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1.1 Introduction

O'Toole Composting Ltd. (OTCL) currently operates an enclosed tunnel composting facility at Ballinrane, Fenagh, Co. Carlow and also a recovery facility for dry recyclables, general skip waste, household waste and construction and demolition waste.

The facility accepts various types of biodegradable waste for composting at the purpose built in vessel composting plant. Best available technology (BAT) has been installed at the facility which has been operational since 2005. Various other waste streams are accepted at the facility for waste transfer. The waste transfer building accepts material for storage and pre-processing prior to removal offsite for further recycling, recovery or disposal. Materials accepted include municipal solid waste, dry mixed recyclables, bulky waste and timber.

The facility operates under Waste Permit number WFP-CW-10-0003-01, (as reviewed by WFP-CW-14-05) issued by Carlow County Council. The site has been in use since the parent permit was granted in 2005. In the time that OTCL has operated at this site the company has continued to develop its operations through the introduction of new and innovative techniques which meet legislative, policy and BAT criteria and continuously seeks to improve the environmental performance of the company's activities. In 2008, OTCL upgraded the existing plant for its composting and installed the best available upgraded technology which it imported from Europe where techniques and practises are considerably advanced. OTCL view the current proposal as the next progressive step in improving and developing procedures on site.

O'Toole Composting Ltd. are applying to Carlow County Council for permission to increase the tonnage accepted at the facility to 60,000 tonnes per annum and for the construction of a purpose built Municipal Bring Centre. This will also require a licence from the Environmental Protection Agency (EPA) under the Industrial Emissions Directive (IED). As part of this application an Environmental Impact Assessment (EIA) has been conducted. Enviroguide Consulting have been appointed consultants to oversee this application process and the EIA.

This Environmental Impact Statement (EIS) has been prepared by Enviroguide Consulting on behalf of O'Toole Composting Ltd. It addresses the potential environmental impacts of the proposed development and proposed mitigation measures.

1.2 Overview of the Proposed Development

O'Toole Composting Ltd. are proposing to expand, develop and upgrade their existing operations at Ballintrane Fenagh Co. Carlow to allow for the following;

- Increase in capacity of composting facility up to 40,000 tonnes per annum
- Construction of new bio-filter for composting building.
- Development of a purpose built Municipal Bring Centre.
- Installation of bio-filter on waste transfer and processing facility (skip shed).

There are two proposed stages to this development. It is proposed that Stage 1 will include the expansion to the composting activities with an increase of permitted tonnage to 40,000 tonnes per annum. Stage 1 will also include the construction of a new bio-filter for the composting building.

Stage 2 includes the construction of a purpose built Bring Centre. This will be developed to allow for the acceptance of various waste streams from local residents including bulky waste, mixed recyclables, wood, metal, WEEE, batteries, textiles and others as deemed necessary. This facility will be open to members of the public. Stage 2 will also include the construction of a bio-filter at the skip shed if deemed necessary by the waste types being accepted.

This EIS will accompany a planning application to Carlow County Council for an increase in tonnage to of 60,000 tonnes per annum and a new bio-filter for the composting building, the construction of a Bring Centre and the construction of a bio-filter for the skip shed.

1.2.1 Need for the Proposed Development

OTCL is committed to the recycling of waste from all sources including Household, Commercial and Industrial, and Construction and Demolition. Currently there is no waste transfer facility in County Carlow for the acceptance of commercial waste. The company is particularly focussed on the recycling/composting of bio-waste, MSW Drying and MBT. With this in mind OTCL wishes to utilise its state of the art technology to capacity and therefore requires an Industrial Emissions Licence to reflect the classes of waste activity and allowable tonnages proposed. By doing this OTCL will contribute significantly to the national composting tonnage capacity available to waste operators necessary to enable the diversion of biodegradable waste from landfill.

OTCL will also have additional capacity to process (stabilise) mechanically separated organics and this will provide waste operators with an outlet for the 'fines' arising from pre-treatment operations. This will contribute to Ireland's efforts to meet EU targets of biodegradable municipal waste (BMW) accepted at landfill for disposal as set out by the EU Landfill Directive (1999/31/EC).

The EU Landfill Directive (1999/31/EC) prescribes a staged reduction in the quantities of biodegradable municipal waste (BMW) allowed to landfill.

The Landfill Directive imposes restrictions on the consignment of certain wastes to landfill. Landfill operators must demonstrate that all waste accepted has been subjected to pre-treatment effective from 16th July 2009 for facilities commenced since 16th July 2001. Article 5 of the Directive sets mandatory targets for diversion of biodegradable municipal waste (BMW) from landfill. It is now mandatory to reduce biodegradable municipal wastes (BMW) going to landfill to 35% of the total amount (by weight) that was produced in 1995 (427,000t) by 2016. An assessment of risk carried out by the EPA in 2012 has found that Ireland is at risk of meeting these statutory obligations. The report also anticipates that municipal waste arising's will increase by 825,000 tonnes (to 3.7m tonnes) within the next 15 years and found that; *"the predicted growth of municipal waste within the coming decade will necessitate investment in waste management infrastructure"*. The report also highlighted the need for much more rapid progress in the provision of sustainable alternatives.

This subject development will provide a vital cog in the wheel of Ireland achieving these mandatory targets by increasing the tonnage of source separated biodegradable material that can be accepted for composting and treatment at the facility. Policy documents from the EU such as *'The Resource Efficiency Roadmap'* and the Governments document *'A Resource Opportunity-Waste Management Policy in Ireland'* highlight a sea change in opinion which now views BMW as a valuable resource with a huge economical potential. They highlight that Ireland must also now plan more fundamentally for alternative approaches that will allow us to effectively eliminate our use of landfill within the next decade. The proposed development will contribute some of the necessary infrastructure required to do this. Through the recycling and composting of organic material at the subject development far more productive products (such as compost) are created then would be the case if the facility did not exist and the material was simply landfilled.

Despite this looming landfill deadline of 2016 the recovery and recycling of organic waste in Ireland is currently well below par. While the most pressing immediate driver must remain compliance with the landfill Directive limits, the DEHLG policy document *Waste Management Policy in Ireland 2012* states that; *'Ireland must also now plan more fundamentally for alternative approaches that will allow us effectively to eliminate our use of landfill within the next decade'*.

If permitted the subject proposal will recycle up to 60,000 tonnes of biodegradable waste and as such will become a significant driver in meeting Ireland's diversion targets and requirement for progressive waste management infrastructure.

1.2.2 Alternatives Considered

Schedule 6 of the Planning and Development Regulations, 2001, sets out the mandatory information that must be contained in an Environmental Impact Statement. Section 1(d) of this Schedule states that; '*an outline of the main alternatives studied by the developer and an indication of the main reasons for his or her choice, taking into account the effects on the environment*'. These main alternatives are not confined to alternative locations and for the purposes of the Regulations alternatives may be described as;

- Alternative Locations
- Alternative Designs
- Alternative Processes

There were three main alternatives considered in terms of the proposed development. These options were as follows;

- 1) A new facility on a Greenfield site.
- 2) The do-nothing scenario.
- 3) The proposed development including alternative layouts.

The key considerations in choosing the alternatives were as follows:

- Guidelines for the location of waste management facilities set out in the National Policy document Waste Management Policy in Ireland: A resource Opportunity 2012, the National Spatial Strategy 2002-2020, and the Joint Waste Management Plan for the South East 2006-2011.
- EPA Guidelines on the information to be contained in Environmental Impact Statements and the Advice Notes on Current Practice
- Proximity & Self Sufficiency Principle (Ireland is obliged by the EU Waste Framework Directive 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)
- Site size and current land use.
- Traffic Considerations (quality of road access).
- Other planning and environmental considerations.

The 2002 EPA Guidelines on the information to be contained in Environmental Impact Statements provides the following advice in relation to examining alternatives which is particularly relevant to the subject site; *'The consideration of alternative routes, sites, alignments, layouts, processes, designs or strategies, is the single most effective means of avoiding environmental impacts.....while for major infrastructure projects the intrinsic suitability of the site is the principal amelioration strategy.'*

In relation to site specific issues the Guidelines further state that the consideration of alternatives needs to be set within the parameters of the availability of land as it may be the only suitable land available to the developer. The availability of land is therefore considered a material consideration in assessing the alternatives for any proposal. In the case of the subject site, not only is a suitable site available but it also has the appropriate services in place.

1.2.2.1 Option 1: A Greenfield Site

The use of a Greenfield site would lead to the introduction of activities into an area where such an operation did not previously exist. The most likely location of such a plant would be somewhere close to the main source of waste i.e. in a large town or city. However, a Greenfield site could not be found which was more suitable than options 2 or 3 in terms of being centrally located and also being close to quality transport corridors.

An analysis was carried out on the basis that the most sustainable option would be that which minimised the tonne-kilometres to the greatest extent, i.e. the lower the number, the more sustainable the option is in terms of truck movements and air emissions from vehicle movements. A location close to a corridor link of cities and large towns would meet this criteria. By locating in Carlow, it is in proximity to Dublin, Waterford and Kilkenny cities that are densely populated thus have large volumes of waste generation, thus providing a central location for the treatment of waste. Subsequently a Greenfield site was not considered appropriate when the above factors were accounted for.

1.2.2.2 Option 2: The Do-Nothing Scenario

The do-nothing scenario would see OTCL continuing operations at the facility as permitted under waste permit WFP-CW-10-0003-01 as reviewed by WFP-CW-14-01. OTCL would continue to accept the permitted amount of biodegradable waste at the site. The acceptance and composting of this volume of waste will aid Ireland in the achievement of targets for the diversion of biodegradable waste from landfill, however the contribution will be minor due to the volume of permitted tonnages accepted on-site.

The site would continue operating at current permitted waste limits while the infrastructure in place would not be utilised to its utmost capacity. The current infrastructure in place has the capacity to process 40,000 tonnes per annum which, if utilised, would provide much needed additional waste management infrastructure. It would also address the current dilemma requiring outlets for biodegradable waste collected from source segregated organic bin collections and for the acceptance of organic fines that have been segregated from MSW

during the mechanical pre-treatment process in order to meet EU targets, relating to biodegradable waste accepted at landfills as laid out in EU Landfill Directive (1999/31/EC).

There is an urgent need for waste management infrastructure to enable Ireland to meet its EU and national targets on the diversion of BMW from landfill. OTCL's proposed development will contribute towards fulfilling this requirement. The proposal will result in a significant increase in bio-waste composting and stabilisation capacity in the South East Region, in line with the specific policies and objectives as set out in the DOEHLG national policy document '*Waste Management Policy in Ireland: A resource Opportunity 2012*'.

A do-nothing alternative will result in no contribution from the proposed facility to meeting Ireland's targets for the diversion of biodegradable waste from landfill. This will exacerbate the existing waste management crisis. The consequence of which for Ireland is huge financial levies.

1.2.2.3 Option 3: The Current Proposal (the preferred option)

The current proposal will increase the capacity of waste that can be accepted for composting or for waste transfer at the facility. It will assist in addressing the urgent need for waste management infrastructure to enable Ireland to meet its EU and national targets on the diversion of BMW from landfill.

