



Comhairle Contae Thiobraid Árann
Tipperary County Council

Comhairle Contae
Thiobraid Árann,
Oifigí Cathartha,
Cluain Meala,
Co. Thiobraid Árann
Tipperary County Council,
Civic Offices, Clonmel,
Co. Tipperary
E91 N512

Comhairle Contae
Thiobraid Árann,
Oifigí Cathartha,
An tAonach,
Co. Thiobraid Árann
Tipperary County Council,
Civic Offices, Nenagh,
Co. Tipperary
E45 A099

t 0818 06 5000
e customerservice
@tipperarycoco.ie
tipperarycoco.ie

To: Office of Licencing, EPA

Waste Licence Ref. No.: W0078-03

Date: 10th December 2021

**Request for Technical Amendment to W0078-03 to Facilitate the
Acceptance of Shannon Vermi-Compost Waste at Ballaghveny in
Exceedance of the Licenced Annual Tonnage**

Dear Sir or Madam,

This letter sets out the background and reasons for this Technical Amendment Request to W0078-03.

A Technical Amendment Request is being made to temporarily increase the annual tonnage at Ballaghveny Landfill, Co. Tipperary for the purposes of the acceptance and management of the illegal waste from Shannon Vermicomposting (SVC), Rathcabbin, Co. Tipperary.

Tipperary County Council (TCC) has the agreement of the Office of Environmental Enforcement to accept this waste for landfill disposal and the material removal from SVC to Ballaghveny commenced on 02nd December 2021.

The nature of the SVC compost-type material requires that in order for it to be landfilled in a safe manner that it should be mixed at a ratio of 2.5:1 with other wastes, and in order to be able to do this at Ballaghveny, given the quantity of material involved, a temporary tonnage increase of 10,500t per annum for two years is required. This would bring the annual tonnage in the years 2022 and 2023 from 49,000tpa to 59,500tpa.

In 2024 once the clearance of the SVC site is complete the annual tonnage at Ballaghveny would revert back to the 49,000tpa. Further background and details on the request are set out below.

Background Information on the Shannon Vermi-Composting Facility

The Shannon Vermicomposting Ltd. (SVC) facility located at Coolross, Rathcabbin, Co. Tipperary operated under a Waste Permit (WP/TN/08) granted by North Tipperary County Council (NTCC) in August 2002 under the Waste Management (Permit) Regulations 1998. The Waste Permit authorised the recovery or disposal of 1,000 cubic metres of organic waste per annum.

The site operator did not comply with the conditions of the Waste Permit and exceeded the allowed tonnage by a large amount.

Shannon Vermicomposting submitted an application to the EPA for a Waste Licence in 2004, but it was not granted (W0209-01).

Legal proceedings were successfully taken by North Tipperary County Council against the owners and operators of SVC in the High Court, and operations at the facility ceased in 2005. The site was also the subject of waste enforcement investigations by the EPA under its register reference PAE 2005/88. The High Court Order was appealed to the Supreme Court. The appeal was dismissed on 10th July 2009.

The SVC status as a limited company is 'dissolved'. The site operator has not complied with any of the requirements of the High Court order and we understand that they have left the country, so under Section 58.(4)(a) of the WMA, Tipperary County Council are taking steps considered necessary to comply with these requirements, i.e. to "*remove all waste which has been deposited... to an authorised facility which is operating lawfully and/or in compliance with the terms and conditions of any applicable waste permit or waste licence...*". Section 58.(4)(a) as extracted from the Waste Management Act 1996 states:

58.(4) (a) *Where a person does not comply with an order under subsection (1), a local authority, as respects its functional area, or the Agency, may take any steps specified in the order to mitigate or remedy any effects of the activity concerned.*

Under Section 58 of the Act North Tipperary County Council have already moved the waste within the site so that it is all stored on the concrete area and has covered the waste with plastic and tyres to prevent rain ingress. Tipperary County Council (TCC) now intends to carry out final remaining High Court requirement, which is to remove the waste from the SVC site to a licenced facility.

Section 56 of the Waste Management Act also gives TCC powers to carry out the removal of the SVC waste. Section 56. as extracted from the Waste Management Act 1996 states:

56.—(1) Where it appears to a local authority that measures are required to be taken in order to prevent or limit environmental pollution in its functional area caused, or likely to be caused, by the holding, recovery or disposal of waste, the local authority may take such steps, carry out such operations, recover or dispose of, or arrange for the recovery or disposal of, such waste or give such assistance as it considers necessary to prevent or limit such pollution or to mitigate or remedy the effects on the environment of any such activity.

