



Comhairle Cathrach
Bhaile Átha Cliath
Dublin City Council

Environment and Transportation Department,
Block 2, Floor 6,
Dublin 8.

22nd July 2022.

To Each Member of the Climate Action, Environment and Energy Strategic Policy Committee

Report on Dublin Waste to Energy (DWtE) Facility

1 Summary of Residual Municipal Solid Waste (rMSW) Treatment Capacity in Ireland for 2021.

Waste Recovery

Recovery of residual MSW in Ireland is achieved through direct thermal treatment and co-processing in the cement manufacturing processes. The total recovery capacity for 2021 was approximately 1Mt of rMSW.

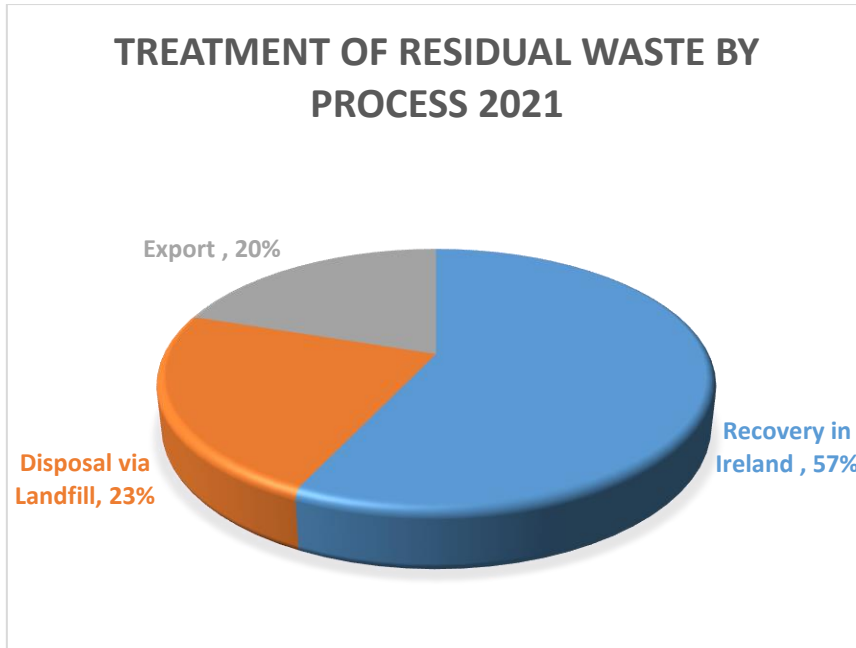
Waste Export

The export of rMSW for recovery continues to be a significant activity and provides recovery capacity not currently available in the country. The total tonnage of waste exported in 2021 was approximately 350kT of rMSW.

Waste Disposal

Disposal of rMSW in Ireland is achieved by landfilling. There were three active landfills operating commercially in Ireland in 2021, which accepted approximately 414kT of rMSW for disposal.

In 2021 there was circa 1.78mT of rMSW treated via recovery, export or disposal as set out in the chart below.



It is noted that the DWtE facility operated at full operational capacity and treated 601,157 tonnes of non-hazardous residual municipal and industrial waste in this year allowing Ireland to achieve a 57% recovery rate. The 600,000 tonne limit for 2021 was increased by an additional 2,500 tonnes by the EPA under section 56 of the EPA act in December 2021, to minimise the volume of waste sent for export and disposal. The chart also shows that Ireland is still highly reliant on the export and disposal of our residual waste.

2 DWtE Facility

The DWtE Project is a partnership between Dublin City Council (the Authority) acting on behalf of the four Dublin Local Authorities and Dublin Waste to Energy Limited (DWTEL) the PPP Company. The DWtE Facility is designed to treat 600,000 tonnes per annum (tpa) of non-hazardous residual municipal and industrial waste.

2.1 Overview of Operations:

The Facility has managed and treated approximately 280,000 tonnes of non-hazardous residual municipal and industrial waste in the year to date and will treat just under 600,000 tonnes by the end of 2022.

