

Non-Technical Summary

1. Introduction

Mr. Binman Ltd. operates a waste transfer station and recycling centre at Luddenmore, Grange, Killmallock, Co. Limerick. Under Waste Licence No. W0061-02, Mr. Binman Ltd. is permitted to accept 87,500 tonnes up to 105,000 tonnes of waste per annum at the facility. Mr. Binman Ltd. proposes to increase this capacity to 200,000 tonnes per annum on a phased basis, subject to approval from the Environmental Protection Agency (EPA). Following consultation between Mr. Binman Ltd. and the EPA with the Forward Planning Section of Limerick County Council, an Environmental Impact Assessment (EIA) of the proposed increase in tonnages to be accepted at the facility was deemed necessary.

McCarthy Keville O'Sullivan Ltd. was appointed as Environmental Consultants on this project and commissioned to complete an EIA, which fulfils the requirements set out by the EPA in the 'Guidelines on the Information to be contained in Environmental Impact Statements' and Schedule 6 of the Planning and Development Regulations 2001, relating to the information to be contained in an Environmental Impact Statement (EIS). This EIS has been prepared on behalf of the applicant Mr. Binman Ltd., and identifies and plans for the mitigation of all potential impacts that will arise as a result of the proposal. Where the proposed development is referred to in this EIS, it is making reference to the proposed increased throughput of material at the facility.

The increase in tonnage can be accommodated by the existing site infrastructure. Planning permission has already been obtained from Limerick County Council for any works that would have been necessary to handle the additional tonnage, including the covering of waste storage areas and the construction of a new site entrance and car park. The proposed increase to 200,000 tonnes per annum will therefore not require any further construction or planning permission applications.

The EIS uses the grouped structure method to describe the existing environment, the potential impacts of the proposed development thereon and the proposed mitigation measures. Background information relating to the proposed development, scoping and consultation undertaken and a description of the proposed development are presented in separate sections. The grouped format sections describe the impacts of the proposed development in terms of human beings, flora and fauna, soils and geology, water, air, noise and climate, landscape, cultural heritage and material assets such as drainage, site services, traffic and transportation, along with the interaction of the foregoing.

2. Background to the Proposed Development

The Mr. Binman Ltd. waste transfer station and recycling centre is located in the townland of Luddenmore, approximately three kilometres southeast of the village of Ballyneety, Co. Limerick. Limerick City lies approximately eleven kilometres northwest of the site. The facility is surrounded by agricultural land and is accessed via the local road through Luddenmore, which adjoins the R512 Regional Road at Sheahan's Cross to the west of the site. The site is currently used for commercial purposes, with land-cover comprising waste-sorting sheds, an office and canteen building, agricultural sheds and a concrete yard. Limerick County Council has granted planning permission to Mr. Binman Ltd. for the construction of a new entrance roadway and car park at the waste transfer station and recycling centre (Planning Reference Nos. 05/3128 and 07/2466). These features will improve access to the site. Construction work has not yet commenced on the roadway or car park.

This chapter the EIS sets out the strategic and statutory planning context for the proposed development at the Mr. Binman Ltd. waste transfer station and recycling centre. It examines the regional and local planning policy context established by the Mid Western Regional Planning Guidelines 2004, the Limerick/Clare/Kerry Regional Waste Management Plan, and the Limerick County Development Plan 2005 – 2011. It also presents the national policies and targets established by the Department of the Environment, Heritage and Local Government with regards to recycling and the diversion of municipal solid waste (MSW) from landfill.

Scoping is the process of determining the content, depth and extent of topics to be covered in the environmental information to be submitted to a competent authority for projects that are subject to an EIA. This process was conducted by contacting the relevant authorities and non-Governmental Organisations (NGOs) with interest in the specific aspects of the environment likely to be affected by the proposal. The recommendations made by consultees have informed the EIA process and the contents of the EIS.

3. Description of Proposed Operations

The existing capacity of the Mr. Binman facility at Luddenmore is 87,500 tonnes up to 105,000 tonnes per annum. Mr. Binman Ltd. proposes to increase this capacity to 200,000 tonnes per annum by 2012, subject to approval from the Environmental Protection Agency (EPA). In September 2007, the EPA confirmed that the most appropriate way of increasing the waste acceptance limit beyond 105,000 tonnes was through a review of the facility's existing waste licence (No. W0061-02). The information presented in this chapter of the EIS is based primarily on that prepared by the applicant and submitted to the EPA in July 2008 as part of the waste licence review application. The EPA Licence Review is part of a programme of improvements at the Mr. Binman Ltd. Luddenmore facility that, along with the existing controls in place, will ensure onsite activities do not cause environmental pollution.

