



Dublin Waste to Energy Upper Tier Seveso Compliance Project Value: €350m

The Dublin Waste to Energy (WtE) facility is designed to thermally treat up to 600,000 tonnes per annum of residual waste in Dublin and in the process provide heating and power to the surrounding population. The Dublin WtE facility is an Upper Tier Seveso establishment, and is located in proximity to a number of notified Seveso establishments at Dublin Port.

AWN Consulting was engaged by Covanta Energy (Ireland) Ltd. to provide specialist consultancy services in respect of Upper Tier Seveso compliance.

The following works were completed by AWN at Pre-Construction Stage of the Dublin WtE facility:

- HAZard IDentification (HAZID) study, consequence modelling and quantitative risk assessment of major accident scenarios;
- Preparation of Major Accident Prevention Policy and outline Safety Management System;
- Preparation of compliance documentation including notification to the HSA;
- Preparation of Pre-Construction Safety Report.



The consequences of a number of major accident scenarios were modelled and assessed including:

- Fly ash release and dispersion, and assessment of effects on marine environment;
- Waste bunker fire, dioxin release and assessment of effects on air quality limit values;
- Overpressure effects and thermal radiation of a vapour cloud explosion or BLEVE and fireball following an accidental LPG release;
- Thermal radiation effects from a diesel fire;
- Ammonium hydroxide release and toxic gas dispersion.

The distances to the boundaries of the inner, middle and outer risk based land use planning zones were determined and it was concluded that the level of individual risk on-site and off-site was acceptable.



AWN completed Domino Effects study, and assessed the impacts of major accident hazards at nearby Seveso establishments on the Dublin WtE Facility. The following was assessed:

- Diesel tank fire and bund fire at National Oil Reserves Agency site, west of Dublin WtE site;
- Methane release at adjacent Dublin City Council Wastewater Treatment Works, Ringsend, east of Dublin WtE site;
- Full bore rupture of Bord Gáis natural gas pipeline to south of Dublin WtE site.

The level of risk at the Dublin WtE facility associated domino effects was assessed as acceptable.