An Bord Pleanála

PLANNING AND DEVELOPMENT ACTS 2000 TO 2011

Cork County

Planning Register Reference Number: 11/04123

An Bord Pleanála Reference Number: PL 04.239166

APPEAL by Diarmuid A. Keogh of Youghal Chamber, Market House, Market Square, Youghal, East Cork against the decision made on the 27th day of May, 2011 by Cork County Council to grant subject to conditions a permission to ERAS ECO Limited care of Tom Phillips and Associates of 70 South Mall, Cork for development comprising the upgrading of an existing Waste Recovery/Transfer and Sludge Drying Facility (as permitted under planning register reference number 04/7531 and An Bord Pleanála appeal reference number PL 04.211117 which comprise two number sludge handling/management buildings, an administration building and a transformer/plant building) to an Integrated Waste Management Facility with a total gross floor space of approximately 3,772.39 square metres on a site of 16,832 square metres at Foxhole, Youghal, County Cork. The Integrated Waste Management Facility development will utilise the existing four number buildings, which range in height from one-storey (including double and triple height) to two-storeys and existing plant, including on-site wastewater treatment and storm water systems, fire water storage tank, wheel wash and weighbridge. The Integrated Waste Management Facility development will further consist of: the handling/management of sludge within two number existing buildings (totalling 3,319.8 square metres) including the upgrading of the existing sludge drying process through the introduction of a second innovative recovery process utilising super critical water oxidisation (Aqua Critox® technology) capable of accepting hazardous wastes; an open air holding area (458.85 square metres) providing parking for vehicles/tankers/trailers during the sample testing period of hazardous waste contents prior to dispatching for treatment on-site or off-site; the erection/construction of two number above ground anaerobic digester tanks (totalling 2,207.65 cubic metres) for the treatment of sludge and the production of methane gas, which will be utilised to produce electricity for use on site through a combined heat and power generator and ancillary plant and equipment including the relocation of the existing portable chemical storage unit; a total organic carbon monitoring unit building (4.1 square metres); above ground nitrogen storage tank; air cooler, cooling tower and cooling water pump; above ground digestate liquid storage tank; above ground liquid oxygen storage tank; five number above ground liquid/solvent storage tanks; three number cooling towers; odour abatement systems and associated site works above and below ground. The Integrated Waste Management Facility development will treat a maximum of 95,000 tonnes of waste (a reduction of 15,000 tonnes from that as permitted under planning register reference number 04/7531 and An Bord Pleanála appeal reference number PL 04.211117) and pedestrian and

vehicular access will be maintained from the existing two number entrances. The proposed development is for activities that require a waste licence. An Environmental Impact Statement accompanied the planning application made to the planning authority, in accordance with plans and particulars lodged with the said Council.

DECISION

GRANT permission for development comprising the upgrading of an existing Waste Recovery/Transfer and Sludge Drying Facility (as permitted under planning register reference number 04/7531 and An Bord Pleanala appeal reference number PL 04.211117 which comprise two number sludge handling/management buildings, an administration building and a transformer/plant building) to an Integrated Waste Management Facility with a total gross floor space of approximately 3,772.39 square metres on a site of 16,832 square metres. The Integrated Waste Management Facility development will utilise the existing four number buildings, which range in height from one storey (including double and triple height) to two-storeys, and existing plant, including on-site wastewater treatment and storm water systems, fire water storage tank, wheelwash and weighbridge. The Integrated Waste Management Facility development will further consist of: the handling/management of sludge within two number existing buildings (totalling 3,319.8 square metres); an open air holding area (458.85 square metres) providing parking for vehicles/tankers/trailers during the sample testing period of hazardous waste contents prior to dispatching for treatment on-site or off-site; the erection/construction of two number above ground anaerobic digester tanks (totalling 2,207.65 cubic metres) for the treatment of sludge and the production of methane gas, which will be utilised to produce electricity for use on site through a combined heat and power generator and ancillary plant and equipment including the relocation of the existing portable chemical storage unit; a total organic carbon monitoring unit building (4.1 square metres), air cooler, cooling tower and cooling water pump; above ground digestate liquid storage tank; odour abatement systems and associated site works above and below ground in accordance with the said plans and particulars based on the reasons and considerations marked (1) under and subject to the conditions set out below. REFUSE permission for the upgrading of the existing sludge drying process through the introduction of a second innovative recovery process utilising super critical water oxidisation (Aqua Critox® technology) capable of accepting hazardous wastes and the ancillary plant associated with it including above ground nitrogen storage tank; above ground liquid oxygen storage tank; five number above ground liquid/solvent storage tanks and three number cooling towers based on the reasons and considerations marked (2) under.

MATTERS CONSIDERED

In making its decision, the Board had regard to those matters to which, by virtue of the Planning and Development Acts and Regulations made thereunder, it was required to have regard. Such matters included any submissions and observations received by it in accordance with statutory provisions.

REASONS AND CONSIDERATIONS (1)

Having regard to the existing permitted development on site, to the pattern of development in the area, to the zoning of the site and to the fact that the proposal will be subject to licensing by the Environmental Protection Agency, the Board considered that the non-hazardous waste treatment component of the proposal would be acceptable at this location, would not be injurious to traffic safety and convenience, would not seriously injure the amenities of the area or of properties in the vicinity and would, therefore, be in accordance with the proper planning and sustainable development of the area.

The Board completed an Environmental Impact Assessment of the proposed scheme which considered the Environmental Impact Statement submitted with the application and all submissions on file from the parties and the report, assessment and conclusions of the Inspector in relation to the environmental impacts of the scheme, the conclusions of which were broadly accepted by the Board.

The Board considered that the environmental impacts of the proposal as they relate to the non-hazardous waste component of the proposed waste treatment facility are acceptable and subject to compliance with the mitigation measures set out in the Environmental Impact Statement, as conditioned by the Board, the scheme would not have unacceptable adverse effects on the environment.

The Board completed an Appropriate Assessment in relation to potential impacts on Natura 2000 Sites and having regard to the Natura Impact Statement submitted including mitigation measures proposed and the Inspector's report and submissions on file, the Board concluded that on the basis of the information available that the proposed development either individually or in combination with other plans or projects would not adversely affect the integrity of the European sites numbers 002170 (Blackwater River (Cork/Waterford) Special Area of Conservation and 004028 (Blackwater Estuary Special Protection Area) in view of those sites' conservation objectives.

CONDITIONS

1. The development shall be carried out and completed in accordance with the plans and particulars lodged with the application, as amended by the further plans and particulars submitted the 21st day of April, 2011, except as may otherwise be required in order to comply with the following conditions. Where such conditions require details to be agreed with the planning authority, the developer shall agree such details in writing with the planning authority prior to commencement of development and the development shall be carried out and completed in accordance with the agreed particulars.

   Reason: In the interest of clarity.

2. No waste materials classified as hazardous shall be treated at the proposed facility.

   Reason: In the interest of clarity.

3. The tonnages of waste which may be treated at the facility on an annual basis will be as follows:

Commercial, Industrial and Household Waste:	20,000 tonnes.
Non Hazardous Sludge:	40,000 tonnes.
Leachate from landfills	5,000 tonnes.

Any proposal to change the above tonnages shall be subject to a further grant of planning permission.

Reason: In the interest of clarity.

4. External finishes, including colours, to all tanks and other items provided on foot of this permission shall be agreed with the planning authority prior to commencement of development on site.

Reason: In the interest of visual amenity.

5. The site shall be landscaped in accordance with a comprehensive scheme of landscaping, details of which shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development. This scheme shall include the following:

(a) A plan to scale of not less than 1:500 showing –

(i) the species, variety, number, size and locations of all proposed trees and shrubs which shall comprise predominantly native species such as mountain ash, birch, willow, sycamore, pine, oak, hawthorn, holly, hazel, beech or alder,

(ii) details of screen planting which shall not include *cupressocyparis x leylandii,*

(iii) details of roadside/street planting which shall not include *prunus* species, and

(iv) hard landscaping works, specifying surfacing materials, furniture and finished levels.

(b) Specifications for mounding, levelling, cultivation and other operations associated with plant and grass establishment, and

(c) A timescale for implementation.

All planting shall be adequately protected from damage until established. Any plants which die, are removed or become seriously damaged or diseased, within a period of five years from the completion of the development , shall be replaced within the next planting season with others of similar size and species, unless otherwise agreed in writing with the planning authority.

Reason: In the interest of residential and visual amenity.

6. Public lighting shall be provided in accordance with a scheme, details of which shall be submitted to, and agreed in writing with, the planning authority prior to commencement of development. Such lighting shall be provided prior to the making available for occupation of the proposed development.

Reason: In the interest of amenity and public safety.

7. Details of proposed drainage of the wheel-wash area shall be submitted to the planning authority for agreement prior to commencement of development on site.

Reason: In the interest of orderly development.

REASONS AND CONSIDERATIONS (2)

Having regard to the multiplicity of waste types proposed to be treated, to the lack of detail submitted with the application on the nature of the waste materials proposed to be treated, to the limited size of the site, to the reliance on an on-site wastewater treatment system, and to the limited record at this scale of the proposed Super Critical Water Oxidation method of waste treatment, the Board was not satisfied that the introduction of hazardous waste treatment, in addition to the other treatments existing and proposed on the site would not exceed the carrying capacity of the site and would not pose a risk of environmental pollution.

In deciding not to accept the Inspector's recommendation to refuse permission for the entire development, the Board did not accept that the site proposed for the development was unsuitable on the basis of the proximity principle taking into account the location of the proposal in relation to areas of waste generation and the transport network. The Board was satisfied that the non-hazardous waste streams proposed to be accepted could be appropriately managed on site, taking into account the nature of the materials involved, the planning history of the site whereby significant sludge treatment is already permitted, and the nature of the waste treatment technologies to be employed.

Member of An Bord Pleanála
duly authorised to authenticate
the seal of the Board.

Dated this day of 2013.

An Bord Pleanála

Inspector's Report

Ref.: PL04. 239166

Development: Development consisting of the upgrading of an existing Waste Recovery / Transfer and Sludge Drying Facility (as permitted under Cork County Council Planning Reg. Ref. No. 04/7531; An Bord Pleanala Reg. Ref. No. PL04.211117 which comprises of 2 No. sludge handling / management buildings, an administration building and a transformer / plant building) to an Integrated Waste Management Facility with a total gross floor space of approximately 3,772.39 sq.m. at a site of 16,832 sq.m. The Integrated Waste Management Facility development will utilise the existing 4 No. buildings, which range in height from one storey (including double and triple height) to two storeys, and existing plant, including on-site wastewater treatment and storm water systems, fire water storage tank, wheelwash and weighbridge. The Integrated Waste Management Facility development will further consist of: The handling / management of sludge within 2 No. existing buildings (totalling 3,319.8 sq.m.) including the upgrading of the existing sludge drying process through the introduction of a second innovative recovery process utilising super critical water oxidisation (Aqua Critox® technology) capable of accepting hazardous wastes; An open air holding area (458.85 sq.m.) providing parking for vehicles / tankers / trailers during the sample testing period of hazardous waste contents prior to dispatching for treatment on-site or off-site; The erection / construction of 2 No. above ground anaerobic digester tanks (totalling 2,207.65 metres cubed) for the treatment of sludge and the production of methane gas, which will be utilised to produce electricity for use on site through a combined

heat and power generator; and ancillary plant and equipment including: the relocation of the existing portable chemical storage unit; a total organic carbon monitoring unit building (4.1 sq.m.); above ground nitrogen storage tank; air cooler, cooling tower and cooling water pump; above ground digestate liquid storage tank; above ground liquid oxygen storage tank; 5 no. above ground liquid / solvent storage tanks; 3 no. cooling towers; odour abatement systems; and associated site works above and below ground. The Integrated Waste Management Facility development will treat a maximum of 95,000 tonnes of waste (a reduction of 15,000 tonnes from that as permitted per Cork County Council Planning Reg. Ref. No. 04/7531; An Bord Pleanala Reg. Ref. No. PL04. 211117) and pedestrian and vehicular access will be maintained from the existing 2 No. entrances. The proposed development is for activities that require a waste licence.

Foxhole, Youghal, Co. Cork.

PLANNING APPLICATION

Planning Authority:	Cork County Council
Planning Authority Ref.:	11/4123
Applicant:	ERAS ECO Ltd.
Type of Application:	Permission
Planning Authority Decision:	Grant subject to conditions

APPEAL

Type of Appeal:	Third Party
Appellant(s):	Diarmaid A. Keogh
Observers:	An Taisce
INSPECTOR:	Robert Speer
Date of Site Inspection:	24th January, 2012

1.0 SITE LOCATION AND DESCRIPTION

1.1 The proposed development site is located at Foxhole, Co. Cork, approximately 2km north of Youghal town centre on the western bank of the Blackwater Estuary in a low lying area known as the Youghal Mudlands to the south of the confluence of the Tourig and Blackwater Rivers. The surrounding area can be described as low-density industrial / commercial with Youghal Landfill located to the immediate east of the site, an NCT test centre to the west and an industrial estate / business park to the northwest. The adjacent lands to the south are at present vacant and undeveloped with the area beyond same characterised by grassland which has established itself on the surface of reclaimed lands used for recreation, wildlife and amenity purposes, being part of the Slob Banks Walk, alongside the Blackwater Estuary.

1.2 The site itself has a stated site area of 1.68 hectares, is irregularly shaped and is presently occupied by an existing waste recovery / transfer and sludge drying facility set within a secure and gated compound which comprises a series of industrial and administrative buildings in addition to associated plant and equipment including a wastewater treatment system. The site is primarily finished in hard standing or artificial surfacing with small areas of amenity grassland, flowerbeds and gravel. The roadside boundary is defined by a high stone wall and security gates with the remaining boundaries consisting primarily of chain-link fencing and planting although a concrete block wall has been erected the partial length of western site boundary between the proposed waste recovery building and the adjacent property.

1.3 Access to the site is obtained via a slip road which extends eastwards from the R634 Regional Road to provide access to Youghal Landfill and the surrounding lands which in turn extends from the Rincrew roundabout on the N25 National Primary Route.

2.0 DESCRIPTION OF PROPOSED DEVELOPMENT

2.1 The proposed development consists of the 'upgrading' of the existing Waste Recovery / Transfer and Sludge Drying Facility, as previously permitted under ABP. Ref. No. PL04.211117, to an Integrated Waste Management Facility which will entail the expansion of the existing operations on site, which already include a sludge drying facility, through the development of several new waste processing / treatment technologies on site in order to allow for the processing of a wider range of waste types at the facility to include commercial, industrial and household waste in addition to hazardous waste. The three principle elements of the proposal consist of the construction of an anaerobic digestion plant, the installation of a second recovery process utilising super critical water oxidation (Aqua Critox® technology) capable of accepting hazardous waste, and the acceptance of Municipal Solid Waste onto the site, including commercial, industrial and household waste, which will comprise source segregated dry recyclables and mixed residual waste such as foodstuffs.

2.2 At present, the existing facility is authorised to process the following:

Commercial & Industrial Waste:	70,000 tonnes
Non-Hazardous Sludge:	30,000 tonnes
Leachate from Landfills:	10,000 tonnes
Total:	*110,000 tonnes*

2.3 The subject proposal seeks permission to expand the existing facility in order to accommodate the following waste types and volumes:

Commercial, Industrial & Household Waste:	20,000 tonnes
Non-Hazardous Sludge:	40,000 tonnes
Hazardous Waste:	30,000 tonnes
Leachate from Landfills:	5,000 tonnes
Total:	*95,000 tonnes*

2.4 The Anaerobic Digestion (AD) plant will consist of a fully enclosed system which will be capable of processing up to 20,000 tonnes per annum of non-hazardous municipal sewage and industrial wastewater treatment sludge, although it is only proposed to direct 15,000 tonnes of sludge to the digester annually. It will be sited adjacent to the existing Waste Recovery Building (Building No. 1) and will consist of the construction of 2 No. over ground anaerobic digestion tanks with a combined capacity of 2,207.65m^3 which are designed to treat the sludge to produce and collect biogas (methane) which will in turn be utilised within a proposed CHP plant to generate heat and power to supply the needs of the site. The intake of raw materials will be conducted from within the Waste Recovery Building where the sludge will be loaded directly into a feeder hopper before being transferred via a fully enclosed conveyor to the AD tanks, each of which will be maintained at a temperature of 37°C. Associated AD equipment to be housed within the Waste Recovery Building will include gas conditioning and the sludge storage areas. The AD process is continuous and will produce both solid (fibrous) and liquid digestate. The liquid material will be directed to a liquid digestate storage tank to be constructed in the south-eastern corner of the facility whilst the solid residue would appear to be stored within a designated area in Building No. 1.

2.5 The Super Critical Water Oxidation (Aqua Critox® technology) plant will be housed within Building No. 2 (the Sludge Drying Facility) although associated equipment including cooling towers, waste solvent storage tanks, nitrogen and oxygen storage tanks, and a generator will be located outside of the building. This is described as an *'innovative physico-chemical treatment process'* which uses water and oxygen at high temperatures and pressures to achieve super critical conditions in order to breakdown toxic and hazardous organic wastes such as waste solvents (although it can also be used to process wastewater treatment sludges) thereby converting them into carbon dioxide and nitrogen gas leaving behind water and a fine particulate inorganic solid residue which is inert and thus suitable for disposal in a non-hazardous landfill or re-use. The subject proposal has the capacity to treat 30,000 tonnes of hazardous waste per annum and will generate 9,000 tonnes of solid residue per annum for disposal off site with a further 26,685 tonnes per

annum of liquid to be directed to the on-site wastewater treatment plant. Hazardous waste arriving at the proposed facility will be tested in the on-site laboratory in order to ascertain its suitability for processing on site. In the event that it is not possible to treat some / all of the waste arriving on site, as part of an overall waste management service, transport tankers containing these wastes will be directed to a designated tanker storage / parking area in the southernmost corner of the site where they will be stored temporarily prior to their subsequent dispatch for treatment / disposal off site.

2.6 Although the existing facility as approved under ABP. Ref. No. PL04.211117 is authorised to accept up to 70,000 tonnes of commercial & industrial waste per annum this was restricted to source segregated and mixed dry recyclables and, therefore, the service was discontinued in 2009 for commercial reasons due to customer demands for a full service collection to include mixed waste. Accordingly, the proposed development seeks permission to accept 20,000 tonnes per annum of Municipal Solid Waste (MSW), comprising commercial, industrial and household waste, which will consist of source segregated dry recyclables and mixed residual waste. The dry recyclables will include paper, plastic, cardboard, 'Tetrapak' and cans etc. whereas the residual waste will include putrescible waste such as foodstuffs. All these wastes will be handled in separate designated areas within the Waste Recovery Building (Building No. 1). It would appear to be the intention to bale the source segregated materials and to manually sort any mixed dry recyclables. The remaining residual waste will be bulked up for transfer off site on the same day as arrival.

N.B. In addition to the foregoing, I would draw the Board's attention to the existing treatment arrangements on site as regards the existing sludge drying facility and the diversion of leachate to the existing wastewater treatment plant. Furthermore, I would advise the Board of the apparent proposal, as detailed in the process flow-diagram which accompanied the response to the request for further information, to subject 15,000 tonnes of sludge per annum to lime stabilisation as a stand-alone treatment procedure.

3.0 ENVIRONMENTAL IMPACT STATEMENT

3.1 Although the applicant is of the opinion that the proposed development does not fall within any of the categories listed in Schedule 5 of the Planning and Development Regulations, 2001, as amended, in light of pre-application discussions with the Planning Authority, the planning history of the site, the nature of the site and the applicant's commitment to undertaking best practice, the subject application has been accompanied by an Environmental Impact Statement.

N.B. The existing facility is subject to a Waste Licence (Reg. No. W0211-01) as issued by the Environmental Protection Agency and the proposed development will similarly require a Waste Licence.

4.0 RELEVANT PLANNING HISTORY

4.1 On Site:
PA Ref. No. 00/7093. Was granted on 3rd October, 2001 permitting Youghal Waste Disposal & Recycling permission for the construction of waste transfer station (*N.B.* This grant of permission was limited to a temporary period of 5 years only and was never implemented).

PA Ref. No. 04/7531 / ABP Ref. No. PL04. 211117. Was granted on appeal on 13th July, 2005 permitting AVR Environmental Solutions permission for the construction of a waste recovery/transfer and sludge drying facility consisting of a waste recovery and transfer building, administration building and carpark, transformer/plant building and standby generator, boiler and woodchip storage building, sludge reception building, sludge drying building, wastewater treatment plant including balancing tank, fire water storage tank, storm water retention tank, one weighbridge, one wheelwash, oil storage and bund walls, waste quarantine area, dried sludge discharge area, mobile dewatering plant, mobile fire fighting plant, hard standings, all boundary fencing and walls, all associated site works and ancillaries on 3.54 acres at Foxhole, Youghal, Co. Cork.

N.B. In addition to the foregoing, I would advise the Board that the Planning Cover Report (Page No. 11), which has accompanied the subject application, refers to an application having been made to the Planning Authority pursuant to Section 5 of the Planning and Development Act, 2000, as amended, for a declaration as to whether the proposed installation of new 'AquaCritox Technology (supercritical waster oxidisation process) in place of a permitted, but yet not implemented, dryer plant, was or was not exempted development. Accordingly, on 1st March the Planning Authority purportedly issued a declaration which stated that the insertion of a new dryer on site constituted exempted development pursuant to Class 21 of Part 1, Schedule 2 of the Planning and Development Regulations, 2001.

4.2 On Sites in the Immediate Vicinity:
ABP Ref. No. PL04. EL.2023. Was granted on 29th March, 2004 approving proposals by Cork County Council to intensify the use of Youghal Landfill, Co. Cork.

5.0 PLANNING AUTHORITY CONSIDERATIONS AND DECISION

5.1 Decision:
Following the receipt of a response to a request for further information, on 27th May, 2011 the Planning Authority issued a notification of a decision to grant permission for the proposed development subject to 7 No. conditions which can be summarised as follows:

Condition No. 1 – States that the proposed development is to comply with the terms and conditions of ABP Ref. No. PL04. 211117, save where otherwise amended by the terms and conditions of this grant of permission.

Condition No. 2 - States that vehicles transporting hazardous material for treatment at the site are not to access the site by way of the town centre, but are instead confined to accessing the site via the Rincrew Roundabout on the N25 National Road.

Condition No. 3 – Refers to the maintenance of existing roadside drainage arrangements.

Condition No. 4 – Requires the water supply to be metered to the Planning Authority's satisfaction.

Condition No. 5 – Prohibits the operation of the proposed development in the absence of a waste licence obtained from the Environmental Protection Agency.

Condition No. 6 - Prohibits the erection of any further structures or signage on site, or any increase in flue heights, without a further grant of planning permission.

Condition No. 7 - Requires the operator to maintain a record of all complaints received including details of nature of the complaint and the company's investigation and response to same. This record is to be submitted to the Planning Authority on an annual basis.

5.2 Internal Reports:

5.2.1 Architect: An initial report stated that most of the subject application was unrelated to architectural considerations, although it was suggested that the proposal may represent an opportunity to address the poor aesthetic appearance of the existing buildings on site. The report subsequently concluded by stating that there was no objection to permission being granted.

Following the receipt of a response to a request for further information, a further report was prepared which stated that the submitted application was of a poor quality in terms of building design and landscape treatment, although it was considered that this was mainly due to the original buildings on site and the addition of poor quality replicas. It is also stated that there appears to be an excessive density of activity on site which does not allow for any significant improvement of the external environment due to the limited space available and the overall poor quality of the submitted design. The report subsequently concludes by recommending a refusal of permission on the grounds that an excessive level of activity is proposed on site which would result in a poor quality built environment.

5.2.2 Engineering (J. O'Connor): Sets out a series of conditions to be attached to any grant of permission.

5.2.3 Environment: An initial report recommended that further information be sought in respect of a variety of items including the specifications of the hazardous material to be treated on site and whether or not there would be sufficient capacity in the wastewater treatment plant proposed for Youghal to accept the treated effluent discharged by the site.

Following the receipt of a response to a request for further information, a further report was prepared which stated that there was no objection to the proposal on environmental grounds subject to conditions.

5.2.4 Area Engineer: An initial report noted that the subject proposal was for an upgrade of the existing facility on site and stated that as there was a history of complaints with regard to odours which emanated in this part of the town and descended into nearby areas including Quarry Road, although it would be reasonable to assume that these emissions originate from the nearby landfill, a condition should be imposed in any grant of permission to ensure that any odours released from the facility adhere fully to the industry norm. The report then proceeds to set out a series of further conditions which should be attached to any grant of permission.

Following the receipt of a response to a request for further information, a further report was prepared which reiterated the foregoing.

5.3 Prescribed Bodies / Other Consultees:

5.3.1 An Taisce: States that before consideration is given to the subject proposal, an evaluation should be carried out in order to ascertain that all issues of compliance with regard to ABP Ref. No. PL04. 21117 have been satisfactorily resolved.

5.3.2 Health Service Executive / Environmental Health Officer: An initial report prepared by the Environmental Health Officer sets out a series of observations in respect of a number of public health issues including air quality, noise and vibration etc. Further correspondence appended to this report, which has been prepared by Dr. Mary T. O'Mahony, Specialist in Public Health Medicine, states that in light of the potential public health concerns, the assessment of the proposal by the Planning Authority should confirm that:

- All potential emissions from the hazardous waste accepted on site will be contained on site, and that
- The Planning Authority is satisfied with the arrangements to manage all potential emissions from the treatment facility.

This report subsequently concludes by suggesting that the Planning Authority's assessment of the risk to the environment, including human beings, should be summarised in a report which is accessible to members of the local community.

5.4 Objections / Observations:

A total of 6 No. submissions were received from interested parties in respect of the proposed development (one of which was subsequently withdrawn) and the principle grounds of objection contained therein can be summarised as follows:

- The proposed development site is located on the northern approach to the town in an area of high scenic and amenity value.

- The site is within 80m of a Special Area of Conservation, a Natural Heritage Area and a Special Protection Area.
- It is the policy of both Cork County Council and the Government to support the tourism sector.
- The Environmental Protection Agency is currently investigating air quality complaints against the existing facility on site.
- There are concerns that any additional development on site will pose an unacceptable risk to the tourism industry, which is the largest employer in the town. In this respect it is submitted that proposals for development that will negatively impact on the viability of an existing industry should not receive favourable consideration and, therefore, given the on-going changes in the wider economy and the diversification away from traditional forms of employment, a stronger weighting should be applied to the development of the tourism industry.
- The tourism industry, with particular reference to the heritage sector of same, is a highly competitive area which needs to maintain a high quality environmental standard in order to project a 'clean' image.
- The remaining lifespan of the adjacent landfill is limited and upon its closure it will be restored to use as a recreational area.
- The proposed development is incompatible with other commercial uses in the area and is prejudicial to the operation and viability of same.
- There is no justification for the transportation of hazardous waste 40 miles from source for treatment.
- The proposed development will contribute to the on-going problem of smells / malodours emanating from the existing plant.
- Public health concerns

6.0 GROUNDS OF APPEAL

The grounds of appeal are summarised as follows:

- The proposed development is located on largely natural infill slobland of alluvio-warf which was fully reclaimed in 1846 by the construction of an embankment. The site itself is located just outside the previous sea wall. The original Youghal Bridge, known as the 'Timber Bridge' was built in 1832. The toll was situated on the north-eastern boundary of the property. The 'Iron Bridge' was opened in 1883 and finally closed in 1963.
- Youghal has the distinction of being the only town in Ireland with 3 No. Blue Flag Beaches. The Blackwater Estuary is recognised both nationally and internationally as an important and fragile natural environment where wildlife and marine tourism co-exist. The Natura Impact Statement which accompanied the subject application states that due to the proximity of the proposed development site to the Blackwater River cSAC and the Blackwater Estuary SPA, and in light of the discharge of treated wastewater into the cSAC / SPA, it was not possible to rule out likely significant effects upon the Natura sites at the screening stage.
- The proposed development, by reason of its elevated location, scale and overall design, would have an adverse impact on the character of the surrounding

landscape (*N.B.* It would appear that the references to a 'proposed dwelling' and Co. Carlow have been made in error).

- There are concerns that the existing mains sewer which presently serves the subject site discharges untreated effluent into the Blackwater Estuary and that no date has been provided for the construction of the new wastewater treatment plant which is intended to serve the entire town.
- It is considered that the proposal to locate a facility for the treatment of hazardous waste in the tourist town of Youghal fails to comply with the 'proximity principle' in that it would necessitate the transportation of waste from sources in Little Island / Ringaskiddy. In addition, the transportation of waste from alternative sources, such as the pharmaceutical industries located in Counties Limerick and Tipperary, would be dependent on use of the R634 which is a notoriously poor regional road. Accordingly, it is submitted that the inclusion of Condition No. 2 as imposed by the Planning Authority serves to highlight its concerns as regards the proposal to transport 30,000 tonnes of hazardous waste per annum.
- The proposed development site is located in an area zoned as *'I-04 – Industrial Estate Development for Small and Medium Industrial Units'* in the Cork County Development Plan, 2003. It is an objective of the Plan to promote the development of these industrial areas as the primary locations for uses including manufacturing, repairs, warehousing, distribution, open storage, waste material treatment and recovery, whereas the development of inappropriate uses such as office-based industry and retailing is not normally permitted.

  It is of objective of the Plan that industrial areas not used primarily for small to medium industry, warehousing or distribution, should be considered suitable in general for the siting of waste management activities (including the treatment and recovery of waste materials, but excluding landfill and contract incineration facilities). Furthermore, subject to local considerations, it may be suitable to locate civic amenity sites and waste transfer stations on industrial sites with warehousing and / or distribution uses. The types of uses outlined in the foregoing objectives can often result in standards of amenity that would not generally be acceptable in other areas. In this respect it is submitted that said uses can also result in 'bad neighbours' in instances where neighbouring land uses have higher expectations in terms of amenity.

  Having regard to the foregoing, it should be noted that the adjacent lands were developed by Youghal Town Council as an 'Enterprise Area' and that permission was granted on these lands for the construction of a wholesale warehouse with ancillary retailing whilst other approved uses include an HSE health centre, a veterinary clinic, offices, a beauty salon and furniture and carpet retailers. Permission has also been granted under PA Ref. No. 08/5273 for a funeral home with ancillary accommodation. The remainder of these zoned lands comprise low-lying slobland which lacks basic infrastructure.

- Other uses along the T12 service road include the NCT Centre, car sales, panel beating and the Youghal Landfill. The recent intensification of the landfill (from 37,000 tonnes per annum to 170,000 tonnes per annum) has greatly reduced its life expectancy and when landfilling operations cease in the coming months, it is the Local Authority's intention to restore the lands to a recreational area, in accordance with its Restoration and Aftercare Plan, that will be *'aesthetically appropriate to the environment'*.
- The planting and screening measures previously approved under PA Ref. No. 04/7531 / ABP Ref. No. PL04. 211117 have yet to be implemented on site.
- The existing buildings on site are very evident visually from the Coast Road, Ferry Point, Rhinecrew, the Blackwater River, the Youghal by-pass and from along the northern approach to the town. In this respect it is submitted that the scale and massing of the proposed units is excessive given the size of the site.
- It is the appellants understanding that the existing (and proposed) buildings on site are too short to accommodate the off-loading of larger waste containers.
- The public consultation carried out by the applicant failed to inform interested parties of the proposal to treat 30,000 tonnes of hazardous waste on site. In addition, it is of relevance to note that whilst the appellant was informed by the Planning Authority on 20th September, 2010 that no pre-planning discussions had been held with regard to the subject site, the applicant has clearly stated that pre-planning discussions were held with the Local Authority on 22nd June, 2010 and that a declaration was issued on 1st March, 2010 which stated that the insertion of a new dryer on site was exempted development and, therefore, the installation of the proposed of the AquaCritox technology did not necessitate a planning application. Accordingly, it is submitted that the 'public consultation' carried out by the applicant could be considered a 'smokescreen' and contrary to the proper planning and sustainable development of the area.

7.0 RESPONSE TO GROUNDS OF APPEAL

7.1 Response of Planning Authority:

None received.

7.2 Response of Applicant:

- The existing facility to be upgraded on foot of the subject application is fully compliant with the terms and conditions of ABP Ref. No. PL04. 211117 together with the requirements of EPA Waste Licence No. W0211-01. The current Waste Licence will be reviewed with the EPA in light of the proposed development, which will not become operational until such time as the EPA has granted a favourable response to the Waste Licence review in respect of the operation.
- In line with national and regional policy objectives, the opportunity was identified to upgrade the existing facility to an Integrated Waste Management Facility capable of biologically treating municipal and non-hazardous industrial sludges (generating heat and power) and to provide local treatment capacity for hazardous sludge and solvent wastes arising in the Cork region. In this respect the proposed development will extend the range of waste types to be processed on site.

