Northacre Resource Recovery Centre

Environmental Report – Contract Year 9 (Nov 2021 - Nov 2022)

Content

1. Introduction

This Environmental Report (AER) is produced by Hills Waste Solutions "HWS," 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 9, covering the period 11 November 2021 to 10 November 2022.

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

Hills Municipal Collections Ltd, "HMC", is responsible for the collection of Municipal Solid Waste, "MSW", within the county. HMC is part of The Hills Group, a family-owned business that has operated in the Wiltshire area for 123 years. The Hills Group is an important local employer that directly employs over 698 people of which 509 work in the Waste Solutions and HMC divisions; 18 of these are employed at the Northacre facility. The Hills Group insists on using local suppliers and contractors located within Wiltshire where possible.

HWS and HMC provide the majority of the waste management service to Wiltshire residents on behalf of the Council, including the operation of Northacre RRC.

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 Wiltshire's ambition of being carbon neutral by 2030.

The Hills Group

HMC have assisted with new collection rounds for household residual waste to be more energy efficient.

HMC and HWS have trialled electric collection vehicles and are investigating rounds which are currently suitable for such vehicles.

94% of material collected by Wiltshire Council and HMC is managed within the UK, reducing 'waste miles.'

80.9% of waste managed by Wiltshire and its contractors is diverted from landfill.

1.3 Purpose of the 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 HWS. It shows how HWS 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, HWS 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.
- Wiltshire Council investigates waste composition. Non-conforming waste within inputs increases rejected materials. These currently go to landfill attracting standard rate landfill tax as they don't comply the HMRC lower rate thresholds. Non-conforming waste is routinely reported to Wiltshire council and dealt with as per environmental directives.
- 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 – in order 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 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 analysed to ensure that maximum efficiency is achieved from transport movements with regard to time, 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 preventative action as needed. This regular review ensures that we:

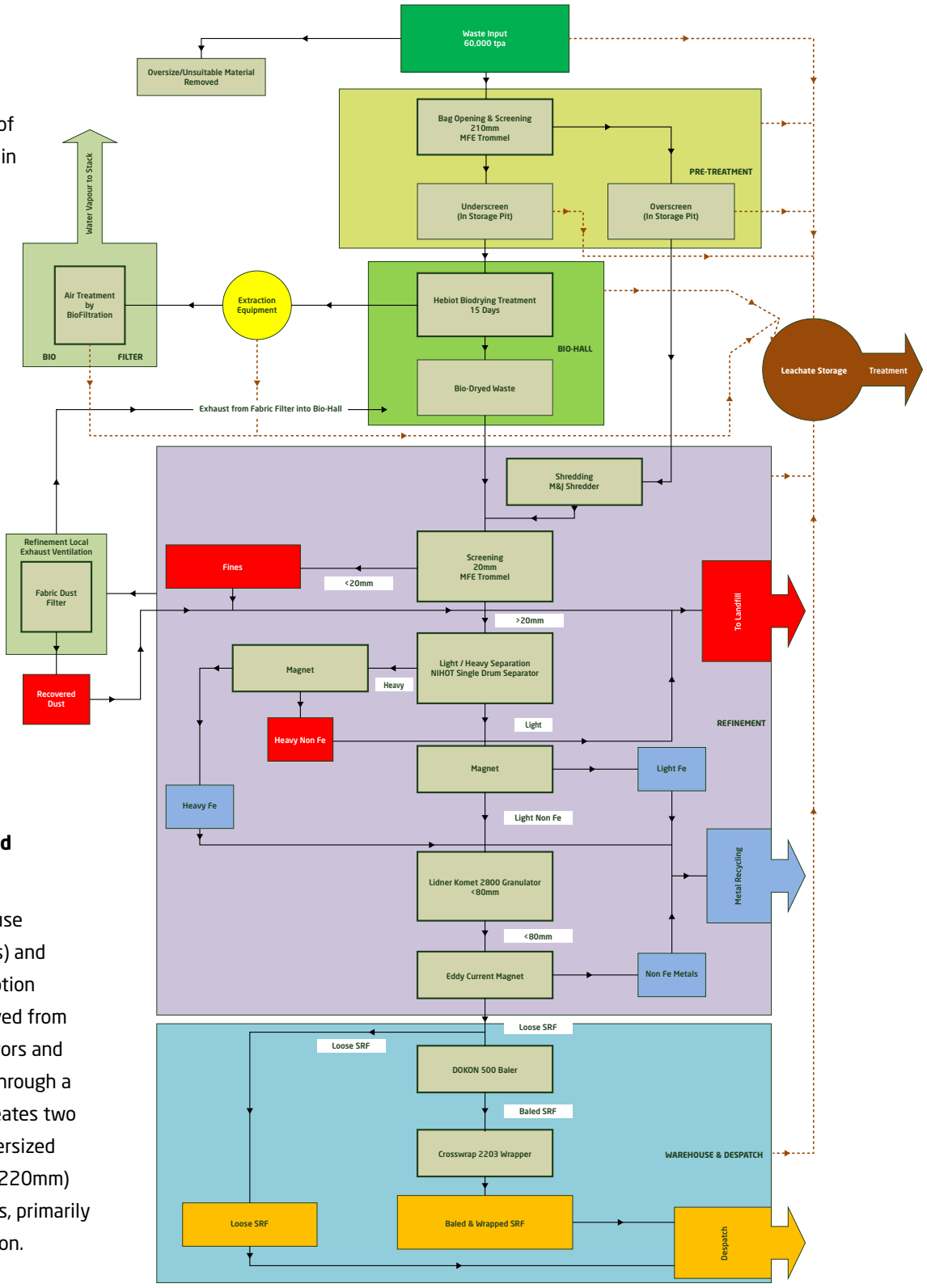
- Maintain standards
- Minimise environmental impacts
- Set and achieve targets – company targets
- Demonstrate continual improvement.

