

Ms. Caroline Murphy,
Inspector,
Environmental Licensing Programme,
Office of Climate, Licensing & Resource Use
Environmental Protection Agency,
PO Box 3000 Johnstown Castle Estate,
Co. Wexford.

12th September 2013

Waste Licence Application Reg. No. W0284-01

Re: Notice in accordance with Article 14(2)(b)(ii) of the Waste Management (Licensing) Regulations 2004, as amended.

Dear Ms. Murphy,

I refer to the above referenced letter and in particular item 10 which requires the following:

- a. Prepare a fully detailed and costed Closure, Restoration and aftercare Management Plan (CRAMP) for the facility, to include as a minimum the following:
 - i. A scope statement for the plan
 - ii. The criteria which define the successful closure and restoration of the facility or part thereof, and which ensure minimum impact to the environment.
 - iii. A programme to achieve the stated criteria.
 - iv. Where relevant, a test programme to determine the successful implementation of the plan.
 - v. Details of the long term supervision, monitoring and control, maintenance and reporting requirements of the restored facility.
 - vi. Details of the costings for the plan and financial provisions to underwrite these costs.
- b. Prepare a fully detailed and costed Environmental Liabilities Risk Assessment (ELRA) which addresses the liabilities and potential liabilities from past and proposed activities, including those liabilities and costs included in the CRAMP. Provide evidence that the assessment was prepared or reviewed and was found to be complete and accurate, by an independent and appropriate qualified consultant or expert.
- c. Provide a proposal for financial provision to cover any liabilities associated with the operation and identified in the ELRA (including closure restoration and aftercare and unanticipated accidents, incidents and liabilities). Provide evidence that O'Toole Composting Ltd. Will be in a position to put such a financial provision in place in the event that a waste licence is granted and prior to development works commencing.

The preparation of the CRAMP and ELRA and evaluation of the amount and form of financial provision should have regard to Environmental Protection Agency guidance including Guidance on Environmental Liability Risk Assessment, Residuals Management Plans and Financial Provision (2006).

and would reply as follows:

A CRAMP and ELRA have been prepared in accordance with the relevant guidelines and are enclosed. Financial information regarding the turnover of O'Toole Composting Ltd is also enclosed.

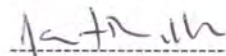
The financial information attached clearly demonstrates that O'Toole Composting Ltd is in a strong position financially and able to meet the requirements of the Closure Plan.

O'Toole Composting Ltd. propose the following in respect of a financial provision to address the CRAMP and ELRA:

- Planned closure by the company for reasons other than a sale or financial insolvency will be financed from the company's own resources. A letter from the company's auditor confirming that they have such resources will be supplied to the Agency on an annual basis as part of the AER. (Please note that this scenario of closure is thought to be extremely unlikely)
- Closure in respect of financial insolvency will be covered by an Environmental Liabilities Risk insurance policy in the amount of €500,000 that the company proposes to take out and review the amount of same on an annual basis.
- All other risks potential identified in the ELRA will also be covered by the Environmental Liabilities Risk Insurance in the amount of €500,000.

I trust that this information meets the requirements but if you require any further information please do not hesitate to contact me.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Jim Dowdall', is written over a horizontal dashed line.

Jim Dowdall
Enviroguide Consulting
(on behalf of O'Toole Composting Ltd.)

Clonminch House, Clonminch Hi-Technology Park, Tullamore, Co. Offaly

Phone: 057 93 66700 / 93 21396 | Fax: 057 93 51762

Email: info@bca.ie | Web: www.bca.ie

Vat Reg No: IE 9538270J

Byrne
& Casey
ASSOCIATES

Chartered Accountants

TO WHOM IT MAY CONCERN

Re: O Toole Composting Ltd, Ballinrane, Fenagh, Co Carlow

We act as Accountants for the above company. The principal activity of the company is the manufacture of compost from organic waste. We can confirm that the total certified turnover for the three years ended 30 June 2012 is as follows,

For the year ended 30 June 2012 €2,241,326 (two million two hundred and forty one thousand three hundred and twenty six).

For the year ended 30 June 2011 €1,902,489 (one million nine hundred and two thousand four hundred and eighty nine).

For the year ended 30 June 2010 €1,031,223 (one million and thirty one thousand two hundred and twenty three).

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Byrne Casey & Associates

CLONMINCH HI TECHNOLOGY PARK

BYRNE CASEY & ASSOCIATES

TULLAMORE

CHARTERED ACCOUNTANTS

CO OFFALY

REGISTERED AUDITORS

DATED: 20/03/2013



Authorised by Chartered Accountants Ireland to carry on investment business.

Hugh P. Byrne, F.C.A., C.T.A.
Michael M. Casey, F.C.A., C.T.A.
Paul J. Fitzpatrick, F.A.I.A.
Michael J. Kinsella, A.C.P.A.
Peter G. Sullivan, A.C.A.

Chartered Accountants Registered Auditors



**ENVIRONMENTAL LIABILITIES RISK ASSESSMENT (ELRA)
REPORT 2013**

**O'TOOLE COMPOSTING LTD
BALLINTRANE
FENAGH
CO. CARLOW**

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August 2013

ENVIRONMENTAL LIABILITIES RISK ASSESSMENT
(ELRA)
REPORT 2013

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APPENDICES

Appendix 1 Environmental Liabilities Risk Insurance
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1. INTRODUCTION

European Communities (Environmental Liability) Regulations (SI 547 of 2008) transposed EU Directive 2004/35/CE on environmental liability with regard to the prevention and remedying of environmental damage into Irish law. These regulations came into force on the 1st of April 2009.

The purpose of these Regulations is to establish a framework of environmental liability based on the 'polluter-pays' principle, to prevent and remedy environmental damage.

The Environmental Protection Agency (herein referred to as the Agency) has been designated as the competent authority for all aspects of these Regulations.

Environmental Liability Risk Assessment (ELRA) considers the risk of unplanned events occurring during the operation of a facility that could result in unknown liabilities materialising.

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2. REGULATORY REQUIREMENT FOR AN ELRA

The facility located at Ballintrane, Fenagh, Co. Carlow by O'Toole Composting Ltd. Is currently permitted under Waste Facility Permit number WFP-CW-10-0003-01. The company applied to the Environmental Protection Agency for a licence in July 2012 reference number W0284-01.

