

Winning the war on waste
NORTHACRE RESOURCE RECOVERY CENTRE



Non Technical Summary

February 2007

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INTRODUCTION

This document is the Non-Technical Summary (NTS) of the Environmental Statement (ES) which supports a planning application for a Resource Recovery Centre (RRC) at Northacre Industrial Park Westbury.

The planning application includes a mechanical and biological waste treatment (MBT) facility, a household recycling centre (HRC) and parking facilities for the vehicles associated with recycling and waste collection in the area.

An Environmental Statement has been produced, which provides the findings of the Environmental Impact Assessment (EIA), which has been undertaken for the proposed development. The EIA has been prepared in accordance with the Town and Country Planning (Environmental Impact Assessment) (England and Wales) (EIA) Regulations 1999. The EIA considers possible impacts of the proposals where it has been assessed that there is likely to be a potential for significant impact to arise. The EIA looked at the potential impacts on Traffic, Air Quality and Noise. Consideration is also given to the alternatives to the proposed MBT.

THE DEVELOPMENT

The Resource Recovery Centre will be developed on the Northacre Industrial Park which is located to the west of Westbury town centre and to the south of the established West Wilts Trading Estate. Northacre Industrial Park, including the site for the RRC, has been granted outline planning permission for Industrial and storage development (B1, B2, B8 uses). The developments which have already taken place include fleet vehicle storage and preparation, Royal Mail Depot, a company manufacturing adhesives and resins and the dried milk production factory.

The MBT plant will handle 60,000 tonnes of household waste each year. It will process and treat the waste to produce solid recovered fuel. A number of other products are created also, some of which can be further recycled or reused. The treatment process causes the weight of waste to reduce considerably as approximately a third by weight of water in the waste is lost during the process.

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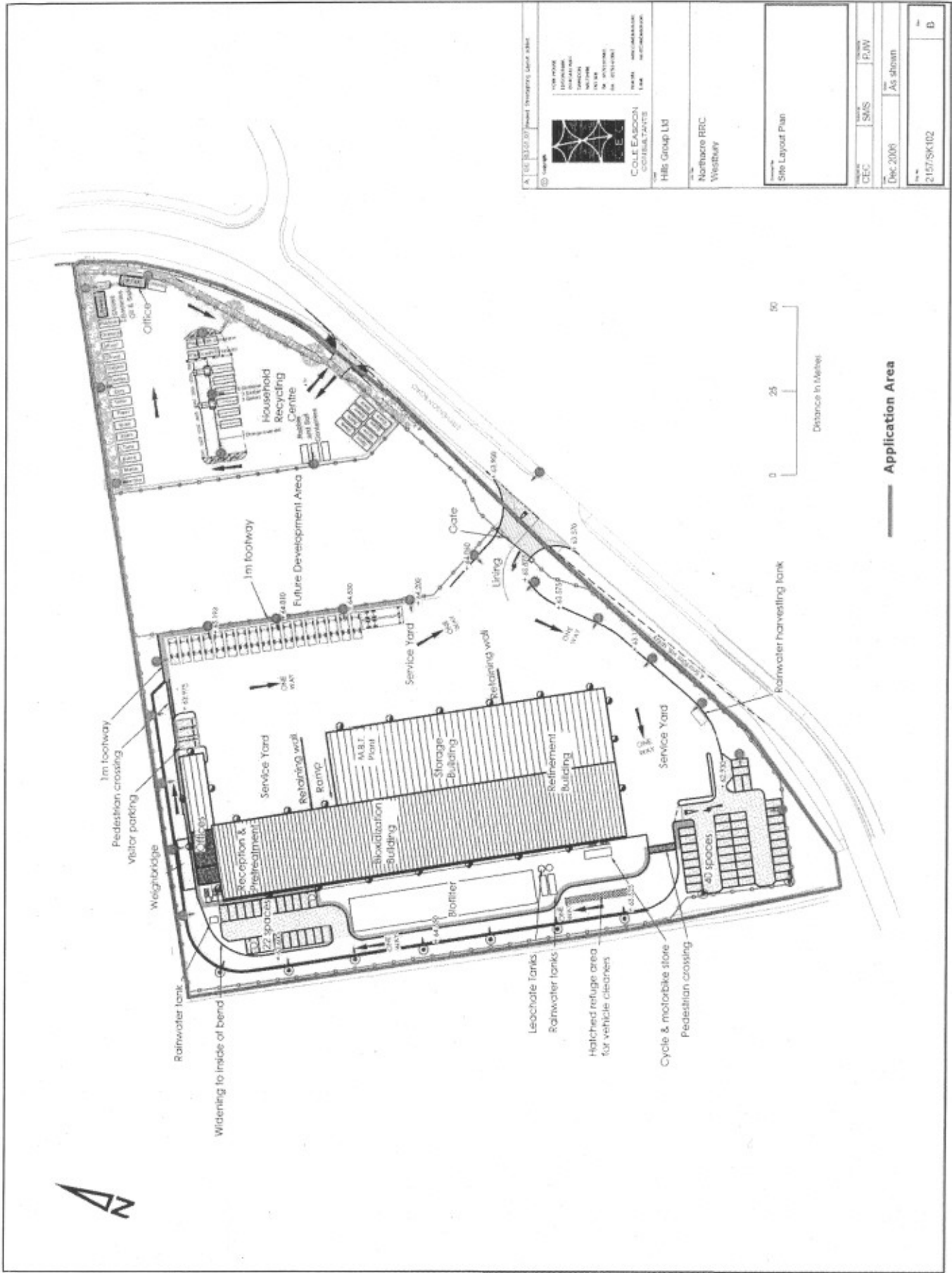
The Resource Recovery Centre has three principal elements, the MBT, the HRC and the vehicle parking. To support these uses there will also be ancillary development including a weighbridge and office, staff mess rooms and parking, and landscaping of the boundaries.

