Northacre Resource Recovery Centre

Annual Environmental Report – Contract Year 10 (Nov 2022 - Nov 2023)

Contents

1. Introduction

This Annual Environmental Report (AER) is produced by Hills Waste Solutions (Hills), as required by Schedule 9 of the Waste Management Landfill Diversion Contract (the contract) entered into between Wiltshire Council and Hills on 26 April 2011. The contract is for 25 years and allows for 60,000 tonnes of municipal solid waste (MSW), to be treated at the Northacre Resource Recovery Centre (Northacre RRC), located at Stephenson Road, Northacre Industrial Park, Westbury, Wiltshire.

The AER reports on the performance of the Northacre RRC in contract year 10, covering the period 11 November 2022 to 10 November 2023.

More information on Northacre RRC can be found on the website **www.northacrerrc.co.uk**

1.1 Role and relationship of the Council as Waste Disposal Authority (WDA) and HWS as the Waste Management Contractor

Northacre RRC is responsible for the processing of Municipal Solid Waste, MSW, within the county, employing 19 staff at the facility. The overall objective of this contract is to divert this waste from landfill.

1.2 Summary of contract purpose and objective

Wiltshire Council developed a policy document 'Energy and Climate Opportunity (ECO) Strategy 2011 – 2020'.

In the ECO strategy, the Council has made a specific commitment to reduce the amount of MSW sent to landfill.

The more recent Wiltshire Climate Strategy, approved in February 2022, continues with the commitment of diverting waste to landfill, with rigorous application of the waste hierarchy, in accordance with the Environment Act, to assist with the Wiltshire's ambition of being carbon neutral by 2030.

1.3 Purpose of the Annual Environmental Report

Wiltshire Council is accountable to its electorate to show value for services received under the Contract. This AER provides information and reports on the environmental performance of the operations within the direct control of Hills Waste Solutions (Hills). It shows how Hills has assisted Wiltshire Council to meet its strategic commitments and is available free of charge to the public for information from Hills' websites, **www.hills-waste.co.uk** and **www.northacrerrc.co.uk**

1.4 Summary of what is monitored

In order to discharge its obligations under the Project Agreement, which forms part of the contract with Wiltshire Council, Hills carries out a wide range of monitoring to assess the effectiveness of the services provided. These are:

- Waste input levels – to ensure the waste targets are met and to review these with Wiltshire Council.
- Landfill performance and fuel production performance – to maximise the amount of material diverted from landfill by either conversion into fuel, loss through drying or removal of recyclates.
- Fuel quality – to ensure that whilst maximising fuel production, quality and contractual targets are met and maintained.
- Moisture loss / drying performance – to ensure that as much material as possible is diverted from landfill through bio drying.
- Recyclate performance – to ensure the maximum amount of recyclable material is extracted and sent to merchants for further processing and recovery.
- Air emissions – to ensure air filtration systems work effectively and efficiently and that emission limits are met as set out in the Environmental Permit.
- Plant availability – to ensure both contractual obligations relating to waste deliveries and operating costs are managed within expectation.
- Leachate composition and levels – as part of the internal quality control system along with the duty of care requirements for the transfer of waste.
- Fly management in and around the site – as a requirement of the Quality and Environmental Management Systems together with Environmental Permit obligations.
- Odour levels in and around the site - as a requirement of the Quality and Environmental Management Systems together with Environmental Permit obligations.
- Electricity generation and consumption – to assess and review the energy efficiency of both the plant and installed photovoltaic systems.
- Transport effectiveness and mileage – is measured and in order to ensure the maximum efficiency is achieved from transport movements with particular regard to fuel consumption and payloads.
- Transport routes utilised - checked by random driver surveys in order to verify that the approved HGV routes are adhered to.

1.5 The purpose of monitoring

Hills monitors the process to ensure that as responsible contractors, we are aware of our performance levels in the following key areas:

- Legal compliance
- Environmental impacts
- Contract requirements.

