i>	3.67	2.84	1.85	1.60	1.21	1.23	1.55	2.18	2.91	3.62	4.00	4.25	4.25	2.58
<i>2020</i>	3.47	2.87	1.87	1.62	1.22	1.24	1.57	2.20	2.93	3.65	4.03	4.29	4.29	2.58
<i>2021</i>	3.50	2.89	1.89	1.63	1.23	1.25	1.58	2.22	2.96	3.69	4.07	2.84	4.07	2.48

1c) Characterisation of leachate composition.

Data is included in Appendix B with regard to the analysis of leachate retrieved from the lagoons and its composition as per the requirements Schedule D of the waste licence.

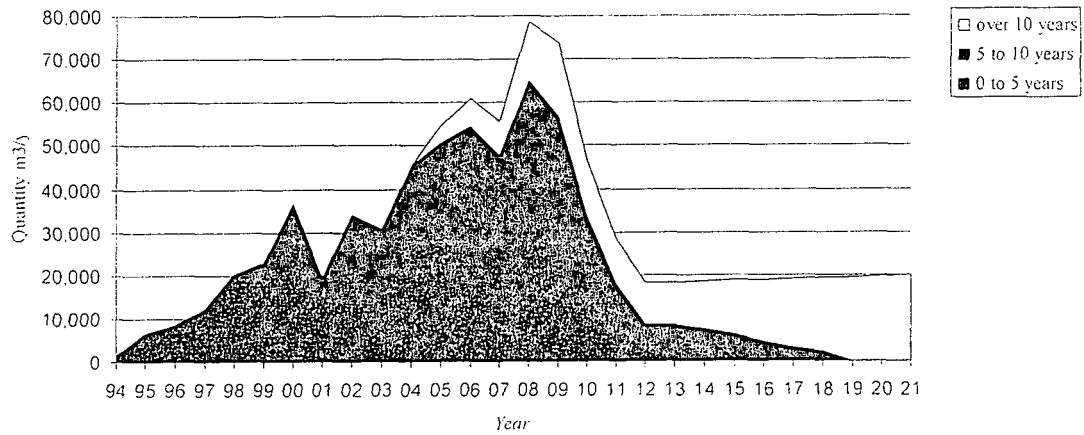
The following graphs indicates the relative proportions with respect to age of leachate that is generated at the landfill.

The first graph indicates the quantities generated from cells 1 – 16 which form a discrete footprint – the final cell (16) will reach profile height by the second quarter of 2011 (see Appendix C for indicative site layout).

The second graph indicates the predicted model for the three new cells in addition to that which is being generated in cells 1-16.

As may be seen from graph no 2 there is a significant fall in both the quantum and percentage of fresh leachate (0 to 5 years) from 2012 onwards this is also mirrored in the 5 to 10 years envelope.

Filled Cells 1 - 16. Age Profile of Leachate



Future Generation Cells 1- 19. 2010 to 2029

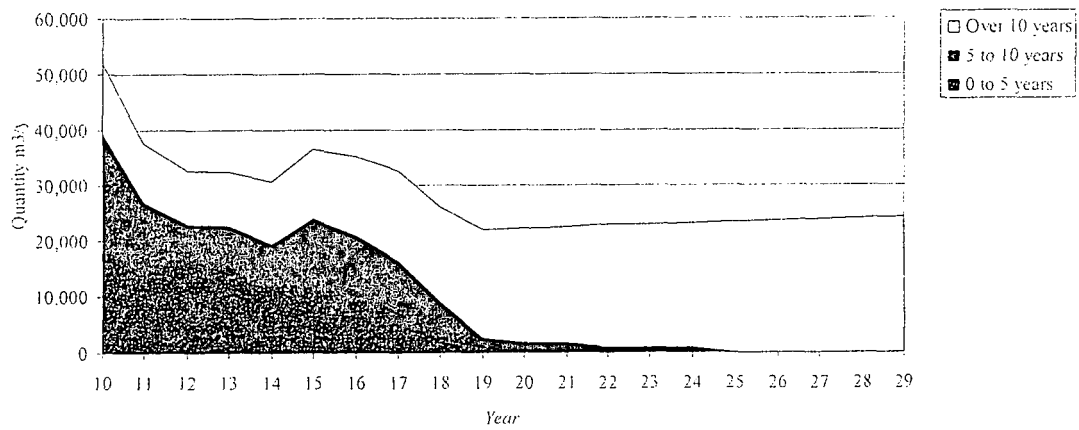


Table 3: Age profile as a percentage of total quantity generated

Age of leachate ▼	Year ▶	2012	2016	2019
0 to 5 years		51	31	4
5 to 10 years		20	29	8
Over 10 years		29	40	88

As may be seen the age profile of the leachate changes rapidly following closure and permanent capping of Cell 16.