The layout of the site is shown on the drawing below and further details on the design and layout are included in each of the sections of the supporting statement to the planning application and in the ES. Layout of the facility has been designed through a combination of the findings of the assessments which have been carried out and the operational needs of the proposals.

The MBT is contained within an industrial style building at the southern end of the site. The building has been designed to minimise its impact on the surrounding landscape. Its impact on surface water has also been minimised by including features such as rainwater catchment.

The HRC design has arisen from Hills experiences with the developing and running the network of ten HRCs currently in Wiltshire.

Vehicle parking and the other ancillary facilities including offices, weighbridge and welfare facilities are needed to support the other aspects of this proposal.



		Cole Eason Consultants Hill's Group Ltd Northacre RRC Westbury	
PROJECT: CES DATE: 21/5/2006 DRAWN BY: SWS CHECKED BY: PJJW	TITLE: Site Layout Plan	SCALE: As shown	SHEET: B

ACOUSTIC ASSESSMENT

An environmental noise impact assessment was carried out for the proposed Resource Recovery Centre.

The study included noise surveys at residential properties identified as being the closest to the site. The instrumentation automatically logged the ambient noise at each site. Measurements were made over a range of conditions including day, night, week and weekends. The measurement locations included: 1&2 Brook Cottages and Brook Farm, both the south and Crosslands, to the north on the Brook Lane Industrial Estate. The assessments at Crosslands, to the north of the site were carried out for typical weekdays, weekend days and a night time period. For the other locations the assessments were for the weekend day and night time periods. The sound pressure levels due to each source and the total sound pressure levels were predicted.

The level of noise which the various activities at the RRC will generate was predicted using information from Entsorga and their knowledge of existing MBT operations as well as measurements taken of the recycling activities at the Trowbridge HRC and noise levels associated with traffic movements. The calculations for the noise levels in the community were based on the guidance in the

appropriate British Standard which is used for rating noise levels on industrial estates.

The noise assessments estimated that without mitigation the noise impact at the nearest receptors would be between "substantial adverse" and "severe adverse" during the day and "severe adverse" at night. For properties to the south of the site the dominant noise sources are the fans associated with the MBT process. For Crosslands the dominant sources are the road traffic (cars and HGV's) and noise from the MBT building.

However mitigation which would reduce noise impact can be achieved in a number of ways such as the choice of noise insulated fans and lagging of the ducting that is used with them. Additional noise reduction can be achieved by choice of the equipment in the MBT building also. The acoustic assessment makes further recommendations which will reduce the noise impact to the south of the site to between "no impact" and "moderate adverse impact".