The Environmental Liability Directive (2004/35/EC) provides a framework of environmental liability based on the 'polluter pays' principle. Future consents will include a condition a 'Statement of Measures condition.

The holder shall as part of the AER provide an annual statement as to the measures taken or adopted at the site in relation to the prevention of environmental damage and the measures in place in relation to the underwriting of costs for remedial actions following anticipated events (including closure) or accidents/incidents as may be associated with the carrying on of the activity.

As part of the licensing process a Notice was issued by the EPA in accordance with Article 14(2)(b)(ii) of the Waste Management (Licensing) Regulations 2004, as amended requiring the applicant to:

- a. Prepare a fully detailed and costed Closure, Restoration and aftercare Management Plan (CRAMP) for the facility, to include as a minimum the following:
 - i. A scope statement for the plan
 - ii. The criteria which define the successful closure and restoration of the facility or part thereof, and which ensure minimum impact to the environment.
 - iii. A programme to achieve the stated criteria.
 - iv. Where relevant, a test programme to determine the successful implementation of the plan.
 - v. Details of the long term supervision, monitoring and control, maintenance and reporting requirements of the restored facility.
 - vi. Details of the costings for the plan and financial provisions to underwrite these costs.
- b. Prepare a fully detailed and costed Environmental Liabilities Risk Assessment (ELRA) which addresses the liabilities and potential liabilities from past and proposed activities, including those liabilities and costs included in the CRAMP. Provide evidence that the assessment was prepared or reviewed and was found to be complete and accurate, by an independent and appropriate qualified consultant or expert.
- c. Provide a proposal for financial provision to cover any liabilities associated with the operation and identified in the ELRA (including closure restoration and aftercare and unanticipated accidents, incidents and liabilities). Provide evidence that O'Toole Composting Ltd. Will be in a position to put such a financial provision in place in the event that a waste licence is granted and prior to development works commencing.

The preparation of the CRAMP and ELRA and evaluation of the amount and form of financial provision should have regard to Environmental Protection Agency guidance including Guidance on Environmental Liability Risk Assessment, Residuals Management Plans and Financial Provision (2006).

3. SCOPE

This report presents the Statement of Measures Report for 2013 pertaining to the assessment environmental risk, potential environmental liability, costs and prevention measures associated with the occurrence of unknown environmental liabilities at the O'Toole Composting Ltd. Facility Ballintrane, Fenagh, Co. Carlow.

There have been no significant developments on site in 2013 that would significantly alter the Environmental Aspects associated with the site and its operations.

Environmental risks have been compiled with due reference to, and regard of, the Environmental Aspects of the facility compiled in 2013 and environmental risk assessments carried out.

The risk assessments completed in accordance with the Agency guidance note on Environmental Liability, Risk Assessment, Residuals Management Plans and Financial Provision in 2008, and this assessment, has categorised the facility as a Risk Category 3 facility. Risk Category 3 automatically requires a site specific ELRA.

3.1 Initial Screening

The EPA Guidance Note requirement for the identification of the potential for known and unknown liabilities to arise has been applied within the scope of this report. The current principal permitted activity on site is:

Class 8 of the Third Schedule, Part I of the Waste Management (Facility Permit and Registration) Regulations 2007, and as amended 2008, which states:

The reception, storage and biological treatment of biowaste at a facility where (a) the maximum amount of compost, biowaste and digestate held at the facility does not exceed 6000 cubic metres at any one time and (b) the annual intake shall not exceed 10,000 tonnes.

Applying Appendix B of the Guidance Note namely 'IPPC and Waste Activities Complexity Look-Up Tables this gives the following banding for this activity (R2)

Recycling or reclamation of organic substances which are not used as solvents where:

- | | |
|----------------------------------|----|
| • <5000 tonnes per annum | G2 |
| • 5000 – 25,000 tonnes per annum | G3 |
| • >25,000 tonnes per annum | G4 |
| • Mushroom composting | G4 |

Using the 'Decision Tree' in the Guidance Note any activity classified as G4 or G5 automatically requires a Site Specific ELRA. While the current level of activity may be G3 and this would then require a further assessment for environmental sensitivity, the proposed licensed activity and tonnages will exceed 25,000 tonnes per annum of composting or bio-stabilisation. Therefore it is deemed appropriate that a site specific ELRA is undertaken.

4 ELRA

4.1 General

The objectives of the ELRA are:

- To identify and quantify environmental liabilities at the facility focussing on unplanned, but possible and plausible events occurring during the operational phase
- To calculate the value of financial provisions required to cover unknown liabilities.
- To identify suitable financial instruments to cover each of these financial provisions
- To provide a mechanism to encourage continuous environmental improvement through the management of potential environmental risks.

The methodology is based on that provided in the EPA ELRA Guidance Document 2006. This detailed assessment includes a Risk Management Programme for the mitigation and management of any environmental liabilities identified.

The ELRA covers environmental risks leading to a potential or anticipated liability. Environmental risks will be deemed to cover all risks to: surface water, groundwater, atmosphere, land and human health.

4.2 Methodology – Risk Identification, Likelihood and Consequence

The following steps were taken as part of the ELRA;

- Risk Identification
- Risk Assessment
- Identification and Assessment of Risk Mitigation
- Development of Risk Management Programme
- Assessment of Unknown Environmental Liabilities

4.2.1 Risk Identification

4.2.1.1 Methodology

Risk identification was initially undertaken using a Risk Management Workshop with site management and consultants including a site visit. The risk identification process involved:

- The identification of potential environmental receptors at the site
- The identification of facility processes that posed potential hazards to the environmental receptors
- The identification of risks associated with the processes

4.2.1.2 Identification of Environmental Receptors

Environmental receptors are those parts of the surroundings likely to be affected by the processes that are ongoing at the O'Toole Composting Ltd. facility. The receptors identified are listed below and are used as a baseline to ensure that all significant risks are identified and all major aspects of the environment are taken into account.

- Groundwater
- Surface Water
- Human Beings
- Air Quality

During the workshop all processes on site were evaluated and the hazards associated with each process listed. Any potential cause of failure of the process was identified and if this had the potential to effect the environment it was classed as a Risk.

4.2.1.3 Identification of Processes

A number of processes being carried out on site were identified during the course of the workshop and are listed below:

Processes:

- Material reception and acceptance
- Processing of material on site
- Storage of material on site
- Loading and despatch of material
- Management of site operations

These processes have been identified to cover all activities on site that may result in a risk to the environmental receptors. Each environmental receptor was assessed against the list of processes in order to identify potential hazards.

