3 ALTERNATIVES

As part of the EIA assessment process, alternatives are considered under the following areas:

- Alternative Locations
- Alternative Treatment Technologies
- Alternative Waste Management Strategies
- Alternative Designs

3.1 ALTERNATIVE LOCATIONS

For the purposes of this application, given the existing planning permission for the development, the suitability of the site location for a WTE Facility is established and unchanged from the final permission granted in October 2007. The increase in throughput of 20,000 tonnes per annum will, however, impact the amount of waste processed and the traffic associated with the existing permission. While it is not viable to develop a dedicated standalone waste-to-energy facility to accept 20,000 tonnes of waste per annum, and co-location with the only available existing facility for thermal treatment is the most sensible choice, the alternative location could be at a different existing waste treatment site. The suitability of the site for the additional 20,000 tonnes per annum throughput will be assessed on this basis in sections 3.2.1 and 3.2.2 below.

In terms of alternative locations for the proposed Central Maintenance Depot, the primary criterion considered was distance from the existing facility in Carranstown, whose maintenance requirements are the main ones to be serviced by this new Depot. The second criterion was to look at access to international airports and port facilities for efficient of dispatch of spare parts from all over Europe. The Carranstown site is only 20 minutes north of Dublin airport and is linked by the M1 motorway. The ports of Drogheda and Dublin are also nearby and give adequate options for the import of larger parts, plant and equipment. The third consideration was proximity to Indaver's Solvent Blending Facility and Waste Transfer Station in Dublin Port which will also be serviced by the centralised maintenance depot. Again, the Carranstown site is only 30 minutes by road from the Dublin Port facility and linked by the M1 and Dublin Port tunnel.

Alternative locations of an office block to cater for Indaver Staff and outside contractors temporarily visiting, as well as additional meeting rooms for staff permanently based at the Meath WTE site were not considered, as it would not be feasible to have site based activities located off-site.

3.2 ALTERNATIVE TREATMENT TECHNOLOGIES

The Facility now operates with a moving grate furnace with a two stage flue gas cleaning system and energy recovery. The extra capacity proposed will comprise MSW and hazardous waste, but the exact split between the two waste types over the 20,000 tonnes will be driven by market factors and the availability of certain waste types should planning permission be granted.

3.2.1 MSW

There are three main alternatives for the treatment of 20,000 tonnes per annum additional MSW capacity at present in the Irish market (if we assume that all of the additional 20,000 tonnes applied for is MSW and not hazardous waste):

- Direct to landfill (following source separation)
- Wrapping/baling followed by export for recovery (following source separation)
- Mechanical treatment followed by landfill and/or export for recovery

Continuing to consign waste to landfill with no further pre-treatment will become more challenging from 2013 onwards, when the restrictions on the percentage of Biodegradeable Municipal Waste (BMW) sent to landfill become tighter. Other EU and national waste policy also seeks to reduce the amount of waste going to landfill. Landfill closures in many regions have been realised and further closures are pending. For instance, Inagh Landfill in Co Clare closed on Nov 25, 2011 and the remaining fully functional landfill in the region, Gortnadroma is expected to close in 2013. This scenario is repeated in many regions throughout the country, whilst in others, facilities (such as Cork's Bottlehill) have had their opening postponed indefinitely. More local to the Meath facility, plans for the Nevitt landfill for North Dublin have also been abandoned. This means landfill of residual untreated MSW is therefore not regarded as a sustainable or appropriate solution

Wrapping and baling followed by export is a more likely alternative than the above, but is only an interim solution which is heavily dependant on the availability of surplus incineration capacity in Europe at very low gate fees. This surplus capacity is already being availed of by the U.K., Ireland and Italy and as this capacity diminishes over time (assuming also that economic growth returns in the Eurozone over the next 5-7 years), gate fees will increase and this solution will no longer be viable.

Mechanical treatment followed by landfill/export is another alternative, but there is not enough of this capacity available in the market and the availability of such treatment capacity will depend on the ability of the private sector to invest in the waste market. Over the last number of years, there have been a number of barriers to investment in alternatives to landfill, including regulatory and policy uncertainty, a

lack of coordinated regional waste plans, lengthy planning delays[1], and a lack of finance available for development. The current economic climate only exacerbates policy and regulatory uncertainty, particularly where project finance is required. With a major consultation ongoing at present regarding the key issue of ownership of waste, these barriers remain. Therefore, it is unlikely that sufficient capacity to meet national waste policy targets will be developed in the near to medium term.