Since the facility has opened all leachate that has been collected has been tankered by road to either Castleisland or Tralee WWTP.

Time won experience has shown that both plants have been able to adequately treat the leachate that has been presented for disposal.

2. Reasons for the change(s) requested.

As part of the internal review process of the Environmental Management System as required by Condition 2.3 of the waste licence significant opportunities for improved environmental performance have been identified by changing to a pipeline system.

A pipeline system will result in;

- a) *a reduction in energy use* - with reference to Graph number two above, if transport were to continue by road tanker then there would be in excess of 40,000 vehicle movements over the next 38 years. Should the quantity generated increase or aftercare period extend then the number of vehicle movements would correspondingly increase.
- b) *an improvement in resource efficiency* - installed infrastructure at the landfill and WWTP has potential for improved efficiency - the constraint is the current method of transportation of the leachate. There are three lagoons and a reinforced concrete holding tank at NKL - each currently has a different source of leachate thus any tanker load being received at the WWTP will vary in strength according to which lagoon from which it has been retrieved.

By installing a pipeline system the lagoons and holding tank will be reconfigured to blend and balance the leachate to within a target composition window. The benefit to the WWTP is that there will be consistency in the strength of the leachate being received and thus eliminating possible shock loading. Also a pipeline system allows for a pre-determined rate of discharge which also removes the difficulty of treating a shock load after discharge for a road tanker.

The pipeline will ensure that available capacity at the WWTP will be matched to the load from the landfill - discharge will be blended and balanced to eliminate shock loading and sequenced to when capacity is available at the WWTP - this will result in more efficient use of the infrastructure at both facilities and energy consumption at the WWTP.

- c) *use of cleaner technology* - removing the tanker movements will improve environmental conditions for people resident along the existing transport route including reduction in noise, traffic hazard, visual nuisance and air quality. There will be a reduction in fuel consumed by the tankers and HDPE pipe can be recycled after use.
- d) *an increase in effectiveness of installed infrastructure at NKL and receiving WWTP* - as described above there will be an improvement in the efficiency of installed plant but there will also be an improvement in the effectiveness in that a more consistent waste stream will be more effectively treated by the elimination of peaks in hydraulic and biological loading.
- e) *reduction in environmental risk* - the pipeline is a continuously sealed system - the pipeline satisfies the relevant requirements of the guidance note issued by the agency with regard to Storage and Transfer of Materials for Scheduled Activities even though leachate does not exhibit properties that require such an assessment.
- f) *BAT* - the pipeline forms part of a system that will ensure that the best available technique is employed for the transfer and treatment of leachate and thus limit its environmental impact.

In combination an overall improvement in the environmental performance of the facility and the elimination of the negative impacts of a road tankering method will result if the requested change in method of transportation is approved.

3. Details of any increase or changes in emissions resulting from the change(s), including details of the relevant proposed discharge locations and monitoring points. This should include details of grid references and drawings at an appropriate scale, with the latter marking the location of each point with a unique assigned reference number.

As the requested change refers to the method of transportation only there is consequently no change in emissions.

The proposed monitoring point on the discharge line will be at the outlet to the holding tank grid reference 94,910/117,365.

It will be identified by permanent signage marked 'LDP' with grid reference indicated on the plate (please refer to the attached drawing in Appendix C).

The monitoring port will allow the retrieval of samples from the pipeline in a readily accessible area – it is on the exit pipework from the holding lagoon. The pipe is fully sealed from the lagoon downstream therefore there are no other inflows to the pipeline beyond this point.

4 An assessment of the likely impacts of any increase/changes in emissions.

As outlined there is no increase in emissions due to the requested change.