Hills examines the data collected and takes corrective and preventive action as needed. This regular review ensures that we:

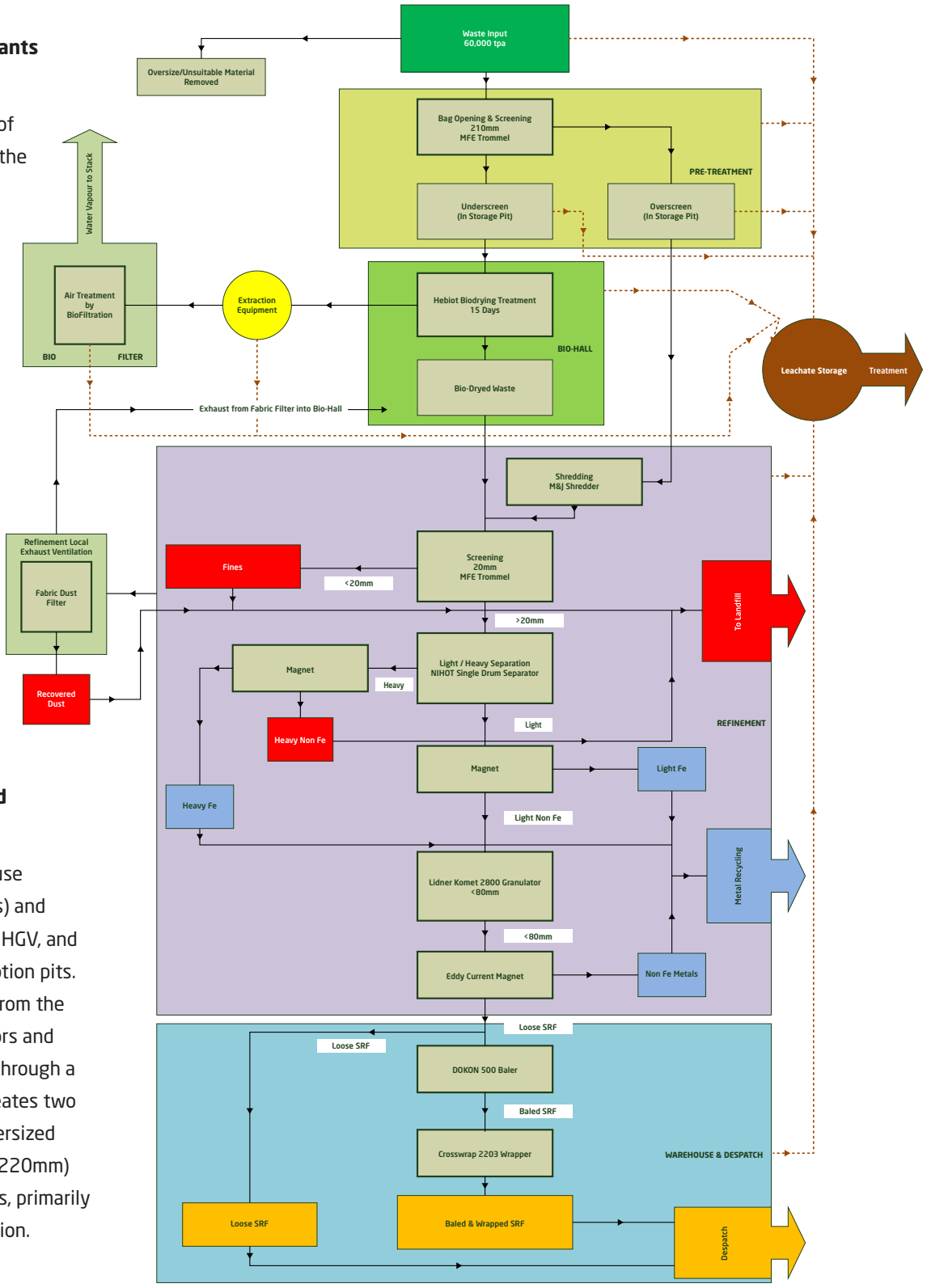
- Maintain standards
- Minimise environmental impacts
- Set and achieve targets – company targets
- Demonstrate continual improvement.

2. Waste Management Facility

2.1 Outline of the plants and processes

Northacre RRC consists of 4 main areas defined in the flow diagram as:

1. **Pre-treatment**
   Reception and pre-treatment
2. **Bio-hall**
   Bio-stabilisation
3. **Refinement**
   Mechanical refining
4. **Warehouse and despatch**
   Baling, wrapping and storage



2.1.1 Reception and pre-treatment

MSW is delivered on refuse collection vehicles (RCVs) and from transfer station by HGV, and deposited into the reception pits. The material is moved from the reception pit by conveyors and automatic cranes, then through a drum screener which creates two main waste streams, oversized material (anything over 220mm) and undersized materials, primarily the bio-degradable fraction.

Oversized material is placed in a separate storage bay where it is sent directly to the Solid Recovered Fuel (RDF) refining line. This stream is composed of chemically inactive material (plastic, paper and card) and is not suitable for biological treatment. Undersized material is placed in a separate storage bay before being placed in windrows within the bio-hall by automated cranes.