4.2.1.4 Identification of Risks from the processes on site

Each process was considered separately and the workshop group brainstormed to identify all risks which were associated with the process in question. A list of risks was developed and these were entered into a Risk Register. Table 2 illustrates the Risk Register.

Table 2 Project Risk Register

Risk	Potential Failure Mode/Risk
1	Uncontrolled release of dust to air
2	Excessive noise
3	Fire causing release of poisonous/noxious gases
4	Accidental/unauthorised delivery of hazardous material, other wastes
5	Loss of integrity of fuel bund
6	Loss of integrity of process drains and pipes
7	Mobile fuel tanker accident
8	Contamination of surface water
9	Odours emanating from the facility
10	Contamination of groundwater or soil
11	Improper disposal of waste generated on site

4.2.2 Risk Assessment

4.2.2.1 Methodology

The risks identified during the on-site workshop were assessed against the risk classification table (RCT) as provided in Table 2. This risk classification table was designed to reflect the critical levels of risk appropriate to this facility.

Ratings taken from a risk classification table were applied to the severity and chance of occurrence of each risk. A risk score was calculated for each risk using the ratings. The risks were then ranked and compared based on the risk scores.

4.2.2.2 Risk Classification Table

The Risk Classification Table (RCT) has been designed to reflect the critical levels of risk appropriate to the facility. The table is presented as Table 3

Table 3 Risk Classification Table

Rating	Description	Probability (%)	Financial Cost (€000's)
1	Very Low	0 – 5	0 – 1
2	Low	5 – 10	1 – 10
3	Medium	10 – 20	10 – 50
4	High	20 – 50	50 – 100
5	Very High	>50	100 – 1000

The RCT provides appropriate levels of probability and severity for the ranking of risks. The levels for each parameter reflect suitable levels for assessing and ranking the risks identified at the facility and allocating appropriate management measures.

4.2.2.3 Risk Ranking

Risk ratings were applied to each risk for severity and occurrence as taken from the RCT. A risk score was then calculated for each risk using the ratings. The risk score is based on the product of the severity rating and the occurrence rating. The system allows the risks to be ranked and compared.

The project risk register listing all the major risks identified at the facility is provided in Table 2. This register has been rearranged in Table 4 to include risk scores and ranks the risks in order of risk score.

Table 4 Project Risk Register – Ranked by Risk Score

Risk	Potential Failure Mode	Risk Score
9	Odours emanating from the facility	12
4	Accidental/unauthorised delivery of hazardous material, other wastes	12
1	Uncontrolled release of dust to air	9
10	Contamination of groundwater or soil	8
8	Contamination of surface water	8
3	Fire causing release of poisonous/noxious gases	8
2	Excessive noise	4
6	Loss of integrity of process drains and pipes	4
7	Mobile fuel tanker accident	4
5	Loss of integrity of fuel bund	2
11	Improper disposal of waste generated on site	2

4.2.2.4 Risk Matrix

The Risk Matrix has been developed to allow the risks to be easily displayed and prioritized as follows: Red is high level risk, Yellow is a medium level risk and Green (light and dark) is a low level risk.

Table 5 below indicates that there are no high level or medium level risks that require immediate action. All 11 risks identified are located in the green zone (light and dark) indicating a need for continuing awareness and monitoring on a regular basis. Further assessment of all zone risks indicates that many of these risks can be reduced through the implementation of mitigation measures. These measures are outlined in the next section of this report. Occurrence against severity is displayed below.

Table 5 Risk Matrix – Current Risk Status

Very High	5					
High	4					
Medium	3			1	9,4	
Low	2		2		10,8,3	
V. Low	1		11,5		6,7	
			2	3	4	5
		V Low	Low	Med	High	V. High

4.2.3 Risk Prevention Mitigation and Management

The risk assessment and categorisation phase identified all risks to be in the green zone. All green zone risks require monitoring on an ongoing basis but there is no risk currently in the amber/red zones which would require mitigation and management action.

However green zone risks may have the potential to increase to yellow or red zone risks, and where additional risk management measures are available to manage them at their current levels or reduce them further, these should be implemented if considered cost effective.

Table 6 below illustrates the recommended risk mitigation measures identified during this assessment. Such measures are currently in place or are planned as part of the company's Operational Management Programme. The table provides the risks in descending order of risk score with the proposed mitigation measure. The current controls are also given

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Risk ID	Risk Description	Possible Mitigation Measures	Time to Complete	Revised Risk Score
9	Odours emanating from the facility	All composting operations involving potentially odorous material is carried out indoors. Staff trained in the operation of the facility to minimise odours such as keeping doors closed. All indoor operations carried out under negative air of biofilter. The biofilter is maintained and serviced regularly and the medium changed at regular intervals. Adequate moisture is maintained within composting material to prevent the formation of airborne particles.	Ongoing and continuous	12
4	Accidental/unauthorised delivery of hazardous material, other wastes including contaminated material	Rigorous inspection of incoming material both at the weighbridge and at reception area. Training of drivers to check all loads before collection. Audit process for new customers. Security cameras to prevent unauthorised access and delivery of material. Ongoing checks of security fencing. Pre-approval required for all customers and completion of feedstock acceptance form.	Ongoing	12
1	Uncontrolled release of dust to air	Existing controls as for odour such as operations being carried out indoors. Spraying of maturing compost in dry weather as part of the process. Additional spraying of compost storage and site surfaces from a tanker and bowsers to be carried in excessively dry weather conditions. Surfaces maintained in clean condition. Site well screened with trees.	Ongoing	9
10	Contamination of groundwater or soil	All operation surfaces of the site are impermeable concrete hardstand. Therefore the risk of groundwater or soil contamination is low. A protocol for inspection and repair (if required) of the hardstand is currently being implemented and this will ensure that this risk does not increase. All oils, lubricants and chemicals are stored in either permanent or mobile bunds and all bunds are subject to testing.	Ongoing	8
8	Contamination of surface water	All surface water is directed to the local stream. A programme of inspection and monitoring is in place. All oils, lubricants and chemicals are stored in either permanent or mobile bunds and all bunds are subject to testing. Any minor spillages are cleaned up immediately and there is adequate provision of spill kits on site for this purpose	Ongoing	8