Each combustion line has its own independent train of Air Pollution Control (APC) equipment. Throughout the air pollution treatment process the emissions are continuously monitored using a real time continuous emissions monitoring system (CEMS). Each stack has its own CEMS. In addition, a redundant CEMS is continuously on standby in the event of one of the live systems going down. These systems are calibrated weekly and certified on an annual basis to best practice and

EPA guidance. Furthermore, quarterly independent stack testing is undertaken as per Schedule B.1 of the Facility IE Licence.

From data submitted to the EPA by DWTEL it is clear that the facility operates well within its licence limits with respect to concentration Emission Limit Values (ELVs) and mass flows.

The data indicates that emissions to air from the Facility are generally running at less than 10% of the licence limits with respect to the concentration Emission Limit Values (ELVs) and mass flows. The only exception to this statement is with respect to NO₂ which is averaging 70% of the ELV, these values are still well below the relevant limit values.

In addition to stack testing undertaken by an independent monitoring company appointed by the operator, the EPA also appoints an independent third party to undertake emissions monitoring at the stack, who report directly to the EPA.

2.1.1.1 Environmental Performance

The CEM data and stack test results for the Facility are available for review and download on the Facility's website. The half hourly data for the previous day is also available for review at <https://www.dublinwastetoenergy.ie/About-the-Facility/Emissions-Data>

Additional information in respect of the EPA site visits and monitoring is available at <http://www.epa.ie/terminalfour/ippc/ippc-view.jsp?regno=W0232-01>

The DWtE Facility emission data from independent stack testing for each combustion line for 2021 is set out in the table below, including the percentage below EPA limits.

Parameter	Units	Result Line 1 Q1 2021	Result Line 2 Q1 2021	Result Line 1 Q2 2021	Result Line 2 Q2 2021	Result Line 1 Q3 2021	Result Line 2 Q3 2021	Result Line 1 Q4 2021	Result Line 2 Q4 2021	EPA License Limit	Average	% Below EPA License Limit
Dates		11-15 th Jan 21	11-15 th Jan 21	4-11 th May 21	4-11 th May 21	9-12 th Aug 21	9-12 th Aug 21	22-26 th Nov 21	22-26 th Nov 21			
PM ₁₀ ₁	mg/m ₃	0.135	0.135	0.688	0.127	0.14	0.45	0.48	0.15	-	0.29	
PM _{2.5} ₁	mg/m ₃	0.166	0.158	0.143	0.136	0.15	0.39	0.16	0.16	-	0.18	
Cadmium & Thallium ₁	mg/m ₃	<0.0006	<0.0006	<0.0006	<0.0007	0.0009	0.0006	0.001	0.001	0.05	0.00	100.0
Heavy Metals ₁	mg/m ₃	0.006	0.018	0.009	0.012	0.014	0.0066	0.012	0.012	0.5	0.01	100.0
Mercury ₁	mg/m ₃	0.0008	0.0004	0.0004	0.0037	0.0004	0.0004	<0.0003	0.001	0.05	0.00	98.0
Arsenic ₁	mg/m ₃	<0.00033	<0.00035	<0.0004	<0.0004	<0.0004	<0.0004	0.0004	<0.0004	0.2	0.00	99.8
Dioxins & Furans (NATO I-TEQ) ₁	ng/m ³	0.0024	0.0091			0.0009	0.0308			0.1	0.01	89.2
Hydrogen Fluoride ₁	mg/m ₃	0.108	<0.037	0.0545	0.146	0.38	0.11	<0.05	<0.05	4	0.16	96.0
Nitrous Oxide ₁	mg/m ₃	0.25	0.05	0.01	0.01	0.06	0.18	0.04	0.05	400	0.08	100.0
Volumetric Flow Rate (REF) ₁	m ³ /hr	259434	261851	238977	239405	245953	247219	256563	259657	275000	251132	

Average below EPA Emission limits to Air

98%

2.2 Compliance with Statutory Consents

In 2021, there were 6 incidents reported to the EPA and 4 non-compliances issued by the EPA. A summary of the Non-Compliance notices are set out below:

Category	Description
4 ELVs	4 no ELV's for TOC

The four ELV breaches for TOC were attributed to variations in waste input during normal operation and systems are now in place with all waste operators to eliminate any further material of this nature being delivered to the Facility.