However the improved conveyance system will result in a smoothing out of the hydraulic and biological loading peaks presented at the WWTP for treatment. Also discharge will be sequenced with available capacity at the plant – this will be co-ordinated by the WWTP operator thus ensuring an improvement in operational performance.

5 A letter from the relevant Sanitary Authority providing:

- a. details of the previous/current practice of acceptance of leachate from the landfill facility;
- b. confirmation that Castleisland WWTP has the capacity to treat the leachate and that the plant will accept the leachate via pipeline as proposed.
- c. clarification that the Sanitary Authority will be assuming control of the pipeline between the landfill and the WWTP, and that this pipeline will be considered as part of the Castleisland agglomeration for the purposes of that facility's WWDL application to the Agency.
- d. details of the relevant emission limit values, flow limits and any other restrictions that the Sanitary Authority wish to make in relation to the proposed discharge of leachate from the landfill via this pipeline.

5a) Details of the previous/current practice of acceptance of leachate from the landfill facility

Leachate has been treated satisfactorily at both Castleisland and Tralee WWTP since the opening of the landfill.

Leachate has been successfully and continually been treated for eleven years at the Castleisland WWTP from 1994 until February 2005.

Since that date due to operational reasons (traffic volumes corresponding to generation volumes) Tralee has been the preferred treatment facility due to the better road network thus mitigating potential hazard. A pipeline line system will eliminate all traffic hazard.

Acceptance at the WWTP is through discharge into a head manhole, this is the difficulty of tankering leachate. The pipeline proposal allows for a time controlled discharge rate thus improving the treatment efficiency and effectiveness.

A specific waste acceptance procedure will be developed for the pipeline transfer system. This will ensure that there is adequate capacity at the receiving plant, the leachate is within the composition window requested by the Water Services Authority and that the operator of the WWTP has full control over the flow duration and timing of any leachate discharge.

5 b, c and d)

The reply to the specific issues raised in these sections are contained in the correspondence received from the Water Service Authority.

A copy of this correspondence is attached in Appendix D for reference.

Conclusion.

In conclusion KCC request that the Agency look favourable on the proposal and use the Technical Amendment procedure to accommodate any required changes to the licence.

The requested change specifically refers to the method of transportation of the leachate only (condition 6.7.2 refers).

A set of operational procedures have been developed where the operator of the WWTP will have control over the volumes and timings of any discharge to the WWTP.

This ensures more effective treatment and an improved environmental performance.


The pipeline forms part of the Best Available Technique for managing the environmental impact of the transfer and treatment of leachate.

The proposed change will:

- lead to a more efficient use of infrastructure and resources at the landfill
- ensure an improvement in the consistency of leachate presented for treatment – by more efficient use of existing infrastructure at the landfill
- improve operational control and performance at the WWTP – give control to the receiving plant operator over volumes and timings of any discharge
- reduce the environmental risk due to unplanned discharge
- reduce the environmental impact of transportation
- remove a traffic hazard
- improve environmental conditions for residents along the present road transport route

I hope the above is satisfactory, if you require any assistance or clarification please do not hesitate to contact this office.

Yours faithfully,



*John Aherne,
A/SEE Waste Management Department,
Environmental Services Section,
(066) 716 20 00*

Copies:

1. Linda Dalton, OEE, Inniscarra, Cork

Appendix A

Correspondence from EPA – December 10th 2010

Ms Tara O'Carroll
Landfill Manager
Kerry County Council
North Kerry Landfill
Muingnaminane
Tralee
County Kerry

10/12/2010 Our Ref: W0001-04 /gc04pos{SEW 4 leachate pipeline}.docx

Dear Ms O'Carroll

I refer to your Specified Engineering Work Report No. 4 in relation the proposal to pipe leachate through a dedicated pipeline from North Kerry Landfill to Castleisland WWTP.

Further to an assessment of the report and attached drawings and a meeting held with Mr. Conor Culloo representing the licensee at these offices on 10/12/2010 I am to advise you of the following:

- Based on the information presented, the OEE has no technical objections to the proposal, however the OEE considers that the intention to commence a discharge of leachate into this proposed pipeline cannot be accommodated under the current licence.

In view of the above, the OEE advises you that the proposed change will require a Technical Amendment (Section 42(B) (1) of the Waste Management Acts), or a Review of your licence (Section 46(8) of the Waste Management Acts).