The existing infrastructure at the Mr. Binman Ltd. waste transfer station encompasses a weighbridge, a materials recovery facility comprising a mechanical separation plant and a picking line, a glass processing facility, transfer station with compactors and balers, a timber shredding area, construction and demolition waste processing plant, two garages, storage areas, wastewater treatment plant, banded fuel storage, truck wash station, offices, laboratory and a canteen. In order to ensure compliance with licence conditions, Mr Binman Ltd. continues to cover all waste storage and processing areas, on a phased basis.

The waste materials recycled or recovered at the facility include glass, timber, rubble, aluminium, ferrous metals, cardboard, paper, plastic, organic fines and refuse derived fuel. The majority of the mixed municipal waste entering the facility is processed through the mechanical biological treatment (MBT) facility which uses a combination of mechanical and manual processing to separate mixed municipal waste into organic fines, refuse-derived fuel, ferrous metals, non-ferrous metals and residual waste for further recycling, recovery or disposal.

Good maintenance is essential for the adequate and trouble-free operation of the mechanical separation plant. By adhering to a stringent maintenance regime in line with manufacturers' recommendations, breakdowns are kept to an absolute minimum. There is a full-time professionally trained maintenance and repair team on-site who carry out all such works at the facility. If any of the critical components of the mechanical separation plant break down, spare parts are kept in storage for the immediate repair. There is adequate storage onsite to enable repairs to be carried out if the available equipment has to be delivered. However in line with the conditions of the facility's waste licence, if a critical part of the plant cannot be repaired during the working hours of the facility, waste will be sent to landfill via the refuse compactors.

Foul water collected from the transfer station is drained to the onsite wastewater treatment plant. At present, there are no discharges to ground from the treatment plant. The wastewater is collected from the onsite plant and brought to Castletroy Wastewater Treatment Plant for further treatment. The diversion of uncontaminated rainwater from roofed surfaces has minimised the hydraulic loading to the wastewater treatment plant and reduced fluctuations in flow due to adverse weather conditions. All other surface water from the yard is discharged via a new hydrocarbon interceptor/settlement tank.

Currently all residual waste processed at the facility is fed directly onto the processing line of MBT facility using front shovel loaders. The material is not shredded. As a result, compacted waste may not be processed efficiently and may result in recyclable or recoverable materials being sent to landfill. Recent trials with pre-shredders have demonstrated that the amount of waste sent to landfill from the mechanical separation plant can be reduced by at least 11% by pre-shredding the waste. Mr. Binman Ltd. plans to install a pre-shredder for mixed municipal waste prior to feeding the waste into the Mechanical Separation Plant. The best available shredder has been ordered and will be installed at the MBT facility in late 2008. This will significantly improve the capacity of the facility.

As part of Mr. Binman Ltd.'s licence review application, the EPA requested that the duty and standby capacities be calculated for all systems in order to demonstrate that the facility is capable of processing or transferring up to 200,000 tonnes of waste. Each section of site operations was subsequently reviewed and information regarding total capacity, duty capacity and standby capacity of each system was submitted to the EPA and is presented in this chapter of the EIS. They show that the proposed increase in tonnage can be accommodated by the existing site infrastructure.

Increasing the waste tonnage acceptance limit at the facility will ensure that more waste generated in the Mid-West Region is recycled at the Luddenmore facility or transferred to Mr. Binman Ltd.'s Clearpoint Materials Recovery Facility in Carrick-on-Suir for optimum recycling. This will aid significantly in minimising the quantity of waste sent direct to landfill, thereby contributing to the meeting of Ireland's targets for diversion of waste from landfill.

4. Human Beings

This section of the EIS discusses the key issues effecting human beings and the potential impacts of the proposed development on them. Information regarding human beings and general socio-economic data were sourced from the Central Statistics Office, Limerick County Development Plan 2005-2011 and the Limerick City Development Plan 2004-2010. This included an examination of the population and employment characteristics of the area.

Census information is divided into State, Provincial, County, Major Town and Electoral Division level. In order to make inferences about the population and other statistics in the vicinity of the proposed mixed development, the study area was defined in terms of the Electoral Divisions (EDs). The development lies within the Ballybricken Electoral Division area and is surrounded by seven other EDs: Fedamore, Grange, Cahercorney, Caherelly, Cahercornlish West, Ballysimon and Roxborough.

If the proposed increase in tonnage was not permitted, it is likely that operations would continue as they are at present with the continued employment of 220 people at the site. Waste recycling and diversion from landfill targets would remain at present levels and an opportunity would be lost to increase recycling rates and reduce the amount of waste going to landfill.

