

Our Ref: W/MBT/EH

Mr Tim Marks
Development Control Officer
Office of Environment & Community Services
Cambridgeshire County Council
ET1011
Shire Hall
Castle Hill
Cambridge. CB3 0AP

30 August 2006

Dear Mr Marks

**Proposed Mechanical Biological Treatment Facility at Waterbeach Waste Management Park, Ely Road, Waterbeach
Request for Screening Opinion
Regulation 5 of the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999
Finding of No Significant Impact**

Donarbon Ltd intends to submit a planning application for a Mechanical Biological Treatment facility (MBT) at Waterbeach Waste Management Park. I would be grateful if you would provide the Screening Opinion of Cambridgeshire County Council. I have considered the proposed development against Schedule 2 and Schedule 3 of the EIA Regulations and consider that there are not likely to be significant impacts on the environment in terms of the meaning in the EIA Regulations. To assist you in forming the Screening Opinion, please find enclosed the following:

- Site location plan showing area of proposed development
- Plan showing the proposed location of new buildings and operations
- Plan showing the proposed elevations
- A summary report of the proposed development and of the proposed use of the facility. This report provides some background to the site and the proposal and seeks to highlight areas of potential impact and the changes to the development currently permitted at the site.

I should be grateful for a response within three weeks of the receipt of this letter. Please contact me on 01223 205072 as soon as possible if there is likely to be any difficulty in meeting this timescale or if you wish to discuss this matter further.

Yours sincerely

Sarah Clover

Planning Manager

Proposed Mechanical Biological Treatment Facility at Waterbeach Waste Management Park, Ely Road, Waterbeach

I have examined the need for an EIA against Schedule 1 and 2 of the EIA Regulations 1999 and as the proposal is a change to a Schedule 2 development it appears to fall under paragraph 13 (a) of Schedule 2. I have therefore sought to provide details to demonstrate that the change will not result in significant environmental effects.

Background

The previous development encompassed a major waste management facility including the construction of a new roundabout, facilities for the recycling of wastes and aggregates, treatment of household waste, extraction of clay, sand and gravel, landfill of remaining waste, remediation of old landfill together with restoration proposals. At the entrance to the site is the Recycling Park which provides facilities for the reception, sorting and segregation of wastes. The current planning permission provides for a building 112 long by 25 metres wide. This was to house a reception hall for the receipt of waste at the start of a mechanical biological treatment (MBT) process. (The first phase of the building has already been constructed). The material was then proposed to be fed through the mechanical process which included a large rotating drum which partially broke down the material and separated it into two fractions. Any metals would be removed by magnets and eddy current separators. The large fraction would be automatically bailed and transferred to the landfill for disposal. The fines, which contains the organic fraction, would be transferred by vehicle to the organic treatment centre where the material would be treated through anaerobic digestion and composting.

Since the planning consent was issued there has been further developments in the waste management industry and changes in legislation. The driver behind developments in waste management is not only to increase recycling but also to require the processing of waste in order to reduce its biodegradability and thereby reducing the production of greenhouse gases from landfill. The reduction in biodegradability can be achieved by thermal treatment such as incineration or pyrolysis or by the mechanical biological treatment of waste (MBT) which covers a wide range of systems which involve the drying or composting of waste. There are strict targets set by Europe on reducing the amount of biodegradable waste going to landfill. These targets require the following reductions in biodegradability from 1996 levels.

- 25% reduction by 2010
- 50% reduction by 2013
- 75% reduction by 2020

In order to ensure that we meet those targets, DEFRA has set County Councils targets to meet on the amount of biodegradable municipal waste they can landfill. Each Council will receive significant fines if they fail to meet these targets.

The company has continued to stay abreast of changes and investigate new and existing technologies for the best ways of dealing with waste in order to meet the targets. From our experience in processing waste, in particular our in-vessel composting process, and as a result of investigations of other technologies, an MBT process is still felt to be the best solution for dealing with Cambridgeshire's waste. The type of MBT process proposed is different from the one currently consented. The main change to the process is the biological element which only includes composting and does not include anaerobic digestion. It is felt that anaerobic digestion is more appropriate for dealing with liquid and food wastes rather than mixed household waste. Our aim has been to find a solution which is simple, flexible and robust and the process proposed is felt to be the best proven technology available which will maximise recycling and meet the County's targets. Details of the proposal are outlined below.