The location of the proposed development in its current location adjacent to the N80 Carlow to Wexford road will have the following advantages;

- The existing land use policies for the site support the development of the subject application and subsequently there are no non-conforming land uses immediately surrounding the site. Most importantly the subject site is fundamentally suitable for the location of the proposed development.
- It is in close proximity to a large customer base, both from the South East Region and from the Greater Dublin Area. The proximity (ca. 6km) of the M9 Dublin to Waterford motorway means ease of access from significant customer base.
- Its location on the site of the existing facility will mean that existing infrastructure can be utilised to maximum capacity without the need for major structural development.
- The existing site already has good quality infrastructure in place such as roads, services (water and foul sewers), and telecommunications to support the subject development.
- Construction at the facility will be limited to the construction of a bio-filter for the skip shed an airlock at the composting building and construction of the Bring Centre facility. The former two will improve the environmental performance of the site while the latter will provide additional recycling capacity to the public.

Figure 1: Site Location Map

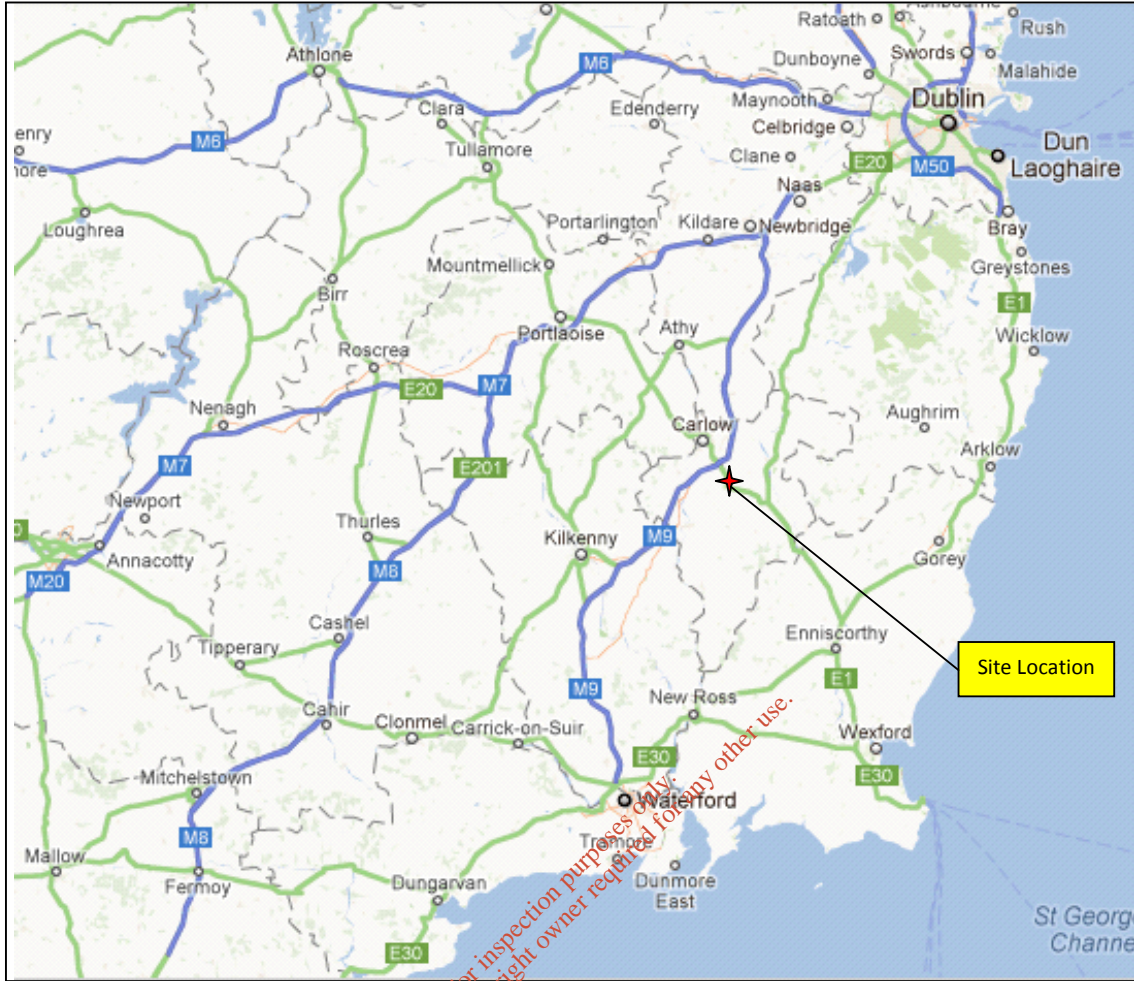
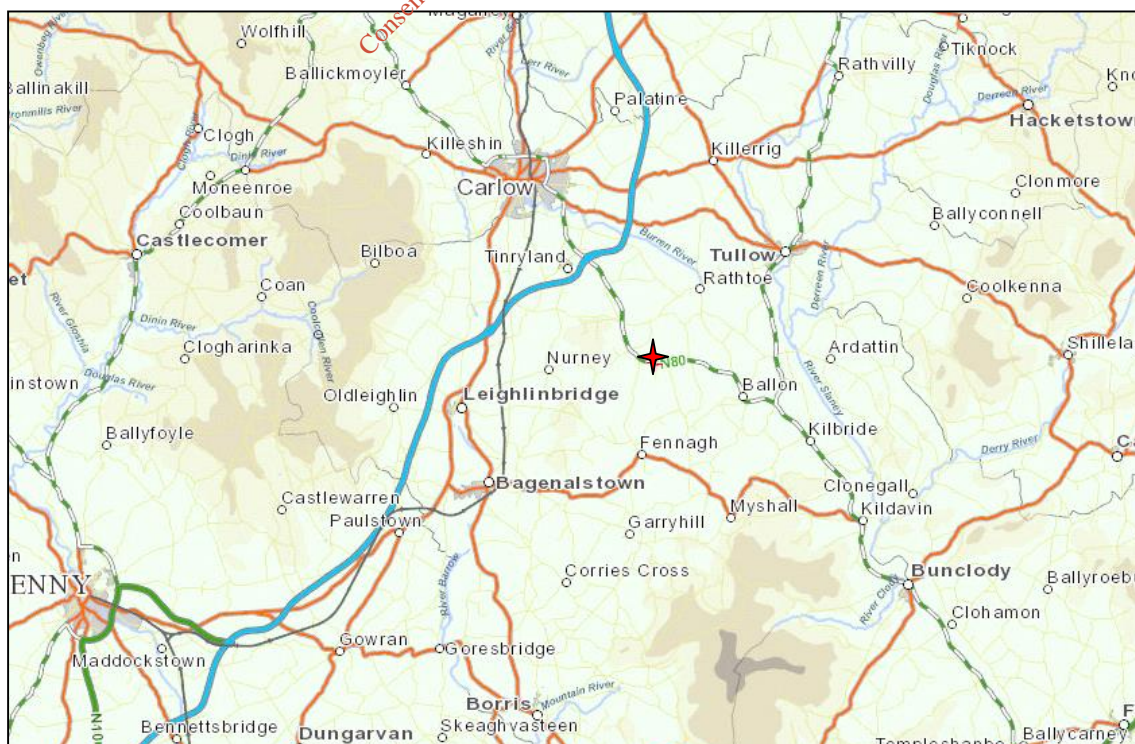


Figure 2: Detailed Site Location Map



1.3 Site Description

The subject site is located in the town land of Ballintrane, Fenagh, Co. Carlow. The site which is 4.87 hectares is located in a rural area where the predominant land use is for agriculture. The closest dwelling located 170 meters south of the facility, Figure 3 below identifies the site boundary in red and delineates the surrounding land use and nearby residences.

The site itself was historically used as agricultural land until it was developed by O'Toole Composting as a composting facility in 2005. Currently the facility operates under Waste permit reference Number WFP-CW-1-0003-01, which was granted by Carlow County Council on the 3rd of August 2010. This permit has been reviewed by Carlow County Council and the current permit for the facility is now WFP-CW-14-5. Various planning permissions have been granted for the facility as listed in Table 1.

Figure 3: Site Location Demonstrating Agricultural Surrounds



The site is well serviced with road networks. The site is located directly off the N80 Carlow/Rosslare Road, approximately 6km south east of the M9 Dublin/Waterford Motorway. The main entrance of the facility is located at the north-west corner of the site, just off a local access road Jocks Lane, which runs perpendicular to the main N80 roadway. Sufficient sightlines are at either side of the access lane for safe access and egress to the facility.

The entrance to the site is paved in concrete hard stand. The concrete hardstand also extends around the waste storage and processing buildings. The perimeter of the facility is

screened by hedgerows and a planted berth at the north east of the site which screens the facility from surrounding dwellings and the roadway. The eastern perimeter of the site is bounded by a stream which leads into the Burren River.

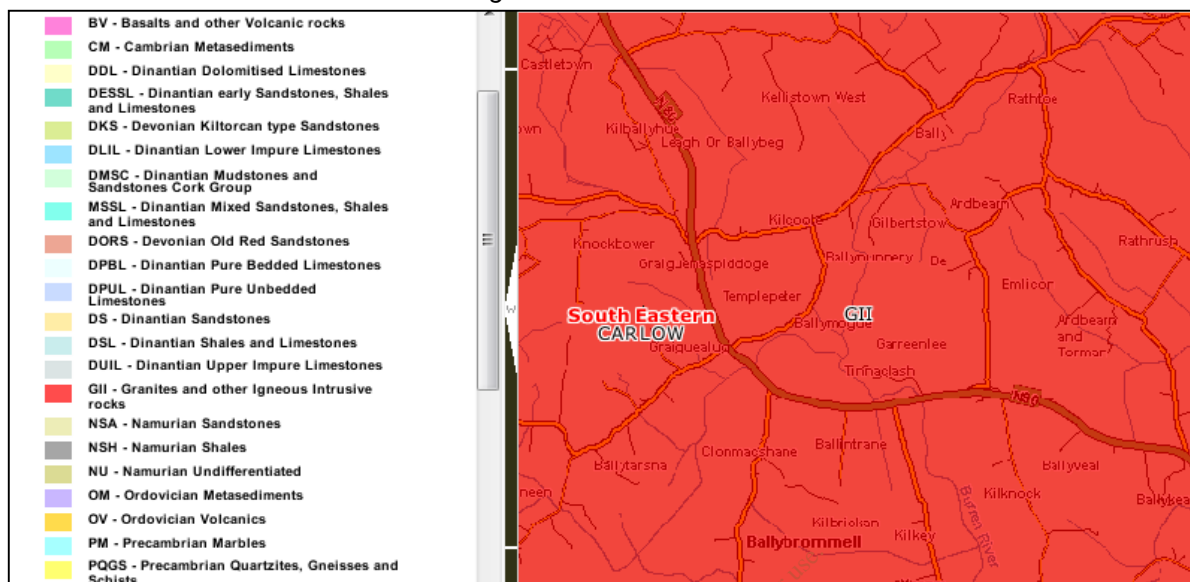
To the west, the site is bounded by local access lane, Jocks Lane. The south of the facility is bounded by agricultural land with the N80 roadway bounding the north of the facility. The east of the facility is bounded by agricultural land which is detached from the facility by a local stream.