It is anticipated that the proposed increased throughput of the plant will result in the creation of five permanent positions within the company. The increase in tonnage will secure the future of this business in the area, thereby securing the jobs of the 220 people that work on site and the 330 that work for the company in the wider region. The consolidation of employment will result in the consolidation of the population around the site by securing jobs in the region.

Traffic associated with increased throughput of the plant is likely to impact on road users in the area. A full assessment of the traffic impact is detailed in Chapter 11 of the EIS. Existing odour and dust control systems are in place at the facility. A full assessment of odour and dust impacts resulting from the proposal is included in Chapter 8 of this EIS

The volume of machinery and equipment used for the operation of the site pose a potential health and safety hazard to workers if site rules are not properly implemented. All site staff are aware of and adhere to the company Health and Safety Statement, which is provided as an appendix to this EIS.

5. Flora and Fauna

This section of the EIS was compiled following a site visit carried out during November 2008 and a desk study of literature pertinent to the site. During fieldwork, flora and fauna were surveyed through direct observation and the recording of signs and calls of bird and mammal species. Habitat suitability was also assessed for the likely occurrence of species that would not be present due to seasonal factors. The literature review included the synopses of sites designated for their conservation importance, as compiled by the National Parks and Wildlife Service (NPWS), bird and plant distribution atlases and other research publications.

Natural Heritage Areas (NHAs) are sites that were designated for the protection of flora, fauna, habitats and geological sites of national importance. Skoolhill NHA is situated three kilometres south west of the waste transfer station site. According to the NPWS site synopsis, two woodlands occur here, with a mixture of native tree species such as ash, hazel, hawthorn and oak as well as exotics like beech and sycamore. This site is the only known location in Ireland of the grass *Festuca heterophylla*.

A search was made in the *New Atlas of the British & Irish Flora* to find out if any rare or unusual plant species had been recorded in the relevant ten-kilometre square during the 1987 – 1999 survey carried out by the Botanical Society of the British Isles (BSBI). The only species listed in the Flora Protection Order that was recorded here was Round Prickly-headed Poppy. This plant is found in arable habitats and disturbed areas and is restricted to calcareous soils.

Four species listed under Annex I of the EU Birds Directive have been recorded within the relevant ten-kilometre square in the *Atlas of Breeding Birds*; Corncrake, Kingfisher, Peregrine and Hen Harrier. Corncrakes are concentrated in four main areas in Ireland: the Moy Valley Co. Mayo, the Shannon Callows in the Midlands, North Donegal and the Erne Catchment in Fermanagh. They are therefore unlikely to occur at this site in Co. Limerick. Kingfisher are never found far from water as they feed on fish, and are therefore very unlikely to occur at the waste transfer station site as no standing water is present. Peregrine breeds on cliffs on the coast or inland, and are unlikely to occur at the waste transfer station site. Hen Harrier breed predominantly in heather dominated areas and in young conifer plantations in Ireland and are unlikely to occur on the waste transfer station site due to unsuitable habitat.

Habitats present on the waste transfer station site were classified according to the guidelines set out in *A Guide To Habitats in Ireland* (Fossitt, 2000) and include Buildings and Artificial Surfaces,

Hedgerows, Treelines, Spoil and Bare Ground, Improved Agricultural Grassland, Amenity Grassland, Ornamental Scrub and Mixed Broadleaf Woodland. Land use surrounding the site is primarily agricultural. No mammalian species were observed within the site during the site visit. In addition no tracks, signs or calls were recorded. None of the habitats or species recorded on the waste transfer station site is protected under Annex I or II of the EU Habitats Directive.

If the proposed development does not go ahead it is likely that the waste transfer facility and recycling centre will continue to operate as usual. Some of the surrounding agricultural areas will be developed into a new entrance road and car park (as per Planning Reference Nos. 05/3128 and 07/2466). The remaining agricultural areas will continue to be grazed by cattle and managed following much the same regime as is currently applied, with continued fertilizer application. This being the case, the grassland habitat is unlikely to alter type or species composition. Most of the hedgerows around the site are likely to remain at least in the medium term. The fauna of the site is likely to remain largely as it is at present.

The proposed development will increase traffic and activity in the area, thus increasing disturbance of wildlife including birds and mammals using the site and adjacent areas. However as the waste transfer station site is already subject to moderate volumes of traffic, this impact is considered to be slight. There are similar habitats in the local area to allow for migration of more sensitive species.