(2) Where a local authority takes steps, carries out operations, recovers or disposes of, or arranges for the recovery or disposal of, waste or gives assistance under this section, the local authority may recover the costs of such steps, operations, recovery, disposal or assistance as a simple contract debt in a court of competent jurisdiction from such person as the local authority satisfies the court is a person whose act or omission necessitated such steps, operations, recovery, disposal or assistance.

(3) Nothing in this Act or an instrument made thereunder or any other enactment shall prejudice the taking of necessary action by a local authority in pursuance of the powers under this section.

Copies of the High Court and Supreme Court Orders are attached.

Timeline for SVC from 2005 to 2021

It is now sixteen years since the High Court Order was issued in 2005, which is a significant period of time. The time line below shows progress from 2005 to the current date of 2021:

- High Court Order issued on the Shannon Vermicompost site on 10th August 2005 (see attached).
- In late 2005 NTCC removed some waste from the field adjoining the south of the facility back into the facility and covered the waste with plastic and tyres (black areas in the Fig 1 below) under Section 58 of the WMA.
- The High Court Order was appealed to the Supreme Court. NTCC did not take any further action until this appeal process concluded. The appeal was dismissed on 10th July 2009 (see attached).
- Tobin's Consulting Engineers were engaged by North Tipperary County Council to examine the options for the SVC waste following the Supreme Court decision. Tobin's issued a report to North Tipperary County Council on their findings in February 2010.

- There was a severe economic downturn from 2009 onwards and this had a significant impact on public spending. Another result of the recession was the merger between North Tipperary County Council and South Tipperary County Council to form Tipperary County Council in June 2014. This reduction in available funding and the disruption of the merger process impacted on the progress of the SVC project.
- North Tipperary County Councils landfill at Ballaghveny was temporarily closed on 26th February 2011 due to the economic circumstances at the time.



Fig 1 Aerial View of the Shannon Vermi-Compost Facility

- North Tipperary County Council continued to monitor the SVC site and when the economy started to recover again Tobin Consulting Engineers were asked to revisit the options for disposal of this waste. Tobin's issued this second report in October 2013.
- In April 2014 Fehily Timoney & Co Consulting Engineers completed a Site Investigation Report on the SVC site for North Tipperary County Council.
- Fehily Timoney & Co issued a second Site Investigation Report to Tipperary County Council in August 2014.

- Fehily Timoney & Co issued an Options Appraisal Report in October 2014 which recommended using Ballaghveny as the most appropriate disposal outlet.
- In 2015 efforts were commenced to re-open Ballaghveny landfill to accept the SVC waste and to fill the existing built void space there to allow the final capping and restoration of the landfill to take place. There was a shortage of available landfill space in the country at the time and Ballaghveny is located close to Rathcabbin, so it was deemed the most appropriate solution. However, a very thorough groundwater investigation project was required to be undertaken to understand and develop a management strategy for groundwater at Ballaghveny prior to the EPA allowing the re-opening of the site. This investigation ran for a number of years as the hydrogeology at the site is very complex, the EPA were kept informed of progress throughout this project via reports and meetings.
- In 2016 Fehily Timoney & Co were appointed consultants in respect of the project to remove waste material from SVC facility in Rathcabbin to Ballaghveny landfill.
- In 2019 the groundwater investigations were completed, and the EPA granted permission for Ballaghveny landfill to re-open to fill the existing built void space.
- In 2019 Fehily Timoney Consulting Engineers on behalf of Tipperary County Council commenced work on the design and tender documents for works to be completed at Ballaghveny landfill prior to re-opening the site (enabling works) such as the construction of a new leachate tank, reconfiguring the surface water management and landfill gas management systems, road improvements etc.
- In 2020 the enabling works construction project commenced at Ballaghveny landfill. This project ran from June 2020 to September 2021.
- On 22nd September 2021 Ballaghveny Landfill re-opened for the acceptance of waste to fill the three existing built cells.
- October 2021 – Samples of soil adjacent to the waste stockpiles at SVC were taken and analysed showing some contamination present from the waste.
- October 2021 – Tipperary County Council commenced the detailed planning and tender process for the removal of the waste from the Shannon Vermicomposting site at Rathcabbin to Ballaghveny Landfill.
- The SVC waste removal to Ballaghveny Landfill commenced on 02nd December 2021.