To determine if the proposed change can be accommodated by Technical Amendment, you should submit the following information to the Agency's Environmental Licensing Programme (ELP), EPA Headquarters, P.O. Box 3000, Johnstown Castle Estate, Co. Wexford:

1. Details of the requested change(s), including details of the expected daily/hourly leachate flow volumes, and a characterisation of the leachate composition.
2. Reasons for the change(s) requested.
3. Details of any increase or changes in emissions resulting from the change(s), including details of the relevant proposed discharge locations and monitoring points. This should include details of grid references and drawings at an appropriate scale, with the latter marking the location of each point with a unique assigned reference number.
4. An assessment of the likely impacts of any increase/changes in emissions.
5. A letter from the relevant Sanitary Authority providing:
 - a. details of the previous/current practice of acceptance of leachate from the landfill facility.
 - b. confirmation that Castleisland WWTP has the capacity to treat the leachate and that the plant will accept the leachate via pipeline as proposed.
 - c. clarification that the Sanitary Authority will be assuming control of the pipeline between the landfill and the WWTP, and that this pipeline will be considered as part of the Castleisland agglomeration for the purposes of that facility's WWDL application to the Agency.
 - d. details of the relevant emission limit values, flow limits and any other restrictions that the Sanitary Authority wish to make in relation to the proposed discharge of leachate from the landfill via this pipeline.

If the alteration is considered to be a significant change and cannot be accommodated by a Technical Amendment, the ELP will notify you of the process for applying for a Licence Review.

Please quote the above reference in future correspondence in relation to this matter.

Yours sincerely

Pól Ó Seasnáin
Office of Environmental Enforcement

Appendix B

Leachate composition results – as reported under Schedule D of the waste licence.

Location	Location Reference	Sample Template	Sample Date
Leachate pumped from Cell 11		General Landfill : Leachate	25-May-10
Leachate Pumped from Cell 5		General Landfill : Leachate	25-May-10
Leachate pumped from Cell 16		General Landfill : Leachate	25-May-10
LL-1	Leachate in lagoon	EPA:North kerry: Leachate Quarterly	13-Feb-08
LL-1	Leachate in lagoon	EPA:North kerry: Leachate Quarterly	01-May-08
LL-1	Leachate in lagoon	EPA:North kerry: Leachate Quarterly	19-Aug-08
LL-1	Leachate in lagoon	General Landfill : Leachate	09-Sep-08
LL-1	Leachate in lagoon	EPA: North Kerry : leachate quality Annual	11-Nov-08
LL-1	Leachate in lagoon	EPA:North kerry: Leachate Quarterly	11-Feb-09
LL-1	Leachate in lagoon	EPA:North kerry: Leachate Quarterly	07-May-09
LL-1	Leachate in lagoon	EPA:North kerry: Leachate Quarterly	06-Aug-09
LL-1	Leachate in lagoon	EPA: North Kerry : leachate quality Annual	03-Nov-09
LL-1	Leachate in lagoon	EPA:North kerry: Leachate Quarterly	17-Feb-10
LL-1	Leachate in lagoon	EPA:North kerry: Leachate Quarterly	12-May-10
LL-1	Leachate in lagoon	EPA:North kerry: Leachate Quarterly	18-Aug-10
LL-1	Leachate in lagoon	EPA: North Kerry : leachate quality Annual	17-Nov-10
LL-2	leachate in Lagoon	EPA:North kerry: Leachate Quarterly	13-Feb-08
LL-2	leachate in Lagoon	EPA:North kerry: Leachate Quarterly	01-May-08
LL-2	leachate in Lagoon	EPA:North kerry: Leachate Quarterly	19-Aug-08
LL-2	leachate in Lagoon	EPA: North Kerry : leachate quality Annual	11-Nov-08
LL-2	leachate in Lagoon	EPA:North kerry: Leachate Quarterly	11-Feb-09
LL-2	leachate in Lagoon	EPA:North kerry: Leachate Quarterly	07-May-09
LL-2	leachate in Lagoon	EPA:North kerry: Leachate Quarterly	06-Aug-09
LL-2	leachate in Lagoon	EPA: North Kerry : leachate quality Annual	03-Nov-09
LL-2	leachate in Lagoon	EPA:North kerry: Leachate Quarterly	17-Feb-10
LL-2	leachate in Lagoon	EPA:North kerry: Leachate Quarterly	12-May-10
LL-2	leachate in Lagoon	EPA:North kerry: Leachate Quarterly	18-Aug-10
LL-2	leachate in Lagoon	EPA: North Kerry : leachate quality Annual	17-Nov-10
LL-3	run off from compos	EPA:North kerry: Leachate Quarterly	13-Feb-08
LL-3	run off from compos	EPA:North kerry: Leachate Quarterly	01-May-08
LL-3	run off from compos	EPA:North kerry: Leachate Quarterly	19-Aug-08
LL-3	run off from compos	EPA: North Kerry : leachate quality Annual	11-Nov-08
LL-3	run off from compos	EPA:North kerry: Leachate Quarterly	11-Feb-09
LL-3	run off from compos	EPA:North kerry: Leachate Quarterly	06-Aug-09
LL-3	run off from compos	EPA: North Kerry : leachate quality Annual	03-Nov-09
LL-3	run off from compos	EPA:North kerry: Leachate Quarterly	17-Feb-10
LL-3	run off from compos	EPA:North kerry: Leachate Quarterly	12-May-10
LL-3	run off from compos	EPA:North kerry: Leachate Quarterly	18-Aug-10
LL-3	run off from compos	EPA: North Kerry : leachate quality Annual	17-Nov-10

