2 Policy and Planning Framework and Need for the Scheme

2.1 Introduction

This section of the Environmental Impact Assessment Report (EIAR) sets out the European Union (EU), national, regional and local waste policy and planning policy framework which underpins the proposed development. The chapter demonstrates the specific need for the proposed development in the context of the waste policy and planning policy framework.

In summary, a review of waste, energy and climate policy at a European and national level shows that the Ringaskiddy Resource Recovery Centre could make a significant contribution toward:

- providing thermal recovery capacity for non-hazardous residual waste (300,000 tpa), industrial waste and hazardous waste (50,000tpa) as identified in the regional waste plans;
- self-sufficiency in waste treatment within the State and reducing exports of hazardous waste and non-hazardous residual municipal waste;
- diverting residual waste away from landfill, and recovering energy from it in line with the EU's Circular Economy objectives, the newly adopted Circular Economy Package and amended Directives on Waste and Landfill, and the Irish Government's Climate Action Plan 2019;
- more ambitious recycling targets as set out in the Circular Economy Package, by extracting ferrous and non-ferrous metals from bottom ash;
- sustainable, secure and competitive energy generation in line with energy policy objectives;
- reducing greenhouse gas emissions from waste management by diverting biodegradable waste away from landfill, and recovering renewable energy from it;
- delivering infrastructure of strategic importance with private sector investment;
- ensuring national competitiveness and balanced regional development;
- strengthening the Cork gateway.

An assessment of waste data and Regional Waste Plans in **Sections 2.4** and **2.5** finds that approximately 707,800 tonnes per annum of residual hazardous, municipal and industrial waste would be suitable for thermal recovery. This represents the theoretical amount of residual waste potentially available for thermal recovery.

Of the 707,800 tonnes, 350,000 tonnes residual hazardous and municipal waste is identified as requiring thermal treatment in the Southern Region Waste Management Plan ("SRWMP")[1] and 325,730 tonnes represents industrial waste[2].

[1] An additional 32,000 tonnes hazardous waste has been identified as potentially requiring treatment
[2] Based on industrial waste arising in 2012 as outlined in Regional Waste Plans

The capacity of the proposed Ringaskiddy Resource Recovery Centre is 240,000 tonnes per annum (including up to 24,000 tonnes per annum of suitable hazardous waste), which would satisfy the majority of the municipal and hazardous waste treatment requirements (350,000 tonnes per annum), as identified in the SRWMP.

Furthermore, there is a lack of suitable recovery capacity within the Southern Waste Region while a large quantity of residual MSW is being exported for recovery in similar facilities in continental Europe. In order to tackle this deficit and to establish a better regional balance, thermal recovery capacity should be developed outside the Eastern-Midlands region (where currently all active facilities are located).

Moreover, the newly adopted National Planning Framework underlines the need for waste to energy thermal recovery facilities which treat the residual waste that cannot be recycled in a sustainable manner. Similarly, the National Development Plan underlines that investment in waste management infrastructure is critical to Ireland's environmental and economic well-being for a growing population and to achieving circular economy and climate objectives.

2.2 Waste Policy

2.2.1 European Union (EU) Law and Policy

The context for the development of Irish waste and energy policy is set by overarching EU policy as well as EU legal instruments that implement this policy. These key EU policy and legislative documents are set out below.

2.2.1.1 7th Environmental Action Programme 2013

The 7th *Environmental Action Programme* ("7th EAP") (European Commission 2014) was formally adopted by the European Parliament and the Council of the European Union in November 2013 and covers the period up to 2020.

This document oversees the implementation of environmental policy for Member States until 2020. It builds on a vision for 2050 that is set out as follows:

> *"In 2050, we live well, within the planet's ecological limits. Our prosperity and healthy environment stem from an innovative, circular economy where nothing is wasted and where natural resources are managed sustainably, and biodiversity is protected, valued and restored in ways that enhance our society's resilience. Our low-carbon growth has long been decoupled from resource use, setting the pace for a safe and sustainable global society."*

In line with these objectives, the programme for action to 2020 aims to (amongst other things):

- Turn waste into a resource based on strict application of the waste hierarchy.
- Limit energy recovery to non-recyclable materials.
- Phase out landfilling of recyclable or recoverable waste.
- Ensure high quality recycling where the use of recycled material does not lead to overall adverse environmental or human health impacts.

- Manage hazardous waste so as to minimise significant adverse effects on human health and the environment.
- Remove barriers facing recycling activities in the European Union internal market and review existing prevention, re-use, recycling, recovery and landfill diversion targets so as to move towards a lifecycle-driven 'circular' economy, with a cascading use of resources and residual waste that is close to zero.

The European Commission has now adopted a more ambitious framework which aims to create conditions for the development of a circular economy as described in the Circular Economy Roadmap (European Commission 2015a) and Communication "Closing the loop – An EU action plan for the Circular Economy" (European Commission 2015b)[3].

The European Commission's Circular Economy Package ('CEP') forms a constituent part of this framework and is centred on key waste legislative proposals which set ambitious targets to increase municipal waste recycling and to reduce landfill across Europe. As part of the CEP, the EU has amended and updated four waste Directives, including the Landfill and Waste Framework Directives.

In June 2018, the four amending Directives which constitute the European CEP were adopted by the European institutions and published in the Official Journal of the European Union. In particular, the amendments to the Waste Framework Directive and the Landfill Directive4 are particularly important in the context of the proposed development and are outlined in full below.

In a circular economy the value of the materials and energy used in products in the value chain is retained for as long as possible while waste and resource use are minimised. This provides consumers with more durable and innovative products that save money and increase quality of life.

The circular economy requires action at all stages of the life cycle of products: from the extraction of raw materials, through material and product design, production, distribution and consumption of goods, repair, remanufacturing and re-use schemes, to waste management and recycling. All these stages are linked and improvements in terms of resource and energy efficiency can be made at all stages.

The European CEP's intent is to ensure the European Union's transition to a circular economy5. Ireland's Regional Waste Plans (see below) already apply the principles of the Circular Economy focusing in particular on transitioning from a waste management economy to a green circular economy and increasing the value recovery and recirculation of resources. This is described further below.

The proposed Ringaskiddy Resource Recovery Centre will support the 7th EAP and Circular Economy objectives including the recently adopted CEP which includes revised and enhanced targets on the landfilling and recycling of municipal waste which Ireland is obliged to adhere to by diverting non-recyclable resources from landfill and recovering valuable energy from them.

[3] European Commission 2015a and Communication 'Closing the Loop – An EU action plan for the Circular Economy, European Commission 2015b
[4] Directive 2018/850 of May 30, 2018, amending Directive 1999/31/EC on the landfill of waste and Directive 2018/851 of May 30, 2018, amending Directive 2008/98/EC on waste
[5] http://ec.europa.eu/environment/circular-economy/index_en.htm

Thermal recovery also supports high quality recycling by treating polluted and complex waste, thereby keeping harmful substances out of the Circular Economy. Finally, thermal recovery facilities can contribute to recycling through extraction of ferrous and non-ferrous metals.

2.2.1.2 Circular Economy Package (CEP)

According to the European Commission the CEP should *"help European businesses and consumers to make the transition to a stronger and more circular economy where resources are used in a more sustainable way."*

Thus, the CEP's primary intent is to ensure the European Union's transition to a circular economy as opposed to the typical linear economy in which resources are created, used, and disposed. A circular economy is one in which resources are used for as long and as productively as possible, and at the end of their useful life, their products and materials are recovered and regenerated. The CEP is thus centered on ‘designing waste out of the system’.

The four amending Directives that constitute the Circular Economy Package include:

- Directive 2018/850 of May 30, 2018, amending Directive 1999/31/EC on the landfill of waste
- Directive 2018/851 of May 30, 2018, amending Directive 2008/98/EC on waste
- Directive 2018/852 of May 30, 2018, amending Directive 94/62/EC on packaging and packaging waste, and
- Directive 2018/849 of May 30, 2018, amending Directives 2000/53/EC on end-of-life vehicles; 2006/66/EC on batteries and accumulators and waste batteries; accumulators; and 2012/19/EU on waste electrical and electronic equipment.

Whilst the main objective of the circular economy is to cover all phases of the product's life cycle, from production and consumption to waste management, the European CEP is primarily focused on waste.

Accordingly, the four Directives have been built on the following principle:

> *"Waste management in the Union should be improved, with a view to protecting, preserving and improving the quality of the environment, protecting human health, ensuring prudent, efficient and rational utilization of natural resources and promoting the principles of the circular economy."*

New Circular Economy Package Targets

In order to facilitate the move to a European circular economy and reach a high level of resource efficiency, the Package through amendments to the above Directives[6], imposes several ambitious targets which Member States, including Ireland must comply with. These targets include:

- 55% of municipal waste must be prepared for re-use and recycling by 2025, 60% by 2030, and 65% by 2035.
- The amount of municipal waste landfilled must be reduced to 10% or less of the total amount of municipal waste generated by 2035.
- As of 2030, all waste suitable for recycling or other recovery, in particular in municipal waste, must not be accepted in a landfill, excepted for waste for which landfilling delivers the best environmental outcome.
- The total amount of recycled packaging waste must be at 65% by 2025 and 70%t by 2030. Member States can ask for derogations to the EU Commission under certain circumstances.
- Specific minimum targets for recycling some materials contained in packaging waste (plastic, wood, ferrous metals, aluminum, glass, paper, and cardboard) are imposed, and
- By December 31, 2023, Member States must ensure that biowaste[7] is either separated and recycled at source or is collected separately and not mixed with other types of waste.

These ambitious and stringent targets are likely to pose challenges for many Member States including Ireland once they are given effect in national law from 2020. Thereafter, Ireland will be obliged to meet the new targets on reuse and recycling and the strict limitation on the amount of municipal waste which can be landfilled.

For the purposes of this Chapter of the EIAR, the amended Directives on waste and the landfilling of waste are particularly relevant in the context of the proposed development and the recently introduced amendments are detailed in full below.

The Irish Government's Climate Action Plan 2019 acknowledges the need to regulate the materials that go to landfill in order to meet the target of just 10% going to landfill by 2035. The proposed development through the diversion of municipal waste from landfill to a higher tier of the waste hierarchy and the recovery of valuable resources from the waste to energy process will contribute to the achievement of the new and enhanced targets as set out in the CEP.

[6] Member States including Ireland are required to bring into force laws, regulations and administrative provisions necessary to comply with the revised CEP Directives by 5 July 2020 and which entered into force on 4 July 2018 following publication in the Official Journal of the European Union.

[7] 'bio-waste' means biodegradable garden and park waste, food and kitchen waste from households, restaurants, caterers and retail premises and comparable waste from food processing plants.

2.2.1.3 Directive (EU) 2018/851 amending Directive 2008/98/EC on waste

The Waste Framework Directive (2008/98/EC) ("the WFD") previously set out the legal framework for waste management in the European Union, including the basic concepts and definitions related to waste management.

The amended Directive (2018/851) on waste amends the 2008 Waste Framework Directive to increase the targets laid down and to avoid methods of waste treatment which lock in resources at the lower levels of the waste hierarchy. The waste hierarchy as established in the previous Waste Framework Directive has also been enshrined in this amended Directive with the result that it must be applied as a priority order in waste prevention and management legislation and policy.

The waste hierarchy establishes the following order of priority:

- Prevention;
- Preparing for re-use;
- Recycling;
- Other recovery e.g. energy recovery, and
- Disposal.

The amended Directive provides that Member States should take account of the waste hierarchy by increasing waste prevention, increase preparing for re-use and recycling rates, enable high-quality recycling and boost the uptake of quality secondary raw materials. In addition, as set out in the previous WFD, the newly amended Directive on waste continues to impose on Member States a number of obligations regarding waste management, including:

- The application of the waste hierarchy as a priority in waste prevention and waste management legislation and policy.
- To ensure that waste is recovered (including separate collection to facilitate recovery where technically, environmentally and economically practicable) or, where it is not recovered, to ensure that waste is disposed of without causing risks to human health and the environment.
- To establish an integrated and adequate network of waste disposal installations and of installations for the recovery of mixed municipal waste - aiming for EU self-sufficiency and for member states individually to move towards self-sufficiency.

The amended Directive on waste continues to apply the hierarchy of waste management as detailed above, with the preferred waste management option at the top of the hierarchy and the least preferred option at the bottom.

This waste hierarchy has been transposed into Irish law (**Section 21A** of the Waste Management Act 1996 (as inserted by article 7 of the European Communities (Waste Directive) Regulations 2011 [S.I. No. 126 of 2011][8]) and, for ease of reference, is demonstrated in **Figure 2.1** (*Source: EPA 2016, Irelands Environment 2016, An Assessment).*The waste hierarchy shows that waste prevention is the most preferred option, with disposal being the least desirable option. Re-use, recycle and recovery fall in the middle of the waste hierarchy.

Annex II of the WFD sets out a non-exhaustive list of recovery operations, which includes material recovery (i.e. recycling), energy recovery (i.e. use principally as a fuel or other means to generate energy) and biological recovery (e.g. composting). This Annex also sets out energy efficiency criteria for energy recovery activities such as waste-to-energy known as the "R1 formula". Any new facilities meeting or exceeding an efficiency of 0.65 according to the R1 formula can be classified as recovery activities (R1) according to the waste hierarchy[9].

At the bottom of the hierarchy is disposal, which in Ireland generally involves waste being sent to landfill. Landfilling results in resources being disposed of without a possibility of recovery, with risks such as emissions from methane generated from decomposing biodegradable waste, leachate and groundwater contamination.

