# LAND AT PORT OF SUNDERLAND

## REQUEST UNDER REGULATION 6 OF THE TOWN AND COUNTRY PLANNING (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS 2017

Prepared for: Quantafuel Sunderland Limited


SLR Ref: 403.11075.00001
Version No: ISSUE
July / 2021

# BASIS OF REPORT

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# 1.0 INTRODUCTION

SLR has been instructed by Quantafuel Sunderland Limited ('the prospective applicant') to undertake a formal screening exercise to establish whether a proposed development would constitute 'EIA' development. This document therefore comprises a formal request for Sunderland City Council (as Local Planning Authority, 'LPA') to adopt a screening opinion under Regulation 6 of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (the 'EIA Regulations').

Under Regulation 6(1) of the EIA Regulations a person who is minded to carry out development may request the relevant planning authority to adopt a screening opinion. Such a request must be accompanied by:

*a) a plan sufficient to identify the land;*

*b) a description of the development, including in particular –*

*(i) a description of the physical characteristics of the development and, where relevant, of demolition works;*

*(ii) a description of the location of the development, with particular regard to the environmental sensitivity of geographical areas likely to be affected;*

*c) a description of the aspects of the environment likely to be significantly affected by the development;*

*d) to the extent the information is available, a description of any likely significant effects of the proposed development on the environment resulting from –*

*(i) the expected residues and emissions and the production of waste, where relevant; and*

*(ii) the use of natural resources, in particular soil, land, water and biodiversity; and*

*e) such other information or representations as the person making the request may wish to provide or make, including any features of the proposed development or any measures envisaged to avoid or prevent what might otherwise have been significant adverse effects on the environment.*

The remainder of this report sets out information on the project and our evaluation of the likely significant effects that may arise having regard to the provisions of the EIA Regulations and associated guidance contained within the web-based Planning Practice Guidance[1] (PPG).

[1] http://planningguidance.planningportal.gov.uk/blog/guidance/environmental-impact-assessment/considering-and-determining-planning-applications-that-have-been-subject-to-an-environmental-impact-assessment/annex/ (Paragraph: 058 Reference ID: 4-058-20140306)

# 2.0 THE SITE AND ITS ENVIRONS

## 2.1 Proposed Development Site

### 2.1.1 Location

The proposed development site is located within the Port of Sunderland, which itself is located to the south of the River Wear. More specifically, it is located on the eastern side of the port, within an area of land bounded by the North Sea to the east and the Hudson Dock to the west. At the southern end of the Port is a waste water treatment plant operated by Northumberland Water whilst to the north is the mouth of the dock/port into the River Wear.

The site itself is located to the north of an area of land in use by Northumbrian Roads for aggregates processing/manufacture of coated roadstone products and to the south the northern part of the port, which is occupied by two large warehouse buildings and concrete hardstanding, along with a dry dock.

For identification purposes, the proposed development site is centred on National Grid Reference NZ 41239 57543. In addition, **Figure 2-1** below illustrates the location based on aerial imagery provided by Google Earth (the proposed development site being shown edged in red). In addition, **Drawing 1** shows the site location based on OS mapping.

**Figure 2-1**
**Site Location**

### 2.1.2 Site Context

The proposed development site covers an area of approximately 4.9 hectares (ha) with approximate dimensions of 658m (from its most northern point to its most southern) and around 100m (from east to west). The land within the site is previously developed industrial land, which is flat, at an elevation generally between 5-6m AOD (excluding the height of any stockpiles placed on the ground)[2]. The main body of the proposed development site (known as the Eastern Enterprise Zone, referred to as the 'EEZ Plot' in this document) comprises a 3.6ha recently cleared development plot that has been made ready for development (planning permission 19/02155/LP3[3] refers). The site works have now been completed, with the surface of the EEZ Plot created from a 100mm layer of uncompacted crushed concrete capping material overlying a layer of compacted sub-grade 6F5 material. Topographic levels range from 5.4m AOD to 6m AOD, with drainage features installed to the western edge of the plot. To the west of the EEZ Plot is Youngs Quay and East Quay North, beyond which is the Hudson Dock. To the east is the foreshore of the North Sea. A sea wall extends along the northern half of the eastern boundary of the EEZ Plot and concrete hardstanding that is located in between this sea wall and the development plot. To the south of this is a rip rap stone wall, that sits at the back of the foreshore and acts as a coastal defence.

Two smaller areas are also available to the prospective applicant to incorporate into the overall development footprint, which are labelled as Areas A and B on **Figure 2-2**.

- Area A (7520m$^2$);
- Area B (8285m$^2$).

Area A lies between the EEZ Plot and the aforementioned warehouses and is irregular in shape. It is at an elevation of around 5.5m AOD with a mound of rubble material within the eastern part and a low (1.5m high) screen mound along the western edge. Area B lies immediately to the south of the EEZ Plot and comprises a rectangular area that, with land to the west, has historically been used for parking lorries, and in more recent times, storage of materials (such as coal). Again, the parcel has an elevation of around 5.5m AOD. To the west of this parcel are two buildings (one understood to be occupied by Odin Shipping Limited). Based on imagery by Google Earth it would appear that this area has been progressively cleared of stockpiles since c. 2018.

[2] Referring to Topographic Survey Drawing ref.3555-C-051 produced for the Port of Sunderland
[3] Engineering works including re-profiling of land and erection of sub-station

**Figure 2-2**
**Site Context (Image Date: 13/05/21)**


### 2.1.3 Surrounding Area

The proposed development site is set within the wider context of the Port of Sunderland, which covers an area in excess of 100ha. As noted above it is bordered to the north by two large warehouse buildings and hardstanding, along with a dry dock. Further to the north is the mouth of the River Wear. To the south lies the Northumbrian Roads premises, beyond which is a further development plot and the Tradebe Solvents facility. To the west lies Odin Shipping Limited, a freight cargo facility, and the main north-south access road within the docks, beyond which is a narrow parcel of land forming a quayside to the Hudson Dock. Further to the west lies the enclosed area of the docks, and on their western side the former Hendon Railway sidings (for which a planning application has been submitted to create a further development plot). To the east of the proposed site is the North Sea and associated sea defences.

### 2.1.4 Access

The port is the second largest municipally owned port in the UK and can receive containers and large cargos via ship. Access to the site by road from the wider road network is gained via the B1293 High Street East/Barrack Street. This road joins the A1018 at a four armed roundabout. The A1018 (Inner Ringroad) provides access to the A19 to the south and the A183, A690 and A1231 to the west, with each road again providing access to the A19 (which runs north to south to the west of Sunderland).

### 2.1.5 Planning Policy

The site lies in an area allocated for business and industry (Use Classes B1, B2 and B8, including offshore renewables and automotive supply chains) in the adopted Sunderland Core Strategy and Development Plan

2015-2033 (2020). It is also covered by Strategic Site Policy SS5 The Port of Sunderland which states that occupants of the site must have need for dock access, and where relevant to meet the sequential test and exceptions test, where necessary, with regard to development within Flood Zones 2 and 3.