Table 1: Planning Permissions Granted

Planning File Reference	Applicant	Development	Date of Decision
03314	Patrick O'Toole	Construction of an in-vessel tunnel composting facility, weigh bridge, offices, site entrance, all site development infrastructure works, ancillary services & associated site works. 04/09/2003	04/09/2003
04378	Patrick O'Toole	To make limited modifications to previously granted planning permission (03/314 and A.B.P. 01.204497) to construct wheel wash, access hall, conveyor hall and to relocate plant room. The proposed development remains within the curtilage of the permitted development site	28/07/2004
05575	Patrick O'Toole	Construction of a bio filter at existing composting facility	15/09/2005
06668	O'Toole Composting Ltd	For 1) Storage building, 2) Bio Filter, 3) Enclosed unloading bay	04/10/2006
08321	O'Toole Composting Ltd	Recycling/storage facility	21/08/2008

The bedrock in the underlying area of the facility is that of granite and other igneous intrusive rocks as shown in Figure 4 below and as detailed further in Section 3.8. Refer to the key on the left hand side which denotes the Granite and Igneous Rocks in red.

Figure 4: Bedrock Data



1.3.1 On-Site Infrastructure

Principal on-site infrastructure consists of one large industrial building and one smaller industrial building both with associated plant. The composting building is the larger of the two buildings on-site. The composting building consists of concrete walls and corrugated industrial metal sheeting to raise the overall ridge height of the building which has an apex roofing. This building houses the composting process plant.

The building itself is divided into three main sections in order to comply with Animal By-Products (ABP) Regulations. The waste acceptance area is accessed by a roller door. Waste is initially shredded using a Doppstadt 3060 slow speed shredder. Oversize from previous composting batches is stored in this building and mixed with fresh incoming waste. From the waste reception area fresh waste is loaded into the delivery bay on a daily basis. This material is removed from the delivery bay after 2-6 days by use of a Volvo L60E loading shovel.

All materials removed from the delivery tunnel are loaded in tunnel 1 or 3, depending on capacity in the tunnels, where the material is composted for 7 days. After 7 days the material is moved to tunnel 2 for a further 7 days. These tunnels make up the second section of the building.

The inside dimensions of the tunnels are 30 x 6 x 5 meters and are controlled by the GICOM Composting System which control the fresh air intake, temperature and moisture levels within the tunnels. A detailed process description is outlined in Attachments D.1 and D.2 of the main application form.

The maturation and curing area is connected to the waste reception area by the composting tunnels only. Composted material is removed from the composting tunnels via the rear door of the tunnels using a Volvo L70F loading shovel. The maturation area is the third section of the main composting building. Compost is screened in this building using a Doppstadt SM 720 trommel screen.

A negative air pressure system and bio-filter bed is in operation in this building. It is proposed to construct a new bio filter at the rear of the maturation building for which planning permission is currently in place.

Leachate water from the process is diverted to an underground sump and is re-used in the tunnels once it is circulated back into the scrubber. There is no waste water surplus. In the event that there is surplus waste leachate, it will be tankered offsite to an approved waste water treatment plant.

The waste transfer (skip) shed is the smaller of the two buildings on-site. This building is constructed with concrete walls and corrugated steel cladding which is built up to the apex roofing. This building is 70ft x 200ft.

Currently the building contains bays for the segregated storage of waste and recyclables. It is proposed to install roller doors. It is also proposed to install a bio-filter in this building should it be deemed necessary. There is a picking station which is used for the pre-treatment of municipal solid waste on-site prior to landfill in order to meet the requirements of the EU Landfill Directive.

Wood is shredded at the wood bay adjacent to the waste transfer building. A Doppstadt AK300 shredder is used for this process. The perimeters of the waste buildings are paved in concrete hardstand which acts as an impermeable barrier for the protection of groundwater. It is proposed to increase the area of the concrete hardstand on a phased basis over the forthcoming years so that the entire site will be paved in concrete hardstand.

Runoff from the site is diverted to the surface water which is discharged to the stream along the eastern boundary of the site and flows into the Burren River. It is proposed to install a Class 1, full retention oil interceptor at the facility so that all runoff water will be diverted to the interceptor prior to discharge. The only foul water from the site is from the facility offices, which is diverted to the on-site septic tank.

The site is also serviced with a pit mounted weighbridge, associated offices with telecommunication and welfare facilities. The site is serviced with electricity from the National Grid. Water for the facility is supplied from the on-site well. The water supply is sufficient to cater for the peak demands of the facility without having an impact on the surrounding local water supplies. Water holding tanks have been installed at the facility in the event of water being required for the process or in the event of a fire. All firewater runoff from the composting shed can be retained in the leachate sumps and can be tankered offsite.

1.4 Current On-Site Practices

1.4.1 General Overview

O'Toole Composting Ltd. currently operate a composting facility, waste recycling building and a Municipal Bring Centre at their site located in Ballinrane, Co. Carlow. At present this facility is permitted by Carlow County Council under waste facility permit WFP-CW-10-0003-01 as reviewed by WFP-CW-14-5.

The principal activity at the facility is the reception, storage and biological treatment of bio-waste. The composting plant is approved by the Department of Agriculture, Fisheries and Food for Animal By-Products (ABP) approval reference COMP-24.

The facility is also permitted to accept skip waste which is segregated into single streams of recycled material prior to transfer offsite for further recovery. Various types of skip waste are permitted to be accepted at the facility including paper, cardboard, plastics, timber, metals, C&D waste, soil & stones, glass, textiles, municipal waste and bulky waste.

1.4.2 Process Operations Summary

All materials entering the facility are accepted at the facility in accordance to the EMS waste Acceptance procedure (EMP005). Materials are inspected upon entry to the facility where possible and directed to the facility weighbridge. Prior to entry to the waste buildings details of the load are recorded on the Genesys weighbridge software system, including vehicle registration, waste type, EWC code, date, time, haulier, customer and the gross weight of the load. Once these details have been recorded the driver is directed to the correct tipping area for the particular waste type.

Once the waste has been tipped in the waste inspection area, has been subject to inspection and considered to be acceptable the driver is directed back onto the weighbridge for second weighing after the vehicle has been washed if necessary. Once the vehicles un-laden weight is recorded a nett weight is generated and a ticket is printed. Tickets for biodegradable waste are printed on triplicate dockets. One copy is given to the driver, one is retained for invoicing and one is placed in the folder as records for inspection from regulatory bodies such as the County Council; Department of Agriculture, Fisheries and Food or the EPA.

1.4.2.1 Skip Waste

When a skip is ordered, the receptionist will inform the customer of the non-acceptable waste types prior to delivery of the skip to prevent against unauthorised waste being placed in the skip. On collection of the skip the driver will briefly examine all visible materials in the skip to ensure that all wastes are acceptable. If unacceptable waste are noticed in the skip the driver will inform the customer and the items will be removed prior to collection. If all visible wastes are found to be acceptable, the skip is covered with a net and transferred back to the facility.

Upon entry the vehicle is weighed as per above. The driver is directed to the waste transfer building where the skip is tipped in the waste inspection area. The waste is inspected upon

tipping by the Manager or by the nominated deputy that has been trained in the waste acceptance practices.

If waste is found to contain mainly unacceptable waste the material is loaded back into the skip and rejected from the facility. The driver will be diverted to an appropriately permitted or licensed facility with the skip. All rejected loads will be recorded on the EMS Waste Rejection Form (EMF017).

If the material is found to contain mild contamination with some unacceptable items that do not contaminate the whole load of waste, the unacceptable items will be segregated from the waste load and stored in the waste quarantine area on a temporary basis. The load of waste will then be accepted. After acceptance of the load at the facility the driver will be directed back to the facility weighbridge.

Mixed waste is stored in the segregated bays in the waste transfer building including mixed municipal waste, dry mixed recyclables and mixed bulky waste. Additional bays are designated for segregated waste streams including metals, wood, mixed waste, cardboard, rubble etc.

The processing plant installed at the waste transfer station comprises a feed hopper which leads to a windshifter for the recovery of plastics, a picking line for the recovery of aggregates, timber and paper and a magnet for the recovery of ferrous metals. The remainder is then shredded and sent offsite to be manufactured into refuse derived fuel (RDF).

1.4.2.2 Wood Waste

Wood is directed to the wood storage bay once weighed on the facility weighbridge. The wood is tipped in the waste inspection area and if found to be clean and untreated (e.g. wooden pallets) it is stored in the wood storage bay where it is shredded on-site using a Doppstadt shredder. Wood chip that is produced on-site is used in the composting process. Any treated wood is mixed with bulky waste and transferred offsite for processing.

1.4.2.3 Municipal Bring Centre Waste

Civic amenity facilities at the subject site are limited at present. Civic amenity waste is currently tipped in the waste transfer building where it is bulked up prior to transfer offsite. It is proposed to upgrade the existing civic amenity facilities at the site. The upgrade includes a new layout for the proposed Bring Centre which will be accessed by the public via a designated entrance which is located after the site weighbridge.

It is proposed to have skips on-site for the storage of source segregated waste streams such as wood, cardboard, metal, WEEE, textiles, general waste, dry mixed recyclables and batteries. Skips from the Bring Centre will be emptied inside the waste transfer building after public opening hours where the materials will be bulked prior to transfer to recycling or recovery facilities.

1.4.2.4 Biodegradable Waste

If biodegradable waste is delivered to the facility the driver will be directed to the composting shed. This waste will be tipped on the waste inspection area on the floor of the intake building. Provided that the material is of acceptable quality the driver will return to the weighbridge for second weighing. If the load is found to be unacceptable, contaminated or not of suitable quality the material will be reloaded onto the delivery vehicle and rejected from the facility.

Acceptable biodegradable waste is inspected prior to being loaded into the Doppstadt DW3060 Shredder. The biodegradable waste is then mixed with the screen area overflow and loaded into the composting tunnel via the Volvo loader.

Biodegradable waste is loaded into the delivery bay on a daily basis where the composting process begins. The material is moved from the delivery bay onto the composting tunnel after two to six days by use of a loading shovel. The material is primarily composted in the first composting tunnel for seven to ten days and the process is repeated in another tunnel.

After the tunnel has been filled with compost feedstock the door is closed and the tunnel climate control program is initialised. The composting tunnels will be managed with respect to temperature and moisture to optimise the process, attain pathogen reduction requirements, and meet the process objectives by use of SICOM controls system.

After tunnel filling, fresh air intake from the working area is integrated with the tunnel aeration. The fresh airstream to the tunnels is drawn from the waste reception area via an overhead ductwork system with managed controls. This system takes the air out of the building on a variable air quantity basis. Air is drawn from building space by a dedicated variable speed blower and controls. The fresh airstream is measured with an air flow transmitter and regulated with a damper.