The waste hierarchy thus gives priority to the options that deliver the best overall environmental outcome and in the context of the proposed development, the waste to energy process – thermal treatment coupled with energy recovery falls within the recovery component of this hierarchy.

Thus, the treatment of unavoidable wastes and residues by the waste to energy process may be regarded as paying due regard to this principle and is in alignment with the proper and correct application of the waste hierarchy as stipulated by EU legislation.

2.2.1.4 Directive (EU) 2018/850 amending Directive 1999/31/EC on landfill of waste

Under this amended Directive, the European Union has set out new rules for the landfill of waste and it establishes stringent and legally binding targets. This Directive amends Directive 1999/31/EC on the landfill of waste to ensure that Member States move towards a more circular economy and is intended to prevent or reduce the adverse effects of the landfill of waste on the environment, soil, air, surface and groundwater.

The objective of this Directive is to improve waste management in the EU and its primary aim is to ensure a progressive reduction of landfilling of waste in the EU. The Directive also sets new binding landfill reduction targets, including:

[8] As referred to above, national laws and regulations necessary to give effect to the revised Directives which form part of the CEP, must be enacted by 2020 and thereafter this statutory instrument will necessarily require amendment.
[9] This R1 classification covers all types of waste acceptable at the MSWI plant as defined in IPPC and WID

- By 2030 all waste suitable for recycling or recovery will not be accepted in a landfill, except when landfilling provides the best environmental outcome. This target will be reviewed in late 2024 with a view to maintaining or possibly reducing, and
- By 2035 municipal waste that is landfilled must only account for 10% that is generated (by weight)[10].

The proposed Ringaskiddy Resource Recovery Centre will be designed to meet the R1 efficiency criteria. The waste activity proposed to be carried out will therefore be classified as a recovery operation. The proposed Ringaskiddy facility will therefore help to move waste treatment away from landfill disposal to a higher tier of the waste hierarchy. This aligns with the objectives of the CEP and the amended EU Directives on waste and the landfilling of waste. Furthermore, the proposed development will contribute to the achievement of the enhanced and more stringent targets as contained within the CEP including the new stringent target on the limitation of the landfilling of municipal waste.

2.2.1.5 Other EU Initiatives

The Europe 2020 strategy (European Commission 2010), an EU document which aims to ensure smart, sustainable and inclusive growth, puts forward seven flagship initiatives to set the EU on the path to this transformation, including the "resource efficient Europe" roadmap.

The Roadmap for a Resource Efficient Europe roadmap (European Commission 2011) sets out key milestones which include:

> *"By 2020, waste is managed as a resource. Waste generated per capita is in absolute decline. Recycling and re-use of waste are economically attractive options for public and private actors due to widespread separate collection and the development of functional markets for secondary raw materials. More materials, including materials having a significant impact on the environment and critical raw materials, are recycled. Waste legislation is fully implemented. Illegal shipments of waste have been eradicated. Energy recovery is limited to non-recyclable materials, landfilling is virtually eliminated and high quality recycling is ensured."*

In 2014-15, the Commission performed a mid-term review[11] of the Europe 2020 strategy. This included a public consultation that showed that the strategy is still seen as an appropriate framework to promote jobs and growth. Following the review, the Commission decided to continue the strategy, monitoring and implementing it through a process known as the European Semester.

The proposed Ringaskiddy Resource Recovery Centre will contribute towards the reduction of landfill within Ireland, treating non-recyclable waste while supporting high quality recycling. It is therefore in alignment with the Strategy's key milestone centred on resource efficiency and the virtual elimination of landfill.

[10] A derogation by a Member State to postpone the above targets by up to 5 years may only be granted if landfilled more than 60 % of its municipal waste generated in 2013 as reported to the OECD and Eurostat
[11] https://ec.europa.eu/info/sites/info/files/europe2020_consultation_results_en.pdf

2.2.2 National Waste Policy

2.2.2.1 A Resource Opportunity – Waste Management Policy in Ireland

The Department of Environment, Community and Local Government published *A Resource Opportunity. Waste Management Policy in Ireland*' in July, 2012. In the context of the previous EU WFD, this national policy document sets out the measures through which Ireland will make the further progress necessary to become a recycling society, with a clear focus on resource efficiency and the virtual elimination of landfilling of municipal waste. This Policy Statement covers the period to 2020 and it has been indicated that a review of the same will take place in 2019 with a view to having a new policy in place in 2020 - 2021. This review will be informed by a wide range of issues and initiatives including the progress achieved to date on implementing the measures set out in *A Resource Opportunity* and the implementation of the Circular Economy Package.

In this regard, the recent Consumer and Competition Protection Agency analysis[12] of the waste collection market has recommended that it is now timely to review this policy document.

There are a number of guiding principles[13] in this policy document as set out below:

- *"Firstly, we must place prevention and minimisation at the forefront of waste policy by ensuring that we minimise the generation of waste through better design, through smart green purchasing and through a keener awareness of locally produced goods which boost jobs and the economy and can reduce impacts associated with transportation.*
- *Secondly, when waste is generated we must extract the maximum value from it by ensuring that it is reused, recycled or recovered, including by the appropriate treatment of mixed municipal waste or residual waste collected in our black bins14.*
- *Thirdly, disposal of municipal waste to landfill must be a last resort – in fact, we must now work to effectively eliminate our use of landfill for this purpose within the next decade, in line with the 2011 EU roadmap to a resource efficient Europe"* ***(see Section 2.2.1.3****).*

The policy notes[15] that the waste projections set out in the Environmental Protection Agency's National Waste Report 2010, which are based on the ESRI's sustainable development model for Ireland, anticipate that municipal waste arisings will increase by 825,000 tonnes (to 3.7m tonnes) within the next 15 years[16]. The report also states:

[12] https://www.ccpc.ie/business/wp-content/uploads/sites/3/2018/10/The-Operation-of-the-Household-Waste-Collection-Market.pdf
[13] Refer to **Section 1** – Introduction of A Resource Opportunity. Waste Management Policy in Ireland' (2012).
[14] See below text on recovery for what the strategy considers to be "appropriate treatment of mixed municipal waste"
[15] Refer to **Section 3** – Planning for the Future of *A Resource Opportunity. Waste Management Policy in Ireland'* (2012).
[16] Note that this ESRI model was reviewed and updated annually in EPA national waste reports until 2012, but is no longer funded (so it is unclear whether it will continue to be used as a forecasting tool). The Regional Waste Plans adopted a waste forecasting approach that takes into account the ESRI modelling as well as other indicators, as outlined in **Chapter 15** of each of the plans.

> *"While there may be sufficient management capacity in the immediate future, the predicted growth of municipal waste within the coming decade will necessitate investment in waste management infrastructure".*

The policy[17] required the preparation of a regional waste management plan for each of the three waste regions, in recognition of the nature of the Irish waste market and the movement of waste across existing boundaries to avail of waste management infrastructure. In keeping with the proximity and self-sufficiency principles, a key objective of waste management plans is to ensure a sufficiency of waste management infrastructure within the State to manage municipal waste. The three waste regions are shown in **Figure 2.3**.

It is stated in the 2012 policy that it is important to harness the potential of waste to contribute in a significant manner to displacing the use of finite fossil fuel resources[18].

In considering measures for the encouragement of recovery, the policy advocates that a balance must be struck between the development of essential infrastructure and the importance of ensuring that material, which could be reused or recycled, is not drawn down the hierarchy and that waste generation is not encouraged in order to provide feedstock for recovery processes. In this context, it is stated that the technical guidance document published by the EPA on *Municipal Solid Waste: pre-treatment and residuals' management* (EPA 2009) is of particular importance, given its provision that residual municipal waste delivered to a waste to energy facility must first have been collected through a source separated system and mechanical treatment for the extraction of metals and other marketable recyclables must be applied to the bottom ashes that are generated following combustion.

Section 9.2 sets out key policy measures and actions in relation to recovery, as follows:

> *"Recovery*
>
> - *the reform of the waste collection permitting system will provide the opportunity for the application of such conditions as are necessary to give effect to the waste hierarchy, reflecting the legal status of the hierarchy and the range of recovery options emerging, to promote self-sufficiency and to drive a move away from disposal and towards recovery;*
> - *conditions imposed on each waste collection permit to prohibit waste which has been source segregated by the waste producer for the purposes of recycling, from being sent for recovery or for disposal, will be rigorously enforced;*
> - *the careful design and use of incentives and economic instruments will be a key focus for ensuring that waste is not drawn down the waste hierarchy;*
> - *government will ensure that the relevant Departments and agencies pursue a coordinated approach in support of the development of recovery infrastructure;*

[17] Refer to **Section 3** – Planning for the Future of *A Resource Opportunity. Waste Management Policy in Ireland'* (2012).
[18] Refer to **Section 9** – Recovery of A Resource Opportunity. Waste Management Policy in Ireland' (2012).

> *Ireland requires an adequate network of quality waste treatment facilities. A review of recovery infrastructure will be completed by 31 December 2012 and the EPA will advise on requirements in this regard. In particular, this will examine capacity for managing municipal waste in conformity with the principles of proximity and self-sufficiency."*

Furthermore, since the publication of the above guidance document, the European Union (Food Waste and Bio-waste) Regulations 2015[19] have been enacted. These Regulations stipulate that waste collectors shall ensure, as a minimum, that they provide or arrange for the provision of a separate collection service for food waste from households for population agglomerations in accordance with the time schedule set out in Regulation 4 of the 2015 Regulations.

As such, food waste must be source segregated and collected by authorised waste collectors and should not be mixed with other waste, other than specified bio waste and food waste, or other material with different residual municipal waste prior to delivery to authorised facilities including waste to energy facilities.

The EPA review of recovery infrastructure, in the *National Municipal Waste Recovery Capacity* report (EPA 2014), recommended that more data be acquired on facilities handling municipal waste due to confusion over waste acceptance categories, availability or capacity of permitted sites and harmonisation of processing capacities in regulatory classes. The report was followed up with a detailed assessment of facilities handling municipal waste by the Regional Waste Authorities in preparation of the Regional Waste Plans, in collaboration with the EPA. This led to the recommendations referred to below (**Section 2.2.3**) in the Regional Waste Plans.

The proposed Ringaskiddy Resource Recovery Centre will help to "extract the maximum value" from residual waste, displacing the use of finite fossil fuel resources. The capacity will contribute toward self-sufficiency of residual waste treatment in the State without impacting on material which could be reused or recycled. This will be achieved by aligning with the capacity requirement identified in regional waste plans as well as complying with the EPA pre-treatment guidance for the mechanical treatment of bottom ash.

2.2.2.2 Ireland's National Hazardous Waste Management Plan 2014-2020

The National Hazardous Waste Management Plan 2014-2020 ("NHWMP 2014-2020") (EPA 2014) is the third national hazardous waste plan. It updates and revises the previous plan covering the period 2008 – 2012 (Proposed Revised National Hazardous Waste Management Plan 2013).

Whilst the current Plan covers the period to 2020, the Waste Management Act 1996 as amended, provides that at least once in each period of 5 years after the date of making of the hazardous waste management plan, the Environmental Protection Agency shall review the plan and make such revisions thereto as it thinks fit[20].

[19] Statutory Instrument No. 430 of 2015: http://www.irishstatutebook.ie/eli/2015/si/430/made/en/print
[20] http://www.irishstatutebook.ie/eli/1996/act/10/section/26/enacted/en/html#sec26

In this regard, a Progress Report on the implementation of the National Hazardous Waste Management Plan has been recently published by the Environmental Protection Agency21 and is referred to below.

Along with this report, any additional information gathered will be used to inform the development of the next Plan, which is due to commence in 2020.

It is presently envisaged that a draft replacement Plan will be developed early in 2021 for public consultation in line with the applicable legislation.

The current NHWMP 2014-2020 sets out the priorities for 2014-2020, taking into account the progress made and the waste policy and legislative changes that have occurred since the previous plan. One area where insufficient progress was made on the previous plan was in achieving self-sufficiency (as described in previous plan), with levels of exported waste staying steady while the proportion of hazardous waste being treated in Ireland is slowly declining.

The NHWMP 2014 – 2020 plan sets out a number of objectives including:

(i) To prevent and reduce the generation of hazardous waste by industry and society generally.

(ii) To maximise the collection of hazardous waste with a view to reducing the environmental and health impacts of any unregulated waste.

(iii) To strive for increased self-sufficiency in the management of hazardous waste and to minimise hazardous waste export.

(iv) To minimise the environmental, health, social and economic impacts of hazardous waste generation and management.

The objective of moving towards increased self-sufficiency in the management of hazardous waste continues to be recommended, where it is strategically / environmentally advisable, and technically and economically feasible.

This recommendation is in line with several objectives (Refer to **Section 6.2** of the NHWMP). It recognises the proximity principle established in the WFD and maintained in the amended Directive on waste and it seeks to maximise the re-use and recovery potential of, for example, materials, precious metal and secondary fuels, through provision of a range of local treatment options where practical.