## 2.2 Environmental Receptors

### 2.2.1 Human Receptors

The nearest residential receptors to the proposed development site are located on Barack Street/Marine Square, approximately 325m to the west. This residential area lies between High Street to the north-west and Prospect Row south-east and extends up to Hartley Street to the south-west. Properties fronting the Quadrant (the former alms-houses) lie around 579m from the proposed site. Residential developments on the north side of the River Wear (in the vicinity of Barbary Drive) are around 540m from the northern site boundary.

### 2.2.2 Ecology and Nature Conservation Designations

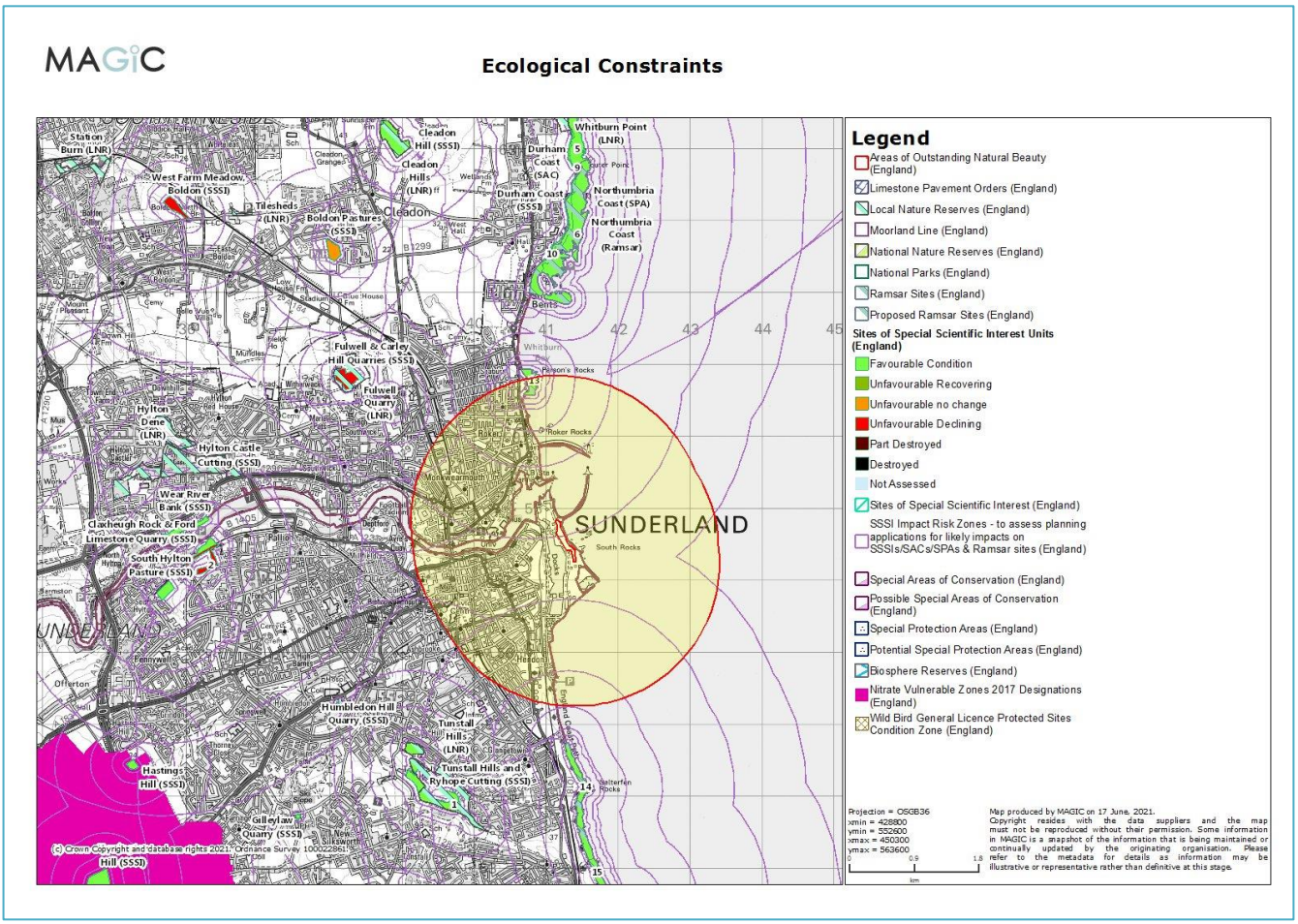
Based on a search of the MAGIC dataset the proposed development site is not affected by any national or international ecological designations. There are nationally (and internationally) important ecological designations within 2km of the proposed site boundary. The closest designations are 1.7km to the north, namely:

- Northumbria Coast Ramsar and Special Protection Area;
- Durham Coast Special Area of Conservation; and
- Durham Cost Site of Special Scientific Interest.

These same designations also exist around 2.5km to the south of the proposed development site.

**Figure 2-3** provides an extract from the MAGIC website showing key designated features within 2km of the site boundary.

**Figure 2-3**
**MAGIC Search - Ecology**




## 2.2.3 Cultural Heritage Designations

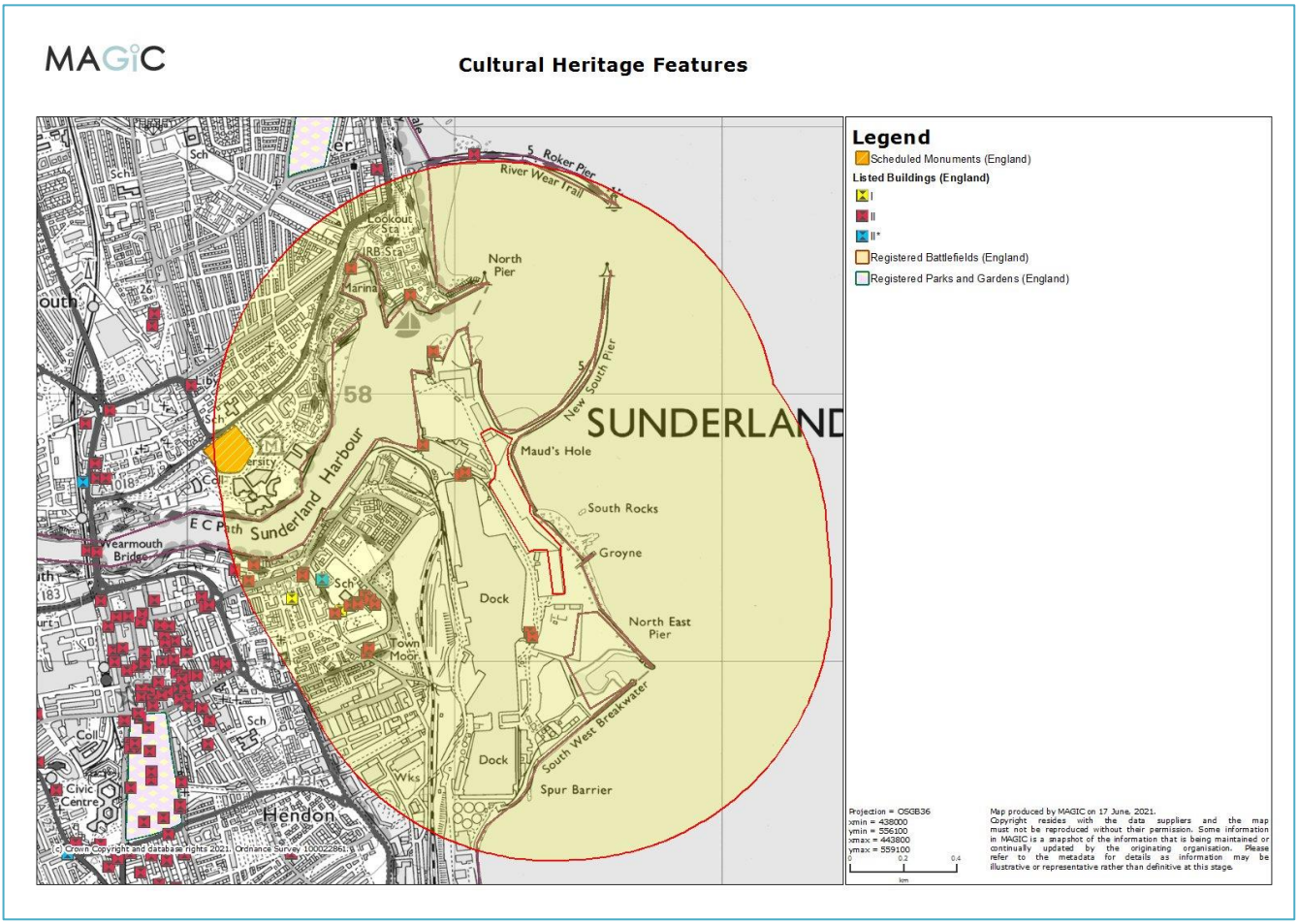
There is one Scheduled Monuments (SAMs) within 1km on the proposed development site; 'St Peter's Church' is located around 880m to the west of the site, to the north of the River Wear. Despite the proximity, there are no clear lines of sight between the scheduled monument and the proposed site due to intervening vegetation and build development (notably the University of Sunderland).