Parameter	Appearance	Odour	Ammonium	pH	BOD (5day)	Conductivity @ 20 oC	Chemical Oxygen Demand	Chloride	Dissolved Oxygen
			NH4		O2		O2	Cl	O2
Max.	--	--	Varies	Varies	Varies	Varies	--	Varies	Varies
Target	--	--	--	--	--	--	--	--	--
Min.	--	--	--	Varies	--	--	--	--	Varies
Comments	Descriptive	Descriptive	mg/l	pH units	mg/l	µS/cm	mg/l	mg/l	mg/l
			783	7.3		7490	850		
			185	7.3		2340	196		
			1804	7.7		14920	1770		
ammonia only	Black Blackish/dirty Blackish	Phenolic/ Leachate phenolic phenolic	53.6	7.7		866			
	Brown Cloudy dirty/brownish Brown Colour	Strong Leachate Smell phenolic Slight Leachate	275.5	7.5	12.5	3320	272	270	2.5
	Blackish dirty/brown Brown Colour	Phenolic phenolic Phenolic	321	7.6	21.8	2710	316	250	
	Brown Colour Brown Colour Cloudy brownish	Leachate Smell ND phenolic	237	7.5	15.8	2470	227	208.5	
	Black Blackish/dirty Blackish	Phenoloic/ Leachate phenolic phenolic							
	Black/Cloudy black Black Colour	Very Strong Leachate Smel phenolic Leachate	815	7.4	1352	8670	4040	690	1.2
	Blackish dirty/blackish Black Colour	Phenolic phenolic Phenolic	801	7.8	254	7010	1014	710	
	Dark Brown Colour Cloudy black	Leachate Smell ND phenolic	556	7.7	306	6590	1320	55	
	Cloudy/ Brown cloudy/dirty dirty/greenish Brown Colour	ND musty/earthy musty Earthy	9.23	7.6	12.6	438	148	76	7.6
	dirty brownish Blackish dirtybrown/sed	decaying compost Musty, decaying odour none detected	2.91	7.6	19.8	317	279	43	
	Rrown Colour/Dirty Brown Colour Clear brownish	Earthy ND ND oily odour	1.62	7.6	5.8	293	111	41.5	

Phenols	iron	Calcium	zinc	Nickel	Magnesium	Colour	Copper	manganese	Fluoride (old units)	Mercury	Semi-Volatile Carbon (SVOC)	Alkalinity	Total Oxidised Nitrogen(TON)	Total Phosphorous
C6H5OH	Fe	Ca	Zn	Ni	Mg	HZ	Cu	Mn	F	Hg	SVOC	CaCO3	NO3	P
--	--	--	Varies	Varies	--	--	Varies	--	Varies	Varies	--	--	Varies	--
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
mg/l	mg/l	mg/l	mg/l	ug/l	mg/l	Hazen	mg/l	mg/l	ug/l	ug/l	ug/l	mg/l	mg/l	mg/l