Risk ID	Risk Description	Possible Mitigation Measures	Time to Complete	Revised Risk Score
3	Fire causing release of poisonous/noxious gases	Ongoing review of fire prevention measures on site. Ensure that all personnel have adequate training in prevention and fire fighting procedures. Only trained personnel engage in cutting and welding operations if required. Ensure an adequate supply of fire extinguishers and ensure that they are serviced on a regular basis. Ensure also that all mobile plant is fitted with fire fighting equipment. Annual fire drill and annual review of procedures.	Complete	8
2	Excessive noise	The site operates within the permitted levels and existing controls on site are adequate	Complete	4
6	Loss of integrity of process drains and pipes.	Monthly checking of processing plant including process drains and pipes. Scheduled maintenance and cleaning of same. On site staff trained in carrying out minor repairs.	Ongoing	4
7	Mobile fuel tanker accident	Rigorously enforce traffic management plan and speed limits. Purchase fuel in bulk to reduce number of deliveries. Small tankers only to be allowed on site. Tankers not allowed on site during peak hours.	Complete	2
5	Loss of integrity of fuel bund	Integrity test every three years	Ongoing.	2
11	Improper disposal of waste generated on site	Only fully licensed waste contractors are used for disposal of any waste generated on site. Copies of Waste Collection Permits, Waste Licenses and Waste Permits where appropriate are retained on site. It is therefore deemed that existing measures are adequate	Complete	2

The revised risk matrix below indicates the critical nature of each risk when considered with the mitigation measures described in table 6 above.

Table 7 Revised Risk Matrix

Very High	5					
High	4					
Medium	3			1	9,4	
Low	2		2,6		10,8,3,	
V. Low	1		5,7,11			
		1	2	3	4	5
		V Low	Low	Med	High	V. High

4.2.4 Risk Management Programme

Every risk requires a certain amount of management in order to reduce the risk or manage the risk at an acceptable level. Risk owners will therefore be allocated to each risk to undertake this role. For the majority of the risks identified, the management of the risk will involve the implementation of the recommended mitigation measures and the maintenance of current controls. The recommended mitigation measures were listed in **Table 6**.

The risk owner must be someone competent enough to understand the risk and the suggested mitigation proposals for that risk, and have the authority to implement the mitigation measure. The risk owner must also be able to be held ultimately responsible for the risk also.

4.2.5 Assessment of Potential (Unknown) Environmental Liabilities

For the unknown liabilities identified in this report a financial model is necessary to estimate the environmental liability associated with these risks

Each risk has two characteristics derived from the Risk Classification Tables that are used in the financial models, namely the range in probability (X–Y %) of the risk occurring and the range in cost implications (€A–B) if the risk occurs.

The requirements of the financial model must first be defined in terms of worst, most likely or best case scenario. If the model is for the worst case scenario then the higher end of each range is used in the calculations. For O'Toole Composting Ltd. facility the worst case scenario was calculated and Table 8 below illustrates how the financial output for the worst case scenario is calculated.

Table 8 Worst Case Scenario Financial Model

Risk ID	Description	Revised occurrence rating	Likelihood of occurrence Range (%)	Revised severity rating	Cost Range	W/C Prob (%) A	W/C Severity (€) B	Most likely Cost = AxB
9	Odours emanating from the facility	3	10-20	4	50,000 to 100,000	20	100,000	20,000
4	Accidental/unauthorised delivery of hazardous material, other wastes	3	10-20	4	50,000 to 100,000	20	100,000	20,000
1	Uncontrolled release of dust to air	3	10-20	3	10,000 to 50,000	20	50,000	10,000
10	Contamination of groundwater or soil	2	5-10	4	50,000 to 100,000	10	100,000	10,000
8	Contamination of surface water	2	5-10	4	50,000 to 100,000	10	100,000	10,000
3	Fire causing release of poisonous/noxious gases	2	5-10	4	50,000 to 100,000	10	100,000	10,000
2	Excessive noise	2	5-10	2	1,000 to 10,000	10	10,000	1000
6	Loss of integrity of process drains and pipes	2	5-10	2	1,000 to 10,000	10	10,000	1000
7	Mobile fuel tanker accident	1	0-5	2	1,000 to 10,000	5	10,000	500
5	Loss of integrity of fuel bund	1	0-5	2	1,000 to 10000	5	10,000	500
11	Improper disposal of waste generated on site	1	0-5	2	1,000 to 10,000	5	10,000	500

5 FINANCIAL PROVISION

The main objective of financial provision is to ensure that sufficient financial resources are available to cover:

- Known environmental liabilities that will arise at the time of facility closure
- Known environmental liabilities that are associated with the aftercare and maintenance of the facility until such time as the facility is considered to no longer pose a risk to the environment
- Unknown environmental liabilities that may occur during the operating life of the facility.

Financial provision encompasses two aspects:

- Quantifying the financial amount of the environmental liabilities (known and unknown), and
- Selecting appropriate financial instrument(s) to underwrite the liabilities.

The amount of financial provisions required for the facility was determined using the Closure, Restoration, Aftercare Management Plan (CRAMP) and ELRA. The known liabilities established in the CRAMP are of the order of €237,500.

There are presently no known environmental liabilities at the site.

It has been ascertained through the ELRA process that the greatest environmental liability for the site is the risk of odour or unauthorised delivery of hazardous or other wastes. Cleanup and remediation costs have been estimated at €20,000 (Table 8)

Other environmental liability costs from unknown environmental risks associated with the operation of the facility have been ascertained as being financially and environmentally of low significance.

Provision must also be made for the worst case scenario involving the possible insolvency of the licence holder. In this extremely unlikely event then the cost of clean-up for the site would be the cost of closure plus disposal of up to 2000 tonnes of waste material.

Table 9 Model for financial insolvency scenario:

Item	Estimated Cost (€)
Transportation of all plant including mobile plant and weighbridge to another facility	20,000
Disposal of up to 2000 tonnes of waste material on site including bio-stabilised materials	200,000
Contract cleaning and decontamination of buildings and hardstand	30,000
Civil and structural, mechanical, and electrical contractors (1000 man hours at €40/hr)	40,000
Environmental Due Diligence Audit by professional consultancy	10,000
Subtotal	300,000
Contingency (25%)	75,000
Total	375,000

Taking this worst case scenario cost and adding the three next highest risks from Table 8 will give a total of €425,000. It is therefore recommended that Environmental Liability Insurance to the value of €500,000 be put in place to cover any such liability arising from the operation of this facility and a possible insolvency situation.