The increased use of vehicles at the waste transfer facility increases the potential for the spillage of fuel and oil on the site either from leaks from vehicles or fuel tanks or spillages. These substances have the potential in the absence of mitigation measures to leach down into the soil, subsoil and groundwater and eventually contaminate surface waters. All vehicles used for transport and collection of waste are therefore checked and maintained to avoid leaks of fuel, lubricants etc. Best practice for machinery management and maintenance is adopted at the site. Fuel is stored in a bunded fuel tank, which is located in a bunded concrete area. The bunded fuel storage area is covered to prevent excess water collecting inside the bund. Any water that does accumulate inside the bund is removed off-site for further treatment, as necessary. The loading/unloading area, beside the bunded tank is surrounded by an interceptor grate in the ground, which drains to the hydrocarbon interceptor in the event of a small spill when filling a truck with fuel. This hydrocarbon interceptor is a Klargester NS 200 Class 1 full retention separator and built-in silt trap, and is the best available unit on the market.

The surface of the yard and truck parking area is concreted. All surface water run-off from the yard will continue to be discharged to the percolation area via the hydrocarbon interceptor located at the eastern boundary of the site. Clean roof run-off is directed to soak pits. Since there are no watercourses draining the site, or in the immediate vicinity of the site, the likelihood of significant negative effects on local surface water is very low. As part of the EPA licence review application, Mr. Binman Ltd. also proposes to seal all joints on hard-standing areas to further ensure there will be no impact on groundwater.

6. Geology and Soils

The geology and soils of the site of the proposed development were surveyed by means of a field visit and a desk study of literature and information pertinent to the area. . Baseline information was gathered through the analysis of previously published literature relevant to the area including the Geology of the Shannon Estuary and the Geology of Tipperary booklets published by the Geological Survey of Ireland, the Soil Map of Ireland (Second Ed., 1980) published by An Foras Talúntais and a hydrogeological report prepared by RPS McHugh Planning & Environment in 2003.

Local topography comprises rolling hills with occasional abrupt changes in slope, due to differential weathering of volcanic rock compared with limestone. The site is located within an area known geologically as “the Limerick Volcanics”, a complex of shallow intrusive and extrusive rocks, consisting of basalts, lithic tuffs and syenites, which erupted just after the deposition of the Waulsortian Limestone and contemporaneous to the deposition of the Herbertstown Formation. The entire site is underlain by tuff breccias of the Knockroe Volcanic Formation, from the Carboniferous era. Local glacial deposits consist of limestone tills providing generally thin cover.

In the region, soils are primarily derived from calcareous non-tenaceous glacial till, predominantly of Carboniferous limestone. There are small admixtures of sandstone, shale or volcanic materials. The soils underlying the site belong to Association 34, which is in the broad physiographic division of Flat to Undulating Lowland. The principal soils of Association 34 are minimal grey brown podzolics (70%), gleys (20%) and brown earths (10%). These soils have a wide range of uses as a result of their depth, free drainage, medium texture and good moisture holding capacity.

There will be no significant impacts on geology of the area as a result of the proposed development as no construction works are proposed. Likewise, it is considered that the proposed development will have no significant impacts on soils in the area. However current operational phase risks including the risk of liquid contamination and soil compaction may increase as a result of the increase in tonnage accepted at the existing facility. Liquid contaminants, resulting from processes on site, are drained to the onsite wastewater treatment plant where they undergo full treatment. At present, the effluent from this treatment process is tankered off-site for further treatment at Castletroy Wastewater Treatment Plant. It is proposed that this method of disposal will continue until it has been proven that the on-site treatment plant is functioning to the standards acceptable to the EPA.

All surface run-off from the site is directed to a larger NS2000 Class 1 Oil Interceptor, which ensures that no hydrocarbon contamination from on-site discharges to the underlying aquifer. The hydrocarbon interceptor is subject to a rigorous maintenance schedule. All clean roof water is diverted to a separate soakaway in order not to overload the oil interceptor hydraulically. It is also proposed to seal all joints on areas of hardstanding within the site to ensure that no contaminants leak to underlying soils.

Extreme care is and will be exercised to ensure that soil contamination does not occur by the spillage of polluting substances e.g. fuel. This will continue to be achieved through the use of a designated bunded area, for the handling and storage of fuel and the re-fuelling of vehicles. In addition, the Emergency Response Procedure (ERP) provides details on precautionary measures and emergency procedures in the event of spills and leaks both on-site and off-site.

Due to the increase in vehicular activity due to the increased tonnage, there is an increased risk of soil compaction. However as all operations are conducted on areas of hardstanding, it is extremely unlikely that any increase in load will cause any significant impact on underlying soils. All operations will be conducted on areas of hardstanding to avoid compaction of soils on-site.