Options to reduce the noise affecting "Crosslands" have also been considered. The road traffic noise won't be reduced significantly by barriers as they would have to be placed between the road and

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the house. This landforms part of another industrial site out of Hills control. Development of that site is due course could reduce the traffic noise.

AIR QUALITY ASSESSMENT

The main local air quality issues associated with the proposed development have been identified as:

The potential impact of the Northacre RRC on local pollution concentrations, specifically nitrogen dioxide (NO₂) particulate matter (PM₁₀), volatile organic compounds (VOCs), bioaerosols and levels of dust during the operation of the Facility;

Potential impacts have been assessed in relation to local sensitive receptors. These are locations where people may be affected by the air quality issues identified above. The nearest residential receptor to the Northacre RRC is "Crosslands", approximately 212m from the centre of the site.

A variety of methods have been used to assess the various potential air quality

issues that may be associated with the RRC. The impact of road traffic emissions has been assessed using the Design Manual for Roads and Bridges (DMRB) screening methodology and potential impacts from dust has been

assessed using guidance from the Buildings Research Establishment (BRE), the Quality of Urban Air Review Group (QUARG) and the Department of the Environment (DoE).

The potential for odour nuisance has been assessed on the basis of baseline site visits and consideration of the likelihood of suitable meteorological conditions providing a source-receptor pathway. The potential for odour nuisance to be caused by the RRC has been assessed as part of the consideration of process emissions from the Biofilter Bed, which comprises part of the mechanical and biological treatment process (MBT Plant).

The assessment of potential impacts associated with the process emissions has involved the use of advanced dispersion modelling software ADMS-3.3 to model potential releases of odour, dust and ammonia (NH₃). VOCs have been monitored for a period of three months using passive diffusion tubes to establish a local baseline.

The results of the air quality assessment conclude that it is unlikely that any of the sources of emissions considered will cause a significant impact on local air quality at local sensitive receptors.

TRAFFIC IMPACT ASSESSMENT

The traffic study considers the traffic and transportation issues associated with the proposal together with the potential traffic impact on the surrounding local highway network. It has been prepared following detailed discussions and meetings with officers from Wiltshire County Council, which is the Highway Authority for the area.

The majority of vehicle movements associated with the development proposal will occur outside of the associated peak hour periods on the local highway network. Refuse Collection Vehicles and Kerbside Collection vehicles will leave the Westbury site before 8:00am and return to the site before 5:00pm. The removal of materials from the MBT by HGV will be minimal and spread across the working day.

The peak periods of vehicle movement associated with the proposed development will be at weekends when existing background traffic is significantly lower than during the week. A full breakdown of anticipated vehicle movements is provided within this Transport Assessment. However, the majority of predicted vehicle movements are those relating to the general public's use of the proposed

HRC. This Transport Assessment has assumed that an average of some 150 cars will visit the HRC each day, this based on surveys from existing similar facilities elsewhere in the county.

Hills Minerals & Waste Limited have confirmed that their heavy goods vehicles (Kerbside Collection Vehicles and the like) will adopt an agreed HGV routing strategy which will minimise vehicle movements through the residential area known as 'The Ham'. Hills will also provide new HGV routing signage as agreed with Officers of Wiltshire County Council.

There will be some localised highway impact, mainly as a result of members of the public using the proposed HRC facility. However, local residents are presently required to use the existing HRC facilities at Trowbridge or Warminster. Therefore, this new local facility has the potential to provide an annual visitor distance mileage saving of over 160,000 miles (260,000 kilometres) based on Westbury residents alone.

The predicted highway impact in the weekday AM peak hour period (08:00-09:00) is below 5%. This impact is insignificant. Impact during the weekday inter-peak period (11:00-12:00) is higher, but generally very local to the site (Storrige Road). This

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NORTHACRE RESOURCE RECOVERY CENTRE

impact relates to circa 50 two-way vehicle movements which are mostly car trips to the proposed HRC. This impact relates to less than one vehicle movement per minute. Even with development traffic, the inter-peak vehicle flows (with development) on any of the assessed highway links remain lower than that experienced in the AM peak hour period without development traffic. The average impact during the weekday PM peak hour period (17:00-18:00) is between 3 and 4% for both assessment years considered. The greatest impact in percentage terms is during the weekend inter peak hour period, and this again is related to the general public visiting the HRC facility. For all time periods assessed, all of the highway links within the study continue to have reserve capacity when development traffic is added. All impacts can be categorised as 'less than slight' when considered in accordance with the IEA Guidelines on Environmental Assessment. There will be no significant increase in HGV movements within Westbury town centre as a result of the proposed development.