SUMMARY OF PROPOSED DEVELOPMENT

1. Characteristics of the development

The proposed MBT facility at Waterbeach primary aim is to view waste as a resource and recover as many beneficial products as possible and divert the material away from landfill.

It provides the reception area for mixed residual household waste from the Districts of South Cambridgeshire, East Cambridgeshire and Cambridge City and from the local HWRCs. Residual household waste delivered to transfer stations at Alconbury and Wisbech will also be processed at this facility. Current estimates on the tonnage required to be processed range from 143,000 to 188,000 over the next 28 years. The facility also has the capacity to process commercial and industrial waste which is currently landfilled at the site should this prove viable.

The MBT process is separated into two distinct halls and functions:

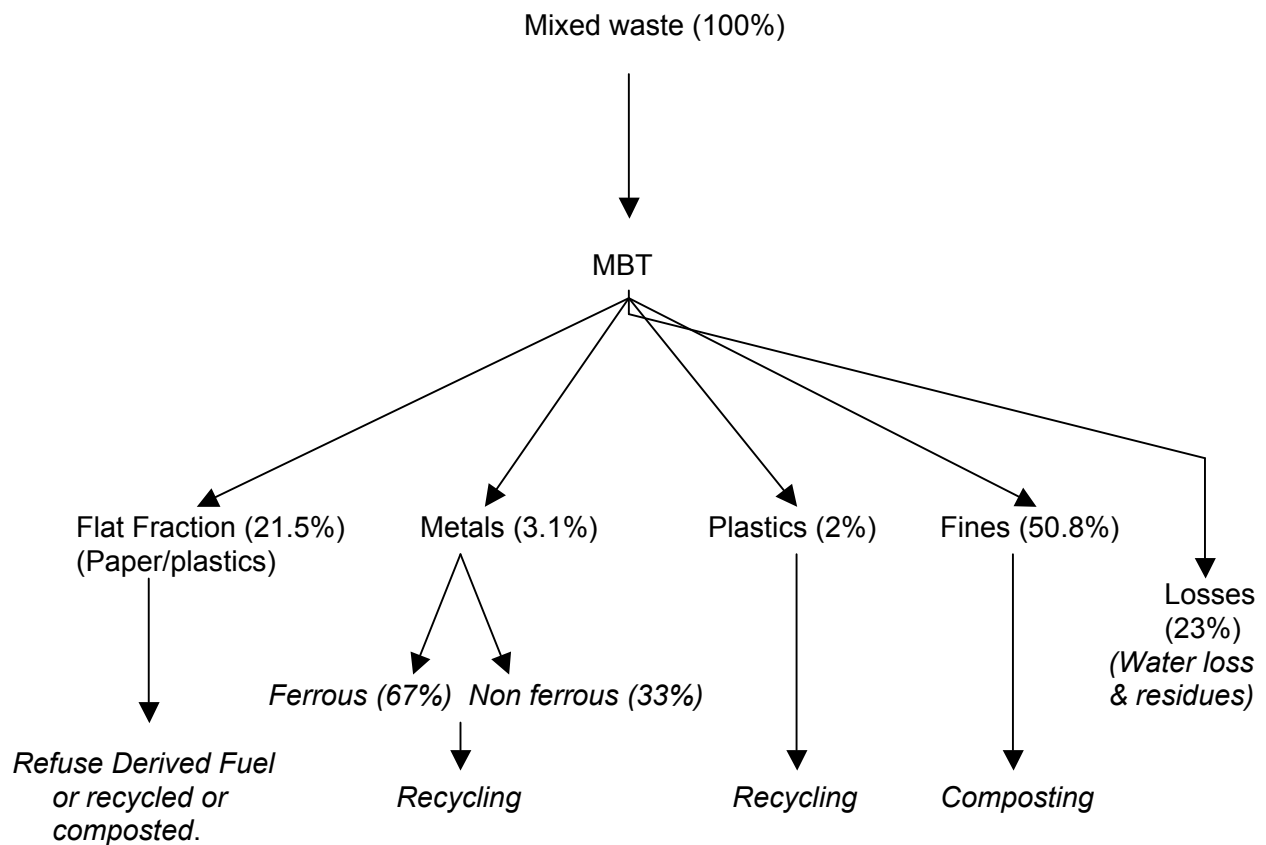
- *Mechanical Treatment*

The role of the mechanical pre-processing is to recover recyclable materials such as metals or plastic bottles (rolling fraction) which remain in the residual waste and to separate those materials suitable as a Refuse Derived Fuel (RDF) such as plastic film, paper and textiles (flat fraction) or for recycling and to prepare the remaining material (fine fraction) for composting.