Background Information on Ballaghveny Landfill

Ballaghveny landfill site commenced operating on a former sand and gravel pit in 1985. Since 1985 the site has gone through four phases of development

The four landfill phases contain a total of 11 cells, two of which are unlined. The landfill entered a temporary closure phase on 26 February 2011 due to the economic downturn at the time, leaving Cell 10B, Cell 11 and the Wedge Cell built but unfilled. It was always the intention to re-open the landfill to fill these three cells once the economy recovered and in September 2021 the landfill did re-open. Once these three cells are filled to the height of the existing waste body so as to form a domed profile, the site will be finally closed and capped and will enter its aftercare phase.

Landfilling of SVC Waste at Ballaghveny Landfill

The SVC waste is composted black bag mixed municipal waste. This waste has been assigned the List of Waste (LoW) Code 19 03 05 Stabilised Wastes other than those mentioned in 19 03 04. Visually the waste resembles compost mixed with debris such as plastic bag fragments, other small plastics, broken glass, small pieces of metal etc. AT4 test results indicate that the material is stabilised.

TCC has been advised by Fehily Timoney & Co consulting engineers on the handling of this material at the landfill and their advice is that it must be mixed with other waste material at a ratio 2.5:1 to ensure the stability of the waste body at Ballaghveny landfill. The reason for this advice is that stabilized biowaste type waste is soft and spongy and has a low shear strength and if placed in isolation could present difficulties with tipping and spreading the waste at the landfill, cause increased leachate generation and create the possibility of rotational failures at the landfill.

There is an estimated 34,000t of waste material at the SVC site to be removed. This amount is a conservative estimate and the tonnage may be less than this amount, it is not expected to be more than 34,000t.

2.5 times of 34,000t is 85,000t of other waste that is required to mix with the SVC waste at Ballaghveny Landfill. The sum of 34,000t and 85,000t is 119,000t. The Ballaghveny Landfill licenced annual intake tonnage is 49,000t so it is clear that it will not be possible to take in all the SVC waste in one calendar year and mix it with other waste as advised. However, to extend the haulage of the material out for too long is also not considered appropriate or financially feasible (more detail on the practicalities around the haulage will be set out later). So, a maximum of 2years for the waste removal project is considered to be the best solution to allow for appropriate mixing at Ballaghveny, for management of the haulage, and also from

a political perspective in that the local residents at Rathcabbin want the site cleared as soon as possible.

It is expected that 2,000t of SVC waste will be removed in 2021, leaving a remainder of 32,000t to be removed. Landfilling this waste at Ballaghveny over a two-year period would mean half of the 32,000t of the material in the first year of the project and the other half the material in the second year of the project, this works out as 16,000tonnes per annum of the SVC material being brought to Ballaghveny. As we are only estimating the tonnage, we would deem it appropriate to add in a contingency factor of 1,000t per annum to bring the amount of SVC waste to be removed in 2022 and 2023 to 17,000t per annum.

Multiplying 17,000t by a factor of 2.5 means Ballaghveny landfill would need to accept an additional 42,500t of other wastes to mix with it each year. 17,000t and 42,500t is a total of 59,500t, which is over the 49,000t per annum licence limit by 10,500t. So, it is proposed (provided the Technical Amendment request is granted by the Agency) that 6,500t of SVC waste would come in to Ballaghveny as part of the 49,000t existing licenced amount and the remaining 10,500t would be in excess of the licenced 49,000t annual limit in each of the two years.

Therefore, this Technical Amendment request is for Tipperary County Council to exceed the 49,000t per annum Ballaghveny Landfill licence intake limit by 10,500t in 2022 and again by 10,500t in 2023 - an increase of 21.43% per annum.

The proposed tonnages for 2021, 2022 and 2023 is set out in Table 1 below.

Table 1 Proposed Tonnages at Ballaghveny for Years 2021, 2022 and 2023

Waste Type	LoW Code	Tonnage Year 2021	Tonnage Year 2022	Tonnage Year 2023
Ash	10 01 15	650	2,000	2,000
Soil & Stone	17 05 04	9,000	40,500	40,500
SVC Waste	19 03 05	2,000	17,000	17,000
Total		11,650	59,500	59,500

From 2024 onwards the Ballaghveny facility would drop its annual tonnage back down to 49,000t per annum and continue to fill the waste at this rate until the available built void space has been filled. Once the available the space has been filled the site will be capped and the landfill will enter its aftercare phase.