9.59 66.6 0.33 <0.8 28.77 <0.025 3.269 3.099

5.14 74.1 0.06 11.73 16.59 <0.025 1.206 <200 <0.009 1.52

<200 <0.009 2.26

8.17 482.4 1.73 44.65 123.7 <0.025 8.107 <200 3.308 27.27

3.33 110.1 1.07 31.97 75.56 0.06 0.936 <200 <0.009 25.16

<200 <0.009 34.9

3.01 25.9 0.09 1.018 4.67 <0.025 0.836 <200 0.017 1.44

3.88 31.9 0.14 6.563 3.76 0.032 0.088 <200 <0.009 6.86

<200 <0.009 1.36

Appendix C

Indicative Site Layout – showing proposed Leachate Discharge Point (LDP) location.

Tralee

Cell 17 - 19

Lagoon 1 and 2

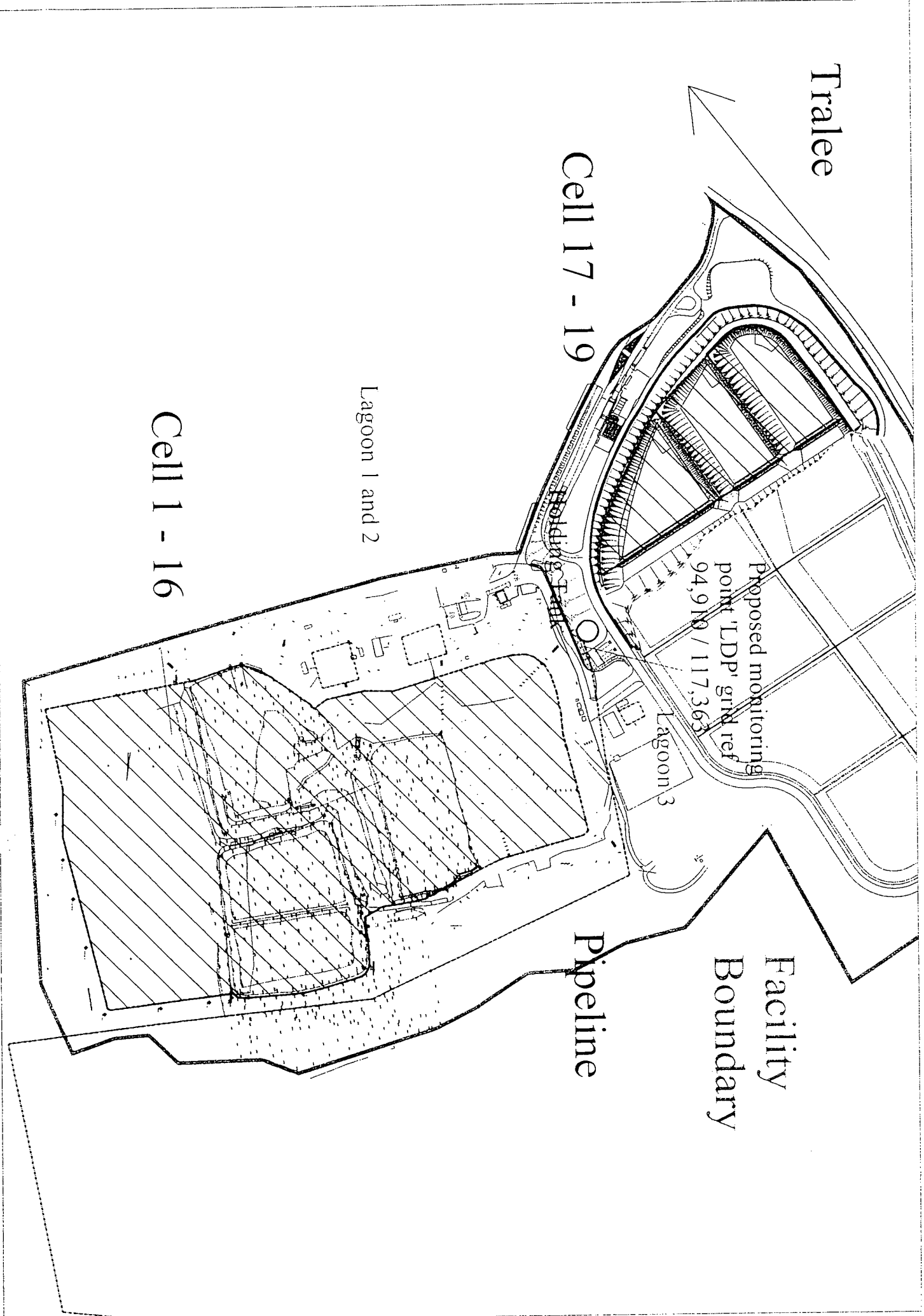
Cell 1 - 16

Proposed monitoring
point 'LDP' grid ref
94,919 / 117,363

Lagoon 3

Pipeline

Facility
Boundary