- The proposed development will treat a maximum of 95,000 tonnes of waste per annum, a reduction of 15,000 tonnes from that permitted under ABP Ref. No. PL04. 211117.
- The proposed 'AquaCritox' plant can be utilised for the treatment of hazardous waste, which is not currently possible on site. This plant will provide for a reduction in the overall volume and bulk of sludges by achieving the complete destruction of organic materials in the sludge.
- The proposed development will reduce the overall tonnage of waste inputs, expand the waste types to be accepted and will change the ratio of waste inputs.
- The proposed development accords with the policies and objectives of all the plans and guidelines governing such developments.
- It is considered that the proposed Integrated Waste Management Facility accords with the National Hazardous Waste Management Plan, 2008-2012 which requires Local Authorities to:

- Reduce the generation of hazardous waste by industry and society generally;
- Minimise unreported hazardous waste with a view to reducing the environmental impact of this unregulated waste stream;
- Strive for increased self-sufficiency in the management of hazardous waste and to reduce hazardous waste export; and
- Minimise the environmental, social and economic impacts of hazardous waste generation and management.

The Plan highlights that approximately 48% of Ireland's hazardous waste in 2006 was exported for treatment and disposal abroad and states that the country should seek to become self-sufficient in hazardous waste recovery, particularly in relation to solvent wastes. The proposed 'AquaCritox' technology utilises Supercritcial Water Oxidisation which is recognised as a method for the treatment of several different hazardous waste streams (i.e. waste that are liquid / having a particle size of less than 20µm and an organic content of less that 20%).

- The South West Regional Authority Regional Planning Guidelines, 2010-2022 support the incorporation of the recommendations and policies of the National Hazardous Waste Management Plan, 2008-2012 with the County Waste Management Plans. Section 5.6.20 of the Plan states the following:

'Hazardous waste management in the region needs to be addressed from the perspective of the most environmentally sustainable approach and in line with best international practice'.

- The Cork County Waste Management Plan, 2004 commits the Local Authority to:

- Act to conserve and protect the environment and natural resources of the region;
- Provide a framework to address the region's growing problem of waste management in accordance with best prevailing norms, financial capacity and best environmental practice;

- Provide solutions for the expansion of recycling facilities, the reduction of volumes disposed in landfill through pre-treatment options, and proper disposal to landfill of residues in accordance with EU and EPA requirements.

- The Cork County Sludge Management Plan, 2008 identifies anaerobic digestion as a treatment solution for sludges generated in the county.
- The proposed development fully complies with the following policies of the Cork County Development Plan, 2009-2015 which seek to:

- Promote the development of industrial areas as the primary location for uses including waste treatment and recovery operating centres;
- Promote the development of facilities for the prevention, minimisation, re-use / recycling or disposal with energy recovery of waste materials; and
- Develop a Material Recovery Facility for the Cork Region.

- The Midleton Electoral Area Local Area Plan, 2005 recognises the hierarchy of preferential modes of waste management, including prevention, minimisation, re-use / recycling, disposal with energy recovery and disposal of residual waste, and it is submitted that the proposed development accords with these principles. Furthermore, the Local Area Plan identifies the subject site as being located within the Youghal Town development boundary whilst the site is zoned as 'New Industry / Enterprise' where waste management activities, such as those presently conducted on site, are considered suitable uses.
- The Draft Midleton Electoral Area Local Area Plan, 2010 proposes to zone the subject site as 'Existing Built-Up Area' which has the effect of allowing a more positive and flexible response to proposals for the development of the subject lands.
- It is acknowledged that the subject site is located in proximity of the Blackwater River cSAC and the Blackwater Estuary SPA and as the likelihood of significant negative effects could not be objectively ruled out a Natura Impact Statement which has assessed the impact of the proposal on the integrity of the designated sites has accompanied the application. This NIS subsequently concluded that:

  'As there are no likely significant residual negative impacts, it is concluded that the proposed development will not have a significant negative effect on the integrity of the cSAC / SPA'.

  The mitigation measures for both the construction and operational stages of the proposed development included in the EIS and the NIS will serve to minimise its impact on the environment.

  Furthermore, as the Appropriate Assessment concludes that there will be no significant impact on the integrity of the cSAC or SPA, it follows that there will be no significant impact on the pNHA.

- It is considered that both the proposed plant and the existing structures on site are in keeping with the overall nature and use of the site.
- Given the sites location in an area zoned for industrial and related development, and the established pattern of development in the vicinity, it is submitted that the proposed development is acceptable in terms of visual amenity and accords with the proper planning and sustainable development of the area. In this respect it should be noted that the EIS concluded that the impact of the proposed changes on the landscape would be neutral.
- Contrary to the appellant's claims, the landscaping of the subject site has been completed in accordance with ABP Ref. No. PL04. 211117. In this regard, there are no outstanding compliance / enforcement issues relating to the site and the Planning Authority has not required any additional landscaping to be undertaken on site.
- The existing landscaping and character of the site is considered reasonable in the context of an industrial facility located within an industrial area surrounded by related uses.
- The EIS has concluded that the existing landscaping and the mitigation measures proposed in the scheme design are adequate.
- The appellant is mistaken in his assertion that the existing (and proposed) buildings are too short to allow the off-loading of larger waste containers as all trucks are unloaded within the enclosed buildings with larger 40ft. trucks unloaded in Building No. 1.
- At present, wastewater is treated on site by an existing wastewater treatment plant before being discharged to the public sewer. The discharged waters are within the emission limits set by the Waste Licence and will ultimately be disposed of to the new Youghal Wastewater Treatment Plant upon the completion of same. Effluent from the proposed 'AquaCritox' technology will be well below existing discharge limits and, therefore, that quality of the final discharge from the facility will improve when mixed with the effluent from the 'AquaCritox' technology'.
- Effluent from the upgraded treatment processes will contain lower levels of pollutants than at present and, therefore, any potential impacts on the Blackwater Estuary cSAC and SPA will be reduced.
- The proposed development site is suitably located in close proximity to a well-developed transportation network and, in accordance with statutory policy and guidance, provides a local management response to wastes arising in the Cork region thereby reducing the amount of material exported to other facilities in Europe.
- The EPA's National Hazardous Waste Management Plan, 2008-2012 recommends that in order to apply the proximity principle, Ireland should seek to become self-sufficient in hazardous waste recovery, particularly in relation to solvent wastes. In this regard, it is submitted that the proposed facility is targeted primarily to meet the needs of the Cork region, which is one of the main centres of hazardous waste production in the country.
- The traffic model associated with the 'parent' permission (ABP Ref. No. PL04. 211117) was based on the facility accepting 110,000 tonnes of waste per annum,

however, the surrounding road network, including the N25 and the T12 local road, has since been significantly upgraded.

- The proposed development will reduce the overall volume of waste accepted at the facility by 15,000 tonnes per annum (tpa) whilst the waste input ratios will be changed as follows:

- 40,000 tonnes of sludge (+10,000 tpa)
- 20,000 tonnes of Household / Commercial / Industrial Waste (-50,000 tpa)
- 5,000 tonnes of leachate (-5,000 tpa)
- 30,000 tonnes of Hazardous Waste (+30,000 tpa)

In addition, as hazardous waste is also heavier than household / commercial / industrial waste, primarily as it is in an aqueous or sludge form, the number of vehicle movements will be less than as estimated in the original traffic impact assessment for the same overall annual tonnage intake. Accordingly, the proposed development will result in less traffic movements than those already permitted at the existing facility.

- The amendments proposed to the existing facility will not require significant construction works with the new anaerobic digester estimated to be constructed within 4 weeks and the 'AquaCritox' plant expected to be delivered and assembled over a period of 6 weeks. Therefore, construction related traffic is expected to be insignificant.
- An analysis of internal vehicle movements demonstrates that there is adequate manoeuvring space within the site.
- Having regard to the site's planning history and existing use, the site location and surrounding pattern of development, the reduced traffic impact, the improved quality of waste discharges from the on-site wastewater treatment plant, taken together with statutory planning policy and guidance which promote the provision of Integrated Waste Management Facilities to increase self-sufficiency in the management of hazardous and non-hazardous wastes in accordance with the proximity principle, it is submitted that the proposed development accords with the proper planning and sustainable development of the area.

8.0 OBSERVATIONS:

8.1 An Taisce:

- The subject application highlights Ireland's non-compliance with the EIA Directive established in European Court Case C-50/09 as regards the lack of provision for assessment by the consent authority.
- The proposed development site adjoins the Blackwater SAC, SPA & NHA and is located on problematically infilled, inter-tidal wetlands.
- It would appear that the reference to a 'proposed dwelling' on Page No. 2 of the grounds of appeal was included in error.

- Concerns have been raised with regard to possible instances of non-compliance with PA Ref. No. 04/7531 and the overall scale and impact of the proposed development.
- Whilst the report of the Area Engineer has referred to a *'history of complaints about odours emanating in this part of the town'* it only 'thinks' these relate to the landfill.
- The report of the Environment Section made a number of recommendations as regards the need for further information.
- Notwithstanding the proposal to extend the range of waste types to be handled on site and the introduction of hazardous waste, Cork County Council has failed to carry out a proper investigation of the operation of the existing facility and whether or not it complies in full with the terms and conditions of PA Ref. No. 04/7351.
- The subject application should be assessed *de novo* having regard to the implications of Case No. C-50/09.

9.0 RESPONSE TO SECTION 131 NOTIFICATIONS:

9.1 Environmental Protection Agency:

- The existing site currently holds a Waste Licence (Reg. No. W0211-01) from the Environmental Protection Agency.
- The proposed activity cannot be accommodated under the existing licence and is one that will require a review of the Waste Licence from the Environmental Protection Agency (see accompanying letter from the Office of Environmental Enforcement to the facility).
- The Agency has not received a Waste Licence Review Application as of 17th February, 2012.
- If and when the Agency receives a Waste Licence Review Application for the proposed development it will be assessed and the decision of the Board of the Agency will be forthcoming in due course. All aspects of the development, including its operation and safe closure, will be considered by the Agency in the determination process.
- All matters to do with emissions to the environment from the activities proposed and as detailed in the EIS, and any licence application documentation as may be received, will be considered and assessed by the Agency. Where the Agency is of the opinion that the activities, as proposed, cannot be carried on, or cannot be effectively regulated under a waste licence, to the extent that permits compliance with as reasonable burden of proof for Section 40(4) of the Waste Management Acts, 1996 to 2010, then the Agency cannot grant a Waste licence for such a facility. Should the Agency decide to grant a licence in respect of the activity, as proposed, it will incorporate conditions that will ensure that appropriate National and EU standards are applied, and that Best Available Techniques (BAT) will be used in the carrying on of the activities.

9.2 Inland Fisheries Ireland:

- Whilst it is stated in the subject application that the proposed operation will operate within the terms of the existing EPA licence W0211-01, the applicant has previously sought a review of the same licence. Inland Fisheries Ireland would therefore request the Board to seek clarification from the EPA that the proposed development may operate within the existing licence and if this is not the case, the current status of the review process. It is also of concern to note that there have been a number of prior ELV exceedances of the existing EPA licence in the operation of the existing treatment plant on site and, therefore, the Board should seek clarification of progress or otherwise in respect of this matter.
- It is noted that the 'Aquacritox' process is described in the application documentation as an *'innovative'* process and that the proposed development may be one of the few to adopt the use of 'Aquacritox' technology on a commercial scale. Accordingly, the applicant should be requested to demonstrate to the satisfaction of the Board that this system is indeed proven as best available technology, perhaps by supplying detailed examples of its successful operation on a similar scale to that proposed in the application.
- The application details discharge to the Local Authority sewerage network and also notes that Youghal presently requires upgrading of its own municipal treatment facilities. The application also states that in due course it is envisaged that on-site treated effluent would then pass to the future new Youghal municipal wastewater treatment plant to undergo further treatment prior to discharge to the estuary. The Council's own recent application to the EPA for discharge authorisation states that untreated wastewater presently discharges directly from the sewerage network to the estuary from the Foxhole catchment area.

  In view of the foregoing, it is submitted that it would be premature to grant permission for the proposed development prior to the construction and commissioning of a new municipal wastewater treatment plant serving the Youghal catchment area. Such a plant, with BAT secondary treatment capability, would then offer additional treatment of effluent from the applicants premises affording protection to the receiving aquatic environment, whilst also providing a separate phase in which to monitor the influence of significant individual discharges within the collection and treatment system. This would provide a further degree of protection to the receiving aquatic environment in that there would be a capability to modify treatment or control discharge in the event of an exceedance or pollution event occurring within the collection network which would otherwise have been discharged directly to the estuary. The receiving aquatic environment should be afforded similar levels of protection as experienced in other receiving catchments where similar agglomerations are now served by WWTPs where infrastructural upgrades have taken place. Alternatively, if the proposed operation were to proceed at present, it would potentially create a situation where sludge from various treatment processes, including secondary treatment plants, would be imported from around the county into a catchment area which currently has no similarly advanced municipal wastewater treatment facilities of its own.

9.3 Failte Ireland:

- It is noted that there are a number of tourism business, including marine-based tourism activities and fisheries, in the vicinity of the Blackwater Estuary that rely on good water quality in the estuary. Accordingly, the Board is requested, in its examination of the subject appeal, to take account of any potential negative impact on tourism that may arise as a result of a deterioration in water quality consequent on the proposed development.

10.0 NATIONAL AND REGIONAL POLICY:

10.1 Sustainable Development: A Strategy for Ireland, 2007:

This document aims to provide a comprehensive analysis and framework to allow sustainable development to be taken forward more systematically in Ireland.

10.2 The National Development Plan 2007- 2013:

This plan recognises that Ireland has significant renewable energy resources available but their large scale exploitation continues to require support and intervention by policy makers because of the investment costs and risks entailed. The plan sets out objectives to stimulate renewable energy production. Renewable energy measures will focus on achieving Government targets for renewable energy production and meeting policy goals with regard to competitiveness, environment, security of supply, R&D and the development of a sustainable All-Island energy market. The primary focus will be on the large-scale deployment of wind, the emerging potential and deployment of biomass and biofuels, preparatory action on ocean energy and deployment of other technologies such as solar and geothermal technologies. Deployment will be delivered through a range of supports including taxation, direct grant aid and other funding or support mechanisms.

The Plan also acknowledges that waste poses a serious economic and environmental challenge for Ireland and that the adoption of a sustainable approach for dealing with same will require the integration of a number of elements — reducing the extent of waste generation through waste prevention strategies, maximising the recycling and recovery of waste and minimising the environmental impacts of the final disposal of waste, particularly through reducing the reliance on landfill.

10.3 A Policy Statement, Waste Management, 'Changing Our Ways', 1998:

This document outlines the Government's policy objectives in relation to waste management, and suggests some key issues and considerations that must be addressed to achieve these objectives. The policy is firmly grounded in an internationally recognised hierarchy of options, namely prevention, minimisation, reuse/recycling, and the environmentally sustainable disposal of waste which cannot be prevented or recovered.

10.4 'Delivering Change', Preventing and Recycling Waste, 2002:

This document builds on the fact that Government policy on waste management is based on the internationally accepted hierarchy of best practice. It therefore covers prevention

and minimisation, re-use, recycling and biological treatment, energy recovery and environmentally sound disposal by thermal treatment or by landfill.

10.5 Waste Management, 'Taking Stock and Moving Forward', 2004:

This document is a review of progress on waste management modernisation since 1998 and includes a programme of key points to underpin future progress.

10.6 National Strategy on Biodegradable Waste, April, 2006 (DoEHLG):

This document outlines Government policy for the diversion of biodegradable municipal waste from landfill in order to meet national commitments to comply with the provisions of the Landfill Directive. The strategy focuses primarily on Biodegradable Municipal Waste (BMW) including proposals for waste prevention and minimization. It also refers to the use of alternative technologies in respect of waste treatment and disposal including biological and thermal treatment. Section 2.2.4 of the Strategy refers to Anaerobic Digestion and notes that there are currently three centralised Anaerobic Digesters operating in the Republic of Ireland, with a fourth being operated in County Fermanagh. These plants are focused on the treatment of farm wastes although the plant at Ballymacarbery, Co. Waterford, has been performing trials on the biodegradable fraction of both MSW and commercial / industrial wastes.

Section 8.4 notes the benefits which can arise from the synergy of the biological treatment of BMW with other sources of organic waste including agricultural wastes, organic industrial wastes, fisheries residues etc.

Section 14.6 refers to a less rigorous specification of waste recovery facilities. Rather than define the exact location, number and capacity of recycling (including waste recycling centres) and biological treatment facilities, Regional Waste Management Plans should enable greater flexibility for additional recovery capacity to be provided within Ireland to serve the needs of the various regions in accordance with the principles contained in the Ministerial Direction on the Inter-Regional Movement of Wastes. Such an approach should enable greater competition among facility operators and provide a more robust set of recovery facilities.

10.7 National Hazardous Waste Management Plan, 2008-2012 (presently under review):

This Plan sets out the priority actions that should be taken within the period of the Plan (2008-2012) and beyond in relation to: the prevention of hazardous waste; improved collection rates for certain categories of hazardous waste; the steps that are required to improve Ireland's self-sufficiency in hazardous waste management; and the management of certain legacy hazardous wastes such as contaminated soil. The objectives of the Plan are:

1. To reduce the generation of hazardous waste by industry and society generally.
2. To minimise unreported hazardous waste with a view to reducing the environmental impact of this unregulated waste stream.

3. To strive for increased self-sufficiency in the management of hazardous waste and to reduce hazardous waste export.
4. To minimise the environmental, social and economic impacts of hazardous waste generation and management.

In the context of the subject proposal it is of relevance to note that the Plan recommends a policy of moving towards self-sufficiency in the management of hazardous waste and states that of the 48% of hazardous waste exported from the country in 2006 for treatment and disposal abroad (mostly for thermal treatment, including incineration and use as fuel, but also for metal recovery, solvent recovery and landfill), a significant proportion of same could have been dealt with in Ireland at existing authorised facilities and in cement kilns. Whilst the Plan acknowledges that one cement kiln operator has indicated their intention to seek authorisation to burn waste, including hazardous waste, it states that if Ireland is to become fully self-sufficient, hazardous waste landfill and incineration (or alternatives) is required. In this respect the Plan notes that whilst a hazardous waste incinerator is licensed to operate in Ringaskiddy, Co. Cork, there are no equivalent proposals on hand for hazardous waste landfill or for technologies that can provide a realistic alternative to the incineration of the wide range of hazardous wastes that are currently exported for incineration.

Chapter 6 of the Plan explores the available options for the increased treatment of hazardous waste in Ireland and identifies three overarching strategic needs to be addressed if additional hazardous waste is to be treated in Ireland and export is to be avoided:

- addressing the deficit in capacity for the substantial waste stream currently exported for thermal treatment (i.e. co-incineration, use as fuel or incineration)
- development of landfill capacity to manage non-recoverable and non-combustible hazardous wastes and residues, including asbestos ; and
- expansion of other recovery and treatment capacity in Ireland for waste that does not need thermal treatment or landfill – generally referred to as physico-chemical treatment .

The Plan subsequently expresses support for the provision of alternative treatment technologies (where technically and economically feasible) for several different hazardous waste streams, including supercritical water oxidation (*N.B.* A brief technical description of which is included in Appendix E of the Plan). Section 6.6 of the Plan specifically refers to the physico-chemical (including oxidation) treatment of hazardous liquid, solid and sludge waste. Chapter 8 on implementation concludes with an overview and summary of the recommended actions to address the issues discussed in earlier chapters. A number of objectives, targets and indicators are proposed to monitor the Plan's implementation.

10.8 Department of Environment, Community and Local Government: Towards a New National Waste Policy, Discussion Document, August, 2011:

This document has been prepared in light of the transposition of the Waste Framework Directive (2008/98/EC) into Irish law in March, 2011 and the Programme for Government ('Government for National Recovery, 2011-2016') commitments in relation to the development of a sustainable waste policy and the putting in place of a national waste policy that will adhere to the EU waste hierarchy and deliver a coherent approach to waste management, minimising the waste going to landfill and maximising resource recovery. It is designed to promote discussion and debate and to provide an opportunity for all interested parties to input into the development of a policy framework that will shape Ireland's approach to waste management for the next decade and beyond.

10.9 National Climate Change Strategy 2007- 2012:

This strategy draws together the Government's collective effort across all sectors to tackle climate change. Chapter 3 deals with energy supply. The government has set national targets above and beyond existing EU targets for 15% of electricity generated from renewable sources by 2010 and 33% by 2020. The government is acting to stimulate combined heat and power (CHP) with support under the CHP Deployment programme, which includes support for small scale CHP and large-scale biomass-fed CHP, and additional research and development supports. The Government's ambition for CHP is underpinned by a target to achieve an installed capacity of 400MW by 2010 and 800MW by 2020. The achievement of the 2010 target will reduce greenhouse gas emissions by 162,000 tonnes on average over the 2008-2012 period. This saving is attributed to the Industrial, Commercial and Services sector for the purposes of this Strategy.

10.10 Delivering a Sustainable Energy Future for Ireland: 2007 Government White Paper on the Energy Policy Framework 2007-2013:

This paper sets out the broad energy policy framework for the long-term development of the energy section, including power generation. The White Paper recognises that energy policy must make a substantial contribution to reducing greenhouse gas emissions through energy efficiency improvements, changes in the fuel mix and the increased use of renewable energy.

Chapter 3.4.8 sets out a number of actions to achieve diversity of fuel use including 15% of electricity consumption from renewable sources by 2010 through REFIT scheme projects and encouraging biomass in power generation.

Section 3.10.10 states that the Government will seek to achieve at least 400MW from Combined Heat and Power by 2010 through continued support under the CHP Deployment Programme and R&D supports with particular emphasis on biomass fuelled CHP and will aim to achieve at least 800MW by 2020.

10.11 National Renewable Energy Action Plan:

Ireland's National Renewable Energy Action Plan ('NREAP') is the submission required under Article 4 of Directive 2009/28/EC. Directive 2009/28/EC requires each Member State to adopt a national renewable energy action plan and to submit these to the

European Commission. These plans are to set out Member States' national targets for the share of energy from renewable sources consumed in transport, electricity and heating and cooling in 2020, taking into account the effects of other policy measures relating to energy efficiency on final consumption of energy. The plan sets out the Government's strategic approach and concrete measures to deliver on Ireland's 16% target under Directive 2009/28/EC.

10.12 'Anaerobic Digestion: Benefits for Waste Management, Agriculture, Energy and the Environment' (Discussion Paper, Environmental Protection Agency, 2005):

This discussion document outlines the policy context, advantages, disadvantages and the various characteristics of anaerobic digestion in addition to considering the feasibility of centralised anaerobic digestion facilities. The primary benefits arising from anaerobic digestion (AD) are energy recovery (through the recovery of biogas) and the displacement of greenhouse gas emissions from fossil fuels, however, the process also produces several additional beneficial outcomes:

- AD destroys a wide range of pathogenic and faecal micro-organisms. Under the EU animal by-products regulation (1774/2002) biogas plants must be fitted with pasteurisation/hygienisation units of minimum treatment of 70°C for one hour. Such treatment will kill all pathogens and seeds thereby eliminating cross-farm contamination of pathogens or weeds.
- AD substantially reduces odours associated with animal slurries by as much as 80%.
- AD reduces the organic pollution potential of animal slurries. Tests of animal slurries from pilot and farm scale digesters show a reduction of 55% of BOD for cattle slurry, 75% for pigs and 80% for poultry slurries.
- An appreciable portion of the geology of the country is of a karst limestone composition, which makes groundwater particularly vulnerable to pollution. The lower pollution potential of AD processed slurries will provide additional protection to groundwater.
- AD increases the proportion of nutrients immediately available for uptake by plants. During the digestion process nutrients are mineralised, which allows improved plant uptake.
- depending on the mixture of slurries (e.g. cattle, pig, poultry, etc) the nutrient balance of digestate may be more balanced for agricultural application. With a better nutrient balance and more accessible nutrients the requirement for artificial fertilisers may be lessened which results in a cost saving to farmers.

The principle disadvantages associated with anaerobic digestion include its significant capital and operating costs and that the viability of an AD plant is largely dependant on it forming part of an integrated waste management system generating several income streams. Furthermore, the operation of an AD facility is a relatively complicated process with centralised plants involving multiple waste sources requiring specialist management. AD, like animal slurries, also produces emissions that can be harmful to the environment and human health (e.g. methane, ammonia and hydrogen sulphide) thus necessitating proper management of the facility to minimise risk. A centralised AD plant will create

traffic movements transporting wastes to the plant and waste residues away from the plant and thus appropriate siting is an essential consideration. Other potential impacts include noise arising from the operation of the plant in addition to the visual impact of the facility.

The following further points are relevant to the subject application:

- The benefits of AD include improved water quality, groundwater protection, reduced carbon dioxide emissions, and an increase in indigenous renewable energy. Centralised AD, with suitable support measures, is a viable policy option to address national commitments in the areas of global warming, renewable energy and water pollution.
- Transport costs form a significant proportion (25-35%) of an AD plants operating costs and consequently the location of an AD plant is critical in terms of viability. Ideal site placement requires proximity to waste sources (i.e. farms and organic wastes from industry) with sufficient volumes of available wastes. Consideration should also be given to proximity to customers for heat generation, where applicable, (i.e. close to population centres) and the electricity grid. The feasibility of centralised AD in specific locations depends on the participation of sufficient farms, preferably within a 5-8 mile radius of a proposed AD site.
- Biogas yield is largely dependent on the waste inputs and, in particular, the mixture of non-agricultural wastes that are mixed with the animal slurries. This co-digestion improves biogas production.
- Consideration should be given to the concentration of farms and the spatial distribution of sources of other organic matter in respect of locating AD plants.
- The landspreading limits imposed by the Nitrates Directive are applicable to AD.

10.13 Environmental Protection Agency, Viewpoint, September, 2006:

This document outlines the background and key issues concerning anaerobic digestion. It refers to the primary benefits arising from anaerobic digestion (AD) and notes that the digestion of animal slurries transforms organic nitrogen into inorganic nitrogen, a better fertiliser, and depending on the composition of digested material, a better balanced fertiliser. Furthermore, when compared to raw animal slurries AD digested material is significantly less odorous and has lower organic pollution potential, which ultimately has water quality benefits. Other benefits include energy recovery (through the recovery of biogas) and the displacement of greenhouse gas emissions from fossil fuels.

The document concludes by stating that the EPA is supportive of the development of anaerobic digestion capacity for the management of organic wastes.

10.14 South West Regional Planning Guidelines, 2010-2022:

The Regional Planning Guidelines are designed to steer the future growth of the region over the medium to long term and to implement the strategic planning frameworks set out in the National Spatial Strategy (NSS), 2002 and National Development Plan, 2007-2013.

They state that significant inroads have been made in switching from the predominantly landfill based waste disposal system to integrated waste management programmes and that the individual Waste Management Plans for the region address all areas of waste management including collection, treatment, recovery and final disposal.

Paragraph 5.6.17 states that an important issue relating to waste management is the need for a Materials Recovery Facility (MRF) or Mechanical Biological Treatment (MBT) to be developed, at an early date, in a sustainable location within the Cork Gateway, with good transportation links. Paragraph 5.6.20 states that hazardous waste management in the region must be addressed from the perspective of the most environmentally sustainable approach and in line with best international practice. The Guidelines subsequently make the following recommendations as regards waste management in the region:

- 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 (WMP's) during the lifetime of the guidelines.
- The RPG supports the incorporation of the recommendations and policies of the National Hazardous Waste Management Plan 2008-12 and encourages the early provision of a Materials Recovery Facility or Mechanical Biological Treatment (MBT) , in a sustainable location within the Cork Gateway
- In relation to Kerry, considering the peripherality of the County, the need to promote economic development and the need to maintain a competitive waste management environment, the development of additional materials recovery facilities at sustainable locations is desirable.

In terms of renewable energy, the Guidelines acknowledge that the region has a key role to play in the attainment of the national renewable energy target of 40% supplied via renewables by 2020 and in this respect the Regional Bioenergy Plan 2009-2020, published by the South West Regional Authority, supports the development of bioenergy resources as a means of displacing or substituting fossil fuel in transport and heating operations. The Guidelines include the following energy objectives:

- It is an objective to facilitate the sustainable development of additional electricity generation capacity throughout the region and to support the sustainable expansion of the network. National grid expansion is important in terms of ensuring adequacy of regional connectivity as well as facilitating the development and connectivity of sustainable renewable energy resources.
- It is an objective to ensure that future strategies and plans for the promotion of renewable energy development and associated infrastructure development in the Region will promote the development of renewable energy resources in a sustainable manner. In particular, development of wind farms shall be subject to:

    - the Wind Energy Planning Guidelines
    - consistency with proper planning and sustainable development

- criteria such as design and landscape planning, natural heritage, environmental and amenity considerations.

- It is an objective of the guidelines to promote the sustainable provision of renewable energy from tidal, wave and pumped storage developments together with bioenergy resources, as critical elements of the long-term secure energy supply throughout the region.

11.0 DEVELOPMENT PLAN

11.1 Cork County Development Plan, 2009-2015:

Chapter 6: Transport and Infrastructure:
Section 6.6: *Waste Recovery and Recycling:*
Development Plan Objectives: *Waste (including):*

INF 6-1: *Waste Management Plan:*
It is an objective to implement and support the provisions of the County Council's approved Waste Management Plan and in particular, to promote the development of facilities for the prevention, minimisation, re-use / re-cycling or disposal with energy recovery of waste material.

INF 6-2: *Waste Management:*
It is an objective to undertake a review of all of the existing Bring Sites, Civic Amenity Sites and Waste Transfer Stations currently operating in the County.

INF 6-3: *Materials Recovery Facility:*
It is an objective to develop a Material Recovery Facility for the Cork Region in line with the Waste Management Plan.

Section 6.7: *Energy:*
Development Plan Objectives: *Energy:*

INF 7-1: *Energy Networks and Infrastructure*

a) It is an objective to recognise the national importance of ensuring security of energy supplies for servicing a whole range of economic sectors in line with the Government's White Paper 'Delivering a Sustainable Energy Future for Ireland'.
b) It is a general objective, where strategic route corridors have been identified, to support the statutory providers of national grid infrastructure by safeguarding such strategic corridors from encroachment by other developments that might compromise the provision of energy networks.
c) It is an objective to protect areas of recognised landscape importance and designated sites including Special Areas of Conservation, Special Protection Areas and Natural Heritage Areas, from the construction of

large-scale visually intrusive energy transmission infrastructure. In such circumstances, it is an objective to seek alternative routing or transmission methods.

INF 7-2: *Climate Change:*

a) It is an objective to support the National Climate Change Strategy and, in general to facilitate measures which seek to reduce emissions of greenhouse gases.
b) It is an objective to adopt sustainable planning strategies, such as integrated approach to land-use and transportation and facilitate mixed-use developments, so as to reduce greenhouse emissions.

INF 7-3: *Renewable Energy Production:*

It is an objective generally to encourage the production of energy from renewable sources, including in particular that from biomass, waste material, solar, wave, micro hydro power and wind energy, subject to normal proper planning considerations, including in particular the impact on areas of environmental or landscape sensitivity.

Chapter 9: Local Area Development

11.2 Cork Area Strategic Plan (CASP) 2001-2020:

The CASP is stated to be underpinned by six key concepts – regeneration of Cork City, metropolitan Cork, reinforcement of ring towns, infrastructure lead development, creation of an integrated transport system and protection and enhancement of the environment. It is stated that the CASP seeks to ensure that infrastructure including transport and utility services are provided in advance or in tandem with housing and other development. In Section 1.6 it states that a number of other parallel studies including waste management strategy for Cork region 2000-2020 have been completed and should be consulted in conjunction with the CASP with regard to common planning areas or specific topics.

The infrastructure goal of the plan is stated to minimise the cost of providing water, sewage, electricity, gas and telecommunication services to the population and to maximise the use of existing infrastructure.

Section 3.5.17: *'Waste Management'* of the Cork Area Strategic Plan (CASP) as updated in July, 2008 states that the provision of waste management infrastructure is critical to support the sustainable development of all sectors in the CASP region including the industrial, commercial, service and residential sectors. Furthermore, the provision of waste infrastructure, as outlined in the Cork City and County Waste Management Plans, is to be prioritised in line with the EU Waste Hierarchy.

11.3 Midleton Electoral Area Local Area Plan, 2011:

Land Use Zoning:

The proposed development site is located on lands zoned as *'Existing Built-Up Area'*.

Section 2: *Local Area Strategy:*
Section 2.2.53: The public water supply is constrained in Youghal at present and needs investment and upgrading. Water supply is sourced from Boola which lies in Co. Waterford. Youghal Water Supply Scheme is listed as a scheme at planning stage on the DoEHLG's Water Services Investment Programme 2010-2012.

