 <p>Environmental Protection Agency An Ghníomhaireacht um Chaomhnú Comhshaoil</p>	OFFICE OF ENVIRONMENTAL SUSTAINABILITY
ENVIRONMENTAL LICENSING PROGRAMME	
TO:	Board
FROM:	Environmental Licensing Programme
DATE:	7 March 2018
RE:	Technical Amendment requests CR04379 and CR04799 Industrial Emissions licence register number W0146-02 Knockharley Landfill Ltd, Co. Meath

On 10/10/2017, Knockharley Landfill Ltd requested a technical amendment (no. CR04379) to licence register number W0146-02. The request relates to a proposed increase in waste acceptance. The additional allowance is sought so that waste excavated from an illegal landfill at Timoole, Co. Meath can be redeposited at Knockharley without using up the licensed intake of 200,000 tonnes of waste per annum.

A second technical amendment request (no. CR04799) was made on 23/2/2018 and is the same as the first request except seeking a greater increase in waste intake. Both requests are dealt with in this report and recommendation.

Information on the Timoole remediation project is on Meath County Council's website at <http://www.meath.ie/CountyCouncil/Environment/TimooleRemediation/>.

1. Background to the request

The Knockharley landfill was first licensed in March 2003 and the licence was reviewed by the EPA in March 2010 for the purposes of the Landfill Directive. The licence authorises the acceptance of:

- 175,000 tonnes per annum of municipal and industrial waste for disposal, and
- 25,000 tonnes per annum of construction and demolition waste for recovery.

A total of 200,000 tonnes of waste per annum.

The planning permission for the facility limits the disposal of waste to 88,000 tonnes per annum. There is headspace of some 87,000 tonnes *disposal* capacity at the facility between what's authorised by the licence and by planning permission. This headspace is used up by accepting waste at the landfill for recovery.

The licence was amended in January 2013, October 2013 and November 2016 for the following reasons, respectively:

- European Communities Environmental Objectives (Groundwater) Regulations 2010;
- to facilitate a temporary trial for metal recovery from incinerator bottom ash;

- to authorise a temporary increased waste intake (up to an additional 95,000 tonnes) of waste at the end of 2016 to meet a critical shortage of authorised landfill capacity at that time in the State. This was “Technical Amendment C”.

Meath County Council has, since January 2018, commenced the excavation of approximately 70,000 tonnes of waste from an illegal landfill at Timoole, Co. Meath. The Council has employed a contractor to carry out the remediation works at Timoole. The contractor is directed to take the waste for final disposal to the Knockharley landfill. The two locations are approximately 6km apart.

Waste disposal at the Knockharley landfill is limited to 88,000 tonnes per annum by planning permission. Meath County Council has issued a section 56 notice to provide for the intake and disposal of waste from the Timoole landfill and for the purposes of preventing environmental pollution. The notice provides for the intake of the additional waste over and above the planning limit.

According to a Meath County Council report, the section 56 notice was made in the knowledge that the licensee would need to seek “technical amendment” of their licence “based on changes to the areas of operation on site”.

Landfill and waste disposal capacity nationally is projected to be in deficit in 2018 and this is described in a letter from the Eastern Midlands Regional Waste Office to Meath County Council (see page 8 below) which emphasises that from a strategic and national point of view, waste arising from illegal sites such as Timoole should not be allowed to result in the displacement of residual municipal waste at the limited number of available outlets. Capacity planning for 2018 relies on the entire *licensed* capacity being available at Knockharley landfill (disposal + recovery). It can be seen that if this technical amendment request is refused, the total available landfill capacity in the State will be reduced and municipal waste that would have been destined for Knockharley will have to be disposed of elsewhere.

On 16/2/2018, the Department of Communications, Climate Action and Environment wrote to the EPA setting out its concerns with regard to the ongoing deficit in waste disposal capacity in the State and the need to protect all available capacity. The transfer of waste between Timoole and Knockharley landfills is especially mentioned as is the opportunity to provide for the use of non-hazardous, non-inert C&D waste and bio-stabilised fines as daily cover material.