2.1.2 Bio-Stabilisation

An automated crane moves material from the undersized storage area into the main bio-hall, creating windrows of 3 to 4 metres in height. Negative air pressure is maintained throughout the bio-hall by air extraction through an underfloor area called the plenum. This air movement also assists with the drying process of the material.

Each windrow is managed separately to maximise bio-stabilisation. Air is drawn through the waste material to promote aerobic decomposition and oxidation of the organic content, for a period of up to 15 days.

Temperatures within the windrows are monitored and air flows are adjusted in response, to optimise the drying process.

The negative pressure differential environment provides for containment of contaminated air with emissions being extracted through a ventilation system that moves odorous air into the bio-filtration plant.

2.1.3 Mechanical Refining

Once the bio-stabilisation phase is completed, the material is moved from the bio-hall into the refining area hopper. Through the refinement process, material which is unsuitable for RDF production is removed using the following equipment:

- Primary shredder
- Hopper
- Drum screener (20mm mesh)
- Air drum separator
- Secondary shredder (RDF production only)
- Magnetic belt
- Eddy current separator
- Conveyors
- Dust extraction system.

2.1.4 Baling, Wrapping and Storage

The RDF material generated by the mechanical refining process enters the warehouse for baling and wrapping.

The bales are typically 1.5m long by 1.1m wide and 1m tall and weigh between 0.95 tonnes and 1.3 tonnes depending upon material density.

The RDF, once baled and wrapped, is stored in the warehouse in preparation for loading onto enclosed trailers, destined for Energy from Waste (EfW) facilities or for converting into fuel pellets for use in cement kilns.

2.2 Summary of waste inputs and recovery and recycling achieved

Contract Year	Inputs (t)	Landfill (t)	Recyclates (t)	RDF (t)	Landfill Diversion (%)	RDF % of Inputs	Landfill % of Inputs	Recyclates % of Inputs
1	53,762	16,917	521	21,120	68.5	39.3%	31.5%	1.0%
2	60,670	18,971	616	27,496	68.7	45.3%	31.3%	1.0%
3	60,864	17,961	657	28,547	70.5	46.9%	29.5%	1.1%
4	57,076	19,763	630	28,749	65.4	50.4%	34.6%	1.1%
5	54,998	20,625	188	26,927	62.5	49.0%	37.5%	0.3%
6	59,758	19,751	99	27,671	66.9	46.3%	33.1%	0.2%
7	59,502	17,335	51	30,998	70.9	52.1%	29.1%	0.1%
8	53,998	18,726	106	25,238	65.3	46.7%	34.7%	0.2%
9	53,617	14,111	75	24,480	73.7	45.7%	26.3%	0.1%
10	54,869	16,016	73	26,384	70.8	48.1%	29.2%	0.1%

The table shows the overall performance of Northacre RRC in contract years one to 10. Landfill diversion has averaged 68.3% over the life of the contract and 69.5% over the last five years. The remainder from the sum of the percentage difference of RDF inputs, landfill inputs and recylates relates to moisture extracted through the drying process.