2. Waste Management Facility

2.1 Outline of the plants and processes

Northacre RRC consists of four 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 deposited into the reception pits. The material is moved from reception pits 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 biodegradable 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 three to four 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 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. They 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.

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%

The table shows the overall performance of Northacre RRC in contract Years 1 to 9. Landfill diversion rates have improved over the lifetime of the facility. The remainder from the sum of the percentage difference if RDF inputs, landfill inputs and recylates is due to moisture extracted through the drying process.

3. Performance Monitoring

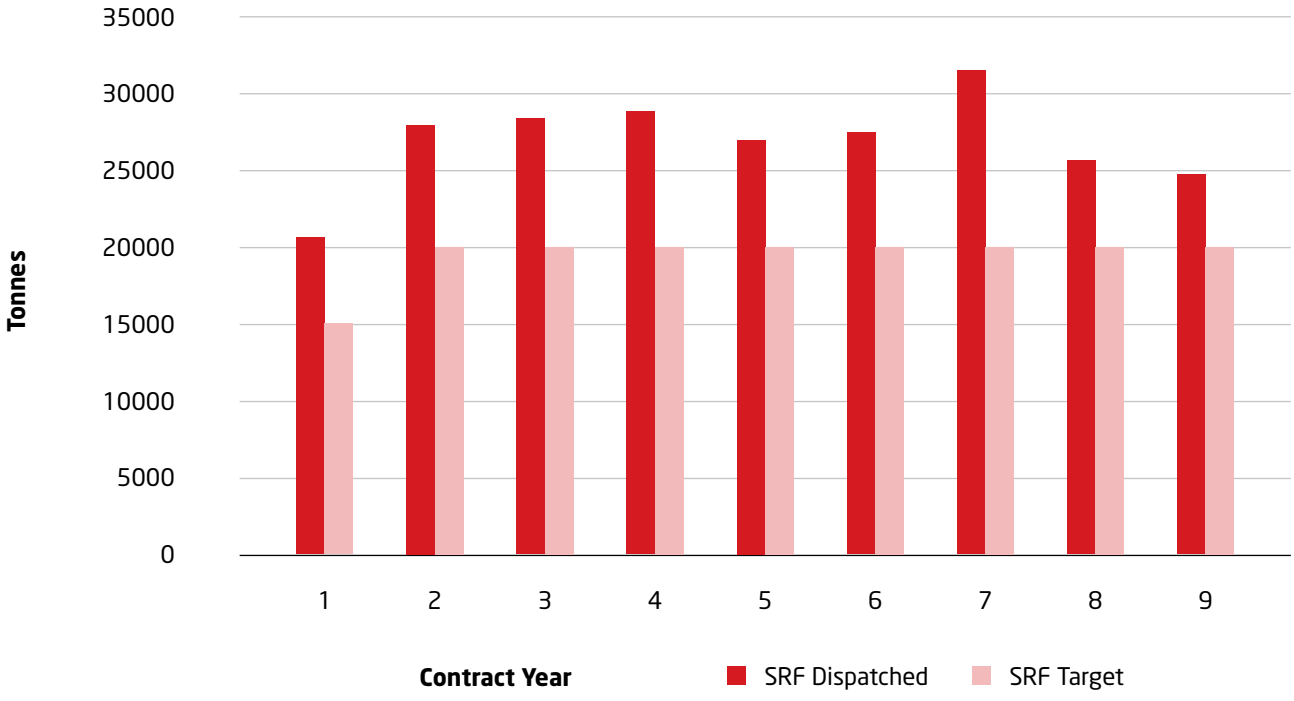
3.1 Targets

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 2 and each subsequent year, 20,000 tonnes of RDF would be produced and accepted by the RDF Contractor(s). This has been achieved in every contract year.

Schedule 20 of the contract states obligation to record performance and that Hills shall 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. Contract year 1 landfill diversion was 68.5%, year 9 landfill diversion was 73.7%, this is the highest since the start of the contract.

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 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 have to 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 on a daily basis and is reviewed with Wiltshire Council at monthly and quarterly 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. HWS continues to investigate alternative methods of disposing of fines as an alternative to landfill.

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 9, Hills had an agreement in place with Remondis to take 25,000 tonnes of RDF.

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 standards 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 on a monthly basis.

3.3 Monitoring RDF

3.3.1 Describe what is considered as RDF and how performance is assessed against contract targets

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".

Routine 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 and quarterly contract performance review meetings.

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

In contract year 9, 24,480 tonnes of RDF were produced at an average calorific value of 14.335 MJ/kg. This equates to a potential recovered energy of 350,923 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 and quarterly 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 End 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, is 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

See section 4.1.1

4.1.3 Income from RDF (if any)

No income is generated from RDF export as it remains classified as waste and attracts a gate fee 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 225,806 kWh during contract year 9.

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 HWS's ISO 14001 certified Environmental Management System (EMS), which includes the Northacre RRC plant. HWS has carried out a thorough environmental risk assessment of the processes taking place at Northacre RRC to identify any possible impacts and has 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.

HWS has a strict contractor approval process in place to ensure that the contractor is competent to carry out works at Northacre RRC. Contractors have to 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 HWS's 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 flow meters with continuous monitoring of volatiles are currently being installed to enable better control of discharges to air. Increasing the stack height is also under 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 a tank, which is periodically 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.

HWS 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.

HWS undertakes environmental monitoring to detect any changes and to ensure that plant, processes and people are performing to the required standards. 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 are 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. HWS 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 practise 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 given 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 up to and including contract year 9.

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

HWS 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's management system. Inspection may generate CCS scores; the higher the score the more expensive the subsistence fee for the Environmental Permit. During contract year 9 the facility received no CCS scores.

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

A total of 28 complaints were received in contract year 9. Of these, one related to flies and the remainder related to odour.

Complaints received via the Environment Agency may represent multiple complaints.