There are a number of listed buildings within 1km of the site, the closest of which are associated with the port ("*Dock Office at North End of Hudson Dock with Hydraulic Accumulator*" and "*Swing Bridge, Lock and Walls of North End of Dock*"). A further listed building lies on the western side of North Half Tide Basin ('*Wall and Pier at Lock*') with another listed building located at the northern end of the docks ('*Wave Basin Battery adjacent to Old South Pier'*). Two more listed buildings are located to the south of the site, midway along Hudson Dock, close to the Northumbrian Roads premises. All of the listed buildings notes above are Grade II.

Outside of the port a cluster of eight listed buildings are located in the vicinity of the Church of the Holy Trinity (itself a Grade I listed building) and the Trafalgar Square Alms-houses, and two at the site of the former Orphanage. Finally, two listed buildings are located on the northern side of the River Wear to the north of the site ('*Walls and Four Mooring Posts to North Dock Basin'* and '*Remaining Walls of North Dock'*)

**Figure 2-4** provides an extract from the MAGIC website showing key designated features within 1km of the site boundary.

**Figure 2-4**
**MAGIC Search - Heritage**




## 2.2.4 Landscape Designations

The site lies over 34km to the east of the North Pennines Area of Outstanding Natural Beauty (AONB).

## 2.2.5 Air Quality

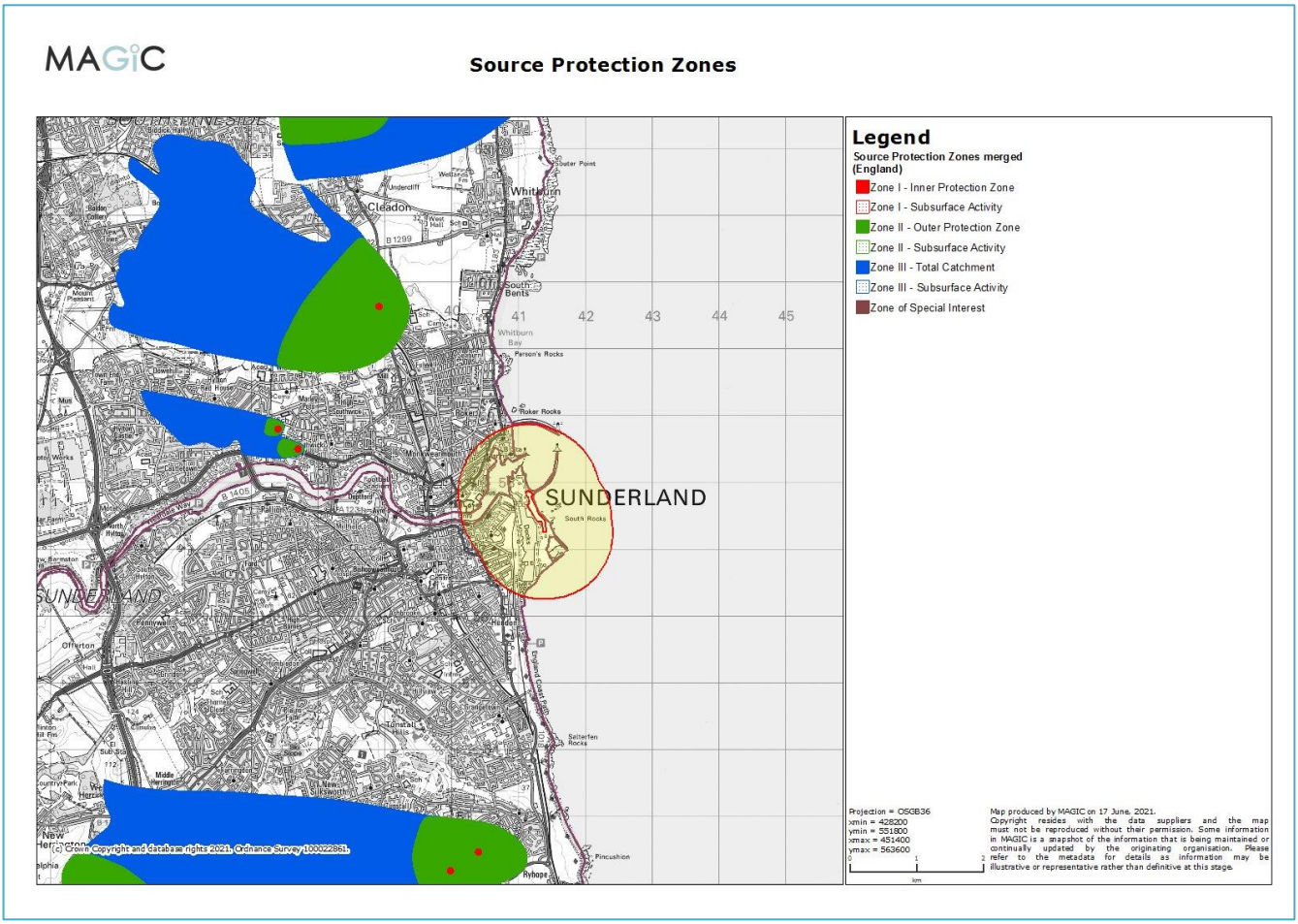
The proposed development site does not lie within, or close to an Air Quality Management Area. The closest are located in Jarrow, around 10km to the north-west of the proposed site.