3.2.2 Hazardous Waste

As described in Section 2.2.2 the types of hazardous waste proposed will be of a lower hazard nature than those proposed for the Ringaskiddy Cork WTE Facility.

It is important to recognise that while a particular EWC code may cover the relatively benign wastes intended for the Meath WTE, the same EWC code may also be assigned to other waste types that would be in no way suitable for acceptance in the Meath WTE facility, but would need to be treated at the proposed Ringaskiddy facility or at a specialist facility.

Likewise, the proposed waste types may have the same EWC code as those on the licence of a cement plant, but their physical/chemical characteristics may be such that they would not be suitable for use as part of the cement manufacturing process.

It will be the waste characterisation and screening procedures and Waste Acceptance Criteria that will determine the suitablility of each waste stream for the Meath WTE.

It is anticipated, (based on waste streams currently exported by Indaver Ireland Ltd) that the maximum amount of suitable hazardous waste will be between 10,000 and 15,000 tonnes per annum. Due to the nature and quantity of the wastes identified, there are no modifications required to the Meath WTE facility or the waste handling processes. Hence the Meath facility is suitable for acceptance of these wastes and the alternatives are discussed below.

The alternatives to the above can be summarised as follows;

- Export for disposal & recovery
- Divert to existing treatment facilities
- Develop Ringaskiddy, Cork Waste to Energy Facility

It is clear that the alternatives are limited, but continuing to rely on an export solution does not follow the proximity principle, nor allow for self sufficiency and is not sustainable in the longer term. Furthermore, it would go against one of the key objectives of the National Hazardous Waste Management Plan which is to:

[1] Forfas (2008), *Waste Benchmarking Analysis and Policy Priorities*, Forfas, available at http://www.forfas.ie

"strive for increased self sufficiency in the management of hazardous waste and to reduce hazardous waste export"

Another alternative is to divert to existing facilities that can accept hazardous waste. Broadly this can be broken into two categories

- Existing Waste Management Facilities
- Cement Kilns

Indaver already utilises the existing hazardous waste management facilities in the country within the portfolio of hazardous waste that we handle. We intend to continue to use this available capacity for waste suitable for these facilities. However, the waste identified as being suitable for the Meath WTE cannot either be accepted or fully treated at these WMFs (indeed some of the wastes identified are waste streams from these WMF's), and is currently being exported. A local solution for the treatment of waste is preferable as the already high transport costs and increasing fuel surcharges incurred by exporting waste is proving to be very challenging for producers of waste in the current economic climate.

Cement kilns can accept some hazardous waste but are limited by their flue gas cleaning technology and the final specification of their end product. There are a number of handling considerations in preparing and feeding hazardous waste streams to cement kilns that may limit intake such as particle size (depending on where the fuel is injected) and achieving a homogeneous feed. Wastes typically accepted by cement kilns are solvents, extensively pre-treated SRF, tyres and meat & bone meal which we accept are suitable for treatment in such installations, but as seen from the list in Section 2.2.2 are not proposed for the Meath WTE.

Indaver is committed to the development of the Ringaskiddy Waste to Energy facility but due to planning delays, it may take several years before construction can begin. Many of the hazardous waste streams such as chlorinated solvents and other more difficult hazardous wastes that are driving the development of the Ringaskiddy facility could not be treated at the Meath WTE plant. However, an amount of the less hazardous streams can easily be diverted to Meath, reducing exports and offering a more sustainable solution for businesses and industry on the island. This in our view does not jeopardize the viability of the Cork Project as the demand for a difficult hazardous waste outlet will remain.

3.3 ALTERNATIVE WASTE MANAGEMENT STRATEGIES

The Meath WTE Facility is still in line with current National, Regional and European Policies, as discussed in section 4.2.3

3.4 ALTERNATIVE DESIGNS

Alternative Designs

This application includes the conversion of two existing temporary structures on site to permanent structures. These are the proposed Modular Office Block and the Centralised Maintenance Depot. The main consideration given was to effect the conversion of these structures in the least intrusive manner possible. The structures are in situ as part of the construction of the facility, and it was felt that making no changes to the appearance or lay-out would allow for the very minimum of construction activities, raw material usage, and general disruption to the operations on site.