2. Technical Amendment request

First request – 10/10/2017

An additional allowance of 105,000 tonnes of waste was sought, linked solely to the excavation and disposal of illegally deposited waste at Timoole (70,000 tonnes) plus an additional 35,000 tonnes of waste to be accepted and used as daily cover.

The licensee (Knockharley Landfill Ltd) sought the insertion of two new conditions into the IE licence. The proposed conditions are similar to those inserted by Technical Amendment C. The licensee proposes the following:

Condition 1.19 Unless otherwise directed by the Agency, in addition to the maximum annual intake of waste authorised in Table A1 of Schedule A, the licensee may accept an additional quantity of waste as follows:

- a) disposal within the void of the landfill an estimated 70,000 tonnes
- b) for use as daily cover 35,000 tonnes.

Condition 1.20 Unless otherwise directed by the Agency, the acceptance of waste under condition 1.19 shall be limited as follows:

- 1.20.1 In relation to the waste accepted for disposal in the void of the landfill, only waste arising from the remediation of the unauthorised waste disposal site at Timoole, County Meath shall be accepted.
- 1.20.2 All wastes accepted for disposal in accordance with condition 1.20.1 shall be weighed at the installation's weighbridge and recorded in a manner that clearly distinguishes them from the other wastes accepted for disposal during the same time period.
- 1.20.3 All waste accepted for use as cover material in accordance with condition 1.19 shall be weighed at the installation's weighbridge and recorded in a manner that clearly distinguishes it from other cover material accepted during the same time period.

Second request – 23/2/2018

An additional allowance of 140,000 tonnes of waste was sought, linked solely to the excavation and disposal of illegally deposited waste at Timoole (70,000 tonnes) plus an additional 70,000 tonnes of waste to be accepted and used as daily cover. A 1:1 ratio of waste to daily cover. At the time of the request, some 52,577 tonnes had been drawn from Timoole plus some 32,444 tonnes of cover material from other sources. Practice has indicated the need for more daily cover and other waste to mix with the Timoole waste to improve its condition and make it easier to compact and drive vehicles over. As described below, the waste is wet and sloppy and creates operational difficulties at the Knockharley landfill. The need for a 1:1 ratio of waste to daily cover or conditioning material was stated to be based on a recommendation by the licensee's advisors, Golder Associates. To support this, a letter dated 2/3/2018 from Golder Associates to the EPA was emailed by the licensee. The letter sets out the engineering need for more daily cover and conditioning material than previously intended. A copy of the letter is attached on page 10 below.

In this instance, in place of the existing condition 1.19, the licensee has sought the following text:

"Disposal within the void of the landfill an estimated 70,000 tonnes of waste from the Timoole remediation project.

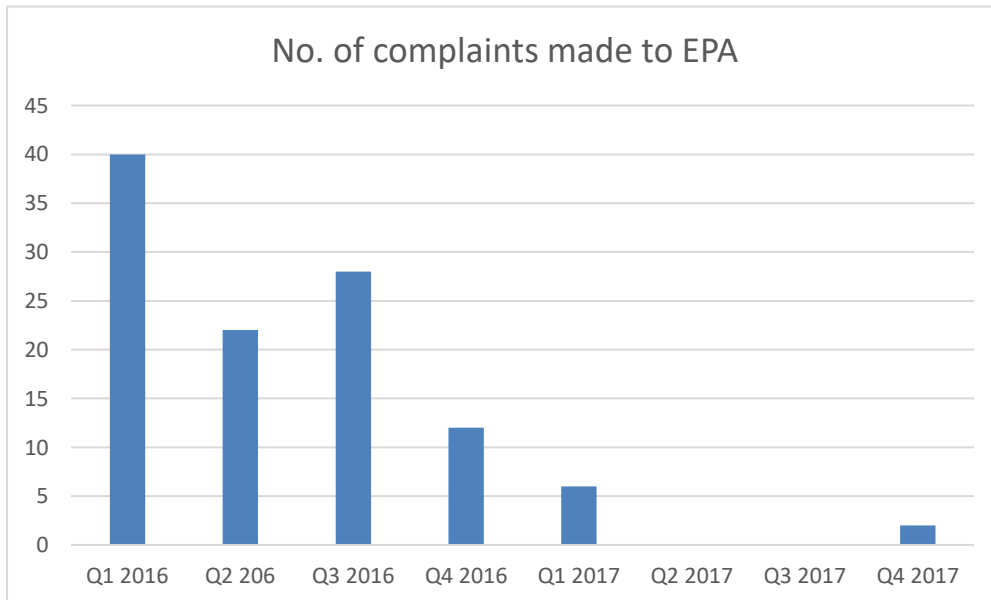
Acceptance of up to 70,000 tonnes of daily cover/engineering material (or a 1:1 ratio) to manage the additional waste from Timoole remediation project."