The EU principles of self-sufficiency and proximity require that;

- *1. Member States shall take appropriate measures, in cooperation with other Member States where this is necessary or advisable, to establish an integrated and adequate network of waste disposal installations and of installations for the recovery of mixed municipal waste collected from private households including where such collection also covers such waste from other producers, taking into account best available techniques.*
- *2. The network shall be designed to enable the Community as a whole to become self-sufficient in waste disposal as well as in the recovery of waste referred to in paragraph 1, and to enable Member States to move towards that aim individually, taking into account geographical circumstances or the need for specialised installations for certain types of waste.*

[21] http://www.epa.ie/pubs/reports/waste/haz/EPA_NationalHazardousWasteManagementPlan_web.pdf

- *3. The network shall enable waste to be disposed of or waste referred to in paragraph 1 to be recovered in one of the nearest appropriate installations, by means of the most appropriate methods and technologies, in order to ensure a high level of protection for the environment and public health.*

The NHWMP 2014-2020 finds that, if Ireland is to become self-sufficient, suitable hazardous waste treatment options would be required. This is further explained in **Section 6.2** of the NHWMP:

- *There are ancillary environmental benefits deriving from self-sufficiency. Firstly international transport of hazardous waste is minimised eliminating associated risks, and avoiding transport related greenhouse gas emissions. Secondly, it increases availability of recovery and disposal outlets for hazardous waste if problems arise in the export agreements for hazardous treatment in other Member States. However, it is noted that hazardous waste destined for recovery is subject to an open and competitive waste market in the EU.*

Greater self-sufficiency would therefore maximise the treatment and disposal of hazardous waste in Ireland, where strategically advisable, and economically and technically feasible, with policy, environmental and availability-of-outlet benefits.

Section 6.4 of the NHWMP 2014-2020 notes there is a quantity of hazardous waste that is currently exported for incineration for which incineration will remain the most likely management route. It must therefore be concluded that, in combination with the blending of waste solvent for use in cement kilns, and in the absence of alternative techniques that are capable of treating a wide range of diverse waste streams, incineration in Ireland will be needed for some waste streams in order for Ireland to move towards self-sufficiency in the treatment of hazardous waste.

Taking this into consideration, three overarching strategic needs have been identified for action if additional hazardous waste is to be treated in Ireland and exports of hazardous waste are to be reduced (Refer to **Section 6.2** of the NHWMP), including:

- Expansion of recovery and treatment capacity in Ireland for waste that does not need thermal treatment or landfill – generally referred to as physico-chemical treatment
- Addressing the deficit in thermal treatment capacity in Ireland (i.e., use as fuel, co-incineration or incineration) for Irish wastes currently being exported (e.g., solvents), and
- Securing of long-term disposal arrangements for hazardous waste streams not suitable for thermal treatment or recovery.

Section 6.2 of the NHWMP 2014-2020 states that consideration should be given to co-location of hazardous waste treatment at existing waste facilities or brownfield sites for the purposes of sustainability and land-use planning.

Two significant public policy constraints were taken into account in preparing the revised Plan (Refer to **Section 1.1** of the NHWMP).

First, current government policy indicates that large-scale public investment in hazardous waste infrastructure will not be made. The hazardous waste industry in Ireland is entirely owned and operated by the private sector.

No public authorities are involved in the commercial collection of hazardous waste, the provision of storage facilities or the treatment of hazardous waste.

The only exception is the provision of civic amenity sites by local authorities for the deposit of small quantities of household hazardous waste.

Second, in this context, options for private sector investment are presented solely as options and the NHWMP 2014-2020 does not seek to carry out a detailed evaluation of the actual economic feasibility of any such potential investments. Any proposals for hazardous waste management infrastructure would, however, be expected to have regard to the NHWMP 2014-2020 and describe how its overarching objectives would be met.

As referred to above, the Environmental Protection Agency has recently published a Progress Report on the implementation of the National Hazardous Waste Management Plan. This Progress Report once again underlines the key objective of increasing Ireland's level of self-sufficiency regarding hazardous waste management.

The report also presents the progress of the recommended actions outlined in the NHWMP 2014-2020 and underlines that while many recommended actions have been advanced, a stronger focus is needed in the areas of hazardous waste prevention and the development of waste management infrastructure if Ireland is to become more self-sufficient in the treatment and management of hazardous waste.

In this regard, the Report finds that whilst Ireland has moved towards greater self-sufficiency regarding hazardous waste management since the publication of the last NHWMP 2014-2020, the often more favourable cost option of treatment and disposal abroad has meant that export continues to be a significant treatment route for Ireland's hazardous wastes and further warns that the overreliance on any one export market for the treatment of hazardous waste is not advisable.

Furthermore, the Report finds that Ireland's self-sufficiency for the environmentally sound management of hazardous waste is contingent upon commercial decisions taken by private sector service providers regarding the provision of infrastructure for hazardous waste and specifically states:

> '*While the introduction of economic and other instruments to provide incentives to potential investors remains under consideration, Ireland's self-sufficiency for the environmentally sound management of hazardous waste is contingent upon commercial decisions taken by private sector service providers regarding the provision of infrastructure for hazardous waste'*. [22]

[22] Progress Report National Hazardous Waste Management Plan, Infrastructure and Self-Sufficiency Section at page 20

This Report states that in 2016, 371,000[23] tonnes of hazardous waste was generated with 409,000[24] tonnes of hazardous waste managed in Ireland. Almost 186,000 tonnes[25] was exported which is an increase of 11 % on 2015 and 6% on 2014[26], thus demonstrating an increase on the previous figures from 2012 as contained within the EPA National Waste Report 2012 (EPA 2014). This data can be seen in Figures 2.2a and 2.2b which are directly extracted from the report[27].

Thus, given such increases in the generation of hazardous waste and in the export of the same, the need for indigenous treatment capacity is once again highlighted by virtue of such increased figures. In this regard, the Progress Report underlines a priority action for the remaining lifetime of the NHWMP 2014-2020 (up to 2020) which includes the promotion of Ireland's self-sufficiency goals regarding the treatment and management of hazardous waste which the proposed development will contribute to.

In this context, the proposed Ringaskiddy Resource Recovery Centre will help to address the deficit in thermal treatment capacity in Ireland for suitable hazardous waste, making a significant contribution toward hazardous waste self-sufficiency (reducing exports by up to 24,000 tonnes per annum) and minimising hazardous waste export. In line with plan led and evidence-based development which underpin the National Planning Framework objectives (detailed below) and sustainable land-use planning goals, the proposed facility will co-locate hazardous waste treatment with residual municipal waste treatment. Furthermore, it will represent a significant private sector investment in hazardous waste infrastructure, which is clearly identified as necessary in order to deliver hazardous waste infrastructure within the State.

Accordingly, the proposed development may be regarded as being in alignment with both the National Hazardous Waste Management Plan 2014-2020 and the recent Progress Report on its implementation as it will contribute to the achievement of self-sufficiency in the treatment in hazardous waste within the State as prioritised and underlined in both policy documents.

[23] Hazardous waste generated figure discounts (a) hazardous waste partially treated waste for export, (b) onsite treatment with recovery (R2) code and (c) waste imported for treatment. Generated (rather than managed) figure is reported for Ireland under Basel Convention requirements.
[24] Figure excludes contaminated soil (at time of writing, the EPA Report referred to this figure as being included, figure, however, the EPA has since confirmed that this figure should be excluded).
[25] Figure excludes contaminated soil. Exclusion of contaminated soil brings exports to 50% of total hazardous waste managed in Ireland.
[26] As per Figure 2 Trend Data for hazardous waste treated on-site, off-site within Ireland and exported outside of Ireland and Figure 3 Comparison of hazardous waste managed (off site & onsite), exported and contaminated soil, 2012 and 2016 of the Progress Report at pages 7 and 8.

[27] Note: hazardous waste partially treated waste for export: Regulation (EC) No. 2150/2002 on Waste Statistics require a distinction to be made between waste generation and waste treatment figures. The waste generated figure should not include the waste treated at economic operators, which is known as secondary waste, this requirement is detailed in full in the Eurostat Manual on Waste Statistics: https://ec.europa.eu/eurostat/documents/3859598/5926045/KS-RA-13-015-EN.PDF/055ad62c-347b-4315-9faa-0a1ebcb1313e

2.2.3 Regional Waste Policy

2.2.3.1 Southern Region Waste Management Plan 2015-2021

The Southern Region Waste Management Plan 2015-2021 [SRWMP] (2015) is one of three regional waste plans made in line with statutory obligations and incorporating certain requirements of the WFD. The Southern Region covers the administrative areas of the following local authorities‑Carlow County Council, Clare County Council, Cork City Council, Cork County Council, Kerry County Council, Kilkenny County Council, Limerick City & County Council, Tipperary County Council, Waterford City and County Council and Wexford County Council. The region has a population of 1,541,439.

The approach of the regional waste plans is to put into place coherent policy objectives and actions which align with European and national policy and support Ireland's move to an economy defined by higher resource efficiency and productivity.

The strategic vision of the SRWMP is to view waste streams as valuable material resources, leading to a healthier environment and sustainable commercial opportunities. The SRWMP seeks to encourage a transition from a waste management economy to a green circular economy by increasing the value recovery and recirculation of resources.

In line with this vision, the SRWMP sets out targets to 2030. These include:

- Absolute decoupling of household waste from economic growth and disposable income. Preparing for reuse and recycling rate of 60-70% of municipal waste by the end of 2030 (since the adoption of the Circular Economy Package, fifty-five percent of municipal waste must be prepared for re-use and recycling by 2025, 60 percent by 2030, and 65 percent by 2035).
- Reduce and where possible eliminate the use of landfilling of all major waste streams including municipal, industrial and construction and demolition wastes in favour of the recovery of residual wastes.

The preferred treatment of non-recyclable residual waste is recovery.

The waste management hierarchy is a core principle of the waste strategy for the region. Policy A1 of the SRWMP sets out the requirement to take measures to ensure the best overall environmental outcome by applying the waste hierarchy to the management of waste streams.

As noted in the SRWMP, the southern region has made significant progress during the lifetime of the previous plans, but challenges remain. These include, in relation to infrastructure, a gap in the end-of-chain residual waste treatment capacity, which has resulted in an increase in exports of waste. The amount of residual municipal waste exported has increased each year since 2011, partly in response to landfill closures and a high landfill levy (€75/t since 2013) and partly in response to spare capacity becoming available for residual MSW in European countries driving down gate fees in those countries.

According to the SRWMP, exports provide short term gains in meeting landfill diversion targets and providing competitive gate fees. However, a continued reliance on exports could:

- Pose a potential significant risk in terms of securing long-term and cost-effective outlets, exposing market operators to potential market shocks and increasing treatment prices.
- Impact on the national policy ambition to become self-sufficient in treating residual waste, reducing the incentive to develop local waste treatment infrastructure.
- Result in a direct loss in revenue to the Irish economy, through a loss of potential gate fee revenue and energy resources.
- Result in the loss of 189,000MWh energy potential in the waste, which could have been harnessed in Ireland to offset circa 38,745 tonnes GHG emissions from energy production in the State from conventional natural gas combustion.
- Result in higher GHG transport emissions per tonne of waste (potentially 3.3 times higher than the self-sufficiency option, according to the Environmental Report on the Southern Region Waste Management Plan).

Policy A4 of the SRWMP aims to address this by setting the objective of improving regional and national self-sufficiency of waste management infrastructure for the reprocessing and recovery of particular waste streams, such as mixed municipal waste, in accordance with the proximity principle.

The SRWMP acknowledges that the long-term alternative to the export of residual waste is to develop indigenous thermal recovery infrastructure to replace landfill, and for the State to become self-sufficient where possible. **Chapter 10** of the SRWMP describes the current management of municipal solid waste and biodegradable municipal waste in the region at the time of writing. This finds that approximately 59% of municipal waste managed within the region was recovered in 2012. There has been a sharp reduction in waste accepted at landfills from 2010 to 2013, from just over 300,000 tonnes in 2010 to less than 200,000 tonnes in 2013 (which is expected to further reduce to less than 100,000 tonnes in 2014).

According to the EPA's *National Waste Reports,* the significant increase in recovery of municipal waste in recent years was attributable to:

- Substantial increase in the landfill levy, which is currently €75/tonne, moving waste to recovery operations
- The decreasing number of active landfills accepting waste within the country
- The opening of Ireland's first municipal waste incinerator with energy recovery,
- The increased production of refuse derived fuels for use both within Ireland and abroad, and
- A significant increase in the export of unprocessed municipal waste for incineration abroad.

Thus, the increase in recovery has largely been achieved through an increase in thermal recovery both within Ireland and abroad.

Section 16 of the SRWMP assesses the current availability of waste treatment capacity and future capacity requirements. The SRWMP states that the need for future treatment capacity requires careful consideration and must take into account predicted waste growth, growing recycling rates, future targets, the continued move away from landfill and the conversion of pending capacity (currently 792,875t[28]) into active treatment.

The development of future thermal recovery facilities will be viewed as national facilities addressing the needs of the State and will not be defined by regional markets alone.

With regards to future treatment capacity requirements, the SRWMP recommends the following:

- **Objective E15a** of the 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 and competitive treatment in the market and the State's self-sufficiency requirements for the recovery of municipal waste are met. This figure is proposed in addition to the active and pending capacity totals.
- **Objective E15b** of the plan supports the need for thermal recovery capacity to be developed specifically for the on-site treatment of industrial process wastes and where justifiable, the treatment of such wastes at merchant thermal recovery facilities
- **Objective E16** supports the development of up to 50,000 tonnes of additional thermal recovery capacity for the treatment of hazardous wastes nationally to ensure that there is adequate active and competitive treatment in the market to facilitate self-sufficiency needs where it is technically, economically and environmentally feasible.

All proposals for waste management development must meet the Environmental Protection Criteria set out in **Section 16.5** of the Plan. These are described in more detail in **Chapter 3 *Alternatives*** of this EIAR***.***

Importantly, the SRWMP identifies the importance of energy recovery and notes that that there needs to be greater recognition in energy policy of the contribution waste facilities are making and will continue to make to Ireland's renewable energy sector and its achievement of mandatory targets. European and national energy policy is discussed in further detail below.