## 2.2.6 Water Environment

Based on the EA map data the vast majority of the site within Flood Zone 3. Notwithstanding this, Area B is mainly in Flood Zone 1, with its northern end in Flood Zones 2 and 3. The proposed development site is not located within a Source Protection Zone. This is illustrated in Figures 2-5 and 2-6 with data provided by the EA (Flood Map for Planning) and MAGIC (Source Protection Zones).

## Figure 2-5
## Flood Risk

## Figure 2-6
## Source Protection Zones



# 3.0 THE PROPOSED APPLICATION

## 3.1 Overview

The proposed development is for the recovery of synthetic hydrocarbons from waste plastics. The recovered synthetic hydrocarbons can be used in the manufacture of new plastic products.

## 3.2 Infrastructure

The proposed development would consist of three main buildings along with a range of ancillary, smaller buildings, plant and equipment. In this respect the proposed development would comprise:

- Buildings for the storage, processing and treatment of waste plastic;
- Administration building;
- Workshop/stores building
- Storage tanks within a bunded enclosure for the storage of liquids from the process;
- Storage tanks for chemicals and water used in the process;
- Distillation plant;
- Ancillary plant and equipment associated with the process;
- Roadways, vehicle manoeuvring/circulation areas and car parking.

The layout of the facility ensures that all waste handling on site would be undertaken in an enclosed environment (buildings).

The site layout also provides for the separation of production related traffic within the site and other traffic related to feed stock supply, waste removal, product loaded out, staff and visitors.

### 3.2.1 Layout of the Plant

In terms of building and equipment the plant would consist of:

- An administration building of approximately 1000m$^2$ on three levels with a height of up to 10m, which would include administration, welfare, and control-room facilities.
- A waste plastics handling and sorting hall of around 8000m$^2$ with a height of up to 20m where the initial treatment of the plastic waste would be carried out. Vehicles delivering the wate plastic would be unloaded inside the building which would have fast operating doors to retain all material within the building. In this hall, sorting, and subdivision of received plastic waste would be carried out. Containers for discarded materials etc. would be provided inside the hall and collected from there by licensed waste disposal contractors.
- A process hall of around 7,400m$^2$ with a height of 16.5m which would contain the pyrolysis reactors used to heat the waste plastic.

- Separate smaller buildings for workshop/warehouse as well as ash storage (residue from the heating process), chemical storage, and forewater tank. There would also be tanks for the storage of Hydrogen with a height of 20m.

- External to the buildings would be the process units that provide the chlorine absorption system, catalysis systems, cooling systems and separation and holding tank facilities. There would also be two distillation towers, each of around 5m by 5m and 21m in height where the distillation of pyrolysis oils would take place. Also external to the buildings would be:

    - 2 stacks of approximately 30 meters in height, acting as exhaust for flue gases.

    - 2 small stacks for venting from the larger buildings.

    - 1 emergency gas flare safety unit.

- Storage tanks for finished products with a total volume of less than 1,200 $m^3$.

- A refuelling site for the transfer of finished products from storage tanks via a pipeline to boat/barge berthed within the dock.

**Figure 3-1** provides an illustration of the site layout. The reception building is located at the northern end of the site, with the pross halls being the two square shaped buildings.

**Figure 3-1**
**Site Layout**

The production facilities in buildings and external areas would be established on an impervious surface with separate drainage into tanks for the collection and separation of oil-containing water before discharge. Roads and operating areas for vehicles would be constructed from concrete or asphalt and arranged with drains to oil separators and silt traps.

The product storage tanks for chemical oil would be arranged in fully bunded tank farms with dense coating and the ability to hold at least more than the total tank content. The finished products would be stored after appropriate cooling in three above-ground tanks. The area would include two stations where finished products are transferred from the storage tanks to approved road trucks. The refuelling area would be constructed with impervious surface, fall and bunding to contain any spills.

**Figure 3-2**
**Montages of the Proposed Facility**

Further images of the proposed development are included in **Appendix 02**.

## 3.3 Process

The plant is designed to process around 110,000 tonnes of plastic waste per year. Of this, it is anticipated that following initial screening, 20% to 25% of the feedstock would not be suitable for the process (due to contamination for example) and would be exported to a suitable waste management facility for further treatment. From the 80,000t of plastic processed, the facility would produce in the order 60,000 tonnes of synthetic hydrocarbons per year.

The process is described below:

- *Reception, separation & sorting of received plastic waste*.
  The plastic waste would be delivered to the facility HGVs. Unloading would be carried out in the enclosed reception hall to prevent the spread of loose plastic waste to the surrounding areas.

  Unwanted materials which would impair the pyrolysis process and subsequent refining process, such as metals, PVC and non-plastic parts would be removed from the feedstock. The sorting includes the following processes:

  a) The bale in which the plastic waste would be split, and the plastic pieces loosened.
  b) A mechanical drum separator would divide the plastic waste into three size fractions.
  c) Any small metal fractions in the plastic waste would be removed using a mechanical and a magnetic separation.
  d) The plastic waste would then be sorted by NIR separation (Near-Infra Red spectroscopy) into fractions suitable for pyrolysis.
  e) The residual fraction consisting of unwanted plastic fractions, wood, paper, ferrous and non-ferrous metals, is itself sorted and stored in containers within the building pending removal to appropriate waste treatment facilities.

- *Pre-Treatment for pyrolysis*
  The coarsely divided usable plastic would be dried and quality checked. After this pre-treatment, the feedstock is reduced to a uniform size via electrically powered "shredders". The prepared plastic is stored in indoor silos until it is needed in the pyrolysis process.

- *Pyrolysis, cleaning and upgrading (Catalysis)*
  a) *Pyrolysis:* pre-treated plastic waste is heated and melted, transforming the solid plastic material into pyrolysis oils in the gas phase. Plastic meltdown is a thermochemical process in which plastic waste is heated and evaporated without oxygen (pyrolysis). In this process step, only a limited chemical conversion of the plastic occurs, as no other substances are added. The pyrolysis process splits the feedstock into two streams: ash and pyrolysis gas. The ash-fraction (carbon black) is diverted in a sealed system to storage, where it is stored in sealed containers.
  b) *Cleaning and upgrading (Catalysis):* The pyrolysis gas leaving the pyrolysis reactors is filtered for dust and upgraded through the catalysis reactors.
  c) *Cooling and condensation*. From the catalysis reactor, the upgraded pyrolysis gas is treated though several steps to separate Non-Condensable Gas, water and oil fractions. Water is treated to meet local requirements for disposal to public wastewater system. The oil fraction is stored in holding tanks before blending and distillation.
  d) Non-Condensable Gas is cleaned in a gas 'scrubber' and stored in tanks for later use as a primary fuel to heat the pyrolysis reactors. Natural gas would be provided to the facility and available as a secondary fuel if required.

- Distillation: Pyrolysis oil within the holding tanks is analysed frequently and blended before being directed to the distillation plant for distillation into product fractions.

- *Final products*: The final products are stored after distillation in outdoor separate above-ground tanks before further transport to customers. The dispatch of finished products is handled at an outdoor refuelling site.