3. Technical Assessment

The primary risk of environmental pollution arising from the intake of waste from Timoole is odour. The excavated waste is old and wet and potentially odorous. The odour issue was discussed in my 2016 report accompanying "Technical Amendment C" as follows:

It would appear that the greatest environmental risk arising from an authorisation to increase waste intake is one of fugitive emissions and consequent odour nuisance. The licensee has proposed no specific details on how landfill gas will be managed in an enhanced way given the proposed increased intake of waste. However the licence conditions are clear in their intention and requirements and these will remain unchanged and can be enforced in case of inadequate enhancement of gas management and/or the occurrence of odour nuisance.

As it happens, in late 2016 and early 2017, there was a reduction in odour complaints made to the EPA – see chart below. Between 15/11/16 and 31/12/16, more than 58,000 tonnes of waste were accepted for disposal, comprising one-third of all waste accepted for disposal in 2016. Some 21% of 2016’s total waste for recovery was accepted in the same period although only a very small proportion of this intake might potentially be odorous. Thus, the operational controls vis-à-vis odour during a period of increased waste intake appear to have been effective at the end of 2016.



I visited the Knockharley landfill and the Timoole landfill on 19 January 2018 in the company of an OEE inspector. At Knockharley we were met by representatives of the licensee. At Timoole we met with a representative of Meath County Council. First, at Knockharley, I observed a number of loads of waste from Timoole being deposited at the working face of the landfill. The waste was wet and at times sloppy. The waste was bulldozed into a small area at the working face. A load of dry (commercial or industrial) waste was used to cover the Timoole waste to (a) make some effort to contain odours and (b) improve its trackability and allow it to be compacted. We were informed that this has been the mode of operation since waste started arriving from Timoole. The waste is soft and yielding and is reportedly difficult to compact. I was informed that daily cover would be applied over the entire waste deposit during the day and prior to work ceasing for the day.

Later, at Timoole, I observed a large and growing excavation, approximately 3-4 metres deep with plans to go deeper to get all the waste. The waste was loaded straight into dumper lorries. The lorries were cleaned before leaving the site and then went straight to Knockharley. Leachate and rainwater collecting in the base of the Timoole excavation is pumped to a road tanker which is periodically driven away to a waste water treatment plant. Standing near the edge of the excavation, there was an odour, but it was not strong. The odour was not detectable except when standing beside the excavation itself. Likewise at Knockharley, the odour of the Timoole waste was localised close in to the disposal area. As I perceived it on the day, there was minimal risk of generating an odour nuisance. I note that there was no odorous municipal waste being handled at Knockharley at the time of my visit. I was told that this type of waste typically arrives later in the day.

According to Meath County Council’s website on the Timoole remediation (referenced above), the waste at Timoole has an offensive odour. It may be that odorous pockets of waste will be excavated in due course. The Council’s website states it intends spraying the waste as it is excavated in an attempt to reduce its odour pending re-disposal at Knockharley. I did not

observe this taking place during my site visit – and there was no apparent need on that morning. Excavations at Timoole are scheduled to take 12-15 months, but with favourable conditions and no problems could be completed sooner.