7. Hydrology & Hydrogeology

The hydrology and hydrogeology of the site was surveyed by means of a desk study of pertinent literature and a field visit. The site of the proposed development is situated within *Hydrometric Area 24 – Shannon Estuary South*. There are no water features present within the site. The closest watercourse is located approximately 0.13 kilometres from the southwestern site boundary and eventually drains to the Camoge River, a tributary of the Maigue, four kilometres downstream.

Water samples are taken by the EPA from monitoring points on the Camoge and Groody Rivers. Physico-chemical data is available for three separate periods of analysis, 1995 to 1997 and 1998 to 2000 and 2001-2003. The Q Value Index System is used by the EPA as an indication of the water quality of rivers. The most recent water samples taken at the closest sample locations on the Camoge and Groody rivers showed Q values of 3-4, representing slightly polluted water.

There are no records of flood events for the area surrounding the site of the proposed development. The site at Luddenmore is not considered to be at risk of flooding due to elevation, distance from areas liable to flooding and the absence of significant watercourses in the area. There is no potential for impacts in respect of flood risk as a result of the proposed development.

Estimated water consumption at the facility for 2008 is at 1,767 m³. The tonnage of wastewater effluent leaving the site in 2008 is estimated to be approximately 6,200 tonnes.

Due to the lack of watercourses on or near the site, it is not considered that the proposed development will have a significant negative impact on surface hydrology. In general, the ongoing groundwater monitoring results for the site indicate good groundwater quality.

Uncontrolled release of liquid contaminants from the processes on-site could result in the contamination of groundwater. However, as the drainage network and stormwater drainage system is already *in situ*, all surface runoff will continue to be directed to the Klargestor NS2000 Class1 Oil Interceptor with silt trap. In order to prevent hydraulic overloading of the oil interceptor/silt trap, all clean roof water is diverted to a separate soakaway. All water used during on-site waste processing operations will continue to be directed to the on-site wastewater treatment plant (WWTP). The effluent from the WWTP is currently being removed off-site for further treatment. It is proposed to continue this practice until emission limit values are achieved on a consistent basis. A laboratory was set up in 2008 to ensure all compliance parameters are actively monitored and to determine what additional measures need to be implemented in order to ensure compliance. It is proposed to seal all joints on paved surfaces where waste is handled in order to ensure groundwater protection.

The increased use of vehicles (associated with the increase in tonnage) at the facility increases the potential for the spillage of hydrocarbons in the form of leaks from vehicles or fuel tanks or spillages. These substances may leach down into the soil, subsoil and groundwater. All operations occur on hardstanding, from where all run-off is directed to the oil interceptor prior to discharge to ground. A designated refuelling area is provided within an area of hardstanding concrete. Fuel is stored in a bunded fuel tank in a bunded concrete area.

In the event of a serious leak or spillage, the measures contained in the Emergency Response Procedure will be followed to ensure that the spill or leak is contained immediately. In addition, all vehicles used for transport and collection of waste will be checked and maintained to avoid leaks of fuel, lubricants etc. Best practice for machinery management and maintenance will be adopted.

All storm wastewater that arises on the site will continue to be directed to the oil interceptor prior to discharge via a percolation area. However, in the unlikely event that the interceptor fails to operate as specified, the leaking of hydrocarbons to groundwater could have a significant negative impact on groundwater quality. The severity of the impact would increase with volume and duration of the leak. However, as there is a substantial overburden, this should provide sufficient protection for the aquifer in the post-construction phase.

8. Air and Climate

Byrne Environmental Consulting Ltd. was commissioned to prepare an Air Quality, Climate and Noise Impact Assessment on behalf of Mr. Binman Ltd. for the proposed increase in capacity at the waste transfer station and recycling centre. This assessment included a review of the programme of continuous monthly dust deposition monitoring which is currently conducted at three site boundary locations, and routine environmental noise monitoring that is conducted in the vicinity of the four closest Noise Sensitive Receptors to the Mr. Binman Ltd. site.

Comprehensive measures for the control of odour, dust and noise emissions are currently in place at the waste transfer station and recycling centre, and will continue to be so. This chapter of the EIS also presents the additional mitigation measures that shall be implemented at the site to ensure that all site activities continue to be controlled and managed according to Industry Best Practices to minimise the impact on the local receiving environment. This includes the covering of the timber storage area and the construction of a new hard-paved car park and entrance roadway, for both of which planning permission has been granted by Limerick County Council.