3. Performance Monitoring

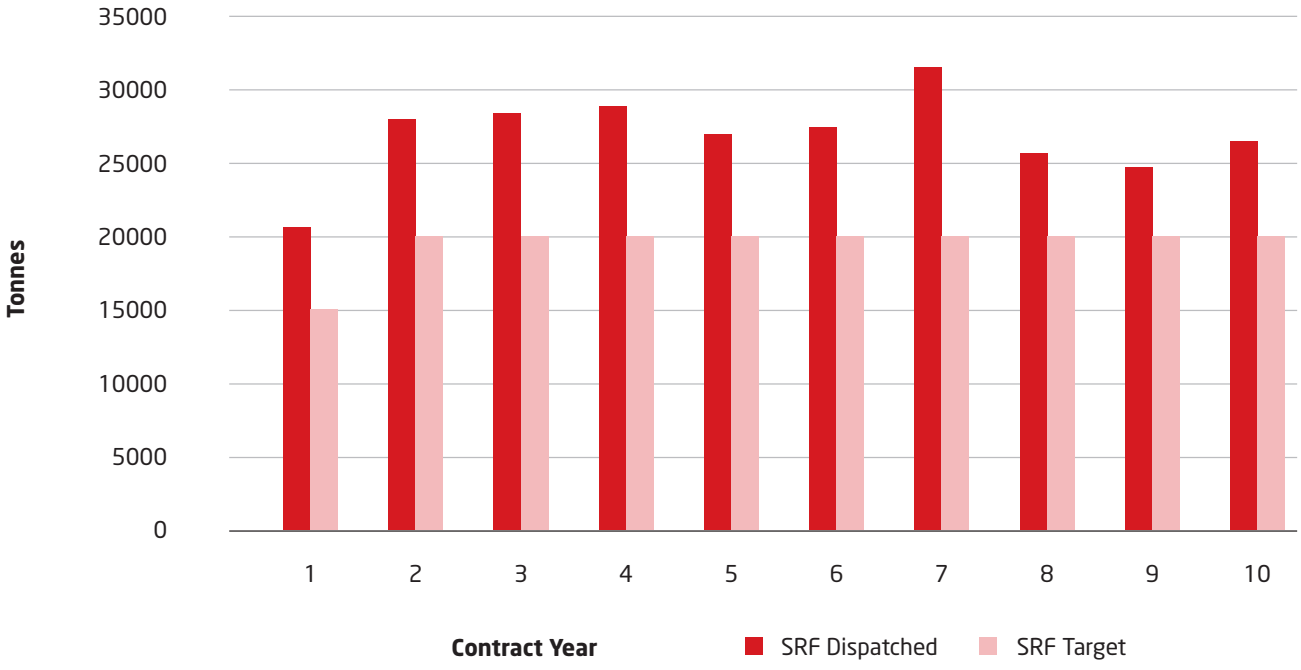
3.1 Targets

3.1.1 This section reports on Hills' performance by reference to the contract targets and the Council's Best Value Duty. Please refer to Schedules 10 and 20.

Schedule 10 of the contract states that in year two and each subsequent year, 20,000 tons of RDF would be produced and accepted by the RDF contractor(s). This continues to be achieved in each contract year.

Schedule 20 of the contract notes Hills' obligation to record performance and to make arrangements to secure continuous improvement in the way in which the services are provided, having regard to a combination of economy, efficiency and effectiveness. The most significant contractual reference point is the volume of waste diverted from landfill; in this contract year, this equated to 73.3%.

3.1.2 Summary of Schedule 10 target against achieved volume



3.2 Monitoring Diversion

3.2.1 Describe what is considered as diversion and how performance is assessed against contract targets

Landfill diversion consists of the waste that would have been deposited in landfill, which has now been diverted to other end uses through reuse, recovery, recycling, and alternative forms of treatment.

Northacre RRC achieves landfill diversion in the following ways:

- The drying and stabilisation of the waste in the bio-hall removes the moisture content of the waste, and this is exhausted out of the stack as water vapour or collected as leachate.
- Recyclates are removed from the waste stream during the mechanical refining process and these are sent to merchants for recycling.
- RDF is the main product from the site and this is utilised to generate electricity at EfW facilities that have achieved R1 status for energy efficiency, meaning that they can be officially classed as 'recovery' rather than disposal facilities.

The process produces some by-products which currently must be sent to landfill. These are produced during the mechanical refinement process and consist of:

- Fines (under 20mm)
- Heavies not including recyclables.

The performance of the above is measured daily and is reviewed with Wiltshire Council at monthly contract performance review meetings.

Fines are currently disposed of to landfill. Due to organic content the fines do not meet the threshold for lower rate landfill tax. The organic content also means the fines contain not insignificant calorific value. Hills has looked into alternative methods of disposing of fines, but without success.

3.2.2 Describe the means employed to achieve the Annual RDF Target

Wiltshire Council is contracted to deliver 60,000 tonnes per contract year of MSW to Northacre RRC. A two shift pattern, from 06:00 – 14:30 and from 13:30 – 22:00 is worked to ensure the plant operates to efficiently receive and process this volume of waste.

Northacre RRC also employs a dedicated maintenance team to service and maintain the equipment to the manufacturers' recommended specification, to ensure that unplanned downtime is kept to a minimum.

There are two (five day) planned shutdown periods that are permitted under the contract during which, major items of preventative maintenance are carried out.

Significant and appropriate spare parts are kept on site and Hills has maintained a good working relationship with local, regional, national and international suppliers of goods and services to ensure a comprehensive network of suppliers can be called upon.

Once RDF is produced, it is crucial that contracts with off-takers are in place, to ensure a continual flow of RDF shipments from the facility. For contract year 10, Hills had an agreement in place with Remondis to take 25,000 tonnes of RDF, split between EfW facilities in Germany and Holland. A further ad hoc arrangement was in place with a UK facility, as a contingency to cover times when Remondis were unable to accept the volume required to be shipped.

3.2.3 Evaluate the means of monitoring the processing operations, including the amount of acceptable refuse actually processed, and the redundant residue left at the end

Hills is certified to both the ISO 9001 and ISO 14001 standard which ensures we operate an extensive and fully auditable Quality and Environmental Management Systems. Within these systems there are detailed procedures to ensure that the process is closely monitored.