Table 10 Financial Provision

Liability Type	Description	Method of Quantification	Amount of Provision	Total Amount	Financial Instrument
Known Liability: Closure, Restoration and Aftercare Management (CRAMP)	Site closure and decommissioning: <ul style="list-style-type: none"> • Decommissioning of plant and buildings • Residual waste disposal • No aftercare is anticipated to be required 	Cost estimates in CRAMP	€237,500	Known: €237,500	Self financing
Unknown Liability in operation (ELRA)	Potential cover required as a contingency for unknown environmental liabilities	ELRA	€500,000	Unknown: €425,000	Environmental liability insurance to the value of €500,000

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6 CONCLUSIONS

The O'Toole Composting Ltd. Facility at Ballintrane, Fenagh, Co. Carlow is subject to an ongoing monitoring programme for environmental emissions.

The overall site sensitivity to environmental liabilities is low. This has been concluded based on the detailed assessment in this report.

There was no historic environmental liability identified at the site.

The current operational management programme on the site has reduced the risk of the development of new significant environmental liabilities to a low level.

No scenarios have been identified that could result in environmental liabilities that would threaten the financial solvency of O'Toole Composting Ltd.

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APPENDIX 1

COPY OF ENVIRONMENTAL LIABILITIES INSURANCE

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O'TOOLE COMPOSTING LTD.
BALLINTRANE
FENAGH
CO. CARLOW

WASTE PERMIT NUMBER WFP-CW-10-0003-01
AND
EPA WASTE LICENCE APPLICATION W0284-01

**CLOSURE, RESTORATION, AFTERCARE MANAGEMENT
PLAN (CRAMP) 2013**

August 2013

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1. EXECUTIVE SUMMARY

O,Toole Composting Ltd. is the owner and permit holder at the Fenagh facility. They are currently permitted by Carlow County Council under Waste Permit Number WFP-CW-10-0003-01. An application for a Waste License is currently under consideration by the Environmental Protection Agency reference W0284-01. The lands and property are in the full ownership of O'Toole Composting Ltd.

The facility is operated by O'Toole Composting Ltd. which is essentially a family run business. The company provides employment locally and is one of Irelands leading composters which has an excellent reputation both within the recycling industry and among its significant customer base. O'Toole Composting Ltd. primarily provides recycling solutions for bio- degradable waste and is also involved in recycling of skip waste and the operation of a small civic amenity facility at the Fenagh facility.

There has been significant investment in this operation in recent years and it is hoped to continue this in future years and create additional employment locally.

This Closure and Aftercare Management Plan is being prepared in accordance with the Environmental Protection Agency's (EPA's) *Guidance on Environmental Liability Risk Assessment, Residuals Management Plans and Financial Provision (2006)*.

An initial screening and operational risk assessment of the facility was completed and indicated that the facility lies in the medium risk category. The risk assessment does not however, show any likelihood of significant residual liabilities.

The scope of this plan addresses the key issues, which would occur in an orderly shutdown of all the site activities on a phased basis over an estimated time period of 2-3 months. The basis of the plan is to ensure that, upon completion of the plan, the facility would be in a suitable state for future agricultural or light industrial use and its condition would not pose a risk to public health and safety or the environment.

The costs associated with decommissioning are generally related to the disposal and recycling of equipment and the use of external resources to implement the CRAMP. In certain instances, costs will be recouped through the sale of equipment or materials.

A full list of resources required and associated costs is shown in Table 1 overleaf.

Table 1 Decommissioning Costs

Item	Estimated Cost (€)
Transportation of all plant including mobile plant and weighbridge to another facility	20,000
Waste treatment/disposal costs to include waste from the composting process including bio-stabilised materials (max 1000 tonnes)	100,000
Contract cleaning and decontamination of buildings and hardstand	20,000
Civil and structural, mechanical, and electrical contractors (1000 man hours at €40/hr)	40,000
Environmental Due Diligence Audit by professional consultancy	10,000
Subtotal	190,000
Contingency (25%)	47,500
Total	237,500

It is estimated that a maximum cost of approximately €237,500 could be incurred to decommission the site, including external resources costs.

A more realistic scenario would see all compost and plant being sold prior to closure and this would make a positive contribution towards the cost of the closure. This would give a closure cost of less than €150,000

On completion of the clearance of the site, the asset will be sold or developed or used by the owner for agricultural or light industrial purposes.

The maximum total cost associated with executing a CRAMP at the Fenagh site is therefore estimated to be in the region of €237,500.

O'Toole Composting Ltd. confirms that there are more than adequate resources from operations to fund the CRAMP. In addition, the value of the facility itself as a fixed asset will far outweigh any remediation cost. However the implementation of Environmental Liabilities Risk Insurance will give additional reassurance to Carlow County Council and the Environmental Protection Agency.

2. INTRODUCTION

2.1 Facility and Licence Details

O'Toole Composting Ltd. is the owner and permit holder at the Fenagh facility. They are currently permitted by Carlow County Council under Waste Permit Number WFP-CW-10-0003-01. An application for a Waste License is currently under consideration by the Environmental Protection Agency reference W0284-01. The lands and property are in the full ownership of O'Toole Composting Ltd.

The facility is operated by O'Toole Composting Ltd. which is essentially a family run business. The company provides employment locally.

O'Toole Composting Ltd. primarily provides recycling solutions for bio- degradable waste and is also involved in recycling of skip waste and the operation of a small civic amenity facility at the Fenagh facility.

There has been significant investment in this operation in recent years and it is hoped to continue this in future years and create additional employment locally.

O'Toole Composting Ltd. submitted an application to the Environmental Protection Agency in July 2012 for a Waste Licence and this Closure Restoration and Aftercare Management Plan is written in response to a 'Notice in accordance with Article 14(2)(b)(ii) of the Waste Management (Licensing) Regulations 2004, as amended' dated 24th June 2013.

This Closure and Aftercare Management Plan is being prepared in accordance with the Environmental Protection Agency's (EPA's) *Guidance on Environmental Liability Risk Assessment, Residuals Management Plans and Financial Provision (2006)*.

"As part of the implementation of the IPPC Directive the terminology Residuals Management (RMP) will be replaced by Closure, Restoration and Aftercare Management Planning (CRAMP)"

In accordance with this guidance document, CRAMP will now be referred to throughout this report.

