REPORT

South Bank Quay

Waste Assessment Report

Client: Tees Valley Combined Authority

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Royal HaskoningDHV

Enhancing Society Together

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1 Introduction

Royal HaskoningDHV was commissioned by Tees Valley Combined Authority (the Client) to produce a Waste Assessment Report for the construction of a new quay at South Bank in the Tees estuary (referred to as the proposed scheme). This report accompanies the Environmental Impact Assessment (EIA) in support of a marine licence application to the Marine Management Organisation (MMO) and a planning application to Redcar and Cleveland Borough Council (RCBC). It is envisaged that the new quay would be utilised predominantly by the renewable energy industry, as well as supporting more general industrial and storage/distribution activities.

This report assesses the impacts of the proposed scheme in terms of waste generation during the construction and occupation phases, considering the proposed options for recycling, recovery or disposal of waste in accordance with the Waste Hierarchy, and the capability of the existing local or regional waste management facilities to manage the waste.

This report is structured as follows:

- Section 2: Waste planning policy context.
- Section 3: Background.
- Section 4: Waste composition and quantities
- Section 5: Conclusion.

1.1 Project background

The site and its surroundings have a long-layered history of industrial use which included an iron and steel works, together with support industries, infrastructure, power generation and distribution and waste management. The site and its surroundings are now largely free of active use and built development.

The site of the proposed scheme is currently occupied by a dilapidated wharf approximately 750m in length, two jetties immediately downstream, a further jetty at the extreme downstream end of the proposed scheme footprint and various buildings and structures on the intertidal, riverbank and the adjacent hinterland.

The area immediately south of the site is planned for redevelopment, forming part of the South Tees Regeneration Master Plan with the vision of transforming the area into a modern, large-scale industrial business park, developed by South Tees Development Corporation (STDC). The Masterplan identifies five distinct development ‘zones’ within the STDC area. The proposed scheme is within the South Industrial Zone. This zone is identified for port related use, offshore energy industries, materials processing and manufacturing and energy generation (i.e. the proposed scheme aligns with the planned use within the South Industrial Zone).

2 Waste planning policy context

2.1 National planning and policy

2.1.1 A Green Future: Our 25 Year Plan to Improve the Environment (Defra, 2018)

The Government's environment plan sets out goals for improving the environment within a generation and leaving it in a better state. In terms of waste management, it seeks to minimise waste, reuse materials and manage materials at the end of their life to minimise the impact on the environment, by:

- Working towards the ambition of zero avoidable waste by 2050.
- Working to a target of eliminating avoidable plastic waste by end of 2042.
- Meeting all existing waste targets – including those on landfill, reuse and recycling – and developing ambitious new future targets and milestones.
- Seeking to eliminate waste crime and illegal waste sites over the lifetime of this Plan, prioritising those of highest risk. Delivering a substantial reduction in litter and littering behaviour.
- Significantly reducing and where possible preventing all kinds of marine plastic pollution – in particular material that came originally from land.

2.1.2 Our Waste, Our Resources (Defra, 2018)

Defra launched its strategy for waste and resources – *Our Waste, Our Resources: A Strategy for England* in December 2018. The Strategy provides a focus on solutions that will reduce the country's reliance on single-use plastics, provide clarity on household recycling, and provides measures to manage packaging and food waste. Its purpose is to provide policy direction in line with government's 25 Year Environment Plan (see above).

The Strategy's timeline of targets shows those on recycling household waste and disposal to landfill remain pegged to the EU's Circular Economy Package of legislation (see below).

An aim of the Strategy is to focus on resource recovery and waste management. Part of this involves the promotion of UK-based recycling. Furthermore, the Strategy aims to implement the waste hierarchy for hazardous wastes.

2.1.3 National Planning Policy for Waste 2014

The Government has published the National Waste Planning Policy[1] for England as a replacement of Planning Policy Statement 10 (Planning for Sustainable Waste Management – 2011)[2]: The updated policy maintains the core principles of the 'plan led' approach, with a continued focus of moving waste up the waste hierarchy.

When determining planning applications for non-waste development, the Policy requires that local planning authorities should, to the extent appropriate to their responsibilities, ensure that:

- the likely impact of proposed, non-waste related development on existing waste management facilities, and on sites and areas allocated for waste management, is acceptable and does not prejudice the implementation of the waste hierarchy and/or the efficient operation of such facilities;

[1] *DCLG, 2014, National Planning Policy for Waste, The National Archives, London*
[2] *DCLG, 2011, Planning Policy Statement 10: Planning for Sustainable Waste Management, London: TSO*

- new, non-waste development makes sufficient provision for waste management and promotes good design to secure the integration of waste management facilities with the rest of the development; and,
- the handling of waste arising from the construction and operation of development maximises reuse/recovery opportunities and minimises off-site disposal.

2.1.4 National Waste Management Plan for England 2013

Defra published a National Waste Management Plan[3] England in July 2013. The key aim of the Waste Management Plan for England is to set a direction towards a zero-waste economy as part of the transition to a sustainable economy. In particular, this means using the "waste hierarchy" (waste prevention, re-use, recycling, recovery and finally disposal as a last option) as a guide to sustainable waste management.

The Waste Management Plan for England is a high-level document which is non–site specific. It evaluated how it would support implementation of the objectives and provisions of the revised Waste Framework Directive[4] (rWFD).

The rWFD established the principle of 'proximity'. This is within the context of the requirement on Member States to establish an integrated and adequate network of waste disposal facilities for recovery of mixed municipal waste collected from private households. The requirement included where such collection also covers waste from other producers.

The plan identified the measures to be taken to ensure that by 2020 at least 70% by weight of construction and demolition waste is subjected to material recovery.

Note: The construction, demolition and excavation sector is the largest contributing sector to the total waste generation. The UK generated 221.0 million tonnes of total waste in 2016[5]. More than half of this (62%) was generated by construction, demolition and excavation activities. The recovery rate from non-hazardous construction and demolition waste in the UK in 2016[6] was 91.0%. The UK is currently meeting, and exceeding, the 2020 target of recovering at least 70% by weight, of non-hazardous construction and demolition waste.

2.1.5 Waste Prevention Programme for England 2013

The Government developed a Waste Prevention Programme[7] for England in 2013 to set out the key roles and actions which should be taken to move towards a more resource efficient economy. As well as describing the actions the government is taking to support this move, it also highlights actions businesses, the wider public sector, the civil society and consumers can take to benefit from preventing waste. Using resources more efficiently, designing and manufacturing products for optimum life and repairing and reusing more items could save money and provide opportunities for economic growth at the same time as improving the environment.

The waste prevention programme is a requirement of the rWFD.

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[3] *Defra, 2013, 'National Waste Management Plan for England 2013', Defra: London*
[4] *Waste Framework Directive (2008/98/EC)*
[5] *https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/683051/UK_Statisticson_Waste_statistical_notice_Feb_2018_FINAL.pdf*
[6] *https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/683051/UK_Statisticson_Waste_statistical_notice_Feb_2018_FINAL.pdf*
[7] *Defra, December 2013 'Prevention is better than cure - The role of waste prevention in moving to a more resource efficient economy', HM Government, London (https://www.gov.uk/government/publications/waste-prevention-programme-for-england)*

The Waste Prevention Programme sets out detailed actions to:

- encourage businesses to contribute to a more sustainable economy by building waste reduction into design, offering alternative business models and delivering new and improved products and services;
- encourage a culture of valuing resources by making it easier for people and businesses to find out how to reduce their waste, to use products for longer, repair broken items, and enable reuse of items by others;
- help businesses recognise and act upon potential savings through better resource efficiency and preventing waste, to realise opportunities for growth; and,
- support action by central and local government, businesses and civil society to capitalise on these opportunities.

To measure progress against the aim of the programme, the government measures changes in overall waste arising, assesses the environmental impacts of this waste and considers how these factors relate to changes in the resource efficiency of the economy.

2.1.6 The Strategy for Hazardous Waste Management in England (2010)

The 'Strategy for hazardous waste management in England' (2010) sets out the principles for the management of hazardous waste and helps waste producers and managers:

- make the right decisions about their waste; and,
- identify the available treatment facilities available.

2.2 Waste legislation

In terms of waste, UK legislation is underpinned by several international (e.g. European Union (EU)) agreements. Since 1 February 2020, the United Kingdom has withdrawn from the European Union and has become a "third country", which means it is not part of the EU. The Withdrawal Agreement provides for a transition period ending on 31 December 2020. Until that date, EU law in its entirety applies to the United Kingdom.

The majority of EU waste management law was implemented into UK legislation by way of statutory instrument. This means that the relevant legislation will not be automatically or immediately affected by the UK's exit from the EU as the legislation will remain in place in the UK.

The government has decided that at the point at which the UK leaves the EU, all EU legislation which had not already been transposed into UK law will be transferred to UK statute. From then on all the EU environmental legislation will remain in force as part of UK law but (unless the UK has made specific commitments to apply such law as part of negotiating a new arrangement with the EU), it can then be repealed or amended according to the policy drivers of the UK Parliament (or the devolved parliaments where they have power to do so).

2.2.1 Waste Framework Directive

The key European legislation is the revised Waste Framework Directive (2008/98/EC) ('rWFD'), which consolidates several separate waste Directives and amendments. It establishes the basis for the management of wastes across the EU. It defines certain terms such as "waste", "recovery" and "disposal", to ensure that a uniform approach is taken across the EU.

The rWFD explains when waste ceases to be waste and becomes a secondary raw material (by meeting "end-of-waste" criteria), and how to distinguish between waste and by-products.

The rWFD provides the following basic waste management principles:

- It requires that waste be managed without endangering human health and harming the environment, and in particular without risk to water, air, soil, plants or animals, without causing a nuisance through noise or odours, and without adversely affecting the countryside or places of special interest.
- It introduces the concept of the waste hierarchy and provides a direction for the management of waste by applying a priority order to the management of waste.
- It incorporates provisions on hazardous waste.
- It provides recycling and recovery targets to be achieved by 2020: 50% preparing for re-use and recycling of certain waste materials from households and other origins similar to households, and 70% preparing for re-use, recycling and other recovery of construction and demolition waste.

The rWFD requires that Member States adopt waste management plans and waste prevention programmes.

Much of the requirements of the rWFD are implemented by UK or English legislation (for example the Environmental Permitting Regulations). The retention of functions from the Waste Framework Directive is made under the Waste (Miscellaneous Amendments) (EU Exit) Regulations 2009.

2.2.2 EU Action Plan for the Circular Economy

The revised legislative framework on waste in the EU's Circular Economy Package (CEP) entered into force at the start of July 2018 through Directive (EU) 2018/851 of the European Parliament and of the Council of 30 May 2018, by amending Directive 2008/98/EC on waste (the Waste Framework Directive – see above).

The governments member states have 24 months to transpose it into national legislation. The implementation of CEP in the UK will be subject to the UK withdrawal agreement. The UK's own Circular Economy Package was published on 30 July 2020 by the UK, Welsh, Scottish and Northern Ireland governments and is predominantly the same as the European CEP. The government states (at the time of writing) that it is looking to lay legislation in the autumn (of 2020) to transpose the relevant CEP regulations into UK law.

The CEP extends targets for municipal waste recycling. A target of 55 per cent by 2025 will be introduced, with a 60 per cent goal for 2030, then a subsequent 65 per cent target being set for 2035. EU member states are currently working towards a 50 per cent target for 2020.

Additionally, the CEP proposes a binding landfill target to reduce landfill to maximum of 10% of municipal waste by 2035.

The CEP will also provide concrete measures to promote re-use and stimulate industrial symbiosis where one industry's by-product is reused as another industry's raw material.

2.2.3 Environmental Protection Act 1990 Part II – Controlled Waste and Duty of Care

The waste duty of care is a legal requirement, originally implemented by Section 34 of the Environmental Protection Act 1990, to ensure that producers and holders handle their waste safely and in compliance with the appropriate regulations. It sets the rules for the management of controlled wastes and identifies the waste Duty of Care, which places an obligation on person who imports, produces, carries, keeps, treats or disposes of controlled waste, including householders, commercial producers and industrial producers of waste.

One of the fundamental aspects of duty of care requires the holder of waste to make sure that anyone else dealing with their waste has the necessary authorisation to do so. If the holder does not do this and their waste is subsequently found to have been illegally disposed, the holder could be held responsible and may face prosecution.

The duty of care provisions are contained in the Waste (England & Wales) Regulations 2011 SI 2011 (No. 988).

2.2.4 The Waste (England and Wales) Regulations 2011

The 2011 Waste Regulations transposes the rWFD in England and Wales. In addition, it reduced the fragmentation of waste legislation to some extent and so it streamlines and replaces some waste regulation, in particular the subordinate legislation relating to the registration of waste carriers and brokers and to the "duty of care".

Key provisions in the rWFD were implemented by the Waste Regulations:

- Waste hierarchy: legal requirement the waste hierarchy for waste prevention and management in legislation and policy (see below).
- Separate collections (private companies): From 1 January 2015: (1) businesses which collect waste paper, metal, plastic or glass need to collect such waste separately; and (2) businesses which collect, transport or receive separately collected waste paper, metal, plastic or glass should ensure that such waste is not mixed with other waste.
- Waste carrier and broker registration: Registration is required for all those that "normally and regularly transport waste, whether the waste is produced by them or others". The Regulations introduced a new two-tier system for registration.

2.2.5 The Waste Hierarchy

The waste hierarchy is set out at Article 4 of the rWFD and has been implemented by The Waste (England and Wales) Regulations 2011.

The waste hierarchy requires the producer/holder of a waste to demonstrate that the priorities identified in **Table 1.1** have been considered in the priority order, to determine the most suitable waste management option for all wastes prior to removal from site.

Table 1.1: The Waste Hierarchy

Waste Hierarchy	Relevant activity
Prevention	Using less material in design and manufacture, keeping products for longer, re-use, using less hazardous materials.
Preparing for re-use	Checking, cleaning, repairing, refurbishing, whole items or spare parts.
Recycling	Turning waste into a new substance or product, includes composting if it meets quality protocols
Other recovery	Includes anaerobic digestion, incineration with energy recovery, gasification and pyrolysis which produce energy (fuels, heat and power) and materials from waste, some backfilling.
Disposal	Landfill and incineration without energy recovery.

Table reproduced from Defra website: https://www.gov.uk/waste-legislation-and-regulations

It is a legal requirement for waste producers/holders to follow the waste hierarchy when making decisions about waste management options. Waste holders must demonstrate the highest possible hierarchical option for their wastes. Lower hierarchical options cannot be justified by cost alone. They require environmental justification over available higher options, for example the location of a site may justify sending waste to a lower hierarchical option (e.g. local landfill), rather than sending it hundreds of miles to the nearest facility that could provide a higher option.

It is inevitable that waste materials will be produced because of the proposed scheme. Actions would be taken to ensure these are managed in accordance with the highest possible waste hierarchical option. A summary of how the hierarchical options may relate to the proposed works is presented below.

Prevention
Where possible, the design of the proposed scheme will ensure that waste is not created where it can be prevented.

Preparing for re-use
Inert waste and soils are proposed to be re-used on site dependent on ground investigation (in the case of the soils).

Recycling
The Waste & Resources Action Programme (WRAP) Aggregates Quality Protocol[8] provides for recycling of aggregate-type materials into a secondary aggregate product. Therefore, inert demolition material and other inert concrete/brick waste may be appropriate to be recycled in accordance with the Aggregates Quality Protocol, where there is a need for such materials and where they can be prepared to a specification that would render them suitable for that use.

There is a requirement for waste electrical and electronic equipment from the substation to be sent to an AATF or ATF (Approved/Authorised Treatment Facilities) for treatment and recycling. Similarly, any waste batteries from the substation must go to an Approved Battery Treatment Operator (ABTO) or an Approved Battery Exporter (ABE) for treatment and recycling.

The condition of any timber from construction activities would determine whether it can be recycled at a wood processing facility; or whether they would have to be chipped or treated and prepared for recovery at a biological treatment facility, such as composting; or prepared for use as a fuel in an energy from waste facility.

Metal waste from construction would be capable of being recycled at a metal recycling facility.

Other recovery
Excavated made ground could be used for construction purposes, e.g. as low-grade fill; or as a defined-specification engineering material, after suitable treatment, where there is a need for that material and where it is demonstrated to be suitable for that use. However, the material must be deemed ‘suitable for use’ according to several criteria, which are described later in this Report.

‘Other recovery’ options for any waste wood include chipping or treating to prepare it for recovery at a biological treatment facility, such as composting; or prepared for use as a fuel in an energy from waste facility. However, wood in poor condition may have to be disposed.

[8] *https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/296499/LIT_8709_c60600.pdf*

Disposal
The lowest hierarchical option for the excavated material would be to dispose of it. It is contrary to the waste hierarchy to justify landfilling by means of convenience or cost.

Landfill would only be a justifiable alternative if there were no on-site; or available local or regional development projects that could use the excavated material; or if there were no local or regional facilities that could receive the material for treatment or recovery.

Any waste wood that is in a deteriorated condition that rules out the potential for recycling or recovery could also be landfilled.

Sediment that meets the appropriate criteria is likely to be disposed at sea, given that it is unlikely that there are any local development schemes that require to large quantity of sediment created by the scheme. A sediment quality survey was undertaken in the Tees estuary during July 2019 to inform the EIA for the Northern Gateway Container Terminal (NGCT); this showed all material was suitable for offshore disposal and therefore would not be required to be brought to land, dewatered and disposed in accordance with waste legislation. The findings of that survey have been used as a proxy for the proposed scheme in advance of a site-specific sediment quality survey being undertaken during 2020.

Waste Hierarchy conclusions
Recycling represents the most appropriate hierarchical option for any metal waste and waste electronic and electrical equipment removed from the substation building and there is a wide market for these wastes; and for excavated hardstanding and inert waste where the Aggregates Quality Protocol can be applied and there is a need to either use the secondary aggregate within this development; or for use elsewhere off-site.

Recycling represents the most appropriate hierarchical option for any waste timber. However, the condition may dictate that recovery or potentially landfill may be the most appropriate option. These would need to be determined at the point of removal by the contractor.

2.2.6 The Environmental Permitting (England and Wales) Regulations 2016 (as amended)

The Environmental Permitting (England and Wales) Regulations 2016 (“the Environmental Permitting Regulations”) consolidate earlier amendments to the Environmental Permitting (England and Wales) Regulations 2010 (S.I. 2010/675). They set out an environmental permitting and compliance regime that applies to various activities and industries, including the management of waste.

The environmental permitting regime is a common framework for applying for, receiving, varying, transferring and surrendering permits, along with compliance, enforcement and appeals arrangements. It rationalises the previous permitting and compliance regimes into a common framework that is easier to understand and simpler to use.

The framework introduces different levels of control, based on risk: exclusions (very low risk activities which may be undertaken without any permit), exemptions (lower risk activities which may be undertaken after registering, which is free), standard rules permits (standard requirements and conditions for the relevant activities are set out so that applicants can determine in advance whether the permit is applicable to their proposals) and bespoke permits (permits written specifically for activities which are unique or of higher risk).

2.2.7 Hazardous waste

Waste is generally considered hazardous if it (or the material or substances it contains) are harmful to humans or the environment. All producers and holders of hazardous waste are obliged to ensure that the hazardous waste does not cause harm or damage. All producers and holders of waste are obliged to know whether their waste is classified as hazardous or non-hazardous.

The hazardous waste regulations identify the administrative provisions for handling hazardous waste. The regulations also make it illegal to mix a hazardous waste with non-hazardous waste; or another type of hazardous waste; or material that is not waste.

The Hazardous Waste Regulations (HWR) (Hazardous Waste (England and Wales) Regulations 2005 SI 894 as amended) provide the rules for assessing if a waste is hazardous or not. The HWR refer to the List of Wastes (which is often referred to as the European Waste Catalogue (EWC)) for the relevant thresholds for some of the hazardous properties; and to assign the formal description and code for the waste.

Detailed technical guidance on the hazardous waste assessment process is provided by 'Waste Classification and Assessment (Technical Guidance WM3)[9]' issued in July 2015 and amended in May 2018.

This document is jointly approved by all the UK environmental regulators. It provides thresholds and criteria for assessing each of the 15 hazardous properties and Persistent Organic Pollutants (POPs).

[9] *https://www.gov.uk/government/publications/waste-classification-technical-guidance*

3 Background

3.1 Existing conditions at the site

3.1.1 Site context

The site is located on the southern bank of the River Tees, approximately 0.9 kilometres (km) north of South Bank railway station in Middlesbrough at OS Grid Reference NZ 53341 22488. It comprises a linear area, approximately 14.5 hectares (ha) in area which encompasses South Bank Wharf, three jetties, parts of the Tees riverbank, an internal access road, Riverside Pumping Station, part of an oil depot and two electrical substations.

3.1.2 Site details

The site comprises:

- South Bank Wharf and three jetties located downstream, riverward of a long, narrow strip of land located along the riverbank.
- On the river bank a road runs parallel to the wharf along the length of the site in a south west to north east axis. To the west of the road, in the centre of the site is Riverside Pumping Station which is a single storey brick building with a plan area of approximately 700m^3.
- Adjacent to the pumping station is Riverside 2.75kV substation and associated transformer pens. There is a further 11kV substation approximately 60m south of the Riverside Pumping Station. At the southern end of the site there is a third substation and to the west of this is a small building and a cylindrical tank of unknown use.
- There is an electricity pylon adjacent to the upstream site boundary.
- At the downstream end of the site is infrastructure associated with Tarmac Teesport Concrete Plant including conveyors and a warehouse building, there are also stockpiles of raw materials such as of slag and aggregates located within the site boundary.
- Towards the centre of the site is an oil depot consisting five circular tanks, three of which are within the confines of the site and two located off site. There are four buildings located adjacent to the tanks associated with the oil depot (two of which are on site). These oil tanks and structures have had prior approval for demolition (see below).
- There are also pipelines which run along the riverbank and it is understood that the oil depot was once served by the adjacent jetty, it is therefore anticipated that oil pipelines run between the oil depot and jetty.

STDC has submitted prior approval applications to RCBC for the demolition of the majority of existing infrastructure within the landward part of the proposed scheme footprint. Such prior approval applications comprise the demolition of:

- Five quayside heavy duty oil tanks and associated structures and pipework (R/2020/0281/PND). STDC confirmed on 7 July 2020 that prior approval for such demolition is not required (meaning demolition can proceed without planning permission).
- Buildings on land east of Smiths Dock Road at South Bank (R/2020/0302/PND). STDC confirmed on 10 July 2020 that prior approval for such demolition is not required.
- Pumping station (excluding the pipework which previously abstracted water from the Tees estuary). STDC confirmed in October 2020 that prior approval for such demolition is not required.

As described in the South Bank Quay Land Quality Desk Study and Preliminary Risk Assessment Report, the site is made up of reclaimed land which is mainly slag fill to a depth of around 10.00 metres below ground level (m bgl); this was reclaimed in the late 1800's.

3.2 Proposed scheme

In summary, the proposed scheme consists of demolition of the existing wharf and jetties, capital dredging and excavation and construction of a new quay to be set back into the riverbank. STDC intends to commence construction of the facility during 2021 to enable operation of the facility by 2023. Construction of the proposed is to be undertaken in phases.

During construction, the proposed scheme would initially comprise the establishment of a site compound. This would be used to store machinery, construction materials, offices, welfare facilities and provide car parking for the duration of the construction activities. It has been assumed that foul sewage from the welfare facilities would be tankered off site on a regular basis, rather than welfare facilities connecting directly into the sewage network.

As noted in **Section 1**, during operation it is envisaged that the proposed quay would be utilised predominantly by the renewable energy industry, as well as supporting more general industrial and storage/distribution activities. The worst-case scenario for the proposed quay is that it would be used by vessels that would support the offshore wind industry. It has been estimated that up to 390 offshore wind vessel calls would take place at the facility on an annual basis. This includes approximately 300 vessel calls per year associated with offshore wind staging and 90 vessel calls per year associated with offshore wind manufacturing activities.

A full description of the proposed scheme is provided in the EIA Report (Royal HaskoningDHV, 2020), **Section 3**. A summary is provided below:

- Demolition of the existing wharf approximately 750m in length. It is proposed that the timber is transported offsite for recovery or disposal at an appropriately licensed facility on the assumption that it would not be suitable for re-use as part of the proposed scheme.
- Demolition of three jetties downstream of the wharf. It is assumed that the concrete decks could be crushed on site and re-used as fill as part of the proposed scheme (or by STDC within the wider development).
- Removal of the piles supporting the jetties and the timber wharf using vibration techniques.
- Removal of conveyor associated with Tarmac Teesport Concrete plant and clearance of associated slag and aggregates.
- Demolition of live substation. The building materials are proposed to be crushed and re-used on site as fill.
- Excavation of underground utilities and pipework infrastructure.
- Excavation of 1,140,000m^3 of soils within the riverbank in order to create the berth pocket. It is proposed that this material be re-used on site, however further investigation is required to characterise soils on site prior to excavation to confirm that they are suitable for use.
- Construction of a new quay structure approximately 1,230m in length (approximately 1,050m of usable quay for berthing) and 30m in width set back from the current riverbank. The quay construction is a combi-wall comprising up to 400 large diameter (2,500mm) tubular king piles with steel sheet pile infills. A piled anchor-wall (up to 400 tubular steel piles or 1,250m of sheet piles) would be constructed approximately 50m inland of the combi-wall. Tie rods would be used to connect the combi-wall to the anchor-wall. The piles would be drilled into the Mercia Mudstone.

- Excavation of approximately 275,000m^3 of existing soils behind the proposed combi-wall in order to install the tie roads. The excavated materials are proposed to be re-used on site if they are confirmed as suitable for use. This material to be excavated is in addition to that which is to be excavated to create the berth pocket.
- Importation of approximately 25,000m^3 of crushed stone to form the surfacing of the quay.
- Importation of rock to be used within the proposed berth pocket.
- Installation of fixed infrastructure including mooring bollards, Demand Side Units (DSUs), lighting towers and a new electrical substation.
- Installation of a water supply (both potable and fire water), as well as the provision for ship to shore power connection (cold ironing).
- Dredging and offshore disposal of marine sediments.

The proposed scheme (and consequently the dredging requirements) has been designed to avoid the pipe tunnels which cross underneath the Tees estuary downstream of the proposed quay, as well as the overhead power lines and pylons upstream of the proposed quay.

3.3 Waste management facilities in the local area

Local waste management facilities were identified from the Environment Agency Public Register[10]. The search radius was limited to 10km of the site (based on postcode TS6 6UF).

The list of facilities on the Public Register includes all waste management facilities that hold an existing permit within a 10km radius. This would include facilities that are not likely (or are not authorised) to receive waste from the proposed scheme, e.g. Household Waste Recycling Centres (HWRC).

The waste management facilities that could receive waste from the proposed scheme are shown in **Annex 1**. Waste Management facilities on the Public Register that are not likely to receive waste from the construction phase or the completed scheme were not included in the table. **Annex 1** shows that there are over 40 potential sites that could receive waste from the proposed scheme.

3.4 Regional waste management facilities

The potential regional waste management capacity was assessed. The Environment Agency publishes waste capacity data on the .gov website[11]. This data set was assessed to identify the remaining regional capacity according to waste management options in the North East (Tees Valley Unitary Authorities is covered by North East data). This provides an indication of whether the predicted waste types from the proposed scheme can be managed within the Region in accordance with the proximity principle (i.e. managing wastes as close to the source of production as possible).

The rWFD (Article 16) establishes the principle of proximity for managing waste as close to the source of production. The Proximity Principle recognises that transporting waste has environmental, social and economic costs so, as a general rule, waste should be dealt with as near to the place of production as possible.

The data in **Table 3.1 toTable 3.6** inclusive provides an indication of the widespread availability of a range of types of waste management facilities within the North East. Note that the facilities identified in **Annex 1** would also be included within the summarised data below. There are too many regional sites to list individually.

[10] *Environment Agency Public Register, accessed on 20/03/2020: https://environment.data.gov.uk/public-register/view/index*
[11] *https://data.gov.uk/dataset/312ace0a-ff0a-4f6f-a7ea-f757164cc488/waste-data-interrogator-2018 accessed 20/03/2020*

Table 3.1: Number of Waste Management Facilities in England and the North East (2018)

England: Permitted waste facilities in 2018

Site type		Former Planning Region									ENGLAND
		North East	North West	Yorkshire & the Humber	East Midlands	West Midlands	East of England	London	South East	South West	
Landfill	Number of sites with an environmental permit at end 2018	26	48	68	64	52	64	45	101	58	**526**
	Number of sites that accepted waste in 2018	21	32	37	39	30	53	5	57	33	**307**
Land Disposal	Number of sites with an environmental permit at end 2018	14	48	46	38	33	60	12	82	94	**427**
	Number of sites that accepted waste in 2018	6	28	27	17	10	29	5	43	61	**226**
Incineration	Number of sites with an environmental permit at end 2018	11	15	19	19	22	14	12	25	17	**154**
	Number of sites that accepted waste in 2018	7	9	16	9	14	7	7	18	9	**96**
Transfer	Number of sites with an environmental permit at end 2018	170	408	391	256	332	356	201	392	342	**2,848**
	Number of sites that accepted waste in 2018	135	311	284	213	266	287	163	335	280	**2,274**
Treatment	Number of sites with an environmental permit at end 2018	152	426	375	292	349	388	157	402	355	**2,896**
	Number of sites that accepted waste in 2018	111	308	287	236	245	292	106	318	265	**2,168**
Metal Recovery	Number of sites with an environmental permit at end 2018	147	370	405	205	365	281	83	192	260	**2,308**
	Number of sites that accepted waste in 2018	70	182	195	117	197	164	53	113	151	**1,242**
Use of Waste	Number of sites with an environmental permit at end 2018	1	1	1		4	3		1	16	**27**
	Number of sites that accepted waste in 2018	1	-	-	-	4	-	-	1	5	**11**
Total	Number of sites with an environmental permit at end 2018	521	1,316	1,305	874	1,157	1,166	510	1,195	1,142	9,186
	Number of sites that accepted waste in 2018	351	870	846	631	766	832	339	885	804	6,324

Table 3.2: Remaining Landfill Capacity in the North East (2018)

North East: Landfill capacity 2018

All figures are provided in 000s cubic metres

Landfill Type	Sub-Region				NORTH EAST
	County Durham	Northumberland	Tees Valley Unitary Authorities	Tyne & Wear	
Hazardous Merchant	-	-	6,950	-	**6,950**
Hazardous Restricted	-	-	-	-	-
Non Hazardous with SNRHW cell*	1,883	1,113	550	-	**3,547**
Non Hazardous	1,594	7	3,406	1,174	**6,182**
Non Hazardous Restricted	-	-	-	-	-
Inert	7,624	764	-	1,336	**9,723**
Total	**11,101**	**1,884**	**10,906**	**2,510**	**26,401**

*Some non-hazardous sites can accept some Stable Non Reactive Hazardous Wastes (SNRHW) into a dedicated cell, but this is usually a small part of the overall capacity of the site.

Table Notes:

Data for 2018 is classified into Landfill Directive categories.

2018 landfill capacity data was obtained from environmental monitoring reports required by permits or directly from the operator.

Table 3.3: Transfer, Treatment and Metal Recycling Volumes in the North East (2018)

North East: Transfer, treatment and metal recycling site inputs 2018

All figures are provided in 000s tonnes

Site Type	Sub-Region				NORTH EAST
	County Durham	Northumberland	Tees Valley Unitary Authorities	Tyne & Wear	
Hazardous waste	2	-	79	266	**347**
HIC	331	275	389	950	**1,945**
Clinical	1	-	-	106	**108**
Civic amenity site	58	40	82	102	**281**
Non Biodegradable	2	4	-	35	**41**
Transfer Total	**393**	**318**	**550**	**1,460**	**2,722**
Material recovery	130	131	318	57	**636**
Physical	91	117	1,153	342	**1,703**
Physico-chemical	2	-	224	63	**288**
Chemical	-	-	-	70	**70**
Composting	1	24	161	36	**223**
Biological	88	4	362	437	**891**
Treatment Total	**312**	**276**	**2,218**	**1,005**	**3,811**
Vehicle depollution	27	4	23	30	**85**
Metal recycling site	13	0	374	240	**627**
Metal Recycling Sector Total	**40**	**4**	**397**	**270**	**712**

Table 3.4: Incineration Capacity in the North East (2018)

North East: Incineration capacity 2018

All figures provided in 000s tonnes

Incineration Type	Sub-Region				NORTH EAST
	County Durham	Northumberland	Tees Valley Unitary Authorities	Tyne & Wear	
Animal By-Product	-	-	-	-	-
Animal Carcasses	-	-	-	-	-
Clinical	-	-	-	-	-
Co-Incineration of Hazardous Waste	-	-	-	-	-
Co-Incineration of Non Hazardous Waste	-	-	-	-	-
Hazardous	-	-	48	-	48
Municipal and/or Industrial & Commercial	-	-	1,256	-	1,256
Sewage Sludge	-	-	-	-	-
Biomass/Waste Wood	125	-	550	-	675
Total	-	-	1,854	-	1,979

Table Notes:

This datatable is for operational incineration facilities that accepted waste from off-site sources. It does not include facilities that burned waste from their own in-house processes or were non or pre-operational.

Table 3.5: Deposit in landfill for recovery inputs in the North East (2018)

North East: Deposit in landfill for recovery inputs 2018

All figures are provided in 000s tonnes

Site Type	Sub-Region				NORTH EAST
	County Durham	Northumberland	Tees Valley Unitary Authorities	Tyne & Wear	
Deposit in landfill for recovery	4	1	268	2	276
Total	4	1	268	2	276

Note: This activity is the deposit of waste in land for benefit and recovery purposes. Landfilling is the deposit in land for the purposes of final disposal. Both activities require an environmental permit under the Environmental Permitting Regulations.

Table 3.6: Use of Waste in the North East (2018)

North East: Use of waste inputs 2018

All figures provided in 000s tonnes

Site Type	Sub Region				NORTH EAST
	County Durham	Northumberland	Tees Valley Unitary Authorities	Tyne & Wear	
Use of waste in construction	-	-	-	-	-
Use of waste in reclamation	-	-	-	-	-
Use of waste for timber manufacturing	8	-	-	-	8
Total	8	-	-	-	8

Note: These activities are for use of waste permitted under Standard Rules Permits for waste operations.

3.5 Availability and capacity of regional facilities

The specific waste streams that are predicted to be generated from the proposed scheme are identified in **Section 4** below. These sections provide a discussion on the types of waste that are predicted to be generated; and whether those wastes would be recovered on site; or would be recovered or disposed off-site. Off site management would involve the use of facilities identified in **Annex 1** and **Table 3.1 toTable 3.6**.

The information shows that there are numerous waste management facilities providing a wide variety of waste management options within the local area (**Annex 1**) and region (**Table 3.1 toTable 3.6** inclusive).

The overall capacity data means that these facilities are likely to be able to manage the wastes requiring off-site management that are predicted to be generated by the proposed scheme during construction.

4 Waste composition and quantities

4.1 Construction waste arisings

Waste material will be generated at all stages of the construction process. **Table 4.1** below considers the type of waste produced over the construction period, with estimated quantities where known.

Table 4.1 Construction waste arisings

Inert	Non-Hazardous	Hazardous
Concrete: - Three concrete jetties and wharf structures (approximately 11,500m^3) to be crushed and re-used on site as fill.	Soils and landside materials - Soils and landside materials (made ground) – 1,140,000m^3 of soils and landside materials within the riverbank – assumed to be re-used on site if suitable for use - Soils – 275,000m^3 of soils from behind the proposed combi-wall – assumed to be re-used on site if suitable for use	Asbestos: - Possibly in substation, an asbestos demolition survey will be carried out by the main works contractor prior to demolition.
Bricks and cement: - Substation building to be crushed and re-used on site (following removal of any hazardous material).	Wood: - 750m wharf with timber piles – likely to be unsuitable for use on site, therefore sent offsite for appraisal whether disposed or potentially suitable for recovery (approximately 4,000m^3)	Oily wastes – adjacent to oil depot and within pipework.
Glass – substation building	Underground utilities and pipework infrastructure	Hazardous waste electrical and electronic equipment.
	Sediment: Sediment – 1,800,000m^3 of sediment proposed to be disposed offshore	Potential for contamination in excavated made ground.
	Non-hazardous electrical and electronic equipment, cabling and furniture	Potential for some excavated sediment close to current shoreline to be contaminated and hazardous waste – to be confirmed by testing – this will be brought to shore for dewatering, treatment and disposal as required.
	Metals: - Steel structures (approximately 1200 tonnes) and reinforcement (approximately 1725 tonnes) from the jetties and wharf - Metals associated with the Tarmac Teesport conveyor.	Motors associated with the Tarmac Teesport conveyor.
	Rubber belts associated with the Tarmac Teesport conveyor.	
	Stockpiles of aggregate and slag (Tarmac Teesport)	

4.2 Construction waste management measures

4.2.1 Construction phase

This section describes the measures to eliminate or reduce the anticipated quantity of waste sent to landfill by implementing the waste hierarchy. These measures would increase reuse, recycling or recovery opportunities, where possible, thereby reducing the effect of significant environmental impacts. The waste management measures for the construction phase are split in the section below, into those that can generally be applied to one or more waste type; and those that are applied to specific waste streams.

4.2.2 General waste management measures

There are certain principles of waste management that can be applied to most of the wastes that would be created during the construction phase. These are:

- Adhere to waste legislation for storage and handling on-site; and also ensure that the relevant regulatory controls have been applied to the reuse, recycling or recovery of waste on-site.
- No waste from the proposed scheme shall be deposited outside the boundary of the site, unless it is at a facility that holds a valid environmental permit or suitable authorised exemption. Off-site waste management facilities are legally obliged to operate under an environmental permit (or an authorised exemption), which is in place to ensure that the site is operated in a manner to prevent emissions causing harm to human health or the environment.
- Ensure that those who remove waste from site have the appropriate authorisation (i.e. are registered waste carriers); and those facilities that receive waste from the site hold a valid environmental permit or authorised exemption.
- Allocate space on site for the safe storage of waste materials and ensure that storage areas and containers are clearly labelled so site workers know which wastes should be put there and are also in a secure location to prevent unauthorised access.
- Hazardous waste must be stored separately from non-hazardous wastes to avoid contamination. The Hazardous Waste Regulations make it illegal to mix hazardous waste with non-hazardous waste; or with other types of hazardous waste; or with materials that are not waste.
- Provide separate containers for dry recyclables, such as paper & cardboard, plastic, glass, wood and metal. This would encourage recycling and increase the potential value of the recyclable items by avoiding contamination.
- Monitor the actual quantities of wastes produced during construction. This can be achieved using a Site Waste Management Plan.
- All wastes that are removed off site must be described on a waste transfer note or hazardous waste consignment note (as appropriate) that follows the movement of the waste to the specified disposal or recycling facility.
- The appointed contractors should identify appropriate staff that are responsible for waste management; and ensure that all contractor staff are aware of the appropriate reuse, recycling or disposal routes for each waste.

These measures would promote sustainable waste management practices by maximising waste prevention, re-use and recycling for material destined for offsite waste management. This would actively discourage sending waste to landfill and would promote the waste hierarchy, which is a legal requirement.

4.2.3 Waste-specific management measures

Inert waste:

Waste inert materials (for example concrete, bricks, rubble) could be crushed and processed in accordance with the Waste & Resources Action Programme (WRAP) Aggregates Quality Protocol[12]. This would allow for on-site reuse or use off-site as secondary aggregate complying with an appropriate engineering standard for fill (for example the Manual of Contract Documents for Highway Works Volume 1 - Specification for Highway Works[13]), where required.

Aggregate that is produced using the Quality Protocol will be regarded as having ceased to be waste, and therefore no longer subject to waste management controls, provided:

- it conforms to the requirements of the European standard appropriate to the use it is destined for;
- the aggregate is produced under Factory Production Control (FPC) measures;
- inputs are limited and controlled within FPC;
- it requires no further processing, including size reduction, for the use it is destined for;
- it is destined for a use within designated market sectors; and,
- it conforms with CE conformity marking requirements contained in the Construction Products Regulations, which applies to all aggregates placed on the market to harmonised European Aggregates Standards from July 2013.

Control procedures must be in place to ensure that only the appropriate types of inert materials are received (these are listed in Appendix C of the Quality Protocol) for processing; therefore, waste acceptance criteria and procedures are required.

The acceptance criteria must include:

- a list of the types of waste that are accepted (including waste codes);
- source/place of origin of the waste;
- supplier and transporting agent; and,
- method of acceptance.

Every load must be inspected visually, both on initial receipt and after tipping, to ensure compliance with the acceptance criteria. A procedure for dealing with non-conforming incoming waste must be set up, for example, rejection of loads, quarantine or disposal. Records must be kept of how the procedure has been implemented.

The facility that receives the inert waste for processing into the aggregate must have an environmental permit, which can include a mobile plant where appropriate site-specific information has been provided to the Environment Agency and agreed. The processing of the inert waste must be carried out in accordance with the environmental permit and under FPC measures.

A rigorous sampling and testing regime is required to ensure that the processed material meets the required market specification according to the type of product produced.

12 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/296499/LIT_8709_c60600.pdf

13 Department for Transport (DfT), 2009, 'Manual Of Contract Documents For Highway Works Volume 1 Specification For Highway Works, DfT: London http://www.standardsforhighways.co.uk/ha/standards/mchw/vol1/index.htm

To be able to demonstrate compliance with the Quality Protocol, producers must maintain delivery documentation for every load of recycled aggregate despatched.

Delivery documentation must include:

- date of supply;
- customer's name and contact details;
- product description to aggregates standard and customer specification;
- the name and contact details of the producer, including the address of the site of production;
- quantity supplied by weight/volume; and,
- a statement that the product was produced in compliance with the Quality Protocol.

Where requested by the purchaser further documentation should also include:

- test results and procedures in accordance with the relevant aggregate industry standard or specification and for any further tests required to assess suitability for a particular end use;
- outline details of the FPC manual; and
- information on good practice relating to the storage, transportation and handling of aggregate.

For the purposes of the Quality Protocol the producer must keep and retain specified records for a minimum of two years; and make them available for inspection by the regulator (if requested).

It is important to note that even if the Quality Protocol is complied with, the material will become waste again and subject to waste management controls at any stage if it is discarded or there is an intention or requirement to discard. For example, if it is:

- disposed; or
- stored indefinitely with little prospect of being used.

These measures would reduce the amount of waste sent off-site and promote on-site recycling into engineering-standard product, therefore, reducing the amount of material defined as waste on-site. Any remaining surplus inert material that cannot be used on site would be sent off-site to a local recycling facility for processing into aggregate. This is a waste recycling measure in accordance with the waste hierarchy.

Non-hazardous wastes

Soils

Excavated material would comprise made ground and subsoil according to the specific parts of the site. Any inert made ground would be dealt with as inert waste (see above).

It is anticipated that the excavated soil would be retained on site for reuse as general fill as part of the cut and fill balance associated with the construction process. Any excavated soil that is surplus to requirements or which does not meet the requirements for it to be 'suitable for use' would be sent to a soil conditioning facility or local landfill for beneficial use as restoration material or daily cover unless it is classified as hazardous waste (see below for further advice on how this is proposed to be managed).

Effective stockpile management would be essential within the site. It would maximise the amount of material that can be beneficially reused on site. Where excavated material is proposed to be used on-site, the appropriate regulatory mechanism must be followed prior to use to demonstrate that it will not cause unacceptable harm to the environment when used.

The Contaminated Land: Applications In Real Environments (CL:AIRE) Definition of Waste: Development Industry Code of Practice[14] (the CoP) is anticipated to provide the framework for the reuse of the excavated material and provides principles that allows the excavated to cease to be waste when used. This would also apply to contaminated material (including excavated material classified as hazardous waste as long as this meets the criteria for 'suitable for use' – see below), where the risk assessment demonstrated that there would be no unacceptable risk to human health or the environment.

The CoP is supported by the Environment Agency and is subject to self-regulation via the use of an independent assessment by a Qualified Person, who is a person that fulfils the required experience, qualifications and professional membership criteria set by CL:AIRE. The CoP sets out the principles for achieving a non-waste status by setting a risk-based approach when excavated material is used within a development. The principles are:

The proposed use of the material must not cause any harm to human health or the environment.

A risk assessment for the specific end use would be required following the principles defined in Environment Agency Contaminated Land Report 11[15], ('CLR11'). This would find out whether any contaminants from anthropogenic and/or natural sources present an unacceptable level of risk to human health, controlled waters, ecosystems and/or the built environment, based on the available pathways and receptors. If the level of risk is unacceptable after treatment, the CoP cannot apply to the material, therefore, it would be a waste and an environmental permit would be required to allow the reuse of the material.

The excavated material is suitable for its proposed use.

This would take into account the chemical and geotechnical requirements of the material in relation to a specification defined for their end use.

The excavated material must not require further treatment prior to use.

The material must be suitable for use in all respects without treatment. If it requires treatment, it is waste.

The use of the excavated material is certain.

The holder must be able to demonstrate that all of the material would be used and that use is a certainty, not a probability. The use of the excavated material must form part of the final design, so it can be clearly identified where in the scheme the material would be used; and how much would be used. This requires a Materials Management Plan to be prepared to show how and where all materials on the ground are to be dealt with; and a tracking system to monitor any waste/material movements; and also contingency measures must be defined, i.e. who takes responsibility and what happens in the event that the material is not suitable for use.

Only a sufficient quantity of material would be used.

The material must be destined for a defined purpose, which is defined in the scheme design. The quantity of material required for that purpose must be known prior to construction. If excess material is deposited to undertake that purpose this is an indication that it is being discarded and it would be waste.

The benefit of the CoP is that an environmental permit is not required where the principles can be met; and therefore, this promotes waste reduction, because the material ceases to be waste when it is used.

[14] *Contaminated Land: Applications In Real Environments (CL:AIRE), 2011, 'The Definition of Waste: Development Industry Code of Practice' (Version 2), CL:AIRE: London*

[15] *Environment Agency, 2004 'Model Procedures for the Management of Land Contamination - Contaminated land report 11', Environment Agency, Bristol.*

These measures would promote on-site recovery and reduce the amount of waste on-site.

Wood
Waste timber will arise from the demolition of the existing South Bank Wharf. The condition of any timber waste would determine whether they can be recycled at a wood processing facility; or whether they would have to be chipped or treated and prepared for recovery at a biological treatment facility, such as composting; or prepared for use as a fuel in an energy from waste facility.

Underground utilities and pipework infrastructure
A check will be carried out before any underground utilities and pipework connections are required to be removed to ensure it is safe to do so. The contractors involved will be required to assess each utility connection and ensure any 'live' connections are made 'dead' prior to works being carried out.

Any pipework that was used to transport hazardous substances (for example oil, associated with the oil depot) should have a decommissioning plan, which explored flushing out the pipes prior to decommissioning and appropriate measures to ensure no hazardous material is released when the pipes are removed. Another potential option will be to cap the pipelines and then to remove the pipe in sections. This will have to be carefully managed in order to prevent pollution to the surrounding area.

Electrical cabling will be assessed on removal, however, it is not anticipated to be in a state to be re-used or prepared for reuse, therefore it is anticipated to be recycled.

Plastic ducting and pipework will be assessed to determine whether it will be suitable for recycling, or for recovery – potentially as a fuel for energy from waste facilities.

Metals
Recycling represents the most appropriate hierarchical option for any metal waste and there is a wide market for these wastes.

Rubber
Rubber associated with the Tarmac Teesport conveyors should be prepared for use as a fuel in an energy from waste facility.

Aggregate and slag (associated with Tarmac Teesport)
Aggregate and slag material should be considered for recovery for construction purposes (e.g. backfill, roads etc).

Dry recyclables from site workers
Site workers will create waste produced by themselves by taking refreshment and from site office activities.

The most effective waste management solution for waste generated by site workers taking refreshment on site is to introduce a policy to require them to take their own waste home. This is likely to reduce the amount of waste produced.

In terms of the waste that would be produced on site, this is similar in composition to mixed municipal waste and is non-hazardous. Space should be made available to provide receptacles to collect different waste streams and allow the separate collection of dry recyclables from residual waste. Segregation of the different streams of plastic waste (e.g. Polyethylene terephthalate (PET), High-density polyethylene (HDPE) and mixed plastics) would maximise opportunities for recycling. Some source segregated plastics, particularly PET and HDPE, can generate income. Card and paper should be separately collected as should

aluminium and steel cans. Glass should be separated into different receptacles where possible. The food waste should also be separately collected and sent for anaerobic digestion. All receptacles for contractor waste should be clearly labelled and have lids to prevent wind-blown litter.

These measures would ensure that the maximum amount of waste is diverted for recycling and recovery. Frequent collections of waste should be arranged to ensure that quantities on site are within the capacity of one skip and waste is not retained on site for long periods to reduce scavengers and vermin.

The remaining residual waste should be sent to an off-site materials recycling facility.

Excess construction materials

Timely procurement and buying the required amount of material should ensure that the right amount of material is delivered at the time when it is needed. This would prevent waste from unused items because of bulk purchasing.

Any perishable materials should be stored so that they are protected from the local climate.

All damaged or off-specification material should be returned to the supplier where possible, which would reduce the amount of wastage.

These measures are anticipated to reduce the amount of this type of waste on site at any one time.

Imported materials

Local and sustainable products would be used to minimise the effects on the environment by reducing carbon emissions from transport, promoting local businesses and saving natural resources.

Packaging

To minimise the effects of packaging, suppliers should be required to take back any packaging associated with their products. This would assist the suppliers in fulfilling their own producer responsibility obligations under Packaging Waste Regulations 2007[16] as amended.

Packaging materials that cannot be returned should be kept for on-site use (e.g. use of pallets for storage).

Any residual packing that cannot be used on site should be segregated into distinct dry recyclable waste streams and sent for recycling off-site. No waste packaging would be landfilled.

Hazardous wastes

Empty fuel or oil drums should be retained for reuse on site for storing waste oil where possible. Those that cannot be retained should be sent to a drum reconditioning facility to enable the container to be prepared for re-use. Damaged drums should be sent for recycling.

These measures are anticipated to maximise waste managed at the highest waste hierarchical option and reduce the amount of waste sent off site.

The use of an active maintenance regime on plant and equipment should reduce the potential for machinery to cause leaks. Valves, stopcocks and pipes should be regularly checked for leakages. Fuelling activities should be carried out in bunded areas, or off-site.

[16] *HMSO, SI 2007 No. 871, The Producer Responsibility Obligations (Packaging Waste) Regulations 2007 (as amended), HMSO, London*

The storage of fuels and liquids should be in accordance with the Oil Storage Regulations 2001[17] and the appropriate pollution prevention control guidelines to protect the environment from both storage and spillages of hazardous substances, which can be obtained from the government archive website[18]:

- PPG 2 - Choosing and using oil storage tanks;
- PPG 7 – Operating Refuelling facilities;
- PPG 8 - Safe storage and disposal of used oils;
- PPG 22 - Dealing with spills; and
- PPG 26 – Storage and handling drums and intermediate bulk containers.

Although these guidelines are no longer supported by the Environment Agency, they represent good practice. Using these guidelines as good waste management practice against leaks would reduce the potential for leakages, therefore reducing the volume of absorbent required to clean up spillages.

In June 2020 the Environment Agency produced a revised classification of waste electrical and electronic equipment (WEEE)[19]. This will apply to items of WEEE and other components removed from the substation. WEEE often has components that contain hazardous substances or persistent organic pollutants (POPs). These could include:

- printed circuit boards;
- plastic casings, cables and other components;
- insulation foam;
- cooling agents;
- flame retardants;
- activated glass and screen phosphors;
- cathode ray tubes;
- capacitors; and,
- Ni-Cd batteries.

If the levels of hazardous substances or POPs are over a certain amount the item will be classified as hazardous or POPs waste. If the item contains any POPs above the relevant threshold then it will affect future waste management options for it. The POPs must be destroyed. This means that it cannot be recycled or turned into a product for reuse. It must remain waste and waste controls will apply until it is destroyed.

The advice from the Environment Agency is that electrical and electronic equipment (EEE) manufactured before 1 January 2009, is more likely to contain penta-bromodiphenyl ether (PBDE) POPs. Therefore, this should be viewed as a cut-off date and any WEEE removed from the substation that was manufactured before this should be assumed to contain at least POPs unless there is evidence to the contrary and should be dealt with as such, i.e. must be destroyed. Furthermore, they advise that if a producer has assessed their waste and is still not sure if an item is hazardous or POPs waste, then it should be treated as hazardous and POPs waste as a precaution.

Hazardous materials should be stored securely, away from non-hazardous or incompatible materials. Small items of hazardous waste should be prevented from being disposed of in general waste skips to avoid contamination.

[17] *HMSO, SI 2001 No. 2954, Control of Pollution (Oil Storage) (England) Regulations 2001, HMSO, London*
[18] *http://webarchive.nationalarchives.gov.uk/20140328084622/http://www.environment-agency.gov.uk/business/topics/pollution/39083.aspx (accessed 21 September 2016)*
[19] *https://www.gov.uk/how-to-classify-different-types-of-waste/electronic-and-electrical-equipment*

Hazardous material should be collected frequently to minimise the total volume on site at any one time. All movements of hazardous waste from the site must be accompanied by a hazardous waste consignment note.

Asbestos

An asbestos demolition / refurbishment survey will be carried out by the main works contractor prior to demolition / refurbishment of buildings. If the survey identifies asbestos, this must be removed prior to demolition by competent specialists and disposed as hazardous waste.

4.3 Operational waste arisings

It is envisaged that the proposed quay would be utilised predominantly by the renewable energy industry, as well as supporting more general industrial and storage/distribution activities. With regard to the renewable energy industry, the proposed quay is to be used to support both manufacturing and staging (pre-assembly and storage) of wind farm components prior to export to offshore wind farm sites. It has been estimated that up to 390 offshore wind vessel calls would take place at the facility on an annual basis. It has also been assumed that wind turbine components would be temporary stored on the quay for loading onto vessels. Welfare facilities are not proposed on the quay itself to maximise the available space to support with operations.

There are no significant waste arisings anticipated from the operation of the quay as there will be no buildings on the quay itself with the exception of a new substation. Any waste produced is likely to be very small volumes of waste comprising general municipal waste produced on an *ad hoc* basis during operation from on-site bins and litter.

Separate receptacles should be provided for dry recyclables, such as paper & cardboard, plastic, glass, wood and metal. This would facilitate the most appropriate reuse, recycling or recovery option in accordance with the waste hierarchy.

There are general principles that would need to be followed to ensure effective management of operational waste arisings. These are provided below.

4.4 General Waste Management Measures

4.4.1 Duty of Care

The commercial occupiers of the proposed scheme would be under a legal obligation to comply with the waste duty of care to ensure that they handle waste safely and in compliance with the appropriate regulations.

The duty of care involves making sure that the waste has been described properly and that all of the properties associated with the waste are known; and to ensure that persons involved in the transfer of waste hold the necessary authorisation to do so.

The basic responsibilities that the commercial occupiers would be expected to follow are:

- Know whether waste is hazardous or non-hazardous.
- Store waste in suitable containers at a secure location, in a manner that prevents releases of the waste.
- Label the waste containers so that it is clear what is in them.

- Check that the waste is subsequently handled by those who hold an appropriate environmental authorisation. This means checking that the waste carrier is registered (or is exempt from having to be a registered waste carrier). It is also good practice to check that the facility that will receive the waste holds a suitable environmental permit that allows the waste to be handled on their site.
- Provide documentation with any waste transfer that accurately describes the waste and contains the relevant code for the waste.
- Keep records of all waste transfers in a register.

4.4.2 Storage

The design and location of waste bins on each deck and waste compound storage areas would be confirmed at detailed design stage.

The required storage provision for the Proposed Development would ensure that:

- The space would be adequate to store the predicted accumulation of waste between waste collections;
- The bin storage would be easily accessible to users of the facility;
- Waste collected from the bins would be accumulated in a waste compound for temporary storage prior to collection;
- The waste compound storage would be easily accessible to waste collectors; and
- The storage would be adequate to accommodate all of the different types of storage containers to meet current and proposed residual waste and waste recycling regimes by waste management companies collecting the waste.

Consideration would be given to vehicle access and egress to ensure the facilities can be easily serviced; and that waste compound areas are secure and can be accessed by waste collection vehicles.

All wastes shall be stored in dedicated areas which should be:

- Identified by appropriate signage;
- Paved or protected from direct contact with the ground; and
- Protected from bad weather conditions (rain, wind, extreme temperatures).

5 Conclusion

Inert wastes

The waste management measures identified above would reduce the amount of inert wastes by ensuring that the maximum amount of this material is processed on-site to enable it to be recycled into an engineering standard product in accordance with the Aggregates Quality Protocol. Where this cannot be achieved, other on-site uses such as recovery in the construction of site access tracks or backfill would be prioritised over any off-site options. Therefore, the measures would reduce the amount of material requiring off-site management to a minimum; and there are sufficient facilities within the region to recycle this material.

Non-hazardous wastes

Excavated material forms most of the non-hazardous waste arisings that will be managed on land. The waste management measures proposed for excavated material would promote the reuse of this material in accordance with the CoP, where possible. The proposed use on site would be considered a justifiable option under the waste hierarchy, because the retention of the material on site would prevent emissions associated with removal from the site. Furthermore, the proposal to use the material on-site achieves the status of non-waste, where the CoP is followed; and has the further benefit of embracing the proximity principle by being used at the site where it came from. Therefore, the use of the CoP would reduce the quantity waste being managed, because if the principles of the CoP are followed, the excavated material ceases to be waste when used.

Dredged sediment is proposed to be disposed offshore; this will be subject to a marine licence from the MMO. Should it be determined by the MMO's advisors that the dredged sediment is not suitable for offshore disposal, it would be managed onshore, and management options will be assessed in accordance with the waste hierarchy.

Any excavated material that is not suitable for use on site or is surplus to requirements for use for construction purposes would be sent off-site in accordance with the waste hierarchy. Options for reuse or recovery, for example to a soil conditioning facility; or beneficial use as restoration material at a local landfill, would be prioritised to ensure that the amount of waste excavated material being disposed to landfill is reduced to an absolute minimum.

Waste timber from the wharf will either be recycled at a wood processing facility, chipped or treated and prepared for recovery at a biological treatment facility, such as composting, or prepared for use as a fuel in an energy from waste facility.

Waste metals will be sent for recycling.

Hazardous wastes

The waste management measures proposed would ensure effective management of hazardous wastes produced on site. There are sufficient facilities within the region to recycle or treat ad hoc hazardous wastes (such as waste oils etc.).

Any hazardous excavated material or hazardous sediment that is not suitable for use on site would be classified to identify the appropriate hazards and sent to a facility that holds an environmental permit that authorises receipt and management of such wastes.

WEEE would be sent to an authorised treatment facility to determine the most appropriate recycling or disposal option according to whether the material contains POPs or not.

Annex 1 - List of waste management facilities within 10km from the proposed development

Name	Permit No.	Address	Distance from Site (km)	Facility type
Industrial Installation Permits				
Highfield Environmental Limited	DP3531DS	Teesport No3 Landfill, Grangetown, MIDDLESBROUGH, Cleveland, TS6 6UG	3.15	Disposal of > 50 t/d non-hazardous waste involving physico-chemical treatment disposal or recovery of hazardous waste with capacity exceeding 10 tonnes per day involving blending or mixing prior to submission to any of the other activities listed in this section recovery or a mix of recovery and disposal of > 50 t/d non-hazardous waste involving biological treatment temporary storage of hazardous waste with a total capacity > 50 tonnes, excl temp storage where generated disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day involving physico-chemical treatment disposal or recovery of hazardous waste with capacity exceeding 10 tonnes per day involving repackaging prior to submission to any of the other activities listed in this section disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day involving biological treatment disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day involving recycling or reclamation of inorganic materials other than metals or metal compounds
Highfield Environmental Limited	DP3331DJ	ICI No 3 (Teesport) Landfill, Grangetown, Middlesbrough, TS6 6UG	3.56	Waste landfilling; >10 t/d with capacity >25,000t excluding inert waste

Name	Permit No.	Address	Distance from Site (km)	Facility type
Highfield Environmental Limited	RP3631DA	ICI No 2 (Teesport) Landfill Site, Grangetown, Middlesbrough, TS6 6UG	6.79	Waste landfilling; >10 t/d with capacity >25,000t excluding inert waste
Cleansing Service Group Limited	MP3434CN	UK Resource Management Ltd, Holden Close, Bolckow Industrial Estate, Grangetown, TS6 7AL	1.96	Associated process | disposal of > 50 t/d non-hazardous waste (> 100 t/d if only ad) involving physico-chemical treatment disposal or recovery of hazardous waste with capacity exceeding 10 tonnes per day involving blending or mixing prior to submission to any of the other activities listed in this section disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day involving physico-chemical treatment temporary storage of hazardous waste with a total capacity > 50 tonnes, excl temp storage where generated disposal or recovery of hazardous waste with capacity exceeding 10 tonnes per day involving repackaging prior to submission to any of the other activities listed in this section
BioConstruct NewEnergy Ltd.	HP3230DJ	Imperial Park, Imperial Avenue, Cleveland, TS6 6BA	1.99	Recovery or a mix of recovery and disposal of > 50 t/d non-hazardous waste (> 100 t/d if only ad) involving biological treatment
North Tees Limited	NP3735YY	Reclamation Pond Materials Recycling Facility, North Tees Access Road, Port Clarence, Stockton on Tees, TS2 1TT	1.99	Disposal of > 50 t/d non-hazardous waste (> 100 t/d if only ad) involving physico-chemical treatment
Millennium EFW Ltd	PP3837JN	Reclamation Pond, Huntsman Drive, Stockton-on-Tees	2.08	Disposal of > 50 t/d non-hazardous waste (> 100 t/d if only ad) involving physico-chemical treatment | co-incineration of hazardous waste

Name	Permit No.	Address	Distance from Site (km)	Facility type
Augean Treatment Ltd	YP3234XR	Port Clarence Waste Recovery Park, Port Clarence Landfill Site, off Huntsman Drive, Stockton on Tees, TS2 1UE	2.31	Cement and lime; blending/using cement in bulk (unless at a construction site) disposal of > 50 t/d non-hazardous waste (> 100 t/d if only ad) involving physico-chemical treatment disposal or recovery of hazardous waste with capacity exceeding 10 tonnes per day involving blending or mixing prior to submission to any of the other activities listed in this section disposal or recovery of hazardous waste with capacity exceeding 10 tonnes per day involving repackaging prior to submission to any of the other activities listed in this section the incineration of hazardous waste in an incineration or co-incineration plant with a capacity exceeding 10 tonnes per day disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day involving biological treatment combustion; waste derived fuel <3mw|disposal of > 50 t/d non-hazardous waste (> 100 t/d if only ad) involving biological treatment disposal of > 50 t/d non-hazardous waste (> 100 t/d if only ad) involving treatment of slags and ashes recovery or a mix of recovery and disposal of > 50 t/d non-hazardous waste (> 100 t/d if only ad) involving biological treatment temporary storage of hazardous waste with a total capacity > 50 tonnes, excl temp storage where generated the incineration of non-hazardous waste in an incineration or co-incineration plant with a capacity exceeding 3 tonnes per hour

Name	Permit No.	Address	Distance from Site (km)	Facility type
				disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day involving physico-chemical treatment
Wood Group UK Limited	SP3839RU	Cats Terminal, Seal Sands Road, Seal Sands, TS2 1UB	2.45	Disposal of > 50 t/d non-hazardous waste (> 100 t/d if only ad) involving biological treatment gasification, liquifac. and refining; refining gas => 1000 te/12 months associated process | combustion; any fuel =>20mw but <50mw (unless 1.1 a(1) b)
RWE Generation UK Plc	CP3939QN	North/South Access Road, North South Access Road, Seal Sands, Cleveland, TS2 1FB	2.47	Combustion; any fuel =>50mw
Augean North Limited	BV1402IC	Port Clarence Non-Hazardous Landfill Site, Off Huntsman Drive, Cleveland, TS2 1UE	2.66	Combustion; waste derived fuel =>3mw but <50mw|waste landfilling; >10 t/d with capacity >25,000t excluding inert waste
Augean North Limited	BV1399IT	Port Clarence Landfill Site, Off Huntsman Drive, Port Clarence, Stockton on Tees, TS2 1UE	2.70	Waste landfilling; >10 t/d with capacity >25,000t excluding inert waste
PX (TGPP) Ltd	NP3133LV	P X TGPP) Limited, Teesside Gas Processing Plant, Seal Sands Road, Seal Sands, Middlesbrough, TS2 1UB	2.74	Combustion; any fuel =>20mw but <50mw (unless 1.1 a(1) b)|gasification, liquifac. and refining; refining gas => 1000 te/12 months
Whitetower Energy Limited	PP3336TC	Seal Sands Bulk Supply Point, Substation, Seal Sands, Stockton-on-Tees, Cleveland, TS2 1UB	2.75	Combustion; any fuel =>50mw

Name	Permit No.	Address	Distance from Site (km)	Facility type
Northumbrian Water Ltd	LP3439LK	Bran Sands, Tees Dock Road, Middlesbrough, Cleveland, TS6 6UE	2.77	Temporary storage of hazardous waste with a total capacity > 50 tonnes, excl temp storage where generated disposal of > 50 t/d non-hazardous waste (> 100 t/d if only ad) involving biological treatment disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day involving biological treatment
Cleansing Service Group Ltd	MP3136HW	Wilton Waste Treatment Plant, Boundary Road West, Wilton International, Cleveland, TS6 8JH	2.89	Disposal or recovery of hazardous waste with capacity exceeding 10 tonnes per day involving blending or mixing prior to submission to any of the other activities listed in this section disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day involving oil re-refining or other reuses of oil disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day involving physico-chemical treatment temporary storage of hazardous waste with a total capacity > 50 tonnes, excl temp storage where generated disposal or recovery of hazardous waste with capacity exceeding 10 tonnes per day involving repackaging prior to submission to any of the other activities listed in this section or in section 5.1 associated process disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day involving biological treatment
Recyc-oil Ltd	AP3930UJ	Murdock Road Oil Treatment Plant, Murdock Road, Middlesbrough Industrial Estat,	3.07	Disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day involving physico-chemical treatment |

Name	Permit No.	Address	Distance from Site (km)	Facility type
		Middlesbrough, Teeside, TS3 8TB		temporary storage of hazardous waste with a total capacity > 50 tonnes, excl temp storage where generated
Port Clarence Energy Limited	MP3333WX	Land at Clarence Works at Port Clarence Road, Port Clarence, Stockton on Tees	3.18	The incineration of non-hazardous waste in an incineration or co-incineration plant with a capacity exceeding 3 tonnes per hour. | associated process
EDF Energy Nuclear Generation Limited	BM4295IK	HARTLEPOOL POWER STATION, TEES ROAD, HARTLEPOOL, CLEVELAND, TS25 2BZ	4.59	Combustion; any fuel =>50mw
Anglian Water Services Ltd	KP3538SN	Greatham Works, Tees Road, Greatham, Hartlepool, TS25 2DD	4.59	Associated process | other waste disposal; non-hazardous waste >50t/d by biological treatment | combustion; any fuel =>50mw | inorganic chemicals; non metals etc e.g. calcium carbide.
Highfield Environmental Limited	KP3933YA	Cowpen Bewley Landfill, Seal Sands Road, Billingham, Stockton-on-Tees, Cleveland, TS23 4HS	5.00	Recovery or a mix of recovery and disposal of > 50 t/d non-hazardous waste (> 100 t/d if only ad) involving biological treatment
Gee Dee Cleansing Limited	DP3636HA	Unit 1, Graythorp Industrial Estate, Cleveland, TS25 2DF	5.11	Temporary storage of hazardous waste with a total capacity > 50 tonnes, excl temp storage where generated | disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day involving physico-chemical treatment
Highfield Environmental Limited	RP3531DV	Cowpen Bewley Landfill Site, Cowpen Bewley, Stockton on Tees, TS23 4HS	5.21	Disposal of > 50 t/d non-hazardous waste (> 100 t/d if only ad) involving physico-chemical treatment | combustion; any fuel =>20mw but <50mw (unless 1.1 a(1) b)|waste landfilling; >10 t/d with capacity >25,000t excluding inert waste
ALAB ENVIRONMENTA	EP3830LE	Tofts Farm Industrial Estate E, Brenda Road,	5.34	Waste landfilling; >10 t/d with capacity >25,000t excluding inert waste

Name	Permit No.	Address	Distance from Site (km)	Facility type
L SERVICES LIMITED		Cleveland, TS25 2BS		
Duranta Teesside Limited	YP3236RW	Teesside AD Power Plant, Forty Foot Road, Middlesbrough, Cleveland, TS2 1HG	5.38	Recovery or a mix of recovery and disposal of > 50 t/d non-hazardous waste (> 100 t/d if only ad) involving biological treatment | associated process
Millennium EFW Limited	PP3037JJ	Tees Valley Renewable Energy Facility, Tees Valley Renewable Energy Facility, Reclamation Pond, Huntsman Drive, Stockton-on-Tees, Cleveland, TS2 1TT	5.67	The incineration of non-hazardous waste in an incineration or co-incineration plant with a capacity exceeding 3 tonnes per hour. | disposal of > 50 t/d non-hazardous waste (> 100 t/d if only ad) involving biological treatment | associated process
Blue Phoenix Limited	TP3438EG	C/o Sita Tees Valley, Haverton Hill Road, Billingham, Cleveland, TS23 1PY	5.86	Recovery or a mix of recovery and disposal of > 50 t/d non-hazardous waste (> 100 t/d if only ad) involving treatment of slags and ashes.
Total Recycling Services Ltd	BP3830QW	Teesside Waste Management Facility, Tofts Road West, Tofts Farm Industrial Estate, Hartlepool, Co. Durham, TS25 2BQ	5.99	Disposal of > 50 t/d non-hazardous waste (> 100 t/d if only ad) involving physico-chemical treatment | temporary storage of hazardous waste with a total capacity > 50 tonnes, excl temp storage where generated | disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day involving physico-chemical treatment.
SUEZ Recycling and Recovery UK Ltd	DP3104SC	Teesside energy from Waste Plant, Haverton Hill Road, Cleveland, TS23 1PY	5.99	Incineration of non hazardous waste >1t/hr | the incineration of non-hazardous waste in an incineration or co-incineration plant with a capacity exceeding 3 tonnes per hour.
BioConstruct NewEnergy Ltd	CP3834YH	Hartlepool BioPower Anaerobic Digestion Plant, Brenda Road, Hartlepool,	6.26	Recovery or a mix of recovery and disposal of > 50 t/d non-hazardous waste (> 100 t/d if only ad) involving biological treatment | associated process

Name	Permit No.	Address	Distance from Site (km)	Facility type
		Teesside, TS25 2BW		
Tees Eco Energy Ltd	NP3537YY	Billingham Reach EfW, Billingham Reach Industrial Es, Stockton, TS23 1PX	6.35	The incineration of non-hazardous waste in an incineration or co-incineration plant with a capacity exceeding 3 tonnes per hour. | associated process
Rapier Energy Ltd	PP3137ML	Billingham Treatment Plant, New Road, Cleveland, TS23 1DE	6.84	Temporary storage of hazardous waste not under s 5.2 pending activities listed in s 5.1, 5.2, 5.3 and paragraph (b) of this section with a total capacity > 50 tonnes, excl temp storage where generated | disposal or recovery of hazardous waste with a capacity exceeding 10 tonnes per day involving physico-chemical treatment | associated process
Scott Bros. Limited	JP3336HA	Billingham Reed Beds, Norton Bottoms, Portrack Roundabout, Billingham, TS18 2QF	7.64	Disposal of > 50 t/d non-hazardous waste (> 100 t/d if only ad) involving physico-chemical treatment | disposal of > 50 t/d non-hazardous waste (> 100 t/d if only ad) involving biological treatment
S.W.S. Limited	BW2145IR	S W S Limited, Thomlinson Road, Cleveland, TS25 1NS	8.75	Waste landfilling; >10 t/d with capacity >25,000t excluding inert waste
Niramax Group Limited	DP3737WZ	Niramax Group Limited, Thomlinson Road, Longhill Industrial Estate, Hartlepool, Cleveland, TS25 1NS	8.77	Recovery or a mix of recovery and disposal of > 50 t/d non-hazardous waste (> 100 t/d if only ad) involving pre-treatment of waste for incineration or co-incineration
Waste Operation Permits				
L & C Skip Hire Ltd	BB3331AZ/V002	L & C Skip Hire Ltd, Smith Dock Road, Middlesbrough, Cleveland, TS6 6UJ	1.50	S1510: No 10: 75kte Household, Commercial, Industrial (HCI) Waste Transfer Station (TS) + treatment + asbestos
Ward Recycling Ltd	EP3793VF/V004	Puddlers Road, South Tees Ind Est, Middlesbrough,	1.62	A15: Material Recycling Treatment Facility

Name	Permit No.	Address	Distance from Site (km)	Facility type
Middlesbrough Container Sorting Line		Cleveland, TS6 6TX		
C W Russell Haulage Ltd	FB3409CH/A001	Old Fire Station, Middlesbrough Road East, Grangetown, Middlesbrough, Cleveland, TS6 6TZ	1.65	S1506 No 6: 75kte HCl Waste TS + treatment
Reclamation Ponds Site	DB3034RK/V002	Reclamation Ponds Site, North Tees Access Road, Port Clarence, Middlesbrough, Cleveland, TS2 1TT	1.66	A16: Physical Treatment Facility
Scott Bros Recycling Limited	KP3490ZT/V002	Land/premises At, Holden Close, Bolckow Ind Est, Middlesbrough, Cleveland, TS6 7AA	1.92	A11 : Household, Commercial & Industrial Waste Transfer Station
Port Clarence Waste Recovery Park	YP3234XR/V006	Port Clarence Landfill Site, Off Huntsman Drive, Stockton On Tees, Cleveland, TS2 1UE	2.31	A17: Physico-Chemical Treatment Facility
Skippers Lane Ind Est	VP3090ZC/A001	Land/premises At, Skippers Lane, South Bank, Middlesbrough, Cleveland, TS6 6EZ	2.46	A11: Household, Commercial & Industrial Waste Transfer Station
Freightliner Site	DB3502KM/V003	Trunk Road, Middlesbrough, Cleveland, TS6 8JH	2.47	A11: Household, Commercial & Industrial Waste Transfer Station
Waste Wood Recycling And Transfer Unit	AP3696ZE/A001	Wilton International, Former Freightliner Site, Trun, Middlesbrough,	2.56	A15: Material Recycling Treatment Facility

Name	Permit No.	Address	Distance from Site (km)	Facility type
		Cleveland, TS6 8JH		
Port Clarence Landfill	MP3296ZR/T001	Huntsman Drive, Stockton On Tees, Cleveland, TS2 1UE	2.68	A04: Household, Commercial & Industrial Waste Landfill
Normanby Wharf	BB3107SC/V004	Normanby Wharf, Dockside Road, Cargo Fleet, Middlesbrough, Cleveland, TS3 8AT	2.71	A11: Household, Commercial & Industrial Waste Transfer Station
Middlesbrough Waste Transfer Station	HP3395VH/A001	Brunel Road, Skippers Lane Ind Est, Middlesbrough, Cleveland, TS6 6JA	2.76	S0803 No 3: 75kte HCI Waste TS + treatment
Normanby Wharf	FP3796ZJ/V004	Normanby Wharf, Dockside Road, Middlesbrough, TS3 8AT	3.00	A11: Household, Commercial & Industrial Waste Transfer Station
Biolite Treatment Centre	DB3606TQ/V002	Biolite Treatment Centre, Stores Road, Wilton International Site, Middlesbrough, Cleveland, TS10 4RD	3.06	A17: Physico-Chemical Treatment Facility
Teesside Integrated Iron And Steelworks	QP3338HU/V005	Teesside Integrated Iron And Steelworks, Redcar, Cleveland, TS10 5QW	3.12	A20: Metal Recycling Site (mixed MRS's)
Deepwater Wharf	UP3190ZZ/A001	Deepwater Wharf, Dockside Road, Cargo Fleet, Middlesbrough, Cleveland, TS3 8AS	3.13	A09: Special Waste Transfer Station
Bitmac Landfill	EB3203LS/T001	Port Clarence Works, Huntsman Drive, Port Clarence,	3.14	A07: Industrial Waste Landfill (Factory curtilage)