Finally, the SRWMP also confirms that the development of waste infrastructure will be driven by the private sector. The local authorities in the Southern Region do not foresee any capital investments and furthermore, the Plans states:

> *"Private sector investment is anticipated in the development of other recovery facilities to treat residual municipal wastes and residual hazardous wastes"*

[28] Includes the Dublin WtE facility, the permitted pyrolysis facility in Tullamore and the planned increase in cement kiln capacity – see Table 16-7 of the Plan.

In summary, the SRWMP is underpinned by the principles of self-sufficiency and proximity. The region will promote sustainable waste management in keeping with the waste hierarchy and the move towards a circular economy and greater self-sufficiency. As noted above, there are no active thermal recovery activities for the treatment of municipal waste in the Southern Region.

It is noted that the spatial distribution of facilities nationally is potentially unbalanced, with all active and pending facilities located in the Eastern-Midlands region. There is a need to consider the spatial distribution of thermal recovery capacity in the State when considering the authorisation of future facilities.

The proposed Ringaskiddy Resource Recovery Centre is a private sector development, which will provide national thermal recovery capacity for the treatment of non-hazardous wastes in accordance with policy Objective E15a and E15b of the SRWMP. With a focus on material and energy resource recovery, the proposed facility will also contribute to the plan's strategic aim of moving toward a green circular economy and the enhanced targets as set out in the recently adopted Circular Economy Package. Finally, the Ringaskiddy Resource Recovery Centre will provide national thermal recovery capacity for suitable hazardous wastes in accordance with policy Objective E16 of the Plan.

2.3 Energy and Climate Change Policies

The proposed development will generate 21MW of electricity of which 18.5MW will be exported to the national grid. A portion of this electricity[29] will be generated from the biodegradable fraction of industrial and municipal waste and is therefore considered to be energy from renewable sources. Waste is also an indigenous energy resource.

For these reasons, the proposed facility aligns with and contributes towards the attainment of European and national energy policy objectives as set out below.

2.3.1 European Energy Policy

In terms of targets for 2020, the 2020 Climate and Energy Package included a suite of Directives including the Renewable Energy Directive ((2009/28/EC) and the Energy Efficiency Directive (Directive 2012/27/EU). The Renewable Energy Directive (2009/28/EC) required the EU to fulfil at least 20% of its total energy needs with renewables by 2020 through mandatory Member State renewable targets.

Since then, the EU has set out its ambition to develop an Energy Union. Its aim of is to make energy more secure, affordable and sustainable. It is made up of five closely related and mutually reinforcing dimensions:

- security, solidarity and trust: diversifying Europe's sources of energy and ensuring energy security through solidarity and cooperation between EU countries;

[29] Based on experience at the Meath waste to energy facility, the fraction of electricity generated from renewable sources is estimated to be approximately 50%.

- a fully integrated internal energy market: enabling the free flow of energy through the EU through adequate infrastructure and without technical or regulatory barriers;
- energy efficiency: improved energy efficiency will reduce dependence on energy imports, lower emissions, and drive jobs and growth;
- decarbonising the economy: the EU is committed to a quick ratification of the Paris Agreement and to retaining its leadership in the area of renewable energy;
- research, innovation and competitiveness: supporting breakthroughs in low-carbon and clean energy technologies by prioritising research and innovation to drive the energy transition and improve competitiveness.[30]:

In 2016, the European Commission introduced a package of measures to provide the stable legislative framework needed to facilitate the clean energy transition – and thereby taking a significant step towards the creation of the Energy Union. The Clean Energy Package consists of 8 different legislative proposals, the majority of which have now been agreed by institutions of the EU.

This put in place a legislative footing to meet the objectives of the 2030 framework for climate and energy policies (European Commission 2014, *A policy framework for climate and energy in the period from 2020 to 2030*) which aims to make the European Union's economy and energy system more competitive, secure and sustainable and sets targets for at least 27% for renewable energy and energy savings by 2030 and at least 40% reduction in greenhouse gas emissions compared to 1990.

The recast Renewable Energy Directive sets out a new regulatory framework which includes a binding renewable energy target for the EU for 2030 of 32% with an upwards revision clause by 2023.[31]

The Energy Efficiency Directive is described in further detail below.

2.3.1.1 Clean Energy Package

The package specifically notes in relation to thermal recovery that:

> *"The Commission will further establish synergies between energy efficiency policies, resource efficiency policies and the circular economy. This will include exploiting the potential of "waste to energy".*

In February 2015, the European Commission published an Energy Union framework package (European Commission 2015c) which aimed to build on the 2030 and 2050 frameworks and integrate a series of policy areas into one cohesive strategy with a cohesive set of measures.

[30] Refer to overview of the EU's Energy Union at https://ec.europa.eu/energy/en/topics/energy-strategy-and-energy-union/building-energy-union
[31] https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32018L2001&from=EN

In this regard, in 2017 the Commission published a waste to energy Communication to enhance synergies between the circular economy, resource efficiency and waste-to-energy. The European Commission's Waste-to-Energy communication, *The role of waste-to-energy in the circular economy,*[32] seeks to provide guidance to Member States on how to achieve properly balanced waste-to-energy capacity. It also affirms that the waste hierarchy remains as the cornerstone of EU policy and legislation and is a key to a transition to a circular economy.

In this regard, the Communication states:

> '*Waste-to-energy processes can play a role in the transition to a circular economy provided that the EU waste hierarchy is used as a guiding principle which ranks waste management options according to their sustainability and gives top priority to preventing and recycling of waste'*. [33]

In the context of energy recovery, the Communication goes on to state that when waste cannot be prevented, prepared for reuse or recycled, recovering the energy embedded in it and injecting it back in the economy is the next best environmental and economic option. The treatment of unavoidable wastes and residues by the energy to waste process may be regarded as paying due regard to the waste hierarchy as it falls within the recovery tier of the waste hierarchy and is to be favoured over landfill whereby such wastes would contribute to greenhouse gas emissions, leachate and would necessarily involve significant after care and which may be regarded as the least favoured environmental option and the least preferred tier of the waste hierarchy.

Energy from waste is also presented as a means of producing low-cost heat and often initiates development of a city's district heating network, utilising the energy content embedded in the waste according to the Communication.

Whilst the Communication does state that investments in treatment facilities for industrial waste for residual waste, such as extra incineration capacity should only be granted in limited and well justified cases, where there is no risk of overcapacity and the objectives of the waste hierarchy are fully respected, in Ireland and many other Member States a risk of such overcapacity does not exist and can be justified from a long term perspective given the lack of treatment capacity as set out in national policy documents.

Furthermore, given that the proposed development will be classed as a recovery operation pursuant to the waste hierarchy and will contribute to the continued diversion of waste from landfill and associated negative and harmful environmental impacts and thus accords with the proper application of the waste hierarchy, it may be said to be in broad alignment with this Communication.

In addition, the Energy Efficiency Directive (Directive 2012/27/EU), promotes the use of cogeneration, district heating and cooling, and waste industrial heat recovery. Article 14 of this Directive provides that Member States shall ensure that a cost-benefit analysis in accordance with Part 2 of Annex IX is carried out when, after 5 June 2014, where:

[32] http://ec.europa.eu/environment/waste/waste-to-energy.pdf
[33] As above.

> *'a new district heating and cooling network is planned or in an existing district heating or cooling network a new energy production installation with a total thermal input exceeding 20 MW is planned or an existing such installation is to be substantially refurbished, in order to assess the cost and benefits of utilising the waste heat from nearby industrial installations'*

The Energy Efficiency Directive is given effect in national law though the European Union (Energy Efficiency) Regulations 2014.[34] Part 5 of these Regulations stipulate that a cost-benefit analysis shall be carried out by an economic operator where required to support an application to the Environmental Protection Agency:

> *'to construct a new district heating and cooling network or to install a new energy production unit with a total rated thermal input in excess of 20MW in an existing district heating or cooling network or to substantially refurbish an existing such installation and waste heat is not being used from nearby industrial installations and …A cost-benefit analysis shall fulfil the requirements of Part 2 of Annex IX and guiding principles[35] made available'.*

Therefore, in the context of the proposed development, such a cost-benefit analysis will be carried out in order to fulfil the requirements of the above Regulations and to ascertain the potential to provide heat and steam to nearby industrial users through the development of a district heating network at the Project site.

The requirement to undertake such a study has also been laid down in the Board Order granting planning permission for the development of a new waste to energy facility on the development site. Specifically, a condition has been attached to this granting of permission which provides that in the interest of sustainable energy management and to inform future land-use and development planning in the area, which requires:

> '*The developer shall commission an independent Feasibility Study in relation to the possibilities for the recovery of excess heat energy from the proposed facility. The terms of reference of the study shall be agreed with the planning authority, and the report shall be completed and submitted to the planning authority within 18 months of the date of this order and made publicly available'.*

The potential for the proposed development to provide steam or hot water to other heat users is also referred to in **Section 3.7.1** of **Chapter 3** ***Alternatives*** and **Section 17.5.1** of **Chapter 17** ***Cumulative Effects, Other Effects and Interactions***, of this EIAR.The proposed Ringaskiddy Resource Recovery Centre will generate renewable electricity from the biomass contained in residual waste. This will contribute towards the delivery of renewable energy targets. Furthermore, given the location of the project site and its proximity to significant industrial facilities, which have large and constant process heat requirements, the proposed development has the potential to contribute towards the achievement of Energy Efficiency Directive targets through the prospective development of a district heating network.

[34](S.I. No 426 of 2014):[34] http://www.irishstatutebook.ie/eli/2014/si/426/made/en/pdf
[35] Note: These Guidelines have yet to be published.

The Climate Action Plan 2019 recognises how the characteristics of district heating have a role to play in climate mitigation i.e. in delivering low-cost, low-carbon heat to industrial processes. Finally, it will contribute towards objectives of energy and resource efficiency and the circular economy as highlighted in the Energy Union package.

2.3.1.2 Revised Renewable Energy Directive

The Renewable Energy Directive has been substantially amended and since further amendments are to be made, it was determined that the Directive should be recast in the interests of clarity with the amendments taking effect from 2020[36]. The revised Renewable Energy Directive on the promotion of the use of energy from renewable sources (recast) also seeks to promote renewable forms of energy as one of the goals of the Union energy policy. The increased use of energy from renewable sources constitutes an important part of the package of measures needed to reduce greenhouse gas emissions in the European Union.

The revised Directive provides the following definitions in Article 2:

> *'energy from renewable sources' means energy from renewable non-fossil sources, namely wind, solar (solar thermal and solar photovoltaic) and, geothermal energy, ambient energy, tide, wave and other ocean energy, hydropower, biomass, landfill gas, sewage treatment plant gas and biogases;*
>
> *biomass' means the biodegradable fraction of products, waste and residues from biological origin from agriculture, including vegetal and animal substances, forestry and related industries including fisheries and aquaculture, as well as the biodegradable fraction of waste, including industrial and municipal waste of biological origin.*

Therefore, the energy generated from the biodegradable fraction of industrial and municipal waste is considered to be energy from renewable sources.

To encourage the development of renewable energy, the revised Directive requires the EU to fulfil at least 32% of its total energy needs with renewables by 2030. Member States should also take additional measures in the event that the share of renewables at the Union level does not meet the Union trajectory towards the at least 32% renewable energy target. The target set for Ireland's share of energy from renewable sources in gross final consumption is 27% by 2030 as stated in Annex 1 of the Directive. These ambitious targets continue to support the generation of electricity from waste through waste-to-energy technology.

[36] Following political agreement on the draft revised Directive in June 2018, the text of the Directive will have to be formally approved by the European Parliament and the Council. Once endorsed by both co-legislators in the coming months, the updated Directive will be published in the Official Journal of the Union and will enter into force 20 days after publication. Member States including Ireland will have to transpose the new elements of the Directive into national law 18 months after its entry into force.

Finally, to ensure progress, the revised Directive also requires that Member States prepare and submit Renewable Energy Action Plans and Progress Reports that set out Member States' national targets for the share of energy from renewable sources consumed in transport, electricity and heating and cooling in 2030.

The proposed Ringaskiddy Resource Recovery Centre will generate renewable electricity from the biomass contained in residual waste, thereby contributing toward achieving the EU's renewable energy targets.

2.3.2 National Energy Policy

2.3.2.1 White Paper Ireland's Transition to a Low Carbon Energy Future 2015 - 2030

As discussed in **Section 2.3.1.1**, Member States must set out how they plan to meet their climate and energy objectives in the National Energy and Climate Plan (NECP).

Following extensive consultation on the Green Paper on Energy Policy in Ireland (Department of Communications, Energy and Natural Resources (2014), the White Paper, Ireland's Transition to a Low Carbon Energy Future 2015-2030[37] has been published, with the primary objective being that of guiding a transition to a low carbon energy system which provides secure supplies of competitive and affordable energy.

The White Paper constitutes a complete energy policy update and sets out a framework to guide policy and the actions that Government intends to take in the energy sector from now up to 2030. The paper takes into account European and International climate change objectives and agreements, as well as Irish social, economic and employment priorities.

As Ireland progresses towards a low carbon energy system, this policy update will help to ensure secure supplies of competitive and affordable energy for Ireland's citizens and businesses, including that generated from renewable energy which will be provided by the proposed development.

The long-term development of Ireland's abundant, diverse and indigenous renewable energy resources is a defining element of this energy policy. Not alone is renewable energy of key environmental importance, it also provides a sustainable, economic opportunity for Ireland, both in terms of providing a secure, indigenous, source of energy. It recognises the versatility of waste and other biomass fuels that can be used for heating, transport and power generation, and states how:

- bioenergy can contribute to broader policy objectives such as waste recovery and rural development.