The existing ambient air quality in the vicinity of the subject site at Luddenmore is typical of a rural environment. There are no major population or industrial centres in the vicinity of the site. The site is in a predominantly rural agricultural area comprising of livestock farming and tillage farming. Additional industrial activities within one kilometre of the site include an active quarry. There are a number of one off houses located along the local road network in the general area in which the subject site is located. The range of measured dust deposition values from onsite and off-site sources show reasonable compliance with the specified 350 mg/m²/day limit value as recommended by the EPA for Waste Transfer Facilities.

There are a number of private residences located in close proximity to the subject site that have been identified as Noise Sensitive Receptors (NSR's). A programme of twice-yearly environmental noise monitoring is conducted at four of these NSRs. From the noise surveys conducted to date at the closest Noise Sensitive Receptors it is apparent that the operation of the subject site does not generate unacceptable noise levels at these locations. The noise climates in the vicinity of the closest Noise Sensitive Receptors to the subject site are characterised as being influenced by passing road traffic noise arising from both subject site related traffic and non-site related traffic as evidenced in the Traffic Impact Assessment contained within the EIS. No complaints have been received from local residents by Mr. Binman Ltd. to date regarding noise emissions from the facility.

There are potential impacts from unscheduled emissions of dust from HGV movements on the site surfaces. This impact is directly related to the working practices on the site. The existing robust dust control and minimisation plan (i.e. truck washes, road sweepers, etc.), will continue to control the potential impacts of fugitive dust. Any complaints arising during the operation of the facility regarding an environmental nuisance will be logged by the EPA who will require corrective action to remove the source of that nuisance.

With regards to air quality, concentrations of combustion gas and particulate emissions from HGV diesel engines in the immediate vicinity of the site will not be adversely affected by the increase in capacity at the facility. In terms of both long-term pollution and regional pollution, the potential impact to air quality as a result of the proposed development is not considered significant. The practice of leaving vehicle engines idling unnecessarily or for prolonged periods is discouraged and appropriate signage shall be clearly posted at the facility. Local roads are swept and cleaned as necessary if it is observed that roads are being soiled by vehicles entering or exiting the site. The proposed increase in capacity at the Mr. Binman Ltd. Luddenmore facility will have no impact on

the climate or microclimate at the site and therefore no mitigation measures are proposed in this regard.

9. Landscape

This section of the EIS addresses the landscape and visual impacts of the proposed development. It includes a description of Limerick County Council landscape policy, with specific reference to the area within which the proposed development site is located. Landscape values and sensitivity are also examined. The landscape of the area is described in terms of its character, which includes a description of the physical, visual and image units.

The Landscape Character Assessment for County Limerick divides the county into ten distinct Landscape Character Areas (LCAs). The townland of Luddenmore, in which the proposed development site is located, lies within LCA 6, the Agricultural Lowlands. This is a farming landscape defined by a series of regular field boundaries, often allowed to grow to maturity. In terms of topography the landscape is generally rather flat with some locally prominent hills and ridges. There are no designated Scenic Views or Prospects within a five-kilometre radius of the proposed development site.

A quarry operated by Roadstone is located approximately 500 metres northeast of the site and is partially visible from the eastern part of the waste transfer station. There are no lakes or areas of open water located within or close to the site of the proposed development. The Camoge River flows in an east-west direction approximately 3.5 kilometres south of the site, but is not visible from the waste transfer station. Knockroe hill, which reaches a peak of 204 metres O.D., is a dominant feature in the local landscape.

An assessment of landscape sensitivity in the vicinity of the Mr. Binman Ltd. waste transfer station was carried out during a site visit by McCarthy Keville & O'Sullivan Ltd. personnel in November 2008. In general, the landscape in this area was found to be of moderate sensitivity. The level of built development in the wider landscape has been relatively low, and agriculture remains the primary land-use.

Views to the north and west from the waste transfer station are restricted by Boughilbreaga hill on which the site is located, while to the east the boundary of the visual unit is marked by Knockroe hill. The longest visibility range from the site of the waste transfer station is available to the south and southwest. The hilly topography of the area screens the waste transfer station from view from most of the surrounding landscape. Houses in the area are similarly screened from view by changes in topography and by roadside hedgerows and trees.

If the proposed development were not to proceed, the existing levels of activity at the waste transfer station would continue and no significant changes or impacts on landscape character or site visibility are envisaged within the foreseeable future. Limerick County Council has granted planning permission for the construction of a new entrance roadway and car park at the waste transfer and recycling centre and for the covering of the Opti-Bag and timber storage areas. The construction of the new entrance and car park and the covering of the timber storage area have not yet been carried out. If the proposal to increase the waste tonnages accepted at the facility does not proceed, these developments will still be carried out, in line with improving access to the site and further reducing dust emissions from the facility. These developments will assimilate well into their receiving environment, and will have no impact on landscape character or visibility of the waste transfer station within the wider area.