The aeration process begins when a variable speed blower associated with the tunnel starts operating and air is pushed into the aeration floor system within the tunnel. Air is blown via the air hose, into the plenum located in the floor of each tunnel and into the floor piping system. The air is circulated through the organic material and from the head-space into the external circulation loop ductwork through the open circulation damper, back through the blower and finally back to the plenum.

As the air enters the plenum, the following parameters are measured in what is referred to as the Input Airstream:

- Air temperature
- Oxygen concentration
- Air pressure
- Air quantity

The temperature of the composting matrix is measured at various points within the tunnel. Other parameters are measured directly outside of the confines of the tunnel, prior to the damper in the recirculation loop ductwork. This is referred to as the Return Airstream. At this point the air temperature and air quality of the total air stream are measured.

Air stream parameters are continuously monitored by the GICOM process computer software. The software is programmed to control certain variables at certain pre-determined times or points in the course of the tunnel cycle. The speed of the blower and the circulation rate can be manipulated to maintain the desired conditions in the compost.

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Figure 5: GICOM Software

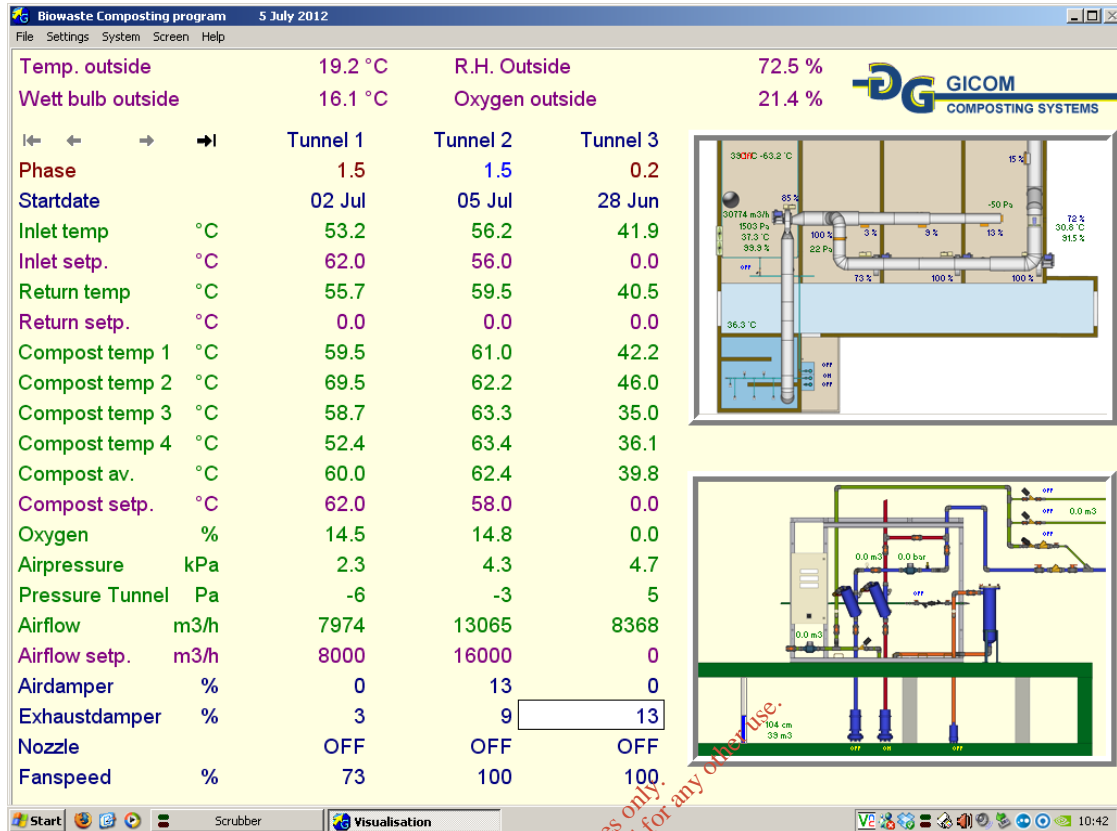


Figure 6: GICOM Software

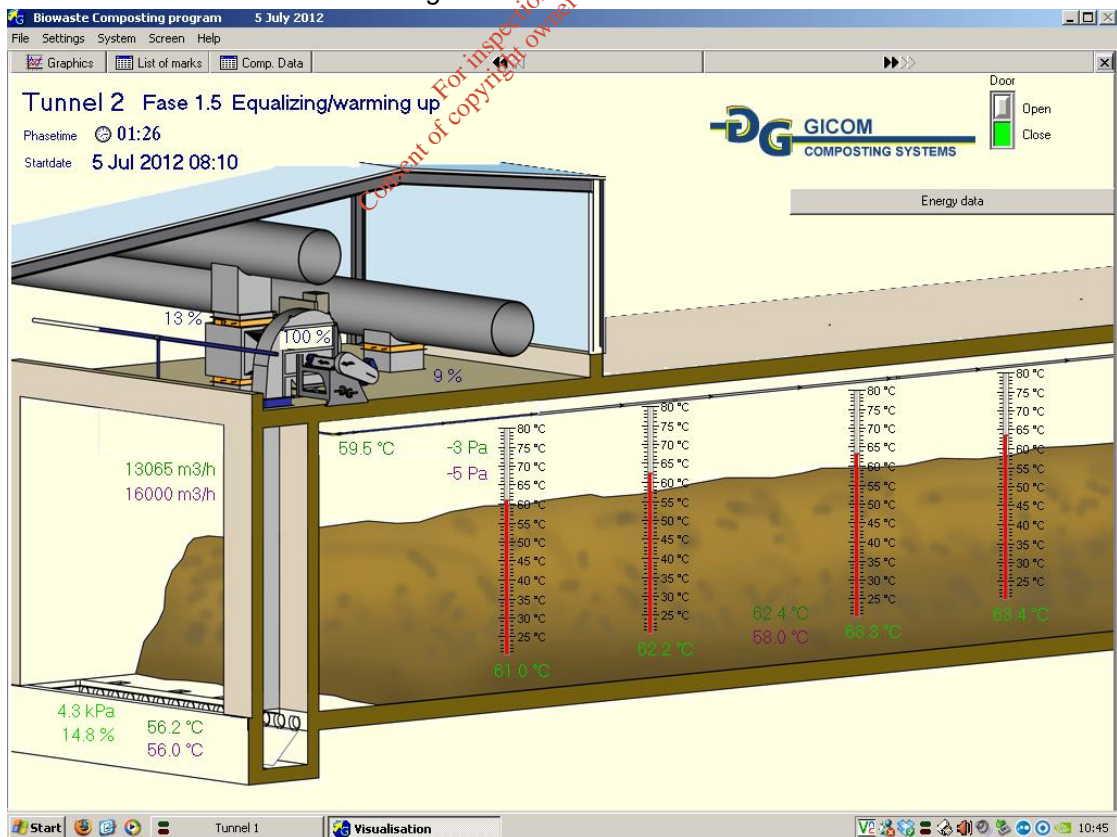


Figure 7: GICOM Software

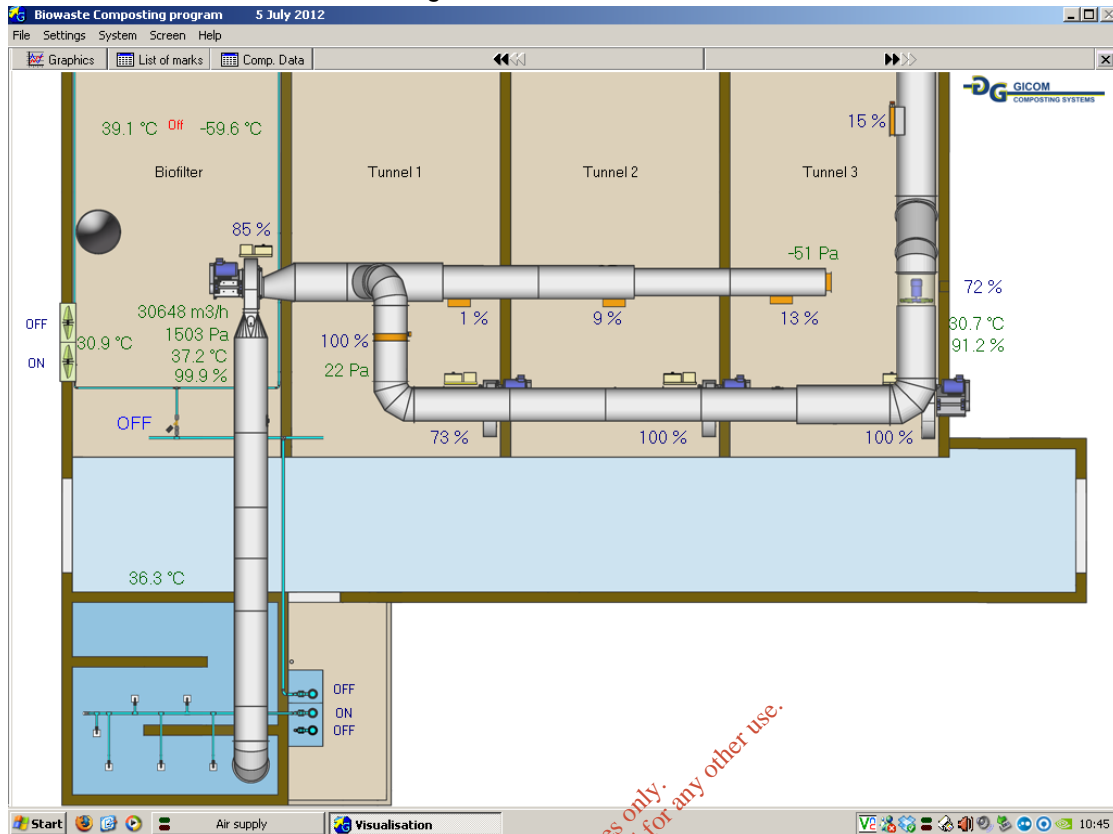
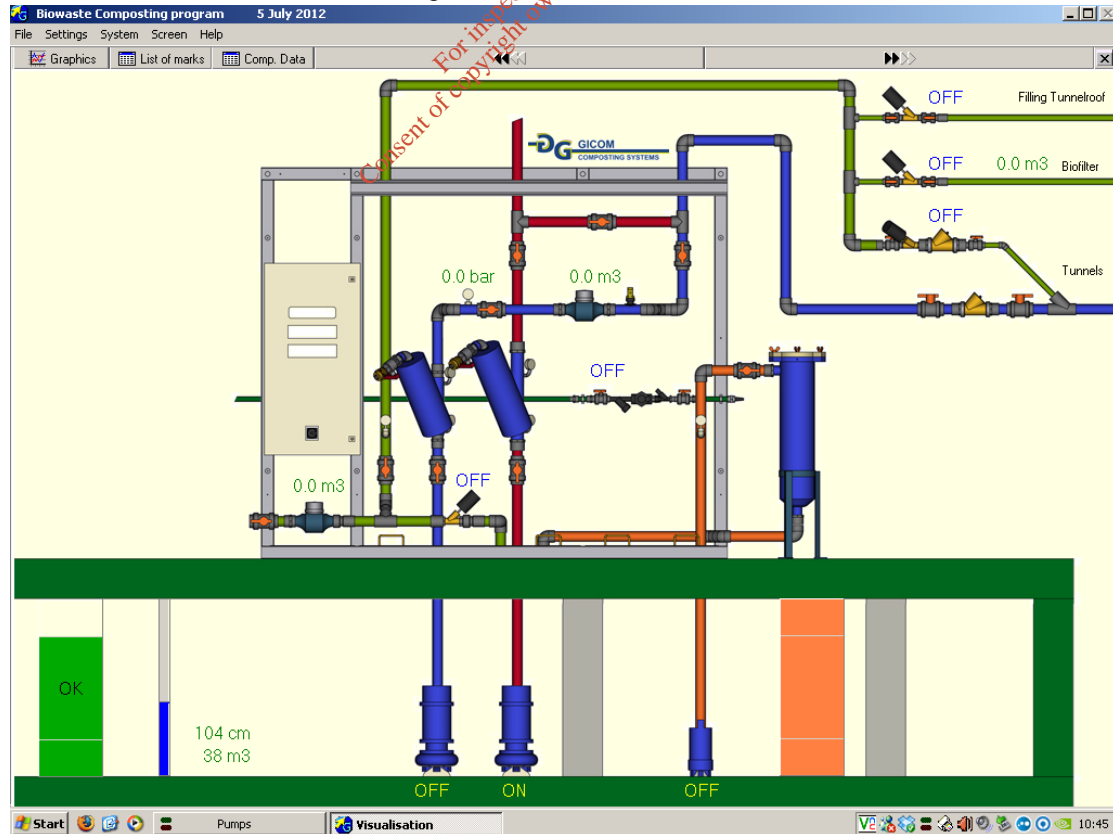