Section 2.2.54: The N25, as part of the Atlantic Corridor, is the subject of major on line improvement works. Design work on the Midleton to Youghal section is underway. As a national route it is important that the capacity and safety of the existing N25 be safeguarded and that areas of concern for the future N25 Midleton-Youghal scheme be protected.

Section 2.2.55: There is no wastewater treatment plant for Youghal and currently all effluent is discharged directly to the sea without treatment. The receiving waters in Youghal contain a number of nature conservation designations; cSAC-2170 Blackwater River, SPA-4028 Blackwater Estuary and pNHA-0072 Blackwater River and Estuary and water quality status is considered to be moderate ecological status. In order to achieve compliance with the EU Urban Waste Water Directive the delivery of a new treatment plant and sewer system is essential to the development aspirations of the town within the lifetime of this plan. Consultants have been appointed to begin the design / construction process for a new treatment plant and upgrade of the network. Youghal Sewerage Scheme is listed as a contract to start on the DoEHLG's Water Services Investment Programme 2010-2012.

Section 3: *Settlements and Other Locations:*
4. Youghal Environs

12.0 WASTE MANAGEMENT PLANS

12.1 Cork County Waste Management Plan, 2004 (presently under review):

The Waste Management Strategy for the Cork Region 1995, on which the 2004 Plan is based, spans 25 years up until 2020 and examined in detail all the options available to the region for its waste management. Options for the prevention, collection, treatment and disposal of the region's waste were outlined and assessed before being organised into three separate scenarios. Scenario 2 was subsequently adopted and carried through into the current Waste Management Plan. This scenario required adopting the concepts of the National Recycling Strategy, introducing large scale home composting, the provision of a new engineered landfill site, and the mechanical separation and composting or mechanical biological treatment of residual household and commercial waste whereby the wet organic fraction is composted and the dry fraction is baled and subsequently landfilled.

The Waste Management Plan, 2004 confirms Scenario 2 for the management of municipal waste in the County and adopts 'prevention' as the core component. It provides for 81 objectives and actions related to prevention, collection, recovery and disposal activity, hazardous waste management and general waste management. Actions 71-76

relate to hazardous waste (i.e. prevention, collection, transportation etc.) but do not detail any specific actions for the 'disposal' of same. Notably, the Plan aims to ensure that there is no increase in hazardous waste disposal over 1996 quantities.

12.2 Sludge Management Plan, 2000:

This Plan identifies different treatment solutions for sludges generated in the county, including anaerobic digestion. Section 6 of the Plan includes recommendations for the management of water treatment sludges, industrial sludges and agricultural slurries.

13.0 ASSESSMENT

From my reading of the file, inspection of the site and assessment of the relevant local, regional and national policies, I conclude that the key issues raised by the appeal can be considered under the following headings:

- The principle / siting of the proposed development
- Environmental impact assessment
- Appropriate assessment / ecological considerations

These are assessed as follows:

13.1 The Principle / Siting of the Proposed Development:

13.1.1 The proposed development consists of the redevelopment of an existing Waste Recovery / Transfer and Sludge Drying Facility to provide for an Integrated Waste Management Facility which will involve the expansion of the existing operation on site through the development of several new waste processing / treatment technologies in order to allow the processing of a wider range of waste types at the facility to include commercial, industrial and household waste in addition to hazardous waste. Whilst the proposal will ultimately reduce the overall tonnage of waste inputs accepted at the site from that previously approved under ABP Ref. No. PL04. 211117, it will serve to expand the range of waste types accepted at the facility for treatment and will change the ratio of said waste inputs as follows:

13.1.2 At present, the existing facility is authorised to process / treat the following waste inputs:

Commercial & Industrial Waste:	70,000 tonnes
Non-Hazardous Sludge:	30,000 tonnes
Leachate from Landfills:	10,000 tonnes
Total:	*110,000 tonnes*

13.1.3 The subject proposal will expand the existing operation to accommodate the following:

Commercial, Industrial & Household Waste:	20,000 tonnes
Non-Hazardous Sludge:	40,000 tonnes

Hazardous Waste:	30,000 tonnes
Leachate from Landfills:	5,000 tonnes
Total:	*95,000 tonnes*

13.1.4 Having regard to the planning history of the site, its established use for the processing of waste, the surrounding pattern of development, with particular reference to the presence of Youghal Landfill on adjacent lands, the sites proximity to the national road network and the location of the site on lands zoned as *'Existing Built-Up Area'* in the Midleton Electoral Area Local Area Plan, 2011, in my opinion, the overall principle of the proposed development would seem to be acceptable at this location, however, given the specific nature of the development proposed and, in particular, the proposal to introduce the processing of hazardous waste on site, it is necessary to consider the wider suitability of the siting of the proposed development and the overall environmental sustainability of the project. In this respect I propose to review each of the individual components of the scheme in turn in addition to the overall cumulative nature of the project having due regard to the interactions between the respective processes involved.

13.1.5 Anaerobic Digestion:

13.1.5.1 The proposed development includes for the construction of a fully enclosed anaerobic digestion (AD) plant which will have the capacity to process 20,000 tonnes per annum of non-hazardous municipal sewage and industrial wastewater treatment plant sludge, although the process flow diagram which has accompanied the response to the request for further information would seem to indicate that only 15,000 tonnes of sludge will be directed to the digester annually. The AD plant will be constructed adjacent to Building No. 1 and will consist of 2 No. above ground anaerobic digestion tanks with a combined capacity of 2,207.65m^3 which will be specifically designed to treat the sludge to produce and collect biogas (methane), which can be classified as a 'greenhouse gas', which will in turn be used to generate heat and power through a CHP plant for use on site. The intake of raw materials will be conducted from within the Waste Recovery Building (Building No. 1) where the sludge will be loaded directly into a feeder hopper before being transferred via a fully enclosed conveyor to the AD tanks, each of which will be maintained at a temperature of 37^{o}C. Associated AD equipment will be housed in Building No. 1 and will include gas conditioning and sludge storage areas. The AD process is continuous and will produce a solid (fibrous) and liquid digestate in addition to the biogas. The liquid material will be directed to a liquid digestate storage tank to be constructed in the south-eastern corner of the facility whereas Section 5.2 of the EIS states that the fibrous residue will be treated in the existing sludge dryer.

13.1.5.2 At this point I would advise the Board that conflicting information has been provided in the submitted documentation as regards the disposal of both the solid and fibrous digestate. In the first instance I would refer the Board to Section 5.2 of the Environmental Impact Statement which states that the liquid digestate is to be re-circulated to the digester and, where necessary, subsequently treated in the on-site wastewater treatment plant, whereas the solid fibrous digestate is to be directed to the sludge drier for further treatment (*N.B.* Although not expressly stated it would appear to be intended to mix the fibrous digestate with other dried sludge and to transport same off

site for recovery at an approved facility). However, Section 2.4.1 of the response to the request for further information clearly states that both the solid and liquid components of the final digestate will be disposed of by way of landspreading on agricultural landbanks in accordance with approved Nutrient Management Plans.

13.1.5.3 With regard to the foregoing, whilst I would concede that all of the various options outlined for the ultimate disposal of the digestate residue would appear to be generally acceptable in principle, I am inclined to suggest that the landspreading and use of this material as a fertiliser would be more sustainable in that it will reduce the total volume of material being exported from the country as a dried residue for recovery abroad. Similarly, such landspreading may reduce the demands placed on the on-site wastewater treatment system. Notwithstanding the foregoing, I would suggest that the final route for disposal is a matter for consideration by the EPA in its licensing of the facility.

13.1.5.4 Having regard to national policy in respect of waste disposal and treatment, it is clear that the biological treatment of waste through anaerobic digestion is envisaged as playing an increasingly important role in achieving national targets in terms of waste minimisation and groundwater protection etc. Furthermore, it is acknowledged that anaerobic digestion has the wider environmental benefit of reducing greenhouse gas emissions through the generation of biogas as a source of renewable energy and thus contributes towards the achievement of Ireland's commitments with respect to the Kyoto Protocol.

13.1.5.5 The detailed benefits of the anaerobic digestion of agricultural waste are specified in the discussion paper prepared by the Environmental Protection Agency in 2005 and whilst the subject proposal will not process agricultural slurries it is my understanding that similar benefits will arise from the anaerobic digestion of municipal sewage sludge and industrial non-hazardous wastewater treatment sludge. These include improved water quality and groundwater protection through the destruction of a wide range of pathogenic and faecal micro-organisms and a reduction in the organic pollution potential of the sludge. The mineralized nutrients contained in the liquid fertiliser arising from anaerobic digestion result in improved uptake by plants / crops (when compared to raw animal slurry) whilst the liquid digestate also benefits from a reduced phosphorous content.

13.1.5.6 With regard to the principle of developing an anaerobic digestion plant at the subject site, it is of relevance to note that the existing operation, as approved under ABP Ref. No. PL04. 211117, already includes for a sludge drying facility which is authorised to process up to 30,000 tonnes of non-hazardous sludge per annum. Accordingly, given that the treatment of specified sludge material on site is an established use I am inclined to suggest that the development of an alternative technology to facilitate the processing of same would generally be acceptable in principle. However, it is necessary to consider the implications of the development of the proposed AD plant as regards the increase in the capacity of the facility to process sludge. In this respect I note that the proposed AD plant will have the capacity to process up to 20,000 tonnes of sludge per annum, although the

process flow diagram supplied in response to the request for further information indicates that only 15,000 tonnes of sludge will be directed to the digester annually. In parallel to the AD plant, a further 10,000 tonnes of sludge will be directed to the sludge drier with an additional 15,000 tonnes diverted to Building No. 1 for 'lime stabilisation'. Accordingly, whilst the introduction of the proposed AD plant will increase the overall intake of raw sludge material for treatment on site by 10,000 tonnes, I note that when taken in conjunction with the proposed decrease in the acceptance of landfill leachate at the site, which is treated by way of the existing wastewater treatment plant, the combined volume of sludge and leachate processed at the site will only increase by 5,000 tonnes i.e. 12.5%.

13.1.5.6 Having regard to the foregoing, with particular reference to the scale of the development proposed and the limited increase in the capacity of the facility, in my opinion, the introduction of the proposed anaerobic digestion plant would serve to achieve the wider strategic objectives of the Cork County Development Plan as regards waste management and energy recovery and would also accord with the provisions of the Waste Management Plan for the area.

13.1.6 The Sludge Drying Facility:

13.1.6.1 The existing sludge drying facility on site, as approved under ABP Ref. No. PL04. 211117, is authorised to process up to 30,000 tonnes of non-hazardous sludge per annum, however, as a result of the development of the proposed AD plant, in addition to lime stabilisation, it would appear that the volume of sludge material being directed to the drier will be reduced to 10,000 tonnes per annum. Whilst I would be generally satisfied as regards this element of the proposed development I would reiterate that Section 5.2 of the ElS states that the solid fibrous digestate from the proposed AD plant is to be directed to the sludge drier for further treatment. Accordingly, the anticipated reduction in the volume of material ultimately processed by the sludge dryer may not be as great as suggested by the applicant.

13.1.7 Lime Stabilisation:

13.1.7.1 The existing operation as approved under ABP Ref. No. PL04. 211117 provided for the development of a sludge drying facility to process 30,000 tonnes of sludge per annum, however, I note that the EIS which has accompanied the subject application refers to the existing treatment process as involving the drying of sludge using heat from a woodchip-fired boiler and also the addition of lime. From a review of ABP Ref. No. PL04. 211117 it is unclear as to whether or not the treatment process as approved provided for the addition of lime as part of the drying process, although I note that the description of the proposed development did refer to the use of a mobile dewatering plant, however, it is my opinion that the addition of lime or 'lime stabilisation' was not intended to operate as a stand-alone process from the sludge drier. In this respect I would draw the Board's attention to the process flow diagram which has been submitted as part of the subject application as this indicates that 15,000 tonnes of raw sludge imported to the site will be subjected to lime stabilisation without any further treatment to produce 16,500 tonnes of biosolids. Lime stabilisation is a process whereby sludge is mixed with lime in order to raise its pH (typically to a value greater than 12) which also results in a

rise in temperature thereby reducing pathogens and offensive odours in addition to moisture content, however, it would also appear to result in a 'bulking up' of the treated material which must then be transported off site thereby giving rise to additional traffic movements when compared to outputs associated with the sludge drier.

13.1.7.2 The description of the proposed development as detailed in the public notices does not make any reference to the introduction of a stand-alone process whereby sludge imported to the facility will simply be subjected to lime stabilisation before being transported for further treatment / disposal off site. Given that it is proposed to process 15,000 tonnes of sludge per annum by way of lime stabilisation, which would equate to the through-out of the proposed AD plant, I would suggest that it would have been reasonable to expect this process to have been included in the description of the proposed development. Furthermore, I would draw the Board's attention to Section 1.3: *'Proposed Changes'* of the submitted EIS which specifically states that the development of the AD plant on site will *'lead to an increase in the quantities of sludge accepted from 30,000 tonnes/year to 40,000 tonnes'*. Such a statement clearly contradicts the applicants assertions that the proposed AD plant will only process 15,000 tpa (with a capacity of up to 20,000 tpa) and also conflicts with the process-flow diagram which indicates that 15,000 tonnes of the sludge will be subjected to lime stabilisation. Indeed, the EIS provides no further elaboration on the proposed use of lime stabilisation on site nor are any details of same shown on the submitted drawings. Accordingly, I would have concerns that insufficient detail has been provided with regard to the extent of lime stabilisation to be employed on site and its wider implications as regards outputs, emissions and traffic movements. Whilst I would generally accept that such a process would be compatible with the existing and proposed operations on site, I am inclined to suggest that further information and revised public notices would be required in this regard.

13.1.8 Super Critical Water Oxidation (Aqua Critox® technology) of Hazardous Waste:

13.1.8.1 The proposed development also includes for the installation of a Super Critical Water Oxidation (Aqua Critox® technology) plant within Building No. 2 with associated cooling towers, waste solvent storage tanks, nitrogen and oxygen storage tanks, and a generator to be located outside of the building. This is described as an *'innovative physico-chemical treatment process'* which utilises water and oxygen at elevated temperatures and under high pressure to achieve super critical conditions in order to breakdown the hazardous components of the waste (i.e. super critical water oxidation) thereby converting them into carbon dioxide and nitrogen gas leaving behind high quality sterile water (which may be recycled as process water or polished and used as a boiler water feed) and a fine particulate inorganic solid residue which is inert and thus suitable for disposal in a non-hazardous landfill or re-use. Section 5.3 and Appendix 2 of the EIS provide a further description of the general operation of the proposed SCWO system.

13.1.8.2 For further clarity as regards the nature of this technology I would refer the Board to the National Hazardous Waste Management Plan, 2008-2012 which states that Super Critical Water Oxidation destroys organic hazardous waste at temperatures and pressures above the waste's thermodynamic critical point and that under these conditions

the water becomes fluid causing the chlorinated hydrocarbons to become soluble and the salts to precipitate out. It also states that this technology is limited to the treatment of waste which is liquid or has a particle size less than 200 μm and that it is most applicable to wastes with an organic content of less than 20%. Notably, the NHWMP also describes this technology as *'emerging'* and states that due to the limitation in waste accepted by the technology, it is unlikely that the quantities generated in Ireland will make a facility cost-effective (*N.B.* It is my understanding that this technology has only operated on a pilot basis in Ireland and that it has not yet been employed on a large scale commercial basis. Therefore, the Board may wish to seek further details in this regard).

13.1.8.3 The subject proposal is designed to treat 30,000 tonnes of hazardous waste per year which would appear to comprise hazardous sludge and waste solvents produced in the Cork region by chemical and pharmaceutical manufacturers, although I would refer the Board to Section 2.1.1 of the applicants response to the request for further information which details all of the hazardous materials (including their European Waste Catalogue Codes) which could potentially enter the site. According to the process flow diagrams submitted with the application the proposal will generate 9,000 tonnes / annum of solid residue for disposal off site with a further 26,685 tonnes / annum of liquid to be directed to the on-site wastewater treatment plant.

13.1.8.4 In respect of the nature and the sources of the hazardous waste to be processed on site, the submitted information is somewhat vague and ambiguous. In the first instance the EIS refers to hazardous sludge and liquid waste as being processed on site although it also refers to waste solvents, however, in response to a request for further information the applicant has set out an extensive list of the types of waste which may be accepted at the site and which extend beyond classification as waste solvents.

13.1.8.5 Notwithstanding the concerns expressed in the NHWMP as regards the viability of Super Critical Water Oxidation technology in Ireland, as I would acknowledge the likelihood of further advances having been in respect of the technology since the preparation of that Plan and as the process may now have become more cost-effective, in terms of assessing the principle of developing such an operation at the subject site it will be necessary to ascertain if there is a need for such a facility and to take account of locational considerations.

13.1.8.6 With regard to the need for the subject facility, which will process certain identified hazardous wastes, the applicant has submitted that despite national and regional objectives to become self-sufficient in terms of the management of such waste, Ireland continues to be heavily dependent upon overseas facilities for the recovery and disposal of hazardous waste. In this respect reference is made to the 2008 National Waste Report published by the EPA which demonstrates Ireland's continued reliance on international outlets for the hazardous wastes generated. Furthermore, it is submitted that 157,256 tonnes of hazardous waste were exported in 2008 which would represent approximately 49% of the total volume of hazardous waste generated in Ireland. Accordingly, the applicant claims to have identified an opportunity to provide an alternative treatment outlet (i.e. Aqua Critox® technology) for some of the hazardous wastes produced in the

Cork region by chemical and pharmaceutical manufacturers which will serve to meet the need identified in the NHWMP, 2008 to reduce the dependency on the export of hazardous waste.

13.1.8.7 It is a key objective of the National Hazardous Waste Management Plan, 2008 to reduce the generation of hazardous waste by industry and society in Ireland generally whilst also striving for increased self-sufficiency in the management of hazardous waste and to reduce hazardous waste exports, where economically and technically feasible, in recognition of the proximity principle established in the Waste Framework Directive. In order to provide for additional hazardous waste to be treated in Ireland and to avoid exports, the Plan identifies three overarching strategic needs including the expansion of other recovery and treatment capacity in Ireland for waste that does not need thermal treatment or landfill – generally referred to as physico-chemical treatment. Section 6.3 of the Plan proceeds to identify *'supercritical water oxidation'* as an alternative treatment technique and supports the provision of such technologies where technically and economically feasible, however, it notes that in many cases the application of certain technologies is technically limited and that adequate supplies of waste would be needed to justify investment. In this respect I would reiterate to the Board that the NHWMP describes SCWO technology as 'emerging' and that due to the limitation in the waste accepted by the technology it is unlikely that the quantities generated in Ireland will make a facility cost-effective.

13.1.8.8 In view of the foregoing, I would accept that the development of facilities designed to treat hazardous waste arising in Ireland are acceptable in principle in terms of achieving self-sufficiency as regards hazardous waste management and wider adherence to the proximity principle. However, the issue arises as to whether or not there is a demonstrable need for the subject facility in terms of the volume of wastes arising.

13.1.8.9 At this point it is necessary to consider the types and sources of waste to be treated on site. The applicant had initially indicated that the proposed facility would accept hazardous sludge and liquid waste (including waste solvents) arising from chemical and pharmaceutical plants in the Cork region, however, in response to a request for further information the applicant has indicated that it is proposed to accept a significantly wider variety of hazardous waste for treatment on site. Accordingly, it is difficult to identify the specific categories of waste which will be made available for treatment on site and the respective volumes of same. Indeed, clarity is required if all of the waste referenced by the applicant would actually be suitable for treatment by way of SCWO. In the absence of a clear breakdown of the types, volumes and sources of the waste to be accepted on site, it is difficult to verify that sufficient waste will be arising within the Cork region to meet the capacity demands of the proposed development. In this respect, whilst it is not within the remit of the Board to consider whether or not the proposed facility will be economically feasible, the need to identify the potential sources of the waste and their respective volumes etc. relates directly to consideration of the 'proximity principle' and the wider implications of the proposal as regards sustainable transportation patterns.

13.1.8.10 The applicant describes SWCO as a 'physico-chemical' process and this would seem to be supported by the NHWMP, 2008 which refers to such operations as comprising material conversion (e.g. neutralisation, oxidation and reduction) and material separation (e.g. filtration, sedimentation, distillation and ion exchange). Section 6.6 of the Plan states that such processes are used to treat hazardous liquid, solid and sludge waste and that 31,372 tonnes of hazardous waste were treated off-site in Ireland in 2006 by physico-chemical methods with an additional 1,709 tonnes having been exported for disposal by physico-chemical means. Notably, the Plan proceeds to states that whilst *'There are no major technical barriers for Irish facilities to increase their capacities or to expand their processes to treat a wider range of waste streams. Some facilities are actually operating below authorised and equipment capacity levels'*. It refers to barriers to expansion as including low levels of waste generation or poor collection rates (to justify investment) and the lack of disposal facilities for treatment residues (resulting, for example, in the export of filter cakes). Whilst the Plan acknowledges the benefits of physico-chemical treatment of hazardous waste in that it is relatively low cost and can lead to employment generation, it states that smaller-scale Irish facilities could find it difficult to compete on many waste streams with larger continental operations. Accordingly, the issue arises as to whether or not there would be sufficient waste arising in the Cork region to meet the demands of the proposed facility or whether it would be necessary to transport some, or a significant proportion of, the waste from further afield.

13.1.8.11 The applicant has failed to provide any specifics as regards the sources and respective ratios of hazardous waste to be processed at the subject site and therefore it cannot be verified that there is sufficient waste arising from within either the site locality or the wider Cork region to support the proposed facility. There have been notable fluctuations in the volumes of hazardous waste treated both at source (i.e. on site) and at approved installations (i.e. off site) in Ireland and in the volume of material exported abroad for disposal/ recovery etc. For example, whilst the summary of hazardous waste management set out in the NHWMP, 2008 indicates that the treatment of waste off-site in Ireland at authorised facilities increased steadily over the period 2001-2006 (from 48,013 to 60,872 tonnes), the National Waste Report, 2010 indicates that this trend peaked in 2008 at 113,839 tonnes with the figure falling to 89,992 tonnes in 2009 before rising slightly in 2010 to 93,048 tonnes. In my opinion, there is an onus on the applicant to demonstrate the availability of sufficient waste arising within the region to supply the proposed facility in order to comply with the 'proximity principle'. For example, on the basis that a total of 31,372 tonnes of hazardous liquid, solid and sludge waste were treated off-site in Ireland in 2006 by physico-chemical methods, the proposed development were appear to be of sufficient capacity to operate as a national facility, although I would concede that the foregoing figures are out-dated and that without specific details of the types and volumes of hazardous waste suitable for treatment on site the proposal may, in fact, be of an appropriate scale for the area. Nevertheless, I am not satisfied that it has been established that the construction of a proposed hazardous waste treatment facility of the scale proposed at this location is appropriate having regard to the 'proximity principle' and that it would not be more suitably located close to identified waste sources.

13.1.9 The Processing of Municipal Solid Waste (MSW) including Commercial, Industrial and Household Waste:

13.1.9.1 The existing facility as permitted under ABP Ref. No. 211117 is authorised to accept up to 70,000 tonnes per annum of commercial and industrial waste comprising source segregated and mixed dry recyclables, however, this service was discontinued in 2009. The subject proposal seeks to accept 20,000 tonnes per annum of Municipal Solid Waste (MSW) comprising commercial, industrial and household waste which will consist of source segregated dry recyclables and mixed residual waste (*N.B.* It is envisaged that equal tonnages of MSW and Commercial & Industrial Waste will be accepted per annum i.e. 10,000 tonnes each). Dry recyclables will include paper, plastic, cardboard and cans etc. whereas the mixed residual waste will include putrescible waste such as foodstuffs. These wastes will be processed in designated areas within the Waste Recovery Building and would appear to comprise the baling of the source segregated materials whereas the residual waste will not be processed further on site and will instead be bulked up for transfer off site on the same day as arrival.

13.1.9.2 Given the planning history of the site and the fact that the site has previously been approved to accept a considerably larger volume of source segregated dry recyclables, I would not anticipate any difficulties in approving the carrying out of this activity on the reduced scale as proposed.

13.1.9.3 With regard to the proposal to accept mixed residual waste on site, I note that the scale of this aspect of the overall operation will be limited in that it will only accept 10,000 tonnes of waste per annum. Accordingly, it would seem likely that the catchment area of this element of the proposal will similarly be limited in terms of its geographical extent and would most likely only extend to include Youghal town and its environs. I would also suggest that it is of relevance to note that the waste in question will not be processed on site and will simply be bulked up for transfer off site presumably for treatment / disposal at an approved facility although no further details have been provided in this regard.

13.1.9.4 In my opinion, given the scale of this element of the proposal, the established use and land use zoning of the subject site, the pattern of development in the surrounding area, and the sites location in close proximity to the urban centre of Youghal and the national road network, I am satisfied that the subject site is an appropriate location in principle for the development of a facility capable of accepting mixed residual waste as outlined in the application documentation.

13.1.10 The Treatment / Disposal of Leachate:

13.1.10.1 The existing facility is authorised to treat up to 10,000 tonnes of leachate from landfills per annum, although Section 1.2 of the EIS states that this process has not as yet started. The subject proposal seeks to treat only 5,000 tonnes of leachate by way of the existing on site wastewater treatment plant.

13.1.10.2 Given the planning history of the site, and the fact that the site has previously been approved to treat landfill leachate, I would have no objection in principle to the proposal to carry out this activity on site on a reduced scale.

13.2 Environmental Impact Assessment:

13.2.1 Outline of Process:

13.2.1.1 In accordance with the requirements of Article 3 of the European Directive 85/337/EEC, as amended by Council Directives 97/11/EC and 2003/35/EC and Section 171A of the Planning & Development Act 2000-2010, this process requires the Board, as the competent authority, to identify, describe and assess in an appropriate manner, in light of each individual case and in accordance with Articles 4 to 11 of the Environmental Impact Assessment Directive, the direct and indirect effects of the proposed development on the four indents listed in Article 3 of that Directive as set out below:

a) human beings, flora and fauna,
b) soil, water, air, climate and the landscape,
c) material assets and the cultural heritage, and
d) the interaction between the factors mentioned in paragraphs (a), (b) and (c).

13.2.1.2 This assessment also requires consideration to be given to, where relevant, the indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative effects of the proposal, including those which arise during the construction phase, which are essentially short-term and temporary, as distinct from the likely long-term effects arising from the operational phase.

13.2.1.3 The Environmental Impact Statement which has accompanied the subject application follows a grouped format structure with each environmental topic presented in a separate chapter. It includes a generally satisfactory description of the receiving environment, the proposed development, its impacts and proposed mitigation measures, and has been accompanied by a non-technical summary. In my opinion, this document can be described as 'fair' in that it technically accords with the requirements of Schedule 6 of the Planning and Development Regulations, 2001, as amended, and is sufficient to comply with Section 172 of the Planning and Development Act, 2000, as amended, and Article 94 of the Regulations.

13.2.1.4 In general, this part of my assessment of the subject application is informed by the contents and conclusions of the EIS, and also by information provided during the various stages of the application / appeal process in relation to the likely effects of the development on the environment and its likely consequences for the proper planning and sustainable development of the area in which it is proposed to be situated. My assessment also has regard to potential mitigation measures, including those indicated in the EIS, and any others which might reasonably be incorporated into any decision to approve the development through the attachment of conditions.

13.2.2 Consideration of Alternatives:

13.2.2.1 Schedule 6 of the Planning and Development Regulations, 2001, as amended, only requires an EIS to include *'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'*. In this respect I would refer the Board to Section 3.0 of the EIS which states that an extensive survey of industrial / enterprise zoned lands in the Cork area was undertaken as part of the original EIS for the existing facility and that the site selection criteria outlined in that application is equally applicable to the subject proposal. It proceeds to state that the only alternative option open to the applicant was to develop a new facility solely for the treatment of hazardous waste at a separate location, however, given the associated acquisition and development costs this was not considered economically feasible. With regard to the possibility of developing alternative waste disposal technologies on site my reading of the EIS would appear to suggest that little consideration was given to same save for a brief reference to the 'Do-Nothing' alternative. In the basis of the foregoing, it is my opinion that the consideration of alternatives set out in the submitted EIS can at best be described as both limited and unimaginative.

13.2.3 Human Beings:

13.2.3.1 In terms of assessing the potential impact of the proposed development on human beings I would, in the first instance, refer the Board to Chapter 14 of the submitted EIS which focuses attention on public health, socio-economic activity and environmental nuisance considerations. The contents of this assessment can be summarised as follows:

13.2.3.2 Public Health:

- The processing of all waste indoors will militate against the potential for the proposal to detrimentally impact on public health.
- Those areas designated for the processing of odorous waste will be provided with appropriate odour abatement controls.
- Operational practices and suitable control measures will ensure that the facility will not attract vermin or birds.
- There are no routine emissions to ground or groundwater thereby minimising the risk to same.
- Facility personnel will be provided with appropriate personal protective equipment in order to minimise the risk to health.

13.2.3.3 Socio-Economic Activity:

- The proposed development will not adversely affect the existing economic activities conducted in the surrounding area nor will it reduce the potential for the further expansion of economic activity in the area.
- The proposal will accord with local and national waste management policy and is in keeping with existing and proposed land use patterns.
- The proposal will not result in the loss of any amenities or rights of way.
- Additional employment is expected to be generated as a consequence of the proposed development.

13.2.3.4 Environmental Nuisance:

- The overall design and operation of the proposed facility will either eliminate, or minimise to the greatest practical extent, the risk of environmental nuisance such as noise, litter or odorous emissions.

13.2.3.5 Whilst I would generally concur with the foregoing, it is of relevance to note that there are various inter-relationships between effects on the human environment and effects on other aspects of the environment such as air and water quality. Accordingly, in order to avoid unnecessary repetition, I would refer the Board to my assessment of the specific implications of the proposal as regards soil, water and air quality etc. as set out elsewhere in this report. Furthermore, although referenced in separate chapters of the EIS, I propose to focus the remainder of my assessment of the impact of the proposed development on human beings on the key issues of traffic and noise.

13.2.3.6 Traffic:

The proposed development site is accessed via a slip road which extends eastwards from the R634 Regional Road to provide access to Youghal Landfill and the surrounding lands which in turn extends from the Rincrew roundabout on the N25 National Primary Route. Notably, this slip road (also referred to as the 'T12' road) would appear to have been upgraded since the grant of permission issued for ABP Ref. No. PL04. 21117 and in this respect I note the applicants reference in Section 9.2 of the EIS to upgrading works carried out in 2008 / 2009 which included the resurfacing and relining of the roadway in addition to the erection of fencing and the construction of a roadside pathway. Similarly, it would appear that there have been further improvements to the surrounding road network serving the subject site since the opening of the existing facility.

13.2.3.7 At present, traffic is directed to the facility along the R634 Regional Road via the Rincrew roundabout on the N25 before turning onto T12. On arriving at the site all waste delivery, collection and maintenance vehicles are required to use the first entrance gate to the facility whereas staff and visitors access the site via a second entrance gate located further east. Outgoing traffic follows the same route to the Rincrew Roundabout. Other than for locally based staff and maintenance crews it has been submitted that no site traffic will approach the site from the direction of Youghal town.

13.2.3.8 In estimating the potential operational impact of the proposed development on existing traffic conditions the applicant has submitted that particular regard has been had to the Traffic Impact Assessment completed in 2004 in respect of the existing facility as authorised under ABP Ref. No PL04. 211117 which was based on an annual waste intake of 110,000 tonnes. In this respect it is stated that the proposed development will reduce the overall waste intake at the site from 110,000 tonnes to 95,000 tonnes per annum thereby resulting in less vehicular movements. Furthermore, it has been submitted that although household waste has generally the same characteristics as commercial waste, the hazardous waste to be accepted at the site will primarily be in an aqueous or sludge form and thus will be heavier by volume than household or commercial / industrial waste with

the effect that the number of vehicle movements will be less that estimated in the original traffic impact assessment.

13.2.3.9 With regard to the constructional impact of the proposed development, the applicant has submitted that the given the scale and anticipated duration of the proposed works when compared to those factored into the original TIA prepared in respect of the construction of the existing facility, the overall impact on traffic levels in the area will be minor.

13.2.3.10 On the basis of the available information, whilst it is regrettable that more specific details have not been provided as regards a breakdown of the likely traffic volumes associated with the proposed development, particularly in light of my earlier concerns regarding the increase in residues for transportation off site, I am inclined to accept that the proposed development will have an overall reduced impact on traffic in the wider area when compared to the existing facility on site as originally approved under ABP Ref. No PL04. 21117.