There is no construction phase associated with the proposal to increase waste tonnages accepted at the facility, and therefore there will be no landscape or visual impacts resulting from construction works at the site as part of this application. The construction of the new entrance roadway and car park at the site form part of a separate application, which has been granted planning permission by Limerick County Council. With regards to that development, the negative visual impact resulting from the construction of the new roadway and car park will be short-term and slight only. These construction works will be visible only in the immediate vicinity of the site entrance, and will have no impact on local landscape character. No cumulative impact will therefore result from the construction phase of the roadway or car park with this current proposal.

The proposed development will have no impact on any Scenic Route or Protected View, due to distance from the site and the screening effects of the intervening topography, vegetation and houses and other buildings. There will be no changes to land-use or land-cover within the site of the proposed development.

The proposal to increase waste tonnages accepted at the waste transfer station will result in additional traffic movements on the local road adjoining the site. This increase in traffic will have a slight negative impact on the rural character of the Luddenmore area. In addition, larger volumes of waste will be handled on-site, thereby resulting in increased activity within the waste transfer station. At a local level, this increased activity will also have a slight negative impact on landscape character.

10. Cultural Heritage

Cultural heritage in respect of a project is assumed to include all humanly created features on the landscape, including portable artefacts, which might reflect the prehistoric, historic, architectural, engineering and/or social history of the area. The cultural heritage of the subject development area and environs was examined through an Archaeological, Architectural and Historical study. The Archaeological and Architectural studies involved a documentary/cartographic search and field inspection of the area, while the Historical study involved documentary research.

Following the paper survey, a list of cultural heritage sites/sites of cultural heritage potential was compiled for inspection. A field inspection development lands and environs, was subsequently undertaken in late November 2008. An attempt was also made to identify previously unrecorded sites of cultural heritage potential within, and in the immediate environs of, the proposed development area.

The area under assessment is part of a landscape that is rich in historical and archaeological material. The general region has attracted settlement from early times as evidenced by the presence of monuments dating back to the prehistoric period. Continuity of settlement is illustrated by artefacts dating to the Bronze Age and by identified monuments ranging from Neolithic to Medieval and Post-Medieval remains.

The subject site contains a number of modern buildings, including warehouses, workshops, offices, security hut, etc., none of which are considered to be of any interest from the perspective of architectural heritage. However, there is a range of former stables and outbuildings situated on the western area of the site, which by their form and date, are of interest.

There are no previously Recorded Monuments located within, or in the immediate environs of, the subject development lands. The nearest Recorded Monument to the site is an enclosure situated approximately 80 metres to the east of the subject development lands. The remains of this monument are screened from the existing facility by trees located on an adjacent property. Given

the location of this monument and the presence of the trees, it is not considered likely that the subject development has the ability to have any negative direct impacts or indirect/visual impacts on this or any other features/monuments of archaeological interest/potential.

There are no Protected Structures, within the meaning of the Planning and Development Act 2000, situated either within the boundaries of the subject development lands or within the defined study area of approximately 500 metres surrounding such lands.

It is not considered that the development, as proposed, will cause any negative direct impacts to any sites or structures of historical, archaeological or architectural heritage interest. Likewise, the development will not cause any indirect or visual impacts on the views or settings of any structures or features of historical, archaeological or architectural heritage interest. Consequently, it is not envisaged that any mitigation measures are required.

11. Material Assets

Traffic and Transport Assessment

A Traffic and Transport Assessment (TTA) was carried out on behalf of Mr. Binman Ltd. by CST Group in conjunction with Michael Punch & Partners. The purpose of the TTA was to assess the potential impact of the proposed development on the existing junction with the local transport network and to ensure that the site access will have adequate capacity to carry the development traffic and the future growth in existing road traffic to the design year and beyond.

The facility has two accesses on a County Road, one for office staff and one for trucks, other staff and the general public when depositing waste. The county road is typically five metres wide with some one-off housing. Planning permission has been granted to Mr. Binman Ltd. by Limerick County Council for an upgraded main access to reduce this incline and provide better junction visibility. All staff will use this main access.

Manual classified traffic turning count surveys were carried out during November 2008 at the junction between the site entrance and the County Roadway and also at the crossroads with the R512. Flows in the AM are very light and the full two-hour count has been used as the peak hour to give a robust figure. A worst-case 2008 PM peak hour flow regime was established for the junction by combining the largest peak hour values for each turning movement over the survey period. Approximately 24 bin trucks, 5 skip trucks, 3 hook-laden trucks, 3 cardboard collection trucks, 3 glass collection trucks and 14 articulated trucks leave in the morning over a period of 2 hours. That is a total of 52 trucks. The skips trucks would be in and out 20 times during the day and the hook-ladens up to nine times. The total truck trips (both in and out) is thus approximately 342.