Figure 8: GICOM Software



Once aeration has taken place in the delivery and composting tunnels, material from the tunnel is discharged via the back door so that the material can be screened. The oversize fraction is circulated and mixed with fresh incoming waste, so it can break down further. The undersize fraction is transferred to the maturation floor. The composted material is left on the maturation floor for five to seven weeks to cure.

The processed air exhausted from the tunnels, referred to as the Overpressure Airstream, is transported into the central overpressure duct, which connects and handles the exhaust air from the different tunnels. The overpressure duct is equipped with several safety devices to prevent damage to the system. This outgoing process air which is centrally collected, is moisturised and blown through a biofilter.

Leachate runoff from the compost tunnels is diverted via floor aeration piping that is led to a drain that leads to a collection sump. Overflow from the sump leads to a collection tank as a mitigation measure. However leachate is in general not diverted to the collection tank as all leachate is re-circulated back into the composting process so there is no waste water from the process.

1.4.2.5 Municipal Solid Waste

Municipal Solid Waste is accepted at the facility primarily from kerbside waste collections or from waste compactors. This waste is bulked up in a storage bay until an appropriate amount is accumulated for drying. It is then shredded and placed into a composting tunnel. Once in the tunnel it is retained there until it is dry – approximately 14 days. It is then screened and the mechanically separated organic material removed. This material can be used for landfill cover. The remaining material (non-organic fraction) is sent off site for recovery into RDF (Refuse Derived Fuel) or landfilled.

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Figure 9: Biodegradable Waste Process

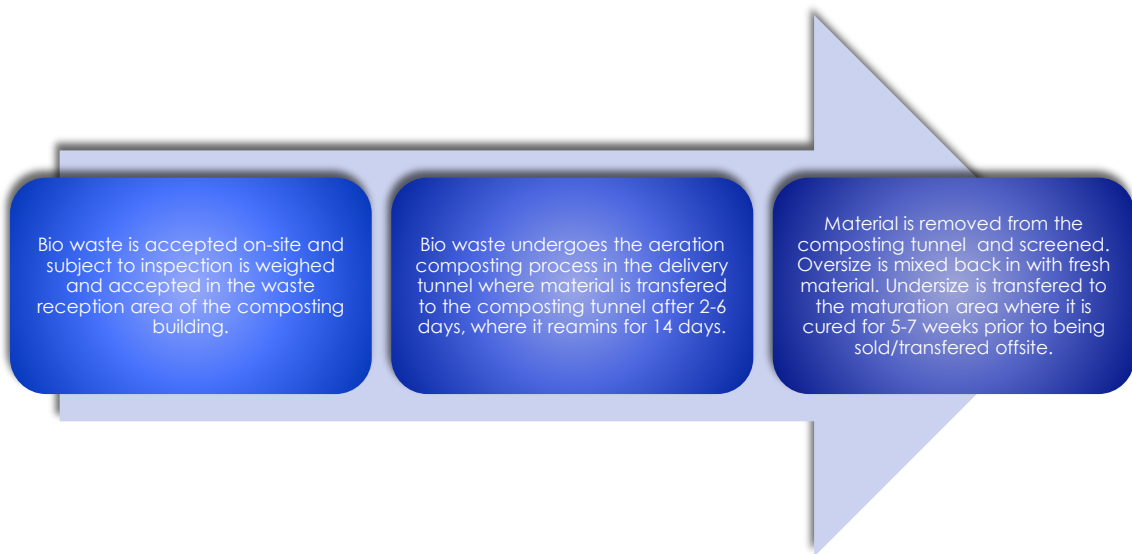


Figure 10: Mixed Skip Waste Process

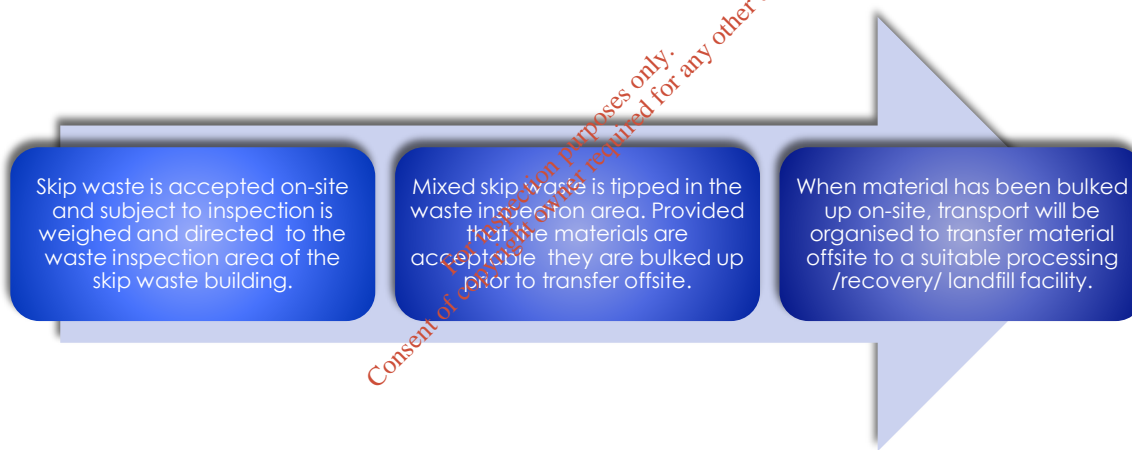


Figure 11: Untreated Wood Waste Process



1.5 Planning and Policy Content

Ireland's planning system was introduced in 1964, when the Local Government (Planning and Development) Act, 1963 came into effect. This is the primary piece of planning legislation in Ireland, including the Amendment Acts in 2001 and in 2010. Secondary legislation includes the Planning and Development Regulations, most recently amended in 2013.

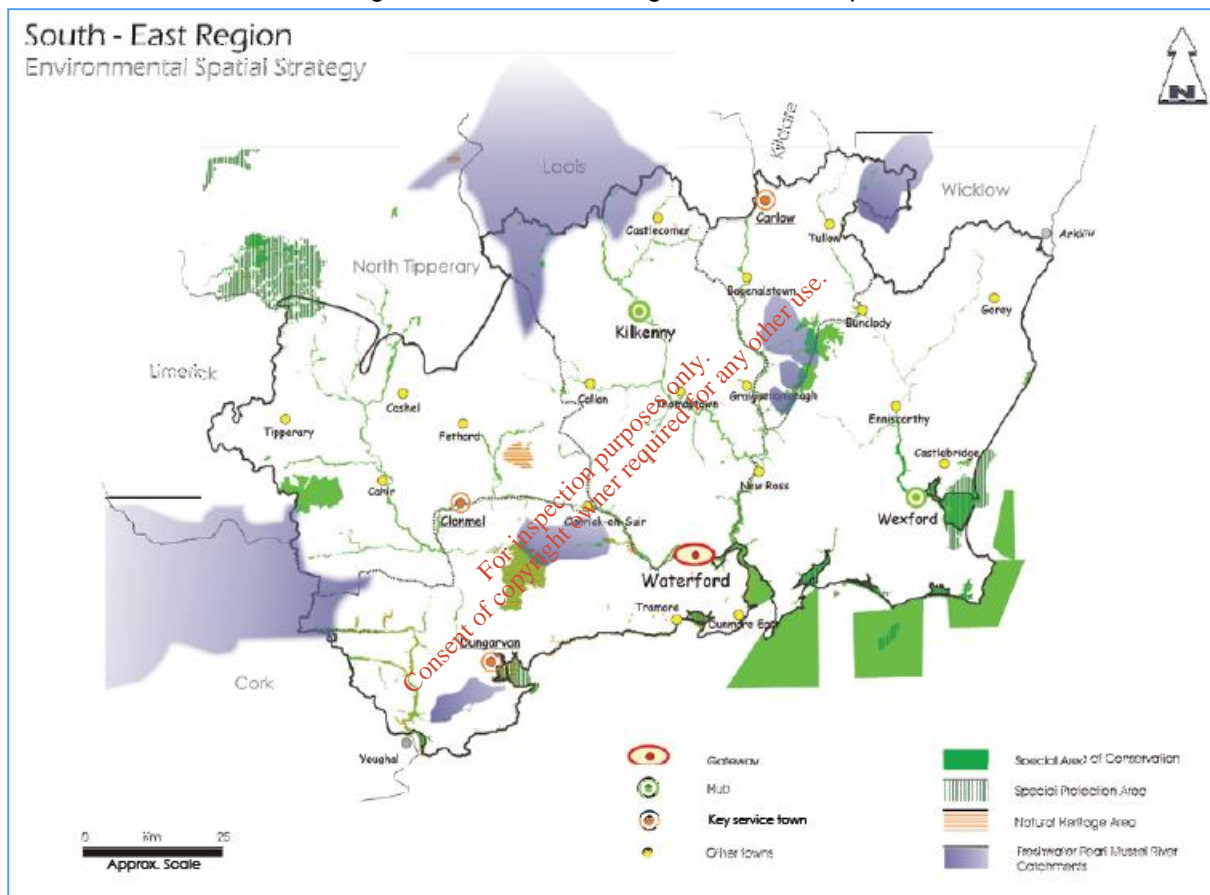
1.5.1 National Spatial Strategy 2001-2020

The National Spatial Strategy (NSS) is a coherent national planning framework for Ireland for the next 20 years. The NSS aims to achieve a better balance of social, economic and physical development across Ireland, supported by more effective planning. In order to drive development in the regions, the NSS proposes that areas of sufficient scale and critical mass will be built up through a network of gateways and hubs. The Strategy states that it is about people, places and potential and making the most of cities, towns and rural places to bring a better spread of opportunities, better quality of life and better places to live in.