13.2.3.11 Noise:
In assessing the impact of noise levels arising as a result of the proposed development I would refer the Board in the first instance to the noise survey contained in Appendix 6 of the EIS which purportedly establishes baseline noise conditions. This report details that noise monitoring was conducted at 4 No. measurement stations (N1-N4) located on site and also at the nearest occupied dwelling house (identified as Ref. NSL) to the existing and proposed facility. The results of this monitoring indicate that noise levels recorded on site are considerable, although much of this would seem to be attributable to passing traffic and the operation of the adjacent landfill facility, however, considering the sites location within an emerging industrial area, it is perhaps of more relevance to consider the impact of the proposed development on nearby noise sensitive receptors and in this respect I can confirm from a site inspection that the property identified as NSL in the submitted noise survey is indeed the nearest noise sensitive location to the subject site. Daytime monitoring over a single 15-minute period on 14th October, 2010 at Location Ref. NSL recorded a level of 64dB$_{Laeq}$, which is considerably in excess of the accepted daytime limit of 55dB$_{Laeq}$, however, this was attributed to traffic travelling along the adjacent R634 Regional Road with instances of noise levels reaching between 50dB and 80dB. In support of this position the applicant has submitted that the existing waste processing operation was inaudible at this location and that similar noise levels of 58dB and 59.8dB respectively were recorded during previous surveys conducted in 2008 and 2009. With regard to night-time monitoring conducted at Location Ref. NSL, a noise level of 50.1dB$_{Laeq}$ over a 15-minute sampling period was recorded which would also be in excess of the accepted night-time limit of 45dB, however, this was again apparently attributable to passing traffic whilst the existing facility was similarly not audible at the time.

13.2.3.12 Having established the baseline noise environment at the nearby NSL it is necessary to identify the various noise sources associated with the proposed development in an effort to predict whether or not the operation of the proposed facility will not result

in any increase in ambient noise levels. In this respect I am inclined to suggest that the principle noise sources arising as a result of the proposed development will include the transportation of waste to the facility, the associated traffic movements on site, the loading and unloading of material and the operation of the actual industrial processes themselves with their associated plant / machinery. Further noise would be expected to arise from the transportation of unacceptable waste and other residues from the site and personnel movements to / from the site.

13.2.3.13 In terms of the noise impact arising as a result of vehicular traffic travelling to / from the proposed development, in the first instance, it is of relevance to note that whilst the existing facility is authorised to accept up to 110,000 tonnes of waste per annum, including up to 70,000 tonnes of commercial & industrial waste, it is not operating at full capacity at present in that it has discontinued the processing of commercial & industrial waste since 2009 for commercial reasons. Accordingly, whilst the proposed development will increase traffic volumes travelling to and from the site relative to existing levels (with a consequential increase in noise) this must be taken in context as the existing facility is already authorised to process a higher tonnage of waste per annum and therefore there is a case to be made that the predicted traffic noise will be no greater than that forecasted in the original EIS as approved ABP Ref. No. PL04. 211117. With regard to the impact of the aforementioned increase over existing traffic levels on the identified noise sensitive receptor (i.e. Ref. NSL), Section 2 *'Assessment of Predicted Noise Levels'* of the submitted noise survey predicts that worst-case noise levels at this monitoring location, based on 5 No. truck movements in an hour between 08:00 hours and 18:00 hours with and without a 2m earth barrier (such as the concrete structure built to the west of the Waste Recovery Building) will be 53.9dB$_{Laeq(30\ mins)}$ and 65.2dB$_{Laeq(30\ mins)}$ respectively. On the basis that there is already an existing 2.4m high concrete wall running along the western site boundary it has been submitted that sufficient noise attenuation is already provided and that there is no need for any additional earthen bank / berm. Accordingly, the applicant has stated that whilst noise levels will increase consequent on increased traffic associated with the proposed development, compared to existing noise levels at the NSL, the projected increase will be low and will not represent a nuisance.

13.2.3.14 Having considered the foregoing, including the limited sampling period of noise measurements / monitoring carried out in order to ascertain baseline noise conditions, I am not entirely convinced of the robustness of the applicants predictions as regards the impact of traffic noise on the NSL, however, in light of the planning history of the site and the anticipated reduction in overall traffic levels when compared to that previously approved on site it would appear that the noise impact of the proposal would be within acceptable limits.

13.2.3.15 With regard to noise impacts arising from the actual operation of the proposed facility, I note that the applicant has indicated that all waste handling / treatment processes will be carried out indoors or from within enclosed tanks as in the case of the proposed AD plant. Similarly, it has been indicated that all equipment to be installed in the proposed waste recovery / transfer facility will be designed to best international

practice as regards the mitigation of noise. Features of such equipment will include the control and management of noise emissions. In this respect it is not envisaged that any additional noise will result from the proposed processes in the internal units.

13.2.3.16 With a view to reducing the overall noise impact of the proposed development at noise sensitive locations the EIS also outlines a series of mitigation measures which will include the operation of speed limits on site, the restriction of any pallet crushing activities or other mobile external processes to well-screened parts of the site, a review of reversing sirens, and the implementation of a programme of periodic noise monitoring at the noise sensitive locations.

13.2.3.17 Having considered the submitted information, on balance it would appear that the noise impact of the proposed development will be within acceptable limits, particularly in view of existing baseline conditions, however, I would have a number of reservations as regards the robustness of the data used by the applicant in ascertaining these baseline conditions whilst I would also question the absence of clear calculations in terms of the predicted noise levels arising from the operation of the facility. However, I would advise the Board that the facility will require a waste licence and matters pertaining to noise emissions and the regulation of same will be considered by the EPA.

13.2.4 Fauna and Flora (Ecology):

13.2.4.1 In order to avoid unnecessary repetition I would refer the Board to that section of this report entitled 'Appropriate Assessment / Ecological Considerations', however, I would generally conclude with the conclusions of the EIS in that there will be no direct ecological impacts of any significance on site. Potential impacts off site will be assessed elsewhere in this report.

13.2.5 Soils and Geology:

13.2.5.1 Chapter 6 of the EIS describes the soil and bedrock conditions underlying the subject site and I would advise the Board that this information has been derived from a report set out in Appendix 3 of the document which in turn is based on a desk study of the available information, including reports from previous site investigations conducted in 2004 and 2007, and a walk-over survey.

13.2.5.2 The proposed development site is located in a low-lying area known locally as the Youghal Mudlands in the vicinity of the Blackwater Estuary. The soil maps for the area as published by the EPA indicate deep mineral and marine soils in the vicinity of the site with deep well drained mineral soils to the west whereas the subsoil mapping available from the Geological Survey of Ireland shows that the site is underlain by made ground which would be consistent with the historical background of the area which involved the reclamation of land from the mudlands. Indeed, on-site investigations conducted in 2004 and 2007 confirmed the presence of up to 3m of made ground on site overlying up to 11.6m of glacial till atop a further layer of up to 2m of sandy gravel. This made ground was recorded as being predominantly composed of gravelly clay with fragments of construction and demolition waste, including wood, plastic, glass and ceramics, in addition to some household rubbish. Notably, at the time of these

investigations it is stated that the subject site was used by the operator of the neighbouring landfill and included a diesel storage area located in the vicinity of the existing site entrance to the east of the administration building. Natural mapped subsoils in the area include marine sands in the vicinity of the estuary and sandstone tills further west of the site.

13.2.5.3 In line with Table 6.1*: 'Estimation of Importance of Soil and Geology Criteria (NRA, 2005)'* of the EIS the applicant has submitted that the economic importance of the soil and geology underlying the subject site is *'low'* given the 'made' nature of the ground. In this respect the site has been compared to a *'recent landfill site for construction and demolition waste'* which is identified in Table 6.1 as retaining as the lowest level of importance.

13.2.5.4 With regard to the underlying bedrock this is stated to consist primarily of Waulsortian Limestones made up of massive, unbedded mounds of calcareous deposits in the form of mudstones, wackestones and packstones. Bedrock was not encountered during the 2004 and 2007 investigations, however, based on the proven thickness of the subsoils it is in excess of 12m below ground level. The site has also been identified as overlying a karstified aquifer.

13.2.5.5 Potential negative impacts on the underlying soil / geology arising as a result of the proposed development include the direct physical impact of excavations carried out during construction works and the possible contamination of soils / subsoils due to leakages from the proposed bunded areas, the surface water drainage system, and from within the existing concrete yard / hardstanding area. In addition, there is the possibility of contaminated runoff from the waste storage areas being discharged to the underlaying soil / geology via cracks / fissures in the existing hardstanding or via surface water drainage routes.

13.2.5.6 In terms of assessing the impact of the proposed development on the underlying soil / site geology it is of relevance in the first instance to note that the existing facility is located on made ground and is already predominantly surfaced in concrete hardstanding which will be retained as part of the proposed development. In this respect I am satisfied that the proposal to undertake minor excavation works in order to facilitate the laying of foundations for the proposed AD tanks in addition to the installation of drainage pipes within the proposed tanker parking area will have no significant impact on the wider characteristics of the prevailing soil / geological conditions. With regard to the potential for the contamination of soils / subsoils underlying the site due to leakages / spillages, in order to address same it is proposed to lay a new fibre-mesh reinforced concrete slab over the existing concrete hardstanding in the southern part of the site as part of the construction of the proposed bunded *'transfrontier shipment compound'* i.e. that area to be used as a designated tanker storage / parking area where transport tankers containing hazardous waste will be parked temporarily prior to their dispatch off site. This will prevent any leakages that may have occurred as a result of any existing cracks in the hardstanding area. It is also proposed to construct a 2m high wall to provide bunding to the tanker parking area in addition to a ramp which will prevent any runoff from leaving

the bunded storage area. Further mitigation measures include the fabrication of the pipework between the collection chamber / sump and the discharge manhole from stainless steel in order to prevent any future corrosion and subsequent leakage from same due to the hazardous and corrosive characteristics of some of the waste to be accepted on site. Only non-hazardous runoff that collects in the sump will be allowed to enter the existing surface water drainage system and this will be tested in the on-site laboratory to ensure that it is suitable for discharge. In the event that any contamination is detected the runoff will instead be directed to the proposed Aquacritox system for treatment. Proposals for continued monitoring and maintenance of the facility include the carrying out of bi-annual inspections of the bunded area in order to ensure that it remains fit for purpose and regular monitoring of groundwater quality both up-gradient and down-gradient of the hazardous waste operation which will indicate if any leakages to the underlying soil are occurring.

13.2.5.7 On the basis of the foregoing, the EIS has concluded that the proposed development will have no residual impacts on the soil and geological environment underlying the site. In this respect I am generally satisfied as regards the proposed mitigation measures outlined in the EIS and that adherence to best practice operating procedures as regards the transportation and handling of waste, with particular reference to hazardous waste, and the requirements of any waste licence granted in respect of the proposed activity, will serve to minimise the impact of the proposal on the underlying soil / site geology. I would, however, also consider it appropriate to ensure that all the existing hardstanding areas frequented by vehicles conducting waste deliveries etc. on site are inspected to ensure their continued structural integrity with any repairs deemed necessary carried out accordingly.

13.2.6 Water:

13.2.6.1 Impacts on water are of concern in relation to surface waters and groundwater and are potentially related to effects on human beings, flora, fauna and material assets, including fisheries and water-based recreation / tourism activities. In this respect it is of relevance in the first instance to consider the sites location within the catchment of the Blackwater River and its proximity to the Blackwater River and Estuary, which has been designated as a Special Area of Conservation, a Special Protection Area and a Proposed Natural Heritage Area, although I would propose to consider the potential impacts of the proposed development on ecological considerations in more detail elsewhere in this report. With regard to flooding in the area, the EIS has noted the OPW's recording of flood events in the Youghal Mudlands which were associated with drainage ditches to the south of the site, although these reports would seem to indicate that this flooding was due primarily to extremely high tides combined with wind surges. In relation to the subject site there are no recorded instances of flood events, and on the basis of the available data, including the national flood hazard mapping, it would appear that the flood risk to the site is low.

13.2.6.2 Water quality results from monitoring stations located upstream along both the Blackwater and Tourig Rivers indicate quality ratings of Q4, however, further estuarine and coastal water quality monitoring conducted by the EPA shows the Lower Blackwater

and Lower Tourig to be eutrophic. The EIS also states that surface water characterisation undertaken pursuant to Article 5 of the Water Framework Directive has designated the surface water catchments of the Tourig River a 'Good' status whilst the catchments of the Blackwater River generally fall into the 'moderate' to 'poor' categories.

13.2.6.3 With regard to groundwater, the EIS states that the limestones which underlie the site are classified as a Locally Important Karstified Aquifer and, although the vulnerability of this aquifer is rated as predominantly high by the GSI, on site investigations have recorded up to 11.8m of stiff glacial clay till beneath the site and, therefore, the groundwater vulnerability can be rated as Moderate to Low. In addition, the results of previous groundwater monitoring conducted on site biannually under the terms of the existing waste licence have shown groundwater quality in the vicinity of the site to be poor partially due to the sites location within an estuary where groundwater would be below drinking water standard as a result of saltwater intrusion and also due to the presence of hydrocrabons in very small concentrations given the previous use of the site as a landfill and the nature of the 'made' ground. Furthermore, it is noted that there are no mapped source protection zones in the vicinity of the site and although a public water supply well for Youghal Town is located 5km up-gradient of the site groundwater flow is towards the estuary. Accordingly, whilst the aquifer underlying the site can be classified as locally important and as a sensitive receptor, the EIS has emphasised that groundwater quality in the area is naturally poor due to saline intrusion and that the aquifer itself is not a suitable source of potable water.

13.2.6.4 At present, all wastewater from the existing facility, including the sludge drier, is disposed of via the on site wastewater treatment plant which subsequently discharges the treated effluent to an existing outfall which leads directly to the Blackwater Estuary (*N.B.* Effluent generated from within the administration block is initially treated in a Puraflo system before being discharged to main wastewater treatment plant on site). The existing waste licence sets a maximum discharge of 170m^3 / day and also specifies the applicable emission limit values and in this respect I would advise the Board that previous monitoring of the discharge quality showed an inability to consistently meet the required quality limits with the effect that in November, 2010 the applicant ceased discharge to the estuary pending the implementation of a wastewater treatment improvement programme (which was on-going at the time the EIS was being prepared), which was to include additional treatment measures such as Dissolved Air Floatation and breakpoint chlorination, as approved by the EPA. Given that the applicant has since indicated in response to the grounds of appeal that the waters discharged from the wastewater treatment plant on site are now within the applicable emission limits set by the Waste Licence it would appear that the foregoing improvement works have been carried out.

13.2.6.5 Stormwater from roofs and runoff from non-waste storage hardstanding areas is presently passed through two silt / oil interceptors, together with a pH controlled stormwater retention tank, before being discharged to a public drain to the northeast of the site which in turn discharges into the estuary. The results of quarterly monitoring in 2009 have shown the quality of stormwater to be within an acceptable range for discharge.

13.2.6.6 In terms of the potential impacts of the proposed development on ground and surface water quality in the area these can generally be divided into constructional and operational impacts. Possible impacts associated with the construction phase of the proposed development will include the pollution of both ground and surface waters through the accidental release or discharge of hydrocarbons or other contaminated site runoff, however, the risk of same can be satisfactorily mitigated through the implementation of an appropriate programme of pollution control measures, details of which are outlined in Table 7.2 of Chapter 7 and Table 7.8.1 of Appendix 4 of the EIS, which are effectively tied into good construction practice.

13.2.6.7 With regard to the operational impact of the proposed development on groundwater quality, the applicant has reiterated that the site overlies up to 11.8m of stiff clayey tills which are in turn covered by infill and an extensive area of concrete hardstanding and, therefore, the risk to groundwater is low, however, the possible risk of the contamination of groundwater from leakages from the proposed bunded areas and the associated drainage systems is to be mitigated through the design and construction of these items in addition to the implementation of a regular programme of monitoring and maintenance.

13.2.6.8 In respect of surface water, the potential detrimental impact on water quality in the Blackwater Estuary and Youghal Harbour arises from the proposal to route effluent from the proposed hazardous waste treatment technology through the existing wastewater treatment system on site which discharges directly to the estuary by way of an existing outfall subject to the terms of an existing waste licence, however, it has been submitted that based on the manufacturers specifications, the effluent discharged from the proposed AquaCritox technology will be of a high quality and will be well below the emission limit values set out in the existing waste licence. In effect, it is anticipated that the quality of the final discharge from the development will improve when mixed with the effluent from the AquaCritox technology.

13.2.6.9 Finally, with regard to the potential for the proposed development to contribute towards the flooding of lands located down-stream of the site, it is of relevance to note that the proposal will not increase the overall extent of hardstanding present and, therefore, there should be no increase in surface water runoff. Furthermore, the introduction of rainwater harvesting on site, when taken in combination with the existing surface water attenuation facilities, will similarly serve to mitigate the potential of the proposal to exacerbate flood events in the surrounding area.

13.2.7 Air Quality:

13.2.7.1 The assessment of air quality is stated to have been carried out having regard to the routine air quality monitoring already specified in the waste licence for the existing facility, additional monitoring of the emission of particulate matter carried out by the applicant and, in particular, to the *'Odour and Air Quality Impact Assessment of Identified Processes'*, with associated dispersion modelling of emissions from the

proposed development, prepared by Odour Monitoring Ireland Ltd. as contained in Appendix 5 of the EIS.

13.2.7.2 With regard to the existing facility the applicant has indicated that an air emission abatement system is in place in Building No. 2 (the sludge drying facility) in order to control emissions from the sludge treatment process. This building is fitted with rapid closing roller doors which, when taken in conjunction with the provision of hydraulic lids on the reception bins, apparently provide effective containment of odours within the building. The existing biofilter odour abatement system serving this building extracts air from the various stages of the sludge treatment process, including head gases from the storage hopper, the purged steam and evaporating volatile organics from the drying process, and also off-gases from the treatment of dryer condensate in the wastewater treatment plant, whilst negative ventilation is also provided to the sludge handling area. In addition to the foregoing, following an audit of the existing system commissioned by the EPA which identified a number of measures which could be used to improve performance, the applicant implemented the recommendations of this report, which included the adoption of odour management / control procedures, additional sealing of the building fabric, the continuation of existing good housekeeping practices and an assessment of the operation of the biofilter, on a staged basis which resulted in a significant improvement in the control of odour emissions from the existing facility.

13.2.7.3 At present, there are two point emissions to air at the existing facility, namely, the boiler and the biofilter. These emissions are subject to routine monitoring as per the facility's Waste Licence which also specifies the relevant emission limit values. Monitoring of the boiler emission point includes oxides of nitrogen and sulphur, carbon monoxide and particulates, whereas monitoring of the biofilter includes ammonia, organics, hydrogen sulphide, mercaptans and amines. Dust deposition monitoring is carried out at 3 No. on-site locations three times a year whilst odour monitoring at the site entrance and boundaries is conducted daily by site staff. Further monitoring of particulate matter is carried out by the applicant at three locations on site and at an additional location off-site at the nearest residence to the facility.

13.2.7.4 The proposed development will result in the introduction of the following additional point emission sources to air:

- The trim heater
- The Odour Control Unit (carbon filter), Materials Recovery Building and AD plant
- The CHP plant
- The AquaCritox plant
- The solvent fill tank
- Three individual minor emission points from solvent storage tanks

13.2.7.5 In order to minimise the impact of the foregoing additional air emissions consequent on proposed development the applicant intends to implement a series of mitigation measures as set out in Section 10.5 of the EIS. In this respect it is proposed to

continue to implement the current air quality and odour management protocols operated on site. In addition, it is proposed to provide a new Odour Control Unit (OCU) comprising an air extraction system and a carbon filter which will have a treatment capacity of 30,000 Nm^3/hour in order to treat odours arising from within the mixed MSW processing area in Building No.1 (the material recovery building). This OCU will also have sufficient spare capacity to treat odorous air from the AD plant and the sludge drying if considered necessary. Furthermore, the Odour Management System is to be amended to include for the routine inspection and maintenance of the OCU to ensure that it operates at optimum efficiency.

13.2.7.6 In addition to the foregoing, I would refer the Board to Sections 2.9.1 & 2.10.1 of the applicant's response to the request for further information which provide additional details of the proposed odour control system in that Building No.1 (the material recovery building) will be provided with an air-tight building fabric. Appendix D of this document also outlines the waste acceptance procedures for Building No.1.

13.2.7.7 With regard to the 'flaring' of low-grade or surplus gas, it is my understanding that the flaring of gas is typically only undertaken in the event of there being an excess of same which cannot be stored within the digester or utilised in the CHP plant and therefore any such instances of 'flaring' will probably be infrequent and an inefficient use of the desired energy resources. Whilst the applicant has confirmed in response to a request for further information that it is proposed to install a closed flare system for use in emergencies, this matter has not been considered in any level of detail in the EIS and, therefore, I would suggest that further details of the need for flaring and its potential impacts should have accompanied the application.

13.2.7.8 Having considered the submitted information, the modelling of emissions consequent on the operation of the proposed development as set out in the *'Odour and Air Quality Impact Assessment of Identified Processes'* contained in the EIS would seem to confirm that the applicable emission limit values and guideline values in the waste gases will be achieved and that the proposed development will not result in any significant impact on air quality in the surrounding area with all ground level concentrations of pollutants within their respective ground level concentration limit values. Accordingly, given the nature of the activity proposed, the assessment of emissions carried out, the mitigation measures proposed, the distance of the proposal from nearby residences and requirement for a waste licence issued by the EPA, in my opinion, it would appear that, on balance, the proposed development can be adequately constructed and operated to achieve the relevant odour and air quality standards.

13.2.8 Climatic Factors:

13.2.8.1 Chapter 8 of the EIS states that whilst the proposed development will not have any effect on the climate or micro-climate at the site, the use of biogas produced on site to generate heat and power will reduce the facility's reliance on electricity produced from non-renewable sources which will in turn reduce its carbon footprint

13.2.8.2 Whilst I would acknowledge the wider environmental benefits of reducing greenhouse gas emissions through the generation of biogas on site as a source of renewable energy thereby contributing towards the achievement of Ireland's commitments with respect to the Kyoto Protocol, I would suggest that this section of the EIS would benefit from elaboration. For example, it would have been beneficial if a breakdown of savings in CO_2 emissions would have been provided. Furthermore, I would reiterate that in the absence of a clear breakdown of the types, volumes and sources of the hazardous waste to be accepted on site it is difficult to verify that sufficient waste will be arising within the Cork region to meet the capacity demands of the proposed development. This need to identify the potential sources of the waste and its respective volumes etc. relates directly to consideration of the 'proximity principle' and the wider implications of the proposal as regards sustainable transportation patterns and associated vehicular greenhouse gas emissions.

13.2.9 Landscape:

13.2.9.1 The proposed development site is located on the western bank of the Blackwater Estuary in a low lying area characterised by low-density industrial / commercial development which includes Youghal Landfill to the east, an NCT test centre to the west and an industrial estate / business park to the northwest with vacant and undeveloped lands located further south. The site itself is presently occupied by an existing waste recovery / transfer and sludge drying facility which comprises a series of industrial and administrative buildings in addition to associated plant and equipment with the most prominent of these structures being the existing Waste Recovery Building (Building No. 1), which extends to 15.603m in height, the Sludge Drying Facility (Building No. 2) which has a ridge height of 13.148m, and to a lesser extent the administration building and the wastewater treatment plant.

13.2.9.2 With regard to the overall visual impact of the proposed development, the applicant has acknowledged that due to the prevailing topography of the surrounding area the existing facility is visible from some of the higher vantage points in the area, with particular reference to those views available from elevated areas to the east of the site in Co. Waterford and from along sections of the N25 National Road opposite, however, it has been submitted that the adjacent landfill and civic amenity centre remains the focal point in this fragmented landscape and that the scale of the proposed development will be in keeping with the existing pattern of development in close proximity to the site. With regard to those views available over the Blackwater River and beyond from existing residences in the vicinity, it is claimed that the proposed development will not interfere with same and that any visual impact is likely to be minor or negligible. Similarly, the applicant has submitted that given the sites low-lying location it does not unduly impact on views to or from the town whereas views of the existing facility available from positions along the N25 to the north are intermittent and are effectively screened by existing hedgerows and other structures. Reference has also been made to the sites location outside of any area of scenic or special amenity importance and that the sensitivity of the surrounding landscape is low. Accordingly, on the basis of the foregoing, and as the proposed development will involve the provision of purpose-built storage tanks and other plant located adjacent to the larger buildings already present on

site, it has been submitted that the proposal will not dramatically alter the visual character of the site and that the visual impact of the proposed works will be neutral in that it can be satisfactorily mitigated through the appropriate design, height and siting of the proposed structures relative to the existing structures on site

13.2.9.3 Having reviewed the submitted information, and following a site inspection, in my opinion, whilst the proposed development will be visible to a varying degree from various vantage points within the surrounding area, including views available from alongside sections of the N25 National Road to the north of the site, the wider visual impact of the proposal must be taken in context. In the first instance, the subject site is located in a low-lying area characterised by an emerging pattern of low-density industrial / commercial development on lands which are presently occupied by an existing waste management facility. Secondly, the site is not located within any landscape designated for protection or preservation in the Development Plan nor will the proposed facility be visible from any views listed for preservation in that Plan. Furthermore, when taken in conjunction with the existing industrial / warehouse type structures on site, the proposed development will appear as an extension of same and in this respect it should be noted that the existing facility already has a localised visual impact and thus the scale of the subject proposal must be considered in context. Accordingly, given the site context, in my opinion, the visual impact of the proposal will be within acceptable parameters and will have a low residual impact on the prevailing character of the surrounding area.

13.2.10 Material Assets:

13.2.10.1 The term 'material assets' is typically interpreted as referring to architectural, archaeological and cultural heritage, although it can also refer to items including natural resources of economic value, recreational amenities, property, businesses and infrastructure.

13.2.10.2 With regard to architectural, archaeological and cultural heritage, from a review of the available information, including the Record of Monuments and Places, the Sites and Monuments Database, the Record of Protected Structures and the relevant Development Plans, it is evident that there are no recorded items of architectural, archaeological or cultural heritage present on site and that there are no known features of interest within the immediate environs of the proposed development. Accordingly, I am satisfied that the proposed development will not impact on any such items and in support of this position I would reiterate to the Board that the subject site is located on 'made' land reclaimed from the Youghal Mudlands which has already been re-developed to facilitate the construction of a substantial waste processing facility approved under ABP Ref. No. PL04. 211117.

13.2.10.3 In terms of the wider impact of the proposed development on material assets such as natural resources of economic value and recreational amenities I propose to consider the potential impact of the proposal on the tourism industry of the area, including marine-based tourism activities and fisheries in the vicinity of the Blackwater Estuary that rely on good water quality.

13.2.10.4 Youghal town is a well-known tourist destination given its coastal location along the Blackwater River and is particularly popular with anglers and water-sports enthusiasts. Accordingly, I would suggest that certain interested parties would have legitimate concerns with regard to the potential impact of a development of the nature proposed on tourist resources in the area, in particular the Blackwater Estuary, or at least they would have reservations as regards the compatibility of such a development with the wider public image of Youghal.

13.2.10.5 Whilst I would acknowledge the general public perception of facilities which provide for the processing / treatment of waste, in particular hazardous waste, it is of relevance to note that the subject site is already occupied by an existing waste processing plant, the operation of which would not appear to have significantly impacted on the overall attractiveness of Youghal as a tourist destination. The perception of risk is a difficult factor to quantify, however, given the sites location in an industrial area adjacent to an existing landfill / civic amenity site, the established use of the site for waste processing activities, and the requirement for the facility to be issued with a waste licence by the EPA which will impose suitable restrictions / mechanisms as regards the control of emissions, including those to the protected waters of the Blackwater River and Estuary, I am inclined to suggest that the proposed development does not pose an unacceptable risk to the tourism industry of the area.

13.2.10.6 In addition to the foregoing, I also note the applicants comments as regards job security and the potential for the creation of additional jobs in the existing facility.

13.2.11 Interactions:

13.2.11.1 There are numerous interactions between the foregoing issues and I am satisfied that I have consider the key inter-relationships of the wider implications of the proposed development in the above assessment.

13.3 Appropriate Assessment / Ecological Considerations:

13.3.1 Appropriate Assessment – Screening:

13.3.1.1 Concerns have been raised with regard to the site's proximity to the Blackwater River and, in particular, to the Blackwater River (Cork / Waterford) Special Area of Conservation (Site Code: 002170) and the need to ascertain if the proposal should be subjected to 'Appropriate Assessment'. In this respect I would refer the Board in the first instance to the screening report prepared by the applicant which is included in the Natura Impact Statement that has accompanied the subject application. This has concluded that in accordance with the precautionary principle it was not possible to rule out the likelihood of the proposed development significantly impacting on both the Blackwater River (Cork / Waterford) Special Area of Conservation and the Blackwater Estuary Special Protection Area (Site Code: 004028) due to the following potentially significant impacts:

- The discharge of treated wastewater (from the waste treatment processes) into the Blackwater Estuary;

- The runoff of sediment and / or pollutants into the Blackwater Estuary during both the construction and operational phases of the proposed development; and
- The noise that may arise during the construction and operation of the proposed development.

13.3.1.2 Having regard to the foregoing, it is apparent from a review of the available mapping, including Map No. 10 of the Development Plan and the data maps available from the website of the National Parks and Wildlife Service, that the subject site is located in close proximity to both the Blackwater River (Cork / Waterford) Special Area of Conservation and the Blackwater Estuary Special Protection Area (Site Code: 004028). It is the policy of the planning authority, as set out in Section 7.1 and Policy ENV 1-5 of the Cork County Development Plan, 2009-2015, to provide protection to all natural heritage sites designated or proposed for designation in accordance with National and European legislation. This includes an objective to protect the conservation value of all European sites, as defined in the Planning and Development Act, 2000, as amended, (i.e. Special Areas of Conservation, Special Protection Areas or lands proposed for inclusion in such sites), notified by the Minister for the Environment, Heritage and Local Government, either before or during the lifetime of the plan, and to ensure that appropriate assessments are carried out where development plans or projects are likely to have significant effects on these sites. It is also a requirement of the Plan to assess all proposed developments which are likely to impact (directly or through indirect or cumulative impact) on designated natural heritage sites or sites proposed for designation and protected species in accordance with the relevant legislation and to ensure that an adequate level of environmental assessment is prepared to an acceptable standard in respect of any proposed plan or project likely to have an impact on these sites or protected species.

13.3.1.3 At this point I would refer the Board to Table 12.3 of the Ecological Impact Assessment as set out in Appendix 7 of the EIS and to Table 2 of the submitted Natura Impact Statement which each identify the designated Natura 2000 sites in the vicinity of the subject site. From a review of same, and by employing the source/pathway/receptor principle of risk assessment, in my opinion, it is clear that particular consideration needs to be given to the likelihood of the proposal to have a significant effect on the conservation objectives of both the Blackwater River (Cork / Waterford) Special Area of Conservation and the Blackwater Estuary Special Protection Area. In this respect I would concur with the findings of the applicants screening report that the discharge of treated wastewater and surface water from the proposed facility into both the Natura 2000 sites could potentially have a detrimental impact on water quality which could threaten the qualifying interests of the sites thereby undermining their respective conservation objectives which seek to:

- Maintain or restore the favourable conservation condition of the Annex 1 habitat(s) and / or the Annex II species for which the SAC has been selected; and
- Maintain or restore the favourable conservation condition of the bord species listed as Special Conservation Interest for the SPA.

13.3.1.4 Similarly, I would accept that the constructional and operational impact of the proposed development, such as lighting, landscaping and noise, may also result in the disturbance of fauna, with particular reference to birds, within the designated sites.

13.3.1.5 Accordingly, it is reasonable to conclude on the basis of the information available, which I consider adequate in order to issue a screening determination, that the likelihood of the proposed development significantly and negatively affecting the aforementioned Natura 2000 sites cannot be objectively ruled out and therefore it is necessary to proceed to 'Appropriate Assessment (Stage 2)'.

13.3.2 Appropriate Assessment (Stage 2):
13.3.2.1 The subject application has been accompanied by a Natura Impact Statement and I would refer the Board to this document as a basis on which to assess the likely impact of the proposed development.

13.3.2.2 The proposed development consists of the 'upgrading' of the existing Waste Recovery / Transfer and Sludge Drying Facility, as previously permitted under ABP. Ref. No. PL04.211117, to an Integrated Waste Management Facility which will entail the expansion of the existing operations on site through the development of several new waste processing / treatment technologies in order to allow for the processing of a wider range of waste types at the facility, with particular reference to hazardous waste. The three principle elements of the proposal consist of the construction of an anaerobic digestion plant, the installation of a second recovery process utilising super critical water oxidation (Aqua Critox® technology) capable of accepting hazardous waste, and the acceptance of Municipal Solid Waste which will comprise source segregated dry recyclables and mixed residual waste such as foodstuffs.