All MSW received and RDF exported from the facility is weighed by a fully serviced and calibrated weighbridge. The input and export tonnages (RDF, recyclate and redundant residue) are reported monthly.

3.3 Monitoring RDF

3.3.1 Describe what is considered as RDF and how performance is assessed against contract targets. Do we need this?

RDF is defined in the Waste Management (Landfill Diversion) Contract dated 26th April 2011 as:

> "Any residue of contract waste processed under this contract being biotreated waste which is solid recovered fuel" or "Refuse Derived Fuel"

Periodic testing of RDF material is carried out to ensure compliance with the specification required by the off-take facility.

The performance of volume produced is measured daily and is reviewed with Wiltshire Council at the monthly contract performance review meetings.

3.3.2 The amount of energy potentially generated e.g. converted to electricity and / or heat (if any)

In contract year 10, 26,384 tonnes of RDF was produced at an average calorific value of 14.335 MJ/kg. This equates to a potential recovered energy of 377,951 GJ.

3.4 Monitoring Recycling

3.4.1 Describe what is considered as recycling and how performance is assessed

Under the contract recyclable materials are defined as both ferrous metals and aluminium, the recovered non-ferrous aluminium component is negligible.

The performance is measured daily and is reviewed with Wiltshire Council at the monthly contract performance review meetings.

3.4.2 Describe the means employed to recycle acceptable refuse

The ferrous and non-ferrous recyclate recovered from the process is recycled at suitably permitted facilities.

4. Effectiveness of Process

4.1 Financial

4.1.1 Evaluating the ends markets for recycled materials, in terms of supply, demand and relative value of products

One of the purposes of the mechanical refinement process is to segregate any potential recyclables from the product stream and these are as follows:

- **Heavy metals** – This is sent to a merchant for further reprocessing as the level of contamination is too great to give the material any residual value.
- **Light metals** – The primary purpose of removing light fragments of metal before entering the secondary shredder, was to protect the wear parts of the shredder. The secondary shredder is no longer used, as it is not required to produce an RDF quality of fuel. As the material collected at this extraction is over 65% plastics and bags, it is therefore too heavily contaminated to have a value.
- **Shredded non-ferrous metals** – A very small quantity is collected, which is still quite heavily contaminated with light non-metallic materials. It therefore has no financial value.

4.1.2 Optimising the effectiveness of production or processing to maximise financial returns

Maximising moisture removal from the incoming waste is a process that can influence the overall contract cost to the Council. Increased moisture loss results in reduced volumes of SRF and landfill byproducts, reducing the overall cost of their disposal. Continual monitoring of the biofilter efficiency ensures that moisture removal is maximised and assists in determining when the filter medium should be exchanged for new.

4.1.3 Income from RDF (if any)

No income is generated from RDF export as it remains classified as a waste and attracts a gate fee payment at the recovery point.

4.1.4 Income from electricity and / or heat generation (if any)

Hills does not receive any income from the electricity generated by RDF output.

In August 2014, Hills worked with Wiltshire Council to install 1,248 photovoltaic (PV) solar panels on the roof of Northacre RRC.

The (PV) solar panels generated 156,722 kWh during contract year 10, which provided revenue for the Council under a Feed-in-Tariff and offsets some of the cost of purchasing electricity.

Towards the end of contract year 10, a major service of the PV system identified significant faults. Some faults have been repaired but further work is required to be performed.

4.2 Environmental

4.2.1 The measures taken by the contractor to minimise (at the risk and cost of the contractor) any negative environmental impacts from the facility and the carrying out of the works and services

Northacre RRC is operated under Environmental Permit Number EPR/LP3491EE issued and regulated by the Environment Agency (EA). The permit recognises what environmental effects may impact on the local environment and sets conditions to ensure that the impacts are controlled to acceptable levels.

The environmental impacts of the facility are managed through Hills' ISO 14001 certified Environmental Management System (EMS), which includes the Northacre RRC plant. Hills has carried out a thorough environmental risk assessment of the processes taking place at Northacre RRC, to identify any possible impacts and rated the residual risk with current engineering controls and procedures in place. Where the risk is considered too high, and beneficial changes have been identified, Hills has made improvements.

Hills has a strict contractor approval process in place to ensure that the contractor is competent to carry out works at Northacre RRC. Contractors must provide evidence to prove their competence before they are allowed to start work and agree to follow HWS site procedures.

As part of Hills' Quality Management System (QMS) an approved access route to and from Northacre RRC has been produced, which is provided to all HGV drivers as part of their induction to site.