The NSS has identified strategically located, medium-sized "hubs" which will support, and be supported by, the gateways and will link out to wider rural areas. The hubs identified are Cavan, Ennis, Kilkenny, Mallow, Monaghan, Tuam and Wexford, along with the linked hubs of Ballina/Castlebar and Tralee/Killarney, working together to promote regional development in their areas. The role of the gateways acting at the national level, together with the hubs acting at the regional and county levels, needs to be partnered by the county towns and other larger towns as a focus for business, residential, service and amenity functions. The NSS also identifies an important need to support the role of smaller towns, villages and rural areas at the local level.

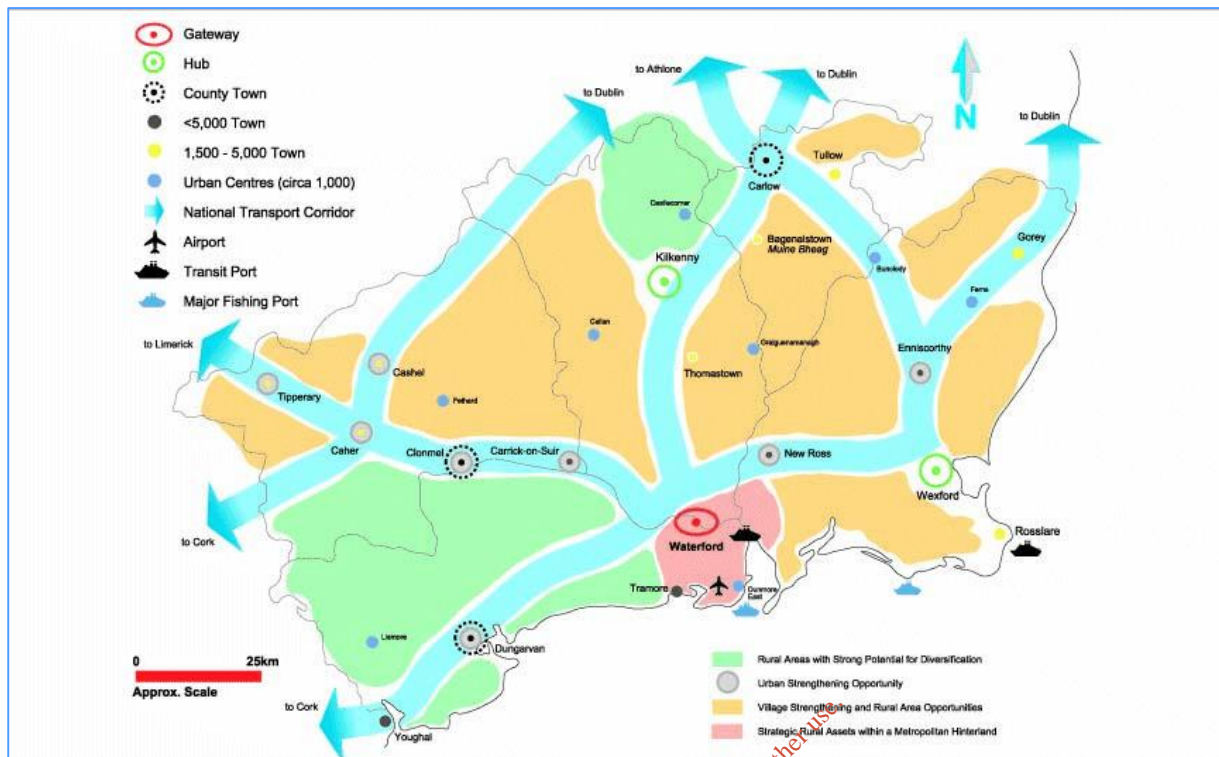
As can be seen from the site location maps in Figure 11 and Figure 12 O'Toole Composting is in a central location off the national transport corridor, a county town which links the gateways of Waterford and Dublin and the hub towns of Kilkenny and Wexford.

Figure 12: South East Region Location Map



(Source NSS)

Figure 13 South East Region Transport Corridor



(Source NSS)

1.5.2 Regional Planning Guidelines

Regional Planning Guidelines (RPGs) were first adopted in March 2004 as a key implementation mechanism of the Government’s overall framework for achieving more balanced regional development and more strategic physical and spatial planning – the 2002 National Spatial Strategy (NSS). The principal function for RPGs is to link national strategic spatial planning policies to the planning process at City and County Council level by co-ordinating the Development Plans through the Regional Planning Guidelines.

The enactment of the Planning and Development (Amendment) Act 2010 provides a statutory link between Regional Planning Guidelines (RPGs) and the National Spatial Strategy (NSS). There is a requirement in the new legislation that RPGs be prepared in order to support the implementation of the NSS. In addition, it is a requirement that RPGs must be set within the policy framework of the NSS.

The 2010 Act is also designed to ensure a closer alignment between the NSS, RPGs, development plans and local area plans. A key element in the Act is the introduction of a requirement for the inclusion of an evidence-based “Core Strategy” in local authority development plans which will provide information to demonstrate how the development plan and the housing strategy are consistent with RPGs and the NSS. The Core Strategy must also provide the policy framework for local area plans (LAPs), particularly in relation to zoning at LAP level.

1.5.3 South-East Regional Planning Guidelines 2010-2022

The South-East Regional Planning Guidelines 2010-2022 covers Waterford City and Counties Carlow, Wexford, Kilkenny, South Tipperary and Waterford. This document states that it is an objective of the Regional Authority to support the implementation of the Joint Waste Management Plan and it will support the review of the Plan to ensure that its recommendations and objectives comply with the Regional Development Strategy for the South East.

The Plan also states that the Local Authorities in the region should ensure that the majority of the recycling and recovery infrastructure recommended in the Joint Waste Management Plan be provided before 2013.

1.5.4 Carlow County Development Plan 2009-2015

The Carlow County Council Development Plan sets out strategic policies and objectives for the proper planning and sustainable development of the County from 2009 to 2015. Many relative aspects relating to the proposed development are addressed within the plan as summarised below:

Air Quality-The National Climate Change Strategy 2007-2012 emphasises that reducing greenhouse gas emissions will benefit air quality. The role of Carlow County Council is to protect, enhance and control air and noise pollution and to ensure the provision of the highest standards. The Council supports the Polluter Pays Principle and will have regard to the Local Government (Planning and Development) General Policy Directive 1988 (as amended) and any regulations (such as the Smokeless Fuel Regulations and Solvent Regulations) issued by the Minister for the Environment relating to air quality standards nationally.

Noise and Dust - Excessive noise and dust levels can have an adverse impact on the county's environment. This Development Plan states that the Council will seek to minimise noise through the planning process by ensuring that the design of future developments incorporate measures to prevent or mitigate the transmission of noise and vibration, where appropriate.

Water Quality - The Council is responsible for the protection of all waters including rivers, lakes, estuarine waters and groundwater. The work includes implementation of pollution control measures, licensing of effluent discharges, implementing and monitoring compliance with environmental legislation, and drawing up pollution contingency measures.

Waste Management - The local authorities of Carlow County, Kilkenny County, Waterford City and County, Wexford County, and South Tipperary County have prepared a joint Waste Management Plan for the South East Region which sets out the policies and objectives for waste management.

Waste Infrastructure - Under the Waste Management Plan, a 3 bin collection system is mandatory since 2009 throughout urban areas greater than 1,000 persons for household,

industrial and commercial waste or as otherwise determined by the Region. This third collection bin will be utilised to collect bio-waste.

1.6 Environmental Policy

1.6.1 EU Policy

1.6.1.1 EIA Directive

The EIA Directive (85/337/EEC) is in force since 1985 and applies to a wide range of defined public and private projects. The EIA Directive was amended in 1997, 2003 and 2009 by Directives 97/11/EC; 2003/35/EC and 2009/31/EC. The EIA Directive requires environmental impact assessments to be carried out for certain projects as listed in Annex I of the Directive. The EIA Directive, and amendments, are transposed into Irish law through the Planning and Development Acts 1996 to 2010. An EIA is required for this proposed development as the proposed annual tonnages exceeds the threshold of 25,000 tonnes per annum.

1.6.1.2 EU Waste Framework Directive and European Community (Waste Directive) Regulations 2011

The Waste Framework Directive 2008/98/EC was applied on the 12th December 2010 and introduced new provisions in order to boost waste prevention and recycling as part of the waste hierarchy and clarifies key concepts namely, the definitions of waste, recovery and disposal and establishes a legal framework for the treatment of waste both in Europe and Nationally. The WFD made it mandatory for member states to implement a five-step waste hierarchy instead of the out dated six steps and obliges Member States to move towards self-sufficiency. It also requires Member States to establish an integrated and adequate network of waste disposal installations and installations for the recovery of mixed municipal waste. This Directive was transposed into Irish Law by the European Communities (Waste Directive) Regulations 2011, S.I. No. 126 of 2011. The WFD encourages the source separation of bio waste with a view to composting. It also encourages the treatment of bio-waste in order to produce environmentally sound compost and other bio waste by products.

This is outlined in Article 22 of the Directive and Part 3, Section 38 of the Regulations, which states that measures shall be taken to encourage:

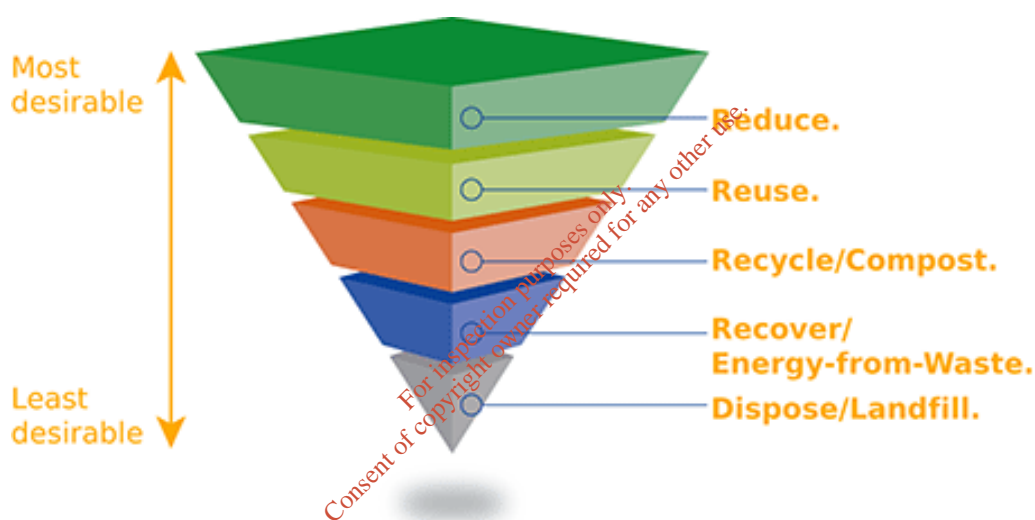
- *"the separate collection of bio-waste with a view to the composting and digestion of bio-waste;*
- *the treatment of bio-waste in a way that fulfils a high level of environmental protection;*
- *the use of environmentally safe materials produced from bio-waste"*

This proposed development will continue to contribute significantly to the national composting tonnage capacity available to waste operators and by doing so will enable a

greater tonnage of biodegradable waste to be recycled. Recycling is defined in the Waste Framework Directive as any recovery operation by which waste materials are reprocessed into products, materials or substances whether for the original or other purposes. It includes the reprocessing of organic material but does not include energy recovery and the reprocessing into materials that are to be used as fuels or for backfilling operations.