13.2.2.3 In terms of the potential impact of the proposed development on the identified Natura 2000 sites I would refer the Board to Tables 6 & 7 of the NIS and, in particular, to the operational impact of the proposal which will involve the disposal of all wastewater arising at the facility, including that emanating from the sludge drier and the proposed Aqua Critox® hazardous waste treatment technology, to an on-site wastewater treatment plant which will subsequently discharge the treated effluent via an existing outfall directly to the Blackwater Estuary subject to the terms and conditions of a waste licence issued by the EPA. The proposed development will increase the volume of treated effluent discharged to the Blackwater Estuary and in this respect it should be emphasized that all of the habitats and species in the estuarine section of the Blackwater River would be sensitive to water pollution and that in the absence of mitigation the discharge of nutrient-loading wastewater to this river could potentially contribute to the further eutrophication of same which would in turn impact on habitats and aquatic fauna. Whilst I note the applicants intention to ultimately connect to the public sewer following the construction and commissioning to the new municipal wastewater treatment plant intended to serve Youghal town, pending the completion of same treated effluent from the facility will continue to discharge directly to the estuary.

13.2.2.4 In general, I am satisfied that the submitted NIS has adequately identified the key characteristics of the potential impacts arising as a result of the proposed development which would be likely to undermine the stated conservation objectives of the designated sites. In order to militate against the potential detrimental effects of these impacts the NIS proposes the following mitigation measures:

The protection of water bodies from pollutants during construction:

- Contractors will have regard to the following best practice guidelines to ensure that water bodies are adequately protected from construction works:

- Construction Industry Research and Information Association CIRIA C649: Control of water pollution from linear construction projects: Technical guidance (Murnane et al. 2006).
- BMRB HD33/06: Surface and sub-surface drainage systems for highways. Design Manual for Roads and Bridges. Vol. 4: 2 (2006).

In addition to the foregoing, reference is made to Section 7.8.1 of the EIS which outlines the design and mitigation measures which will put in place during the construction process, for example, the monitoring of the quality of stormwater runoff and the use of spill kits.

Protection of water bodies (from pollutants spills or runoff) during operation:

- Table 7.8.2 of the EIS includes a number of design and mitigation measures that will prevent pollutants from reaching groundwater to the surface water drainage system during operation, including:

- Reinforcement of the concreted area of the site to contain spillages within the bunded area.
- Construction of a 2m high concrete wall around the waste acceptance area. Access to the bunded area will be guarded by a 450mm concrete ramp which will also prevent runoff leaving the bunded area.
- Use of steel piping between the collection chamber and the discharge manhole to prevent corrosion (and subsequent leakages).

- Monitoring and maintenance measures:

- Twice yearly inspections will be carried out by suitably qualified engineers to ensure the bunded area remains fit for purpose.
- Maintenance of the TOC and butterfly valve should conform to their respective manufacturers' specifications.
- Regular monitoring of groundwater quality up-gradient and down-gradient of the hazardous waste operation.

Protection of water bodies (from wastewater discharge) during operation):

- The existing on-site wastewater treatment plant will continue to operate as part of the proposed development.

The development is subject to a waste licence from the EPA, which prescribes maximum permitted concentrations for various parameters. The parameters of the discharge will continue to be monitored by the applicant in order to ensure compliance with EPA limits and to ensure that the discharge does not have any impact on fauna in the designated sites.

If the discharge is found to cause impacts upon the designated sites, the applicant will be able to increase the quality of wastewater treatment.

Measures to reduce faunal disturbance from noise during construction and operation:

- Chapter 11: Noise of the EIS includes 7 No. mitigation measures intended to reduce noise caused during operation, primarily from machinery movements.

13.2.2.5 On the basis of the foregoing, the NIS has concluded that provided the required mitigation measures are implemented the proposed development will not have any significant residual negative impacts and will not have a significant negative effect on the integrity of the designated sites.

13.2.2.6 Having considered the available information, I consider it reasonable to conclude that the proposed development, individually and in combination with other plans or projects, would not adversely affect the integrity of European Site Codes 002170 & 004028 in respect of their respective conservation objectives.

14.0 RECOMMENDATION

Having regard to the foregoing I recommend that permission be refused for the proposed development for the reasons and considerations set out below:

Reasons and Considerations:

1. Having regard to the nature and scale of the proposed development, to the type and quantity of wastes proposed to be used at the facility, to the absence of sufficient detail with regard to the specific locations of waste sources, and to the consequent transportation patterns generated in the sourcing of the waste material, the Board is not satisfied that a demonstrable need has been established for the proposal to be sited at this location, that it would adhere to the 'proximity principle' as established by the Waste Framework Directive, and that it would not give rise to unsustainable transportation movements. The proposed development would, therefore, be contrary to the proper planning and sustainable development of the area.

Signed: _____ Date: _____

Robert Speer
Inspectorate

An Bord Pleanála

Inspector's Report

Ref.: PL04. 239166

Development: Development consisting of the upgrading of an existing Waste Recovery / Transfer and Sludge Drying Facility (as permitted under Cork County Council Planning Reg. Ref. No. 04/7531; An Bord Pleanala Reg. Ref. No. PL04.211117 which comprises of 2 No. sludge handling / management buildings, an administration building and a transformer / plant building) to an Integrated Waste Management Facility with a total gross floor space of approximately 3,772.39 sq.m. at a site of 16,832 sq.m. The Integrated Waste Management Facility development will utilise the existing 4 No. buildings, which range in height from one storey (including double and triple height) to two storeys, and existing plant, including on-site wastewater treatment and storm water systems, fire water storage tank, wheelwash and weighbridge. The Integrated Waste Management Facility development will further consist of: The handling / management of sludge within 2 No. existing buildings (totalling 3,319.8 sq.m.) including the upgrading of the existing sludge drying process through the introduction of a second innovative recovery process utilising super critical water oxidisation (Aqua Critox® technology) capable of accepting hazardous wastes; An open air holding area (458.85 sq.m.) providing parking for vehicles / tankers / trailers during the sample testing period of hazardous waste contents prior to dispatching for treatment on-site or off-site; The erection / construction of 2 No. above ground anaerobic digester tanks (totalling 2,207.65 metres cubed) for the treatment of sludge and the production of methane gas, which will be utilised to produce electricity for use on site through a combined

heat and power generator; and ancillary plant and equipment including: the relocation of the existing portable chemical storage unit; a total organic carbon monitoring unit building (4.1 sq.m.); above ground nitrogen storage tank; air cooler, cooling tower and cooling water pump; above ground digestate liquid storage tank; above ground liquid oxygen storage tank; 5 no. above ground liquid / solvent storage tanks; 3 no. cooling towers; odour abatement systems; and associated site works above and below ground. The Integrated Waste Management Facility development will treat a maximum of 95,000 tonnes of waste (a reduction of 15,000 tonnes from that as permitted per Cork County Council Planning Reg. Ref. No. 04/7531; An Bord Pleanala Reg. Ref. No. PL04. 211117) and pedestrian and vehicular access will be maintained from the existing 2 No. entrances. The proposed development is for activities that require a waste licence.

Foxhole, Youghal, Co. Cork.

PLANNING APPLICATION

Planning Authority:	Cork County Council
Planning Authority Ref.:	11/4123
Applicant:	ERAS ECO Ltd.
Type of Application:	Permission
Planning Authority Decision:	Grant subject to conditions

APPEAL

Type of Appeal:	Third Party
Appellant(s):	Diarmaid A. Keogh
Observers:	An Taisce
INSPECTOR:	Robert Speer
Date of Site Inspection:	24th January, 2012

1.0 SITE LOCATION AND DESCRIPTION

1.1 The proposed development site is located at Foxhole, Co. Cork, approximately 2km north of Youghal town centre on the western bank of the Blackwater Estuary in a low lying area known as the Youghal Mudlands to the south of the confluence of the Tourig and Blackwater Rivers. The surrounding area can be described as low-density industrial / commercial with Youghal Landfill located to the immediate east of the site, an NCT test centre to the west and an industrial estate / business park to the northwest. The adjacent lands to the south are at present vacant and undeveloped with the area beyond same characterised by grassland which has established itself on the surface of reclaimed lands used for recreation, wildlife and amenity purposes, being part of the Slob Banks Walk, alongside the Blackwater Estuary.

1.2 The site itself has a stated site area of 1.68 hectares, is irregularly shaped and is presently occupied by an existing waste recovery / transfer and sludge drying facility set within a secure and gated compound which comprises a series of industrial and administrative buildings in addition to associated plant and equipment including a wastewater treatment system. The site is primarily finished in hard standing or artificial surfacing with small areas of amenity grassland, flowerbeds and gravel. The roadside boundary is defined by a high stone wall and security gates with the remaining boundaries consisting primarily of chain-link fencing and planting although a concrete block wall has been erected the partial length of western site boundary between the proposed waste recovery building and the adjacent property.

1.3 Access to the site is obtained via a slip road which extends eastwards from the R634 Regional Road to provide access to Youghal Landfill and the surrounding lands which in turn extends from the Rincrew roundabout on the N25 National Primary Route.

2.0 DESCRIPTION OF PROPOSED DEVELOPMENT

2.1 The proposed development consists of the 'upgrading' of the existing Waste Recovery / Transfer and Sludge Drying Facility, as previously permitted under ABP. Ref. No. PL04.211117, to an Integrated Waste Management Facility which will entail the expansion of the existing operations on site, which already include a sludge drying facility, through the development of several new waste processing / treatment technologies on site in order to allow for the processing of a wider range of waste types at the facility to include commercial, industrial and household waste in addition to hazardous waste. The three principle elements of the proposal consist of the construction of an anaerobic digestion plant, the installation of a second recovery process utilising super critical water oxidation (Aqua Critox® technology) capable of accepting hazardous waste, and the acceptance of Municipal Solid Waste onto the site, including commercial, industrial and household waste, which will comprise source segregated dry recyclables and mixed residual waste such as foodstuffs.

2.2 At present, the existing facility is authorised to process the following:

Commercial & Industrial Waste:	70,000 tonnes
Non-Hazardous Sludge:	30,000 tonnes
Leachate from Landfills:	10,000 tonnes
Total:	*110,000 tonnes*

2.3 The subject proposal seeks permission to expand the existing facility in order to accommodate the following waste types and volumes:

Commercial, Industrial & Household Waste:	20,000 tonnes
Non-Hazardous Sludge:	40,000 tonnes
Hazardous Waste:	30,000 tonnes
Leachate from Landfills:	5,000 tonnes
Total:	*95,000 tonnes*

2.4 The Anaerobic Digestion (AD) plant will consist of a fully enclosed system which will be capable of processing up to 20,000 tonnes per annum of non-hazardous municipal sewage and industrial wastewater treatment sludge, although it is only proposed to direct 15,000 tonnes of sludge to the digester annually. It will be sited adjacent to the existing Waste Recovery Building (Building No. 1) and will consist of the construction of 2 No. over ground anaerobic digestion tanks with a combined capacity of 2,207.65m^3 which are designed to treat the sludge to produce and collect biogas (methane) which will in turn be utilised within a proposed CHP plant to generate heat and power to supply the needs of the site. The intake of raw materials will be conducted from within the Waste Recovery Building where the sludge will be loaded directly into a feeder hopper before being transferred via a fully enclosed conveyor to the AD tanks, each of which will be maintained at a temperature of 37^{o}C. Associated AD equipment to be housed within the Waste Recovery Building will include gas conditioning and the sludge storage areas. The AD process is continuous and will produce both solid (fibrous) and liquid digestate. The liquid material will be directed to a liquid digestate storage tank to be constructed in the south-eastern corner of the facility whilst the solid residue would appear to be stored within a designated area in Building No. 1.

2.5 The Super Critical Water Oxidation (Aqua Critox® technology) plant will be housed within Building No. 2 (the Sludge Drying Facility) although associated equipment including cooling towers, waste solvent storage tanks, nitrogen and oxygen storage tanks, and a generator will be located outside of the building. This is described as an *'innovative physico-chemical treatment process'* which uses water and oxygen at high temperatures and pressures to achieve super critical conditions in order to breakdown toxic and hazardous organic wastes such as waste solvents (although it can also be used to process wastewater treatment sludges) thereby converting them into carbon dioxide and nitrogen gas leaving behind water and a fine particulate inorganic solid residue which is inert and thus suitable for disposal in a non-hazardous landfill or re-use. The subject proposal has the capacity to treat 30,000 tonnes of hazardous waste per annum and will generate 9,000 tonnes of solid residue per annum for disposal off site with a further 26,685 tonnes per

annum of liquid to be directed to the on-site wastewater treatment plant. Hazardous waste arriving at the proposed facility will be tested in the on-site laboratory in order to ascertain its suitability for processing on site. In the event that it is not possible to treat some / all of the waste arriving on site, as part of an overall waste management service, transport tankers containing these wastes will be directed to a designated tanker storage / parking area in the southernmost corner of the site where they will be stored temporarily prior to their subsequent dispatch for treatment / disposal off site.

2.6 Although the existing facility as approved under ABP. Ref. No. PL04.211117 is authorised to accept up to 70,000 tonnes of commercial & industrial waste per annum this was restricted to source segregated and mixed dry recyclables and, therefore, the service was discontinued in 2009 for commercial reasons due to customer demands for a full service collection to include mixed waste. Accordingly, the proposed development seeks permission to accept 20,000 tonnes per annum of Municipal Solid Waste (MSW), comprising commercial, industrial and household waste, which will consist of source segregated dry recyclables and mixed residual waste. The dry recyclables will include paper, plastic, cardboard, 'Tetrapak' and cans etc. whereas the residual waste will include putrescible waste such as foodstuffs. All these wastes will be handled in separate designated areas within the Waste Recovery Building (Building No. 1). It would appear to be the intention to bale the source segregated materials and to manually sort any mixed dry recyclables. The remaining residual waste will be bulked up for transfer off site on the same day as arrival.

N.B. In addition to the foregoing, I would draw the Board's attention to the existing treatment arrangements on site as regards the existing sludge drying facility and the diversion of leachate to the existing wastewater treatment plant. Furthermore, I would advise the Board of the apparent proposal, as detailed in the process flow-diagram which accompanied the response to the request for further information, to subject 15,000 tonnes of sludge per annum to lime stabilisation as a stand-alone treatment procedure.

3.0 ENVIRONMENTAL IMPACT STATEMENT

3.1 Although the applicant is of the opinion that the proposed development does not fall within any of the categories listed in Schedule 5 of the Planning and Development Regulations, 2001, as amended, in light of pre-application discussions with the Planning Authority, the planning history of the site, the nature of the site and the applicant's commitment to undertaking best practice, the subject application has been accompanied by an Environmental Impact Statement.

N.B. The existing facility is subject to a Waste Licence (Reg. No. W0211-01) as issued by the Environmental Protection Agency and the proposed development will similarly require a Waste Licence.

4.0 RELEVANT PLANNING HISTORY

4.1 On Site:
PA Ref. No. 00/7093. Was granted on 3rd October, 2001 permitting Youghal Waste Disposal & Recycling permission for the construction of waste transfer station (*N.B.* This grant of permission was limited to a temporary period of 5 years only and was never implemented).

PA Ref. No. 04/7531 / ABP Ref. No. PL04. 211117. Was granted on appeal on 13th July, 2005 permitting AVR Environmental Solutions permission for the construction of a waste recovery/transfer and sludge drying facility consisting of a waste recovery and transfer building, administration building and carpark, transformer/plant building and standby generator, boiler and woodchip storage building, sludge reception building, sludge drying building, wastewater treatment plant including balancing tank, fire water storage tank, storm water retention tank, one weighbridge, one wheelwash, oil storage and bund walls, waste quarantine area, dried sludge discharge area, mobile dewatering plant, mobile fire fighting plant, hard standings, all boundary fencing and walls, all associated site works and ancillaries on 3.54 acres at Foxhole, Youghal, Co. Cork.

N.B. In addition to the foregoing, I would advise the Board that the Planning Cover Report (Page No. 11), which has accompanied the subject application, refers to an application having been made to the Planning Authority pursuant to Section 5 of the Planning and Development Act, 2000, as amended, for a declaration as to whether the proposed installation of new 'AquaCritox Technology (supercritical waster oxidisation process) in place of a permitted, but yet not implemented, dryer plant, was or was not exempted development. Accordingly, on 1st March the Planning Authority purportedly issued a declaration which stated that the insertion of a new dryer on site constituted exempted development pursuant to Class 21 of Part 1, Schedule 2 of the Planning and Development Regulations, 2001.

4.2 On Sites in the Immediate Vicinity:
ABP Ref. No. PL04. EL.2023. Was granted on 29th March, 2004 approving proposals by Cork County Council to intensify the use of Youghal Landfill, Co. Cork.

5.0 PLANNING AUTHORITY CONSIDERATIONS AND DECISION

5.1 Decision:
Following the receipt of a response to a request for further information, on 27th May, 2011 the Planning Authority issued a notification of a decision to grant permission for the proposed development subject to 7 No. conditions which can be summarised as follows:

Condition No. 1 – States that the proposed development is to comply with the terms and conditions of ABP Ref. No. PL04. 211117, save where otherwise amended by the terms and conditions of this grant of permission.

Condition No. 2 - States that vehicles transporting hazardous material for treatment at the site are not to access the site by way of the town centre, but are instead confined to accessing the site via the Rincrew Roundabout on the N25 National Road.

Condition No. 3 – Refers to the maintenance of existing roadside drainage arrangements.

Condition No. 4 – Requires the water supply to be metered to the Planning Authority's satisfaction.

Condition No. 5 – Prohibits the operation of the proposed development in the absence of a waste licence obtained from the Environmental Protection Agency.

Condition No. 6 - Prohibits the erection of any further structures or signage on site, or any increase in flue heights, without a further grant of planning permission.

Condition No. 7 - Requires the operator to maintain a record of all complaints received including details of nature of the complaint and the company's investigation and response to same. This record is to be submitted to the Planning Authority on an annual basis.

5.2 Internal Reports:

5.2.1 Architect: An initial report stated that most of the subject application was unrelated to architectural considerations, although it was suggested that the proposal may represent an opportunity to address the poor aesthetic appearance of the existing buildings on site. The report subsequently concluded by stating that there was no objection to permission being granted.

Following the receipt of a response to a request for further information, a further report was prepared which stated that the submitted application was of a poor quality in terms of building design and landscape treatment, although it was considered that this was mainly due to the original buildings on site and the addition of poor quality replicas. It is also stated that there appears to be an excessive density of activity on site which does not allow for any significant improvement of the external environment due to the limited space available and the overall poor quality of the submitted design. The report subsequently concludes by recommending a refusal of permission on the grounds that an excessive level of activity is proposed on site which would result in a poor quality built environment.

5.2.2 Engineering (J. O'Connor): Sets out a series of conditions to be attached to any grant of permission.

5.2.3 Environment: An initial report recommended that further information be sought in respect of a variety of items including the specifications of the hazardous material to be treated on site and whether or not there would be sufficient capacity in the wastewater treatment plant proposed for Youghal to accept the treated effluent discharged by the site.

Following the receipt of a response to a request for further information, a further report was prepared which stated that there was no objection to the proposal on environmental grounds subject to conditions.

5.2.4 Area Engineer: An initial report noted that the subject proposal was for an upgrade of the existing facility on site and stated that as there was a history of complaints with regard to odours which emanated in this part of the town and descended into nearby areas including Quarry Road, although it would be reasonable to assume that these emissions originate from the nearby landfill, a condition should be imposed in any grant of permission to ensure that any odours released from the facility adhere fully to the industry norm. The report then proceeds to set out a series of further conditions which should be attached to any grant of permission.

Following the receipt of a response to a request for further information, a further report was prepared which reiterated the foregoing.

5.3 Prescribed Bodies / Other Consultees:

5.3.1 An Taisce: States that before consideration is given to the subject proposal, an evaluation should be carried out in order to ascertain that all issues of compliance with regard to ABP Ref. No. PL04. 21117 have been satisfactorily resolved.

5.3.2 Health Service Executive / Environmental Health Officer: An initial report prepared by the Environmental Health Officer sets out a series of observations in respect of a number of public health issues including air quality, noise and vibration etc. Further correspondence appended to this report, which has been prepared by Dr. Mary T. O'Mahony, Specialist in Public Health Medicine, states that in light of the potential public health concerns, the assessment of the proposal by the Planning Authority should confirm that:

- All potential emissions from the hazardous waste accepted on site will be contained on site, and that
- The Planning Authority is satisfied with the arrangements to manage all potential emissions from the treatment facility.

This report subsequently concludes by suggesting that the Planning Authority's assessment of the risk to the environment, including human beings, should be summarised in a report which is accessible to members of the local community.

5.4 Objections / Observations:

A total of 6 No. submissions were received from interested parties in respect of the proposed development (one of which was subsequently withdrawn) and the principle grounds of objection contained therein can be summarised as follows:

- The proposed development site is located on the northern approach to the town in an area of high scenic and amenity value.

- The site is within 80m of a Special Area of Conservation, a Natural Heritage Area and a Special Protection Area.
- It is the policy of both Cork County Council and the Government to support the tourism sector.
- The Environmental Protection Agency is currently investigating air quality complaints against the existing facility on site.
- There are concerns that any additional development on site will pose an unacceptable risk to the tourism industry, which is the largest employer in the town. In this respect it is submitted that proposals for development that will negatively impact on the viability of an existing industry should not receive favourable consideration and, therefore, given the on-going changes in the wider economy and the diversification away from traditional forms of employment, a stronger weighting should be applied to the development of the tourism industry.
- The tourism industry, with particular reference to the heritage sector of same, is a highly competitive area which needs to maintain a high quality environmental standard in order to project a 'clean' image.
- The remaining lifespan of the adjacent landfill is limited and upon its closure it will be restored to use as a recreational area.
- The proposed development is incompatible with other commercial uses in the area and is prejudicial to the operation and viability of same.
- There is no justification for the transportation of hazardous waste 40 miles from source for treatment.
- The proposed development will contribute to the on-going problem of smells / malodours emanating from the existing plant.
- Public health concerns

6.0 GROUNDS OF APPEAL

The grounds of appeal are summarised as follows:

- The proposed development is located on largely natural infill slobland of alluvio-warf which was fully reclaimed in 1846 by the construction of an embankment. The site itself is located just outside the previous sea wall. The original Youghal Bridge, known as the 'Timber Bridge' was built in 1832. The toll was situated on the north-eastern boundary of the property. The 'Iron Bridge' was opened in 1883 and finally closed in 1963.
- Youghal has the distinction of being the only town in Ireland with 3 No. Blue Flag Beaches. The Blackwater Estuary is recognised both nationally and internationally as an important and fragile natural environment where wildlife and marine tourism co-exist. The Natura Impact Statement which accompanied the subject application states that due to the proximity of the proposed development site to the Blackwater River cSAC and the Blackwater Estuary SPA, and in light of the discharge of treated wastewater into the cSAC / SPA, it was not possible to rule out likely significant effects upon the Natura sites at the screening stage.
- The proposed development, by reason of its elevated location, scale and overall design, would have an adverse impact on the character of the surrounding

landscape (*N.B.* It would appear that the references to a 'proposed dwelling' and Co. Carlow have been made in error).

- There are concerns that the existing mains sewer which presently serves the subject site discharges untreated effluent into the Blackwater Estuary and that no date has been provided for the construction of the new wastewater treatment plant which is intended to serve the entire town.
- It is considered that the proposal to locate a facility for the treatment of hazardous waste in the tourist town of Youghal fails to comply with the 'proximity principle' in that it would necessitate the transportation of waste from sources in Little Island / Ringaskiddy. In addition, the transportation of waste from alternative sources, such as the pharmaceutical industries located in Counties Limerick and Tipperary, would be dependent on use of the R634 which is a notoriously poor regional road. Accordingly, it is submitted that the inclusion of Condition No. 2 as imposed by the Planning Authority serves to highlight its concerns as regards the proposal to transport 30,000 tonnes of hazardous waste per annum.
- The proposed development site is located in an area zoned as *'I-04 – Industrial Estate Development for Small and Medium Industrial Units'* in the Cork County Development Plan, 2003. It is an objective of the Plan to promote the development of these industrial areas as the primary locations for uses including manufacturing, repairs, warehousing, distribution, open storage, waste material treatment and recovery, whereas the development of inappropriate uses such as office-based industry and retailing is not normally permitted.

  It is of objective of the Plan that industrial areas not used primarily for small to medium industry, warehousing or distribution, should be considered suitable in general for the siting of waste management activities (including the treatment and recovery of waste materials, but excluding landfill and contract incineration facilities). Furthermore, subject to local considerations, it may be suitable to locate civic amenity sites and waste transfer stations on industrial sites with warehousing and / or distribution uses. The types of uses outlined in the foregoing objectives can often result in standards of amenity that would not generally be acceptable in other areas. In this respect it is submitted that said uses can also result in 'bad neighbours' in instances where neighbouring land uses have higher expectations in terms of amenity.

  Having regard to the foregoing, it should be noted that the adjacent lands were developed by Youghal Town Council as an 'Enterprise Area' and that permission was granted on these lands for the construction of a wholesale warehouse with ancillary retailing whilst other approved uses include an HSE health centre, a veterinary clinic, offices, a beauty salon and furniture and carpet retailers. Permission has also been granted under PA Ref. No. 08/5273 for a funeral home with ancillary accommodation. The remainder of these zoned lands comprise low-lying slobland which lacks basic infrastructure.

- Other uses along the T12 service road include the NCT Centre, car sales, panel beating and the Youghal Landfill. The recent intensification of the landfill (from 37,000 tonnes per annum to 170,000 tonnes per annum) has greatly reduced its life expectancy and when landfilling operations cease in the coming months, it is the Local Authority's intention to restore the lands to a recreational area, in accordance with its Restoration and Aftercare Plan, that will be *'aesthetically appropriate to the environment'*.
- The planting and screening measures previously approved under PA Ref. No. 04/7531 / ABP Ref. No. PL04. 211117 have yet to be implemented on site.
- The existing buildings on site are very evident visually from the Coast Road, Ferry Point, Rhinecrew, the Blackwater River, the Youghal by-pass and from along the northern approach to the town. In this respect it is submitted that the scale and massing of the proposed units is excessive given the size of the site.
- It is the appellants understanding that the existing (and proposed) buildings on site are too short to accommodate the off-loading of larger waste containers.
- The public consultation carried out by the applicant failed to inform interested parties of the proposal to treat 30,000 tonnes of hazardous waste on site. In addition, it is of relevance to note that whilst the appellant was informed by the Planning Authority on 20th September, 2010 that no pre-planning discussions had been held with regard to the subject site, the applicant has clearly stated that pre-planning discussions were held with the Local Authority on 22nd June, 2010 and that a declaration was issued on 1st March, 2010 which stated that the insertion of a new dryer on site was exempted development and, therefore, the installation of the proposed of the AquaCritox technology did not necessitate a planning application. Accordingly, it is submitted that the 'public consultation' carried out by the applicant could be considered a 'smokescreen' and contrary to the proper planning and sustainable development of the area.

7.0 RESPONSE TO GROUNDS OF APPEAL

7.1 Response of Planning Authority:

None received.

7.2 Response of Applicant:

- The existing facility to be upgraded on foot of the subject application is fully compliant with the terms and conditions of ABP Ref. No. PL04. 211117 together with the requirements of EPA Waste Licence No. W0211-01. The current Waste Licence will be reviewed with the EPA in light of the proposed development, which will not become operational until such time as the EPA has granted a favourable response to the Waste Licence review in respect of the operation.
- In line with national and regional policy objectives, the opportunity was identified to upgrade the existing facility to an Integrated Waste Management Facility capable of biologically treating municipal and non-hazardous industrial sludges (generating heat and power) and to provide local treatment capacity for hazardous sludge and solvent wastes arising in the Cork region. In this respect the proposed development will extend the range of waste types to be processed on site.

- The proposed development will treat a maximum of 95,000 tonnes of waste per annum, a reduction of 15,000 tonnes from that permitted under ABP Ref. No. PL04. 211117.
- The proposed 'AquaCritox' plant can be utilised for the treatment of hazardous waste, which is not currently possible on site. This plant will provide for a reduction in the overall volume and bulk of sludges by achieving the complete destruction of organic materials in the sludge.
- The proposed development will reduce the overall tonnage of waste inputs, expand the waste types to be accepted and will change the ratio of waste inputs.
- The proposed development accords with the policies and objectives of all the plans and guidelines governing such developments.
- It is considered that the proposed Integrated Waste Management Facility accords with the National Hazardous Waste Management Plan, 2008-2012 which requires Local Authorities to:

- Reduce the generation of hazardous waste by industry and society generally;
- Minimise unreported hazardous waste with a view to reducing the environmental impact of this unregulated waste stream;
- Strive for increased self-sufficiency in the management of hazardous waste and to reduce hazardous waste export; and
- Minimise the environmental, social and economic impacts of hazardous waste generation and management.

The Plan highlights that approximately 48% of Ireland's hazardous waste in 2006 was exported for treatment and disposal abroad and states that the country should seek to become self-sufficient in hazardous waste recovery, particularly in relation to solvent wastes. The proposed 'AquaCritox' technology utilises Supercritcial Water Oxidisation which is recognised as a method for the treatment of several different hazardous waste streams (i.e. waste that are liquid / having a particle size of less than 20µm and an organic content of less that 20%).

- The South West Regional Authority Regional Planning Guidelines, 2010-2022 support the incorporation of the recommendations and policies of the National Hazardous Waste Management Plan, 2008-2012 with the County Waste Management Plans. Section 5.6.20 of the Plan states the following:

'Hazardous waste management in the region needs to be addressed from the perspective of the most environmentally sustainable approach and in line with best international practice'.

- The Cork County Waste Management Plan, 2004 commits the Local Authority to:

- Act to conserve and protect the environment and natural resources of the region;
- Provide a framework to address the region's growing problem of waste management in accordance with best prevailing norms, financial capacity and best environmental practice;

- Provide solutions for the expansion of recycling facilities, the reduction of volumes disposed in landfill through pre-treatment options, and proper disposal to landfill of residues in accordance with EU and EPA requirements.

- The Cork County Sludge Management Plan, 2008 identifies anaerobic digestion as a treatment solution for sludges generated in the county.
- The proposed development fully complies with the following policies of the Cork County Development Plan, 2009-2015 which seek to:

- Promote the development of industrial areas as the primary location for uses including waste treatment and recovery operating centres;
- Promote the development of facilities for the prevention, minimisation, re-use / recycling or disposal with energy recovery of waste materials; and
- Develop a Material Recovery Facility for the Cork Region.

- The Midleton Electoral Area Local Area Plan, 2005 recognises the hierarchy of preferential modes of waste management, including prevention, minimisation, re-use / recycling, disposal with energy recovery and disposal of residual waste, and it is submitted that the proposed development accords with these principles. Furthermore, the Local Area Plan identifies the subject site as being located within the Youghal Town development boundary whilst the site is zoned as 'New Industry / Enterprise' where waste management activities, such as those presently conducted on site, are considered suitable uses.
- The Draft Midleton Electoral Area Local Area Plan, 2010 proposes to zone the subject site as 'Existing Built-Up Area' which has the effect of allowing a more positive and flexible response to proposals for the development of the subject lands.
- It is acknowledged that the subject site is located in proximity of the Blackwater River cSAC and the Blackwater Estuary SPA and as the likelihood of significant negative effects could not be objectively ruled out a Natura Impact Statement which has assessed the impact of the proposal on the integrity of the designated sites has accompanied the application. This NIS subsequently concluded that:

  'As there are no likely significant residual negative impacts, it is concluded that the proposed development will not have a significant negative effect on the integrity of the cSAC / SPA'.

  The mitigation measures for both the construction and operational stages of the proposed development included in the EIS and the NIS will serve to minimise its impact on the environment.

  Furthermore, as the Appropriate Assessment concludes that there will be no significant impact on the integrity of the cSAC or SPA, it follows that there will be no significant impact on the pNHA.