4.2.2 The emission controls in place to demonstrate compliance with the Environmental Permit and all legislation, including:

Legal requirements are identified and detailed in Hills' legislation register, which forms part of the EMS. This document identifies the requirements of all legislation, what process they apply to and how those requirements will be met.

4.2.2.1 Emission levels from the facility

Emissions to air from the Northacre RRC are proportionately controlled according to the risk of causing pollution. The bio-hall is the most odour generating area of the site and air from this area is extracted and passed through a bio-filter to reduce any dust, odour, bio-aerosols, or potentially harmful substances below the limits set in the EA permit.

Inline monitoring equipment has been installed to enable better control of discharges to air. Increasing the stack height also remains a consideration.

Surface water from the road is collected, passed through interceptors, and discharged to a watercourse. Emissions to this outlet could occur if a polluting liquid contaminated the site drainage. The major liquid pollutants are leachate and fuel in the storage tank and site vehicles. Leachate is stored in a sealed system and drains to underground tanks, which are periodically integrity tested. Bulk fuel is stored in bunded tanks and protected from accidental damage by steel barriers. Procedures are in place to control the transfer of these liquids, which include actions to take following a leak or spill. Equipment identified as required under these procedures such as spill kits are also available on site to limit potential effects.

Hills complies with the Ozone Depleting Substances (ODS) (Qualification) Regulations 2006 and ensures that only qualified persons, through the contractor approval process, work on the recovery, recycling, reclamation or destruction of controlled substances. Hills has identified all equipment containing ODS and minimises leaks through regular maintenance and monitoring.

Hills undertakes environmental monitoring to make sure that processes, plant and people are performing to the required standards and to detect any changes. For example, there is a risk of pollution from a diesel spill on site. Hills has developed procedures and checklists which require staff to check on a regular basis that plant and equipment is not leaking, and spill control equipment is available. If defects are identified, then these are communicated to plant supervisors for action. This whole process is subject to audit as part of the EMS.

Despite precautions, systems can fail, and accidents can occur. Hills has comprehensive emergency procedures, which include the action to take in particular circumstances, location of hazards on-site, drains and watercourses, contact numbers and a command / control hierarchy. Staff regularly practice dealing with emergencies such as spills and lessons learnt are fed back into procedures.

The limits for emissions from the bio-filter to air are detailed in schedule 3, table S3.1 of the EA Permit.

4.2.2.2 Report on any accidental releases of hazardous materials

No hazardous materials have been released during the operational history of the facility.

4.2.2.3 Report on the number of breaches of controls in the last year, including: -

(a) The number of convictions for freshwater pollution

There were no convictions for freshwater pollution.

(b) The number of convictions for other emissions

Hills has not been convicted of any breaches of controls.

The EA carries out audits and inspections of the process. The findings are recorded on CAR1 forms and addressed through HWS management system. Inspection may generate a CCS scores; the higher the score the more expensive the subsistence fee for the Environmental Permit. During Contract year 10 the facility has received no CCS scores.

(c) The number and geographical origin of complaints received regarding the facility

A total of 41 complaints were received in contract year 10. Of these one related to flies, one was regarding seagulls and the remainder related to odour.

Additionally, the EA received several complaints about Hills burning waste at night. They were not formally classified as complaints by the EA.

Complaints received via the Environment Agency may represent multiple complaints.

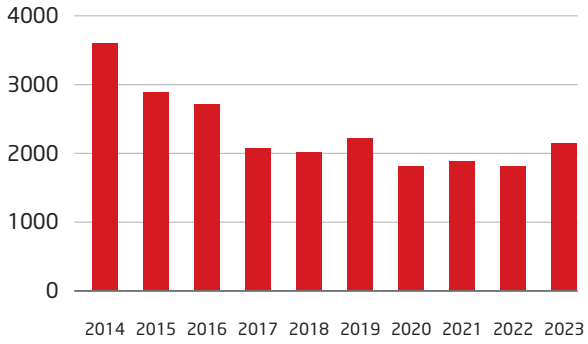
All complaints are investigated and discussed with the individual complainant or the Environment Agency.

(d) Power consumption on site

An energy management system has been enacted in accordance with best available technique. Close monitoring of energy use enables the identification of energy reduction options.

At time of writing The Hills Group is going through third party energy auditing to create a Carbon Baseline. A science based approach will then be used to develop a road map to Net Zero.

Total MWh



MW energy use (purchased) has increased over the last two contract years and may be related to lower energy production from the photo voltaic array, which has been identified as having significant faults.

4.2.3 Measures taken to deal with complaints

Northacre RRC is operated in accordance with its Environmental Permit and ISO Management Systems which are audited by a third party. Complaints can be received from a variety of sources including:

- In person
- By telephone or text
- By letter or email
- From web page referral.