I was advised by OEE on 28/2/2018 that only one odour complaint was made to the licensee in 2018. Three complaints were made to the licensee regarding noise. No complaints were made directly to the EPA.

The above hopefully serves to indicate that there is some chance of the Timoole waste creating an odour nuisance at Knockharley, but that event has yet to happen.

To the request for technical amendment, the EPA will choose to make the technical amendment or not make the technical amendment. The following analyzes that choice:

1. Making the amendment to the licence will protect national waste disposal capacity (in terms of annual limitations on waste acceptance) and reduce the scale of any waste disposal capacity shortfall that materialises during 2018. In this scenario, there is a risk, yet to materialise, of odour nuisance being caused at Knockharley landfill.
2. Not making the technical amendment will result in one of two things:
 - a. excavation of waste at Timoole will cease because the licensee will refuse to accept the waste. The remediation and restoration project will be delayed pending procurement of a new disposal site;
 - or
 - b. acceptance of Timoole's waste at Knockharley will continue. However the implication is that the waste industry will have to find a new home for approximately 140,000 tonnes of waste that would otherwise have gone to Knockharley. This will reduce the overall available waste disposal capacity in the State.

Section 96 of the EPA Act 1992 as amended limits the situations where the EPA can make a technical amendment of a licence. It appears that only section 96(1)(c) is applicable in this case, viz.:

"The Agency may amend a licence or revised licence for the purposes of otherwise facilitating the operation of the licence and the making of the amendment does not result in the relevant requirements of section 83(5) ceasing to be satisfied."

Taking section 96(1)(c) in two parts.

Making the technical amendment will facilitate the operation of the licence by protecting the annual waste intake authorised at the facility in its role as one of the few remaining facilities making up the national waste disposal network. As a result of the failure to develop *secure* waste disposal capacity to match the volume of waste collected by the waste industry, the role of Knockharley's licensed annual intake in the national waste disposal network is significant given the small number of operational landfills and incinerators in the State.

Second, ensuring the making of the amendment does not result in the relevant requirements of section 83(5) ceasing to be satisfied. The discussion above illustrates that the increased intake of waste need not result in odour nuisance and complaints from neighbours and has not yet. This is not an assurance that odour nuisance will not be created in future. But it does demonstrate that where the licensee makes an effort, like at the end of 2016, it has yielded results in the form of fewer complaints.

The risk of odour nuisance in the vicinity of the Knockharley landfill during the deposit of the Timoole waste should be balanced against the imperative to excavate the illegally deposited waste from Timoole landfill and desposit it somewhere.

The following conclusions seem pertinent:

- A reason for the EPA to make a technical amendment of the licence is to protect national waste disposal capacity in the face of predicted shortfalls in 2018.
 - Making the technical amendment will have a neutral effect on available national waste disposal capacity.
 - Not making the technical amendment will significantly increase the pressure on available national waste disposal capacity.
- The basis for the EPA making a technical amendment of the licence is section 96(1)(c) of the EPA Act 1992 as amended, as described above.

Other factors to take into consideration in the EPA’s decision are the following:

- Authorising the increased intake of waste is not something that is routinely done by way of technical amendment and does not reflect normal EPA practice in environmental regulation and licensing. However, in 2016 and now, the State has asked the EPA to take extraordinary measures to protect the limited available waste disposal capacity.
- There may be considerable public interest in a technical amendment that increases the total intake of waste by more than 50% in one year.
- The Industrial Emissions licence granted for the Knockharley landfill reflects the scale of landfilling activities sought for authorisation by the licensee. The licensee has at no point in recent years sought a licence review or a revised planning permission to secure greater waste intake so that contingencies (and their foreseen and foreseeable recurrent need) can be accommodated on a routine basis.