- It is considered that both the proposed plant and the existing structures on site are in keeping with the overall nature and use of the site.
- Given the sites location in an area zoned for industrial and related development, and the established pattern of development in the vicinity, it is submitted that the proposed development is acceptable in terms of visual amenity and accords with the proper planning and sustainable development of the area. In this respect it should be noted that the EIS concluded that the impact of the proposed changes on the landscape would be neutral.
- Contrary to the appellant's claims, the landscaping of the subject site has been completed in accordance with ABP Ref. No. PL04. 211117. In this regard, there are no outstanding compliance / enforcement issues relating to the site and the Planning Authority has not required any additional landscaping to be undertaken on site.
- The existing landscaping and character of the site is considered reasonable in the context of an industrial facility located within an industrial area surrounded by related uses.
- The EIS has concluded that the existing landscaping and the mitigation measures proposed in the scheme design are adequate.
- The appellant is mistaken in his assertion that the existing (and proposed) buildings are too short to allow the off-loading of larger waste containers as all trucks are unloaded within the enclosed buildings with larger 40ft. trucks unloaded in Building No. 1.
- At present, wastewater is treated on site by an existing wastewater treatment plant before being discharged to the public sewer. The discharged waters are within the emission limits set by the Waste Licence and will ultimately be disposed of to the new Youghal Wastewater Treatment Plant upon the completion of same. Effluent from the proposed 'AquaCritox' technology will be well below existing discharge limits and, therefore, that quality of the final discharge from the facility will improve when mixed with the effluent from the 'AquaCritox' technology'.
- Effluent from the upgraded treatment processes will contain lower levels of pollutants than at present and, therefore, any potential impacts on the Blackwater Estuary cSAC and SPA will be reduced.
- The proposed development site is suitably located in close proximity to a well-developed transportation network and, in accordance with statutory policy and guidance, provides a local management response to wastes arising in the Cork region thereby reducing the amount of material exported to other facilities in Europe.
- The EPA's National Hazardous Waste Management Plan, 2008-2012 recommends that in order to apply the proximity principle, Ireland should seek to become self-sufficient in hazardous waste recovery, particularly in relation to solvent wastes. In this regard, it is submitted that the proposed facility is targeted primarily to meet the needs of the Cork region, which is one of the main centres of hazardous waste production in the country.
- The traffic model associated with the 'parent' permission (ABP Ref. No. PL04. 211117) was based on the facility accepting 110,000 tonnes of waste per annum,

however, the surrounding road network, including the N25 and the T12 local road, has since been significantly upgraded.

- The proposed development will reduce the overall volume of waste accepted at the facility by 15,000 tonnes per annum (tpa) whilst the waste input ratios will be changed as follows:

- 40,000 tonnes of sludge (+10,000 tpa)
- 20,000 tonnes of Household / Commercial / Industrial Waste (-50,000 tpa)
- 5,000 tonnes of leachate (-5,000 tpa)
- 30,000 tonnes of Hazardous Waste (+30,000 tpa)

In addition, as hazardous waste is also heavier than household / commercial / industrial waste, primarily as it is in an aqueous or sludge form, the number of vehicle movements will be less than as estimated in the original traffic impact assessment for the same overall annual tonnage intake. Accordingly, the proposed development will result in less traffic movements than those already permitted at the existing facility.

- The amendments proposed to the existing facility will not require significant construction works with the new anaerobic digester estimated to be constructed within 4 weeks and the 'AquaCritox' plant expected to be delivered and assembled over a period of 6 weeks. Therefore, construction related traffic is expected to be insignificant.
- An analysis of internal vehicle movements demonstrates that there is adequate manoeuvring space within the site.
- Having regard to the site's planning history and existing use, the site location and surrounding pattern of development, the reduced traffic impact, the improved quality of waste discharges from the on-site wastewater treatment plant, taken together with statutory planning policy and guidance which promote the provision of Integrated Waste Management Facilities to increase self-sufficiency in the management of hazardous and non-hazardous wastes in accordance with the proximity principle, it is submitted that the proposed development accords with the proper planning and sustainable development of the area.

8.0 OBSERVATIONS:

8.1 An Taisce:

- The subject application highlights Ireland's non-compliance with the EIA Directive established in European Court Case C-50/09 as regards the lack of provision for assessment by the consent authority.
- The proposed development site adjoins the Blackwater SAC, SPA & NHA and is located on problematically infilled, inter-tidal wetlands.
- It would appear that the reference to a 'proposed dwelling' on Page No. 2 of the grounds of appeal was included in error.

- Concerns have been raised with regard to possible instances of non-compliance with PA Ref. No. 04/7531 and the overall scale and impact of the proposed development.
- Whilst the report of the Area Engineer has referred to a *'history of complaints about odours emanating in this part of the town'* it only 'thinks' these relate to the landfill.
- The report of the Environment Section made a number of recommendations as regards the need for further information.
- Notwithstanding the proposal to extend the range of waste types to be handled on site and the introduction of hazardous waste, Cork County Council has failed to carry out a proper investigation of the operation of the existing facility and whether or not it complies in full with the terms and conditions of PA Ref. No. 04/7351.
- The subject application should be assessed *de novo* having regard to the implications of Case No. C-50/09.

9.0 RESPONSE TO SECTION 131 NOTIFICATIONS:

9.1 Environmental Protection Agency:

- The existing site currently holds a Waste Licence (Reg. No. W0211-01) from the Environmental Protection Agency.
- The proposed activity cannot be accommodated under the existing licence and is one that will require a review of the Waste Licence from the Environmental Protection Agency (see accompanying letter from the Office of Environmental Enforcement to the facility).
- The Agency has not received a Waste Licence Review Application as of 17th February, 2012.
- If and when the Agency receives a Waste Licence Review Application for the proposed development it will be assessed and the decision of the Board of the Agency will be forthcoming in due course. All aspects of the development, including its operation and safe closure, will be considered by the Agency in the determination process.
- All matters to do with emissions to the environment from the activities proposed and as detailed in the EIS, and any licence application documentation as may be received, will be considered and assessed by the Agency. Where the Agency is of the opinion that the activities, as proposed, cannot be carried on, or cannot be effectively regulated under a waste licence, to the extent that permits compliance with as reasonable burden of proof for Section 40(4) of the Waste Management Acts, 1996 to 2010, then the Agency cannot grant a Waste licence for such a facility. Should the Agency decide to grant a licence in respect of the activity, as proposed, it will incorporate conditions that will ensure that appropriate National and EU standards are applied, and that Best Available Techniques (BAT) will be used in the carrying on of the activities.

9.2 Inland Fisheries Ireland:

- Whilst it is stated in the subject application that the proposed operation will operate within the terms of the existing EPA licence W0211-01, the applicant has previously sought a review of the same licence. Inland Fisheries Ireland would therefore request the Board to seek clarification from the EPA that the proposed development may operate within the existing licence and if this is not the case, the current status of the review process. It is also of concern to note that there have been a number of prior ELV exceedances of the existing EPA licence in the operation of the existing treatment plant on site and, therefore, the Board should seek clarification of progress or otherwise in respect of this matter.
- It is noted that the 'Aquacritox' process is described in the application documentation as an *'innovative'* process and that the proposed development may be one of the few to adopt the use of 'Aquacritox' technology on a commercial scale. Accordingly, the applicant should be requested to demonstrate to the satisfaction of the Board that this system is indeed proven as best available technology, perhaps by supplying detailed examples of its successful operation on a similar scale to that proposed in the application.
- The application details discharge to the Local Authority sewerage network and also notes that Youghal presently requires upgrading of its own municipal treatment facilities. The application also states that in due course it is envisaged that on-site treated effluent would then pass to the future new Youghal municipal wastewater treatment plant to undergo further treatment prior to discharge to the estuary. The Council's own recent application to the EPA for discharge authorisation states that untreated wastewater presently discharges directly from the sewerage network to the estuary from the Foxhole catchment area.

  In view of the foregoing, it is submitted that it would be premature to grant permission for the proposed development prior to the construction and commissioning of a new municipal wastewater treatment plant serving the Youghal catchment area. Such a plant, with BAT secondary treatment capability, would then offer additional treatment of effluent from the applicants premises affording protection to the receiving aquatic environment, whilst also providing a separate phase in which to monitor the influence of significant individual discharges within the collection and treatment system. This would provide a further degree of protection to the receiving aquatic environment in that there would be a capability to modify treatment or control discharge in the event of an exceedance or pollution event occurring within the collection network which would otherwise have been discharged directly to the estuary. The receiving aquatic environment should be afforded similar levels of protection as experienced in other receiving catchments where similar agglomerations are now served by WWTPs where infrastructural upgrades have taken place. Alternatively, if the proposed operation were to proceed at present, it would potentially create a situation where sludge from various treatment processes, including secondary treatment plants, would be imported from around the county into a catchment area which currently has no similarly advanced municipal wastewater treatment facilities of its own.

9.3 Failte Ireland:

- It is noted that there are a number of tourism business, including marine-based tourism activities and fisheries, in the vicinity of the Blackwater Estuary that rely on good water quality in the estuary. Accordingly, the Board is requested, in its examination of the subject appeal, to take account of any potential negative impact on tourism that may arise as a result of a deterioration in water quality consequent on the proposed development.

10.0 NATIONAL AND REGIONAL POLICY:

10.1 Sustainable Development: A Strategy for Ireland, 2007:

This document aims to provide a comprehensive analysis and framework to allow sustainable development to be taken forward more systematically in Ireland.

10.2 The National Development Plan 2007- 2013:

This plan recognises that Ireland has significant renewable energy resources available but their large scale exploitation continues to require support and intervention by policy makers because of the investment costs and risks entailed. The plan sets out objectives to stimulate renewable energy production. Renewable energy measures will focus on achieving Government targets for renewable energy production and meeting policy goals with regard to competitiveness, environment, security of supply, R&D and the development of a sustainable All-Island energy market. The primary focus will be on the large-scale deployment of wind, the emerging potential and deployment of biomass and biofuels, preparatory action on ocean energy and deployment of other technologies such as solar and geothermal technologies. Deployment will be delivered through a range of supports including taxation, direct grant aid and other funding or support mechanisms.

The Plan also acknowledges that waste poses a serious economic and environmental challenge for Ireland and that the adoption of a sustainable approach for dealing with same will require the integration of a number of elements — reducing the extent of waste generation through waste prevention strategies, maximising the recycling and recovery of waste and minimising the environmental impacts of the final disposal of waste, particularly through reducing the reliance on landfill.

10.3 A Policy Statement, Waste Management, 'Changing Our Ways', 1998:

This document outlines the Government's policy objectives in relation to waste management, and suggests some key issues and considerations that must be addressed to achieve these objectives. The policy is firmly grounded in an internationally recognised hierarchy of options, namely prevention, minimisation, reuse/recycling, and the environmentally sustainable disposal of waste which cannot be prevented or recovered.

10.4 'Delivering Change', Preventing and Recycling Waste, 2002:

This document builds on the fact that Government policy on waste management is based on the internationally accepted hierarchy of best practice. It therefore covers prevention

and minimisation, re-use, recycling and biological treatment, energy recovery and environmentally sound disposal by thermal treatment or by landfill.

10.5 Waste Management, 'Taking Stock and Moving Forward', 2004:

This document is a review of progress on waste management modernisation since 1998 and includes a programme of key points to underpin future progress.

10.6 National Strategy on Biodegradable Waste, April, 2006 (DoEHLG):

This document outlines Government policy for the diversion of biodegradable municipal waste from landfill in order to meet national commitments to comply with the provisions of the Landfill Directive. The strategy focuses primarily on Biodegradable Municipal Waste (BMW) including proposals for waste prevention and minimization. It also refers to the use of alternative technologies in respect of waste treatment and disposal including biological and thermal treatment. Section 2.2.4 of the Strategy refers to Anaerobic Digestion and notes that there are currently three centralised Anaerobic Digesters operating in the Republic of Ireland, with a fourth being operated in County Fermanagh. These plants are focused on the treatment of farm wastes although the plant at Ballymacarbery, Co. Waterford, has been performing trials on the biodegradable fraction of both MSW and commercial / industrial wastes.

Section 8.4 notes the benefits which can arise from the synergy of the biological treatment of BMW with other sources of organic waste including agricultural wastes, organic industrial wastes, fisheries residues etc.

Section 14.6 refers to a less rigorous specification of waste recovery facilities. Rather than define the exact location, number and capacity of recycling (including waste recycling centres) and biological treatment facilities, Regional Waste Management Plans should enable greater flexibility for additional recovery capacity to be provided within Ireland to serve the needs of the various regions in accordance with the principles contained in the Ministerial Direction on the Inter-Regional Movement of Wastes. Such an approach should enable greater competition among facility operators and provide a more robust set of recovery facilities.

10.7 National Hazardous Waste Management Plan, 2008-2012 (presently under review):

This Plan sets out the priority actions that should be taken within the period of the Plan (2008-2012) and beyond in relation to: the prevention of hazardous waste; improved collection rates for certain categories of hazardous waste; the steps that are required to improve Ireland's self-sufficiency in hazardous waste management; and the management of certain legacy hazardous wastes such as contaminated soil. The objectives of the Plan are:

1. To reduce the generation of hazardous waste by industry and society generally.
2. To minimise unreported hazardous waste with a view to reducing the environmental impact of this unregulated waste stream.

3. To strive for increased self-sufficiency in the management of hazardous waste and to reduce hazardous waste export.
4. To minimise the environmental, social and economic impacts of hazardous waste generation and management.

In the context of the subject proposal it is of relevance to note that the Plan recommends a policy of moving towards self-sufficiency in the management of hazardous waste and states that of the 48% of hazardous waste exported from the country in 2006 for treatment and disposal abroad (mostly for thermal treatment, including incineration and use as fuel, but also for metal recovery, solvent recovery and landfill), a significant proportion of same could have been dealt with in Ireland at existing authorised facilities and in cement kilns. Whilst the Plan acknowledges that one cement kiln operator has indicated their intention to seek authorisation to burn waste, including hazardous waste, it states that if Ireland is to become fully self-sufficient, hazardous waste landfill and incineration (or alternatives) is required. In this respect the Plan notes that whilst a hazardous waste incinerator is licensed to operate in Ringaskiddy, Co. Cork, there are no equivalent proposals on hand for hazardous waste landfill or for technologies that can provide a realistic alternative to the incineration of the wide range of hazardous wastes that are currently exported for incineration.

Chapter 6 of the Plan explores the available options for the increased treatment of hazardous waste in Ireland and identifies three overarching strategic needs to be addressed if additional hazardous waste is to be treated in Ireland and export is to be avoided:

- addressing the deficit in capacity for the substantial waste stream currently exported for thermal treatment (i.e. co-incineration, use as fuel or incineration)
- development of landfill capacity to manage non-recoverable and non-combustible hazardous wastes and residues, including asbestos ; and
- expansion of other recovery and treatment capacity in Ireland for waste that does not need thermal treatment or landfill – generally referred to as physico-chemical treatment .

The Plan subsequently expresses support for the provision of alternative treatment technologies (where technically and economically feasible) for several different hazardous waste streams, including supercritical water oxidation (*N.B.* A brief technical description of which is included in Appendix E of the Plan). Section 6.6 of the Plan specifically refers to the physico-chemical (including oxidation) treatment of hazardous liquid, solid and sludge waste. Chapter 8 on implementation concludes with an overview and summary of the recommended actions to address the issues discussed in earlier chapters. A number of objectives, targets and indicators are proposed to monitor the Plan's implementation.

10.8 Department of Environment, Community and Local Government: Towards a New National Waste Policy, Discussion Document, August, 2011:

This document has been prepared in light of the transposition of the Waste Framework Directive (2008/98/EC) into Irish law in March, 2011 and the Programme for Government ('Government for National Recovery, 2011-2016') commitments in relation to the development of a sustainable waste policy and the putting in place of a national waste policy that will adhere to the EU waste hierarchy and deliver a coherent approach to waste management, minimising the waste going to landfill and maximising resource recovery. It is designed to promote discussion and debate and to provide an opportunity for all interested parties to input into the development of a policy framework that will shape Ireland's approach to waste management for the next decade and beyond.

10.9 National Climate Change Strategy 2007- 2012:

This strategy draws together the Government's collective effort across all sectors to tackle climate change. Chapter 3 deals with energy supply. The government has set national targets above and beyond existing EU targets for 15% of electricity generated from renewable sources by 2010 and 33% by 2020. The government is acting to stimulate combined heat and power (CHP) with support under the CHP Deployment programme, which includes support for small scale CHP and large-scale biomass-fed CHP, and additional research and development supports. The Government's ambition for CHP is underpinned by a target to achieve an installed capacity of 400MW by 2010 and 800MW by 2020. The achievement of the 2010 target will reduce greenhouse gas emissions by 162,000 tonnes on average over the 2008-2012 period. This saving is attributed to the Industrial, Commercial and Services sector for the purposes of this Strategy.

10.10 Delivering a Sustainable Energy Future for Ireland: 2007 Government White Paper on the Energy Policy Framework 2007-2013:

This paper sets out the broad energy policy framework for the long-term development of the energy section, including power generation. The White Paper recognises that energy policy must make a substantial contribution to reducing greenhouse gas emissions through energy efficiency improvements, changes in the fuel mix and the increased use of renewable energy.

Chapter 3.4.8 sets out a number of actions to achieve diversity of fuel use including 15% of electricity consumption from renewable sources by 2010 through REFIT scheme projects and encouraging biomass in power generation.

Section 3.10.10 states that the Government will seek to achieve at least 400MW from Combined Heat and Power by 2010 through continued support under the CHP Deployment Programme and R&D supports with particular emphasis on biomass fuelled CHP and will aim to achieve at least 800MW by 2020.

10.11 National Renewable Energy Action Plan:

Ireland's National Renewable Energy Action Plan ('NREAP') is the submission required under Article 4 of Directive 2009/28/EC. Directive 2009/28/EC requires each Member State to adopt a national renewable energy action plan and to submit these to the

European Commission. These plans are to set out Member States' national targets for the share of energy from renewable sources consumed in transport, electricity and heating and cooling in 2020, taking into account the effects of other policy measures relating to energy efficiency on final consumption of energy. The plan sets out the Government's strategic approach and concrete measures to deliver on Ireland's 16% target under Directive 2009/28/EC.

10.12 'Anaerobic Digestion: Benefits for Waste Management, Agriculture, Energy and the Environment' (Discussion Paper, Environmental Protection Agency, 2005):

This discussion document outlines the policy context, advantages, disadvantages and the various characteristics of anaerobic digestion in addition to considering the feasibility of centralised anaerobic digestion facilities. The primary benefits arising from anaerobic digestion (AD) are energy recovery (through the recovery of biogas) and the displacement of greenhouse gas emissions from fossil fuels, however, the process also produces several additional beneficial outcomes:

- AD destroys a wide range of pathogenic and faecal micro-organisms. Under the EU animal by-products regulation (1774/2002) biogas plants must be fitted with pasteurisation/hygienisation units of minimum treatment of 70°C for one hour. Such treatment will kill all pathogens and seeds thereby eliminating cross-farm contamination of pathogens or weeds.
- AD substantially reduces odours associated with animal slurries by as much as 80%.
- AD reduces the organic pollution potential of animal slurries. Tests of animal slurries from pilot and farm scale digesters show a reduction of 55% of BOD for cattle slurry, 75% for pigs and 80% for poultry slurries.
- An appreciable portion of the geology of the country is of a karst limestone composition, which makes groundwater particularly vulnerable to pollution. The lower pollution potential of AD processed slurries will provide additional protection to groundwater.
- AD increases the proportion of nutrients immediately available for uptake by plants. During the digestion process nutrients are mineralised, which allows improved plant uptake.
- depending on the mixture of slurries (e.g. cattle, pig, poultry, etc) the nutrient balance of digestate may be more balanced for agricultural application. With a better nutrient balance and more accessible nutrients the requirement for artificial fertilisers may be lessened which results in a cost saving to farmers.

The principle disadvantages associated with anaerobic digestion include its significant capital and operating costs and that the viability of an AD plant is largely dependant on it forming part of an integrated waste management system generating several income streams. Furthermore, the operation of an AD facility is a relatively complicated process with centralised plants involving multiple waste sources requiring specialist management. AD, like animal slurries, also produces emissions that can be harmful to the environment and human health (e.g. methane, ammonia and hydrogen sulphide) thus necessitating proper management of the facility to minimise risk. A centralised AD plant will create

traffic movements transporting wastes to the plant and waste residues away from the plant and thus appropriate siting is an essential consideration. Other potential impacts include noise arising from the operation of the plant in addition to the visual impact of the facility.

The following further points are relevant to the subject application:

- The benefits of AD include improved water quality, groundwater protection, reduced carbon dioxide emissions, and an increase in indigenous renewable energy. Centralised AD, with suitable support measures, is a viable policy option to address national commitments in the areas of global warming, renewable energy and water pollution.
- Transport costs form a significant proportion (25-35%) of an AD plants operating costs and consequently the location of an AD plant is critical in terms of viability. Ideal site placement requires proximity to waste sources (i.e. farms and organic wastes from industry) with sufficient volumes of available wastes. Consideration should also be given to proximity to customers for heat generation, where applicable, (i.e. close to population centres) and the electricity grid. The feasibility of centralised AD in specific locations depends on the participation of sufficient farms, preferably within a 5-8 mile radius of a proposed AD site.
- Biogas yield is largely dependent on the waste inputs and, in particular, the mixture of non-agricultural wastes that are mixed with the animal slurries. This co-digestion improves biogas production.
- Consideration should be given to the concentration of farms and the spatial distribution of sources of other organic matter in respect of locating AD plants.
- The landspreading limits imposed by the Nitrates Directive are applicable to AD.

10.13 Environmental Protection Agency, Viewpoint, September, 2006:

This document outlines the background and key issues concerning anaerobic digestion. It refers to the primary benefits arising from anaerobic digestion (AD) and notes that the digestion of animal slurries transforms organic nitrogen into inorganic nitrogen, a better fertiliser, and depending on the composition of digested material, a better balanced fertiliser. Furthermore, when compared to raw animal slurries AD digested material is significantly less odorous and has lower organic pollution potential, which ultimately has water quality benefits. Other benefits include energy recovery (through the recovery of biogas) and the displacement of greenhouse gas emissions from fossil fuels.

The document concludes by stating that the EPA is supportive of the development of anaerobic digestion capacity for the management of organic wastes.

10.14 South West Regional Planning Guidelines, 2010-2022:

The Regional Planning Guidelines are designed to steer the future growth of the region over the medium to long term and to implement the strategic planning frameworks set out in the National Spatial Strategy (NSS), 2002 and National Development Plan, 2007-2013.

They state that significant inroads have been made in switching from the predominantly landfill based waste disposal system to integrated waste management programmes and that the individual Waste Management Plans for the region address all areas of waste management including collection, treatment, recovery and final disposal.

Paragraph 5.6.17 states that an important issue relating to waste management is the need for a Materials Recovery Facility (MRF) or Mechanical Biological Treatment (MBT) to be developed, at an early date, in a sustainable location within the Cork Gateway, with good transportation links. Paragraph 5.6.20 states that hazardous waste management in the region must be addressed from the perspective of the most environmentally sustainable approach and in line with best international practice. The Guidelines subsequently make the following recommendations as regards waste management in the region:

- 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 (WMP's) during the lifetime of the guidelines.
- The RPG supports the incorporation of the recommendations and policies of the National Hazardous Waste Management Plan 2008-12 and encourages the early provision of a Materials Recovery Facility or Mechanical Biological Treatment (MBT) , in a sustainable location within the Cork Gateway
- In relation to Kerry, considering the peripherality of the County, the need to promote economic development and the need to maintain a competitive waste management environment, the development of additional materials recovery facilities at sustainable locations is desirable.

In terms of renewable energy, the Guidelines acknowledge that the region has a key role to play in the attainment of the national renewable energy target of 40% supplied via renewables by 2020 and in this respect the Regional Bioenergy Plan 2009-2020, published by the South West Regional Authority, supports the development of bioenergy resources as a means of displacing or substituting fossil fuel in transport and heating operations. The Guidelines include the following energy objectives:

- It is an objective to facilitate the sustainable development of additional electricity generation capacity throughout the region and to support the sustainable expansion of the network. National grid expansion is important in terms of ensuring adequacy of regional connectivity as well as facilitating the development and connectivity of sustainable renewable energy resources.
- It is an objective to ensure that future strategies and plans for the promotion of renewable energy development and associated infrastructure development in the Region will promote the development of renewable energy resources in a sustainable manner. In particular, development of wind farms shall be subject to:

    - the Wind Energy Planning Guidelines
    - consistency with proper planning and sustainable development

- criteria such as design and landscape planning, natural heritage, environmental and amenity considerations.

- It is an objective of the guidelines to promote the sustainable provision of renewable energy from tidal, wave and pumped storage developments together with bioenergy resources, as critical elements of the long-term secure energy supply throughout the region.

11.0 DEVELOPMENT PLAN

11.1 Cork County Development Plan, 2009-2015:

Chapter 6: Transport and Infrastructure:
Section 6.6: *Waste Recovery and Recycling:*
Development Plan Objectives: *Waste (including):*

INF 6-1: *Waste Management Plan:*
It is an objective to implement and support the provisions of the County Council's approved Waste Management Plan and in particular, to promote the development of facilities for the prevention, minimisation, re-use / re-cycling or disposal with energy recovery of waste material.

INF 6-2: *Waste Management:*
It is an objective to undertake a review of all of the existing Bring Sites, Civic Amenity Sites and Waste Transfer Stations currently operating in the County.

INF 6-3: *Materials Recovery Facility:*
It is an objective to develop a Material Recovery Facility for the Cork Region in line with the Waste Management Plan.

Section 6.7: *Energy:*
Development Plan Objectives: *Energy:*

INF 7-1: *Energy Networks and Infrastructure*

a) It is an objective to recognise the national importance of ensuring security of energy supplies for servicing a whole range of economic sectors in line with the Government's White Paper 'Delivering a Sustainable Energy Future for Ireland'.
b) It is a general objective, where strategic route corridors have been identified, to support the statutory providers of national grid infrastructure by safeguarding such strategic corridors from encroachment by other developments that might compromise the provision of energy networks.
c) It is an objective to protect areas of recognised landscape importance and designated sites including Special Areas of Conservation, Special Protection Areas and Natural Heritage Areas, from the construction of

large-scale visually intrusive energy transmission infrastructure. In such circumstances, it is an objective to seek alternative routing or transmission methods.

INF 7-2: *Climate Change:*

a) It is an objective to support the National Climate Change Strategy and, in general to facilitate measures which seek to reduce emissions of greenhouse gases.
b) It is an objective to adopt sustainable planning strategies, such as integrated approach to land-use and transportation and facilitate mixed-use developments, so as to reduce greenhouse emissions.

INF 7-3: *Renewable Energy Production:*

It is an objective generally to encourage the production of energy from renewable sources, including in particular that from biomass, waste material, solar, wave, micro hydro power and wind energy, subject to normal proper planning considerations, including in particular the impact on areas of environmental or landscape sensitivity.

Chapter 9: Local Area Development

11.2 Cork Area Strategic Plan (CASP) 2001-2020:

The CASP is stated to be underpinned by six key concepts – regeneration of Cork City, metropolitan Cork, reinforcement of ring towns, infrastructure lead development, creation of an integrated transport system and protection and enhancement of the environment. It is stated that the CASP seeks to ensure that infrastructure including transport and utility services are provided in advance or in tandem with housing and other development. In Section 1.6 it states that a number of other parallel studies including waste management strategy for Cork region 2000-2020 have been completed and should be consulted in conjunction with the CASP with regard to common planning areas or specific topics.

The infrastructure goal of the plan is stated to minimise the cost of providing water, sewage, electricity, gas and telecommunication services to the population and to maximise the use of existing infrastructure.

Section 3.5.17: *'Waste Management'* of the Cork Area Strategic Plan (CASP) as updated in July, 2008 states that the provision of waste management infrastructure is critical to support the sustainable development of all sectors in the CASP region including the industrial, commercial, service and residential sectors. Furthermore, the provision of waste infrastructure, as outlined in the Cork City and County Waste Management Plans, is to be prioritised in line with the EU Waste Hierarchy.

11.3 Midleton Electoral Area Local Area Plan, 2011:

Land Use Zoning:

The proposed development site is located on lands zoned as *'Existing Built-Up Area'*.

Section 2: *Local Area Strategy:*
Section 2.2.53: The public water supply is constrained in Youghal at present and needs investment and upgrading. Water supply is sourced from Boola which lies in Co. Waterford. Youghal Water Supply Scheme is listed as a scheme at planning stage on the DoEHLG's Water Services Investment Programme 2010-2012.

Section 2.2.54: The N25, as part of the Atlantic Corridor, is the subject of major on line improvement works. Design work on the Midleton to Youghal section is underway. As a national route it is important that the capacity and safety of the existing N25 be safeguarded and that areas of concern for the future N25 Midleton-Youghal scheme be protected.

Section 2.2.55: There is no wastewater treatment plant for Youghal and currently all effluent is discharged directly to the sea without treatment. The receiving waters in Youghal contain a number of nature conservation designations; cSAC-2170 Blackwater River, SPA-4028 Blackwater Estuary and pNHA-0072 Blackwater River and Estuary and water quality status is considered to be moderate ecological status. In order to achieve compliance with the EU Urban Waste Water Directive the delivery of a new treatment plant and sewer system is essential to the development aspirations of the town within the lifetime of this plan. Consultants have been appointed to begin the design / construction process for a new treatment plant and upgrade of the network. Youghal Sewerage Scheme is listed as a contract to start on the DoEHLG's Water Services Investment Programme 2010-2012.

Section 3: *Settlements and Other Locations:*
4. Youghal Environs

12.0 WASTE MANAGEMENT PLANS

12.1 Cork County Waste Management Plan, 2004 (presently under review):

The Waste Management Strategy for the Cork Region 1995, on which the 2004 Plan is based, spans 25 years up until 2020 and examined in detail all the options available to the region for its waste management. Options for the prevention, collection, treatment and disposal of the region's waste were outlined and assessed before being organised into three separate scenarios. Scenario 2 was subsequently adopted and carried through into the current Waste Management Plan. This scenario required adopting the concepts of the National Recycling Strategy, introducing large scale home composting, the provision of a new engineered landfill site, and the mechanical separation and composting or mechanical biological treatment of residual household and commercial waste whereby the wet organic fraction is composted and the dry fraction is baled and subsequently landfilled.

The Waste Management Plan, 2004 confirms Scenario 2 for the management of municipal waste in the County and adopts 'prevention' as the core component. It provides for 81 objectives and actions related to prevention, collection, recovery and disposal activity, hazardous waste management and general waste management. Actions 71-76

relate to hazardous waste (i.e. prevention, collection, transportation etc.) but do not detail any specific actions for the 'disposal' of same. Notably, the Plan aims to ensure that there is no increase in hazardous waste disposal over 1996 quantities.

12.2 Sludge Management Plan, 2000:

This Plan identifies different treatment solutions for sludges generated in the county, including anaerobic digestion. Section 6 of the Plan includes recommendations for the management of water treatment sludges, industrial sludges and agricultural slurries.

13.0 ASSESSMENT

From my reading of the file, inspection of the site and assessment of the relevant local, regional and national policies, I conclude that the key issues raised by the appeal can be considered under the following headings:

- The principle / siting of the proposed development
- Environmental impact assessment
- Appropriate assessment / ecological considerations

These are assessed as follows:

13.1 The Principle / Siting of the Proposed Development:

13.1.1 The proposed development consists of the redevelopment of an existing Waste Recovery / Transfer and Sludge Drying Facility to provide for an Integrated Waste Management Facility which will involve the expansion of the existing operation on site through the development of several new waste processing / treatment technologies in order to allow the processing of a wider range of waste types at the facility to include commercial, industrial and household waste in addition to hazardous waste. Whilst the proposal will ultimately reduce the overall tonnage of waste inputs accepted at the site from that previously approved under ABP Ref. No. PL04. 211117, it will serve to expand the range of waste types accepted at the facility for treatment and will change the ratio of said waste inputs as follows:

13.1.2 At present, the existing facility is authorised to process / treat the following waste inputs:

Commercial & Industrial Waste:	70,000 tonnes
Non-Hazardous Sludge:	30,000 tonnes
Leachate from Landfills:	10,000 tonnes
Total:	*110,000 tonnes*

13.1.3 The subject proposal will expand the existing operation to accommodate the following:

Commercial, Industrial & Household Waste:	20,000 tonnes
Non-Hazardous Sludge:	40,000 tonnes

Hazardous Waste:	30,000 tonnes
Leachate from Landfills:	5,000 tonnes
Total:	*95,000 tonnes*

13.1.4 Having regard to the planning history of the site, its established use for the processing of waste, the surrounding pattern of development, with particular reference to the presence of Youghal Landfill on adjacent lands, the sites proximity to the national road network and the location of the site on lands zoned as *'Existing Built-Up Area'* in the Midleton Electoral Area Local Area Plan, 2011, in my opinion, the overall principle of the proposed development would seem to be acceptable at this location, however, given the specific nature of the development proposed and, in particular, the proposal to introduce the processing of hazardous waste on site, it is necessary to consider the wider suitability of the siting of the proposed development and the overall environmental sustainability of the project. In this respect I propose to review each of the individual components of the scheme in turn in addition to the overall cumulative nature of the project having due regard to the interactions between the respective processes involved.