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

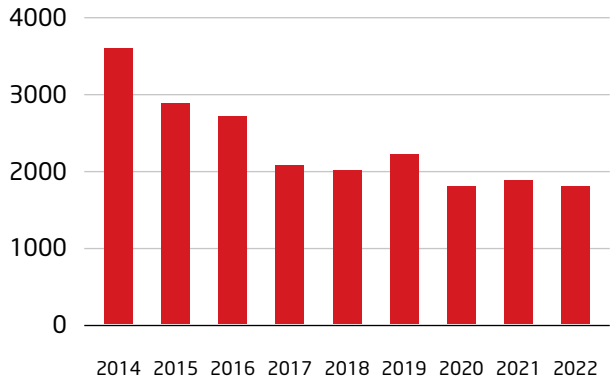
(d) Power consumption on site

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 the time of writing 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.

For contract year 9 recorded power consumption was 1982 MW – a reduction of almost 30% from contract year 1.

Total MWh



During the same period, the recorded power generated from the manufacture of RDF was 97,482 MW. For every MW put into the system, 49 were generated.

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 and the issues are recorded in the complaint register and passed on to the responsible manager for action. This includes investigating the issue, correcting the problem, stopping it happening again and providing feedback to the complainant. The status and number of complaints is discussed at monthly management meetings. Hills holds liaison meetings with elected local representatives 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 optimized. Following the servicing, HWS is given a record of parts replaced and the actions carried out.

HWS has trialled electric forklifts. Electric plant may be considered at Northacre when current equipment is replaced dependent on the cost benefit analysis.

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

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

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

Hills' own transport is used to carry redundant residue, consisting largely of fines and heavies from Northacre RRC to Lower Compton landfill. All other transport of RDF and recyclable materials is made by other waste carriers. During contract year 9 there were 1,722 vehicle movements resulting in 33,062.4 miles traveled. This consumes 33062.4 litres of diesel generating 87.2 tonnes of CO_2 assuming 1 litre of diesel generates 2.6391 kgs of CO_2.

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	5
General waste	12
Cardboard	12
Hazardous waste	0.040
Total	**29.04**

4.2.9 Amount in tonnes and percentage of Processed Residue and Recyclable Materials being dealt with at each stage of the waste hierarchy

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

Waste Hierarchy Stage	Tonnage	Percentage
Reduce - Moisture to atmosphere	14,951	27.9
Reuse	0	0
Recyclable - ferrous/non-ferrous	75	0.1
Recovery RDF	24,480	45.7
Disposal - Fines and heavies	14,111	26.3

4.2.10 Progress towards 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 achieved certification of the systems to ISO 9001.

HWS was re-certified for Quality, ISO 14001 Environmental, and OHSAS 45001 Health & Safety during contract year 9.

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 5.2.1.2 for further detail.

5.2 Technical

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

5.2.1.1 Developing & 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 Special Purpose Vehicle (SPV) company formed by The Hills Group working with technology providers and funders, for the purpose of constructing an Energy from Waste Facility (EfW) to generate power and potentially heat on land, adjacent to the Northacre RRC.

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 to enable electricity production 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 at the end of the NRRC contract year 9, has recieved planning permission.

5.2.1.3 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. This implies they have a calorific value which could be used within RDF.

5.2.1.4 Establishing markets for RDF

Hills is looking to develop relationships with brokers to establish a number of potential off-takers of RDF. RDF is currently being exported to continental Europe for energy recovery. As stated in section 5.2.1.2 Hills is assessing the viability of building a renewable energy plant at Westbury thereby establishing a local market for RDF produced at Northacre RRC.

Given the current energy crisis this could be a considerable benefit to local companies.

5.3 Environmental

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

5.3.1.1 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.

During year 9 HWS went through an energy audit to establish carbon baselines. This to assist with developing a road map to Net Zero which will be published during contract year 10.

Rainwater 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.

5.3.1.2 Securing sustainable transport of Waste: rail, water, "sustainable" fuels

Currently all waste is carried by road to a range of appropriate facilities. Recyclables and residual waste are transported to local facilities by road, which remains the most suitable option. With regard to exporting RDF, Hills is assessing the viability of building a renewable energy plant at Westbury therefore establishing a local market for RDF and reducing environmental impact.