The details of the complainant are recorded in a complaint register and passed on to the responsible manager for action. This includes investigating the issue, correcting the problem, preventing it happening again and providing feedback to the complainant. The status and number of complaints is discussed at monthly management meetings. Hills holds six-monthly liaison meetings with elected local representatives, Wiltshire Council and the EA, which give the opportunity to discuss issues face to face.

Waste is an emotive issue and unfortunately, there may be some occasions when a large number of complaints may be generated concerning Hills' activities, whether justified or not. Hills has a dedicated communications team, who can help in these circumstances and Hills is proud of our record in working with Wiltshire Council, the Environment Agency and other agencies to resolve issues.

4.2.4 Fuel efficiency

All fixed and mobile plant using fuel are maintained and serviced in accordance with manufacturer's recommendations using qualified technicians to ensure that their fuel efficiency is optimised. Following the servicing, Hills is provided with servicing record.

Hills is in the process of replacing the forklift truck, during which a conversion to electric was considered but discounted.

4.2.5 Amount (in tonnes) of processed residue and recyclable materials transported by road, rail and water

See 4.2.6 below

4.2.6 Emissions of CO_2 from the contractor's own transportation (if any) used in the transportation of RDF, Redundant Residue, Unacceptable Refuse or Recyclable Materials from the Facility

Material	Receptor & Type	Destination	Transport Method	Quantity (tonnes)
RDF/RDF	AVR - EfW	The Netherlands	Curtainside (Road - Ferry - Road)	10205
RDF/RDF	ARN - EfW	The Netherlands	Curtainside (Road - Ferry - Road)	14275
Refinement Fines	Hills - Landfill	Lower Compton, Wiltshire	Ro40 skips - Road	9370
Refinement Heavies (non-metal)	Hills - Landfill	Lower Compton, Wiltshire	Ro40 skips - Road	4741
Ferrous Metal	Shanleys - Recycling Merchant	Trowbridge, Wiltshire	Ro40 skips - Road	75.4

Hills' own transport is used to carry redundant residue, consisting of fines and heavies from Northacre RRC to Lower Compton landfill. All other transport of RDF and recyclable materials is made by other contracted waste carriers.

During contract year 10 there were 1,952 vehicle movements resulting in 798,855 kilometers traveled. Assuming 1 litre of diesel produces 2.4Kg CO_2, the total CO_2 produced from transport was 596.12 tonnes.

4.2.8 The volume of waste produced by the contractor

The table below shows the tonnages of waste produced at Northacre RRC.

Waste types	Quantity (t)
Dry Mixed Recyclables	6
General waste	11
Cardboard	14
Hazardous waste	0.020
Total	**31.02**

4.2.9 Amount in tonnes and percentage of processed residue and recyclable materials being dealt with by each stage of the waste hierarchy

The table below shows both tonnage and percentage of processed residue and recyclable material being dealt with by each stage of the waste hierarchy.

Waste Hierarchy Stage	Tonnage	Percentage
Reduce - Moisture to atmosphere	12,396	22.6
Reuse	0	0
Recyclable - ferrous/non-ferrous	73	0.1
Recovery RDF	26,384	48.1
Disposal - Fines and heavies	16,016	29.2

4.2.10 ISO 14001

Hills' management systems in place at Northacre RRC facility are externally audited by SGS against the internationally recognised ISO standards for environment, quality and health and safety.

Hills hold certification to ISO 9001, ISO 14001, and OHSAS 45001

In summary, this means that Hills has:

- Demonstrated compliance with legislation
- Prevented pollution
- Identified and controlled risks to people and the environment
- Provided a reliable, quality service to our customers
- Deployed external and internal audits
- Used competent staff
- Demonstrated continual improvement
- Put in place procedures to deal with emergencies and abnormal operating conditions.

5. Wider Environmental Assessment

5.1 Financial

5.1.1 Relative cost effectiveness of options

Hills has continued to pursue the development of a renewable energy plant adjacent to Northacre RRC to remove the need to export RDF.

See 5.2.1 for further detail.

5.2 Technical

Discussion of how (if at all) the contractor has contributed to and/or performed in:

5.2.1 Developing and deployment of waste management technologies which reduce environmental impact of waste

Principle 3.4 from Wiltshire Council's MWMS 2012 states that the Council will promote local use of the solid recovered fuel manufactured at the Northacre RRC plant.

Northacre Renewable Energy Limited (NRE) is a company established for the purpose of constructing an Energy from Waste Facility (EfW) to generate power and potentially heat on land adjacent to the Northacre RRC.