13.1.5 Anaerobic Digestion:

13.1.5.1 The proposed development includes for the construction of a fully enclosed anaerobic digestion (AD) plant which will have the capacity to process 20,000 tonnes per annum of non-hazardous municipal sewage and industrial wastewater treatment plant sludge, although the process flow diagram which has accompanied the response to the request for further information would seem to indicate that only 15,000 tonnes of sludge will be directed to the digester annually. The AD plant will be constructed adjacent to Building No. 1 and will consist of 2 No. above ground anaerobic digestion tanks with a combined capacity of 2,207.65m^3 which will be specifically designed to treat the sludge to produce and collect biogas (methane), which can be classified as a 'greenhouse gas', which will in turn be used to generate heat and power through a CHP plant for use on site. The intake of raw materials will be conducted from within the Waste Recovery Building (Building No. 1) where the sludge will be loaded directly into a feeder hopper before being transferred via a fully enclosed conveyor to the AD tanks, each of which will be maintained at a temperature of 37^oC. Associated AD equipment will be housed in Building No. 1 and will include gas conditioning and sludge storage areas. The AD process is continuous and will produce a solid (fibrous) and liquid digestate in addition to the biogas. The liquid material will be directed to a liquid digestate storage tank to be constructed in the south-eastern corner of the facility whereas Section 5.2 of the EIS states that the fibrous residue will be treated in the existing sludge dryer.

13.1.5.2 At this point I would advise the Board that conflicting information has been provided in the submitted documentation as regards the disposal of both the solid and fibrous digestate. In the first instance I would refer the Board to Section 5.2 of the Environmental Impact Statement which states that the liquid digestate is to be re-circulated to the digester and, where necessary, subsequently treated in the on-site wastewater treatment plant, whereas the solid fibrous digestate is to be directed to the sludge drier for further treatment (*N.B.* Although not expressly stated it would appear to be intended to mix the fibrous digestate with other dried sludge and to transport same off

site for recovery at an approved facility). However, Section 2.4.1 of the response to the request for further information clearly states that both the solid and liquid components of the final digestate will be disposed of by way of landspreading on agricultural landbanks in accordance with approved Nutrient Management Plans.

13.1.5.3 With regard to the foregoing, whilst I would concede that all of the various options outlined for the ultimate disposal of the digestate residue would appear to be generally acceptable in principle, I am inclined to suggest that the landspreading and use of this material as a fertiliser would be more sustainable in that it will reduce the total volume of material being exported from the country as a dried residue for recovery abroad. Similarly, such landspreading may reduce the demands placed on the on-site wastewater treatment system. Notwithstanding the foregoing, I would suggest that the final route for disposal is a matter for consideration by the EPA in its licensing of the facility.

13.1.5.4 Having regard to national policy in respect of waste disposal and treatment, it is clear that the biological treatment of waste through anaerobic digestion is envisaged as playing an increasingly important role in achieving national targets in terms of waste minimisation and groundwater protection etc. Furthermore, it is acknowledged that anaerobic digestion has the wider environmental benefit of reducing greenhouse gas emissions through the generation of biogas as a source of renewable energy and thus contributes towards the achievement of Ireland's commitments with respect to the Kyoto Protocol.

13.1.5.5 The detailed benefits of the anaerobic digestion of agricultural waste are specified in the discussion paper prepared by the Environmental Protection Agency in 2005 and whilst the subject proposal will not process agricultural slurries it is my understanding that similar benefits will arise from the anaerobic digestion of municipal sewage sludge and industrial non-hazardous wastewater treatment sludge. These include improved water quality and groundwater protection through the destruction of a wide range of pathogenic and faecal micro-organisms and a reduction in the organic pollution potential of the sludge. The mineralized nutrients contained in the liquid fertiliser arising from anaerobic digestion result in improved uptake by plants / crops (when compared to raw animal slurry) whilst the liquid digestate also benefits from a reduced phosphorous content.

13.1.5.6 With regard to the principle of developing an anaerobic digestion plant at the subject site, it is of relevance to note that the existing operation, as approved under ABP Ref. No. PL04. 211117, already includes for a sludge drying facility which is authorised to process up to 30,000 tonnes of non-hazardous sludge per annum. Accordingly, given that the treatment of specified sludge material on site is an established use I am inclined to suggest that the development of an alternative technology to facilitate the processing of same would generally be acceptable in principle. However, it is necessary to consider the implications of the development of the proposed AD plant as regards the increase in the capacity of the facility to process sludge. In this respect I note that the proposed AD plant will have the capacity to process up to 20,000 tonnes of sludge per annum, although the

process flow diagram supplied in response to the request for further information indicates that only 15,000 tonnes of sludge will be directed to the digester annually. In parallel to the AD plant, a further 10,000 tonnes of sludge will be directed to the sludge drier with an additional 15,000 tonnes diverted to Building No. 1 for 'lime stabilisation'. Accordingly, whilst the introduction of the proposed AD plant will increase the overall intake of raw sludge material for treatment on site by 10,000 tonnes, I note that when taken in conjunction with the proposed decrease in the acceptance of landfill leachate at the site, which is treated by way of the existing wastewater treatment plant, the combined volume of sludge and leachate processed at the site will only increase by 5,000 tonnes i.e. 12.5%.

13.1.5.6 Having regard to the foregoing, with particular reference to the scale of the development proposed and the limited increase in the capacity of the facility, in my opinion, the introduction of the proposed anaerobic digestion plant would serve to achieve the wider strategic objectives of the Cork County Development Plan as regards waste management and energy recovery and would also accord with the provisions of the Waste Management Plan for the area.

13.1.6 The Sludge Drying Facility:

13.1.6.1 The existing sludge drying facility on site, as approved under ABP Ref. No. PL04. 211117, is authorised to process up to 30,000 tonnes of non-hazardous sludge per annum, however, as a result of the development of the proposed AD plant, in addition to lime stabilisation, it would appear that the volume of sludge material being directed to the drier will be reduced to 10,000 tonnes per annum. Whilst I would be generally satisfied as regards this element of the proposed development I would reiterate that Section 5.2 of the ElS states that the solid fibrous digestate from the proposed AD plant is to be directed to the sludge drier for further treatment. Accordingly, the anticipated reduction in the volume of material ultimately processed by the sludge dryer may not be as great as suggested by the applicant.

13.1.7 Lime Stabilisation:

13.1.7.1 The existing operation as approved under ABP Ref. No. PL04. 211117 provided for the development of a sludge drying facility to process 30,000 tonnes of sludge per annum, however, I note that the EIS which has accompanied the subject application refers to the existing treatment process as involving the drying of sludge using heat from a woodchip-fired boiler and also the addition of lime. From a review of ABP Ref. No. PL04. 211117 it is unclear as to whether or not the treatment process as approved provided for the addition of lime as part of the drying process, although I note that the description of the proposed development did refer to the use of a mobile dewatering plant, however, it is my opinion that the addition of lime or 'lime stabilisation' was not intended to operate as a stand-alone process from the sludge drier. In this respect I would draw the Board's attention to the process flow diagram which has been submitted as part of the subject application as this indicates that 15,000 tonnes of raw sludge imported to the site will be subjected to lime stabilisation without any further treatment to produce 16,500 tonnes of biosolids. Lime stabilisation is a process whereby sludge is mixed with lime in order to raise its pH (typically to a value greater than 12) which also results in a

rise in temperature thereby reducing pathogens and offensive odours in addition to moisture content, however, it would also appear to result in a 'bulking up' of the treated material which must then be transported off site thereby giving rise to additional traffic movements when compared to outputs associated with the sludge drier.

13.1.7.2 The description of the proposed development as detailed in the public notices does not make any reference to the introduction of a stand-alone process whereby sludge imported to the facility will simply be subjected to lime stabilisation before being transported for further treatment / disposal off site. Given that it is proposed to process 15,000 tonnes of sludge per annum by way of lime stabilisation, which would equate to the through-out of the proposed AD plant, I would suggest that it would have been reasonable to expect this process to have been included in the description of the proposed development. Furthermore, I would draw the Board's attention to Section 1.3: *'Proposed Changes'* of the submitted EIS which specifically states that the development of the AD plant on site will *'lead to an increase in the quantities of sludge accepted from 30,000 tonnes/year to 40,000 tonnes'*. Such a statement clearly contradicts the applicants assertions that the proposed AD plant will only process 15,000 tpa (with a capacity of up to 20,000 tpa) and also conflicts with the process-flow diagram which indicates that 15,000 tonnes of the sludge will be subjected to lime stabilisation. Indeed, the EIS provides no further elaboration on the proposed use of lime stabilisation on site nor are any details of same shown on the submitted drawings. Accordingly, I would have concerns that insufficient detail has been provided with regard to the extent of lime stabilisation to be employed on site and its wider implications as regards outputs, emissions and traffic movements. Whilst I would generally accept that such a process would be compatible with the existing and proposed operations on site, I am inclined to suggest that further information and revised public notices would be required in this regard.

13.1.8 Super Critical Water Oxidation (Aqua Critox® technology) of Hazardous Waste:

13.1.8.1 The proposed development also includes for the installation of a Super Critical Water Oxidation (Aqua Critox® technology) plant within Building No. 2 with associated cooling towers, waste solvent storage tanks, nitrogen and oxygen storage tanks, and a generator to be located outside of the building. This is described as an *'innovative physico-chemical treatment process'* which utilises water and oxygen at elevated temperatures and under high pressure to achieve super critical conditions in order to breakdown the hazardous components of the waste (i.e. super critical water oxidation) thereby converting them into carbon dioxide and nitrogen gas leaving behind high quality sterile water (which may be recycled as process water or polished and used as a boiler water feed) and a fine particulate inorganic solid residue which is inert and thus suitable for disposal in a non-hazardous landfill or re-use. Section 5.3 and Appendix 2 of the EIS provide a further description of the general operation of the proposed SCWO system.

13.1.8.2 For further clarity as regards the nature of this technology I would refer the Board to the National Hazardous Waste Management Plan, 2008-2012 which states that Super Critical Water Oxidation destroys organic hazardous waste at temperatures and pressures above the waste's thermodynamic critical point and that under these conditions

the water becomes fluid causing the chlorinated hydrocarbons to become soluble and the salts to precipitate out. It also states that this technology is limited to the treatment of waste which is liquid or has a particle size less than 200 μm and that it is most applicable to wastes with an organic content of less than 20%. Notably, the NHWMP also describes this technology as *'emerging'* and states that due to the limitation in waste accepted by the technology, it is unlikely that the quantities generated in Ireland will make a facility cost-effective (*N.B.* It is my understanding that this technology has only operated on a pilot basis in Ireland and that it has not yet been employed on a large scale commercial basis. Therefore, the Board may wish to seek further details in this regard).

13.1.8.3 The subject proposal is designed to treat 30,000 tonnes of hazardous waste per year which would appear to comprise hazardous sludge and waste solvents produced in the Cork region by chemical and pharmaceutical manufacturers, although I would refer the Board to Section 2.1.1 of the applicants response to the request for further information which details all of the hazardous materials (including their European Waste Catalogue Codes) which could potentially enter the site. According to the process flow diagrams submitted with the application the proposal will generate 9,000 tonnes / annum of solid residue for disposal off site with a further 26,685 tonnes / annum of liquid to be directed to the on-site wastewater treatment plant.

13.1.8.4 In respect of the nature and the sources of the hazardous waste to be processed on site, the submitted information is somewhat vague and ambiguous. In the first instance the EIS refers to hazardous sludge and liquid waste as being processed on site although it also refers to waste solvents, however, in response to a request for further information the applicant has set out an extensive list of the types of waste which may be accepted at the site and which extend beyond classification as waste solvents.

13.1.8.5 Notwithstanding the concerns expressed in the NHWMP as regards the viability of Super Critical Water Oxidation technology in Ireland, as I would acknowledge the likelihood of further advances having been in respect of the technology since the preparation of that Plan and as the process may now have become more cost-effective, in terms of assessing the principle of developing such an operation at the subject site it will be necessary to ascertain if there is a need for such a facility and to take account of locational considerations.

13.1.8.6 With regard to the need for the subject facility, which will process certain identified hazardous wastes, the applicant has submitted that despite national and regional objectives to become self-sufficient in terms of the management of such waste, Ireland continues to be heavily dependent upon overseas facilities for the recovery and disposal of hazardous waste. In this respect reference is made to the 2008 National Waste Report published by the EPA which demonstrates Ireland's continued reliance on international outlets for the hazardous wastes generated. Furthermore, it is submitted that 157,256 tonnes of hazardous waste were exported in 2008 which would represent approximately 49% of the total volume of hazardous waste generated in Ireland. Accordingly, the applicant claims to have identified an opportunity to provide an alternative treatment outlet (i.e. Aqua Critox® technology) for some of the hazardous wastes produced in the

Cork region by chemical and pharmaceutical manufacturers which will serve to meet the need identified in the NHWMP, 2008 to reduce the dependency on the export of hazardous waste.

13.1.8.7 It is a key objective of the National Hazardous Waste Management Plan, 2008 to reduce the generation of hazardous waste by industry and society in Ireland generally whilst also striving for increased self-sufficiency in the management of hazardous waste and to reduce hazardous waste exports, where economically and technically feasible, in recognition of the proximity principle established in the Waste Framework Directive. In order to provide for additional hazardous waste to be treated in Ireland and to avoid exports, the Plan identifies three overarching strategic needs including the expansion of other recovery and treatment capacity in Ireland for waste that does not need thermal treatment or landfill – generally referred to as physico-chemical treatment. Section 6.3 of the Plan proceeds to identify *'supercritical water oxidation'* as an alternative treatment technique and supports the provision of such technologies where technically and economically feasible, however, it notes that in many cases the application of certain technologies is technically limited and that adequate supplies of waste would be needed to justify investment. In this respect I would reiterate to the Board that the NHWMP describes SCWO technology as 'emerging' and that due to the limitation in the waste accepted by the technology it is unlikely that the quantities generated in Ireland will make a facility cost-effective.

13.1.8.8 In view of the foregoing, I would accept that the development of facilities designed to treat hazardous waste arising in Ireland are acceptable in principle in terms of achieving self-sufficiency as regards hazardous waste management and wider adherence to the proximity principle. However, the issue arises as to whether or not there is a demonstrable need for the subject facility in terms of the volume of wastes arising.

13.1.8.9 At this point it is necessary to consider the types and sources of waste to be treated on site. The applicant had initially indicated that the proposed facility would accept hazardous sludge and liquid waste (including waste solvents) arising from chemical and pharmaceutical plants in the Cork region, however, in response to a request for further information the applicant has indicated that it is proposed to accept a significantly wider variety of hazardous waste for treatment on site. Accordingly, it is difficult to identify the specific categories of waste which will be made available for treatment on site and the respective volumes of same. Indeed, clarity is required if all of the waste referenced by the applicant would actually be suitable for treatment by way of SCWO. In the absence of a clear breakdown of the types, volumes and sources of the waste to be accepted on site, it is difficult to verify that sufficient waste will be arising within the Cork region to meet the capacity demands of the proposed development. In this respect, whilst it is not within the remit of the Board to consider whether or not the proposed facility will be economically feasible, the need to identify the potential sources of the waste and their respective volumes etc. relates directly to consideration of the 'proximity principle' and the wider implications of the proposal as regards sustainable transportation patterns.

13.1.8.10 The applicant describes SWCO as a 'physico-chemical' process and this would seem to be supported by the NHWMP, 2008 which refers to such operations as comprising material conversion (e.g. neutralisation, oxidation and reduction) and material separation (e.g. filtration, sedimentation, distillation and ion exchange). Section 6.6 of the Plan states that such processes are used to treat hazardous liquid, solid and sludge waste and that 31,372 tonnes of hazardous waste were treated off-site in Ireland in 2006 by physico-chemical methods with an additional 1,709 tonnes having been exported for disposal by physico-chemical means. Notably, the Plan proceeds to states that whilst *'There are no major technical barriers for Irish facilities to increase their capacities or to expand their processes to treat a wider range of waste streams. Some facilities are actually operating below authorised and equipment capacity levels'*. It refers to barriers to expansion as including low levels of waste generation or poor collection rates (to justify investment) and the lack of disposal facilities for treatment residues (resulting, for example, in the export of filter cakes). Whilst the Plan acknowledges the benefits of physico-chemical treatment of hazardous waste in that it is relatively low cost and can lead to employment generation, it states that smaller-scale Irish facilities could find it difficult to compete on many waste streams with larger continental operations. Accordingly, the issue arises as to whether or not there would be sufficient waste arising in the Cork region to meet the demands of the proposed facility or whether it would be necessary to transport some, or a significant proportion of, the waste from further afield.

13.1.8.11 The applicant has failed to provide any specifics as regards the sources and respective ratios of hazardous waste to be processed at the subject site and therefore it cannot be verified that there is sufficient waste arising from within either the site locality or the wider Cork region to support the proposed facility. There have been notable fluctuations in the volumes of hazardous waste treated both at source (i.e. on site) and at approved installations (i.e. off site) in Ireland and in the volume of material exported abroad for disposal/ recovery etc. For example, whilst the summary of hazardous waste management set out in the NHWMP, 2008 indicates that the treatment of waste off-site in Ireland at authorised facilities increased steadily over the period 2001-2006 (from 48,013 to 60,872 tonnes), the National Waste Report, 2010 indicates that this trend peaked in 2008 at 113,839 tonnes with the figure falling to 89,992 tonnes in 2009 before rising slightly in 2010 to 93,048 tonnes. In my opinion, there is an onus on the applicant to demonstrate the availability of sufficient waste arising within the region to supply the proposed facility in order to comply with the 'proximity principle'. For example, on the basis that a total of 31,372 tonnes of hazardous liquid, solid and sludge waste were treated off-site in Ireland in 2006 by physico-chemical methods, the proposed development were appear to be of sufficient capacity to operate as a national facility, although I would concede that the foregoing figures are out-dated and that without specific details of the types and volumes of hazardous waste suitable for treatment on site the proposal may, in fact, be of an appropriate scale for the area. Nevertheless, I am not satisfied that it has been established that the construction of a proposed hazardous waste treatment facility of the scale proposed at this location is appropriate having regard to the 'proximity principle' and that it would not be more suitably located close to identified waste sources.

13.1.9 The Processing of Municipal Solid Waste (MSW) including Commercial, Industrial and Household Waste:

13.1.9.1 The existing facility as permitted under ABP Ref. No. 211117 is authorised to accept up to 70,000 tonnes per annum of commercial and industrial waste comprising source segregated and mixed dry recyclables, however, this service was discontinued in 2009. The subject proposal seeks to accept 20,000 tonnes per annum of Municipal Solid Waste (MSW) comprising commercial, industrial and household waste which will consist of source segregated dry recyclables and mixed residual waste (*N.B.* It is envisaged that equal tonnages of MSW and Commercial & Industrial Waste will be accepted per annum i.e. 10,000 tonnes each). Dry recyclables will include paper, plastic, cardboard and cans etc. whereas the mixed residual waste will include putrescible waste such as foodstuffs. These wastes will be processed in designated areas within the Waste Recovery Building and would appear to comprise the baling of the source segregated materials whereas the residual waste will not be processed further on site and will instead be bulked up for transfer off site on the same day as arrival.

13.1.9.2 Given the planning history of the site and the fact that the site has previously been approved to accept a considerably larger volume of source segregated dry recyclables, I would not anticipate any difficulties in approving the carrying out of this activity on the reduced scale as proposed.

13.1.9.3 With regard to the proposal to accept mixed residual waste on site, I note that the scale of this aspect of the overall operation will be limited in that it will only accept 10,000 tonnes of waste per annum. Accordingly, it would seem likely that the catchment area of this element of the proposal will similarly be limited in terms of its geographical extent and would most likely only extend to include Youghal town and its environs. I would also suggest that it is of relevance to note that the waste in question will not be processed on site and will simply be bulked up for transfer off site presumably for treatment / disposal at an approved facility although no further details have been provided in this regard.

13.1.9.4 In my opinion, given the scale of this element of the proposal, the established use and land use zoning of the subject site, the pattern of development in the surrounding area, and the sites location in close proximity to the urban centre of Youghal and the national road network, I am satisfied that the subject site is an appropriate location in principle for the development of a facility capable of accepting mixed residual waste as outlined in the application documentation.

13.1.10 The Treatment / Disposal of Leachate:

13.1.10.1 The existing facility is authorised to treat up to 10,000 tonnes of leachate from landfills per annum, although Section 1.2 of the EIS states that this process has not as yet started. The subject proposal seeks to treat only 5,000 tonnes of leachate by way of the existing on site wastewater treatment plant.

13.1.10.2 Given the planning history of the site, and the fact that the site has previously been approved to treat landfill leachate, I would have no objection in principle to the proposal to carry out this activity on site on a reduced scale.

13.2 Environmental Impact Assessment:

13.2.1 Outline of Process:

13.2.1.1 In accordance with the requirements of Article 3 of the European Directive 85/337/EEC, as amended by Council Directives 97/11/EC and 2003/35/EC and Section 171A of the Planning & Development Act 2000-2010, this process requires the Board, as the competent authority, to identify, describe and assess in an appropriate manner, in light of each individual case and in accordance with Articles 4 to 11 of the Environmental Impact Assessment Directive, the direct and indirect effects of the proposed development on the four indents listed in Article 3 of that Directive as set out below:

a) human beings, flora and fauna,
b) soil, water, air, climate and the landscape,
c) material assets and the cultural heritage, and
d) the interaction between the factors mentioned in paragraphs (a), (b) and (c).

13.2.1.2 This assessment also requires consideration to be given to, where relevant, the indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative effects of the proposal, including those which arise during the construction phase, which are essentially short-term and temporary, as distinct from the likely long-term effects arising from the operational phase.

13.2.1.3 The Environmental Impact Statement which has accompanied the subject application follows a grouped format structure with each environmental topic presented in a separate chapter. It includes a generally satisfactory description of the receiving environment, the proposed development, its impacts and proposed mitigation measures, and has been accompanied by a non-technical summary. In my opinion, this document can be described as 'fair' in that it technically accords with the requirements of Schedule 6 of the Planning and Development Regulations, 2001, as amended, and is sufficient to comply with Section 172 of the Planning and Development Act, 2000, as amended, and Article 94 of the Regulations.

13.2.1.4 In general, this part of my assessment of the subject application is informed by the contents and conclusions of the EIS, and also by information provided during the various stages of the application / appeal process in relation to the likely effects of the development on the environment and its likely consequences for the proper planning and sustainable development of the area in which it is proposed to be situated. My assessment also has regard to potential mitigation measures, including those indicated in the EIS, and any others which might reasonably be incorporated into any decision to approve the development through the attachment of conditions.

13.2.2 Consideration of Alternatives:

13.2.2.1 Schedule 6 of the Planning and Development Regulations, 2001, as amended, only requires an EIS to include *'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'*. In this respect I would refer the Board to Section 3.0 of the EIS which states that an extensive survey of industrial / enterprise zoned lands in the Cork area was undertaken as part of the original EIS for the existing facility and that the site selection criteria outlined in that application is equally applicable to the subject proposal. It proceeds to state that the only alternative option open to the applicant was to develop a new facility solely for the treatment of hazardous waste at a separate location, however, given the associated acquisition and development costs this was not considered economically feasible. With regard to the possibility of developing alternative waste disposal technologies on site my reading of the EIS would appear to suggest that little consideration was given to same save for a brief reference to the 'Do-Nothing' alternative. In the basis of the foregoing, it is my opinion that the consideration of alternatives set out in the submitted EIS can at best be described as both limited and unimaginative.

13.2.3 Human Beings:

13.2.3.1 In terms of assessing the potential impact of the proposed development on human beings I would, in the first instance, refer the Board to Chapter 14 of the submitted EIS which focuses attention on public health, socio-economic activity and environmental nuisance considerations. The contents of this assessment can be summarised as follows:

13.2.3.2 Public Health:

- The processing of all waste indoors will militate against the potential for the proposal to detrimentally impact on public health.
- Those areas designated for the processing of odorous waste will be provided with appropriate odour abatement controls.
- Operational practices and suitable control measures will ensure that the facility will not attract vermin or birds.
- There are no routine emissions to ground or groundwater thereby minimising the risk to same.
- Facility personnel will be provided with appropriate personal protective equipment in order to minimise the risk to health.

13.2.3.3 Socio-Economic Activity:

- The proposed development will not adversely affect the existing economic activities conducted in the surrounding area nor will it reduce the potential for the further expansion of economic activity in the area.
- The proposal will accord with local and national waste management policy and is in keeping with existing and proposed land use patterns.
- The proposal will not result in the loss of any amenities or rights of way.
- Additional employment is expected to be generated as a consequence of the proposed development.

13.2.3.4 Environmental Nuisance:

- The overall design and operation of the proposed facility will either eliminate, or minimise to the greatest practical extent, the risk of environmental nuisance such as noise, litter or odorous emissions.

13.2.3.5 Whilst I would generally concur with the foregoing, it is of relevance to note that there are various inter-relationships between effects on the human environment and effects on other aspects of the environment such as air and water quality. Accordingly, in order to avoid unnecessary repetition, I would refer the Board to my assessment of the specific implications of the proposal as regards soil, water and air quality etc. as set out elsewhere in this report. Furthermore, although referenced in separate chapters of the EIS, I propose to focus the remainder of my assessment of the impact of the proposed development on human beings on the key issues of traffic and noise.

13.2.3.6 Traffic:

The proposed development site is accessed via a slip road which extends eastwards from the R634 Regional Road to provide access to Youghal Landfill and the surrounding lands which in turn extends from the Rincrew roundabout on the N25 National Primary Route. Notably, this slip road (also referred to as the 'T12' road) would appear to have been upgraded since the grant of permission issued for ABP Ref. No. PL04. 21117 and in this respect I note the applicants reference in Section 9.2 of the EIS to upgrading works carried out in 2008 / 2009 which included the resurfacing and relining of the roadway in addition to the erection of fencing and the construction of a roadside pathway. Similarly, it would appear that there have been further improvements to the surrounding road network serving the subject site since the opening of the existing facility.

13.2.3.7 At present, traffic is directed to the facility along the R634 Regional Road via the Rincrew roundabout on the N25 before turning onto T12. On arriving at the site all waste delivery, collection and maintenance vehicles are required to use the first entrance gate to the facility whereas staff and visitors access the site via a second entrance gate located further east. Outgoing traffic follows the same route to the Rincrew Roundabout. Other than for locally based staff and maintenance crews it has been submitted that no site traffic will approach the site from the direction of Youghal town.

13.2.3.8 In estimating the potential operational impact of the proposed development on existing traffic conditions the applicant has submitted that particular regard has been had to the Traffic Impact Assessment completed in 2004 in respect of the existing facility as authorised under ABP Ref. No PL04. 211117 which was based on an annual waste intake of 110,000 tonnes. In this respect it is stated that the proposed development will reduce the overall waste intake at the site from 110,000 tonnes to 95,000 tonnes per annum thereby resulting in less vehicular movements. Furthermore, it has been submitted that although household waste has generally the same characteristics as commercial waste, the hazardous waste to be accepted at the site will primarily be in an aqueous or sludge form and thus will be heavier by volume than household or commercial / industrial waste with

the effect that the number of vehicle movements will be less that estimated in the original traffic impact assessment.

13.2.3.9 With regard to the constructional impact of the proposed development, the applicant has submitted that the given the scale and anticipated duration of the proposed works when compared to those factored into the original TIA prepared in respect of the construction of the existing facility, the overall impact on traffic levels in the area will be minor.

13.2.3.10 On the basis of the available information, whilst it is regrettable that more specific details have not been provided as regards a breakdown of the likely traffic volumes associated with the proposed development, particularly in light of my earlier concerns regarding the increase in residues for transportation off site, I am inclined to accept that the proposed development will have an overall reduced impact on traffic in the wider area when compared to the existing facility on site as originally approved under ABP Ref. No PL04. 21117.

13.2.3.11 Noise:
In assessing the impact of noise levels arising as a result of the proposed development I would refer the Board in the first instance to the noise survey contained in Appendix 6 of the EIS which purportedly establishes baseline noise conditions. This report details that noise monitoring was conducted at 4 No. measurement stations (N1-N4) located on site and also at the nearest occupied dwelling house (identified as Ref. NSL) to the existing and proposed facility. The results of this monitoring indicate that noise levels recorded on site are considerable, although much of this would seem to be attributable to passing traffic and the operation of the adjacent landfill facility, however, considering the sites location within an emerging industrial area, it is perhaps of more relevance to consider the impact of the proposed development on nearby noise sensitive receptors and in this respect I can confirm from a site inspection that the property identified as NSL in the submitted noise survey is indeed the nearest noise sensitive location to the subject site. Daytime monitoring over a single 15-minute period on 14th October, 2010 at Location Ref. NSL recorded a level of 64dB$_{Laeq}$, which is considerably in excess of the accepted daytime limit of 55dB$_{Laeq}$, however, this was attributed to traffic travelling along the adjacent R634 Regional Road with instances of noise levels reaching between 50dB and 80dB. In support of this position the applicant has submitted that the existing waste processing operation was inaudible at this location and that similar noise levels of 58dB and 59.8dB respectively were recorded during previous surveys conducted in 2008 and 2009. With regard to night-time monitoring conducted at Location Ref. NSL, a noise level of 50.1dB$_{Laeq}$ over a 15-minute sampling period was recorded which would also be in excess of the accepted night-time limit of 45dB, however, this was again apparently attributable to passing traffic whilst the existing facility was similarly not audible at the time.

13.2.3.12 Having established the baseline noise environment at the nearby NSL it is necessary to identify the various noise sources associated with the proposed development in an effort to predict whether or not the operation of the proposed facility will not result

in any increase in ambient noise levels. In this respect I am inclined to suggest that the principle noise sources arising as a result of the proposed development will include the transportation of waste to the facility, the associated traffic movements on site, the loading and unloading of material and the operation of the actual industrial processes themselves with their associated plant / machinery. Further noise would be expected to arise from the transportation of unacceptable waste and other residues from the site and personnel movements to / from the site.

13.2.3.13 In terms of the noise impact arising as a result of vehicular traffic travelling to / from the proposed development, in the first instance, it is of relevance to note that whilst the existing facility is authorised to accept up to 110,000 tonnes of waste per annum, including up to 70,000 tonnes of commercial & industrial waste, it is not operating at full capacity at present in that it has discontinued the processing of commercial & industrial waste since 2009 for commercial reasons. Accordingly, whilst the proposed development will increase traffic volumes travelling to and from the site relative to existing levels (with a consequential increase in noise) this must be taken in context as the existing facility is already authorised to process a higher tonnage of waste per annum and therefore there is a case to be made that the predicted traffic noise will be no greater than that forecasted in the original EIS as approved ABP Ref. No. PL04. 211117. With regard to the impact of the aforementioned increase over existing traffic levels on the identified noise sensitive receptor (i.e. Ref. NSL), Section 2 *'Assessment of Predicted Noise Levels'* of the submitted noise survey predicts that worst-case noise levels at this monitoring location, based on 5 No. truck movements in an hour between 08:00 hours and 18:00 hours with and without a 2m earth barrier (such as the concrete structure built to the west of the Waste Recovery Building) will be 53.9dB$_{Laeq(30\ mins)}$ and 65.2dB$_{Laeq(30\ mins)}$ respectively. On the basis that there is already an existing 2.4m high concrete wall running along the western site boundary it has been submitted that sufficient noise attenuation is already provided and that there is no need for any additional earthen bank / berm. Accordingly, the applicant has stated that whilst noise levels will increase consequent on increased traffic associated with the proposed development, compared to existing noise levels at the NSL, the projected increase will be low and will not represent a nuisance.

13.2.3.14 Having considered the foregoing, including the limited sampling period of noise measurements / monitoring carried out in order to ascertain baseline noise conditions, I am not entirely convinced of the robustness of the applicants predictions as regards the impact of traffic noise on the NSL, however, in light of the planning history of the site and the anticipated reduction in overall traffic levels when compared to that previously approved on site it would appear that the noise impact of the proposal would be within acceptable limits.

13.2.3.15 With regard to noise impacts arising from the actual operation of the proposed facility, I note that the applicant has indicated that all waste handling / treatment processes will be carried out indoors or from within enclosed tanks as in the case of the proposed AD plant. Similarly, it has been indicated that all equipment to be installed in the proposed waste recovery / transfer facility will be designed to best international

practice as regards the mitigation of noise. Features of such equipment will include the control and management of noise emissions. In this respect it is not envisaged that any additional noise will result from the proposed processes in the internal units.

13.2.3.16 With a view to reducing the overall noise impact of the proposed development at noise sensitive locations the EIS also outlines a series of mitigation measures which will include the operation of speed limits on site, the restriction of any pallet crushing activities or other mobile external processes to well-screened parts of the site, a review of reversing sirens, and the implementation of a programme of periodic noise monitoring at the noise sensitive locations.