- *Biological Treatment*

The role of the biological composting process is to reduce the biodegradability of the material and to make a product suitable for use on the land.

The ultimate aim of the MBT processing is to meet the requirements for the reduction of biodegradable waste going to landfill and to recover as many recyclable products as possible. The process seeks to provide the flexibility to recover as many of these materials as possible and can be adapted to meet changing waste streams and volumes. A simple mass balance showing the potential splits from the processing is shown below.



It is also proposed to incorporate an Education Centre as part of the MBT facility. This Centre is situated at the front of the facility connected to the Pre-processing Hall and Composting Hall. Access can be gained from the Centre to view the whole MBT process from enclosed viewing areas.

The proposed layout of the facility is shown on drawing 2/5. The conceptual view of the proposed elevations is shown on drawing 2/6. As vehicles do now, after being validated and weighed at the weighbridge, they will manoeuvre on the separate traffic area in front of the Waste Reception Building, and reverse into the reception area where incoming material is unloaded and stored. This reception area contains the material handling grabs for loading the material, two bag openers and frequency controlled conveyors leading to the separation process and building.

From the Waste Reception Building the two conveyors are fed into the Preparation Building. Within this building the material undergoes a screening and sorting process with trommels and ballistic separators, magnets and eddy current separators, which divides the material suitable for recycling such as metals and plastics, has the potential to produce an RDF material and the material for composting. The material for composting is then shredded to a size below 80mm.

The 80mm fraction from the preparation building is fed into the Composting Building via a conveyor belt and onto the input bridge. There are two windrow containers or halls in the composting building each with their own input bridges, turning mechanisms and output mechanisms. Each windrow hall is effectively divided into 6 'fields' each getting progressively shorter as the material

moves down the hall and composting occurs, to the output section. The process normally takes 6 weeks.

After 6 weeks in the hall the material is moved into the storage area and screened to remove any remaining contaminants. The aim is to produce a usable compost product suitable for land remediation/restoration but any surplus material not required can be landfilled as it will have met all its requirements for a reduction in biodegradability.

(a) Size of the development

The site covers an area of approximately 3 hectares of the reception park. The proposed buildings are shown on the attached layout plan. The development encompasses three main buildings; the Waste Reception Building which is 50m long by 40m wide and 10m to the eaves and 12m to the ridge. The Preparation Building, which also includes the Education Centre, is 54m long by 45m wide and 10m to the eaves and 12m to the ridge and the Composting Building which is 180m long by 73m wide. These buildings are the same height as the existing Waste Reception Building. Although the proposal results in a greater number of buildings it does not increase the area already permitted as a recycling centre. Any impact resulting from the characteristics of the development should be focussed on the impact of the additional buildings and the change to the technology proposed to operate within the buildings.

(b) The cumulation with other development

This proposal is part of an integrated waste management facility at the Waterbeach site. It does not add any additional processes that have not already been permitted in principle.

(c) The use of natural resources

It is proposed to minimise the use of natural resources at all stages of the detailed design of the facility and reviewed throughout the operational life of the site as part of the continuous improvement undertaken through the environmental management system. The use of recycled materials will be proposed wherever possible in the construction of the development. It is intended to use grey water recycling systems and solar panels on the roof of the buildings to minimise water and energy consumption.

(d) The production of waste

The purpose of the development is to process waste and maximise resources. Any marketable recyclable materials will be separated from the mixed waste and the remainder composted to produce a usable product. Only the residual material from the screening operation at the end of the process will be landfilled. The material cannot be recycled and has reached the required reduction in biodegradability to allow it to be landfilled.

(e) Pollution and nuisances

The facility has been designed to reduce the effect of gaseous, odours, dust and bioaerosol emissions on the environment. Air from the preparation halls is combined with air in the composting halls. Once in the hall the air is sucked vertically from the top to the bottom through the compost. This not only allows the treatment of the air and subsequent gaseous emissions but also removes any dust, odours and bioaerosols from the mechanical separation areas to the composting hall where they are treated. The temperature of the compost can also be measured and can be corrected by adjusting the ventilation systems.