The Transport Assessment has demonstrated that the proposed development is not predicted to have a significant impact on the future operation of existing highway junctions

along the network. All junctions are predicted to continue to have reserve vehicular capacity, even with the addition of development traffic. There will be no significant impact on vehicle queue lengths.

The proposed MBT plant will reduce domestic landfill waste to a minimum and, in so doing, produce an alternative fuel source which could be used at the local Westbury Cement Works (Lafarge). Many of the refuse collection vehicle movements associated with the development proposal are already on the wider highway network, albeit that they presently originate from Trowbridge and Compton Bassett.

The MBT Plant will reduce West Wiltshire's reliance on landfill technology. The predicted vehicular impact can be accommodated on the local highway network and at its junctions.

ALTERNATIVES

In considering the environmental impacts through the EIA process, alternatives to the development proposed should also be considered. The alternatives which have been considered in this application include the process for dealing with waste, the location of the RCC as well as the options for the

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NORTHACRE RESOURCE RECOVERY CENTRE

layout of the site which were considered during the design phase.

One of the choices which has been considered is the option of "doing nothing" i.e. not providing any alternative waste management facilities. If no further steps are taken to deal with the non-recyclable household waste, and the MBT is not built; the waste will continue to be transported to Lower Compton Landfill. Continued landfilling of waste and in particular biodegradable household waste is neither desirable from an environmental perspective nor financially viable due to the fines which would be imposed on Wiltshire by central government for failing to achieve landfill diversion targets.

The alternatives to Mechanical Biological Treatment for diverting waste from landfill were subject to scrutiny by the County Council through their adoption of their waste management strategy. The options for disposal of residual waste are not extensive and aside from MBT include energy from waste, including incineration, pyrolysis, gasification and anaerobic digestion. The County has identified, through consideration of the "Best Practicable Environmental Options" that a combination of MBT, Anaerobic digestion and Energy from

waste facilities presents the best option for Wiltshire. These reflect the choices for disposal of waste, but the focus is on reducing the amount of waste which requires disposal by encouraging householders to reduce and recycle their waste.

The HRC element of these proposals provides a local facility which accepts a range of wastes that cannot be catered for in the kerbside collections or the local bring sites.

Alternative locations were considered by Hills, principally by investigating sites identified by the County Council in current and emerging waste policy documents as being suitable for this type of development. Additionally sites which were available in similar industrial locations were also considered. The need to locate the facility within in the area it is to serve, the area required, the need to have services accessible and the availability of the land to Hills, resulted in the Westbury Industrial Estates being identified as the most appropriate area. Although a site on Brook Lane was initially considered, it was substituted with the current Northacre site when it became available. Although it has been suggested that the RC should be sited at the Westbury Cement Works this site was not available to Hills.

requirements and the shape of the site. Consideration was given to locating the HRC at the southern end of the site, but this would have placed the MBT building and vehicle parking on the sweep of Stephenson Road. The building shape was dictated by the plant requirements inside. The external appearance of the building was arrived at by assessing how the practical requirements could be accommodated in a design and colour scheme which minimised the landscape and visual impact.

CONCLUSIONS

The proposals to build a RRC including a Mechanical Biological Treatment plant and a Household Recycling Centre at Northacre have been subject to intensive study on issues which were considered to have the potential to create significant impact. The assessments specifically looked at air

measures to protect surface and groundwater and the design of the MBT building itself.

The acoustic assessment has found that there is potential for impact on a residence to the north of the site. The degree of impact and its significant will be further discussed through the planning process

The findings of the extensive range of other assessments have been that the RRC can be located on the chosen site at Northacre without causing any unacceptable environmental impact. The planning support statement has also addressed the need for waste treatment and describes how the proposals fit with national and local government policy on waste facilities.