2.3 Overview of the Project Economics for Dublin City Council.

2.3.1 Risk/Revenue Sharing

The Dublin Waste to Energy Project Agreement contains a number of key risk sharing mechanisms, related to project revenues as set out below.

2.3.1.1 Authority Contingent Obligation (ACO)

During the first 15 years of the Facility's Operation, '*the PPP period*', the DLA's are bound by an Authority Contingent Obligation (ACO) mechanism to underpin the waste market revenue of the Facility. Under the ACO the DLA's will provide partial (i.e. 58%) revenue support in respect of any shortfall below a threshold waste revenue. The ACO only becomes effective if the Operator fails to achieve the threshold waste revenue in any year during the PPP period.

2.3.1.2 DLA Revenue Streams

In return for the provision of the ACO, the DLA's will receive 54% of all DWtE waste revenue above the threshold waste revenue for the PPP period (i.e. the first 15 years). In addition, they will receive 25% of energy revenue above an agreed energy revenue threshold for the PPP period and 45% of energy revenue above the same threshold for the merchant period (i.e. the subsequent 30 years – (years 15 to 45)).

Generally, electricity generated at the DWtE facility will be sold at the wholesale market price. However, for the first 13 years of operation (i.e. until 31 December 2030) the DWtE facility will benefit from a national renewable energy feed-in tariff under the REFIT 3 Programme which will provide a guaranteed price per MWh for approximately 57% of the electricity produced at the facility. This means that if the wholesale price of electricity is below the REFIT 3 tariff, approximately 50% of the electricity will be guaranteed the REFIT3 tariff by the State.

Actual returns to the DLA's will depend primarily on the development of the waste and electricity markets, although a significant element of the energy revenue is effectively guaranteed until 31 December 2030.

2.3.2 Revenue from 2021

The Dublin Local Authorities will receive a payment of approximately €14.6m from DWTEL as the facility operator in 2022.

Dublin Local Authority	Amount
Dublin City Council	€6.1
Fingal County Council	€3.1
South Dublin County Council	€3.0
Dun Laoghaire Rathdown County Council	€2.4

2.3.3 Commercial Rates

The Dublin Waste to Energy operator, DWTEL will be liable for the payment of rates throughout the operational phase of the Project, with the annual charge being circa €4.5m.

2.4 Update on application Process for an Increase in Treatment Capacity at the DWtE Facility

An Bord Pleanála approved the planning application, for the increase in treatment capacity at the Dublin Waste to Energy Facility from 600,000 tonnes per annum to 690,000 per annum in December 2021.

DWTEL as the holder of the EPA licence has submitted an application in respect of the EPA licence, for the equivalent increase in treatment capacity and the EPA are currently working through their review and approval process in the respect of the application.

Dublin Waste to Energy Community Gain Fund for the Irishtown, Ringsend & Sandymount Catchment Area

Introduction:

A Community Gain Liaison Committee and a Community Gain Fund were established for the catchment area of Irishtown, Ringsend, and Sandymount, in accordance with Planning Permission, reference 29S.EF2022 and Industrial Emissions Directive Licence, reference W0232-01, granted by An Bord Pleanála and the Environmental Protection Agency respectively, for the Dublin Waste to Energy Project in 2017.

1 The Dublin Waste to Energy Community Gain Liaison Committee

- In line with condition no. 2, of the above planning approval a Community Gain Liaison Committee was established. The current membership of the Dublin Waste to Energy Community Gain Liaison Committee is as shown:

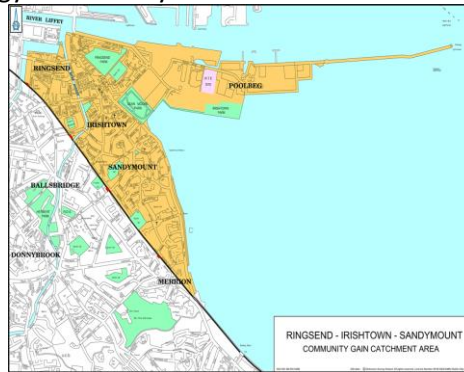
Table 1 Dublin Waste to Energy Community Gain Liaison Committee Membership.