4. Consultation with the Office of Environmental Enforcement (OEE)

I have consulted with the OEE in relation to this technical amendment request and my recommendation. The OEE confirmed that the proposed increase in waste acceptance cannot be accommodated under the existing licence.

5. Appropriate Assessment

A screening for Appropriate Assessment was undertaken and is documented in the proposed technical amendment document that accompanies this report. The following table lists the European sites assessed, their associated qualifying interests and conservation objectives.

List of European sites assessed, their associated qualifying interests and conservation objectives.

European site (site code)	Distance from installation	Qualifying interests (* denotes a priority habitat)	Conservation objectives
River Boyne and Blackwater SAC [002299]	Approximately 4.5km overland	7230 Alkaline fens 91E0 Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae)* 1099 River Lamprey <i>Lampetra fluviatilis</i> 1106 Salmon <i>Salmo salar</i>	As per NPWS (2016) Conservation objectives for River Boyne and River Blackwater SAC [002299]. Generic Version 5.0. Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs. 15/8/2016.

		1355 Otter <i>Lutra lutra</i>	
River Boyne and Blackwater SPA [004232]	Approximately 4.5km overland	A229 Kingfisher <i>Alcedo atthis</i>	As per NPWS (2016) Conservation objectives for River Boyne and River Blackwater SPA [004232]. Generic Version 5.0. Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs. 15/8/2016.
River Nanny Estuary and Shore SPA [004158]	21km downstream	A130 Oystercatcher <i>Haematopus ostralegus</i> wintering A137 Ringed Plover <i>Charadrius hiaticula</i> wintering A140 Golden Plover <i>Pluvialis apricaria</i> wintering A143 Knot <i>Calidris canutus</i> wintering A144 Sanderling <i>Calidris alba</i> wintering A184 Herring Gull <i>Larus argentatus</i> wintering A999 Wetlands	As per NPWS (2012) Conservation Objectives: River Nanny Estuary and Shore SPA 004158. Version 1.0. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht. 21/9/2012.

6. Recommendation

Consequent on the State's request that the EPA take extraordinary measures to assist in the mitigation of the environmental effects of ongoing waste disposal capacity deficits, I recommend technical amendment of the licence according to the recommended technical amendment document that accompanies this report.

Signed

Brian Meaney

On behalf of the Environmental Licensing Programme

Letter from Eastern Midlands Regional Waste Office to Meath County Council



**eastern - midlands
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26th September 2017

**Mr Larry Whelan,
Senior Executive Officer,
Environment Department,
Meath County Council.**

By email

National Residual Waste Disposal/Treatment Capacity 2017/18

A Chara,

The following letter sets out the position with regard to the current availability of residual waste disposal / treatment capacity and the implications for the options available to remediate the site at Tymoole.

1.0 Current Position

The three regional waste management offices have continued to monitor the situation in relation to the MSW treatment/disposal capacity and have engaged with all stakeholders. The Regional Waste Offices have participated in an industry working group consisting of representatives from all of the MSW disposal streams and continued to provide all stakeholders with the best available analysis with regard to waste arisings and disposal capacities.

The Regional Offices recently completed a National Municipal Waste Projections Report for the period 2017-2021 at the request of the City & County Managers Association (CCMA).

The report (extract enclosed) concludes that for the period 2017/2018 there is only sufficient capacity to meet "normal" municipal solid waste (MSW) arisings with significant deficits possible in the period 2019-2021 unless additional capacity is realised. It also points to the need for continued export of waste in the short to medium term.

Whilst there are a number of applications at varying stages in the planning and licensing processes it will be late 2018/early 2019 at the earliest before additional capacity could potentially be available. This presents difficulties in particular for projects to remove materials from illegal waste sites and the waste repatriation programme in Northern Ireland.

2.0 Options for Tymoole Site

In light of the forecasts that there is only sufficient residual capacity in 2017 and 2018 for "normal" residual MSW arisings it is likely that the acceptance of other waste streams such as repatriated waste from Northern Ireland, and waste from illegal sites would result in serious capacity issues going forward and possibly necessitate measures such as the invoking of emergency powers provided for under Section 56 of the Waste Management Act 1996 on a national scale similar to what occurred in 2016.