An initial screening and operational risk assessment of the facility was completed and indicated that the facility lies in the medium risk category. The risk assessment does not show any likelihood of residual liabilities.

2.2 Facility Closure Scenarios covered in this Plan

O'Toole Composting Ltd. has no current plans to decommission all or part of the site. Two possible scenarios in the unlikely event of a shutdown of the facility were considered.

- Do-Nothing
- Do-Something

The do-nothing scenario describes the situation of potential risks if the facility was vacated without implementing the Closure, Restoration, Aftercare Management Plan. The do-something scenario describes the potential risks if the plan was implemented.

It should be noted that a do-nothing scenario is not consistent with the policy of O'Toole Composting Ltd. consequently, the company proposes to implement the do-something scenario, i.e. implement the CRAMP.

The scope of this plan addresses the key issues, which would occur in an orderly shutdown of all the site activities on a phased basis over an estimated time period of 2-3 months. The basis of the plan is to ensure that, upon completion of the plan, the facility would be in a suitable state for future use/development and its condition would not pose a risk to public health and safety or the environment.

It is intended to remove all equipment and systems from the site. In general, specialist equipment will be distributed to operating plants of a similar nature in the event of a shut down.

O'Toole Composting Ltd. intends to utilise existing staff resources to form a team to manage and execute the plan, supplemented where appropriate by outside resources. This CRAMP Team would be responsible for managing and executing the complete plan. Outside contractors required for cleaning, waste disposal, or recycling activities would be fully approved and licensed.

It is estimated that the duration of decommissioning and decontamination would be 2 to 3 months. Environmental monitoring would continue while the plan is in operation and for a period following the completion of the plan to be determined by the Environmental Protection Agency. The EPA would be informed of the results of the monitoring programme and of the status of the plan.

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3. SITE EVALUATION

3.1 Facility Description and History

The site of the composting facility at Ballintrane, Fenagh Co. Carlow is in a rural location with the neighbouring areas occupied primarily by farms or one off housing. However it is immediately adjacent to the N80 which is the main Carlow to Wexford road. There are a number of industrial operations along this road the nearest being Carlow Precast approximately 1.2km from the O'Toole facility.

The current site consists of a 4.1 ha site with approximately 5000 square metres of composting buildings. The site is in a secluded area which has been in the present ownership for over 10 years and all land use in the immediate vicinity is agricultural in nature.

The nearest residences (sensitive receptors) are some 170 m from the site. The facility does not/will not have any significant impacts with respect to human health, socio-economic factors, land use, or the amenity value and tourism potential of the area.

There will be no significant environmental emissions from the facility which could give rise to adverse effects.

3.2 Site reference condition

The site being occupied is located in a rural area and would have agricultural or other similar potential uses. It could also be used for industrial purposes subject to the necessary consents as it is in a central location of the national transport corridor, namely a county town which links the gateways of Waterford and Dublin and the hub towns of Kilkenny and Wexford.

The reference condition of the site is therefore taken to be that of a clean site with utilities available with no historical pollution that has been generated on site. The objective of the Closure, Restoration, Aftercare Management Plan will therefore be the return of the site to clean condition with potential for agricultural or possibly light industrial use.

3.3 Facility Compliance Status

There are currently no issues of non-compliance associated with this site.

3.4 Facility Processes and Activities

The facility is primarily engaged in the production of peat free soil enhancement products, woodchip and in the bio-stabilisation of organic fines. On site operations include:

- Reception and classification of materials.
- Shredding of green garden waste and timber
- In-vessel composting of biowaste
- Bio-stabilisation of organic fines
- Blending and bagging of compost and other nutrient rich materials

- Loading trailers etc with outgoing loads

3.5 Overview of Production Process

In-vessel composting of biowaste, Wood shredding and Bio stabilisation of organic fines are already conducted at the facility.

Waste wood from civic amenity sites and waste transfer stations is shredded and then sold to make panel boards, pallets or as an amendment to Coillte for boiler fuel.

Organic fines are treated to reduce their biological activity and render the organic material stable for landfill as set out in the EPA Technical Guidance Document Municipal Solid Waste –Pre-treatment & Residuals Management.

By pre-treating bio-degradable waste the potential for ground water pollution and methane emissions from landfill is significantly reduced.

Within the facility there is a large concrete pad for the maturation and wood shredding, a blending area for the manufacture of horticultural products, storage area for finished products and a fully enclosed air conditioned building for bio-stabilisation.

All bio-stabilisation activity is conducted within an enclosed building. In addition there is a physical boundary between the areas where the different activities are conducted this eliminates the potential for cross contamination between the organic fines and the green material/horticultural products.

The bio-stabilisation building contains a reception hall, concrete bunkers where the various parameters can be carefully controlled and a maturation building used to cure material. The cured material is then sampled to assess the level of micro-biological activity. Material achieving the EPA standard AT4 is then removed to landfill for use as an engineering material.

Air is removed from the intake building and blown up through the floor of the bunkers. This fresh air ensures that the material is kept aerobic and also regulates the temperature to optimise the rate of biodegradation. Exhaust air from the composting bunkers is removed and sent to the biofilter via a humidifier.

By removing air from the buildings a vacuum is created within the building. The presence of this vacuum is such that it causes fresh air to enter the facility, thus removing the potential for any odour migration off site.

3.6 Inventory of Site Buildings, Plant, Raw Materials and Wastes

Description of the Plant

The facility is primarily an indoor rather than a yard based facility. Most of the plant is mobile plant and any fixed plant is installed in such a way that can facilitate a rapid and clean removal. This includes composting tunnels and the bio-filter.

The administration building is a series of portacabins as is the weighbridge office. The weighbridge itself is an in-ground installation however it can be easily removed and the site remediated.

Storage on site is contained indoors.

Supporting site infrastructure includes a partially concreted and partially hardstand yard, underground services including well, roads and car parking.

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4. CLOSURE CONSIDERATIONS

4.1 General

In the event of closure of the O'Toole Composting Ltd. facility, there is a set of checklists to be completed, which cover such aspects as environment, quality and compliance, safety and industrial hygiene, sterilisation, and loss prevention.

4.2 Clean or Non-Clean Closure Declaration

Upon cessation of operations and subsequent decommissioning at the facility, it is anticipated that there will be no remaining environmental liabilities, i.e. clean closure is expected.