To ensure no emissions can escape from the production hall, the air management system is designed to have reduced pressure in the composting hall. Consequently, a slightly greater air volume is always extracted from the hall than is blown in by the inlet ventilator for supplying air to the hall. The differential air volume is supplied via automatic shutters in the outer walls of the composting hall.

Once the 'exhaust air' has been collected it is passed firstly through a counter-flow spray washer, which removes the ammonia and then passes through a bio-filter, which removes any other emissions such as odours.

With respect to water emissions the facility has been designed to collect, store and re-use any leachate and clean water. As the air is sucked down any water vapour is also drawn down and the resulting leachate is collected and pumped to a tank and sprayed back onto the initial stages of the process.

The facility has been designed to reduce the effect of noise emissions. All processing is carried out within a building. The airborne noise generated by the pre-processing equipment is largely dependent on the type of material to be separated and the specific usage conditions. The values increase with the hardness of the material. Airborne noise measurements under typical operating conditions will be undertaken and noise protection measures implemented where appropriate.

Site operating hours and shift patterns at the Waterbeach Waste Management Park will be governed by existing and permitted operating hours, namely:

WATERBEACH	PERMITTED WASTE RECEPTION	PERMITTED OPERATING HOURS
Monday – Friday	07:00 – 18:00	06:00 – 21:00
Saturday	07:00 – 16:00	06:00 – 16:00
Sunday	09:00 – 16:00	09:00 – 16:00

It is not proposed to change the existing hours of working at the site. It is proposed to include a noise and odour assessment with the planning application to demonstrate that there will not be a significant impact. Any potential for noise and odours can be mitigated against

(f) The risk of accidents, having regard in particular to substances or technologies used.

The basis of the technology proposed is no different than that which is already approved. They both involve the mechanical biological treatment of waste. The development involves very simple processes the pre-processing of the material is a mechanical separation process involving conveyors, trommels and ballistic separators. The biological process is basically the composting of the waste. The whole process is contained within buildings and a contained environment. A breakdown in any part of the system would not result in a danger to the local area. There is capacity within the building to hold the material for short periods and if necessary the material can be directed to the landfill.

2. Location of Development

(a) The existing landuse

The existing landuse is already permitted for a mixed waste treatment facility. The site is currently used partially for the reception of waste to the site and an aggregates sales yard. The majority of the site was previously agricultural land which is currently grassland. The facility currently permitted was to be sited on the southern side of the access road and weighbridges in the Recycling Park. Slight changes in the alignment of the access road meant that the initial phase of the building was constructed on the northern side. The proposed location of the new facility is on the southern side of the access road and weighbridges which was identified for the Recycling Centre.

(b) The majority of the mixed household waste is already received in the current Waste Reception Building at the site. This material is currently landfilled. The proposal seeks to process that material and recover recyclables, a potential RDF and a compost material for land remediation. There is existing sand and gravel reserves on the site together with a concrete batching plant and recycled aggregate facility. These on site resources will be utilised in the construction of the facility. Extensive screen planting was provided at the front of the site to help soften the development of the Waste Management Park. There is potential for the existing planting to be supplemented to aid the overall appearance of the site.

(c) The site is not located within a sensitive area with regard to landscape or ecological designations. The proposal will have regard to Denny Abbey SAM to the south east of the site on the eastern side of the A10.

3. Characteristics of the potential impact

(a) The extent of the impact

There is no change to the area identified for the development and therefore no change to any impact on the local population. The estimated mixed waste tonnages in 1999 were 120,000 tonnes per annum that has risen to 143,000 tonnes for 2007. The whole site covers some 250 hectares and the reception park 10 hectares. The area proposed for the facility, its associated car parking and landscaping covers some 3 hectares of the reception park. The proposed buildings cover some 17,570m².

(b) The transfrontier nature of the impact

The current permission is subject to a catchment restriction which includes household waste arising from the whole of Cambridgeshire and Peterborough and a 37km radius from the site. There is no proposed change to this catchment, the facility is to process Cambridgeshire waste in accordance with the proximity principle.

(c) The magnitude and complexity of the impact

There is no significant change in the magnitude and complexity of the proposal. The system proposed is a simple process which involves mechanical processing and composting. The larger buildings will have additional visual impact which can easily be assessed.