Section 21(A) of the Waste Management Act has been amended by the European Communities (Waste Directive) Regulations 2011 which updates the waste hierarchy which is represented in Figure 12 below. In order of priority waste must be prevented, prepared for re-use, recycled/composted, recovered (including energy recovery) or disposed. This proposed development is in line with the new waste hierarchy as it is promoting the recycling and composting of organic waste. It is also diverting materials from disposal to landfill.

Figure 14: Waste Hierarchy 2011



1.6.1.3 EU Landfill Directive

Directive 1999/31/EC of the 26th of April 1999, sets out the criteria for the landfill of waste. This Landfill Directive requires Member States to reduce their dependence on the landfill of municipal waste in support of more environmentally sound alternatives.

Article 5 of this Directive requires Member States to prepare a National Strategy for the implementation of the reduction of biodegradable waste going to landfills which will set out measures aimed at source segregated collections, recovery and recycling of biodegradable waste. It states that the strategy should include measures to achieve diversion targets by means of recycling, composting, biogas production of materials/energy recovery.

Article 5 of the Directive also sets out targets in relation to the progressive diversion of biodegradable municipal waste (BMW) from landfill. The limitations in respect to the tonnages of bio waste that can be accepted at landfills are based on a percentage proportionate to the tonnages of biodegradable waste produced in 1995. The diversion

targets are gradually staged with each possessing a more stringent obligation in relation to diversion. The target for Ireland in 2016 is that BMW waste going to landfill must be reduced to 35% of the total quantity (by weight) of the BMW waste produced in 1995 (427,000 t). An assessment of risk carried out by the EPA in 2012 has found that Ireland is at risk of meeting this statutory obligation.

This proposed development will provide a necessary cog in the wheel of Ireland achieving these targets by increasing the tonnage of source separated biodegradable waste that can be accepted for composting and treatment at the facility. The facility also proposes to accept 'organic fines' for stabilisation. Organic fines are the organic fraction that has been mechanically separated from municipal solid waste during the pre-treatment of waste prior to landfill.

1.6.1.4 The Resource Efficiency Roadmap

This is part of the Europe 2020 strategy for a smart, inclusive and sustainable economy in the EU. It is one of the main building blocks of the resource efficiency flagship initiative and sets out a framework for the design and implementation of future actions. As part of this process a review of Waste Policy and Legislation is currently underway. A primary objective is to develop new products and services and to find new ways to reduce inputs, minimise waste, improve management of resource stocks, change consumption patterns, optimise production processes, management and business methods and improve logistics. The strategy intends to lay the ground work for more effective design of waste legislation that promotes further the principle of the waste hierarchy to remove any ambiguity and improve legal certainty, thus making legislation clearer, more effective and more easily enforceable.

1.6.2 National Waste Management Policies

1.6.2.1 A Resource Opportunity-Waste Management Policy in Ireland

This document was published by the Department of the Environment in July 2012 and sets out the National Policy on waste management. It highlights 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 the landfilling of municipal waste. This policy document encompasses measures covering the full spectrum of waste management planning, compliance and enforcement and charts a path towards a more modern, innovative and sustainable approach to the management of our waste. There are three main guiding principles outlined in this policy document which are as follows;

- 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 bins;
- 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.

The proposed extension to the existing Composting facility will further the aims of each of the guiding strategies outlined above.

1.6.2.2 Towards a New National Waste Policy

The Department of the Environment, Community and Local Government published a discussion document on a new National Waste Policy in August 2011. The consultation period closed on 30 September 2011 and the new waste policy is expected to be finalised in the upcoming months.

This discussion document states that a *"particular concern is the lack of a broad range of recycling facilities to reprocess the materials the public and businesses take so much effort to segregate and present for separate collection"*. This once again highlights the current lack of infrastructure to process the various segregated fractions of waste including organic waste.

The waste policy review acknowledges the progress that has been made in relation to the provision of source segregated collections, including organic wastes, which it states *"should be the norm in most parts of the country"*. However, even though considerable progress has been made in the past number of years the policy review recognises that there continues to be an over reliance on landfill. The document states that *"addressing this over dependence [on landfill] must be one of the core priorities of the new waste policy framework. However, we must also be realistic as it will take some time to develop fully the alternative infrastructure necessary to achieve sufficient diversion of waste from landfill"*. To further support this statement the policy states that *"all relevant Government Departments will work together to ensure that policy and other supports are structured to encourage the provision of waste recovery infrastructure, where appropriate"*.

1.6.2.3 Hitting the Targets for Biodegradable Waste: Ten Options for Change (2008)

In 2008 the EPA published a document entitled 'Hitting the Targets for Biodegradable Municipal Waste: Ten Options for Change' (2008). This report confirms that *"composting is an environmentally sustainable treatment option for OFBWM treatment"* but currently there is a lack of infrastructural capacity available in the country to meet the EU, national and regional targets.

The report states that source separated organic fraction of biodegradable municipal waste collection is necessary for good recycling options but at present "it is not currently clear whether there will be sufficient reuse/recycle outlets for the treated OFBMW collected in the third (brown) bin".

According to this report, in order to comply with the Landfill Directive, Ireland must change how it manages the organic fraction of biodegradable municipal waste. In order to achieve this by 2016 it must develop in excess of 1 million tonnes of additional capacity.

1.6.2.4 EPA Licence Review 2009

In 2009 the EPA commenced a review of existing EPA waste licences issued for landfill facilities. The purpose of this review was to restrict the acceptance of biodegradable waste at landfills which will assist in complying with the targets set by the EU Landfill Directive, reduce the potential for odours from landfill facilities, reduce greenhouse gas emissions and maximise the use and value of waste prior to it being landfilled.

These reviewed Licences now contain specific Licence conditions relating to the acceptance of BMW at individual sites. In order for these licensed landfills to be able to comply with their individual licence conditions requirements, waste accepted at the landfill facility will require pre-treatment. Pre-treatment can be achieved by the provision of a three bin collection system to source segregate the organic fraction or by mechanical treatment to remove the organic fraction. Once the organic fraction of BMW is mechanically separated from the municipal solid waste, the organic fraction requires bio stabilisation prior to landfill. The main difficulty facing pre-treatment facilities in Ireland at present is the limited availability of outlets for the acceptance of organic fines or source separated brown bin material. This proposed development will increase the available capacity for the acceptance of organic fines for bio stabilisation and the acceptance of source separated organic waste for composting, thus increasing the availability of treatment outlets for waste collectors and operators.

1.6.2.5 Waste Management (Food Waste) Regulations 2009, S.I. 508 of 2009

The Waste Management (Food Waste) Regulations came into force on the 1st of July 2010. These regulations apply to a wide range of commercial premises where food waste is produced including but not limited to restaurants, hotels, cafés, hospitals, schools, canteens, shops, deli counters and local authority buildings. The regulations require that food waste arising is source segregated and kept separate from non-biological waste and contaminants.

The regulations require that all food waste that has been source segregated at the producers premises is subjected to an authorised treatment process at the premises where the food was produced, collected by a permitted waste collector and transferred for an authorised treatment process or transferred directly by the producer to an authorised facility for the purpose of an authorised treatment process.

The purpose of these regulations is to segregate food waste in order to reduce the amount of biodegradable waste being consigned to landfill in line with the targets set out in the EU Landfill Directive and in the National Strategy for Biodegradable Waste 2006.

In order to ensure the successful implementation of these regulations a sufficient number of authorised facilities need to be available. Without availability or sufficient capacity at these authorised facilities, the dependency on landfill will continue.

1.6.2.6 National Strategy on Biodegradable Waste

The National Strategy on Biodegradable Waste, published in April 2006 by DoEHLG, sets out the Government policy for its diversion from landfill in order to achieve the targets as set out in the Landfill Directive 1999/31/EC. This strategy is based on the key objectives established in policy documents *Changing Our Ways* (1998), *Delivering Change - Preventing and Recycling Waste* (2002) and *Waste Management: Taking Stock and Moving Forward* (2004).

The policy sets out a range of measures to meet diversion targets. The fundamental principles of the strategy include:

- *"employing a combination of instruments to promote waste reduction – including awareness measures, economic incentives, and regulatory measures;*
- *continuing to develop an integrated waste system building on proposals and policies in regional waste management plans and strengthening these where necessary;*
- *emphasis on source separation of biodegradable wastes by the producer, followed by separate collections by the collector, enabling high quality recyclables to be recovered;*
- *striving to maximise the recovery of materials firstly, and energy secondly as a sustainable means of treating waste, rather than diverting from landfill to other forms of disposal; and*
- *developing partnerships with other sectors (industry, agriculture, fisheries etc.) enabling cost effective treatment systems to be established suited to Irish conditions".*

This policy states that *"separate collection of biowaste will be required, together with the provision of composting facilities for garden waste and centralised biological treatment facilities for food waste. The targets for central biological treatment are:*

- *40% coverage for households and 60% coverage for commerce in 2010 at an estimated average yield of 45% to 60% respectively, corresponding to 25% of overall organic waste generation within BMW;*

- 45% coverage for households and 70% coverage for commerce in 2013 at an estimated average yield of 50% to 65% respectively, corresponding to 33% of overall organic waste generation within BMW; and
- 50% coverage for households and 70% coverage for commerce in 2016 at an estimated average yield of 55% to 70% respectively, corresponding to 36% of overall organic waste generation within BMW."

The proposed development is in line with the National Strategy on Biodegradable Waste through the proposed provision of composting facility for the acceptance of bio waste including garden and kitchen waste.

1.6.2.7 The National Waste Prevention Programme (NWPP)

The National Waste Prevention Programme has been in existence since 2004. Led by the EPA the aim of the NWPP is to deliver substantive results in waste prevention and minimisation and to integrate a range of initiatives addressing; awareness raising, technical and financial assistance, training and incentive mechanisms. The overall objective of the NWPP is to establish an ambitious programme that delivers substantive results on waste prevention & minimisation across both hazardous & non-hazardous waste arisings. The Programme has three main strands:

- Production and consumption behavioural change - resource efficiency;
- Statutory producer and holder responsibility obligations for specified materials and substances; and
- Measurement of progress through waste statistics reporting.