[37] https://www.dccae.gov.ie/en-ie/energy/publications/Documents/2/Energy%20White%20Paper%20-%20Dec%202015.pdf

- it aligns with waste management policy in Ireland i.e. the need to develop efficient ways to extract as much value as possible from waste in accordance with the requirements of the waste hierarchy and the opportunity for waste to be used as an indigenous energy resource.
- the three regional waste management plans for the period 2015-2021 support the development of additional thermal recovery and biological treatment capacity within the State.
- measures in the White Paper also gives effect to national waste policy in terms of utilising waste as a resource.
- the Renewable Energy Feed in Tariff (REFIT) schemes, which support the generation of electricity and CHP technologies including waste-to-energy, anaerobic digestion and landfill gas, continue to support the use of waste as a renewable energy feedstock. REFIT provides financial support for the renewable portion of energy from waste-to-energy plants, to assist the development of waste-to-energy projects.

Since the publication of the White Paper in 2015, the Irish Government issued details of a new renewable electricity support scheme, entitled "*Renewable Electricity Support Scheme (RESS) High Level Design".* The purpose of the new scheme is help deliver Ireland's contribution to the EU-wide binding renewable energy target of 32% RES out to 2030. The Irish Government's Climate Action Plan 2019 includes a new commitment that 70% of Ireland's electricity needs will come from renewable energy sources by 2030.

Where possible, the scheme will also deliver additional renewable electricity which can be counted towards Ireland's RES-E 2030 target.[38] Whilst still in the design phase and subject to European Commission State Aid approval, the scheme will provide opportunities bioenergy alongside other technologies.

The draft replacement Bioenergy Action Plan (2014)[39] further emphasises that bioenergy – including from waste - will be an essential element in contributing to Ireland's future energy needs and has the potential to provide significant economic and environmental benefits. It recognises that developing the bioenergy sector can also help in achieving wider policy objectives in areas such as waste recovery.

The proposed Ringaskiddy Resource Recovery Centre will contribute toward the energy policy pillars of sustainability, security, competitiveness and contribution to the economy by generating renewable energy from indigenous biomass resources.

2.3.2.2 Climate Action and Low Carbon Development Act 2015

The Climate Action and Low Carbon Development Act 2015[40] entered into law in 2015 and provides a statutory basis to transition to a low carbon, climate resilient and environmentally sustainable economy. The Climate Act is Ireland's first overarching piece of climate change legislation and provides that annual emissions limits should be agreed at the EU level.

[38] Government of Ireland, Renewable Electricity Support Scheme (RESS) High Level Design
[39] https://www.dccae.gov.ie/documents/Draft%20Bioenergy%20Plan.compressed.pdf
[40] http://www.irishstatutebook.ie/eli/2015/act/46/enacted/en/index.html

In summary, the Act provides the tools and structures to transition towards a low-carbon economy and it anticipates that it will be achieved through a combination of:

- a national mitigation plan (to lower Ireland's level of greenhouse emissions);
- a national adaptation framework (to provide for responses to changes caused by climate change); and
- tailored sectoral plans (to specify the adaptation measures to be taken by each Government department).

The Irish Government's Climate Action Plan has signalled the introduction of a new Climate Action (Amendment) Bill which will introduce a new governance structure including a Long-Term Climate Strategy.

2.3.2.3 National Mitigation Plan 2017

The National Mitigation Plan 2017[41] contains measures to address the challenge to 2020 and begins the process of developing of medium to long term options. According to the Climate Act 2015, it must specify the policy measures that Government consider are required to manage greenhouse gas emissions and the removal of emissions to meet Ireland's international obligations.

It identifies opportunities for decarbonising the heating sector by using waste as a fuel.

Related publications include:

- The UN Intergovernmental Panel on Climate Change report in 2014 (*Climate Change 2014: Impacts, Adaptation, and Vulnerability)* which clarified that electricity generated from gas and coal must be replaced with renewable electricity generation within 35 years.
- The 2030 framework for climate and energy policies (referred to above in **Section 2.3.1**), agreed in principle at the European Council meeting in October 2014, which sought a reduction in greenhouse gas emissions of 40%; an increase in EU energy from renewable sources to 27%; and an indicative target of 27% for energy efficiency.

These policies and reports all recognise the very significant contribution that renewables will make in the period to 2030, which is the next critical milestone on the EU's transition to a low-carbon European economy by 2050. The proposed Ringaskiddy Resource Recovery Centre would help to reduce greenhouse gas emissions from waste management by diverting biodegradable waste away from landfill and recovering renewable energy from it. In addition, the provision of treatment capacity in the Munster region will reduce the export of residual waste for recovery thus reducing carbon emissions from transport of waste.

The proposed Long-Term Climate Strategy referenced in the Irish Government's Climate Action Plan will be a statutory successor to the National Mitigation Plan.

[41] DCCAE, National Mitigation Plan, July 2017

2.4 Planning Policy

2.4.1 National Policy

The Department of Housing Planning and Local Government, on behalf of the Government, has prepared and published the National Planning Framework ('NPF') under Project Ireland 2040, the overarching policy and planning framework for the social, economic and cultural development to apply in Ireland to 2040.

The newly launched Project Ireland 2040 contains two parts:

- The National Planning Framework (NPF). The NPF along with the Regional Spatial and Economic Strategies (RSES) will determine how to achieve balanced regional development in Ireland, and
- A National Development Plan (NDP) which complements the Planning Framework detailing how €116 billion worth of investment will be spent over the next 10 years.

Finalisation of the NPF alongside the ten-year National Development Plan puts together one plan to guide strategic development and infrastructure investment and thus represents a coordinated policy between spatial development and capital investment at national level.

2.4.1.1 The National Planning Framework (NPF)

The NPF is a national document that will guide at a high-level strategic planning and development for the country over the next 20 years to ensure that as the population grows, this growth is sustainable in economic, social and environmental terms.

The NPF in conjunction with the NDP will also set the context for each of Ireland's three regional assemblies to develop their Regional Spatial and Economic Strategies (RSES's) taking account of and coordinating local authority County and City Development Plans in a manner that will ensure national, regional and local plans align. The formulation process of the Regional Strategies will enable the implementation of the NPF at regional and local levels.

Currently each of the Regional Assemblies, including the Southern Regional Assembly, is in the process of preparing a Regional Spatial and Economic Strategy which will provide regional level strategic planning and economic policy in support of the implementation of the National Planning Framework. It is anticipated that the Regional Spatial and Economic Strategies will be completed in early 2019.

The NPF was adopted on 29 May 2018 and supersedes the previous National Spatial Strategy[42].

[42] As per Section 20 of the Planning and Development (Amendment) Act 2018 'the National Spatial Strategy, as amended having regard to the provisions of this Chapter including any document published by the Government which amends or replaces that Strategy shall be known as the National Planning Framework'. Schedule 3

It has also been given statutory effect in the Planning and Development (Amendment) Act 2018[43] which amends the principal Planning and Development Act 2000. This Act was signed into law on the 19 July 2018 and the provision which sets out the statutory underpinning for the recently adopted NPF has since been commenced by statutory instrument (**Section 18** and Schedule 3 pursuant to S.I. No. 436 of 2018)[44] and thus replaces the previous non-statutory National Spatial Strategy.

The objectives of the NPF are set forth in **Section 18** of the 2018 Amendment Act.

These objectives are:

a) To establish a broad national plan for the Government in relation to the strategic planning and sustainable development of urban and rural areas;

b) To secure balanced regional development by maximising the potential of the regions, and support proper planning and sustainable development, and

c) To secure the co-ordination of regional spatial and economic strategies and city and county development plans[45].

In terms of planning for waste treatment requirements to 2040, the NPF's National Strategic Outcome 9 – Sustainable Management of Water and other Environmental Resources[46], expressly provides that this will require:

- Waste to energy facilities which treat the residual waste that cannot be recycled in a sustainable way delivering benefits such as electricity and heat production.

This National Strategic Outcome goes on to provide that the effective management of waste will include the following elements:

- Regional Spatial and Economic Strategies and the core strategies of Metropolitan Area Strategic Plans (MASPs) and city and county development plans will support national and regional waste policy and efficient use of resources;
- District heating networks will be developed, where technically feasible and cost effective, to assist in meeting renewable heat targets and reduce Ireland's GHG emissions;
- Development of necessary and appropriate hazardous waste management facilities to avoid the need for treatment elsewhere; and

[43] Whilst the Act was signed into law on the 19 July 2018, certain amendments to the Principal Act including the establishment and operation of the Office of the Planning Regulator shall be subject to a Ministerial Order prior to commencement: http://www.irishstatutebook.ie/eli/2018/act/16/enacted/en/html
[44] Planning and Development (Amendment) Act 2018 (Commencement) Order 2018: http://www.irishstatutebook.ie/eli/2018/si/436/made/en/pdf
[45] As per section 14 of the Amendment Act amending Section 12 of the Principal Act (Making of development plan) 'statutory obligations' includes, in relation to a local authority, the obligation to ensure that the development plan is consistent with (a) the national and regional development objectives specified in (i) the National Planning Framework; and (ii) the regional spatial and economic strategy and (b) specific planning policy requirements specified in guidelines under subsection (1) of section 28.
[46] http://npf.ie/wp-content/uploads/Project-Ireland-2040-NPF.pdf at pages 150-151.

- Adequate capacity and systems to manage waste, including municipal and construction and demolition waste in an environmentally safe and sustainable manner and remediation of waste sites to mitigate appropriately the risk to environmental and human health.

Thus, the proposed development is in alignment with the NPF as it will be designed to treat the residual waste that cannot be recycled in a safe and environmentally sound manner and will also create renewable electricity. It will accordingly contribute to the sustainable management of waste as provided for in the NPF's National Strategic Outcome 9 which focuses on the sustainable use of water and environmental resources.

Furthermore, the proposed development has the potential to assist in meeting Ireland's renewable heat targets and to reducing Ireland's GHG emissions if it is determined that it is technically feasible and cost effective to develop a district heating network at the proposed development site.

2.4.1.2 The National Development Plan 2018 - 2027

The National Development Plan (NDP*)* as a constituent part of Project Ireland 2040 was adopted by the Government on 29 May 2018[47]. The Plan sets out the investment priorities that will underpin the successful implementation of the new National Planning Framework that will guide national, regional and local planning and investment decisions in Ireland over the next two decades, to cater for an expected population increase of over 1 million people.

It may therefore be regarded as a companion document to the National Planning Framework and comprises a ten-year strategy for public capital investment of almost €116 Billion.

In the context of waste management and resource efficiency, National Strategic Outcome 9 as laid out in both the NPF and NDP underlines that Investment in waste management infrastructure is critical to Ireland's environmental and economic well-being for a growing population and to achieving circular economy and climate objectives.

The NDP goes on to provide that '*capacity will continue to be built in waste facilities, including anaerobic digestion, hazardous waste treatment, plastics processing, recycling, waste to energy, and landfill and landfill remediation, to meet future waste objectives*'.

The Plan also notes that the infrastructure to deliver waste management policy has been, to date, largely delivered through private investment with some public-sector investment. Accordingly, the proposed development is in alignment with the newly adopted NDP, as the Plan underlines the need for waste treatment facilities to meet future waste objectives. Given that the proposed development is premised on the thermal treatment of waste with energy recovery, which is the preferred option for dealing with residual waste after waste prevention, recycling and recovery, it may be regarded as compatible with this objective of the NDP.

[47] https://www.per.gov.ie/en/national-development-plan-2018-2027/

Finally, continued investment in waste management infrastructure including private sector investment is critical to Ireland's environmental and economic wellbeing as laid down in the NDP.

2.4.1.3 Planning Policy Statement

The Government published its first Planning Policy Statement in January 2015, which is intended to act as a general guiding document to the operation of the planning system and to outline the key values, principles and priorities that should underpin it. Through the non-statutory Planning Policy Statement 2015, the Government wishes:

> *"to reaffirm its strong belief in the value of a forward-looking, visionary and dynamic planning process, because it will ensure that the right development takes place in the right locations and at the right time and in providing the social, economic and physical infrastructure necessary to meet the needs of our people in a way that protects the many qualities of our natural and built environment".*

The policy statement sets out ten key principles, the following of which are relevant to the proposed development:

1. *Planning must be plan-led and evidence based so that at the appropriate level, from the National Spatial Strategy, Regional Spatial and Economic Strategies, City and County Development Plans and Local Area Plans, the Government, local authorities and local communities, work together to set out a cohesive vision for the future of our country.*
2. *Planning must proactively drive and support sustainable development, integrating consideration of its economic, social and environmental aspects at the earliest stage to deliver the homes, business and employment space, infrastructure and thriving urban and rural locations in an economically viable manner that will sustain recovery and our future prosperity.*
4. *Planning must support the transition to a low carbon future and adapt to a changing climate taking full account of flood risk and facilitating, as appropriate, the use of renewable resources, particularly the development of alternative indigenous energy resources.*
6. *Planning will encourage the most efficient and effective use of previously developed (brownfield) land over the use of greenfield land to ensure the most efficient use of existing infrastructure, enhancing and strengthening the continued vitality of existing communities through regeneration.*
9. *Planning will support the protection and enhancement of environmental quality in a manner consistent with the requirements of relevant national and European standards by guiding development towards optimal locations from the perspective of ensuring high standards of water and air quality, biodiversity and the minimisation of pollution risk.*

The proposed Ringaskiddy Resource Recovery Centre is a plan-led development on an appropriately zoned and previously developed site in an area designated as an Industrial Area that is a Strategic Employment Area where large scale waste treatment facilities are considered. In addition, it will support sustainable development and support the transition to a low carbon economy through the treatment of waste by an accepted means, proximate to source, and to generate energy for supply to the national grid. It will also support the protection and enhancement of environmental quality, without impacting on designated sites, and improving local road and amenity infrastructure in the vicinity of the site.