Capacity of Ballaghveny Landfill

Total quantity of waste permitted to be placed at the landfill facility over the authorised life of the facility is 446,246m³ as set out in Table A.2.2 of licence W0078-03.

The facility was authorised on 05th April 2001. Taking the tonnage from Jan 2001 to the site closure in 2011, and using a density for MSW of 0.8m³/t for compacted MSW, 232,740.00m³ was filled in this period. Table 3 gives the year by year details.

Therefore when the site re-opened in 2021 213,506m³ of waste remained to be filled. Details are given in Table 3 for two possible scenarios, one with the same 0.8m³/t density as used previously and another density of 0.7m³/t to take in to account the amount of heavier soil type waste that is being brought in currently. Both scenarios show that there is sufficient available void space left. Depending on the actual density of material brought in it is estimated there is between 266,650t and 300,650t remaining to fill. The density of material and the volume of space used will be monitored annually by topographical survey and weighbridge records to ensure that the total volume limit is complied with.

The other parameter that will dictate the amount of waste accepted is Condition 10.3.2 which states that the landfill shall not exceed 120m OD at any location. In a 2020 topographical survey the highest point on the landfill was measured to be 119.18m, this was measured on the fully capped Cell 9. The waste being filled in the current void space will be shaped to meet the existing filled landfill and form a domed profile, so will therefore not exceed the 120m limit.

Planning Permission

Ballaghveny Landfill was developed prior to the requirement for Planning Permission for Local Authority owned developments, therefore the site is exempt from Planning Permission and this increased tonnage will have no Planning implications.

Environmental Impact Statement

An Environmental Impact Statement was prepared in 1998 prior to the development of Phases 3 and 4 of Ballaghveny landfill (these phases include cells 6 to 11) and the remediation of Cells 1 to 5.

The EIS assesses a proposed 27 trucks per day (54 movements). The designated route to the site was subsequently upgraded prior to the development of Phases 3 and 4.

27 trucks per day at an average of 24t per truck equates to 648t per day, over a 50week working year would be 162,000t/annum. The tonnage of 59,500t we are proposing to bring in is almost only a third of that amount. It is very unlikely therefore that Ballaghveny would receive more than 27 trucks in any one day, so there is no proposed increase in truck traffic. Truck movements per week since the

site re-opened are shown in Table 2, we are averaging only 24 trucks per week, this figure includes both leachate trucks and trucks bringing waste to the site for disposal. The busiest week so far which had 47 trucks coming to Ballaghveny included 8 trucks bringing the SVC waste. There is definitely capacity to increase the number of trucks using the site to facilitate the SVC waste.

Haulage from SVC to Ballaghveny and Impact on Traffic

The 17,000t total that is proposed to be moved from the SVC site per year works out at 4 loads per day (at 20t per load), which will probably in practice be two trucks doing the round trip to get in 2 loads per day each. This is a very minimal impact on traffic and on the operation of Ballaghveny Landfill. It is not practical to slow the process down any further than this as the haulier would need a full day’s work for the trucks.

It should also be noted that hauling this waste over a two-year period will work out as more expensive for TCC than hauling over a shorter timeframe as the excavator hire at the SVC site will be for a longer period, but in order to mix the material properly at Ballaghveny it is considered a necessary and balanced solution

**Table 2 – Trucks Per Week Using Ballaghveny Landfill
22nd Sept to 03rd Dec 2021**

Week Ending	Trucks per week
24-09-21	22
01-10-21	23
08-10-21	4
15-10-21	33
22-10-21	22
29-10-21	29
05-11-21	22
12-11-21	13
19-11-21	30
26-11-21	17
03-12-21	47
Average	24 trucks per week