The NWPP issues annual reports outlining the progress made on waste prevention projects. The most recent of these reports was issued in 2013 for the previous year of 2012. This report provides an overview of the progress made by the NWPP in 2012 on a wide variety of integrated projects focussing on waste prevention during the eighth year of the programme. The report highlights the financial benefits of supporting environmental technologies and states that; *'The EPA believes that continued investment in developing environmental technologies is an appropriate fiscal stimulus in an Irish context, which would be spent domestically and provide a high rate of return in terms of future economic growth'*.

1.6.2.8 Waste Collection Permit Regulations

Waste Collectors are granted waste collection permits under the Waste Collection Permit Regulations, 2008, as amended. Current waste collection permits contain conditions requiring waste collectors to provide customers with source segregated collections. The National Strategy on Biodegradable Waste states that Local Authorities should impose conditions on waste collection permits regarding the source segregation of waste and the separate collection of segregated fractions.

1.6.3 Local Policy

1.6.3.1 Regional Waste Management Plan 2006-2011 (as extended)

The South East Waste Management Region comprises of Carlow, Kilkenny, South Tipperary, Waterford, Wexford County Councils and Waterford City Council. A joint Regional Waste Management Plan was prepared for the South East Region in 2006. This Waste Management Plan outlines the regional and local policy in relation to waste management. Among the measures contained in 'A Resource Opportunity – Waste Management Policy in Ireland' is the reduction in the number of waste management planning regions from the ten that are currently present to three regions in total. Therefore the present RPG has been extended until 2014 whilst new plans are being implemented under the rationalisation of the waste management regions.

The objectives of the present RWMPs are that the region will:

- *Encourage the provision of biowaste treatment facilities for source segregated MSW.*
- *Provide or arrange or facilitate for the provision of an appropriate number of waste transfer facilities, to facilitate the movement of recyclables, biowaste and residual waste to their respective treatment facilities.*
- *Encourage the provision of an adequate range of waste recovery and recycling infrastructure and will have due regard to the requirements of scale for economic viability".*

It is necessary for source segregated waste to be treated in the most appropriate manner to optimise recovery, recycling and re-use. As part of this waste management plan the region has adopted many policies in relation to the recovery and recycling of the organic fraction of waste. The policy states that the region will encourage the provision of local biological treatment facilities for agriculture or other non MSW bio wastes throughout the region as well as providing and promoting a minimum of nine recycling centres to cater for the collection of green waste from householders.

At the time of the development of this Waste Management Plan, a number of small biological facilities were operational within the Region. The Plan states that it is policy "not to support the further establishment of smaller biological facilities (particularly those of less than 25,000 tonnes)". The existing number of smaller biological facilities in the region are expected to remain operational. However the Plan continues to state that the region will promote the provision of major material recovery facilities for the organic waste fraction by the private sector as well as promoting "the establishment of larger facilities with a view to achieving economies of scale and to ensure that proposed facilities are fully assessed by means of an environmental impact assessment (EIA)".

This subject development is proposing a waste intake of 90,000 tonnes per annum, with this EIA being completed as part of the proposed development. Having regard to the Regions

Policy on supporting the establishment of larger facilities which are fully assessed by means of an EIA, it is evident that this proposed development is within supporting the local policy for the Region. Currently there is no other facility for commercial waste in County Carlow.

1.7 Structure of the Environmental Impact Statement

Environmental Impact Assessment (EIA) is a systematic examination of the potential impacts of a proposed development on the environment prior to the beginning of any activity. OTCL commenced composting operations at their facility in Ballintrane in 2005, currently operating under waste facility permit number WFP-CW-10-0003-01. It is proposed to increase the tonnages of waste accepted at this facility in order to maximise the usage of existing equipment that is limited due to tonnage restrictions of the WFP. There will be no construction stage as such. This Environmental Impact Statement (EIS) is essentially to account for any additional environmental impacts that may arise due to proposed development. An Environmental Impact Statement (EIS), as part of the EIA process, is required to accompany Planning and Waste Licence Applications, where the volumes of waste are above a threshold volume (greater than 25,000 t/a), as outlined in Schedule 5 Part 2 of the Planning and Development Regulations, 2001 (S.I. 600 of 2001), as amended.

The EIS contains information on the scale and nature of the proposed development, a description of the existing environment, impact assessment of the proposed development and mitigation measures to avoid, reduce and where possible remedy significant adverse effects on the receiving environment. An Environmental Impact Statement (EIS) is defined in S.I. No 349 of 89 (Art. 3 (1)) as follows:-

"A statement of the effects, if any, which proposed development, if carried out, would have on the environment".

Schedule 6 of these Regulations sets out the information to be contained within an Environmental Impact Statement. This EIS is based on that structure. This sequence is as follows;

- A non-technical summary
- A description of the proposed environment
- A description of the baseline receiving environment
- The potential and predicted impacts of the development and the mitigation of those impacts.

This Environmental Impact Statement (EIS) is arranged as follows:

Volume 1:	Non-Technical Summary
Volume 2:	Main Report
Volume 3:	Appendices

The existing environment and the subsequent impacts of the development are explained by reference to its possible impact on the following environmental topics:

Table 2: Environmental Topics

Human Beings	Flora & Fauna
Soil & Geology	Hydrology
Hydrogeology	Air
Noise	Traffic
Climatic Factors	Landscape
Cultural Heritage	Material Assets
Inter-relationship between the above factors	

Supporting documentation such as maps and relevant tables are appended in Volume 3. A list of all external consultants is also included in the appendix to the rear.

1.8 Consultation and Scoping

1.8.1 Scoping Request

Scoping is the process of determining the content and extent of the matters which should be covered in the environmental information to be submitted to a competent authority for projects which are subject to EIA.

Scoping is conducted by contacting the relevant authorities and Non-Governmental Organisations (NGOs) with interest in the specific aspects of the environment that are likely to be affected by the proposed development. The organisations contacted are invited to submit comments or provide information in relation to the proposed development that they may hold or to highlight any issues that they feel should be addressed as part of the EIA. Consultations will help ensure that all the impacts, issues, concerns, alternatives and mitigation which interested parties believe should be considered in the EIA are addressed.

A scoping request which included details of the proposed development was prepared by Enviroguide Consulting for and on behalf of O'Toole Composting Ltd. This scoping request was circulated to all identified relevant bodies on the 25th of November 2011. All bodies contacted are listed in Table 2 below.

The scoping and contents element of the EIS were determined following:

- Detailed consultation with the Environmental Protection Agency;
- Existing knowledge of the site and surrounds based on current operations of the existing facility;
- Regard to 'Guidelines on the information to be contained in Environmental Impact Statements' (EPA, 2002);
- Regard to 'Guidance on EIA Scoping' (European Commission, 2001);

- Consultation with various, relevant Statutory Bodies and Non-Governmental Organisations.

A pre-licence application consultation meeting was held with the Environmental Protection Agency to determine the scope of the investigations required for the application of a waste licence. A meeting was held with the EPA at the O'Tooles Composting Facility on the 2nd of September 2011 to discuss the proposal of applying for an EPA Licence for a composting facility which is currently being operated under waste facility permit register number WFP-CW-10-0003-01 as reviewed by WFP-CW-14-5. A pre-planning meeting was held with Carlow County on July 15th 2014.

Table 3: Bodies Consulted During Scoping

Statutory Bodies	EnviroGuide Action	Response Details
Inland Fisheries Ireland, Anglesa Street, Clonmel, Co. Tipperary.	Written scoping request sent on the 25th of November 2011	Letter received on 30th November 2011
Department of Transport, Tourism and Sport, 44 Kildare St., Dublin 2	Written scoping request sent on the 25th of November 2011	
An Taisce, Tailors Hall, Back Lane, Dublin 8.	Written scoping request sent on the 25th of November 2011	
Enterprise Ireland, East Point Business Park, Dublin 3.	Written scoping request sent on the 25th of November 2011	
Health Service Executive, Oak House, Millennium Park, Naas, Co. Kildare.	Written scoping request sent on the 25th of November 2011	Letter received on 6th January 2012
Health and Safety Authority, The Metropolitan Building, James Joyce St., Dublin 1.	Written scoping request sent on the 25th of November 2011	
Department of Environment, Heritage and Local Government, Custom House, Dublin 1.	Written scoping request sent on the 25th of November 2011	
Carlow County Council, County Buildings, Athy Road, Carlow, Co. Carlow.	Written scoping request sent on the 25th of November 2011	

The Heritage Council, Áras na hOidhreachta, Church Lane, Kilkenny, Co. Kilkenny.	Written scoping request sent on the 25th of November 2011	
Department of Communications Energy and Natural Resources, 29 - 31 Adelaide Road, Dublin 2	Written scoping request sent on the 25th of November 2011	
Faillte Ireland, 88-95 Amiens St., Dublin 1.	Written scoping request sent on the 25th of November 2011	Email received on 30th November 2011
<i>Birdwatch Ireland, Unit 20, Block D, Bullford Bus Campus, Kilanic, Co. Wicklow</i>	Written scoping request sent on the 25th of November 2011	
National Transport Authority, Dún Scéine, Harcourt Lane, Dublin 2.	Written scoping request sent on the 25th of November 2011	Letter received on 19th December 2011
The Department of Finance, Government Buildings, Upper Merrion St., Dublin 2.	Written scoping request sent on the 25th of November 2011	
The Department of Jobs, Enterprise & Innovation, 23 Kildare St., Dublin 2.	Written scoping request sent on the 25th of November 2011	
Geological Survey of Ireland, Beggars Bush, Haddington Road, Dublin 4.	Written scoping request sent on the 25th of November 2011	
The Irish Aviation Authority, The Times Building, 11-12 D'Olier Street, Dublin 2.	Written scoping request sent on the 25th of November 2011	Letter received on 6th December 2011
The National Roads Authority, St. Martin's House, Waterloo Road, Dublin 4.	Written scoping request sent on the 25th of November 2011	Letter received on 10th January 2012
Waterways Ireland, Floor 2, Block C, Ashtowngate, Navan Road, Dublin 15.	Written scoping request sent on the 25th of November 2011	
An Bord Pleanála, 64 Marlborough St., Dublin 1.	Written scoping request sent on the 25th of November 2011	Letters received on 6th December 2011 and 13th December 2011

The Department Of Agriculture, Food and Marine, Agriculture House, Kildare St. Dublin 2.	Written scoping request sent on the 25th of November 2011	Email received on 5th of December 2011 and Letter received on 21st December 2011
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1.8.2 Scoping Responses

This section of the EIS presents a summary of the main recommendations that were made in the replies to the scoping document. Recommendations that were made during the scoping process have been taken into account and addressed where necessary within the contents of the EIS. Copies of all scoping responses received by the 30th of June 2012 are included in Appendix 3.1.1 of this EIS. Further scoping responses received after the 30th of June 2012 are also considered during the operation of the proposed development, subject to the grant of planning permission and an EPA licence.

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