### 3.3.1 Operating Hours

The plant is expected to be in operation 24 hours a day 7 days a week (i.e. including Saturdays and Sundays and public holidays). Notwithstanding this, there would be periods of programmed maintenance twice a year. In this respect, the plant is anticipated to be operated in excess of an annual availability of 8,000 hours.

However, HGVs arriving with plastic waste and picking up finished products would primarily take place during weekdays between 0700 hours and 1800 hours.

# 4.0 STATUTORY BASIS FOR EIA

## 4.1 Legislative Basis

The EIA Regulations provide the basis for determining whether a development would constitute an EIA development. The 2017 Regulations, which updated the 2011 version of the EIA Regulations, came into force on 16 May 2017. The EIA Regulations specify the types of development for which an EIA is mandatory (Schedule 1 Projects) and those categories of development where an EIA may be required (Schedule 2 Projects). With respect to screening, the 2017 Regulations are broadly similar to the 2011 Regulations except that there is more detailed guidance as to the type of information that should be submitted to the local planning authority when requesting a screening opinion.

The proposed application would be for the construction and operation of a plant to recover synthetic hydrocarbons from waste plastics. Whilst the process would involve heating the waste plastic within a pyrolysis plant **it is not** considered to be an incineration process (i.e. combustion of waste to generate energy) which would involve much higher temperatures.

Schedule 2 of the EIA Regulations. For installations for the disposal of waste the criteria for "*Schedule 2 development*" is noted as being cases where:

> "*ii) the area of the development exceeds 0.5 hectare; or*
>
> *(iii) the installation is to be sited within 100 metres of any controlled waters*."

The facility is not technically a disposal operation as it would recover value from the waste plastic; however, it should be noted that the descriptions of the types of development need to be interpreted widely[4] and this category is often used for waste recycling/recovery facilities.

The proposed site is not located within a 'sensitive area' as defined by the EIA Regulations; the nearest such designations are the Northumbria Coast Ramsar and Special Protection Area; Durham Coast Special Area of Conservation; and Durham Cost Site of Special Scientific Interest.

When screening Schedule 2 projects the LPA must, in accordance with Regulation 5(4), take account of the selection criteria in Schedule 3 of the EIA Regulations. Not all of the criteria will be relevant in every case. Each case should be considered on its own merits in a balanced way.

The government advises in the PPG that only a very small proportion of Schedule 2 development will require an assessment. It further advises that, while it is not possible to formulate criteria or thresholds which will provide a universal test of whether or not an assessment is required, it is possible to offer a broad indication of the type or scale of development which is likely to require an assessment. It is also possible to provide an indication of the sort of development for which an assessment is unlikely to be necessary. In respect of 'waste disposal', government guidance[5] indicates that EIA is likely to be needed for '*installations (including landfill sites) for the deposit, recovery and/or disposal of household, industrial and/or commercial wastes where new capacity is created to hold more than 50,000 tonnes per year, or to hold waste on a site of 10 hectares or more. Sites taking smaller quantities of these wastes, sites seeking only to accept inert wastes (demolition rubble etc.) or Civic Amenity sites, are unlikely to require Environmental Impact Assessment*'. The guidance then adds that key issues to consider are 'Scale of the development and the nature of the potential impact in terms of discharges, emissions or odour'. In the case of the proposed development, the proposed plant would process up to 80,000tpa of waste plastics, so slightly above the indicative threshold, but the site area is around 4.9ha, and so smaller than the 10ha referred to in the guidance.

[4] C-72/95 Kraaijeveld and others v Gedeputeerde staten van zuid-Holland ([1997] All ER (EC) 134) (colloquially known as the "Dutch Dykes" case)
[5] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/574479/Indicative_Screening.pdf

The guidance also clearly states:

*"it should not be presumed that developments above the indicative thresholds should always be subject to assessment, or those falling below these thresholds could never give rise to significant effects, especially where the development is in an environmentally sensitive location. Each development will need to be considered on its merits."*

The PPG adds that, in general, the more environmentally sensitive the location, the lower the threshold will be at which significant effects are likely, and an assessment is more likely to be required if the project affects the features for which the sensitive area was designated. However, it does not follow that every Schedule 2 development in close proximity to such sensitive areas (such as Natura 2000 sites) will automatically require an assessment. The PPG goes on to advise that: '*It will be necessary to judge whether the likely effects on the environment of that particular development will be significant in that particular location*'. This is illustrated in the flow diagram within the PPG.

The following sections explain the setting of the site and its relationship with the sensitive areas and considers the likely effects of the proposed development in the context of the nature of the development and the planning controls (which could be imposed on the grant of planning permission).

## 4.2 Planning and Pollution Control

Government advice on waste planning makes it clear that it is important to avoid unnecessary or confusing duplication. For example, Paragraph 183 of the National Planning Policy Framework states that *The focus of planning policies and decisions should be on whether proposed development is an acceptable use of land, rather than the control of processes or emissions (where these are subject to separate pollution control regimes). Planning decisions should assume that these regimes will operate effectively. Equally, where a planning decision has been made on a particular development, the planning issues should not be revisited through the permitting regimes operated by pollution control authorities."*

# 5.0 CONSIDERATION OF SCREENING CRITERIA

The nature of the development means that it could fall within the scope of Schedule 2 and thus the proposed development needs to be screened to establish whether it falls within the scope of the EIA Regulations. As described in Section 2 above, the issue turns on the likelihood of 'significant environmental effects' occurring.

To assist with the consideration of whether any significant environmental effects would arise as a result of the prospective development, Schedule 3 to the EIA Regulations sets out the criteria that should be addressed. These criteria are considered below under the following headings:

- Characteristics of development;
- Location of development; and
- Types and characteristics of potential impact.

For ease of reference a copy of Schedule 3 is included in **Appendix 01**.

## 5.1 Consideration under Schedule 3

### 5.1.1 Characteristics of development

This requires the characteristics of the development to be considered, as set out below.

a) Size and design of the whole development

The proposed development is relatively small in scale: the land take is around 5.6ha, which is below the 10ha threshold in the EIA Regulations. Notwithstanding this around 22,800m$^2$ constitutes the proposed process and treatment buildings. In addition to this there would be three storage tanks (being up to 11m in diameter) for product storage and other items of external plant (such as the catalysis plant, flue, gas flare and distillation towers). This must be viewed within the wider context of the surrounding port area: the main part of the port around the Hudson and Hendon Docks measures around 64ha (including the water areas but excluding the railway sidings and water treatment works) within which are a range of buildings (mostly portal framed) and storage tanks/silos. There are also areas of open ground associated with dock berths, storage areas or undeveloped plots (such as the proposed development site). The proposals would not lead to an increase in this area, but would change the appearance of around 8% of it. As noted, there are already a small number of large industrial buildings located within the port, being of comparable size to the building s proposed. Moreover, the inclusion of storage tanks and flue stack(s) would also be similar in character to other developments within the port, notably the Tradebe Solvents plant, a roadstone coating plant. Allied to this a planning permission has been granted for the "*Construction of 8 storage tanks in a bunded enclosure, office facilities and other ancillary structures*"[6] and a development is being proposed by WasteFront AS (request for an EIA screening opinion submitted) for a facility to treat waste tyres. Again, the proposed development is similar in character to these developments and so would help to reinforce the redevelopment of the Port of Sunderland.

b) Cumulation with other existing development and/or approved development

There would be little, if any cumulative impacts in relation to other development within or surrounding the port. The proposed development site has been previously developed for industrial uses associated with the port; industrial buildings have been demolished and the site levelled for development. The size of the port is such that it can accommodate the proposed development and the separation distance between the proposed

[6] Planning Permission ref. 19/01334/FU4 dated 7 November 2019.

development site and the nearest sensitive receptors (see Section 2 above) is such that it is considered that there would not be a likelihood of significant effect, either individually or cumulatively.