Peter McLoone	Chairperson
Eimear McCormack	Community Representative
Anthony McDonald	Community Representative
David Turner	Community Representative
Cllr. James Geoghegan	Elected Representative
Cllr. Dermot Lacey	Elected Representative
Cllr. Paddy McCartan	Elected Representative
Kieran Mullins, Project Director, Dublin Waste to Energy Ltd.	Contractor Representative
Brian Hanney, South East Area Manager	DCC Official
James Nolan, Senior Executive Officer	DCC Official

2 The Dublin Waste to Energy Community Gain Fund.

- In line with condition no. 3, of the above planning approval a Community Gain Fund was established. The Community Gain Fund provides financial assistance to community based clubs, groups, voluntary organisations, educational groups, individuals or businesses for the development of educational, environmental, community and recreational projects in the Irishtown, Ringsend and Sandymount areas, as defined on the map in figure 1 below.

Figure 1 Dublin Waste to Energy Community Gain Catchment Area.



- The Community Gain Fund comprises a once-off capital contribution equivalent to 3% of the capital cost of the Dublin Waste to Energy facility and an annual contribution of €1 per tonne of waste accepted for thermal treatment at the plant. The annual contribution of €1 per tonne is updated in accordance with the consumer price index and equates to approximately €600K per annum.
- Since 2014, circa €12.47m has been credited by the developer, Dublin Waste to Energy Limited, to the Community Gain Fund.

3 The Dublin Waste to Energy Community Gain Projects Grant Scheme.

- In accordance with its terms of reference, the Committee developed the Dublin Waste to Energy Community Gain Projects Grant Scheme which is an agreed mechanism to assess and fund proposals from local community groups, voluntary organisations, environmental, arts and educational groups, sports clubs, individuals and businesses for the development of environmental, community, educational and recreational projects.
- The Scheme is funded by Dublin Waste to Energy Limited through its Community Gain Fund and the disbursement of grants is facilitated by Dublin City Council.
- Applications are invited to submit proposals to the Scheme for assessment by the Committee and the amount to be contributed, if any, towards a proposed project is at the absolute discretion of the Committee. The local area to benefit from qualifying projects comprises the areas of Irishtown, Ringsend and Sandymount. Priority is given to projects that enhance their local area and in so doing provide the maximum opportunity to advance community, educational, recreational and environmental initiatives.
- The Committee has run four Schemes to date, one in 2016, 2017, 2019 and 2021. Thus far, a total of 133 community groups, schools, religious and sporting organisations in the Ringsend, Irishtown and Sandymount catchment area have received grant funding of circa €11.29m.
- In respect of the 2016 Scheme, €5.1m was available from the fund for disbursement. 56 applications were received requesting grant funding in excess of circa €35 million. The Community Gain Liaison Committee approved 32 grant applications to the value of circa €4.81m.

- With regard to the 2017 Scheme, circa €5.2m was available from the fund for distribution. 48 grant applications were received requesting funding in excess of circa €11 million. The Committee allocated circa €4.25m to 35 approved projects.
- With reference to the 2019 Scheme, the Committee had circa €1.75m available to them to allocate to eligible projects. 51 applications were received requesting grant funding in excess of circa €7m. The Committee approved 38 grant applications and allocated circa €1.73m in grant funding.
- With regard to the 2021 Scheme, it was open for applications between September and October 2021. €500K was available from the fund for allocation to eligible projects. 46 grant applications were received requesting funding in excess of circa €1.6 million. The Committee approved 28 projects and allocated circa €500K in funding.

Table 3 shows the number of grant applications approved per scheme with reference to the amount approved per scheme.

Grant Scheme	No. Approved	Total Amount Approved
2016	32	€4.81m
2017	35	€4.25m
2019	38	€1.73m
2021	28	€500K
Totals	133	€11.29m

4 Overview of Grant Applications Approved.

- On receipt of the grant applications, the Committee divides them into three categories, namely, those requesting amounts less than €20K, those requesting amounts of between €20K and €100K and those seeking amounts in excess of €100K. The Committee carefully evaluates each application against the Scheme's general conditions and criteria.