5.3.1.3 Reducing lorry numbers and lorry miles

Currently all waste is carried by road to a range of appropriate facilities. Recyclables and residual waste are transported to local facilities by road, which remains the most suitable option. A trial was undertaken to supply a UK facility with RDF, however this was found to be not economically viable. Hills is assessing the viability of building a renewable energy plant at Westbury therefore establishing a local market for RDF and reducing environmental impact.

5.3.1.4 Promoting resource conservation within the company

The Hills Group head office at County Park, Swindon is benefitting from the installation of a 37.75kWp PV solar panel system which will pay for itself via feed-in-tariff payments and reduced electricity bills within six years. In the first year of operation it was estimated that the PV system from Southern Solar would produce 34,466 kWh of electricity and provide an equivalent saving of 18,233kg of CO_2. In fact, it produced 38,000 kWh of electricity.

5.3.1.5 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 landfill up to 60,000 tonnes of MSW per annum. 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.

5.3.1.6 Securing achievement of waste hierarchy objectives

For contract year 9, Hills has diverted 39,506 tonnes of MSW from landfill. This is calculated from the amount of waste accepted at Northacre RRC minus the bio-stabilised 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 in order 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 formed in 2012 to keep local residents informed on construction progress and subsequent operational activities at the Northacre RRC. The committee is made up of representatives of Hills Waste Solutions, local parish councils, Westbury Town Council, Wiltshire Council and neighbouring businesses. Minutes of all meetings are published at **www.northacrerrc.co.uk**

Hills has actively participated in a number of Westbury Area Board meetings where they have been able to report on and answer residents' questions in relation to the Northacre RRC together with proposals for a renewable energy centre to be built alongside the Northacre RRC.

6.1.2 Education

Nothing to report.

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 community projects

Prior to this reporting period, Hills donated to a large number of community and environmental projects in Wiltshire through the Landfill Communities Fund. Specific to Westbury this included funding towards the refurbishment of the Westbury Community Centre. It also included a grant for the provision of changing facilities, toilets, showers and a kitchen area at the West Wilts Youth Sailing Association.

Westbury Community Centre

In February 2019, The Hills Group donated £52,000 in a Landfill Community Grant towards refurbishing an old youth centre to create a multi age community centre.

West Wilts Youth Sailing Association

In June 2019, The Hills Group donated a £10,000 grant from the Landfill Community Fund towards the provision of toilets, showers, changing facilities and a kitchen area for the users of the lake.

In 2021/22 The Hills Group distributed more than £630,000 to community and environmental projects in Wiltshire through the Landfill Communities Fund. These included funding for local sports facilities, community centres and nature reserves. Specific to Westbury and its surrounding areas, funding included contributions towards the modernization of the Warminster Cricket Club's pavilion and a grant to replace the fencing at Codford Tennis Club. A grant which was given to Freshford & Limpley Stoke Community Association (FLiSCA) to extend their cafe and shop.

Warminster Cricket Club Pavilion

In August 2022, The Hills Group donated £2,865 through the Landfill Communities Fund for modernization and refurbishment work at the club's pavilion, including energy efficient double glazing and air-source heating.

Codford Tennis Club

In February 2022, The Hills Group gave a £10,000 grant through the Landfill Communities Fund, to replace the fencing at the Tennis Club.

Freshford & Limpley Stoke Community Association café and shop (FLiCSA)

In March 2022, The Hills Group donated £10,000 through the Landfill Communities Fund to further extend the FLiCSA café floor space and shop.

Above: Hills has supported the Wiltshire Wildlife Trust for over 25 years

6.1.5 Amount spent on local environmental projects

Hills is committed to providing annual funding to the Wiltshire Wildlife Trust. This unique 25-year partnership has seen the Trust benefit from over £9 million of funding which has been used to purchase special wildlife sites, facilitate public enjoyment and appreciation of the natural environment. It has also been used to increase the knowledge and understanding of the natural world among children.

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

Nothing to report.

6.1.7 Number of jobs created for local people

Northacre RRC directly employs 18 staff and in addition supports the local community by preferring local businesses as suppliers.

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