Appendix D

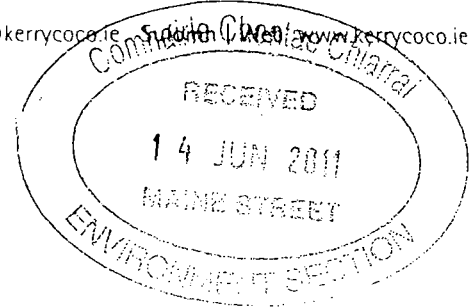
Correspondence from Water Services Authority



COMHAIRLE CONTAE CHIARRAÍ
KERRY COUNTY COUNCIL

Guthán | Tel 066 7183503 Faics | Fax 066 7181639 Rphost | Email waterservices@kerrycoco.ie www.kerrycoco.ie

Environmental Department,
Kerry County Council,
Tralee,
Co Kerry.



Thursday, 26 May 2011.

Re: Proposal to pipe leachate to Castleisland WWTP.

Dear Mr. Culloo,

I refer to the above and to email dated 24th May 2011.

Please find detailed hereunder information as requested;

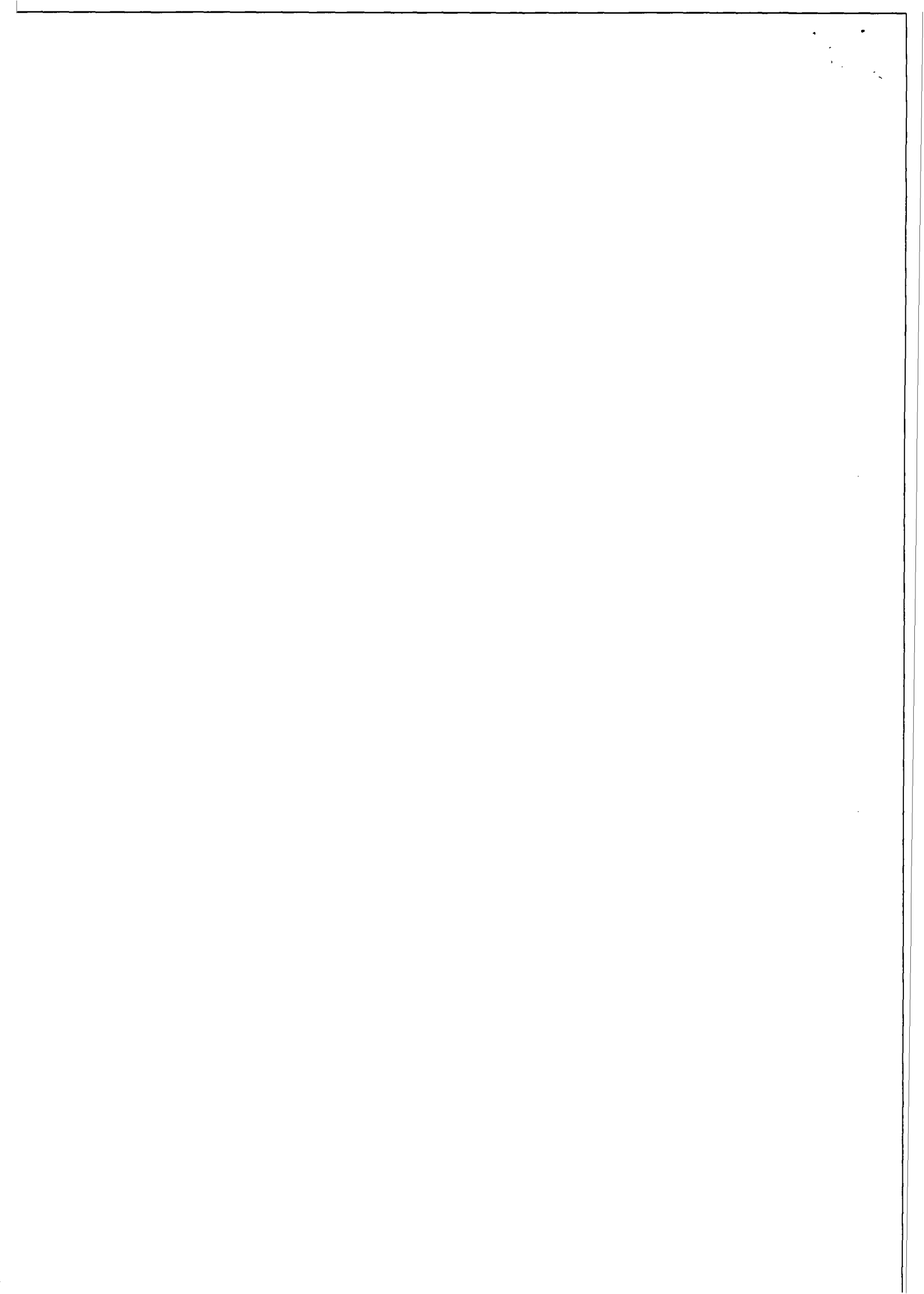
- a. details of the previous/current practice of acceptance of leachate from the landfill facility.