2.4.2 Regional Planning Policy

2.4.2.1 South West Regional Planning Guidelines 2010-2022

The South West Regional Planning Guidelines 2010-2022 set out the objectives and policies for securing balanced regional development in line with the NSS. As referred to above in the context of the new NPF, currently each of the Regional Assemblies is in the process of preparing a Regional Spatial and Economic Strategy which will provide regional level strategic planning and economic policy in support of the implementation of the National Planning Framework.

It is anticipated that these Regional Strategies including the Southern Region Spatial and Economic Strategy will be completed in early 2019. This Strategy will provide a long-term regional level strategic planning and economic framework in support of the implementation of the National Planning Framework.

In the interim period, the South-West Regional Planning Guidelines 2010-2022 shall continue to have effect until the Southern Regional Spatial and Economic Strategy is finalised and adopted by the Southern Regional Assembly.

Section 5.6.12 of the SWRPGs states that under the Waste Management Acts, each local authority was required to make a Waste Management Plan (WMP) the objectives of which is to:

- Prevent or minimise the production and harmful nature of waste.
- Encourage and support the recovery of waste.
- Ensure that such waste as cannot be prevented or recovered is safely disposed of.
- Address the need to give effect to the polluter pays principle, in relation to waste disposal.

It is stated in the Guidelines that significant inroads have been made in switching from the predominantly landfill based waste disposal system to integrated waste management programmes.

Accordingly, **policy objective RTS-08**, in relation to waste management, states that it is an objective to encourage the delivery of an effective and efficient waste management service in line with the Waste Management Acts and promote local authorities to review their respective Waste Management Plans during the lifetime of the guidelines.

The Regional Planning Guidelines supports the incorporation of the recommendation and policies of the National Hazardous Waste Management Plan 2008-12.

From a regional perspective, the proposed Ringaskiddy Resource Recovery Centre will make a significant contribution towards the delivery of an effective and efficient waste management service and ensure balanced regional development.

2.4.2.2 Draft Regional Spatial & Economic Strategy (RSES) for the Southern Region 2018

The draft RSES for the Southern Region was issued for consultation in December 2018. This document sets out how, in policy terms, the Southern Region will be aligned with the provisions of the NPF.

The draft RSES will seek to provide infrastructure and services in a sustainable plan and infrastructure-led manner to ensure the sustainable management of water waste and other environmental resources. It commits the Southern Region to implementing the provisions of the Southern Regional Waste Management Plan 2015-2021 (RPO 104).

A national enabler for Cork in the draft Cork Metropolitan Area Strategic Plan (MASP) is the improvement of sustainability in terms of waste, to include district heating (Cork MASP 6)

The Southern Regional Assembly is currently in the process of preparing their own strategy in accordance with the Framework set by the National Planning Framework. This is anticipated to be completed by early 2019 and will be known as the Southern Regional Spatial and Economic Strategy (RSES). Once adopted, the County and City Development Plan review cycles will then fall in to line with the Southern Regional Strategy in order to ensuring that the vision of the National Planning Framework is carried through to the local planning level.

2.4.3 Local Planning Policy

This section sets out the principle policies of the Cork County Development Plan 2014-2020 and the Ballincollig Carrigaline Municipal District Local Area Plan 2017 against which the proposed development is to be assessed.

2.4.3.1 Cork County Development Plan 2014-2020

The Cork County Development Plan must accord with the Southern Regional Spatial and Economic Strategy once it is adopted and with the provisions of the National Planning Framework to ensure that a policy-oriented approach to planning policy is accomplished and properly managed spatial planning achieved.

Section 11.7.3 of the Cork County Development Plan 2014 states that waste policy in the plan is guided by International, European and National guidelines as well as the Council's Waste Management Plan. It is also stated that consideration will be given to any changes in Government Policy, Best Available Technology (BAT) and best practice in waste treatment since the coming into effect of the current waste management plan.

Section 6.4.10 of the Cork County Development Plan 2014 states that lands identified for industry in Local Area Plans can normally be used for small/medium scale waste management and recovery operations where impacts are limited to the local area. Industrial Areas normally will not be used for large scale waste recovery, unless a specific requirement is identified by the Waste Management Plan.

Section 6.4.11, however, states that the provision of strategic large scale waste treatment facilities will be considered in 'Industrial Areas' designated as Strategic Employment Areas in the local area plans subject to the requirements of National Policy, future Regional Waste Management Plans and the objectives set out in local area plans.

Accordingly, **policy objective WS 7-1**, in relation to Waste Management, seeks to:

- *Support the policy measures and actions outlined in 'A Resource Opportunity' 2012 – National Waste Policy.*
- *Encourage the delivery of an effective and efficient waste management service in line with the Waste Management Acts and relevant Waste Management Plan for the County/Region.*
- *Normally require details and formal development proposals of onsite provisions for the management of waste materials that are likely to be generated from the proposed use. The Council will require Waste Management Assessment for projects which exceed thresholds outlined.*
- *Support the incorporation of the recommendation and policies of the National Hazardous Waste Management Plan 2008-12.*
- *Support the sustainable development of the Bottlehill facility for specialised and appropriate uses primarily associated with integrated waste management. The specialised and associated role of Bottlehill in the provision of waste management activities is therefore clearly identified in local planning policy, whereas the policy for large scale waste infrastructure is that their preferred location is in industrial areas that are also Strategic Employment Areas.*

In relation to energy, **policy ED 1-1** of the Plan seeks to ensure that through sustainable development County Cork fulfils its optimum role in contributing to the diversity and security of energy supply and to harness the potential of the County to assist in meeting renewable energy targets.

In relation to land use zoning, **objective ZU 3-7**[48] is of note. Pursuant to the Minister's Direction which came into effect on March 2015, these objective states:

ZU 3-7: Appropriate Uses in Industrial Areas

3 *Promote the development of industrial areas as the primary location for uses that include manufacturing, repairs, medium to large scale warehousing and distribution, bioenergy plants, open storage, waste materials treatment, and recovery and transport operating centres'. The development of inappropriate uses, such as office based industry and retailing will not normally be encouraged. Subject to local considerations, civic amenity sites and waste transfer stations may be suitable on industrial sites with warehousing and/or distribution uses.*

4 *The provision of strategic large scale waste treatment facilities including **waste to energy recovery facilities** will be considered in 'Industrial Areas' designated as Strategic Employment Areas in the local area plans subject to the requirements of, National Policy, future Regional Waste Management Plans and the objectives set out in local area plans.*

[48] The Cork County Development Plan 2014 was subject to a Ministerial Direction arising from a concern that the Plan was not in compliance with the requirements of ss.9, 10 and 12 of the Planning and Development Act 2000, as amended as regards the consistency between objective ZU 3-7 and national waste policy and the then draft Southern Region Waste Management Plan. This Direction came into effect on 4th March, 2015

It is noted that policy **objective EE 4-1** of the Cork County Development Plan 2014 identifies Ringaskiddy as one of five Strategic Employment Areas in the County, the others being Carrigtwohill, Kilbarry, Little Island, and Whitegate. It is the objective to promote the development of Strategic Employment Areas suitable for large scale developments at Carrigtwohill, Kilbarry, Little Island, Ringaskiddy and Whitegate where such development is compatible with relevant environment, nature and landscape protection policies as they apply around Cork Harbour.

In relation to Cork Harbour, **objective CS 4-1(d)** of the Cork County Development Plan seeks to protect and enhance the area's natural and built heritage and establish an appropriate balance between competing land uses to maximise the areas overall contribution to Metropolitan Cork while protecting the environmental resources of the Harbour.

The Cork Harbour Study 2011 (draft), which is referenced in the Cork County Development Plan 2014-2020, seeks to promote a more integrated approach to development of the Harbour, using a coastal zone management approach. Among other issues, the Study seeks to maintain the availability of land in the harbour which is or could become a source of competitive advantage for sectors such as energy, marine transport, tourism and the pharmachem/biopharma cluster.

In relation to coastal protection, policy **objective RCI 9-3** of the Cork County Development Plan 2014-2020 seeks to employ soft engineering techniques as an alternative to hard coastal defence works, wherever possible.

In relation to coastal beaches, policy **objective RCI 9-5(a)** of the Cork County Development Plan 2014-2020 seeks to maintain and improve County Cork's beaches to a high standard and develop their recreational potential as publicly accessible seaside amenity facilities, in accordance with the principles of proper planning and sustainable development.

Section 6.6 of the Development Plan sets out the policies with respect to the economic role of the Harbour. Policy **objective EE 6-1** seeks to implement sustainable measures which support and enhance the economic and employment generating potential of Cork Harbour in a manner that is compatible with other Harbour activities, as well as with the nature conservation values of the Cork Harbour Special Protection Area and the Great Island Channel Special Area of Conservation.

Policy **Objective EE 6-2** seeks to:

> *"a) Protect lands for port related developments at Ringaskiddy.*
>
> *b) Support the upgrade of the N28 to accommodate the expansion of Ringaskiddy Port.*
>
> *c) Protect lands for port related development at Marino Point.*
>
> *d) Protect harbour side land for industrial and marine related developments dependant on access to deep water unless able to demonstrate a strong need or significant economic benefit for other such development of harbour side lands, relative to alternative sites inland.*

All development will be carried out in a manner that is compatible with other Harbour activities, taking account of residential amenity, tourism and recreation as well as with the nature conservation values of the Cork Harbour Special Protection Area and the Great Island Channel Special Area of Conservation."

In relation to tourism, the Plan, through **Objective TO 2-1**, seeks to protect the natural, built and cultural heritage. In relation to the Harbour, the potential for Spike Island and Fort Camden to become internationally recognised tourist attractions is noted. Both of these attractions, which are rich in military history, will also greatly add to the creation of a military trail which is proposed as part of an Interpretive Framework for Cork City and Harbour being developed by Fáilte Ireland. The Council have prepared a 'Masterplan for Spike Island' which was adopted by the Council in 2012. It is hoped that the development of Spike Island as a visitor attraction will help build on the existing tourism and heritage infrastructure in Cork Harbour.

In the Landscape Character Assessment of County Cork (**Table 1**, **Appendix E**, Cork County Development Plan 2014-2020), Cork Harbour and Estuary has a very high landscape value and sensitivity and is a landscape of national importance. Within these High Value Landscapes considerable care will be needed to successfully locate large scale developments without them becoming unduly obtrusive. Therefore, the location, siting and design of large scale developments within these areas will need careful consideration and any such developments should generally be supported by an assessment including a visual impact assessment which would involve an evaluation of visibility and prominence of the proposed development in its immediate environs and in the wider landscape. There are four designated scenic routes in the wider area of the site, namely A53/S53, A54/S54, A51/S51 and A57/S57. Policy GI 7-2 seeks to protect the character of the views and prospects from scenic routes. Refer to **Chapter 11 *Landscape and Visual*** of this EIAR, for a full assessment of the potential impact of the proposed development on the landscape and scenic routes in the vicinity.

The proposed Ringaskiddy Resource Recovery Centre is located in an industrial area designated as a Strategic Employment Area, in which large scale waste facilities will be considered, in accordance with zoning objective ZU 3-7(b) of the Plan. The proposed development will contribute to a diversity in energy generation in line with policy ED 1-1. The proposed development will enhance the area's tourism potential and has been designed to integrate within its landscape without impact on the character of views and prospects from scenic routes, and without impact on the Harbour's heritage. The proposed development is compatible with other Harbour activities, as well as with the nature conservation values of the Cork Harbour Special Protection Area and the Great Island Channel Special Area of Conservation, in line with objective EE 6-2.

It should be noted that the proposed coastal protection works in this instance will involve soft engineering techniques (placement of shingle above foreshore), consistent with policy objective RCI 9-3 of the Plan 2014.

The proposed development of the Ringaskiddy Recovery Resource Centre will provide additional employment in a Strategic Employment Area of Cork Harbour without impact on the activities of the Harbour, in accordance with policy objective EE 6-1.

Consistent with policy objective EE 6-2 the proposed development will not impact on the protection of port related developments at Ringaskiddy.

The proposed development will enhance the provision of tourist facilities in the area by the amenity walkway including viewing point. The views from Martello Tower to Fort Mitchell on Spike Island will not be impacted by the proposed development. The dedicated viewing point will enable tourists to appreciate the natural, built and cultural heritage of Cork Harbour.

Consistent with the policy provisions for this High Value Landscape, the proposed development has been carefully designed and located such that will not be visually obtrusive in the context of the wider Cork Harbour area and relative to adjoining developments, including the wind turbines. The layout of the proposed development has been informed by the campus style character of the immediate area, while also being cognisant of Ringaskiddy's strategic industrial role.