Table 4.1 shows the number of grant applications approved in each category across the four Schemes with reference to the total amount approved in each category.

Categories	<€20,000	€20K - €100K	>€100K	Grand Total
Total No. Approved by Category	63	47	23	133
Total Amount Approved by Category	€502K	€2.23m	€8.56m	€11.29m

- To date 23 grant applications requesting amounts greater than €100K have been approved by the Committee and the total amount of funding awarded in this category is circa €8.5m. Some notable projects in this category include the following:
 - The refurbishment and modernisation of the clubhouse at Railway Union Sports Club. This project received €1.1m in grant funding.
 - The renovation of Ringsend and Irishtown Community Centre to which the Community Gain Fund contributed €1.4m.

- Ringsend College built a science laboratory with their €120K grant funding.
 - With the €180K provided by the Community Gain Fund the Irish Nautical Trust purchased the boat named 'The Liffey Sweeper'. The boat has a dual purpose acting as a river cleaner to remove floating debris and to allow the marine training apprenticeship project to commence.
 - Enable Ireland Sandymount renovated their hydrotherapy pool with the €200K provided by the Community Gain Fund.
 - The extension to Irishtown Stadium. This project was undertaken by Crusaders Athletic Club and St. Patrick's CYFC. The overall cost of the project amounted to circa €2.75m to which the Dublin Waste to Energy Community Gain Fund contributed €2.02m, with the remaining funding being provided by the two clubs and a contribution from Dublin City Council.
 - In collaboration with Dublin City Council, Sandymount Tidy Towns Community Association constructed a new playground in Seán Moore Park.
- Of the 133 projects approved to date there has been a comparatively equal distribution of grant funding awarded across the catchment area with Ringsend and Sandymount both receiving in excess of €4m and the smaller catchment area of Irishtown in receipt of around €2m.

Table 4.2 shows the total number of grant applications approved by area with reference to the amount approved by area.

Area	Total No. Approved by Area	Total Amount Approved by Area
Irishtown	16	€2.12m
Ringsend	71	€4.77m
Sandymount	46	€4.4m
Grand Totals	133	€11.29m

Table 4.3 shows the total number of grant applications approved by sector with reference to the total amount approved in each sector.

Sector	Total No. Approved by Sector	Total Amount Approved by Sector
Community	37	€2.75m
Education & Training	26	€1.95m
Sport & Recreation	57	€6.28m
Arts	6	€69K
Residents Associations	6	€240K
Environmental	1	€2K
Grand Totals	133	€11.29m

- Worth noting is that the sport and recreation sector has received €6.2m, which is the largest quantum of grant funding. This figure includes the €2.02m awarded to the Irishtown Stadium extension project and the €1.1m awarded to Railway Union Sports Club and is reflective of the high volume of eligible grant applications submitted by sporting clubs and organisations within the catchment area. For comparison purposes, in total, 87 grant applications from the sports

and recreation sector have been submitted to the Projects Grant Scheme compared to 9 from the arts sector and 3 from the environmental sector.

- The types of projects awarded grant funding across the four Schemes has been diverse. They are broadly categorised as shown in Table 4.4.
- You will note that there has been in excess of €8m granted towards the upgrade of community, recreational and educational services. This figure includes refurbishment and renovation projects carried out by sporting organisations, clubs, schools and community centres across the catchment area.

Table 4.4 shows the total number of grant applications approved by project type with reference to the total amount approved by project type.

Project Type	Total No. Approved by Project Type	Total Amount Approved by Project Type
Provision of Community/Recreational/Educational Facilities and Services	16	€1.77m
Upgrade of Community/Recreational/Educational Facilities and Services	54	€8.18m
Purchase of Equipment for Community/Recreational/Educational Facilities and Services	39	€790K
Public Area Enhancement	6	€18K
Community Education Projects	4	€165K
Community Arts Projects	8	€70K
Local Heritage Projects	6	€295K
Grand Totals	133	€11.29m

James Nolan

Senior Executive Officer