The Water Department currently accept leachate from the landfill facility at the Tralee WWTP.

- b. confirmation that Castleisland WWTP has the capacity to treat the leachate and that the plant will accept the leachate via pipeline as proposed.

Ryan Hanley carried out a report on the Castleisland WWTP examining it's ability to treat the leachate as proposed. Their recommendations indicated the plant could treat the leachate taking the following actions;

- *The operation time of the mechanical aerators is increased in order to preserve the existing oxygen transfer rate for the increased organic and nutrient load from the leachate.*
- *An anoxic tank be constructed upstream of the existing aeration tanks.*
- *Kerry County Council revise the discharge licence for the Castleisland livestock mart, imposing more stringent conditions on the frequency of discharge and provide for future pre-treatment of effluent and flow measurement.*
- *The leachate be discharged downstream of the inlet/ storm overflow chamber.*
- *A more comprehensive programme of monitoring influent and effluent quality be set up by Kerry County Council, to expand on the frequency, quantity and range of samples currently measured, in order to provide effective process monitoring and to enable a comprehensive review of the impact of the leachate in the future. It is recommended that the revised programme include sampling for Ammoniacal Nitrogen, Total Nitrogen, MRP, Alkalinity, heavy metals and the substances listed in Schedules 5 and 6 of the 2009 Surface Water Regulations.*



The following works must be completed prior to the acceptance of leachate at this plant;

- Construction of a Suitable Anoxic Tank.
- The installation of a Soda Ash/ Caustic dosing system

Furthermore, a service level agreement will have to be determined between the Water Authority and the Environment Section in regard to the treatment of the leachate at the Castleisland WWTP.

- c. clarification that the Sanitary Authority will be assuming control of the pipeline between the landfill and the WWTP, and that this pipeline will be considered as part of the Castleisland agglomeration for the purposes of that facility's WWDL application to the Agency.

The above is confirmed.

- d. details of the relevant emission limit values, flow limits and any other restrictions that the Sanitary Authority wish to make in relation to the proposed discharge of leachate from the landfill via this pipeline.

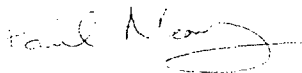
Maximum Limits for Leachate discharge

- | | |
|-----------|-----------------|
| • BOD | 28Kg/day |
| • COD | 69 Kg/day |
| • Ammonia | 10kg/day |
| • pH | 6.5 to 8.0 |
| • Volume | 300 Cum per day |

The Water Authority may have to review the emission limit values subsequent to the issue of the Waste Water Discharge license for the Castleisland Plant.

I trust the above is to your satisfaction.

Sincerely,



Paul Neary CEng MIEI
Senior Executive Engineer