Therefore from Regional Waste Management Plan Office perspective there is a strong imperative from a strategic and national point of view that waste arising from illegal sites such as Tymoole should not result in the displacement of residual MSW at available outlets for 2017 and 2018.

This leaves Section 56 at a local level as the most viable option in the current circumstances in order to ensure that that all the waste and impacted soil is removed from the site as soon as possible to prevent the real risk of significant environmental impacts.

The Regional Office is very cognisant and appreciative of the steps taken in 2016 by Meath County Council to assist with the national capacity crisis and recognise that the measures being considered here again will also prevent any knock on effects to national capacity in 2017/18.

Please do not hesitate to contact us should you require any further information or assistance in this matter.

Yours Sincerely



Hugh Coughlan,
Regional Waste Coordinator

Letter from Golder Associates to EPA



02 March 2018

Reference No. 1792156.L01.B0

Mr. Brian Meaney
Senior Inspector
Environmental Licensing Programme
Environmental Protection Agency
PO Box 3000
Johnstown Castle Estate
Wexford
Y35 W821

RE: WASTE LICENCE W0146-02 KNOCKNARLEY LANDFILL SITE: SUPPORTING LETTER FOR REQUEST TO AMENDMENT OF CONDITION 1.19, SUBMITTED ON 23 FEB 2018

Dear Mr. Meaney,

Golder Associates Ireland Ltd (Golder) have been retained by KLL to design and provide CQA Supervision for the pending Cells 17 & 18 and a similar service was provided for Cells 15 & 16, where the Timoole Remediation Project (TRP) waste is currently being placed. Golder were requested to visit the facility during the week beginning 19 February to assess the quality of the material arriving from the TRP, discuss the method of placement with the KLL staff and to provide a preliminary assessment of the slope stability of the batters constructed.

The site visit was carried out by Brian Keenan of Golder on the 21 February 2018. The material arriving from the TRP was observed to be high in moisture content and was being blended with suitable material sourced from other waste streams and/or suitable cover material on site. The nature of the TRP waste required a mixing ratio of approx. 1.5:1 to permit landfill plant to traffic, following placement and compaction of the blended material in layers of approximately 1 m depth. It was evident at this blending ratio, the landfill plant were struggling to traffic over the placed layers; severe rutting and rolling of the placed layers visible. The TRP waste is primarily being stored below the crest and in the internal portion of Cell 15 with the outer batter to Cell 17 constructed from suitable material from other waste streams and/or suitable material on site. The gradient and condition of the current batter of Cell 15, facing towards Cell 17, was observed to be satisfactory. The waste deposited in Cell 15 is nearing the elevation of the crest and subsequent storage of the TRP waste will require the construction of shallow batters in a number of directions to contain the material. It is recommended that the mixing ratio of TPR waste to suitable material be increased to 1:1 in order to improve the moisture content and characteristics of the blended material such that sharper batters can be safely constructed to contain the additional TRP material.

It is understood that KLL propose to increase the rate of recovery of fines, woodchip, stone and soils to a ratio of 1:1 with the waste coming in from the TRP to continue good operational practice and maintain compliance with BAT and the Regional Waste Management Plan. It is further understood that the acceptance of the additional waste and cover material will not give rise to any new emissions and will comply with BAT and will not change the total permitted landfill capacity.

Should you require any further information or have any queries to resolve, please do not hesitate to contact the undersigned at your convenience on 045 810 200 or pcorrigan@golder.com.

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Mr. Brian Meaney
Senior Inspector

1792156.L01.B0
02 March 2018

Yours Sincerely,

GOLDER ASSOCIATES IRELAND LIMITED



Brian Keenan
Engineer

Peter Corrigan
Principal

BK/PC/ar

CC: Dee Stevenson, Damien Holmes, Thomas Finnegan, Sean Smith,

Attachments: