

Energy Recovery Facility (ERF) Planning, Design & Access Statement

GRANGETOWN PRAIRIE SITE

Final Report

December 2019

www.jbaconsulting.com

Hartlepool Borough Council

Civic Centre
Victoria Road
Hartlepool
TS24 8AY



JBA Project Manager

Dorian Latham
 Floor 4
 Maybrook House
 Grainger Street
 Newcastle upon Tyne
 NE1 5JE

Revision History

Revision Ref/Date	Amendments	Issued to
13/12/2019	Draft Report	Kieran Bostock
13/12/2019	Final Report	Planning - Redcar Borough Council

Contract

This report describes work commissioned by Kieran Bostock, on behalf of Hartlepool Borough Council. Shantelle Friesen and Della Adams of JBA Consulting carried out this work.

Prepared by Shantelle Friesen BSc MSc
 Environmental Consultant

..... Della Adams HND Arb. MSc MRTPI
 Principal Environmental Consultant

Reviewed by Dorian Latham BA PhD CEnv MIEEM
 Technical Director

Purpose

This document has been prepared as a Draft Report for Hartlepool Borough Council. JBA Consulting accepts no responsibility or liability for any use that is made of this document other than by the Client for the purposes for which it was originally commissioned and prepared.

JBA Consulting has no liability regarding the use of this report except to Hartlepool Borough Council.

Acknowledgements

JBA text

Copyright

© Jeremy Benn Associates Limited 2019.

Carbon Footprint

A printed copy of the main text in this document will result in a carbon footprint of 58g if 100% post-consumer recycled paper is used and 73g if primary-source paper is used. These figures assume the report is printed in black and white on A4 paper and in duplex.

JBA is aiming to reduce its per capita carbon emissions.

Executive summary

This combined Planning and Design Access Statement supports an outline application for the development of a 35 megawatt Energy Recovery Facility (ERF) capable of process 450,000 tonnes of waste per year, and associated development on land east of John Boyle Road and west of Teesdock Road, Grangetown Prairie, Redcar and Cleveland.

The Planning and Design Access Statement summarises the development and its impact within the planning context and local environment. The document outlines how the facility considers the following:

- Appropriate use of land, brown field site in an industrial area, part of the STDC Master Plan,
- Compliance with planning policies;
- Need - End of SITA UK contract, JWMS;
- Low carbon energy;
- Avoiding waste to landfill;
- Employment Opportunities;
- Protect, enhance and improve the natural and historic environment (heritage and biodiversity gain);
- The proposed development is a viable and valuable project that would make a sustainable contribution to sustainable waste management and low carbon energy; and
- Integration of the development with the Policy and Requirements of the Resource & Waste Strategy for England

Contents

1	Introduction	- 1 -
1.1	Background	- 1 -
2	The Proposed Development	- 2 -
2.1	Process	- 2 -
2.2	Proposed works	- 3 -
3	Environmental Impact Assessment	- 5 -
4	Site Location and Description	- 6 -
4.1	Designated Sites	- 7 -
5	Site History	- 8 -
5.1	The wider area	- 8 -
5.2	Previous Planning Applications	- 8 -
6	Design and Access	- 9 -
6.1	Description of Proposed Energy Recovery Facility Plant	- 9 -
6.2	Access	- 10 -
6.3	Site Compound	- 10 -
7	Background	- 11 -
7.1.1	Waste Management in Tees Valley	- 11 -
7.1.2	Waste Management in Neighboring Authorities	- 11 -
7.1.3	JWMS (2008)	- 11 -
7.2	Draft JWMS	- 12 -
7.2.1	Waste Treatment Options	- 13 -
7.3	Site Selection	- 14 -
7.4	The Preferred Site	- 16 -
8	Pre application Consultation	- 17 -
8.1	Stakeholder Consultation	- 17 -
9	Planning Policy	- 19 -
9.1	National Planning Policy Framework, 2019	- 19 -
9.2	Our Waste, Our Resources: A Strategy for England	- 19 -
9.3	Figure 9-1 Diagram of 'A Circular Economy' (Source DEFA's & EA Our Waste, Our Resources: A Strategy for England)	- 20 -
9.4	25 Year Environment Plan	- 21 -
9.5	Local Planning Policy	- 21 -
9.5.1	Redcar and Cleveland Local Plan 2015-2032	- 21 -
9.5.2	Tees Valley Joint Minerals and Waste Development Plan Documents	- 22 -
9.5.3	Current Tees Valley Joint Waste Management Strategy (JWMS) 2008	- 23 -
9.6	Draft Tees Valley Joint Waste Management Strategy (JWMS) 2020-2035	- 23 -
-		
9.7	Policy Supplementary Planning Documents	- 24 -
9.7.1	South Tees Area Supplementary Planning Document (SPD)	- 24 -
10	South Tees Development Regeneration Master Plan	- 25 -
11	Planning Policy Review	- 26 -
12	Environmental Considerations	- 28 -
12.1	Heritage and Archaeology	- 28 -
12.2	Ecology	- 28 -
12.2.1	Habitats Regulations Assessment (HRA)	- 28 -
12.3	Landscape and Visual Impact Assessment (LVIA)	- 29 -
12.3.1	Flood Risk Assessment	- 29 -
12.3.2	Water Framework Directive (WFD)	- 29 -
12.4	Traffic and Transportation	- 30 -

12.5	Noise	- 30 -
12.6	Air Quality	- 30 -
13	Conclusions and Recommendations	- 31 -

List of Figures

Figure 2-1	Diagram to show the Waste to Energy Process (Source: www.suezcornwall.co.uk)	- 3 -
Figure 4-1	The Site Zoning Plan of the STDC area (Source: STDC, 2019)	- 6 -
Figure 7-1	Location of the three preferred sites for a new residual waste facility (Source: Tees Valley OBC Site Identification and Selection)	- 15 -
9.3	Figure 9-1 Diagram of 'A Circular Economy' (Source DEFA's & EA Our Waste, Our Resources: A Strategy for England)	- 20 -
Figure 9-2	Waste hierarchy (Source: Draft JWMS)	- 23 -

List of Tables

Table 1-1	Planning Application Documents	- 1 -
-----------	--------------------------------	-------

Abbreviations

APC	Air Pollution Control
DEFRA	Department of Environment, Food and Rural Affairs
ERF	Energy Recovery Facility
EIA	Environmental Impacts Assessment
ES	Environmental Statement
FGT	Flue Gas Treatment
GIS	Geographic Information System
HGV	Heavy Goods Vehicle
HRA	Habitats Regulations Assessment
JBA	Jeremy Benn Associates
JWMS	Joint Waste Management Strategy
LACW	Local Authority Collected Waste
LVIA	Landscape and Visual Impact Assessment
OBC	Outline Business Case
PEA	Preliminary Ecological Appraisal
RCBC	Redcar and Cleveland Borough Council
RDF	Refuse Derived Fuel
SSI	Sahaviriya Steel Industries
SSSI	Site of Special Scientific Interest
SPA	Special Protection Area
SEA	Strategic Environmental Assessment
STDC	South Tees Development Corporation
WFD	Water Framework Directive

1 Introduction

JBA Consulting (JBA) has been appointed by Hartlepool Borough Council on behalf of the Tees Valley Authorities (Darlington, Hartlepool, Middlesbrough, Redcar and Cleveland and Stockton-on-Tees) to prepare and submit a planning application for an Energy Recovery Facility (ERF) and associated development on land east of John Boyle Road and west of Teesdock Road, Grangetown Prairie, Grangetown Redcar and Cleveland.

Outline planning permission is sought for a concept design for the ERF. This document forms a combined Planning and Design Access statement for the proposed development. It provides outline details of the proposal in relation to the site, its setting, design principles, access arrangements. It assesses the proposals against relevant planning policy framework and other material considerations. Details of consultation and a summary of the discussions held with relevant stakeholders is included.

The documents detailed in the Table 1 below form part of the planning this application submission.

Table 1-1 Planning Application Documents

Document	Reference
Planning Application Form	2019s0951ERF Planning Application Form
Site Location Plan	2019s0951-JBA-Z-DR-PL-1001
Site Layout Plan	2019s0951-JBA-Z-DR-PL-1001
Planning, Design and Access Statement;	2019s0951ERF Planning DAS
Flood Risk Assessment;	2019s0951_Flood_Risk_Assessment_Issued
Copy of the Development Notice sent to the landowner and cover letter	2019s0951ERF Development Notice 2019s0951 ERF Landowner Cover Letter
Preliminary Ecological Assessment	2019s0951Ecology Report
Archaeological Assessment	2019s0951_DBA Report_Revised Location
Habitat Regulations Assessment	2019s095_HRA Report_Issued
WFD Assessment	2019s0951_WFD-Assessment-Issue_20191213

1.1 Background

Hartlepool Borough Council, working in partnership with the other Tees Valley Authorities will be procuring a new Residual Waste Treatment Contract. The need for the proposed ERF has arisen from the Tees Valley Joint Waste Management Strategy (JWMS), which is in the process of being extended until 2035.

The need for of a long-term residual waste treatment solution for the region beyond 2020 was identified during the Options Appraisal process, undertaken by the Tees Valley Councils in the preparation of the revised Draft JWMS, resulted in the selection of a Preferred Option.

2 The Proposed Development

The proposed development will comprise of an ERF capable of processing up to 450,000 tonnes of municipal solid waste (MSW) waste per annum, generating 35MW of electricity to export to the national grid.

The facility will have potential for future expansion to CHP so heat export will be enabled when local markets are available, and these can be exploited. This is not part of the current submission

The development covers a 10-hectare site and will include the main building, where the reception and treatment of all residual waste will take place.

The waste feedstock for the ERF will be supplied by MSW sourced within the Tees Valley, and neighbouring Durham County Council and Newcastle City Council. No hazardous waste would be used at the proposed facility.

The main building will be approximately 140 metres by 70 metres by 50 metres high, with the stack being 80 metres in height.

Hard and soft landscaping will form part of the design of the site. Hard landscaping will be used for access roads, walkways and parking areas. Soft landscaping will include grass and vegetation, the full details to be dealt with by reserved matters.

2.1 Process

A thermal (incineration) process will take place at the facility and the waste is subject to a combustion process to produce steam and generate electricity. A summary of the process is set out below:

- MSW is transported by road to the ERF;
- Waste is transferred to the ERF tipping hall and into the reception bunker;
- Waste is subject to a combustion process where it is mixed with air (oxidised) at a high temperature to produce heat;
- Heat is used to boil water to create steam;
- The steam is then used to generate electricity through the movement of turbines, which takes place in the turbine hall. The electricity is distributed to the national grid;
- State of the art air pollution control equipment cleans the gases, and a baghouse controls the emissions. This takes place in the air-cooling condenser and flue gas treatment building and released via the stack. Emissions are continuously monitored;
- Remaining ash is processed, and metals are recovered for recycling.
- Residual material is beneficially reused. That which cannot be reused is disposed of at landfill.

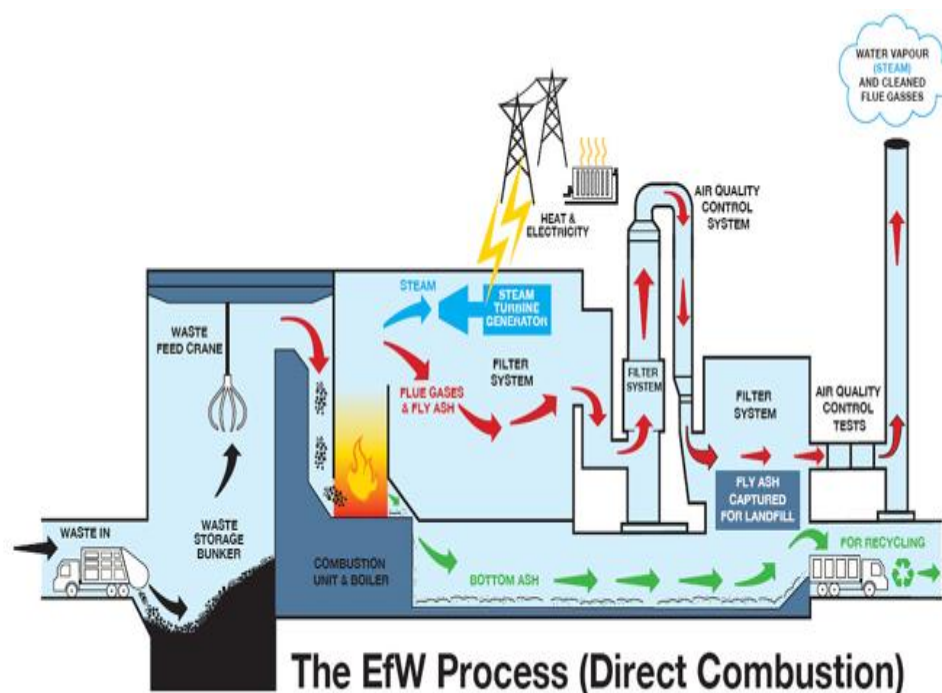


Figure 2-1 Diagram to show the Waste to Energy Process (Source: www.libertyhygiene.com)

2.2 Proposed works

Several buildings and structures are required for the process and form part of the proposed development. Full details are set out on the accompanying planning drawings.

Tipping Hall - The tipping hall is where the waste is delivered. Heavy Goods Vehicles (HGVs) and refuse collection vehicles (RCV) will enter the building and discharge their loads. The tipping hall shall be totally enclosed with roll-up doors to control the release of dust, odours and emissions. These will be controlled by continuously drawing air from the refuse pit for the combustion units i.e. the negative air pressure will retain any odours in the building rather than let them out. The tipping floor will be concrete, suitable for HGVs and RCVs, and the floor will be sloped to the bunded pit to contain any spillage.

Boiler Hall - The boiler hall is where the waste feedstock combusts in a furnace, releasing heat. The hot gases which are generated pass through the boiler, which contains steam and water. As the combustion gases from the furnace pass through the boiler, they are cooled to a temperature suitable for the flue gas cleaning system. Fuel oil is required to safely start and shutdown the plant but once operating temperatures are reached, waste can be burned without the need for any auxiliary fuel.

Turbine Hall - The steam generated by the boilers passes through a condensing steam turbine-generator.

Flue Gas Treatment Building - The flue gas treatment (FGT) building houses air pollution control (APC) equipment which cleans the any gases prior to being discharged to atmosphere.

Air Cooled Condenser - Steam is exhausted at low pressure from the turbine into an air-cooled condenser which condenses the steam back into water. The water is then pumped back into the boiler. The heat lost by the steam when it condenses is transferred to the atmosphere. The air-cooled condenser has fans which draw air across the condenser tubes, so there is no visible plume.

Stack - Once cleaned, the flue-gases from the boilers are discharged to atmosphere via a stack. Stack height being between 70 and 80 metres.

Fuel Oil - A fuel oil storage tank, with a secondary containment, will be provided. An HGV unloading area adjacent to the road will also be provided. This area will be bunded.

Fire Fighting Water Tank - A fire protection water storage tank will be provided on site.

Standby Diesel Generator - In case of a power interruption or outage, a standby diesel generator is provided. The generator and the diesel engine will be mounted on a steel base frame. The diesel generator shall be enclosed.

A designated heritage and biodiversity area, landscaping, internal access roads and car-parking also form part of the proposals, the details of these will be dealt with by reserve matters.

Air Cooled Condenser Building - The air-cooled condenser condenses the steam exhausting the steam turbine, pulling a vacuum for power generation. Condensed water is returned to the boilers.

Incinerator Bottom Ash (IBA) Building - the 'clinker' that is left after the waste is burned (this is typically, is 20% by weight of the waste being burned) will be stored ahead of further recycling.

Air Pollution Control Residue (APCr) Silos - Fine material that is captured by the bag filters in the FGT is transported to the APCr silos before being removed from site in road tankers.

Powdered Activated Carbon (PAC) - is added to the flue gas in the FGT to remove dioxins, furans, mercury etc.

Lime Tank - Lime is used to remove these acidic pollutants from the flue gas as part of environmental management systems to minimise the impact of these activities on air quality.

Ammonia (NH₃) Storage Tank - Ammonia is Injected to the boiler to reduce NOx levels to EA permitted levels. Some plants use urea instead (same as Adblue, used in diesel cars).

Administration Building - Will provide office facilities associated with the operation of the site and welfare facilities for employees and visitors.

Electrical Equipment Building - Containing the electrical equipment associated with the operation of the facility.

Car Parking - Designated staff and visitor car parking.

3 Environmental Impact Assessment

The Town and Country Planning (Environmental Impact Assessment) Regulations govern the requirement for the scope and process of an EIA. A revision to the EU directive on EIA came into force in May 2014 after being adopted by the European Parliament. The purpose of the 2017 EIA Regulations has been to transpose the 2014 amended Environmental Impact Assessment Directive into UK Law. The 2017 EIA Regulations set out more stringent procedural requirements to be taken by the relevant planning authority when considering whether planning permission or subsequent consent should be granted for EIA development.

A Screening Opinion under Regulation 6 of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017, was submitted by Dorian Latham, Technical Director at JBA Consulting to Redcar and Cleveland Borough Council (RCBC) on 12th August 2019. A voluntary Environmental Statement was offered to support the planning application on the basis that the proposed project would be Schedule 1 development as specified in Category 10 of the Regulations: *Waste disposal installations for the incineration or chemical treatment (as defined in Annex I to Directive 2008/98/EC under heading D9) of non-hazardous waste with a capacity exceeding 100 tonnes per day.*

A Scoping Opinion ref: R/2019/0587/SCP was submitted to Redcar Borough Council on 17th September 2019 by Steve Maslen Director and Head of Environment at JBA Consulting. A Scoping Response was received on 23rd December 2019.

A minor change in the site location, moving the site west, resulted in the submission of a revised Scoping Opinion R/2019/0700/SCP on the 11th November 2019. A response was received on 10th December. An Environmental Statement has been prepared taking on board the responses received as part of the Scoping Response and forms part of the planning applications submission.

4 Site Location and Description

The proposed ERF site is within the South Tees Development Corporation (STDC) area, which comprises 4,500 acres (1,800 hectares) of land that forms part of the STDC's Regeneration Master Plan.

The Master Plan is 'a vision strategy and ideas for the transformational regeneration of the South Tees Development Corporation area into a world class employment-generating zone and economic growth enabler for the Tees Valley' (STDC Regeneration Master Plan).

The STDC area, has been divided into specific zones. A principal area of development land comprising 2,200 acres (890 hectares) that was predominately occupied by the former Sahaviriya Steel Industries (SSI) and Tata Steel land in Redcar, Lackenby, Grangetown and South Bank.

The proposed ERF site occupies a 25-acre (10 hectare) site situated at the southwestern corner of the STDC area, within the Grangetown Prairie Zone (Figure 4-1 below). It lies 1.2km south of the River Tees and approximately 4miles to the north east of Middlesbrough Town centre (National Grid Reference NZ544-214).

It is the first zone within the area 'Phase 1' to be brought forward for development. The majority land area (50+ hectares) has 'Enterprise Zone' status.

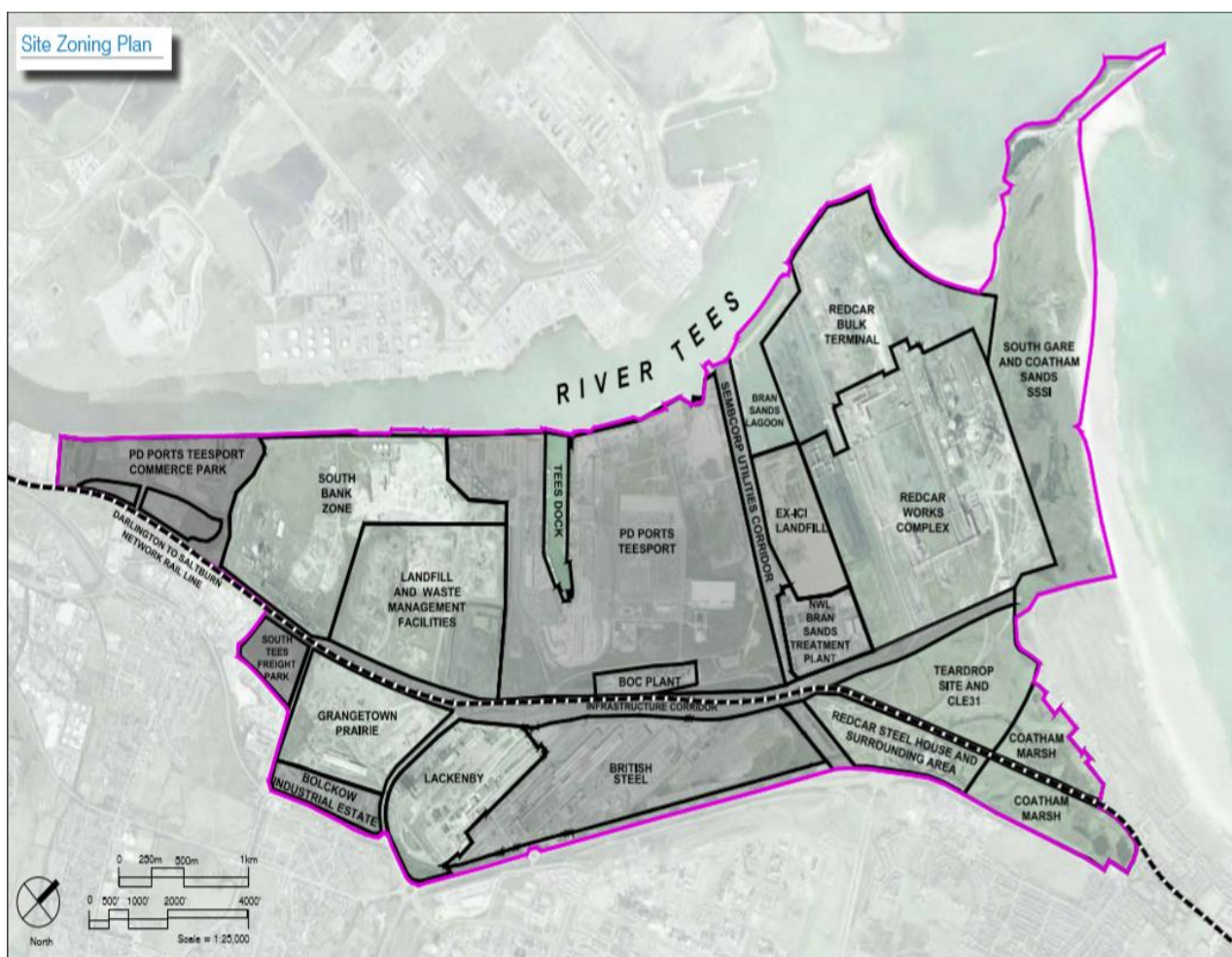


Figure 4-1 The Site Zoning Plan of the STDC area (Source: STDC, 2019)

The proposed site comprises of relatively flat grassland. The site is brownfield land and was once dominated by industrial buildings at the heart of the steel making industry on Teesside. This site itself has been cleared. Some industrial buildings / plant still surround the Grangetown Prairie site on its the south, east and western boundaries.

The SSI Torpedo Shed, lies to the south of the site and is still in operation. Lackenby steelmaking complex is situated to the east. South Tees Freight Park lies to the west. South Bank Coke Ovens are located to the north east.

The site is well defined by existing infrastructure corridors such as the Tees Valley Railway Line, which runs along the north of the site, beyond which is an existing landfill and waste management facility. The A66 is located south of the site.

4.1 Designated Sites

The area of influence or zone of influence (ZoI) for the project is taken to be 10km from the proposed works location to follow DEFRA air emission guidance (DEFRA, 2016). These distances are based on potential impacts from the facility once in operation as impacts during construction are likely to be more local.

There are six European designated sites within the project zone of influence that will be considered in this assessment (see location map at Appendix B). These are:

- Teesmouth and Cleveland Coast SPA;
- Teesmouth and Cleveland Coast pSPA;
- Teesmouth and Cleveland Coast Ramsar;
- Teesmouth and Cleveland Coast pRamsar;
- North York Moors SAC; and
- North York Moors SPA.

A Habitat Regulations Assessment Screening document has been prepared and will be submitted as part of the Planning Application.

5 Site History

5.1 The wider area

The STDC Regeneration Master Plan provides details of the history of the Grangetown Prairie site which has a long history of iron and steel works. The site is situated within an industrial area and was once extensively occupied with buildings and freight rail infrastructure associated with such works, that were cleared in the 1980's.

Former uses included the Cleveland Iron and Steel Works, where the heavy end operations (coke ovens, iron making and steel making) were located along the western periphery of the site, with mills dominating the central and eastern zones. The Torpedo Ladle Workshop was previously home to open hearth furnaces.

The original site entrance still exists and, if re-opened, provides the site with direct vehicular access to the A66 at the existing Whitworth Road junction, through the Bolckow Industrial Estate.

5.2 Previous Planning Applications

A list of the most relevant planning consents associated with the site is provided below:

- R/2007/0994/FFM dated 9th October 2007 - Erection of waste autoclave and community recycling facilities, four-storey office accommodation and associated infrastructure (approved in February 2008)
- R/2008/0967/SC dated 27th November 2008 - Screening opinion application for tyre pyrolysis plant.

The outline application area for planning application ref: R/2007/0994/FFM overlaps the ERF proposed development site. This application was approved over 10 years ago; it appears that a detailed design was never submitted.

6 Design and Access

6.1 Description of Proposed Energy Recovery Facility Plant

The context of the development and its proximity with the adjacent plots have been taken into account, as well as the function of the building in the design approach. This information is however limited. At this stage the application is outline and knowledge of the development proposals for the remaining plots within the Grangetown Prairie site are not known. The plots are vacant.

The design of the building reflects the functional nature of the process performed within it, and the industrial context of the site.

Buildings

The facility comprises several buildings that form a linear process for the waste treatment /energy recovery. There are several ancillary buildings that house the external generators, material store and residual waste. The layout of the site is shown in the accompanying planning drawings.

All buildings will be situated on a piled platform / hardstanding and will comprise a steel framed structure. Piling into the bedrock will be required as the plot is brownfield / made-ground consisting of a mixed substrate. The building will be a steel frame clad with profiled steel. Louvers and service penetrations / openings will be required. The internal floor will be constructed with a single, level concrete floor slab, with level access roller shutter doors into the Tipping Hall. There will also be access doors to other parts of the process for maintenance and removal of ashes and supply of reagents

The industrial design of the building reflects the context of the site, although a curved roof line aims to provide a more contemporary view.

The facility will be bunded for pollution prevention / management purposes.

The location and positioning of the buildings has reflected the industrial archaeological assets known on site, with the 19th Century blast furnaces proving a feature on site that requires preservation in situ. Although the structures and plant of the steel complex have all been removed the site presently comprises concrete surfaces which retain a number of features related to the previous use of the site and more significantly the bases of the Bessemer Blast Furnaces which survive to a degree intact. The surviving bases of the late 19th and 20th century blast furnaces are to be retained on site and integrated into landscaping.

The final design will be detailed in the full application but will comply with the emerging guidance from the STDC.

Landscaping and Environmental Enhancement Area

Biodiversity Net Gain (BNG) is embedded in the National Planning Policy Framework (NPPF) as a means to conserve and enhance the natural environment. This proposed development aims to provide wider Environmental Net Gain (ENG) in its delivery, through safeguarding existing habitats and industrial archaeological assets and to ensure that any significant loss or damage is compensated by restoring or creating new features that provide greater value to wildlife and people. Defra has completed a consultation on Net Gain and any future Environmental Bill is expected to introduce a consistent approach to BNG and wider ENG.

An area of 3.6 acres is provided into the site layout giving linkage, linear habitats and networks across the site and significant opportunities for the other plots within Grangetown Prairie in general. This area integrates with the retained industrial archaeological assets covering an area of circa. 2.13 acres

Landscaping will be provided on site boundaries.

Car Parking

Parking for staff and visitors is provided at the north western corner of the site, close to the site access to avoid the need for private vehicles to move around the site . The development will result in approximately 42 new FTE jobs. Bays for electric cars be will provided.

Site Security

The site is operational 24 hours per day, 365 days per year. There will be a constant presence on site, operating from an administration base within the proposed development plot. Site security will make tours of the site to deter and detect intrusion.

6.2 Access

The design of the building ensures that access is safe and practical for both commercial users (HGVs) and staff, with due consideration for disabled staff. The facility will be not available for public disposal of wastes.

The site will use a new site access on the corner of Eston Road that will serve a new internal highway network for the Grangetown Prairie plots. This access will be constructed as part of the enabling works for all development plots by STDC and not part of the current application.

Vehicles will enter the site via a new access constructed along the western boundary, leading directly onto the weighbridge. Vehicles will move round the site using a one-way system, traffic flow is indicated on the attached Site Layout Plan. Vehicles bringing waste to the site will enter the tipping hall from the east, in forwards direction. This will minimise noise emissions of reversing. Vehicles will tip the waste and leave via the western side of the building in a forward's direction.

The construction period will be approximately 36 months, during which construction traffic is likely to peak during the initial 12 months. At the peak of construction activity, up to 40 HGVs will visit the site each day, but for the most part it will be fewer than this.

During construction staff numbers on site, may be as high as 300 at the peak, although numbers will vary dependent upon the activities being carried out.

The facility is designed to have the capacity to receive up to 450,000 tonnes of waste per annum. Waste deliveries are expected to finish by approximately 1600 hours, thus removing operational trips on the highway network during the evening rush hour. Waste will be received from the North East Region. The facility will receive waste during an 8-hour operation (8am -4pm) Monday to Friday and Saturday morning. It is likely that there will be peaks mid-morning and mid-afternoon, Monday to Friday and Saturday morning. The facility will function 365 days a year, with waste received 305 days per year.

Staffing will operate 24-hours over three shifts (08:00 – 16:00, 16:00 to 00:00 and 00:00 to 08:00).

All visitors will be required to report to reception within the facility. Dedicated pedestrian access to reception will be provided from the car park area.

6.3 Site Compound

The site compound will be within the red line development boundary.

7 Background

7.1.1 Waste Management in Tees Valley

The Tees Valley Authorities have for several years been working to develop efficient and sustainable methods of dealing with waste. In 2002, the Tees Valley Authorities, except for Darlington Borough Council, produced a JWMS that set out how the Authorities would deal with the area's waste up until 2020. At this time, Darlington was partnered with Durham County Council for the delivery of services. Darlington Borough Council published its Interim Waste Management Strategy in 2003 which included the aims and objectives for their waste service until the expiry of its current waste disposal contract in 2008.

Recycling collections, with the help of residents, resulted in a household recycling and composting rate of 25% in 2006/2007. In addition, recycling and composting, energy was recovered from 52% of the household waste stream with only 23% of the household waste stream continuing to be sent to landfill for disposal.

7.1.2 Waste Management in Neighboring Authorities

In line with the Tees valley Authorities, Durham County Council and Newcastle City Council both have Waste Strategies that set out policies and actions to guide waste management in their areas.

In County Durham, 240,000 tonnes of household waste each year is either reused or recycled, 40% of which is composted. Household rubbish is no longer sent to landfill, 130,000 tonnes of rubbish collected is sent to Suez's Energy from Waste (EfW) plant on Teesside where it is burnt to create energy.

Durham County Council is developing waste management solutions that maximise beneficial recovery from residual waste and includes consideration for the recovery of raw materials or the generation of energy

In Newcastle, Newcastle Waste Commission (independent to the Council) made recommendations for developing long-term, ambitious approaches to reduce waste where possible, maximise recycling and reuse. Where prevention, reuse and recycling are not possible, maximising recovery from waste to energy is a priority.

Since 2010 thousands of tonnes of residual waste that would otherwise have gone to landfill has been used instead to produce energy and heat, either within the region or in Sweden as a Refuse-Derived Fuel or in an EfW facility in the UK. In 2017 over 40,000 tonnes were used in this way.

Set out within Newcastle's 2019 Waste Strategy, the Resource Newcastle Partnership is challenging Newcastle approach to waste, which includes looking for alternatives to sending waste to Sweden for EfW facility. The strategies also has an Action Plan, where opportunities to maximise value of waste are being investigated, including development of shared waste operations and the potential of energy recovery from waste.

7.1.3 JWMS (2008)

In 2008, the Tees Valley Authorities joined to review recycling and waste issues, resulting in a revised JWMS that included Waste Treatment, Waste Collection, Waste Awareness and Headline Strategy documents for the Tees Valley from 2008 to 2020.

The Headline Strategy was developed using the most recent guidance from Department of Environment, Food and Rural Affairs (Defra). In tandem with a Sustainability Appraisal (SA), it incorporates the requirements of the Strategic Environmental Assessment (SEA) Directive. An Options Appraisal Assessment was undertaken that assessed technical waste management information to help develop the Headline Strategy and selection of a draft Preferred Option for waste management, which included:

- Revised Waste Awareness and Minimisation;
- Revised Waste Collections;
- Additional Waste Treatment Facilities to divert additional waste from landfill;
- Continued use of the EfW for waste recovery.

The Headline Strategy set the challenges ahead of the Preferred Option, policies and actions that would allow the Authorities to meet the challenges. Details of the policies are set out within the Planning Policy Section at Chapter 9 of this statement.

Principles that steered the development of the Strategy included:

- Reduce waste generation;
- Be achievable and affordable;
- Work towards zero landfill; and
- Minimise the impact on climate change.

Under the current JWMS (2008) various recycling services are in place by each council around the Tees Valley. Household residual waste is treated through an EfW combustion facility at Billingham in Stockton-on-Tees (Haverton Hill). Tees Valley Hartlepool, Middlesbrough, Redcar and Cleveland and Stockton Authorities are currently under contract to provide SITA UK Limited with at least 180,000 tonnes per annum of municipal solid waste (MSW) for processing at the Haverton Hill EfW. This ensures that the Authorities recover value from the residual waste stream and divert waste from landfill. A small proportion of the residual municipal waste will continue to go to landfill as it doesn't conform to the requirements for incineration.

Darlington Borough Council is not part of the JWMS 2008 contract. DBC residual waste is currently treated through a residual waste materials recovery facility (MRF) at Aycliffe Quarry. The refuse derived fuel (RDF) produced is exported to an EU based EfW.

The SITA contract runs until 2020, the JWMS identified that consideration would need to be given for sustainable waste management until 2025, which is when the EfW contract with SITA and the new Darlington contract both cease to continue the recovery of waste and diversion of materials from landfill.

7.2 Draft JWMS

Changes in waste management policies, and the coming to an end of the existing EfW contracts, have led to the preparation of a revised Draft JWMS (which is in the process of being adopted), extending it until 2035. As with previous and current JWMS, the revised document focus is the sustainable management of waste within the Tees Valley.

An Options Appraisals Report was prepared to inform the development of the updated Strategy, paying regard to:

- moving waste up the waste hierarchy (diagram can be found figure 9-2) of option through prevention, reuse, recycling and composting activities; and
- the identification of a long-term residual waste treatment solution for the region.

The Draft JWMS identifies that the Tees Valley covers an area of 790km², with a population of approximately 670,000, averaging inhabitants per household, with much of the population centred around the River Tees and Teesmouth.

The document identifies that although the Tees Valley has a rich industrial heritage with an economy based around manufacturing and engineering, aerospace, automotive, chemicals and processing and offshore oil and gas, there is a high level of deprivation amongst the population. This presents challenge for the provision and operation of efficient waste management services, waste avoidance and high recycling rates.

The Draft JWMS set out that in 2016/2017 just over 350,000 tonnes of Local Authority Collected Waste (LACW) was gathered across Tees Valley. This is equivalent to approximately 1 tonne per household per annum (in 2016/17). These figures exclude commercial, industrial, construction waste or private waste collections.

Waste trends tend to reflect economic growth. Predicted increase in population and housing is likely to increase waste generated across the Tees Valley. The Draft JWMS recognises that if economic regeneration planned by the Tees Valley Combined Authority is achieved, population and housing will increase, resulting in between 392,000 to 420,000 tonnes of LACW by 2035 and an assumed future waste growth rate of approximately 0.25% per annum.

The work undertaken as part of the Draft JWMS looked at waste trends, quantity of material collected for recycling and composting across Tees Valley, with the aim of devising a high quality, accessible and affordable waste management service that would contribute to:

- economic regeneration, including employment and a more circular economy;
- the protection of the environment and natural resources;
- reducing the carbon impact of waste management;
- delivers customer satisfaction;
- reduces the amount of waste generated by householders and the Councils;
- increases reuse and recycling;
- then maximises recovery of waste; and
- works towards zero waste to landfill.

The Options Appraisal was supported by a series of supplementary reports that provided technical waste management information used in preparation of the revised JWMS and to inform selection of a Draft Preferred Option.

As part of the Options Appraisal, refreshed aims and objectives were prioritised to include:

- Affordability / Income Generation
- Reuse, recycling and composting
- Raising waste awareness and education
- Service Quality / Customer Satisfaction
- Waste prevention
- Regeneration / Job Creation
- Reducing fly-tipping and litter
- Limiting environmental impacts and harm to human health
- Circular economy
- **Energy recovery from waste**
- Landfill diversion
- Reducing the carbon impact of waste management
- Managing the impact of plastic wastes
- Management of all municipal waste
- Managing the impact of food waste

7.2.1 Waste Treatment Options

Options across the waste hierarchy were considered during the Options Appraisal process, these included:

- Waste prevention, Reuse and Recycling Options;
- Recycling and Composting Collection Options;
- Residual Waste Treatment Options
- For residual waste treatment, the primary waste treatment options at the Tees Valley included:
 - Further contract extension (beyond 2025) for the existing ERF contract;
 - **New build energy recovery facility;**
 - New build refuse derived fuel facility (RDF); and
 - Utilise third party energy recovery facility capacity.

Twenty combinations of the waste treatment options were considered (the full details of the assessment are set out within the Options Appraisal). The outcome, was the following Preferred Option:

- adoption of prevention, reuse and recycling initiatives;
- the introduction of high recycling collections including separate food waste collections; and
- a new energy recovery facility with the ability to utilise the heat produced, through the development of Combined Heat and Power (CHP).

The Preferred Option would:

- Contribute to reducing the amount of waste generated compared to the baseline forecast;
- Increase the recycling and composting rate by 13-14% by the midpoint of the Strategy period (2027) to bring the overall recycling and composting rate to between 45-50%. This is a significant improvement on the current performance and reflects the challenges faced in an urban industrial setting;
- Further increase the recovery of waste by 3-4%;
- Further reduce the waste sent to landfill;
- Reduce the carbon impact of waste management; and
- Create/secure employment within Tees Valley.

7.3 Site Selection

A comprehensive Outline Business Case (OBC) was then developed by the Tees Valley Authorities and considered several options with regards to long-term waste treatment including:

- Further contract extension (beyond 2025) for the existing EfW contract;
- New build energy recovery facility;
- New build refuse derived fuel facility; and
- Utilise third party energy recovery facility capacity.

To support the development of the OBC, an appraisal of locations for a new facility has been undertaken to provide an evidence-based analysis of potential locations.

A site identification and selection process were undertaken to support the development of an OBC for the new energy recovery facility forming part of the preferred option. An appraisal took place of potential locations across the five Tees Valley Authorities' combined administrative area using a systematic, evidence-based analysis. The initial long list included 176 sites, which were initially screened to remove:

- sites that were allocated for commercial / light industrial employment activities;
- where size information was publicly available, sites with an area of less than 2 hectares as these would be too small for a strategic residual waste treatment facility;
- sites that were already developed for non-waste related land uses; and
- duplicate sites.

The screening process reduced the number of sites to 55 and a desk-based assessment was then undertaken using Geographic Information System (GIS). A 'scoring system' was applied relating to location, sensitive locations, landscape, conservation, cultural and heritage designations, proximity to existing industrial areas, rivers and Flood Zones, sensitive receptors including buildings and airfield safety to produce a 'shorter-list'. The scoring system applied a higher score to a worse outcome, with a score of 2 indicating the worst outcome (e.g. 2-4 ha site size) and a score of 0 the best (e.g. greater than 6 ha site size). The GIS output was colour coded so that the scores could readily be seen; red for 2; amber for 1; and green for 0.

Further consultation was undertaken with the Tees Valley Authorities regarding the assessment criteria. The sites were assessed further using a combination of GIS, observations from site visits, and other information that was gained through the site assessment process, further considering:

- relevant policy for the site;
- the availability of each site;
- the deliverability of each site, infrastructure, human and environmental constraints; and
- key features identified from the site visit including, the current state of the site, its location within the study area and the presence of overhead lines or other infrastructure.

The above resulted in a short list of three preferred sites, the locations are shown below in Figure 8-1:

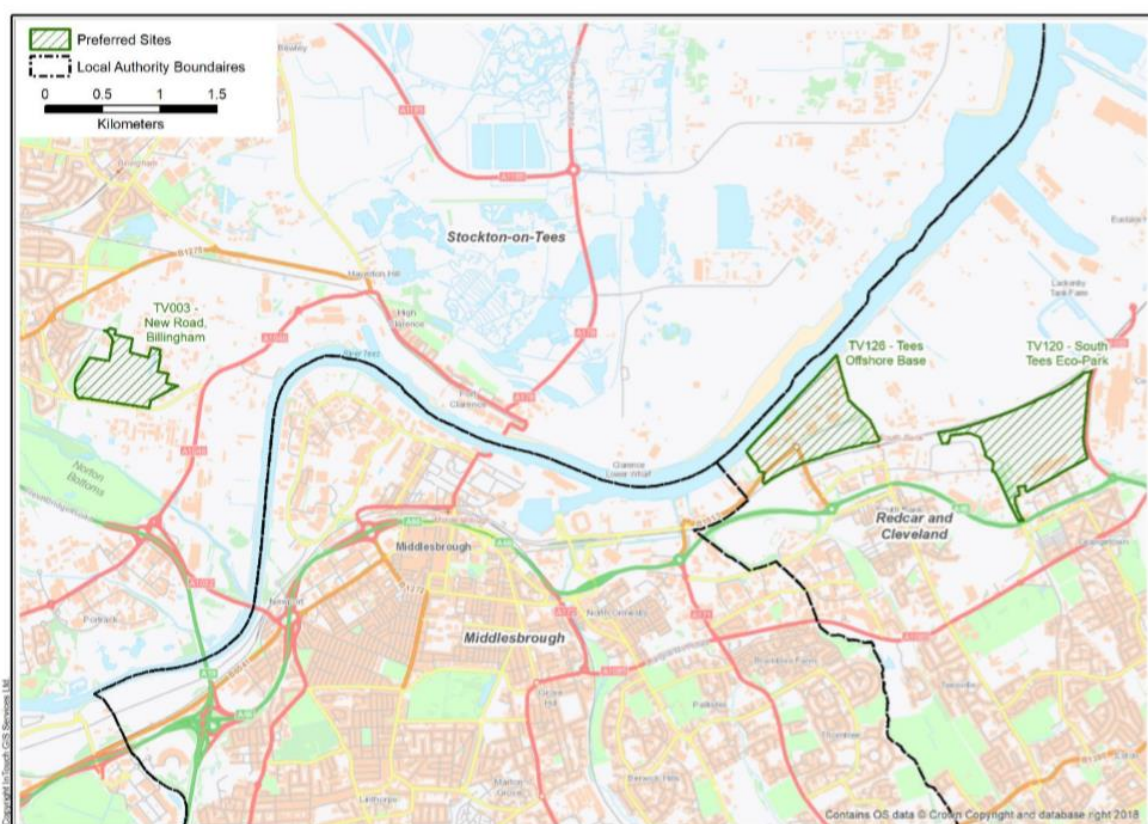


Figure 7-1 Location of the three preferred sites for a new residual waste facility (Source: Tees Valley OBC Site Identification and Selection)

Site specific benefits and constraints of each site were considered, details are set out in Table 7-1.

Table 7-1 The benefits and constraints of the preferred sites (Source: Tees Valley OBC Site Identification and Selection)

Site Reference		Benefits	Constraints
TV003	New Road, Billingham	Centrally located within the study area and allocated for strategic waste development. Appears to be an available site, ready to develop.	Billingham residential area to the west. Pipe work around the site and over New Road at the south eastern corner of the site
TV120	South Tees Eco-Park (now Grangetown Prairie)	Allocated for strategic waste development. Appears to be an available site, ready to develop, however the STDC indicated that it is a popular location for other potential investors.	It is a long way to the east within the study area. It is located within an area formerly extensively used for heavy industry processes and may require comprehensive remediation.
TV126	Tees Offshore Base	It is located within the spatial strategy for strategic waste development. Appears to be an available site, ready to develop.	It is a long way to the east within the study area. It is located close to PD Ports and the river frontage and may be preferred/retained by the site owner for port related uses.

7.4 The Preferred Site

Site TV120 'South Tees Eco Park' (now known as Grangetown Prairie) is the preferred location for the proposed development. The site has Enterprise Zone status, on brownfield land, available for development located within an industrial area, with good existing transport links.

The site is allocated for strategic waste development within the Redcar Borough Council Local Plan, the Tees Valley Joint Minerals and Waste Development Plan Documents (The Minerals and Waste Core Strategy DPD and the Minerals and Waste Policies and Sites DPD), the South Tees Area Supplementary Planning Document (SPD) and STDC Regeneration Master Plan.

The site is well screened on most of its sides. The site was also granted planning permission in 2008 (planning application ref: R/2007/0994/FFM) for the erection of waste autoclave and community recycling facilities, four-storey office accommodation and associated infrastructure. The previous application gives an indication of the scale and massing of suitable development in this location.

8 Pre application Consultation

On the 9th of August 2019, a meeting took place with Claire Griffiths, Development Services Manager and Adrian Miller, Head of Planning and Development, both from Redcar Borough Council, in attendance with Dorian Latham, Technical Director (Environmental Impact Assessment and Environmental Management), Della Adams, Principal Environmental Consultant and Mike McDonald Technical Director (Hydrogeology), of JBA. The meeting was held at Redcar Borough Council Offices. During the meeting it was agreed that the proposals would form EIA Schedule 1 Development. The supporting information and level of detail required for the Environmental Statement (ES) and Outline Application was also discussed.

Regular progress meetings have taken place between JBA, Hartlepool and Redcar Councils. Mr. Miller has been available at some of the meetings and has provided advice during the preparation of the ES and planning application.

Consultation responses obtained from the EIA Scoping Response from key stakeholders have been taken on board as part of the preparation of the planning application and have formed the basis of some of the supporting information.

8.1 Stakeholder Consultation

The proposed development site lies at the north western corner, within 'Zone 1', Grangetown Prairie. This zone is identified as the 'South Industrial Zone'. It is the first Phase of re-development planned between 2019 and 2022.

Extensive consultation took place during the preparation of the STDC Regeneration Master Plan which included the plans to re-develop Grangetown Prairie. As part of the adoption process, a draft Master Plan was prepared in March 2017, which included a 'Development Potential Illustrative Plan' for each Zone. Subsequent to comments received an updated Masterplan was published in March 2019.

The purpose of the consultation was to gauge views of the local community and other stakeholders and consider how their comments and suggestions could be utilised as part of the proposals. In addition to the public, identified interested stakeholders included:

- Tees Valley Combined Authority (Redcar & Cleveland Borough Council, Middlesbrough Council, Stockton on Tees Borough Council, Hartlepool Borough Council, Darlington Borough Council)
- Environment Agency
- Highways England
- Network Rail
- National Grid
- Health & Safety Executive Natural England
- South Tees Site Company
- Thai Banks Consortium
- Official Receiver
- SSI Task Force
- Tata Steel
- Greybull Capital
- PD Ports
- British Steel
- Redcar Bulk Terminal
- Northumbrian Water Ltd
- BOC

- MGT Power Teesside
- Sembcorp Utilities (UK) Ltd
- Operators at Wilton International
- Sirius Minerals
- Industry Nature Conservation Association (INCA)
- Tees Estuary Partnership
- Teesside Valley Wildlife Trust
- Major utilities providers
- Wood Group (CATS Pipeline)
- Local public transport service providers

As part of the consultation exercise a range of activities and events were undertaken over a seven-week period, including formal public presentations and events, workshops and stakeholder meetings, meetings with and/or presentations to major operators in the area, regulators, and local and regional business networks and forums.

A total of 27 consultation events took place. The public consultation events were held within each of the five Tees Valley boroughs at the following locations:

- The Heart, Redcar & Cleveland, 18th October 2017;
- Redcar & Cleveland Civic & Learning Centre, 20th October 2017;
- Guisborough Library, 1st November 2017;
- Middlesbrough Central Library, 8th November 2017;
- National Museum of the Royal Navy, Hartlepool, 15th November 2017;
- Dolphin Centre, Darlington 22nd November 2017; and
- Stockton Central Library, Stockton, 29th November 2017.

Hundreds of stakeholder responses were received on a range of subjects including:

- Ecology and Environment
- Heritage and Culture
- Utilities
- Economics
- Flooding and Water Management
- Contamination and Landfill
- Energy Generation
- Connectivity and Transport Infrastructure
- Leisure and Recreation

As set out in the Masterplan, consultation not only helped STDC develop positive relationships with stakeholders, it also helped to develop a better understanding of current operations, constraints, logistics needs and business plans, enabling the development of the Master Plan that would also enable these key stakeholders to operate better and be more successful, so helping to realise and sustain significant growth in the Tees Valley economy.

The STDC area is also allocated for strategic waste development within the adopted Redcar Borough Council Local Plan, the Tees Valley Joint Minerals and Waste Development Plan Documents (The Minerals and Waste Core Strategy DPD and the Minerals and Waste Policies and Sites DPD), the South Tees Area Supplementary Planning Document (SPD) and STDC Regeneration Master Plan.

9 Planning Policy

9.1 National Planning Policy Framework, 2019

The National Planning Policy Framework (NPPF) was published by the Department for Communities and Local Government (DCLG) in 2012. The Framework was updated on 19th February 2019 and sets out the government's planning policies for sustainable development in England, based on economic, social and environmental objectives:

a) economic objective – to help build a strong, responsive and competitive economy, by ensuring that sufficient land of the right types is available in the right places and at the right time to support growth, innovation and improved productivity; and by identifying and coordinating the provision of infrastructure;

b) a social objective – to support strong, vibrant and healthy communities, by ensuring that a sufficient number and range of homes can be provided to meet the needs of present and future generations; and by fostering a well-designed and safe built environment, with accessible services and open spaces that reflect current and future needs and support communities' health, social and cultural well-being; and

c) an environmental objective – to contribute to protecting and enhancing our natural, built and historic environment; including making effective use of land, helping to improve biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy.

Chapter 3 of the NPPF, relates to 'Plan-Making'. It states that the planning system should be planned, succinct and up-to-date plans should provide a positive vision for the future of each area. Paragraph 20, of chapter 3 relates to Strategic Policies set out an overall strategy for the pattern, scale and quality of development, including the provision for

- infrastructure for transport, telecommunications, security, waste management, water supply, wastewater, flood risk and coastal change management, and the provision of minerals and energy (including heat);

Section 11 promotes effective use of land and states that planning policies, and decisions should support the use suitable brownfield land within settlements for homes and other identified needs.

Section 12 outlines the importance of well-designed buildings and promotes development sympathetic to local character and history, including the surrounding built environment and landscape setting.

Section 15 relates to 'Conserving and enhancing the natural habitat' and sets out ways that planning policies and decisions should protect and enhance the natural and local environment.

Section 16 outlines policies for the protection and enhancement of the historic environment in plan-making and decision taking. Decisions affecting heritage assets should be undertaken based on an understanding of the significance of any heritage asset affected by development, based on a proportionate evidence base. Where sites include archaeological potential field evaluation may also be required (para 189).

The NPPF should be read in conjunction with the Government's planning policy for waste, this includes: Our Waste, Our Resources: A Strategy for England.

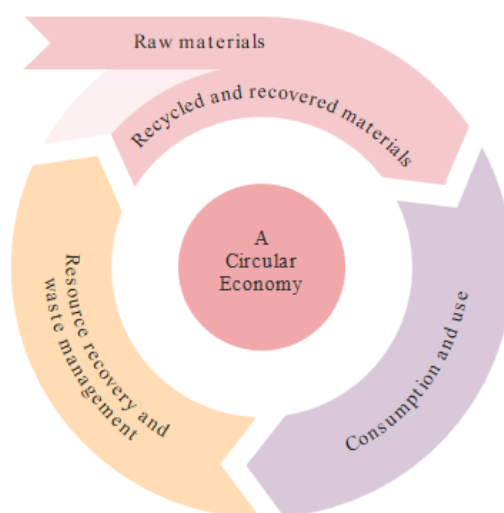
9.2 Our Waste, Our Resources: A Strategy for England

This strategy, prepared by the Department for Environment, Food Rural Affairs (DEFRA) and Environment Agency was published in 2018. It sets out plans to double resource productivity and eliminate avoidable water by 2025. The strategy combines immediate actions with firm commitments for the coming years and gives a clear longer-term policy direction in line with the 25 Year Environment Plan. It sets out how we will:

- preserve our stock of material resources by minimising waste, promoting resource efficiency and moving towards a circular economy

- minimise the damage caused to our natural environment by reducing and managing waste safely and carefully
- deal with waste crime

A key focus of the strategy is 'a more circular economy' which involves re-use, repair, recycle, keeping resources in use for as long as possible, shown in Figure 9-1 below.



9.3 Figure 9-1 Diagram of 'A Circular Economy' (Source DEFA's & EA Our Waste, Our Resources: A Strategy for England)

Targets have been agreed in Europe, which the UK are expected to adopt to support the delivery of a circular economy the following. These include:

- 55% recycling target for municipal waste by 2025;
- 60% recycling target for municipal waste by 2030;
- 65% recycling target for municipal waste by 2035;
- 10% limit on the landfilling of municipal waste by 2035.

Chapter 3 of the strategy, 'Resource Recover and Waste Management' identifies the need for better quantity and quality in recycling, and more investment in domestic recycled materials markets. It aims to promote UK-based recycling and export less waste to be processed abroad.

This chapter sets out how we will:

- improve recycling rates by ensuring a consistent set of dry recyclable materials is collected from all households and businesses;
- reduce greenhouse gas emissions from landfill by ensuring that every householder and appropriate businesses have a weekly separate food waste collection, subject to consultation;
- improve urban recycling rates, working with business and local authorities;
- improve working arrangements and performance between local authorities;
- drive greater efficiency of Energy from Waste (EfW) plants;
- address information barriers to the use of secondary materials;
- encourage waste producers and managers to implement the waste hierarchy in respect to hazardous waste.

9.4 25 Year Environment Plan

DEFRA's 25 Year Environmental Plan was published on the 11th January 2018 and updated on 16th May 2019. It sets out goals for improving the environment within a generation, leaving it in a better state than it was found. It details how government will work with communities and businesses to do this.

The Plan has a specific chapter relating to 'Minimising Waste' and sets out how this will be done. This includes the reuse of materials and managing materials at the end of their life to minimise the impact on the environment.

9.5 Local Planning Policy

The Redcar & Cleveland development plan consists of the Redcar & Cleveland Local Plan and the Tees Valley Joint Minerals and Waste Development Plan Documents.

9.5.1 Redcar and Cleveland Local Plan 2015-2032

The Redcar and Cleveland Local Plan was adopted in May 2018 and sets out the vision and overall development strategy for the Council's area and how it will be achieved for the plan period until 2032.

The policies that are relevant to the proposed development are set out below:

SD1: Sustainable Development states that the Council will take a positive approach that reflects the presumption in favour of sustainable development contained in the NPPF. The council will also work proactively with applicants to secure developments that improve the economic, social and environmental conditions in the area and are in accordance with planning policies.

SD2: Locational Policy is based on a settlement hierarchy that is used to guide development to the most sustainable locations such as urban and coastal areas. Only limited development of an appropriate scale will be allowed within the service villages and villages, as defined on the Policies Map.

SD3: Development Limits supports development within the Development Limits defined on the Policies Map. Development beyond development limits will be restricted to criteria set out within the policy.

SD4: General Development Principles outlines the criteria that will be utilised by the Council when assessing the suitability of a site or location.

SD6: Renewable and Low Carbon Energy states that renewable and low carbon energy schemes will be supported and encouraged, and will be approved where their impact is, or can be made, acceptable.

SD7: Flood and Water Management states that flood risk will be taken into account at all stages in the planning process to avoid inappropriate development in areas at current or future risk. In addition, all development proposals will be expected to be designed to mitigate and adapt to climate change. The policy also sets out criteria where flood risk assessments will be required to demonstrate that development is not at risk from flooding and that it does not increase flood risk elsewhere in the following circumstances.

LS4: South Tees Spatial Strategy includes:

- Teesport Wilton International
- South Tees Development Corporation area,
- South Tees Industrial Estates and Business Parks (including current and former steelworks at South Tees and Redcar)

The policy then goes on to set out several aims of the Council and partners with regard to the Economy, Connectivity and the Environment many of which are specific to the STDC area.

ED6: Promoting Economic Growth states that land and buildings within existing industrial estates and business parks, as shown on the Policies Map, will continue to be developed and safeguarded for employment uses.

N4: Biodiversity and Geological Conservation states that support will be given to high quality schemes that enhance nature conservation and management, preserve the character of the natural environment and maximise opportunities for biodiversity and geological conservation. The council will protect and preserve local, national and international priority species and habitats and promote their restoration, re-creation and recovery.

HE2: Heritage Assets states that non-designated heritage assets of archaeological interest that are demonstrably of equivalent significance to scheduled monuments will be considered subject to the policies for designated heritage assets.

HE3: Archaeological Sites and Monuments requires development that may affect a known or possible archaeological site, whether designated or non-designated, will require the results of a desk-based assessment to be submitted as part of the planning application.

TA1: Transport and New Development requires the Council and its Partners to ensure transport requirements of new development, are relative to the scale and type of development and that sustainable travel is promoted to minimise environmental impacts and support residents' health and wellbeing.

9.5.2 Tees Valley Joint Minerals and Waste Development Plan Documents

Tees Valley Combined Authority (Darlington, Hartlepool, Middlesbrough, Redcar and Cleveland and Stockton-on-Tees Council's) was created in April 2016 to drive economic growth and job creation in the area.

The combined authority prepared joint Development Plan Documents (DPDs) which include:

- The Minerals and Waste Core Strategy DPD which sets out the long-term spatial vision and strategic policies for minerals and waste developments;
- The Minerals and Waste Policies and Sites DPD which identifies specific sites for minerals and waste development and provides policies which will be used to assess minerals and waste planning applications.

The DPDs were adopted on the 15th September 2011 and set out planning policies and site allocations on minerals and waste developments until 2026.

The policies from the Minerals and Waste Core Strategy DPD that are relevant to the proposed development are set out below:

MWC6: Waste Strategy seeks to deliver sustainable management of waste arisings through the distribution of waste management sites across the Tees Valley so that facilities are well related to the sources of waste arisings, related industries or the markets for any products created.

MWC7: Waste Management Requirements states that land will be provided for the development of waste management facilities.

MWC8: General Locations for Waste Management Sites sets out specific location's for large waste management facilities, these include:

- south of the River Tees - land located around Teesport, Smiths Dock Road and the eastern end of Dockside Road (Middlesbrough and Redcar and Cleveland);
- to the north of the River Tees - the land located around the Graythorp and Haverton Hill Road areas (Hartlepool and Stockton-on-Tees); and
- to the north of the River Tees - the land located around the Port Clarence, Cowpen Marsh and Seal Sands areas (Hartlepool and Stockton-on-Tees)

MWC10: Sustainable Transport requires proposals for minerals and waste development to prioritise the use of nonroad-based transport for the movement of minerals and waste resources. Where transportation cannot be provided by non-road means, evidence must be provided that the proposed traffic movements can be accommodated on the strategic road network and that the site can be accessed in a safe manner.

The policies from The Minerals and Waste Policies and Sites DPD relevant to the proposed development are set out below:

MWPS (South Tees Eco-Park (Redcar and Cleveland)) details that a site of approximately 27 hectares is allocated for development and is expected to recover value from 450,000 tonnes of municipal solid waste and commercial and industrial waste annually. The policy details that appropriate development for the site includes large-scale waste management facilities.

9.5.3 Current Tees Valley Joint Waste Management Strategy (JWMS) 2008

Policies and actions contained within the Headline Strategy, specific to the proposals includes:

Policy 5: Aims to maximise the amount of material that is recycled, composted or recovered from the residual waste stream.

Actions: Provision will be made residual waste treatment capacity beyond 2020 identified by midterm reviews to ensure targets on the diversion of waste from landfill are met.

9.6 Draft Tees Valley Joint Waste Management Strategy (JWMS) 2020-2035

The Draft JWMS is in the process of being adopted. It has been produced by the five Tees Valley Councils, Darlington Borough Council, Hartlepool Borough Council, Middlesbrough Council, Redcar and Cleveland Borough Council, and Stockton-on-Tees Borough Council. The current JWMS evolved from the 2008 JWMS, which required updating subsequent to changes waste management policies and is supported by:

- an Options Appraisal (OA) which considers a number of different ways to achieve the objectives in this strategy; and
- A Strategic Environmental Assessment (SEA), carried out to determine if the activities that are proposed to progress in Tees Valley are likely to have any significant adverse impact on the environment.

The current strategy sets out the joint approach to the sustainable management of waste within the Tees Valley and prioritises actions for the next fifteen years. It is Tees Valleys approach to the management of LACW over this timeframe. It provides the framework for how the councils will work towards reducing the amount of waste produced, to recycle as much material as possible and find the most sustainable solution to deal with any waste that remains.

The JWMS, current national policy is based on the principle of the waste hierarchy (Figure 11-1), alongside the circular economy which sets out an approach in waste management stages in their order of priority. Preventing waste being created in the first instance is the main priority, the disposal is the lowest priority option. Producing recyclable material of a high quality is also important so that further treatment and disposal is minimised.

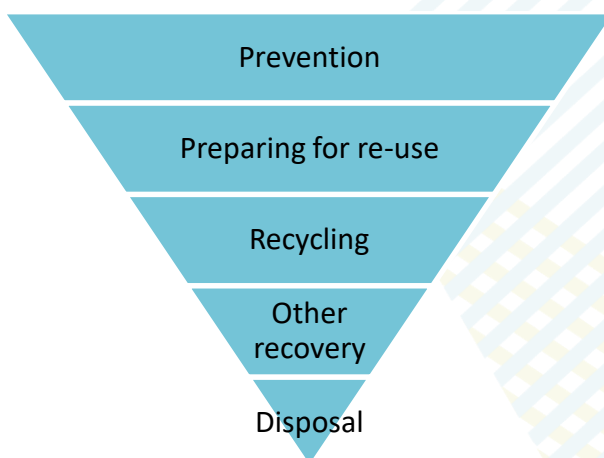


Figure 9-2 Waste hierarchy (Source: Draft JWMS)

Policies contained within the JWMS to support the implementation of the strategy and the delivery of the Preferred Option include:

Policy 1: Joint Working We will continue to work together in partnership with other stakeholders in order to ensure sustainable waste management within the Tees Valley to protect the natural environment. We will strive for sub-regional self-sufficiency and be mindful of the proximity principle.

Policy 2: Sustainable Waste Management We will ensure that the services delivered by the Tees Valley Authorities implement methods of sustainable waste management in line with the Waste Hierarchy.

Policy 3: Waste Awareness and Prevention We will work with partners to promote waste awareness and prevention and encourage householders, schools and local businesses to reduce the impact of their behaviour with regards to their waste stream.

Policy 4: Waste Collections We will increase the proportion of material that is collected for recycling and composting through kerbside schemes, bring sites and HWRCs.

Policy 5: Waste Treatment Facilities We will maximise the amount of material that is recycled, composted or recovered from the residual waste stream.

Policy 6: Residual Waste Stream We will minimise the amount of waste that is disposed of in line with our principle of working towards zero waste to landfill.

Policy 7: Monitoring and Review We will regularly monitor and review this Strategy in consultation with stakeholders and the public to ensure that it links with other plans and strategies.

9.7 Policy Supplementary Planning Documents

9.7.1 South Tees Area Supplementary Planning Document (SPD)

South Tees Area (SPD) was adopted in May 2018. It has been prepared to support adopted planning policies to guide and inform future planning applications that will support both the expansion of existing business operators and future employment opportunities who wish to locate to the South Tees Area.

Polices contained within the SPD, relevant to this proposal include:

STDC1: Regeneration Priorities states that the council will, in partnership with the STDC, seek to achieve the comprehensive redevelopment of the South Tees Area in order to realise an exemplar world class industrial business park.

STDC2: Land Assembly and Delivery requires the Council, in partnership with the STDC, to work with landowners and key stakeholders within the South Tees Area to proactively assemble land to maximise the development and regeneration potential of the area.

STDC3: Phasing Strategy sets out an approach for the phasing is site re-development.

STDC4: Economic Development Strategy states that the council will, in partnership with the STDC, support the economic development of the South Tees Area for specialist industries, in accordance with Local Plan Policies LS4and ED6.

STDC6: Energy Innovation requires the in partnership with the STDC and other partners, promote and support the development of new energy generation within the South Tees Area, including renewable energy development and the promotion of other innovative energy projects.

STDC7: Natural Environmental Protection and Enhancement requires the Council in partnership with the STDC and investment partners and other key stakeholders, to protect and, where appropriate, enhance designated and non-designated sites of biodiversity and geodiversity value and interest within the South Tees Area.

STDC8: Preserving Heritage Assets states that Council will, in partnership with the STDC and in consultation with the local community and key stakeholders, seek to identify those industrial assets which it is appropriate and viable to retain as part of the development of an industrial heritage trail within the South Tees Area Open Space Strategy.

STDC10: Utilities states that development of new infrastructure relating to energy generation in line with the Energy Strategy, will be supported.

STDC14: South Industrial Zone states that the Council, in partnership with the STDC, will encourage development proposals within the South Industrial Zone, for port-related uses, including port-based fabrication, offshore energy industries, including manufacturing, materials processing and manufacturing, contract fabrication and energy generation and, potentially, rig and large equipment decommissioning.

10 South Tees Development Regeneration Master Plan

The South Tees Development Corporation (STDC) is the first Mayoral Development Corporation (MDC) set up outside of London to promote economic development and business growth in the South Tees Area for the next 25 years, with a mission of creating 25,000 new jobs over the next 10 years.

Under the enabling legislation that established STDC, a range of powers were granted to the Corporation. However, it was agreed between Tees Valley Combined Authority and Redcar & Cleveland Borough Council that the Council would retain planning powers and continue to act as the Local Planning Authority for the STDC area in respect of planning policy and development management, and in the processing of planning applications.

The STDC Regeneration Master Plan was prepared in 2017 as a supporting visioning and development strategy document to inform the preparation of the SPD (Supplementary Planning Document). It presents the vision, strategy and ideas for the regeneration of the South Tees Development Corporation area, which covers almost 4,500 acres (1,800 hectares) for employment and economic growth for the Tees Valley.

The preferred site is located within South Area, Zone 1 'Grangetown Prairie'. Most of the land has Enterprise Zone status. These are geographic regions that are granted special status by a government in order to encourage development and economic growth. The zones may be granted favourable tax rates, regulatory exemptions, or other incentives to encourage businesses to stay in the area or locate in it.

11 Planning Policy Review

National and local planning policies and strategies on sustainable waste management focus on the waste hierarchy. It presents several waste management stages in order of priority. It stresses the importance of preventing waste being created in the first instance as the main priority and disposal as the lowest priority.

Aligned with the waste hierarchy is circular economy where we keep resources in use for as long as possible, extracting the maximum value from them whilst in use, then recover and regenerate products and materials at the end of each service life.

The proposed ERF is viable and valuable concept that would make a positive contribution to sustainable waste management and low carbon energy in the North East

The proposals will recover the value from the North East's residual waste stream diverting waste from landfill. The proposed development is in line with the waste hierarchy and circular economy, national, local planning policies and strategies, the Tees Valley current and emerging JWMS, Durham County Council and Newcastle City Councils Waste Management Strategies

The development will contribute to the waste treatment targets agreed in Europe, which the UK are expected to adopt.

The need for a sustainable, long term-waste treatment option beyond 2020 (when the existing Tees Valley Authorities EfW contracts expire), was initially identified within the JWMS (2008).

The need specifically for:

- a new energy recovery facility with the ability to utilise the heat produced, through the development of Combined Heat and Power (CHP);

was then identified as part of the Preferred Option, undertaken during the Options Appraisal in the preparation of the revised Draft Joint Waste Management Strategy (extending it until 2035). The proposed development is in line with waste strategy and waste requirement policies, MWC6 and MWC7 of the Minerals and Waste Core Strategy DPD, and Policy 5 of the JWMS (Headline Strategy).

The proposed ERF, has been suitably sited within STDC area 'Grangetown Prairie', 'South Zone 1' which has Enterprise Zone status, on land allocated within the Minerals and Waste Policies, Core Strategy and Policies Sites DPD documents (policy MWC8 and MWP8), specific to large-scale waste management facilities. In terms of appropriate land use, the development is in accordance with Section 11 of the NPPF.

The location of the site within the industrial area and surrounded on all sides, enables the existing landscape character has the capacity and qualities to accommodate the proposed development in-line with local and national landscape character policies.

The proposed site also has local plan allocations, LS4, ED6 supporting the development and economic regeneration of this redundant, brownfield site which was once at the heart of the steel making industry.

The development of the Grangetown Prairie site, for an ERF, is in line with all policies contained within the in the South Tees Area Supplementary Planning Document (SPD). It will create job opportunities, contributing to the creation of 'a new energy hub', whilst growing the 'recycling sector' in line with policies LS4, ED6 and other sustainable development and locational policies SD1, SD2, SD4.

The development is further supported by several policies which encourage the development of 'new energy generation', renewable and low carbon energy schemes, including Policies SD6 of the Local Plan and SPD policy STDC6.

An archaeological assessment has been undertaken (details at section 12.1) which identified surviving bases of the late 19th and 20th century blast furnaces. Recommendations limited ground disturbance works in the vicinity of the surviving blast furnaces that will enable them to be retained on site and been incorporated into the design and layout of the proposals in accordance with local plan policies for the conservation and preservation of the historic environment, HE2 and HE3, and SPD policies STD7 and STD8 and the Section 16 of the NPPF.

Given the proximity of the site to nearby sensitive sites, including Teesmouth and Cleveland Coast Special Protection Area (SPA) and Ramsar and the underlying Teesmouth and Cleveland Coast Site of Special Scientific Interest (SSSI), appropriate ecological and habitat assessments have been undertaken (full details of the assessments are included at Section 12.2). Approximately 20% of the site is assessed as good quality habitat, as a result an area of 2.31 hectares is to be retained and enhanced as part of the proposals, in line with habitat, biodiversity and geological conservation policies within the Section 15 of the NPPF, SPD policy STDC7 and Local Plan policy N4.

A Flood Risk Assessment has been undertaken, which concluded the proposed development at this location (Flood Zone 1) acceptable. Providing the consideration is given to attenuation and surface water run-off in the final design the proposals would be in accordance with policy SD7.

The proposals are unlikely to cause a significant impact to the road network, in accordance with local plan policy TA1.

12 Environmental Considerations

12.1 Heritage and Archaeology

A Historic Environment Desk Based Assessment was undertaken in November 2019 by Robin Daniels of Tees Archaeology. The assessment identified that although the site has been cleared of structures and plant of the more recent steel works, a number of features relating to the previous use of the site and more significantly the bases of the Bessemer Blast Furnaces are intact, including their related hot air stoves, cooling towers and related equipment.

The assessment concluded that the surviving bases of the late 19th and 20th century blast furnaces should be retained on site and consideration be given to their proper preservation and interpretation. Recommendations were provided within the assessment which included further archaeological works including surveys, trial trenches and monitoring.

The design and layout of the proposed ERF has been strategically sited to avoid disturbance of the remains, and the setting aside of this area as a 'heritage gain'.

12.2 Ecology

Industry Nature Conservation Association (INCA) and Hartlepool Borough Council have undertaken separate Preliminary Ecological Appraisals (PEA) of the proposed site. The key PEA was undertaken by INCA on 10th May 2018 (INCA, 2018). The site forms part of the home range of at least two Brown Hare (*Lepus europaeus*) and provides suitable habitat for breeding Common Toad (*Bufo bufo*) and several bird species. Surrounding areas also had potential to support brownfield butterfly species such as Dingy Skipper (*Erynnis tages*) and Grayling (*Hipparchia Semele*). Mitigation for the loss of high-quality calcareous vegetation was recommended as well as ecological enhancements which could include removal of Sea Buckthorn (*Hippophae rhamnoides*), Sustainable Drainage Systems (SUDS) and naturalising the course of Holme Beck, dependent on the nature and extent of the development. An environmental DNA (eDNA) test was also undertaken for Great Crested Newts, which returned negative results on the 30th May 2018.

A PEA was also undertaken by INCA on 17th April 2019 which surveyed the wider STDC area (INCA, 2019). However, none of these areas fall within the site boundary for the ERF site. Overall the PEA describes habitats with potential to support brownfield butterfly species such as Dingy Skipper (*Erynnis tages*) and Grayling (*Hipparchia Semele*) which are highly mobile and therefore could be impacted by the proposed development.

Hartlepool Borough Council undertook a PEA in August 2019 that identified the need for a Habitats Regulations Assessment (HRA) due to the proximity of the Teesmouth and Cleveland Coast potential Special Protection Area (pSPA) and proposed Ramsar site (HBC, 2019a). These designations underly the current designation as a Site of Special Scientific Interest (SSSI). No further surveys or licences for European Protected Species were required. However, mitigation for the loss of Priority Habitats, Open Mosaic Habitats and Ponds, and species such as Brown Hare, breeding birds, Common Toad and butterflies is required as well as biodiversity enhancement. Removal of the invasive non-native species, Small-leaved Cotoneaster (*Cotoneaster integrifolius*) and non-native Buddleia (*Buddleia davidii*), was also recommended. This survey was followed by an interim assessment of the Defra Metric 2.0 to log a loss of 40 Ha of brownfield habitat, which must be compensated for and result in a minimum biodiversity net gain of 10% (HBC, 2019b).

Following an alteration to the site boundary, an additional walkover of the proposed site was undertaken on the 13th November 2019 and amendments were made to the Hartlepool Borough Council PEA (HBC, 2019c). Approximately 20% of the site is assessed as good quality habitat and an area of 2.31 hectares has been designated to be retained and enhanced.

12.2.1 Habitats Regulations Assessment (HRA)

A HRA Screening was required due to the proximity of the proposed works to European designated sites. The HRA Screening Assessment report (JBA, 2019) identified the following designated sites within 10km of the proposed ERF site:

- Teesmouth and Cleveland Coast SPA

- Teesmouth and Cleveland Coast pSPA
- Teesmouth and Cleveland Coast Ramsar
- Teesmouth and Cleveland Coast proposed Ramsar
- North York Moors SAC; and
- North York Moors SPA.

The HRA Screening concluded that, in the absence of appropriate mitigation measures, the proposed works both alone and in-combination will have no likely significant effects on the designated sites. The HRA process therefore is not required to proceed to an Appropriate Assessment.

12.3 Landscape and Visual Impact Assessment (LVIA)

A Landscape Visual Impact Assessment has been undertaken. It concluded that the site is situated within an industrial area and is screened by existing industrial areas, buildings, plant and equipment. The landscape can accommodate this proposal without any significant effects arising on either the national or local level landscape character areas and types.

The proposal gives rise to slight beneficial effects due to the redevelopment of derelict brownfield areas within the allocated employment zones. This creates an opportunity for a high-quality external environment to be designed to set the building into context adjacent to these uses and to provide a contemporary and attractive environment with both landscape and biodiversity benefits. There are no residual significant impacts on landscape character resulting from the proposed development.

12.3.1 Flood Risk Assessment

A Flood Risk Assessment (FRA) has been undertaken which incorporates and Outline Drainage Strategy. The FRA concluded that the site is within Flood Zone 1 and the proposed development is appropriate at this location is acceptable.

Based on Environment Agency defined Risk of Flooding Surface Water (RoFSW) mapping, the proposed development is at low risk of surface water flooding.

JFlow modelling was undertaken to delineate surface water flow routes, quantify associated flow rates and volumes, and confirm interactions with the development layout. The modeling indicated that there are no clear offsite impacts that need to be managed, however, development proposals must consider intercepting defined areas of localised ponding in addition to managing surface water runoff associated with the proposed development. To ensure that flood risk is not increased offsite, surface water runoff must be managed on site.

The FRA recommended attenuation of surface water on site so that flood risk downstream can be effectively managed, and that attenuate runoff is discharged to Holme Beck Culvert. This would be dependent on culvert capacity and recommended a condition assessment and agreement with the Local Lead Flood Authority.

12.3.2 Water Framework Directive (WFD)

A WFD Assessment has been prepared JBA Consulting to determine the effects of the proposed ERF on ecological, hydromorphological and chemical quality of nearby waterbodies and identify any potential impacts that could cause deterioration in the current status of the water body or could hinder the water body from meeting its WFD objectives in the future.

The Environmental Objectives, together with the specific actions (mitigation measures) necessary to enable the water body to meet these objectives, are set out in the Northumbria RBMP (Environment Agency (EA), 2015) and Catchment Data Explorer (EA, 2019).

Waterbodies adjacent to the site include Tees Transitional water body, Tees Estuary (S Bank), Tees Coastal Waterboard within the Tees Mercia Mudstone and Redcar Mudstone Groundwater water body (GB40302G701300). Morton West Beck Catchment (trib of Tidal Tees) is also located upstream of these waterbodies.

Screening, Scoping and Impact Assessment were all undertaken as part of this work. It was concluded that all of the waterbodies have an Overall Classification as Moderate.

The main impacts will be to the Tees Estuary, which will subsequently impact the other waterbodies assessed. Implementation of the mitigation measures described within the WFD will ensure the proposed development will be compliant with WFD Objectives.

This WFD assessment should be updated following confirmation of, and further details on, discharge and / or abstraction processes required for the operation of the ERF.

12.4 Traffic and Transportation

A Traffic Assessment has been undertaken by Fore Consulting. Based on the volume of waste that would be transported to the site it is estimated that 15 HGV's would visit the site per day. The Traffic Assessment also considered previous uses at the site when the steel works were in operation. It is concluded that the proposals would not have a significant detrimental impact of the surrounding road network.

12.5 Noise

A baseline Noise Assessment has been undertaken by Paul Horsley Acoustics. The nearest residential properties and sensitive receptors are located approximately 800m from the site on Bolckow. The A66 and industrial areas lie between the site and the residential properties. As part of the assessment background noise levels were obtained at Bolckow Road. It is confirmed that the proposed facility will not exceed these noise levels and these would be agreed with the LPA for both construction and operation.

Embedded mitigation will be included within the design, for example the vehicles would go in forwards and do their direction change in the vehicle, this means any extra noise and emissions of reversing are contained and the exhaust emission will go via the air handling of the plant.

12.6 Air Quality

An Air Quality Assessment has been prepared by Hoare Lea. It is confirmed that the proposed facility will meet air quality standards and will be in line with Defra's Air Quality Strategy.

As with noise, embedded mitigation will be included within the design to manage potential air quality issues. Consultation is proposed with the LPA and Environment Agency as part of the scheme development and implementation.

There is a new Best Available Techniques (BAT) Reference Document (BREF) for Waste Incineration (BREFs) that has been released: –

<https://ec.europa.eu/jrc/en/news/new-eu-environmental-standards-waste-incineration>

The BAT for waste plants was published on 12 Nov 2019 and has been applied in the Air Quality Assessment for this application

13 Conclusions and Recommendations

The Tees Valley Authorities and neighbouring Authorities Durham and Newcastle have developed several strategies over the years to develop a joint approach to the sustainable waste management. Currently in the region, and in line with the waste hierarchy, preventing waste in the first instance is the highest priority, however various recycling services are in place by each council diverting materials from landfill. Residual from Hartlepool, Middlesbrough, Redcar and Cleveland and Stockton Authorities that cannot be recycled is treated through Haverton Hill EfW combustion facility in Tees Valley under a contract with SITA UK Limited, with at least 180,000 tonnes per annum of municipal solid waste (MSW) being processed. Darlington Borough Council waste is currently treated through a residual waste materials recovery facility (MRF) at Aycliffe Quarry. The refuse derived fuel (RDF) produced is exported to an EU based ERF.

Aligned with the Tees Valley Authorities Durham County Council and Newcastle City Council a significant amount of their residual waste is also burnt to create energy. Durham County Council have a contract with Suez's ERF on Teesside. Newcastle City Councils residual waste is either sent to Sweden for treatment as a Refuse-Derived Fuel or in an EfW facility in the UK.

The Tees Valley SITA contract terminates in 2020. The coming to an end of the existing ERF contracts and changes in waste management policies, have led to the preparation of a revised Draft JWMS (which is in the process of being adopted), extending it until 2035. The revised JWMS pays particular regard to:

- moving waste up the waste hierarchy of options through prevention, reuse, recycling and composting activities; and
- the identification of a long-term residual waste treatment solution for the region.

An Options Appraisal process, undertaken by the Tees Valley Councils in the preparation of the revised Draft JWMS, resulted in the selection of a Preferred Option for the proposed ERF. A detailed site selection process was then undertaken, and the ERF site has been carefully sited on brownfield land within 'Grangetown Prairie', land identified for development within the STDC Regeneration Master Plan. The site is also allocated for waste development in the Redcar Borough Council Local Plan, the Tees Valley Joint Minerals and Waste Development Plan Documents (The Minerals and Waste Core Strategy DPD and the Minerals and Waste Policies and Sites DPD), the South Tees Area Supplementary Planning Document (SPD).

The proposed ERF is viable and valuable concept that would make a positive contribution to sustainable waste management and low carbon energy in the North East. Residual waste would be supplied from by the Tees Valley Authorities. In addition, Newcastle, Durham are able to provide the regional capacity to supply the facility recovering the value from the residual waste stream whilst diverting waste from landfill.

Specialist surveys including Ecology, Archaeology, Flood Risk Assessment, WFD Assessment, Air Quality, Transport Assessment, LVIA have been undertaken ahead of the application submission to ensure there is no detrimental impact as a result of the proposals on the immediate or wider locality.

The layout of the facility has been carefully designed to taken on board comments received from Archaeological and Environmental Consultants, archaeological assets are being retained and ecological habitats are being enhanced on site as part of a landscaping plan.

The proposed development is in line with the waste hierarchy and circular economy, national, local planning policies and strategies, including the current and emerging JWMS.

References (Heading 6)

HBC (2019a) *Prairie Site Ecological Appraisal*. Unpublished report.

HBC (2019b) *Interim Ecological Appraisal for an Environmental Statement*. Unpublished report.

HBC (2019c) *Prairie Site Ecological Appraisal amended 18/11/19*. Unpublished report.

INCA (2018) *Preliminary Ecological Appraisal: Grangetown Prairie*. Unpublished report.

INCA (2019) *Preliminary Ecological Appraisal: Potential spoil deposition sites. South Tees Development Corporation*. Unpublished report.

JBA Consulting (2019) *Hartlepool Energy Recovery Facility Plant: Habitats Regulations Assessment Screening Report*. Unpublished report.

Offices at

Coleshill
Doncaster
Dublin
Edinburgh
Exeter
Glasgow
Haywards Heath
Isle of Man
Limerick
Newcastle upon Tyne
Newport
Peterborough
Saltaire
Skipton
Tadcaster
Thirsk
Wallingford
Warrington

Registered Office
1 Broughton Park
Old Lane North
Broughton
SKIPTON
North Yorkshire
BD23 3FD
United Kingdom

+44(0)1756 799919
info@jbaconsulting.com
www.jbaconsulting.com
Follow us:  

Jeremy Benn Associates Limited

Registered in England 3246693

JBA Group Ltd is certified to:
ISO 9001:2015
ISO 14001:2015
OHSAS 18001:2007