Table 3 – Available Void Space

Active Cells	Year	Annual Tonnage	Equivalent m³ (@ density 0.8m³/t for MSW)
Cells 6, 7 & 8	2001	28,588	22,870.40
Cells 6, 7 & 8	2002	35,788	28,630.40
Cells 6, 7 & 8	2003	36,612	29,289.60
Cells 6, 7 & 8	2004	32,622	26,097.60
Cells 6, 7 & 8	2005	26,115	20,892.00
Cell 9	2006	31,802	25,441.60
Cell 9	2007	28,470	22,776.00
Cell 9	2008	25,096	17,153.60
Cell 9	2009	21,442	13,603.20
Cell 10a	2010	17,004	13,603.20
Cell 10a	2011	7,386	5,908.80
(A) Total 2001 - 2011		290,925 t	232,740.00m³
Site Closed 2012 to 2020		0	0
Scenario 1 – 0.7m³/t density:			
Active Cells	Year	Annual Tonnage (estimated)	Equivalent m³ (@ density 0.7m³/t for MSW, Soil, Stone mix)
Wedge Cell	2021	11,650	8,155
Wedge Cell / Cell 10B	2022	59,500	41,650
Wedge Cell / Cell 10B	2023	59,500	41,650
Cell 10B / 11	2024	49,000	34,300
Cell 10B / 11	2025	49,000	34,300
Cell 10B / 11	2026	49,000	34,300
Cell 10B / 11	2027	25,000	17,500
(B) Total 2021 - 2027		302,650 t	211,855m³
Scenario 2 – 0.8m³/t density:			
Active Cells	Year	Annual Tonnage (estimated)	Equivalent m³ (@ density 0.8m³/t for MSW, Soil, Stone mix)
Wedge Cell	2021	11,650	9,320
Wedge Cell / Cell 10B	2022	59,500	47,600
Wedge Cell / Cell 10B	2023	59,500	47,600
Cell 10B / 11	2024	49,000	39,200
Cell 10B / 11	2025	49,000	39,200
Cell 10B / 11	2026	36,000	28,800
Cell 10B / 11	2027	0	0
(C) Total 2021 - 2027		264,650 t	211,720 m³
(D) Total A + B		593,575 t	444,595 m³
(E) Total A + C		555,575 t	444,460 m³
(F) Licenced Capacity		-	446,246 m³

Local Communities

The local community at Rathcabbin and the local community at Ballaghveny are aware of the movement of the SVC waste.

Two open days were held at Ballaghveny for local residents prior to the landfill re-opening and TCC staff discussed the movement of the Rathcabbin waste and its acceptance at Ballaghveny at these meetings.

TCC also briefed the County Councillors on two different occasions regarding the landfill re-opening and the movement of the SVC waste.

TCC staff met with and discussed the waste removal with the immediate neighbours to the SVC site.

Odour Considerations

The dig out at SVC will be monitored for odour generation. The waste will only be dug out as needed for loading the haulage vehicles. This will minimise disturbance of the waste and odour generation. The dig out to date has found that there is a slight odour from the waste that is noticeable while standing next to the area being actively dug out. This odour is comparable to what would be encountered in a farm yard and the odour isn't noticeable off the site. The vehicles hauling the waste are covered to further minimise possible odour impact.

Odour will also be monitored at Ballaghveny. Strong Odour Assessment and Odour Management procedures are in place and agreed with the Agency for Ballaghveny.

Licence Compliance

All Conditions of Licence W0078-03 will be complied with.

Technical Amendment Request

TCC is requesting the permission of the Agency to grant a Technical Amendment to accept an additional 10,500t over and above the 49,000t stated in Schedule A.2 licenced amount per annum in 2022 and again in 2023 in order to accept the waste from Shannon Vermi-Composting, Rathcabbin, Co. Tipperary for landfill disposal at Ballaghveny Landfill, Co. Tipperary. This would bring the amount of waste landfilled at Ballaghveny up to 59,500t per annum for each of these two years.

The SVC waste will be moved under Section 58 and 56 of the Waste Management Act from an illegal waste site in County Tipperary to a licenced landfill facility in County Tipperary in order to fulfil the instructions of High Court Order 2005 No. 25 MCA.

This proposed licenced tonnage increase will relate solely to the SVC waste and will be only for 2022 and 2023. The additional tonnage requested would be used solely for the specific purpose of accepting the SVC waste, i.e. it is a temporary and specific purpose request for the purposes of fulfilling the requirements of the High Court Order.

If the tonnage from SVC turns out to be less than estimated, then the amount of SVC waste brought in 2023 will reduce accordingly.

A suggested wording would be the addition of a Note to Schedule A.2 of the licence W0078-03:

"Note 5: An additional tonnage of 10,500t to be permitted in 2022 and 2023"

Response Time

In order to plan for waste acceptance from suppliers TCC require a response to this request from the Agency by the end of Q2 2022 (i.e. by the end of June 2022). TCC would be very grateful if the Agency could process this request within this timeframe.

If you require any further information on any of the above, please let me know.

Regards,



Louise Ryan

Acting Executive Scientist

Enclosed: High Court Decision and Supreme Court Appeal