Name	Permit No.	Address	Distance from Site (km)	Facility type
		Middlesbrough, Cleveland, TS2 1SD		
Middlesbrough Recycling	HB3032AE/V003	Middlesbrough Recycling, Cargo Fleet Lane, Cohcranes Wharf, Middlesbrough, Cleveland, TS3 6AU	3.18	A16: Physical Treatment Facility
Biffa Polymers Ltd	JB3406GC/T001	Plastics Road, Wilton Ind Est, Redcar, Cleveland, TS10 4RG	3.22	A15: Material Recycling Treatment Facility
Northern Powergrid Middlesbrough Depot	DB3103CN/V002	Northern Powergrid Middlesbrough Depot, Cargo Fleet Lane, Middlesbrough, Cleveland, TS3 8DG	3.60	A09: Special Waste Transfer Station
All Saints Refinery	BT9828IN/V006	All Saints Refinery, Corgo Fleet Road, Middlesbrough, TS3 6AF	4.10	A17: Physico-Chemical Treatment Facility
T E R R C	VP3296ZM/V002	T E R R C, Graythorp Dock, Tees Road, Hartlepool, Cleveland, TS25 2DB	4.64	A16: Physical Treatment Facility
Land Outside Wilton Engineering Yard	CB3806GZ/T001	Land Outside Wilton Engineering Services Yard, Port Clarence Road, Port Clarence, Middlesbrough, Cleveland, TS23 1PZ	4.67	S0906: Inert & Excavation WTS with treatment
Warrenby Waste Transfer Station	HP3696ZJ/V007	Warrenby Waste Transfer Station, Tod Point Road, Warrenby, Redcar,	4.69	S0805 No 5: 75kte HCI Waste TS + asbestos

Name	Permit No.	Address	Distance from Site (km)	Facility type
		Cleveland, TS10 5AW		
Cowpen Recycling Centre	EB3707LD/V002	Cowpen Recycling Centre, Cowpen Bewley, Billingham, Cleveland, TS23 4HS	4.87	A15: Material Recycling Treatment Facility
E M R Middlesbrough	VP3196ZS/V003	Land/premises At, Depot Road, Middlesbrough, Cleveland, TS2 1LE	4.91	A20: Metal Recycling Site (mixed MRS's)
Robinson Group Ltd	XP3496ZH/V002	Depot Road, Middlesbrough, Cleveland, TS2 1JA	4.92	A20: Metal Recycling Site (mixed MRS's)
A. V. Dawson Limited	DB3506MN/V002	North Sea Supply Base & Dawson's Wharf, Riverside Park, Middlesbrough, Cleveland, TS2 1UT	5.00	A11 : Household, Commercial & Industrial Waste Transfer Station
1st Choice Skip Hire North East Ltd	RP3096ZD/V004	1st Choice Skip Hire North East Ltd, Tod Point Road, Redcar, Cleveland, TS10 5AU	5.04	S0801: No 1: 75kte HCI Waste Transfer Station
Cowpen Bewley Open Windrow Composting Facility	EB3707CF/V002	Cowpen Bewley Landfill, Seal Sands Road, Billingham, Stockton On Tees, Cleveland, TS23 4HS	5.04	A16: Physical Treatment Facility
Richmond Street	XP3990ZK/A001	Land/ Premises At, Richmond Street, Middlesbrough, Cleveland, TS2 1LN	5.06	A11 : Household, Commercial & Industrial Waste Transfer Station
Bucklers	KP3696ZB/A001	Land/premises At, Lloyd Street, Middlesbrough,	5.20	A11: Household, Commercial & Industrial Waste Transfer Station

Name	Permit No.	Address	Distance from Site (km)	Facility type
		Cleveland, TS2 1DW		
Teesside Skip Hire And Waste Management	EB3305CQ/A001	77, Graythorpe Industrial Estate R, Hartlepool, Cleveland, TS25 2DF	5.24	S1504: No 4: 75kte HCI Waste Transfer Station
A1 Dial A Skip	HB3931RP/A001	Dunn's Yard, Metz Bridge Road, Middlesbrough, Cleveland, TS2 1AF	5.62	S0803: No 3: 75kte HCI Waste Transfer Station + treatment
Scott Bros. Recycling Ltd	BB3803XQ/V002	Scott Bros. Recycling Ltd, Haverton Hill Road, Haverton Hill, Billingham, Cleveland, TS23 1PY	5.68	A11: Household, Commercial & Industrial Waste Transfer Station
Casebourne	CB3104GR/A001	Haverton Hill Road, Billingham, Stockton On Tees, Cleveland, TS23 1PY	5.88	A25: Deposit of waste to land as a recovery operation
Tofts Farm	AP3895ED/V002	Tofts Farm, 6-8, Tofts Road West, Tofts Farm Ind Est, Hartlepool, Cleveland, TS25 2BQ	6.02	A11: Household, Commercial & Industrial Waste Transfer Station
Teesside Recycling Facility	HB3309HE/T001	Teesside Recycling Facility, Brenda Road, Hartlepool, TS25 2BE	6.09	A11: Household, Commercial & Industrial Waste Transfer Station
Joe's Skips	MB3639RE/A001	Joe's Skips, Brenda Road, Hartlepool, Cleveland, TS25 2BW	6.17	S0801: No 1: 75kte HCI Waste Transfer Station
Orchard Green	EB3400UT/V002	Tofts Road East, Tofts Farm Ind Est, Hartlepool,	6.35	A16: Physical Treatment Facility

Name	Permit No.	Address	Distance from Site (km)	Facility type
		Cleveland, TS25 2BE		
Land Within Riverside Terminal	GB3008GU/A001	C/o Inter Terminals, Billingham Reach Ind Est, Billingham, Cleveland, TS23 1PX	6.46	S0906: No 6: Inert & Excavation WTS with treatment
Trinity Recycling Centre	DB3237AB/V002	Haverton Hill Road, Billingham Reach Ind Est, Billingham, Cleveland, TS23 1PX	6.61	A25: Deposit of waste to land as a recovery operation
SNF Oil & Gas	EB3907XC/A001	Belasis Avenue, Billingham, Cleveland, TS23 1QY	6.72	S1539: No 39: Use of waste in a deposit for recovery op
Billingham Treatment Plant	FP3899SQ/T001	Land/ Premises At, New Road, Haverton Hill, Billingham, Cleveland, TS23 1LE	6.84	A17: Physico-Chemical Treatment Facility
Able Skip Hire	SP3098EM/A001	Trinity Works, Off Haverton Hill Road, Billingham Reach Ind. Est, Stockton On Tees, Cleveland, TS23 1PY	7.18	A11: Household, Commercial & Industrial Waste Transfer Station
Norton Bottoms	JB3139AT/V003	Norton Bottoms, Haverton Hill Road, Billingham, Stockton On Tees, Cleveland, TS23 1PX	7.82	A25: Deposit of waste to land as a recovery operation
Herring's Transfer Station	DP3993VN/T001	Land/ Premises At, Windermere Road, Longhill Ind. Est., Hartlepool, Cleveland, TS25 1NX	8.53	A11: Household, Commercial & Industrial Waste Transfer Station

Name	Permit No.	Address	Distance from Site (km)	Facility type
Carlin Howe Farm Civic Amenity Site	HP3196ZC/V004	B1269, Tocketts, Guisborough, Cleveland, TS14 6RG	8.60	S0813 No 13: 75kte Non-hazardous & hazardous HWA Site
Hartlepool Fibre Sort	GB3806MQ/A001	Windermere Road, Longhill Road Industrial, Hartlepool, Cleveland, TS25 1PA	8.63	A15: Material Recycling Treatment Facility
Sims Group U K Limited	FP3690VM/V007	Windermere Road, Longhill Industrial Est, Hartlepool, Cleveland, TS25 1NX	8.66	A20: Metal Recycling Site (mixed MRS's)
Carlin Howe Farm	KP3590ZF/V004	Carlin Howe Farm, Redcar Road, Nr Dunsdale, Guisborough, Cleveland, TS14 6RG	8.70	A04: Household, Commercial & Industrial Waste Landfill
Niramax Transfer Station	GP3399LG/V003	Niramax Transfer Station, Thomlinson Road, Longhill Ind Est, Hartlepool, Cleveland, TS25 1NS	8.77E+00	A11: Household, Commercial & Industrial Waste Transfer Station
Windermere Road M R F	FP3398EY/V006	J & B Recycling, Windermere Road, Longhill, Hartlepool, Cleveland, TS25 1NS	8.77E+00	A15: Material Recycling Treatment Facility
E M R Marske	WP3896ZW/V002	Land/premises At, The Drive, Longbeck Ind Est, Marske By The Sea, Cleveland, TS11 6HB	8.78E+00	A20: Metal Recycling Site (mixed MRS's)
Longbeck Ind Est	GP3690ZT/V002	Longbeck Ind Est, Marske, Redcar, Cleveland, TS11 6HB	8.78E+00	A20: Metal Recycling Site (mixed MRS's)

Name	Permit No.	Address	Distance from Site (km)	Facility type
E M R Hartlepool	MP3090ZL/V002	Land/ Premises At, Thomlinson Road, Longhill Ind Est, Hartlepool, Cleveland, TS25 1NS	8.89E+00	A20: Metal Recycling Site (mixed MRS's)
M P Allen	LP3390ZK/A001	Unit 3, Sandgate Ind Est, Mainsforth Terrace, Hartlepool, Cleveland, TS25 1UB	9.08E+00	A11: Household, Commercial & Industrial Waste Transfer Station
Unit 5 Sandgate Ind Est	AB3207MG/V002	Unit 5 Sandgate Ind Est, Mainsforth Terrace, Hartlepool, Cleveland, TS25 1UB	9.15E+00	S0801 No 1: 75kte HCI Waste Transfer Station
J & B Recycling Ltd	KP3896ZU/V006	J & B Recycling Ltd, Baltic Street, Hartlepool, Cleveland, TS25 1PS	9.43	A11: Household, Commercial & Industrial Waste Transfer Station
Pout & Foster Ltd	MP3590ZZ/V006	90-91, Mainsforth Terrace, Sandgate Ind Est, Hartlepool, Cleveland, TS25 1NR	9.44	A20: Metal Recycling Site (mixed MRS's)
Baxketh Ltd	LP3990ZD/A001	25, Burn Road, Hartlepool, Cleveland, TS25 1PL	9.55	A11 : Household, Commercial & Industrial Waste Transfer Station
Mobile Plant S R 2010 No 11	DB3201UX/A001	Mobile Plant S R 2010 No 11	9.77	SR/11 No11: Mobile plant treatment for soil <75,000 tpd
Clevestone	SP3790ZQ/A001	Old Durham Paper Mills, Moreland Street, Hartlepool, Cleveland, TS24 7NL	9.78	A11: Household, Commercial & Industrial Waste Transfer Station