As noted above, planning permission has been granted on land adjacent to Youngs Quay (being adjacent to the proposed development site) for the erection of storage silos. To the south of the Northumbrian Roads plant, a development is being promoted for a facility to process waste tyres which would also involve pyrolysis and distillation (and so similar in character to the development being proposed by Quantafuel). In view of the nature of the development proposals, coupled with existing and proposed developments, it is not considered that the proposed scheme would give rise to any significant cumulative effects that would necessitate examination by EIA.

It should also be noted that the nature of the proposed development, like many industrial and waste management developments, would require an Environmental Permit in addition to planning permission. As part of the permit process consideration would be given to emissions and the potential effects upon the environment.

Notwithstanding the foregoing, it is noted that the Tradebe site located within the southern part of the port (some 500m from the EEZ Plot, which would be the main area for development) is an Upper Tier COMAH Establishment. This does mean that there may be the potential for cumulative effects (in terms of risk management) but this would be covered by Health and Safety legislation, requiring a separate application (with supporting assessment) to the HSE.

c) Use of natural resources, in particular land, soil, water and biodiversity

The proposals would not use a substantial amount of, or significantly affect, natural resources. The proposals involve the development of previously development ('brownfield') land and do not require any greenfield land. This site currently comprises bare plots of land that has largely been cleared of previous development; the EEZ Plot has recently been redeveloped to create a suitable development plot. As such, there would be no loss of soils or habitat. There are no water bodies within the site or important water resources beneath the site.

Suitable mitigation measures would be designed into the scheme to protect water resources from any pollution.

d) Production of waste

The proposed development is aimed at recovering value from waste plastics by producing various grades of synthetic hydrocarbons. The process would produce a small amount of waste materials from the initial pre-treatment process (such as metals); these would be separately collected and transferred to suitable waste treatment facilities.

e) Pollution and nuisance

The nature of the development is such that it would generate noise and gaseous emissions from the processes. However, given the separation distance between the proposed development and the nearest receptors, the effects are not considered to be significant. As noted above, the operation would regulated through both a planning permission and Environmental Permit, both containing conditions setting limits on emissions. Whilst it would be necessary to substantiate the applications with bespoke assessments (including quantitative modelling) this does not mean that there is a likelihood of a significant effect arising.

Suitable mitigation would be designed into the development, including carrying out operations within the confines of buildings and suitable air pollution treatment equipment. Through the use of suitable mitigation measures (see section 5.2 below), coupled with the imposition of suitable planning conditions, pollution and nuisance at nearby receptors can be minimised.

f) Risk of major accidents and/or disasters relevant to the development (including those caused by climate change)

As noted above, there may be the potential for cumulative effects (in terms of risk management) but this would be covered by Health and Safety legislation, requiring a separate application (with supporting assessment) to the HSE.

Whilst located close to the North Sea, suitable sea defences are in place (which are in the process of being refurbished). As the proposed site area exceeds 1ha, and the site is located in Flood Zone 3, then a Flood Risk Assessment (FRA) would be required to support the planning application irrespective of whether the development is considered to be EIA development, or not. The FRA would consider the potential for flooding taking into account climate change.

g) Risks to human health (e.g. due to water contamination or air pollution)

Potential risks to human health through ground and surface water pathways or air pollution would fully assessed through the Environmental Permit application; suitable assessments would also be provided as part of the planning application irrespective of whether the development is EIA development. Such assessments would demonstrate that applicable limits can be met and mitigation designed into the scheme. For example, in relation to surface water, suitable mitigation in the form of a drainage scheme would be provided, including carrying out of operations within buildings; storage tanks being within bunded enclosures and sited on impervious hardstandings; and the use of hardstandings to site other plant on.

### 5.1.2 Location of development

This requires consideration of the environmental sensitivity of geographical areas likely to be affected by development.

a) Existing and approved land use

As noted above, all land directly affected by the proposed development has historically been in 'industrial' use associated with the port, be it the EEZ Plot has been cleared of any previous development to create a suitable development plot. It is also allocated in the Development Plan for industrial use associated with the port.

The proposed development site is located within the curtilage of the port, which as noted above covers a substantial area of land. It is bordered to the north by two large warehouse buildings and hardstanding, along with a dry dock. Further to the north is the mouth of the River Wear. To the south lies the Northumbrian Roads premises, beyond which is a further development plot and the Tradebe Solvents facility. To the west lies Odin Shipping Limited, a freight cargo facility, and the main north-south access road within the docks, beyond which is a narrow parcel of land forming a quayside to the Hudson Dock. Further to the west lies the enclosed area of the docks, and on their western side the former Hendon Railway sidings (for which a planning application has been submitted to create a further development plot). To the east of the proposed site is the North Sea and associated sea defences.

The proposed development is therefore appropriate for the area in terms of land use. As previously noted, this is recognised in the Development Plan for the area, with Policy SS5 allocating the Port as being suitable for a range of industrial uses.

b) Relative abundance, availability, quality and regenerative capacity of natural resources in the area

The development would not materially affect any natural resource or statutorily designated area. It is acknowledged that Natura 2000 sites and SSSI's are located around 1.7km to the north and 2.5km to the south

of the proposed development site, but the separation distance is such that no significant effects would be predicted.

c) Absorption capacity of the natural environment

The proposals would not affect any wetlands; coastal zones; mountains or forests; nature reserves and parks; statutorily protected cultural, ecological or landscape sites, being specifically referred to in Schedule 3. The site is located within an established port, significantly separated from residential areas on the eastern side of Sunderland and so is not considered to be densely populated. Due to the small scale of the proposed development it is considered that the local environment could readily absorb the scheme. As stated above, the development would occupy around 5.6ha of land which has historically been in industrial use and is also allocated for industrial use. In the immediate vicinity of the site other land is also in industrial use, some of which is occupied by substantial buildings. Further to the west of the port are other pockets of industrial development, generally being located to the west of the railway line and east of the A1018 (Commercial Road). Allied to this, the application site is over 300m from the nearest residential properties, with other industrial developments located closer. The proposed development would generate a number of HGV movements associated with vehicles delivering waste. However, the proposed development site, roads within the port and surrounding network all currently experience HGV traffic. Finally, the scale of the development must be viewed in the context of the entire port area.

Due to the limited scale of the development, coupled with its location within the port, it is concluded that the local environment could readily absorb the proposed development.

### 5.1.3 Types and characteristics of the potential impacts

This requires the likely significant effects of the development on the environment to be considered.