4.3 Plant or Equipment Decontamination Requirements

Decontamination of process equipment is a normal part of the operations. Equipment requiring decontamination is foreseen to consist of composting process equipment. In addition to process equipment, decontamination will be extended to any demolitions to be undertaken, and to the vacant areas created by such demolitions.

Decontamination will extend to all drains and sewers, to guarantee that any sludge and residues are removed from the site and are appropriately disposed of.

The decontamination programme will be based on updated risk assessment and will be submitted to the Environmental Protection Agency for approval.

4.4 Plant Disposal or Recovery

The process equipment will be decontaminated in accordance with normal operating procedures ensuring removal of all traces of pre-compost material and any chemical material such as hydraulic oils that could cause harm. Plant may be removed for use at other locations, left in place as part of the asset to be disposed of, or scrapped, based on risk assessment and cost benefit analysis. The most likely scenario in the event of a cessation of activity on site by O'Toole Composting Ltd. is that the process equipment will be removed for sale and use at another location.

Utility plant will be left with the asset, as mothballed equipment or ready-to-operate, depending on the best economic option.

4.5 Waste Disposal or Recovery

Wastes to be managed in the circumstances of closure of the facility which may be present for management over and above the normal range or volumes are foreseen as the following:

- Any waste arising from the composting process
- Any waste remaining in the waste transfer building
- Sludge from the wastewater drains;
- Scrapped decontaminated equipment;
- Ducting and decontaminated process equipment

- Residues of oils e.g hydraulic oils and fuel oils
- Non-hazardous waste arising from the disposal of residual packaging documentation, and waste arising from the cleaning of offices, workshops and welfare facilities.

The disposal of these wastes will be according to the current good practice as applicable to hazardous and non-hazardous waste, through licensed operators.

It should be noted that any remaining compost stock on site at the time of closure will be treated as normal, i.e. sold for the best market price available.

4.6 Soil or Spoil Removal

Given the following:

- The quantities of non organic materials stored and used on site is relatively small
- The natures of the materials held onsite are not harmful to the environment
- The main operational part of the site is concreted and indoors.
- Foul effluent is directed into a closed system
- Surface water is unlikely to be contaminated and regularly monitored.

it is therefore anticipated that there will be no contaminated ground, soil or spoil arising at the site that would require specialist recovery or disposal.

5. IMPLEMENTATION OF CLOSURE, RESTORATION, AFTERCARE MANAGEMENT PLAN (CRAMP)

Particular actions are listed below for specific areas of the facility as part of the CRAMP. In general, care and attention will be given during the implementation of the plan to ensure that the potential risks associated with the plan are avoided. In the event of a spillage, leak or fire during decommissioning, O'Toole Composting Ltd. Emergency Plan would be fully implemented in order to minimise the risk to health and the environment.

5.1 Production Areas

The CRAMP for all production areas would consist of the following actions:

- Cessation of waste acceptance
- Cessation of all production other than completion of work in progress.
- Removal of all product material to the relevant area of the facility for transfer to other facilities or for sale.
- Cleaning and decontamination of all process vessels and any other equipment with product contact. Site cleaning procedures, using clean-in-place, steam-in-place, clean-out-of-place steam-out-of-place would be sufficient for these operations. Additional specific procedures would be developed, if required. The state of cleanliness would be verified through a visual inspection.

- Cleaning and decontamination of all mobile plant.
- Cleaning and decontamination of all concrete hardstand areas using a steam cleaning process and employing the use of a roadsweeper.
- Shutting off unnecessary services to the buildings.
- Cleaning and decontamination of all floor drains and sumps.
- Specialist equipment, once decontaminated, to be sold off for use in similar or other processes.

5.2 Utilities

The CRAMP for the utilities areas would consist of shutting down of the following systems on a phased basis, depending on plant status and requirements:

Chemicals, water

Removal of any associated chemicals, oils or any other materials used in the utilities area for redistribution, return to vendor or disposal, if required.

The water supply system would be maintained due to the needs for fire protection and sanitary services.

Waste Oils, Diesel and Hazardous Waste

Waste oils, diesel and hazardous waste (e.g. anti-freeze) used in the utilities area will be sent for suitable treatment or disposal. Hazardous waste will be removed from site and disposed of to a suitably licensed facility. Records will be retained and archived.

Maintenance and Engineering

- The secure archiving of all engineering documentation including drawings, process and instrumentation diagrams, validation documentation, vendor manuals and data, project files, maintenance records, inspection records and all other appropriate documentation.
- Disconnection of all maintenance equipment to leave it in a secure state.
- Distribution of equipment to another similar facility or sale to an interested party, where possible.
- Removal of all old and obsolete equipment from maintenance areas, workshop areas and stores for recycling or disposal by a licensed contractor.

5.3 Warehouse

The CRAMP for the warehouse will consist of the following actions:

- Cancellation of all orders for incoming materials to the site;
- Negotiate with other composting plants with a view to distribution of unused materials;
- Negotiation with relevant suppliers to return unused materials to supplier;
- Send opened containers and unreturnable or out-of-date goods for appropriate treatment or disposal;

- Clean and decontaminate the storage areas. Specific procedures would be developed, if required. The state of cleanliness would be verified either analytically or through a visual inspection.

5.4 Offices, Administration, Reception and Security

The CRAMP for the offices, Administration areas, Reception and Security includes the following actions:

- Removal of administration equipment for distribution to sister facility or sale to interested party, where possible, otherwise for disposal by a licensed contractor.
- Safe and compliant storage of all relevant documentation to an off-site location.
- The maintenance of site security on an ongoing basis for ongoing monitoring of the site from a safety, fire prevention and environmental perspective.

5.5 Canteen

Removal of canteen equipment for sale to interested party, where possible, otherwise for disposal by a licensed contractor.

5.6 Waste Permit or Licence Documentation

All Environmental Protection Agency licence or Carlow County Council Permit related documentation will be maintained on file for a minimum of 7 years post closure of the facility. Where a transfer of the Waste Licence takes place, the associated documentation will reside with the new licence holder.