2.4.3.2 Ballincollig Carrigaline Municipal District Local Area Plan

The Ballincollig Carrigaline Municipal District Local Area Plan 2017 was amended and adopted on 21 August 2017[49]. The Plan has rezoned the principal part of the proposed development site from I-15 to RY-I-20 with the following specific objective:

> *"Suitable for the extension of the opposite Third Level Educational campus and enterprise related development including marine related education, enterprise, research and development. Consideration will also be given to established operators in Ringaskiddy for the provision of ancillary office accommodation and for Research and Development facilities.*
> *This site is considered inappropriate for any short or full time residential accommodation.*
>
> *Any existing access to the nearby Martello tower which crosses this site shall be protected and provision for open space buffer to any existing access shall be provided.*
>
> *This area may be used as a feeding ground by bird species for which Cork Harbour SPA is designated."*

Notwithstanding the above, the provision of a strategic large-scale waste treatment facility at the site in Ringaskiddy, which is both an Industrial Area and Strategic Employment Area, is endorsed by **Section 6.4.11** of the Cork County Development Plan 2014 and is in accordance with policies for its zoning objective as per ZU 3-7(b) of the Plan.

In addition, the proposed development is supported by policy objective WS 7-1 of the Cork County Development Plan 2014 in relation to Waste Management, as it is consistent with the provisions of Ireland's national waste policy and contributes towards the delivery of an effective and efficient waste management service in line with the Southern Region Waste Management Plan 2015.

[49] http://corklocalareaplans.com/wp-content/uploads/2017/08/Ballincollig-Carrigaline-Map-Browser.pdf

The proposed development is also consistent with the policies of the National Hazardous Waste Management Plan.

The proposed development is therefore a plan-led development, located, in an area designated as an Industrial Area that is a Strategic Employment Area where large scale waste treatment facilities are to be considered as dictated by national, regional and local planning policy. Finally, as referred to under the National Planning Policy section above, the National Planning Framework stipulates that all regional and local planning policies must be in accordance with the forthcoming Southern Regional Spatial and Economic Strategy which will in turn be aligned with the objectives of the National Planning Framework which is due to be completed in early 2019.

This is designed to ensure that future development will be evidence based and plan-led such that balanced and sustainable regional development can take place.

This obligation is placed on a statutory footing in the Planning and Development (Amendment) Act 2018[50] which amends **Section 20** of the Principal Planning Act to require that local area plans must be consistent with the objectives of the development plan, the national and regional development objectives in the National Planning Framework and the regional spatial and economic strategy and specific planning policy requirements under **Section 28** (Ministerial Guidelines).

In this regard, planning permission for a Strategic Infrastructure Development (SID) lodged with An Bord Pleanála for the development of a new waste to energy facility (PA0045) on the proposed development site was granted in May 2018. In making this decision, An Bord Pleanála had regard to the above matter and those matters to which, by virtue of the Planning and Development Acts and Regulations thereunder, it was required to have regard. Under **Section 37(G)(6)** of the Planning and Development Act, 2000, as amended, the Board can grant permission in this instance.

The Local Area Plan states that there have been a number of flooding events in Ringaskiddy over the last decade. Future development is avoided in areas indicated as being at risk of flooding, unless a satisfactory Flood Risk Assessment and Justification Test is undertaken in accordance with the Guidelines for Planning Authorities: The Planning System and Flood Risk Management, 2009. A flood risk assessment has been carried out on the proposed development and is presented in **Appendix 13.4** ***Flood Risk Assessment*** and **Chapter 13** ***Soils, Geology, Hydrogeology, Hydrology and Coastal Recession*** of this EIAR. The proposed development site is not identified on the Local Area Plan as an area susceptible to flooding (Flood Zones A or B), refer to **Figure 2.4**.

[50] **Section 17** of the 2018 Amendment Act: http://www.irishstatutebook.ie/eli/2018/act/16/section/17/enacted/en/html#sec17 – subject to commencement by Ministerial Order.

2.5 Need for the Proposed Development

2.5.1 Introduction

This section outlines the need for the proposed development in order to deliver thermal recovery capacity to manage residual hazardous and non-hazardous waste generated in the Southern Region and at a national level. The quantities of the different waste streams, which will require thermal treatment, are addressed. The proposed Ringaskiddy Resource Recovery Centre will be designed to meet this need.

2.5.2 Hazardous Waste Thermal Treatment Capacity Required

2.5.2.1 Reported Hazardous Waste

The EPA National Waste Report 2012 (EPA 2014) provides information on waste generation and management in 2012 including hazardous waste statistics. However, these figures have since been updated in the EPA 2018 Progress Report on the implementation of the National Hazardous Waste Management Plan 2014 -2020[51] .This report now provides the most recent data available on hazardous waste management in Ireland at the time of writing. The data available on hazardous waste generation and treatment is set out in **Table 2.1** below.

Table 2.1 Hazardous Waste Management in 2016

	Proportion managed in 2016	Tonnes managed 2016	Typical treatment type
On-site treatment at integrated pollution prevention and control facilities	16%	51,013	Incineration, solvent recycling, landfill and use as fuel
Off-site treatment at authorised facilities in Ireland	28%	91,083	Authorised hazardous waste treatment facilities (e.g. autoclaving, physic-chemical treatment)
Export to disposal and recovery facilities abroad	56%	186,000	Thermal treatment as well as metal recovery, solvent recovery and landfill
Total	100%	328,096	

In 2016, 371,000[52] tonnes of hazardous waste was generated, with 409,000[53] tonnes of hazardous waste managed in Ireland. Almost 186,000 tonnes[54] was exported which is an increase of 11 % on 2015 and 6% on 2014.

[51] http://www.epa.ie/pubs/reports/waste/haz/EPA_NationalHazardousWasteManagementPlan_web.pdf
[52] Hazardous waste generated figure discounts (a) hazardous waste partially treated waste for export, (b) onsite treatment with recovery (R2) code and (c) waste imported for treatment. Generated (rather than managed) figure is reported for Ireland under Basel Convention requirements.
[53] Figure excludes contaminated soil (at time of writing, the EPA Report referred to this figure as being included, figure, however, the EPA has since confirmed that this figure should be excluded).
[54] Figure excludes contaminated soil. Exclusion of contaminated soil brings exports to 50% of total hazardous waste managed in Ireland.

This is mainly due to a large increase in the export of cement kiln dust and healthcare waste. **Figure 2.2(a)** sets out trend data (from 2009 to 2016) for hazardous waste treated on-site, off-site within Ireland and exported outside of Ireland. (This is taken directly from **Figure 2** of the Progress Report).

In terms of waste disposal, almost 64,000 tonnes (34%) of exported waste went for disposal while 122,000 tonnes (66%) went for recovery. 90% of the total exported waste was transported to Great Britain, Germany or Belgium[55], a similar trend to previous years.

The routes of treatment for hazardous waste have been relatively stable over time and there will continue to be a requirement to export some hazardous wastes for treatment where there is no or limited existing capacity in Ireland, e.g. treatment of hazardous waste batteries and accumulators, asbestos and mercury wastes and thermal treatment residues.

Authorised hazardous waste treatment in Ireland is carried out either on-site at the industrial facility where the waste was generated (under the relevant conditions of an EPA licence) or offsite at authorised waste treatment facilities. Approximately half of the total hazardous waste managed is exported for treatment. The other half is managed onsite or transferred offsite for disposal/recovery within Ireland.

In terms of hazardous waste arising in Ireland, a comparison between 2012 and 2016 data is included in **Figure 2.2(b),** showing overall increases in hazardous waste arising, hazardous waste exports, offsite treatment in Ireland and a decrease in onsite treatment in Ireland.

Therefore, the quantity of hazardous waste generated in 2012 was approximately 275,838[56] tonnes while in 2016, 371,000 tonnes of hazardous waste was generated. This represents an increase in the amount of hazardous waste treated in Ireland with a corresponding increase in the amount of hazardous waste exported since 2012.

As noted previously in this EIAR, in order to reduce the level of these exports and improve self-sufficiency, the SRWMP supports the development of 50,000tpa thermal recovery capacity for hazardous waste nationally in **Objective E16.** Furthermore, the increase in the generation of hazardous waste as shown above and similarly, the increase in hazardous waste exported abroad for treatment in 2016 further underline the need for indigenous treatment capacity which is capable of contributing to the State's self-sufficiency requirements for the recovery of hazardous waste as set out in both the NHWMP and the recent Progress Report on its implementation.

2.5.2.2 Unreported Hazardous Waste

The NHWMP notes that an amount of hazardous waste remains 'unreported'. That is, it is not recorded as having entered the formal waste management industry.

[55] Great Britain & Northern Ireland, 51%, Germany 21% & Belgium 17%
[56] Data provided in EPA National Waste Report 2012 includes double counting as noted in the footnote to Table 22 which states "*some hazardous waste treated in the state is exported for further treatment*". The amount of waste treated off-site in Ireland and also exported (e.g. from TFS data) is estimated 21,000. This is subtracted from the total of **Table 2.1** above to get a more accurate figure and avoid double counting

The NHWMP estimates that unreported waste was 26,024 tonnes of hazardous waste in 2011. The source of this waste is primarily small business, households and farms. One aim of the NHWMP 2014-2020 is to channel this waste into appropriate hazardous waste treatment facilities. Due to the small volumes arising per waste generator, this waste would need to be bulked up at a transfer station before being sent for disposal or recovery.

2.5.2.3 All Island Solution to Hazardous Waste

Economies of scale and the potentially erratic nature of hazardous waste markets mean that it is essential that all island markets are available. To achieve economies of scale the NHWMP suggests full opening of the Northern Ireland and Republic of Ireland waste markets, recognising that some companies are already operating on this basis. In relation to incineration capacity, the NHWMP 2014-2020 also states that,

> *'… it is still possible for all-island incineration and physico-chemical treatment capacity to be planned for and taken into consideration by treatment operators'.*

The latest data on hazardous waste arising in Northern Ireland is provided in the Arc21 region *Waste Management Plan* (October 2014). This finds that in 2010/11 approximately 75,400 tonnes hazardous waste was generated in Northern Ireland of which approximately 6,050 tonnes were exported for energy recovery or incineration (R1, D10).

2.5.2.4 Capacity Required to Treat Hazardous Waste Streams

In summary the identified potential for thermal recovery of hazardous waste as outlined above is summarised in **Table 2.2**.

Table 2.2 Potential Capacity Required To Treat Hazardous Waste Streams

Source	Estimated tonnage	Notes
Hazardous waste	50,000 tonnes	Southern Region Waste Management Plan
Unreported hazardous waste	26,024 tonnes	Potential additional hazardous waste requiring treatment (NHWMP aims to channel this waste into appropriate hazardous waste treatment facilities)
Northern Ireland hazardous waste	6,050 tonnes	Material exported for R1 / D10 from Northern Ireland
Total	82,074 tonnes	Recognising not all of the unreported / Northern Ireland waste will be available, this figure represents the potential capacity required in total from all sources

The Indaver Meath waste-to-energy facility operating licence W0167-03 permits the treatment of 10,000tpa suitable hazardous waste. In 2018, the Meath facility accepted 9,588 tonnes of suitable hazardous waste.

Therefore, there remains a gap of at least 40,000tpa thermal treatment capacity for hazardous waste treatment (based on the need identified in the SRWMP and excluding unreported or Northern Ireland waste).

By combining the management of non-hazardous residual municipal solid waste (MSW), industrial waste, and suitable hazardous waste on a single grate incineration line it will be possible to deliver a "technically, economically and environmentally feasible" treatment facility that will contribute to the self-sufficiency objectives outlined in **Policy E16** of the SRWMP.

2.5.3. Residual Municipal Waste Thermal Treatment Capacity Required

2.5.3.1 National thermal recovery capacity

All three regional waste plans, the Southern, Connaught-Ulster and Eastern-Midlands Plans, identify the national requirement for 300,000 tonnes thermal recovery capacity. This is set out in Objective E15a of the SRWMP as discussed in **Section 2.2.3** above.

The SEA Environmental Report on the SRWMP notes in **Section 8.3.5.5** (Other Recovery) that:

- The Southern and Connaught-Ulster Regions have no active thermal recovery, and
- The Eastern-Midlands Region is the only region in the country to have thermal recovery treatment available with 5 active facilities authorised to accept 435,000 tonnes MSW and a further 727,875 tonnes MSW capacity pending.

It finds that **Policy E15a** supports an additional 300,000 tonnes of thermal recovery capacity which is not specific to the Southern Region but rather is reflective of an identified national need. However, the report states that the fact that the Eastern-Midlands Region is currently the only waste region with thermal recovery capacity indicates a regional imbalance.

The Ringaskiddy Resource Recovery Centre, with its location in the southern region, will address this imbalance.

2.5.3.2 Export of Municipal Waste

In 2018, Indaver exported just under 135,000 tonnes of residual MSW to thermal treatment plants in continental Europe and Scandinavia. Of these 135,000 tonnes exported, 80% was sent from the Southern Region. As reported in figures from the National TFS Office, 263,377 tonnes of residual MSW was exported nationally (excluding exports to Northern Ireland) for thermal treatment in 2018[57]. It is estimated that 172,000 tonnes of this total were sent from the Southern Region alone.

These figures clearly demonstrate that there now exists an over reliance on the export of residual MSW from the Southern region as 65% off all MSW exports in 2018 were from this region.

[57] Amber List Waste figures as detailed on the National Transfrontierr Shipment Office website: http://www.dublincity.ie/main-menu-services-water-waste-and-environment-waste-and-recycling-national-tfs-office/ntfso-waste

As noted above, the SRWMP acknowledges that the long-term alternative to the export of residual waste is to develop indigenous thermal recovery infrastructure to replace landfill, and for the State to become self-sufficient where possible. The Ringaskiddy Resource Recovery Centre, will provide indigenous thermal recovery capacity in line with the SRWMP that will in turn help to reduce exports and enable the State to become more self-sufficient

2.5.3.3 Industrial Waste Streams

Non-hazardous industrial waste is waste produced by industrial activities such as factories, mills and mines (as defined in National Waste Reports available on the EPA website, the most recent being 2012). This does not include non-process industrial waste (e.g. from site canteen, office, etc.), which is similar in character to commercial waste and is generally categorised as municipal waste in the EPA waste reports.

