Attachment 4.3.9 Waste Hierarchy Considerations

DWtE consider that site operations are fully compliant with Section 29(2A) of the Waste Management Act 1996 as amended, which states that it shall be the duty of waste producers and holders to ensure that waste undergoes recovery operations in accordance with sections 21A (Waste Hierarchy) and 32(1) of the Waste Management Act.

After avoidance and recycling the main tool for reducing landfill reliance is thermal recovery facilities.

The Eastern Midlands Regional Waste Management Plan (EMRWMP 2015) 2015-2021 provided an overview of the current and planned thermal recovery capacity for residual waste and Table 16.7 of the Plan report is reproduced below.

Table 16-7: Active and Pending Capacity for the Thermal Recovery of MSW

Thermal Recovery Activity (Number of facilities)	Active (Tonnes)	Pending (Tonnes)	Total (Tonnes)	Intake (2013)
Waste-to-Energy (2)	220,000[94] (1)	600,000[95] (1)	820,000	206,000
Cement Kilns (3)	215,000 (2)	127,875 (1)	342,875	140,000[96]
Pyrolysis (1)	-	65,000 (1)	65,000	-
Total (6)	**435,000**	**792,875**	**1,227,875**	**346,000**

The Plan analysed the need for thermal recovery of residual municipal waste by making a number of assumptions with respect to Ireland improving its recycling rate from the then current 40% to 50% by 2020 and 60% by 2030. It also made several assumptions with regard to the phasing out of landfills as a repository for residual waste.

It was forecast that by 2020 municipal waste generated would grow to between 3.0 and 3.2 million tonnes per annum and that the national need for thermal recovery facilities would grow to between 1.5 and 1.6 million tonnes per year compared to the then current and anticipated thermal recovery capacity of 1.23 million tonnes per year. This analysis informed the adoption of EMRWMP Policy E15a:

> *'The waste plan supports the development of up to 300,000 tonnes of additional thermal recovery capacity for the treatment of non-hazardous wastes nationally to ensure there is adequate active and competitive treatment in the market and the State's self-sufficiency requirements for the recovery of municipal waste are met. This capacity is a national treatment need and is not specific to the region. The extent of capacity determined reflects the predicted needs of the residual waste market to 2030 at the time of preparing the waste plan. Authorisations above this threshold will only be granted if the applicant justifies and verifies the need for the capacity, and the authorities are satisfied it complies with national and regional waste policies and does not pose a risk to future recycling targets. All proposed sites for thermal recovery must comply with the environmental protection criteria set out in the plan*.'

At the most recent Irish Waste Conference (November 2018), figures for municipal waste generation and recycling rates for 2018 were presented[1] which indicate that approximately 2.9 million tonnes of

[1] *"Waste Capacity Challenge – Key Trends & Projections"; Hugh Coughlan, Regional Co-ordinator Easter Midlands; Irish Waste Management Associated Conference, November 27th 2018.*

municipal waste was generated in the year. With a projected national recycling rate of 41%, the resulting national amount of residual waste was 1.7 million tonnes. This residual waste was treated as follows:

Table 1 Residual Waste, 2018 Recovery and Disposal Routes

Residual Waste Route	Tonnage	% of total
Waste to Energy (DWtE and one other Irish facility)	800,000	47
Cement Kilns	255,000	15
Landfill	356,000	21
Export	289,000	17
Total	**1,700,000**	**100**

Disposal of residual municipal solid waste (MSW) is achieved by landfilling. There are currently four active landfills taking residual MSW in Ireland with East Galway Landfill expecting to close in May/June of 2019. The residual MSW competes with incinerator bottom ash, C&D wastes and secondary MSW materials for scarce void space.

With regard to the export figure cited above, baled residual MSW is exported as Refused Derived Fuel (RDF) for thermal treatment, generally in continental Europe.

The same presentation provided a number of *Final Remarks* including a statement that, based on the analysis as provided in Table 1 above, Policy E15 RWMP (300kT of additional capacity) is still valid (November 2018).

Furthermore, since the publication of EMRWMP 2015 a number of other potential thermal treatment routes not anticipated in the Plan have arisen, i.e.:

- A number of the cement kilns have applied for increased use of alternative fuels and raw materials (including solid recovered fuel - SRF). In most cases SRF is identified as one of a number of potential alternative fuels and must be produced from municipal solid waste to a bespoke specification. Consequently, not all nominal capacity for thermal treatment (licensed and pending in the planning and/or IE licensing system) is or will be available for thermal treatment of residual waste.
- In May 2018, a facility in Munster was granted planning permission for a 240,000 tpa waste to energy plant (including up to 24,000 tpa hazardous waste). The decision to grant planning permission was subsequently subject to a judicial review. The duration of the judicial review process and its ultimate outcome are uncertain. Consequently, the date this capacity will be available is uncertain. Even though the planning permission is subject to review, it is noted that the need for the development was rigorously examined during the planning process. The planning inspector, having reviewed the European, national and regional policy contexts, examined the need for an additional thermal recovery need capacity of 300,000 tonnes for the treatment of non-hazardous wastes in the period 2020 – 2030. The inspector concluded[2]: "*In this context the need for this development is, I consider, established*". This facility will also have to apply for an IE Licence prior to the commencement of activities on site.

In summary, there was a clearly defined national need established in 2015 and confirmed in 2018 for at least an additional 300,000 tpa of thermal treatment capacity.

The proposed 15% annual tonnage increase at DWtE would enable the Facility to process an additional 90,000 tonnes annually more sustainably both in terms of national residual waste treatment and energy generation, than the current alternatives of landfill or the export of waste. This capacity is available immediately, subject to amendment of the IE Licence, without any requirement for additional plant or investment.

[2] *Inspector Report PA0045 January 27th 2017*

Furthermore, in following the principals of the Waste Hierarchy DWtE ensure that residues from the thermal recovery process are recovered as follows:

- Incinerator Bottom ash (IBA) - is transported in covered trucks to Dublin Port located on the other side of Pigeon House Road for transfer to ship and subsequent delivery to a recovery facility. At present the approved recovery facility in the Netherlands recovers the metal (ferrous and non-ferrous) from the IBA. The remaining IBA material is used as aggregate in road building, embankments, road barriers and concrete pads for solar parks. It is intended to carry out this activity, through a 3rd party, in Ireland once the prerequisite licences and approvals are granted.
- Air Pollution Control Residues (APCR) - 90% of this material is recirculated back into the air pollution control system to maximise the reuse of the reagents and enhance the performance of the system. The remaining APCR which is collected in hoppers is continuously discharged via a screw conveyor to two fully enclosed steel tanks (silos) located west of the flue gas cleaning area. The silos have sealed surfaces and a gross volume of 700m^3 each. The silos are equipped with High Efficiency Particulate Abatement (HEPA) filers. The APCR is transported off site in closed containers for recovery as follows:
  - used to neutralise an acid waste, thus forming a stable gypsum matrix, which is utilised to back-fill a historic limestone quarry in Norway and
  - used to stabilise a salt mine in Germany.