In the light of the above consideration of both the characteristics of the effects and the sensitivity of the location, it may be concluded that the potential impacts on the environment are not significant in respect of their extent, magnitude, complexity or duration.

These points would be supported by the information set out in a supporting statement accompanying the planning application.

## 5.2 Consideration of Potential Environmental Effects

In relation to the criteria contained in Schedule 3 EIA Regulations, we would wish to highlight the following points:

a) Air Quality

The nearest residential receptors to the proposed development site are located on Barack Street/Marine Square, approximately 325m to the west. This residential area lies between High Street to the north-west and Prospect Row south-east and extends up to Hartley Street to the south-west. Properties fronting the Quadrant (the former alms-houses) lie around 579m from the proposed site. Residential developments on the north side of the River Wear (in the vicinity of Barbary Drive) are around 540m from the northern site boundary.

The separation distance between the development site and the receptors identified above is such that effects from dust (during construction) should be minimal; in this respect guidance indicates that dust particles tend to be dispersed within 200m of the dust generating operations. Moreover, in considering the need for more detailed assessment, a screening distance of 400m is often adopted.

In terms of operational effects, the enclosed nature of the process, plus the heating of the waste plastic (within sealed vessels) minimises the effects of odour. The process would result in emissions to air via a flue

stack and these would be subject to limits set in an Environment Permit. In view of this, and given the presence of Natura 2000 sites, the planning application (along with the permit application) would be supported by dispersion modelling and this would be undertaken irrespective of whether the development is considered to be EIA Development or not. The recommended scope of the air quality assessment would comprise:

- baseline evaluation – review of existing air quality in the local area;
- construction phase assessment – assessment of potential air quality impacts associated with the construction phase of the proposed scheme (construction dust and vehicle emissions);
- traffic emissions screening assessment – screening of potential air quality impacts associated with the operational phase vehicle movements;
- pyrolysis flue gas emissions assessment – modelling of potential impacts on air quality against standards for the protection of health and ecosystems; and
- fugitive emissions assessment – assessment of potential odour emissions during the operational phase.

As previously mentioned in this document, in addition to a planning permission, the site would be regulated by an Environmental Permit which also addresses air quality. In this context it is important to note Government's guidance that regulatory regimes should not duplicate each other.

b) Ecology

The site comprises a bare development plot with no vegetation. As such the development would not result in the loss of any valuable habitat, or threaten protected species. Through the air quality assessment noted above, consideration would be given to aerial dispersion within designated areas.

c) Landscape and Visual

The site is not located within a sensitive area with regard to landscape, with the nearest designation being at some distance to the west of the site (Pennines AONB).

The proposed development would introduce new buildings and structures (buildings up to 20m in height and flue stacks/distillation tower between 21m and 30m in height) on the site; however, they would be set within an industrial context, considering the existing developments within the port. Overall the site and surrounding area is industrial in nature, and so no significant landscape effects are predicted. There are also few sensitive viewpoints in the area; potential visual receptors include users of the England Coast Path which extends north-south at approximately 0.45km to the west of the proposed site around The Quadrant and near to Town Moor and Trafalgar Square, where there are several listed buildings. Views from these areas would be across the railway sidings and port area. However, despite a slight elevational advantage, views of the site are likely to be screened by the intervening ground[7].

d) Noise

As for air quality considered above, the nearest receptors are over 325m from the proposed development site. Between the site and these receptors is an area of established industrial development which provides an acoustic barrier to the site.

To demonstrate that the proposed development would not have an adverse effect on local amenity a noise assessment would be undertaken to support the planning application. This would use background noise levels measured at nearby receptors as part of a noise survey and then compare the predicted noise levels against the background levels, following the guidance in BS 4142. This type of assessment is typically required

[7] Based on Google Street View

for a range of industrial developments irrespective of whether the development is falls within the scope of Schedule 2 of the EIA Regulations. Based on the assessment, planning conditions can be imposed to limit noise emissions at nearby receptors, ensuring that local amenity is not adversely affected.

As such the proposals would not give rise to a significant effect on the noise environment that could not be mitigated.

e) Traffic and Transport

Access into the proposed site would be off the main port access road. This joins the public highway at an established access point off the B1293 High Street East/Barrack Street. This road has good alignment in the vicinity of the site entrance being straight and level. It is also subject to a 30mph speed limit.

The proposed development would generate around 54 HGV movements (27 loads) per day in relation to the import of waste plastic, which equates to around 4 o 5 per hour. To minimise HGV movements, exports of unsuitable feedstock would be loaded onto lorries used for importing the feedstock (i.e. akin to a 'back haul' basis). The final products would be exported by boat to customers in Holland and Germany which would eliminate the need to use HGVs.

Review of the Crashmap website shows that for the last five year period there have been no accidents at the port entrance or along High Street East; three accidents (2 serious and 1 slight) are recorded at the roundabout junction with the A1018. None of these accidents involved a goods vehicle. This is not considered to be a particularly high level of accidents or out of context.

In view of the nature of the proposals it is anticipated that a planning application would need to be supported by a Transport Statement. This in itself does not indicate that significant effects would arise meaning that an EIA would be required.

f) Hydrogeology and hydrology

In terms of potential risk to the water environment, suitable mitigation would be designed into the proposed development. This would include carrying out of operations within buildings; storage tanks being within bunded enclosures and sited on impervious hardstandings; use of hardstandings to site other plant on; areas trafficked by vehicles would be surfaced, and a one way circulation system operated for movement of HGVs around the site. This would significantly limit the potential for any significant effect to occur.

In the context of off-site flood risk, the site would be designed to limit this, with a suitable surface water management scheme designed to attenuate surface water. This would be demonstrated through a Flood Risk Assessment, which would be a mandatory requirement for the planning application irrespective of whether the development falls within Schedule 2 of the EIA Regulations.

In common with a large part of the port, the proposed development site is located within Flood Zone 3. As such, a FRA would need to be undertaken irrespective of whether the development is considered to be EIA development.

As such no significant effect is anticipated as a result of the proposals.

g) Archaeology and Cultural Heritage

As previously developed land there is little likelihood of any buried archaeology surviving. Historic maps show the area as being part of the dock, with rail infrastructure and buildings present. Whilst some of these features may still exist below ground, their significance is not considered to be that high and suitable mitigation in the form of an archaeological watching brief during construction (particularly during excavation works) would provide suitable mitigation. In this respect it is noted that an Historic Environment Assessment[8]

[8] Port of Sunderland Enterprise Zone – East Shore Historic Environment Assessment. Mott McDonald August 2019

was undertaken for planning application 19/02155/LP3 along with the submission of an archaeological watching brief[9]; both of these reports relate to the EEZ Plot and thus the effects on archaeology are understood for the majority of the proposed development site. Should any further archaeological work be required then this can be secured through a planning condition.

As noted from Section 2, there is one scheduled monument and several listed buildings nearby. For the scheduled monument, there is no intervisibility between the proposed development site and the monument due to intervening vegetation and buildings (notably associated with University of Sunderland). In view of this it is considered that there is little, if any chance of the proposed development affecting the setting of the monument.