13.2.3.17 Having considered the submitted information, on balance it would appear that the noise impact of the proposed development will be within acceptable limits, particularly in view of existing baseline conditions, however, I would have a number of reservations as regards the robustness of the data used by the applicant in ascertaining these baseline conditions whilst I would also question the absence of clear calculations in terms of the predicted noise levels arising from the operation of the facility. However, I would advise the Board that the facility will require a waste licence and matters pertaining to noise emissions and the regulation of same will be considered by the EPA.

13.2.4 Fauna and Flora (Ecology):

13.2.4.1 In order to avoid unnecessary repetition I would refer the Board to that section of this report entitled 'Appropriate Assessment / Ecological Considerations', however, I would generally conclude with the conclusions of the EIS in that there will be no direct ecological impacts of any significance on site. Potential impacts off site will be assessed elsewhere in this report.

13.2.5 Soils and Geology:

13.2.5.1 Chapter 6 of the EIS describes the soil and bedrock conditions underlying the subject site and I would advise the Board that this information has been derived from a report set out in Appendix 3 of the document which in turn is based on a desk study of the available information, including reports from previous site investigations conducted in 2004 and 2007, and a walk-over survey.

13.2.5.2 The proposed development site is located in a low-lying area known locally as the Youghal Mudlands in the vicinity of the Blackwater Estuary. The soil maps for the area as published by the EPA indicate deep mineral and marine soils in the vicinity of the site with deep well drained mineral soils to the west whereas the subsoil mapping available from the Geological Survey of Ireland shows that the site is underlain by made ground which would be consistent with the historical background of the area which involved the reclamation of land from the mudlands. Indeed, on-site investigations conducted in 2004 and 2007 confirmed the presence of up to 3m of made ground on site overlying up to 11.6m of glacial till atop a further layer of up to 2m of sandy gravel. This made ground was recorded as being predominantly composed of gravelly clay with fragments of construction and demolition waste, including wood, plastic, glass and ceramics, in addition to some household rubbish. Notably, at the time of these

investigations it is stated that the subject site was used by the operator of the neighbouring landfill and included a diesel storage area located in the vicinity of the existing site entrance to the east of the administration building. Natural mapped subsoils in the area include marine sands in the vicinity of the estuary and sandstone tills further west of the site.

13.2.5.3 In line with Table 6.1*: 'Estimation of Importance of Soil and Geology Criteria (NRA, 2005)'* of the EIS the applicant has submitted that the economic importance of the soil and geology underlying the subject site is *'low'* given the 'made' nature of the ground. In this respect the site has been compared to a *'recent landfill site for construction and demolition waste'* which is identified in Table 6.1 as retaining as the lowest level of importance.

13.2.5.4 With regard to the underlying bedrock this is stated to consist primarily of Waulsortian Limestones made up of massive, unbedded mounds of calcareous deposits in the form of mudstones, wackestones and packstones. Bedrock was not encountered during the 2004 and 2007 investigations, however, based on the proven thickness of the subsoils it is in excess of 12m below ground level. The site has also been identified as overlying a karstified aquifer.

13.2.5.5 Potential negative impacts on the underlying soil / geology arising as a result of the proposed development include the direct physical impact of excavations carried out during construction works and the possible contamination of soils / subsoils due to leakages from the proposed bunded areas, the surface water drainage system, and from within the existing concrete yard / hardstanding area. In addition, there is the possibility of contaminated runoff from the waste storage areas being discharged to the underlaying soil / geology via cracks / fissures in the existing hardstanding or via surface water drainage routes.

13.2.5.6 In terms of assessing the impact of the proposed development on the underlying soil / site geology it is of relevance in the first instance to note that the existing facility is located on made ground and is already predominantly surfaced in concrete hardstanding which will be retained as part of the proposed development. In this respect I am satisfied that the proposal to undertake minor excavation works in order to facilitate the laying of foundations for the proposed AD tanks in addition to the installation of drainage pipes within the proposed tanker parking area will have no significant impact on the wider characteristics of the prevailing soil / geological conditions. With regard to the potential for the contamination of soils / subsoils underlying the site due to leakages / spillages, in order to address same it is proposed to lay a new fibre-mesh reinforced concrete slab over the existing concrete hardstanding in the southern part of the site as part of the construction of the proposed bunded *'transfrontier shipment compound'* i.e. that area to be used as a designated tanker storage / parking area where transport tankers containing hazardous waste will be parked temporarily prior to their dispatch off site. This will prevent any leakages that may have occurred as a result of any existing cracks in the hardstanding area. It is also proposed to construct a 2m high wall to provide bunding to the tanker parking area in addition to a ramp which will prevent any runoff from leaving

the bunded storage area. Further mitigation measures include the fabrication of the pipework between the collection chamber / sump and the discharge manhole from stainless steel in order to prevent any future corrosion and subsequent leakage from same due to the hazardous and corrosive characteristics of some of the waste to be accepted on site. Only non-hazardous runoff that collects in the sump will be allowed to enter the existing surface water drainage system and this will be tested in the on-site laboratory to ensure that it is suitable for discharge. In the event that any contamination is detected the runoff will instead be directed to the proposed Aquacritox system for treatment. Proposals for continued monitoring and maintenance of the facility include the carrying out of bi-annual inspections of the bunded area in order to ensure that it remains fit for purpose and regular monitoring of groundwater quality both up-gradient and down-gradient of the hazardous waste operation which will indicate if any leakages to the underlying soil are occurring.

13.2.5.7 On the basis of the foregoing, the EIS has concluded that the proposed development will have no residual impacts on the soil and geological environment underlying the site. In this respect I am generally satisfied as regards the proposed mitigation measures outlined in the EIS and that adherence to best practice operating procedures as regards the transportation and handling of waste, with particular reference to hazardous waste, and the requirements of any waste licence granted in respect of the proposed activity, will serve to minimise the impact of the proposal on the underlying soil / site geology. I would, however, also consider it appropriate to ensure that all the existing hardstanding areas frequented by vehicles conducting waste deliveries etc. on site are inspected to ensure their continued structural integrity with any repairs deemed necessary carried out accordingly.

13.2.6 Water:

13.2.6.1 Impacts on water are of concern in relation to surface waters and groundwater and are potentially related to effects on human beings, flora, fauna and material assets, including fisheries and water-based recreation / tourism activities. In this respect it is of relevance in the first instance to consider the sites location within the catchment of the Blackwater River and its proximity to the Blackwater River and Estuary, which has been designated as a Special Area of Conservation, a Special Protection Area and a Proposed Natural Heritage Area, although I would propose to consider the potential impacts of the proposed development on ecological considerations in more detail elsewhere in this report. With regard to flooding in the area, the EIS has noted the OPW's recording of flood events in the Youghal Mudlands which were associated with drainage ditches to the south of the site, although these reports would seem to indicate that this flooding was due primarily to extremely high tides combined with wind surges. In relation to the subject site there are no recorded instances of flood events, and on the basis of the available data, including the national flood hazard mapping, it would appear that the flood risk to the site is low.

13.2.6.2 Water quality results from monitoring stations located upstream along both the Blackwater and Tourig Rivers indicate quality ratings of Q4, however, further estuarine and coastal water quality monitoring conducted by the EPA shows the Lower Blackwater

and Lower Tourig to be eutrophic. The EIS also states that surface water characterisation undertaken pursuant to Article 5 of the Water Framework Directive has designated the surface water catchments of the Tourig River a 'Good' status whilst the catchments of the Blackwater River generally fall into the 'moderate' to 'poor' categories.

13.2.6.3 With regard to groundwater, the EIS states that the limestones which underlie the site are classified as a Locally Important Karstified Aquifer and, although the vulnerability of this aquifer is rated as predominantly high by the GSI, on site investigations have recorded up to 11.8m of stiff glacial clay till beneath the site and, therefore, the groundwater vulnerability can be rated as Moderate to Low. In addition, the results of previous groundwater monitoring conducted on site biannually under the terms of the existing waste licence have shown groundwater quality in the vicinity of the site to be poor partially due to the sites location within an estuary where groundwater would be below drinking water standard as a result of saltwater intrusion and also due to the presence of hydrocrabons in very small concentrations given the previous use of the site as a landfill and the nature of the 'made' ground. Furthermore, it is noted that there are no mapped source protection zones in the vicinity of the site and although a public water supply well for Youghal Town is located 5km up-gradient of the site groundwater flow is towards the estuary. Accordingly, whilst the aquifer underlying the site can be classified as locally important and as a sensitive receptor, the EIS has emphasised that groundwater quality in the area is naturally poor due to saline intrusion and that the aquifer itself is not a suitable source of potable water.

13.2.6.4 At present, all wastewater from the existing facility, including the sludge drier, is disposed of via the on site wastewater treatment plant which subsequently discharges the treated effluent to an existing outfall which leads directly to the Blackwater Estuary (*N.B.* Effluent generated from within the administration block is initially treated in a Puraflo system before being discharged to main wastewater treatment plant on site). The existing waste licence sets a maximum discharge of 170m^3 / day and also specifies the applicable emission limit values and in this respect I would advise the Board that previous monitoring of the discharge quality showed an inability to consistently meet the required quality limits with the effect that in November, 2010 the applicant ceased discharge to the estuary pending the implementation of a wastewater treatment improvement programme (which was on-going at the time the EIS was being prepared), which was to include additional treatment measures such as Dissolved Air Floatation and breakpoint chlorination, as approved by the EPA. Given that the applicant has since indicated in response to the grounds of appeal that the waters discharged from the wastewater treatment plant on site are now within the applicable emission limits set by the Waste Licence it would appear that the foregoing improvement works have been carried out.

13.2.6.5 Stormwater from roofs and runoff from non-waste storage hardstanding areas is presently passed through two silt / oil interceptors, together with a pH controlled stormwater retention tank, before being discharged to a public drain to the northeast of the site which in turn discharges into the estuary. The results of quarterly monitoring in 2009 have shown the quality of stormwater to be within an acceptable range for discharge.

13.2.6.6 In terms of the potential impacts of the proposed development on ground and surface water quality in the area these can generally be divided into constructional and operational impacts. Possible impacts associated with the construction phase of the proposed development will include the pollution of both ground and surface waters through the accidental release or discharge of hydrocarbons or other contaminated site runoff, however, the risk of same can be satisfactorily mitigated through the implementation of an appropriate programme of pollution control measures, details of which are outlined in Table 7.2 of Chapter 7 and Table 7.8.1 of Appendix 4 of the EIS, which are effectively tied into good construction practice.

13.2.6.7 With regard to the operational impact of the proposed development on groundwater quality, the applicant has reiterated that the site overlies up to 11.8m of stiff clayey tills which are in turn covered by infill and an extensive area of concrete hardstanding and, therefore, the risk to groundwater is low, however, the possible risk of the contamination of groundwater from leakages from the proposed bunded areas and the associated drainage systems is to be mitigated through the design and construction of these items in addition to the implementation of a regular programme of monitoring and maintenance.

13.2.6.8 In respect of surface water, the potential detrimental impact on water quality in the Blackwater Estuary and Youghal Harbour arises from the proposal to route effluent from the proposed hazardous waste treatment technology through the existing wastewater treatment system on site which discharges directly to the estuary by way of an existing outfall subject to the terms of an existing waste licence, however, it has been submitted that based on the manufacturers specifications, the effluent discharged from the proposed AquaCritox technology will be of a high quality and will be well below the emission limit values set out in the existing waste licence. In effect, it is anticipated that the quality of the final discharge from the development will improve when mixed with the effluent from the AquaCritox technology.

13.2.6.9 Finally, with regard to the potential for the proposed development to contribute towards the flooding of lands located down-stream of the site, it is of relevance to note that the proposal will not increase the overall extent of hardstanding present and, therefore, there should be no increase in surface water runoff. Furthermore, the introduction of rainwater harvesting on site, when taken in combination with the existing surface water attenuation facilities, will similarly serve to mitigate the potential of the proposal to exacerbate flood events in the surrounding area.

13.2.7 Air Quality:

13.2.7.1 The assessment of air quality is stated to have been carried out having regard to the routine air quality monitoring already specified in the waste licence for the existing facility, additional monitoring of the emission of particulate matter carried out by the applicant and, in particular, to the *'Odour and Air Quality Impact Assessment of Identified Processes'*, with associated dispersion modelling of emissions from the

proposed development, prepared by Odour Monitoring Ireland Ltd. as contained in Appendix 5 of the EIS.

13.2.7.2 With regard to the existing facility the applicant has indicated that an air emission abatement system is in place in Building No. 2 (the sludge drying facility) in order to control emissions from the sludge treatment process. This building is fitted with rapid closing roller doors which, when taken in conjunction with the provision of hydraulic lids on the reception bins, apparently provide effective containment of odours within the building. The existing biofilter odour abatement system serving this building extracts air from the various stages of the sludge treatment process, including head gases from the storage hopper, the purged steam and evaporating volatile organics from the drying process, and also off-gases from the treatment of dryer condensate in the wastewater treatment plant, whilst negative ventilation is also provided to the sludge handling area. In addition to the foregoing, following an audit of the existing system commissioned by the EPA which identified a number of measures which could be used to improve performance, the applicant implemented the recommendations of this report, which included the adoption of odour management / control procedures, additional sealing of the building fabric, the continuation of existing good housekeeping practices and an assessment of the operation of the biofilter, on a staged basis which resulted in a significant improvement in the control of odour emissions from the existing facility.

13.2.7.3 At present, there are two point emissions to air at the existing facility, namely, the boiler and the biofilter. These emissions are subject to routine monitoring as per the facility's Waste Licence which also specifies the relevant emission limit values. Monitoring of the boiler emission point includes oxides of nitrogen and sulphur, carbon monoxide and particulates, whereas monitoring of the biofilter includes ammonia, organics, hydrogen sulphide, mercaptans and amines. Dust deposition monitoring is carried out at 3 No. on-site locations three times a year whilst odour monitoring at the site entrance and boundaries is conducted daily by site staff. Further monitoring of particulate matter is carried out by the applicant at three locations on site and at an additional location off-site at the nearest residence to the facility.

13.2.7.4 The proposed development will result in the introduction of the following additional point emission sources to air:

- The trim heater
- The Odour Control Unit (carbon filter), Materials Recovery Building and AD plant
- The CHP plant
- The AquaCritox plant
- The solvent fill tank
- Three individual minor emission points from solvent storage tanks

13.2.7.5 In order to minimise the impact of the foregoing additional air emissions consequent on proposed development the applicant intends to implement a series of mitigation measures as set out in Section 10.5 of the EIS. In this respect it is proposed to

continue to implement the current air quality and odour management protocols operated on site. In addition, it is proposed to provide a new Odour Control Unit (OCU) comprising an air extraction system and a carbon filter which will have a treatment capacity of 30,000 Nm^3/hour in order to treat odours arising from within the mixed MSW processing area in Building No.1 (the material recovery building). This OCU will also have sufficient spare capacity to treat odorous air from the AD plant and the sludge drying if considered necessary. Furthermore, the Odour Management System is to be amended to include for the routine inspection and maintenance of the OCU to ensure that it operates at optimum efficiency.

13.2.7.6 In addition to the foregoing, I would refer the Board to Sections 2.9.1 & 2.10.1 of the applicant's response to the request for further information which provide additional details of the proposed odour control system in that Building No.1 (the material recovery building) will be provided with an air-tight building fabric. Appendix D of this document also outlines the waste acceptance procedures for Building No.1.

13.2.7.7 With regard to the 'flaring' of low-grade or surplus gas, it is my understanding that the flaring of gas is typically only undertaken in the event of there being an excess of same which cannot be stored within the digester or utilised in the CHP plant and therefore any such instances of 'flaring' will probably be infrequent and an inefficient use of the desired energy resources. Whilst the applicant has confirmed in response to a request for further information that it is proposed to install a closed flare system for use in emergencies, this matter has not been considered in any level of detail in the EIS and, therefore, I would suggest that further details of the need for flaring and its potential impacts should have accompanied the application.

13.2.7.8 Having considered the submitted information, the modelling of emissions consequent on the operation of the proposed development as set out in the *'Odour and Air Quality Impact Assessment of Identified Processes'* contained in the EIS would seem to confirm that the applicable emission limit values and guideline values in the waste gases will be achieved and that the proposed development will not result in any significant impact on air quality in the surrounding area with all ground level concentrations of pollutants within their respective ground level concentration limit values. Accordingly, given the nature of the activity proposed, the assessment of emissions carried out, the mitigation measures proposed, the distance of the proposal from nearby residences and requirement for a waste licence issued by the EPA, in my opinion, it would appear that, on balance, the proposed development can be adequately constructed and operated to achieve the relevant odour and air quality standards.

13.2.8 Climatic Factors:

13.2.8.1 Chapter 8 of the EIS states that whilst the proposed development will not have any effect on the climate or micro-climate at the site, the use of biogas produced on site to generate heat and power will reduce the facility's reliance on electricity produced from non-renewable sources which will in turn reduce its carbon footprint

13.2.8.2 Whilst I would acknowledge the wider environmental benefits of reducing greenhouse gas emissions through the generation of biogas on site as a source of renewable energy thereby contributing towards the achievement of Ireland's commitments with respect to the Kyoto Protocol, I would suggest that this section of the EIS would benefit from elaboration. For example, it would have been beneficial if a breakdown of savings in CO_2 emissions would have been provided. Furthermore, I would reiterate that in the absence of a clear breakdown of the types, volumes and sources of the hazardous waste to be accepted on site it is difficult to verify that sufficient waste will be arising within the Cork region to meet the capacity demands of the proposed development. This need to identify the potential sources of the waste and its respective volumes etc. relates directly to consideration of the 'proximity principle' and the wider implications of the proposal as regards sustainable transportation patterns and associated vehicular greenhouse gas emissions.

13.2.9 Landscape:

13.2.9.1 The proposed development site is located on the western bank of the Blackwater Estuary in a low lying area characterised by low-density industrial / commercial development which includes Youghal Landfill to the east, an NCT test centre to the west and an industrial estate / business park to the northwest with vacant and undeveloped lands located further south. The site itself is presently occupied by an existing waste recovery / transfer and sludge drying facility which comprises a series of industrial and administrative buildings in addition to associated plant and equipment with the most prominent of these structures being the existing Waste Recovery Building (Building No. 1), which extends to 15.603m in height, the Sludge Drying Facility (Building No. 2) which has a ridge height of 13.148m, and to a lesser extent the administration building and the wastewater treatment plant.

13.2.9.2 With regard to the overall visual impact of the proposed development, the applicant has acknowledged that due to the prevailing topography of the surrounding area the existing facility is visible from some of the higher vantage points in the area, with particular reference to those views available from elevated areas to the east of the site in Co. Waterford and from along sections of the N25 National Road opposite, however, it has been submitted that the adjacent landfill and civic amenity centre remains the focal point in this fragmented landscape and that the scale of the proposed development will be in keeping with the existing pattern of development in close proximity to the site. With regard to those views available over the Blackwater River and beyond from existing residences in the vicinity, it is claimed that the proposed development will not interfere with same and that any visual impact is likely to be minor or negligible. Similarly, the applicant has submitted that given the sites low-lying location it does not unduly impact on views to or from the town whereas views of the existing facility available from positions along the N25 to the north are intermittent and are effectively screened by existing hedgerows and other structures. Reference has also been made to the sites location outside of any area of scenic or special amenity importance and that the sensitivity of the surrounding landscape is low. Accordingly, on the basis of the foregoing, and as the proposed development will involve the provision of purpose-built storage tanks and other plant located adjacent to the larger buildings already present on

site, it has been submitted that the proposal will not dramatically alter the visual character of the site and that the visual impact of the proposed works will be neutral in that it can be satisfactorily mitigated through the appropriate design, height and siting of the proposed structures relative to the existing structures on site

13.2.9.3 Having reviewed the submitted information, and following a site inspection, in my opinion, whilst the proposed development will be visible to a varying degree from various vantage points within the surrounding area, including views available from alongside sections of the N25 National Road to the north of the site, the wider visual impact of the proposal must be taken in context. In the first instance, the subject site is located in a low-lying area characterised by an emerging pattern of low-density industrial / commercial development on lands which are presently occupied by an existing waste management facility. Secondly, the site is not located within any landscape designated for protection or preservation in the Development Plan nor will the proposed facility be visible from any views listed for preservation in that Plan. Furthermore, when taken in conjunction with the existing industrial / warehouse type structures on site, the proposed development will appear as an extension of same and in this respect it should be noted that the existing facility already has a localised visual impact and thus the scale of the subject proposal must be considered in context. Accordingly, given the site context, in my opinion, the visual impact of the proposal will be within acceptable parameters and will have a low residual impact on the prevailing character of the surrounding area.

13.2.10 Material Assets:

13.2.10.1 The term 'material assets' is typically interpreted as referring to architectural, archaeological and cultural heritage, although it can also refer to items including natural resources of economic value, recreational amenities, property, businesses and infrastructure.

13.2.10.2 With regard to architectural, archaeological and cultural heritage, from a review of the available information, including the Record of Monuments and Places, the Sites and Monuments Database, the Record of Protected Structures and the relevant Development Plans, it is evident that there are no recorded items of architectural, archaeological or cultural heritage present on site and that there are no known features of interest within the immediate environs of the proposed development. Accordingly, I am satisfied that the proposed development will not impact on any such items and in support of this position I would reiterate to the Board that the subject site is located on 'made' land reclaimed from the Youghal Mudlands which has already been re-developed to facilitate the construction of a substantial waste processing facility approved under ABP Ref. No. PL04. 211117.

13.2.10.3 In terms of the wider impact of the proposed development on material assets such as natural resources of economic value and recreational amenities I propose to consider the potential impact of the proposal on the tourism industry of the area, including marine-based tourism activities and fisheries in the vicinity of the Blackwater Estuary that rely on good water quality.

13.2.10.4 Youghal town is a well-known tourist destination given its coastal location along the Blackwater River and is particularly popular with anglers and water-sports enthusiasts. Accordingly, I would suggest that certain interested parties would have legitimate concerns with regard to the potential impact of a development of the nature proposed on tourist resources in the area, in particular the Blackwater Estuary, or at least they would have reservations as regards the compatibility of such a development with the wider public image of Youghal.

13.2.10.5 Whilst I would acknowledge the general public perception of facilities which provide for the processing / treatment of waste, in particular hazardous waste, it is of relevance to note that the subject site is already occupied by an existing waste processing plant, the operation of which would not appear to have significantly impacted on the overall attractiveness of Youghal as a tourist destination. The perception of risk is a difficult factor to quantify, however, given the sites location in an industrial area adjacent to an existing landfill / civic amenity site, the established use of the site for waste processing activities, and the requirement for the facility to be issued with a waste licence by the EPA which will impose suitable restrictions / mechanisms as regards the control of emissions, including those to the protected waters of the Blackwater River and Estuary, I am inclined to suggest that the proposed development does not pose an unacceptable risk to the tourism industry of the area.

13.2.10.6 In addition to the foregoing, I also note the applicants comments as regards job security and the potential for the creation of additional jobs in the existing facility.

13.2.11 Interactions:

13.2.11.1 There are numerous interactions between the foregoing issues and I am satisfied that I have consider the key inter-relationships of the wider implications of the proposed development in the above assessment.

13.3 Appropriate Assessment / Ecological Considerations:

13.3.1 Appropriate Assessment – Screening:

13.3.1.1 Concerns have been raised with regard to the site's proximity to the Blackwater River and, in particular, to the Blackwater River (Cork / Waterford) Special Area of Conservation (Site Code: 002170) and the need to ascertain if the proposal should be subjected to 'Appropriate Assessment'. In this respect I would refer the Board in the first instance to the screening report prepared by the applicant which is included in the Natura Impact Statement that has accompanied the subject application. This has concluded that in accordance with the precautionary principle it was not possible to rule out the likelihood of the proposed development significantly impacting on both the Blackwater River (Cork / Waterford) Special Area of Conservation and the Blackwater Estuary Special Protection Area (Site Code: 004028) due to the following potentially significant impacts:

- The discharge of treated wastewater (from the waste treatment processes) into the Blackwater Estuary;

- The runoff of sediment and / or pollutants into the Blackwater Estuary during both the construction and operational phases of the proposed development; and
- The noise that may arise during the construction and operation of the proposed development.

13.3.1.2 Having regard to the foregoing, it is apparent from a review of the available mapping, including Map No. 10 of the Development Plan and the data maps available from the website of the National Parks and Wildlife Service, that the subject site is located in close proximity to both the Blackwater River (Cork / Waterford) Special Area of Conservation and the Blackwater Estuary Special Protection Area (Site Code: 004028). It is the policy of the planning authority, as set out in Section 7.1 and Policy ENV 1-5 of the Cork County Development Plan, 2009-2015, to provide protection to all natural heritage sites designated or proposed for designation in accordance with National and European legislation. This includes an objective to protect the conservation value of all European sites, as defined in the Planning and Development Act, 2000, as amended, (i.e. Special Areas of Conservation, Special Protection Areas or lands proposed for inclusion in such sites), notified by the Minister for the Environment, Heritage and Local Government, either before or during the lifetime of the plan, and to ensure that appropriate assessments are carried out where development plans or projects are likely to have significant effects on these sites. It is also a requirement of the Plan to assess all proposed developments which are likely to impact (directly or through indirect or cumulative impact) on designated natural heritage sites or sites proposed for designation and protected species in accordance with the relevant legislation and to ensure that an adequate level of environmental assessment is prepared to an acceptable standard in respect of any proposed plan or project likely to have an impact on these sites or protected species.

13.3.1.3 At this point I would refer the Board to Table 12.3 of the Ecological Impact Assessment as set out in Appendix 7 of the EIS and to Table 2 of the submitted Natura Impact Statement which each identify the designated Natura 2000 sites in the vicinity of the subject site. From a review of same, and by employing the source/pathway/receptor principle of risk assessment, in my opinion, it is clear that particular consideration needs to be given to the likelihood of the proposal to have a significant effect on the conservation objectives of both the Blackwater River (Cork / Waterford) Special Area of Conservation and the Blackwater Estuary Special Protection Area. In this respect I would concur with the findings of the applicants screening report that the discharge of treated wastewater and surface water from the proposed facility into both the Natura 2000 sites could potentially have a detrimental impact on water quality which could threaten the qualifying interests of the sites thereby undermining their respective conservation objectives which seek to:

- Maintain or restore the favourable conservation condition of the Annex 1 habitat(s) and / or the Annex II species for which the SAC has been selected; and
- Maintain or restore the favourable conservation condition of the bord species listed as Special Conservation Interest for the SPA.

13.3.1.4 Similarly, I would accept that the constructional and operational impact of the proposed development, such as lighting, landscaping and noise, may also result in the disturbance of fauna, with particular reference to birds, within the designated sites.

13.3.1.5 Accordingly, it is reasonable to conclude on the basis of the information available, which I consider adequate in order to issue a screening determination, that the likelihood of the proposed development significantly and negatively affecting the aforementioned Natura 2000 sites cannot be objectively ruled out and therefore it is necessary to proceed to 'Appropriate Assessment (Stage 2)'.

13.3.2 Appropriate Assessment (Stage 2):
13.3.2.1 The subject application has been accompanied by a Natura Impact Statement and I would refer the Board to this document as a basis on which to assess the likely impact of the proposed development.

13.3.2.2 The proposed development consists of the 'upgrading' of the existing Waste Recovery / Transfer and Sludge Drying Facility, as previously permitted under ABP. Ref. No. PL04.211117, to an Integrated Waste Management Facility which will entail the expansion of the existing operations on site through the development of several new waste processing / treatment technologies in order to allow for the processing of a wider range of waste types at the facility, with particular reference to hazardous waste. The three principle elements of the proposal consist of the construction of an anaerobic digestion plant, the installation of a second recovery process utilising super critical water oxidation (Aqua Critox® technology) capable of accepting hazardous waste, and the acceptance of Municipal Solid Waste which will comprise source segregated dry recyclables and mixed residual waste such as foodstuffs.

13.2.2.3 In terms of the potential impact of the proposed development on the identified Natura 2000 sites I would refer the Board to Tables 6 & 7 of the NIS and, in particular, to the operational impact of the proposal which will involve the disposal of all wastewater arising at the facility, including that emanating from the sludge drier and the proposed Aqua Critox® hazardous waste treatment technology, to an on-site wastewater treatment plant which will subsequently discharge the treated effluent via an existing outfall directly to the Blackwater Estuary subject to the terms and conditions of a waste licence issued by the EPA. The proposed development will increase the volume of treated effluent discharged to the Blackwater Estuary and in this respect it should be emphasized that all of the habitats and species in the estuarine section of the Blackwater River would be sensitive to water pollution and that in the absence of mitigation the discharge of nutrient-loading wastewater to this river could potentially contribute to the further eutrophication of same which would in turn impact on habitats and aquatic fauna. Whilst I note the applicants intention to ultimately connect to the public sewer following the construction and commissioning to the new municipal wastewater treatment plant intended to serve Youghal town, pending the completion of same treated effluent from the facility will continue to discharge directly to the estuary.

13.2.2.4 In general, I am satisfied that the submitted NIS has adequately identified the key characteristics of the potential impacts arising as a result of the proposed development which would be likely to undermine the stated conservation objectives of the designated sites. In order to militate against the potential detrimental effects of these impacts the NIS proposes the following mitigation measures:

The protection of water bodies from pollutants during construction:

- Contractors will have regard to the following best practice guidelines to ensure that water bodies are adequately protected from construction works:

- Construction Industry Research and Information Association CIRIA C649: Control of water pollution from linear construction projects: Technical guidance (Murnane et al. 2006).
- BMRB HD33/06: Surface and sub-surface drainage systems for highways. Design Manual for Roads and Bridges. Vol. 4: 2 (2006).

In addition to the foregoing, reference is made to Section 7.8.1 of the EIS which outlines the design and mitigation measures which will put in place during the construction process, for example, the monitoring of the quality of stormwater runoff and the use of spill kits.

Protection of water bodies (from pollutants spills or runoff) during operation:

- Table 7.8.2 of the EIS includes a number of design and mitigation measures that will prevent pollutants from reaching groundwater to the surface water drainage system during operation, including:

- Reinforcement of the concreted area of the site to contain spillages within the bunded area.
- Construction of a 2m high concrete wall around the waste acceptance area. Access to the bunded area will be guarded by a 450mm concrete ramp which will also prevent runoff leaving the bunded area.
- Use of steel piping between the collection chamber and the discharge manhole to prevent corrosion (and subsequent leakages).

- Monitoring and maintenance measures:

- Twice yearly inspections will be carried out by suitably qualified engineers to ensure the bunded area remains fit for purpose.
- Maintenance of the TOC and butterfly valve should conform to their respective manufacturers' specifications.
- Regular monitoring of groundwater quality up-gradient and down-gradient of the hazardous waste operation.

Protection of water bodies (from wastewater discharge) during operation):

- The existing on-site wastewater treatment plant will continue to operate as part of the proposed development.

The development is subject to a waste licence from the EPA, which prescribes maximum permitted concentrations for various parameters. The parameters of the discharge will continue to be monitored by the applicant in order to ensure compliance with EPA limits and to ensure that the discharge does not have any impact on fauna in the designated sites.

If the discharge is found to cause impacts upon the designated sites, the applicant will be able to increase the quality of wastewater treatment.

Measures to reduce faunal disturbance from noise during construction and operation:

- Chapter 11: Noise of the EIS includes 7 No. mitigation measures intended to reduce noise caused during operation, primarily from machinery movements.

13.2.2.5 On the basis of the foregoing, the NIS has concluded that provided the required mitigation measures are implemented the proposed development will not have any significant residual negative impacts and will not have a significant negative effect on the integrity of the designated sites.

13.2.2.6 Having considered the available information, I consider it reasonable to conclude that the proposed development, individually and in combination with other plans or projects, would not adversely affect the integrity of European Site Codes 002170 & 004028 in respect of their respective conservation objectives.

14.0 RECOMMENDATION

Having regard to the foregoing I recommend that permission be refused for the proposed development for the reasons and considerations set out below:

Reasons and Considerations:

1. Having regard to the nature and scale of the proposed development, to the type and quantity of wastes proposed to be used at the facility, to the absence of sufficient detail with regard to the specific locations of waste sources, and to the consequent transportation patterns generated in the sourcing of the waste material, the Board is not satisfied that a demonstrable need has been established for the proposal to be sited at this location, that it would adhere to the 'proximity principle' as established by the Waste Framework Directive, and that it would not give rise to unsustainable transportation movements. The proposed development would, therefore, be contrary to the proper planning and sustainable development of the area.

Signed: _____ Date: _____

Robert Speer
Inspectorate