The SRWMP in **Policy E15b** supports the need for thermal recovery capacity to be developed for industrial process wastes "where justifiable" at merchant thermal recovery facilities. There is no recommended tonnage capacity for this waste stream.

2.5.3.4 Industrial Waste Generation

Based on experience at the Indaver Meath waste-to-energy facility (which accepted approximately 18,861 tonnes of non-hazardous and hazardous industrial waste in 2018, it is anticipated that a range of non-hazardous industrial waste streams will be suitable for thermal recovery at the proposed Ringaskiddy facility.

The most recent statistics on industrial waste generation were published in the Regional Waste Plans and relate to waste collected in 2012. Combining data from the three Regional Plans, an estimated 5.16 million tonnes non-municipal[58] waste was collected nationally in 2012.

This includes a wide range of non-hazardous residues from manufacturing processes including various sludge, food and beverages unfit for consumption, textiles, printing waste, wood and paper waste, chemical products, pharmaceutical products, rubber and plastic products, non-combustible materials such as non-metallic mineral products, metals, and machinery, electrical and electronic waste, shredding waste (e.g. car shred, WEEE), construction and demolition waste, agricultural waste and others.

The estimated quantity of residual non-hazardous industrial waste that may be suitable for thermal recovery is up to 325,730 tonnes per annum, including the waste streams detailed in the Regional Waste Plans as follows:

- "industrial waste not otherwise specified (non-hazardous) "totalling 312,943 tonnes collected in 2012 across the three regions and
- "industrial sludge" totalling 12,787 tonnes collected in 2012 across the three regions

[58] See waste streams listed in regional plans under "priority waste streams" and "other wastes collected"

While the nature of these waste streams is not specified, it is noted that in 2008 the EPA National Waste Report 2008 identified approximately 300,000 tonnes non-hazardous industrial waste as being suitable for thermal treatment. This included 67,000 tonnes sent for disposal via incineration (D10) and 230,509 tonnes sent for thermal recovery (R1). This does not capture the quantities of industrial waste currently sent to landfill that could otherwise be recovered.

In addition to industrial sludge, sludge from municipal wastewater treatment plants and the food and dairy industry may also require treatment. If alternative specialised infrastructure were not developed to treat this sludge, the Ringaskiddy Resource Recovery Centre would be suited to accepting these streams.

The volumes of municipal wastewater treatment plant sludge that may require treatment are not captured in the figures above. In the future these volumes may increase due to:

- Improvements to wastewater treatment as required under, inter alia, the Water Framework Directive 2000/60/EC.
- Changes in the policy on landspreading. The food industry has already taken steps to prohibit landspreading of raw or treated sewage/sludge on Bord Bia certified farms. This requirement also exists in all other Bord Bia quality assurance programmes. Various contaminants that may be present in sludge include, for example, heavy metals, Persistent Organic Pollutants (POPs), Environmental Persistent Pharmaceutical Pollutants (EPPP) and personal care products (Ternes et al (2004) (e.g. antibiotics, endocrine disrupting hormones). Incineration is the only technology providing effective sludge treatment, destroying organic contaminants and producing ash that is hygienic and safe.

2.5.3.5 National Wastewater Sludge Management Plan 2016

Irish Water in 2016 published a long-term National Wastewater Sludge Management Plan (NWSMP)[59] that outlines its strategy to ensure a nationwide, standardised approach for the management, treatment, transport, storage and disposal of wastewater sludge over the next 25 years.

Regarding the quantity of wastewater sludge produced, the Plan underlines that wastewater sludge volumes are expected to increase over the next 25 years as new and upgraded wastewater treatment plants are completed and estimates the predicted sludge quantity in 2040 is likely to be 96,442 tonnes dry solids/annum.

In terms of treatment methods, the Plan provides that the use of existing anaerobic digestion infrastructure should be maximised to increase energy recovery. Notwithstanding this, one of the objectives outlined in the Plan includes extracting energy and other resources where economically feasible and furthermore, contains a commitment to investigating alternative treatment options on a continuous basis.

[59] National Wastewater Sludge Management Plan, Irish Water, October 2016: https://www.water.ie/projects-plans/our-plans/wastewater-sludge-management/Final-NWSMP.pdf

The NWSMP identifies that the current end-use outlet for wastewater sludge in Ireland is almost exclusively agriculture and, in this regard, identifies reuse on land as the preferred outlet in the short to medium term. In this regard, the Plan accepts that a policy based on a single reuse or disposal option is very susceptible to policy, regulatory and/or perception changes.

The Plan goes on to provide that alternative options will be investigated on an ongoing basis in order to reduce the current dependence on agricultural reuse, in view of the risk of constraints on this outlet and to provide co-operation with the agricultural sector in the implementation of their quality assurance schemes as referred to above.

Furthermore, the Plan states that Irish Water will carry out a feasibility study into identification of viable alternatives, including detailed consideration of thermal treatments, during the 5-year cycle before the next review of the Plan[60].

With regard to the effective management of wastewater sludge, the National Planning Framework Strategic Outcome 9 (relating to the Sustainable Management of Water and other Environmental Resources) provides that planning for waste treatment requirements to 2040 [61] will require:

"Additional sewage sludge treatment capacity and a standardised approach to managing waste water sludge and including options for the extraction of energy and other resources".

Similarly, the Department of the Taoiseach has published a National Policy Statement on the Bioeconomy[62] in March 2018 which addresses the production of renewable biological resources and their conversion into food, feed, biomaterials, bio-chemicals energy and fuels. Biological resources include industrial feedstock resources such as municipal solid waste (MSW) and wastewater. As such, the development of alternative and sustainable treatment methods for wastewater sludge at the proposed development would be in alignment with the goals laid down in this Policy Statement on the Bioeconomy and would furthermore contribute to the efficient valorization of this growing waste stream.

Therefore, in light of the above and current pressures on the agricultural outlet for wastewater sludge, alternative outlets such as the proposed development which is capable of treating and providing sustainable and proper management of wastewater sludge should now be given consideration. This need is underlined in both the NWSMP and the National Planning Framework.

[60] This Feasibility Study has not been yet been published.
[61] http://npf.ie/wp-content/uploads/Project-Ireland-2040-NPF.pdf at page 151
[62] https://www.taoiseach.gov.ie/eng/News/Government_Press_Releases/Bioeconomy.pdf

2.5.4 Summary of Proposed Waste Quantities

Taking 2022 to be an indicative year for when the proposed development will be fully operational, the quantities of waste suitable for thermal treatment in the Cork region, identified in the previous sections, can be summarised as shown in **Table 2.3** below.

Table 2.3 Predicted Waste Quantities for 2020[63]

Residual Waste Generation	Volumes suitable for Waste To Energy (tonnes)	Reference
Hazardous waste	Up to 82,074	Regional Waste Management Plans, National Hazardous Waste Management Plan 2014 – 2020, arc21 Waste Management Plan
Residual MSW	300,000	Southern Region Waste Management Plan
Industrial waste	Up to 325,730	Regional waste plans
Total waste stream potentially available for acceptance at proposed WTE facility	Up to 707,804	Hazardous, MSW, sludge, recovered fuel, industrial waste
WTE facility capacity	240,000	

The proposed Ringaskiddy Resource Recovery Centre, with a capacity of 240,000 tonnes for residual municipal, industrial and suitable hazardous waste, will contribute towards the attainment of the national requirement for thermal recovery capacity as set out in regional and national waste plans. By providing local thermal recovery capacity, the proposed Ringaskiddy Resource Recovery Centre will reduce reliance on waste exports by up to 240,000 tonnes per annum, whilst also maximising the use of energy resources in the residual waste stream.

2.5.5 Energy Recovery

The proposed Ringaskiddy Resource Recovery Centre will recover heat and will use this to generate 21MW of electricity, of which 18.5MW will be exported to the grid. As described in **Section 2.3**, approximately 50% or 9.25MW could be renewable electricity, which would contribute to meeting Ireland's target of a 40% share of electricity from renewable sources in gross final consumption by 2020.

In 2013, according to the SEAI (2015) report, renewable energy in Ireland contributed 7.8% of Gross Final Energy Consumption, almost halfway towards Ireland's binding 2020 target. In order to meet the 2020 target, SEAI estimate that an average of an additional 200 MW/annum renewable electricity capacity will be required.

[63] The figures in the Waste Management Plan only cover the period to 2020 and while these are the only nationally published figures for residual waste generation at present, it is likely that the generation of residual waste will be higher post 2020 as the most recent Central Statistics Office (CS0) publication *'Population and Labour Force Projections: 2016-2046* estimated that the national population will increase to 5.1 million by 2031 and to just over 5.6 million by 2046: http://www.cso.ie/en/media/csoie/releasespublications/documents/population/2013/poplabfor2016_2046.pd

The majority of this capacity has been delivered by wind turbines to date, and so the contribution of renewable electricity from biomass at the Ringaskiddy Resource Recovery Centre will not only support the achievement of the target but will also help to diversify Ireland's renewable energy supply.

The Irish Government's Climate Action Plan 2019 sets a target of 70% renewable electricity by 2030.

2.6 Summary

EU and national waste policy requires waste to be managed in an economic, sustainable and environmentally appropriate manner. Implementing the EU waste hierarchy, waste should be managed as a resource and disposal should be the last resort. EU and national policies support the recovery of energy from residual waste. In particular, the Circular Economy Package through the amended Directives on Waste and Landfilling and the NHWMP require that Ireland should be self-sufficient in waste management. Indeed, the NHWMP, SRWMP and other plans and policies confirm the need for thermal recovery capacity at a waste management facility similar to the proposed development.

The requirement of the SRWMP includes 300,000 tonnes capacity for residual municipal waste as well as 50,000 tonnes capacity for hazardous waste and an additional but unspecified capacity for industrial waste. There is currently a lack of suitable recovery capacity within the Southern Region while a large quantity of residual MSW is being exported for recovery in similar facilities in continental Europe. This is not a sustainable option in the long term as it infringes the proximity principle and does not meet the objective of moving towards self-sufficiency.

The EPA's NHWMP anticipates that the private sector will develop technically and economically feasible treatment options, including thermal treatment. Similarly, the SRWMP notes that the required infrastructure will not be delivered by the Local Authorities as the investment is anticipated from the private sector. The combined approach to the management of residual MSW, industrial waste and suitable hazardous waste by Indaver for the proposed Ringaskiddy Resource Recovery Centre will contribute significantly to the attainment of these objectives.

Moreover, the energy recovery from residual waste at the proposed Ringaskiddy Resource Recovery Centre will help Ireland to achieve its renewable energy targets.

From a national planning policy perspective, the National Planning Framework, specifically provides that planning for waste treatment requirements to 2040 will require waste to energy facilities which treat residual waste that cannot be recycled in a sustainable manner. In this regard, the proposed development is in alignment with this objective and the broader overarching aim of the Framework centred on achieving balanced regional and sustainable development.

Local planning policies and objectives, as set out in the Cork County Development Plan, support the development of a facility such as the proposed Ringaskiddy Resource Recovery Centre on the proposed site in Ringaskiddy.

Section 6.4.11 of the Cork County Development Plan 2014-2020 states that the provision of strategic large-scale waste treatment facilities will be considered in 'Industrial Areas' designated as Strategic Employment Areas in the local area plans subject to the requirements of National Policy, future Regional Waste Management Plans and the objectives set out in local area plans.

Ringaskiddy is one such Industrial Area designated as a Strategic Employment Area.

Therefore, the provision of a strategic large-scale waste treatment facility at the proposed development site in Ringaskiddy, which is both an Industrial Area and Strategic Employment Area, is endorsed by **Section 6.4.11** of the Plan.

The proposed development is supported by policy objective WS 7-1 of the Cork County Development Plan 2014-2020 in relation to Waste Management, as it is consistent with the provisions of Ireland's national waste policy and contributes towards the delivery of an effective and efficient waste management service in line with the Southern Region Waste Management Plan 2015. The proposed development is also consistent with the policies of the National Hazardous Waste Management Plan.

Furthermore, the proposed development is supported by the zoning objective for appropriate uses in Industrial Areas, objective ZU 3-7(b).

Specifically, strategic large-scale waste treatment facilities will be considered in 'Industrial Areas' designated as 'Strategic Employment Areas'.

The proposed Ringaskiddy Resource Recovery Centre is located in an industrial area designated as a Strategic Employment Area, in which large scale waste facilities will be considered, in accordance with zoning objective ZU 3-7(b) of the Plan.

The proposed development is a strategic large-scale waste treatment facility. It is strategic as it addresses an identified need in the SRWMP, and of a large scale that is well within the thresholds for hazardous and non-hazardous waste treatment capacity.

In conclusion, the proposed facility may be regarded as warranted from an EU perspective given that its development fulfills the objectives of the newly adopted Circular Economy Package including the amended Directives on Waste and Landfill and a number of regulations pertaining to climate change and energy efficiency.

In addition, it may also be justified from the national policy perspective as it adheres to the requirements laid out in the Southern Region Waste Management Plan, the National Hazardous Waste Plan and may be regarded as a plan-led development, consistent with regional and national planning policy including the newly adopted National Planning Framework.

In light of this policy alignment, planning permission has been granted for the proposed development having regard to the above detailed European policy for waste management, national and regional waste policy and national and regional spatial planning policy.

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