The proposed increase in tonnage to 200,000 tonnes per annum equates to an increase of 68.07%. Assuming the current level of truck trips of 342 increases in this proportion, this would give 575 daily trips. In actual fact the number of trips will not actually increase in the proportion of tonnage increase as the current trucks are not full and generally will carry the additional tonnage in the existing trips. Testament to this is that the operation has no current plans to increase its fleet.

There is no construction phase associated with the proposal to increase waste tonnages accepted at the waste transfer station, and therefore there will be no impacts arising from construction traffic at the site. The additional traffic generated by the proposed increase tonnage at to the Waste Facility to cater for 200,000 tonnes can easily be accommodated at the existing junction with the public road when combined with the predicted increased background flows on the public road to the year 2025 and beyond. It should be noted that the analysis contained in this report is based

on an extremely onerous permutation of the maximum traffic flows as the anticipated daily flows are assumed to occur in each peak hour.

Junction visibility is currently restricted but the construction of a new access road which has recently been granted planning will provide a minimum of 90 metres visibility in each direction from a setback of three metres. Where cyclists and pedestrians are using the County Road they are aware of the large volume of trucks due to the existing waste facility and Roadstone quarry/plant nearby. Thus they take cognisance of the fact they may encounter large vehicles and use the road appropriately or refrain from using it at all.

Utility Services

Potable water at the site is sourced from the Ballybricken Group Water Scheme. All other water is obtained from the private bored well to the northeast of the waste transfer station yard. There are four stormwater percolation areas located around the site, through which rainwater from roofed surfaces is discharged to ground. All other surface water from the yard is discharged via a new hydrocarbon interceptor/settlement tank. The recent installation of this best available technology (BAT) hydrocarbon interceptor at the site ensures that discharges of environmental significance do not occur.

Although groundwater monitoring results for the facility to date confirm that there has been no impact to groundwater, it is proposed to seal all joints on hardstanding areas to further ensure there will be no impact on groundwater. This measure will be implemented as part of the EPA waste licence review application.

A vehicle washing area is located near the onsite wastewater treatment plant. All vehicle washing is carried out at this location. Water from the truck wash station is discharged to the onsite wastewater treatment plant. Fuel is stored in a bunded fuel tank, which is located in a bunded concrete area. Water discharged from the bund of the fuel store is removed off-site for further treatment, as necessary. The loading/unloading area, beside the bund, drains to the hydrocarbon interceptor in the event of a small spill when filling a truck with fuel.

Foul water from the transfer station (e.g. from the toilets and canteen) is drained to the onsite wastewater treatment plant. At present, there are no discharges to ground from the treatment plant. The wastewater is collected from the onsite plant and brought to Castletroy Wastewater Treatment Plant for further treatment. There will be no discharges from the onsite wastewater treatment plant emission point until such time as it can be demonstrated that it is operating in compliance with the emission limit values.

Figures relating to water, electricity and fuel consumption at the waste transfer station and recycling centre from 1st January 2007 to 31st January 2007 were submitted in the Annual Environmental Report to the EPA during the first quarter of 2008. During 2007, water consumption at the site amounted to approximately 1,085 m³, electricity consumption to approximately 1.4 million kWh, and diesel consumption to approximately two million litres. The waste transfer station is serviced by the Electricity Supply Board (ESB). The site also possesses its own generator, which is switched on each afternoon.

Several alternatives were considered in designing a revised lighting scheme for the facility during 2004. Security lighting at the waste transfer station is positioned strategically so as to prevent overlapping of light emissions. All security lighting is operated via photocell in order to prevent inefficient energy use and excessive lighting of areas during hours of adequate natural daylight. The combination of careful fixture positioning and the use of fully shielded light fixtures eliminate

any light trespass. The company also recognises the potential hazard of excessive glare, thus no security lighting is positioned near or directed towards public roadways.

12. Interaction of the Foregoing

All of the reasonably predictable significant impacts of the proposed development and the measures proposed to mitigate them are outlined in this Environmental Impact Statement. However, for any development with the potential for significant environmental impact there is also the potential for interaction amongst these impacts. The EIS has therefore been edited and collated as an integrated document, rather than a collection of separate reports and consequently, the impacts that will arise as a result of the interaction between several aspects of the development have been addressed in the main body of the report.

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