5.7 Other Areas

The following other actions will be required to ensure the implementation of the CRAMP on a site-wide basis:

- Cessation of any construction project work on site so that the site is left in a safe and orderly condition. Contractors will be required to decommission any construction compounds and remove all construction equipment, construction materials and waste, storage units and temporary offices from the site at the completion of construction projects.
- Disbandment of contract personnel, facilities and equipment.
- Termination of all non-essential maintenance and other contracts.
- Removal from site any temporary offices or storage areas.
- Continuation of ongoing monitoring programmes to insure the integrity of the groundwater and surface waters on site.
- Rationalisation of the site electricity supply.
- Testing of soils and groundwater at the time of decommissioning would be performed and remediation carried out, if necessary.
- Retention of all necessary fire alarms and fire protection systems.

- Retention of standard security patrols, video monitoring and defined site access procedures.
- Removal of all items that may contain mercury (for example fluorescent lights) or any other controlled compounds for recycling or disposal if necessary.

6. CRITERIA FOR SUCCESSFUL CLOSURE

Successful clean closure will be expected to be achieved when it can be demonstrated that there are no remaining environmental liabilities at the site. In practice this will require demonstration that the following criteria have been met:

- All plant was safely decontaminated using standard procedures and authorised contractors;
- All wastes were handled, packaged, temporarily stored and disposed of or recovered in a manner which complies with regulatory requirements;
- All relevant records relating to waste and materials movement and transfer or disposal were managed and retained throughout the closure process;
- There was no soil or groundwater contamination at the site. This was verified using monitoring data and a soil/groundwater assessment at the time of closure (if required);
- The Site Management System remained in place and was actively implemented during the closure period;
- The asset is suitable for use as an agricultural or light industrial related development site, as demonstrated by an environmental due diligence assessment. This due diligence must contain a summary and a detailed explanation of the following issues:
 - Environmental liabilities, past and present;
 - Regulatory non-compliance issues along with a ranking of their severity and implications;
 - Potential limitations on business expansion and business interruption potential;
 - Major environmental risks;
 - Approximate cost estimate to bring closure to these issues.

The decision on clean-up condition will be reflected in the agreement of sale.

7. CLOSURE PLAN COSTING

7.1 Decommissioning Costs

The costs associated with decommissioning are generally related to the disposal and recycling of equipment and the use of external resources to implement the CRAMP. In certain instances, costs will be recouped through the sale of equipment or materials. The liabilities risk assessment does not foresee any ongoing monitoring requirements.

It is expected that external resources will be required in order to implement the CRAMP in full. A list of these resources and associated costs (at 2013 prices) is shown in Table 1.

Table 1: Decommissioning Costs

Item	Estimated Cost (€)
Transportation of processing plant, mobile plant, and weighbridge to another facility	20,000
Waste treatment/disposal costs to include waste from the composting process including bio-stabilised materials (max 1000 tonnes)	100,000
Contract cleaning and decontamination	20,000
Civil and structural, mechanical, and electrical contractors (500 man hours at €40/hr)	40,000
Environmental Due Diligence Audit by professional consultancy	10,000
Subtotal	190,000
Contingency (25%)	47,500
Total	237,500

It is estimated that a cost of approximately €237,500 in a worst case would be incurred to decommission the site, including external resources costs. In reality this cost is anticipated to be less than €150,000.

The following assumptions were made in estimating the likely costs involved:

- The processes and operations at the facility do not give rise to any reasonable probability that site remediation in the form of groundwater or soil cleanup would be a likely requirement.
- The site would be left in a clean condition, i.e. decontaminated and certified as being free of any hazard. All buildings would be retained. All bulk materials and process intermediates and products would be removed.
- No liabilities would be incurred due to activities of contractors storing and disposing of materials removed from the site, as current waste management principles would continue to be applied.
- No civil liability would be incurred as a result of third parties alleging environmental damage arising from the operational phase or closure.

- The maximum asset value of the facility would be maintained, but no action would be taken to prepare the site for a trade sale as a going concern or otherwise.
- Normal practice would be applied to minimise ongoing liabilities and to fulfil insurance requirements.
- In addition, no factors have been identified that would indicate an unusual liability for the site in comparison with other process industry sites.

7.2 Total Cost

The total cost associated with executing a Closure, Restoration, Aftercare Management Plan at the O'Toole Composting Ltd site is estimated to be in the region of **€237,500**

7.3 Funding of Closure, Restoration, Aftercare Management Plan

O'Toole Composting Ltd. confirms that he has more than adequate resources from operations to fund the Closure, Restoration, Aftercare Management Plan as set out above. Confirmation of this is contained within the Letter from his accountants.

This letter is presented in Appendix 1.

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8. CLOSURE PLAN UPDATE AND REVIEW

8.1 Proposed Frequency of Review

The CRAMP will be reviewed annually and any changes submitted to the Environmental Protection Agency as part of the site's Annual Environmental Report.

8.2 Proposed Scope of Review

The scope of the annual review of the CRAMP will cover the following at a minimum:

- Review in accordance with the facility's Waste Permit conditions;
- Review any incidents that may result in environmental contamination;
- Review of changes in environmental aspects
- Review changes in underground structures;
- Review scope of decontamination.
- Review changes in insurance cover for environmental liabilities
- Statutory changes affecting CRAMP and ELRA requirements

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9. CLOSURE PLAN IMPLEMENTATION

9.1 Statutory Authority Notifications

The Environmental Protection Agency and Carlow County Council will be notified of O'Toole Composting Ltd. intentions to fully or partially decommission the facility.

9.2 Full or Partial Closure Considerations

Any partial closure of the facility will be dealt with as a change of activity, as long as the permit activity remains on the site.

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10. CLOSURE PLAN VALIDATION

10.1 Closure Validation Audit

A final validation report to include a certificate of completion for the residuals management plan, for all or part of the site, as necessary, shall be submitted to the Environmental Protection Agency on completion of the plan. This assessment and report will be carried out by a firm of independent consultants. In addition, O'Toole Composting Ltd. shall carry out such tests, investigations or submit certification, as required to confirm that there is no continuing risk to the environment.

10.2 Closure Validation Audit Report

For a Waste Licence or Permit to be transferred or surrendered there must be a consultation process with either the EPA or the Local Authority. Normally, the Agency or Council conducts a post-closure audit of the site and thereafter must be satisfied that the facility is fully compliant with its permit conditions at the time of closure in order to facilitate the formal surrender or transfer of a licence.

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APPENDIX 1

LETTER FROM ACCOUNTANT CONFIRMING FINANCIAL STATUS

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APPENDIX 2

COPY OF ENVIRONMENTAL LIABILITIES RISK INSURANCE

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