(d) The probability of the impact

The system operates within a controlled environment within buildings. Any potential impact with regard to noise, odours or pollution are all tightly controlled. Any impacts will be minimal and there will be no increase or additional risk to the environment from the permitted scheme. In fact this system is more tightly monitored and controlled than the previous system proposed. The existing operations and developments together with the fact that the site is not within a sensitive area means that the visual impact of the proposal can be adequately addressed through sensitive design and landscaping.

(e) The duration, frequency and reversibility of the impact

There is considered no change as the facility proposed is still an MBT facility for processing mixed waste on the site.

Consideration of Significant Impacts

Air Quality and Climatic Factors

The process takes place within a building where the environment is carefully controlled. There will be no increase in dust emissions from the site as a result of the development. All the roads and

turning areas will be hardsurfaced and all operations will take place within the buildings. The hardsurfacing will be kept clean and damped where necessary.

All the waste would be handled within the buildings in a controlled environment. Odour control measures would be utilised in all the buildings. Air from the Composting Hall is treated and a biofilter is proposed to ensure no odours are released. An odour assessment detailing the controls proposed will be submitted with the planning application.

Amenity and Socio-economic

There will be no changes which will result in a significant impact. The proposed design and layout of the buildings has been carefully considered to ensure there will be no impact on nearby residents. All operations will take place within the buildings. The proposed layout of the buildings has been carefully designed to ensure that operational areas are screened and are as far as possible from the nearest residential properties. It is felt that this would be an improvement on the permitted facility. There will be 22 jobs created from the running of the enhanced waste facility necessary to support the growth predicted in Cambridgeshire.

Archaeology and Historic Buildings

An archaeological assessment has already been carried out on the site as part of the previous EIA. Further investigation is required on a small area of the site. This work will be carried out prior to any development on the site in accordance with the approved requirements. The proposed design and landscaping of the new buildings will take account of the impact on Denny Abbey Scheduled Ancient Monument.

Ecology

The land was previously in agricultural production and is currently grassed. The two ponds in the Recycling Park were surveyed for Great Crested Newts in April 2006 and none were found. The site will be surveyed for ground nesting birds prior to any development if necessary depending on the time of year. All existing hedges and tree planting will be retained and enhanced.

Geology and Soils

The assessment has already been carried out and there is no change as a result of the new proposals.

Landscape and Visual

The assessment was undertaken on the original proposal. The advanced planting and bunding at the front of the reception park has already been carried out and is becoming well established. The new proposals which involve much larger buildings have been carefully designed to reduce any impact on the landscape. There is no change to the heights of the building and additional landscaping will be put forward to enhance the existing planting. The design of the proposal has

taken account of the Cambridgeshire County Council's Design Guide for Major Waste Management Facilities.

Noise and Vibration

All the processing takes place within buildings. The proposed layout has been designed to ensure that the operational areas are at the furthest point from residential properties and will be screened by the buildings themselves. Details of the noise emissions from the new technology proposed will be submitted with the planning application.

Traffic, Transport and Highways

The initial assessment was carried out taking into account all operations this has not changed. The assessment was carried out on 284 movements per day. There are currently some 250 - 300 movements per day. Any increase in movements will be minimal, a maximum of 10 per day. The proposal does not seek to increase the amount of waste to be handled, and thereby vehicle movements, already permitted to enter the site. Access will continue via the existing dedicated roundabout.

Hydrology and Hydrogeology

A grey water system will ensure that fresh water usage is kept to a minimum. All surface run off water will be managed and much of this will be utilised where possible in the composting process. All waste will be handled within the buildings with sealed drainage. The site already has an extensive monitoring system for ground and surface water and this will be extended where necessary in consultation with the Environment Agency under the revision of the PPC Permit.

A Flood Risk Assessment will be provided if required to show the measures taken for surface water run off and the construction of the buildings will not increase risk from flooding.

Conclusion

It is considered that none of the above will result in significant environmental effects. The change to the EIA development already consented does not result in an extension of the site or the types and tonnages of waste accepted and processed. The change relates to a variation in the technology process but still involves the mechanical biological treatment of mixed waste. The most significant change is the size of buildings which is required in order to ensure that the whole process is contained and properly managed. The site is not located in a sensitive area and with sensitive design, layout and landscaping it is not considered that it will result in significant environment effects.