It is envisaged that the EfW will convert Recovered Fuel (RDF) from the Northacre RRC and commercial and industrial waste destined for landfill, in a thermal process with heat recovery, to produce steam, which will produce electricity through a steam turbine. A substation will be constructed on site to enable the electricity produced to be exported to the National Grid.

It is hoped that NRE will also be able to provide electricity and possibly heat to other businesses on the Northacre Industrial Park. The proposed development will be a major commitment to sustainable waste management.

The facility has been granted an Environmental Permit to operate and has planning permission.

5.2.2 Encouraging research into the recyclables market

Hills continually reviews options for recycling our waste including the recycling of fines that currently go to landfill. Fines from the facility currently attract the standard rate of landfill tax due to their organic content and heat content. No other alternative has been found to date.

5.2.3 Establishing markets for RDF

Hills looks to develop relationships with brokers, EfW facilities, and other businesses to establish a number of potential off-takers of RDF. RDF is currently being exported to continental Europe for energy recovery, and to a processing facility in the UK, producing a pelletised fuel for use in cement kilns. As stated in section 5.2.1, NRE is looking to build a renewable energy plant at Westbury, thereby establishing a local market for RDF produced at Northacre RRC.

5.3 Environmental

Discussion of how (if at all) the Contractor has contributed to and performed in:

5.3.1 Reducing environmental impacts

Hills is committed to reducing environmental impacts associated with its activities. Northacre RRC is operated under an Environmental Management System (EMS) and is independently certified to ISO 14001.

Rain water falling on the facility roof is collected and stored for use on site. This reduces the quantity of water required to be purchased from the local water supplier.

Where possible Hills use local contractors and suppliers to further reduce any impact on the environment.

5.3.2 Securing sustainable transport of waste: rail, water, 'sustainable' fuels

Currently all waste is carried by road to a range of appropriate facilities. Recylables and residual waste are transported to local facilities by road, which remains the most suitable option. With regard to exporting RDF, the building of an EfW plant at Westbury may establishing a local market for RDF and reduce the environmental impact of transport.

5.3.3 Reducing lorry numbers and lorry miles

The tonnage of material transported by road is maximised so that each vehicle is carrying as close to the legal maximum weight as possible. This ensures that the minimum number of vehicles are used.

5.3.4 Promoting waste management practices which minimise the risks of immediate and future environmental pollution and harm to human health

In line with good practice and efficiency, Northacre RRC has replaced the need to directly landfill up to 60,000 tonnes of MSW per annum with only approx. 30% of the initial waste tonnage being landfilled as process residue. All waste operations are carefully monitored and managed within a purpose-built facility. This facility has minimised both immediate and long term potential environmental impacts and significantly reduced the legacy of landfill operations. Hills is amongst the pioneers of operating mechanical biological treatment technology in the United Kingdom.

5.3.5 Securing achievement of waste hierarchy objectives

For contract year 10, Hills has diverted 38,853 tonnes of MSW from landfill. This is calculated from the amount of waste accepted at Northacre RRC minus the bio- stablised residue that is landfilled at the end of the process. Through the development of Northacre RRC, Hills has moved significant quantities of waste up the waste hierarchy (see table in section 4.2.9).

Hills measures the amount of waste produced throughout this process and will continue to review the options available to process waste that is currently going to landfill to move it up the waste hierarchy.

6. Other Environmental and Social Benefits Assessment

6.1 Discussion of how (if at all) the contractor has contributed to wider objectives

6.1.1 Community

A liaison committee was originally formed in 2012 to keep local residents informed on construction progress and subsequent operational activities at the Northacre RRC. The committee continues to meet and is made up of representatives of Hills Waste Solutions, local parish councils, Westbury Town Council, Wiltshire Council, The Environment Agency and neighboring businesses. Minutes of all meetings are published at **www.northacrerrc.co.uk**

6.1.2 Education

Organisations and community groups have not visited Northacre RRC over the past year, although Hills remain interested and committed to hosting such events.

6.1.3 Research/promotion of markets for recycled products and the amounts spent on such research/ promotion

Nothing to report.

6.1.4 Amount spent on local environmental projects

Nothing to report.

6.1.5 Number of schools involved in projects (including the number of children's visits)

Nothing to report.

6.1.6 Number of jobs created for local people

Northacre RRC directly employs 19 staff and in addition supports the local community by preferring local businesses as suppliers.

Hills Waste Solutions Limited
Wiltshire House, County Park Business Centre
Shrivenham Road, Swindon SN1 2NR

Tel: 01793 714450

@HillsWaste @HillsGroup

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