There are a number of listed buildings within the port that are associated with the 19th century origins and history of the port; the closet are the former Dock Office and Gladstone Bridge which are sited a short distance north of the proposed development site. Whilst the proposed development is substantial in size and will inevitably have an impact on the setting on the former dock office and bridge, it is considered that they are reasonably typical of the type of large structures that have served port activity and established the industrial character of the port throughout its evolution since the 19th century. Considering the other listed buildings, they are at greater distance from the proposed development site and as noted above for Landscape and Visual, unlikely to have much in the way of visual connectivity.

### 5.2.1 Conclusion

In conclusion, having considered whether the proposed development would give rise to any potentially significant effects in relation to the characteristics of development, location of development, or types and characteristics of potential impact, we conclude that the proposed development does not meet the criteria for development requiring EIA.

[9] East Shore - Enabling Works Sunderland Tyne & Wear archaeological watching brief. Durham University Archaeological Services. September 2020

# 6.0 CLOSURE

Notwithstanding our view that an Environmental Impact Assessment is not necessary we would, on behalf of our client, Quantafuel Sunderland Limited, request a formal Screening Opinion under paragraph 6 of the EIA Regulations to determine whether or not the proposed planning application would need to be accompanied by an Environmental Statement.

# APPENDIX 01

| | |
|---|---|
| (c) Development of a description mentioned in Schedule 1 undertaken exclusively or mainly for the development and testing of new methods or products and not used for more than two years. | All development. |

# SCHEDULE 3

Regulation 5(4)

# SELECTION CRITERIA FOR SCREENING SCHEDULE 2 DEVELOPMENT

**Characteristics of development**

**1.** The characteristics of development must be considered with particular regard to—

(a) the size and design of the whole development;

(b) cumulation with other existing development and/or approved development;

(c) the use of natural resources, in particular land, soil, water and biodiversity;

(d) the production of waste;

(e) pollution and nuisances;

(f) the risk of major accidents and/or disasters relevant to the development concerned, including those caused by climate change, in accordance with scientific knowledge;

(g) the risks to human health (for example, due to water contamination or air pollution).

**Location of development**

**2.**—(1) The environmental sensitivity of geographical areas likely to be affected by development must be considered, with particular regard, to—

(a) the existing and approved land use;

(b) the relative abundance, availability, quality and regenerative capacity of natural resources (including soil, land, water and biodiversity) in the area and its underground;

(c) the absorption capacity of the natural environment, paying particular attention to the following areas—

(i) wetlands, riparian areas, river mouths;

(ii) coastal zones and the marine environment;

(iii) mountain and forest areas;

(iv) nature reserves and parks;

(v) European sites and other areas classified or protected under national legislation;

(vi) areas in which there has already been a failure to meet the environmental quality standards, laid down in Union legislation and relevant to the project, or in which it is considered that there is such a failure;

(vii) densely populated areas;

(viii) landscapes and sites of historical, cultural or archaeological significance.

**Types and characteristics of the potential impact**

**3.** The likely significant effects of the development on the environment must be considered in relation to criteria set out in paragraphs 1 and 2 above, with regard to the impact of the development on the factors specified in regulation 4(2), taking into account—

(a) the magnitude and spatial extent of the impact (for example geographical area and size of the population likely to be affected);

(b) the nature of the impact;

(c) the transboundary nature of the impact;

(d) the intensity and complexity of the impact;

(e) the probability of the impact;

(f) the expected onset, duration, frequency and reversibility of the impact;

(g) the cumulation of the impact with the impact of other existing and/or approved development;

(h) the possibility of effectively reducing the impact.

# SCHEDULE 4

Regulation 18(3)

## INFORMATION FOR INCLUSION IN ENVIRONMENTAL STATEMENTS

**1.** A description of the development, including in particular:

(a) a description of the location of the development;

(b) a description of the physical characteristics of the whole development, including, where relevant, requisite demolition works, and the land-use requirements during the construction and operational phases;

(c) a description of the main characteristics of the operational phase of the development (in particular any production process), for instance, energy demand and energy used, nature and quantity of the materials and natural resources (including water, land, soil and biodiversity) used;

(d) an estimate, by type and quantity, of expected residues and emissions (such as water, air, soil and subsoil pollution, noise, vibration, light, heat, radiation and quantities and types of waste produced during the construction and operation phases.

**2.** A description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects.

**3.** A description of the relevant aspects of the current state of the environment (baseline scenario) and an outline of the likely evolution thereof without implementation of the development as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge.

**4.** A description of the factors specified in regulation 4(2) likely to be significantly affected by the development: population, human health, biodiversity (for example fauna and flora), land (for example land take), soil (for example organic matter, erosion, compaction, sealing), water (for example hydromorphological changes, quantity and quality), air, climate (for example greenhouse gas emissions, impacts relevant to adaptation), material assets, cultural heritage, including architectural and archaeological aspects, and landscape.

**5.** A description of the likely significant effects of the development on the environment resulting from, inter alia:

(a) the construction and existence of the development, including, where relevant, demolition works;

(b) the use of natural resources, in particular land, soil, water and biodiversity, considering as far as possible the sustainable availability of these resources;

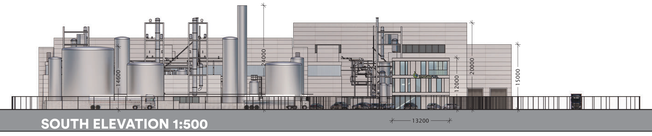
# APPENDIX 02

OVERVIEW - NORTHWEST

SITE PLAN 1:4000


OVERVIEW - SOUTHWEST

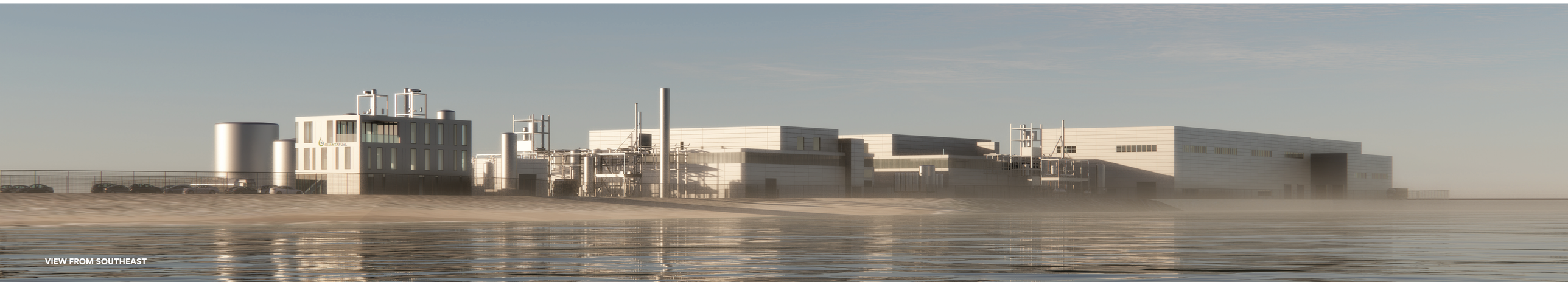

NORTH ELEVATION 1:500




SOUTH ELEVATION 1:500

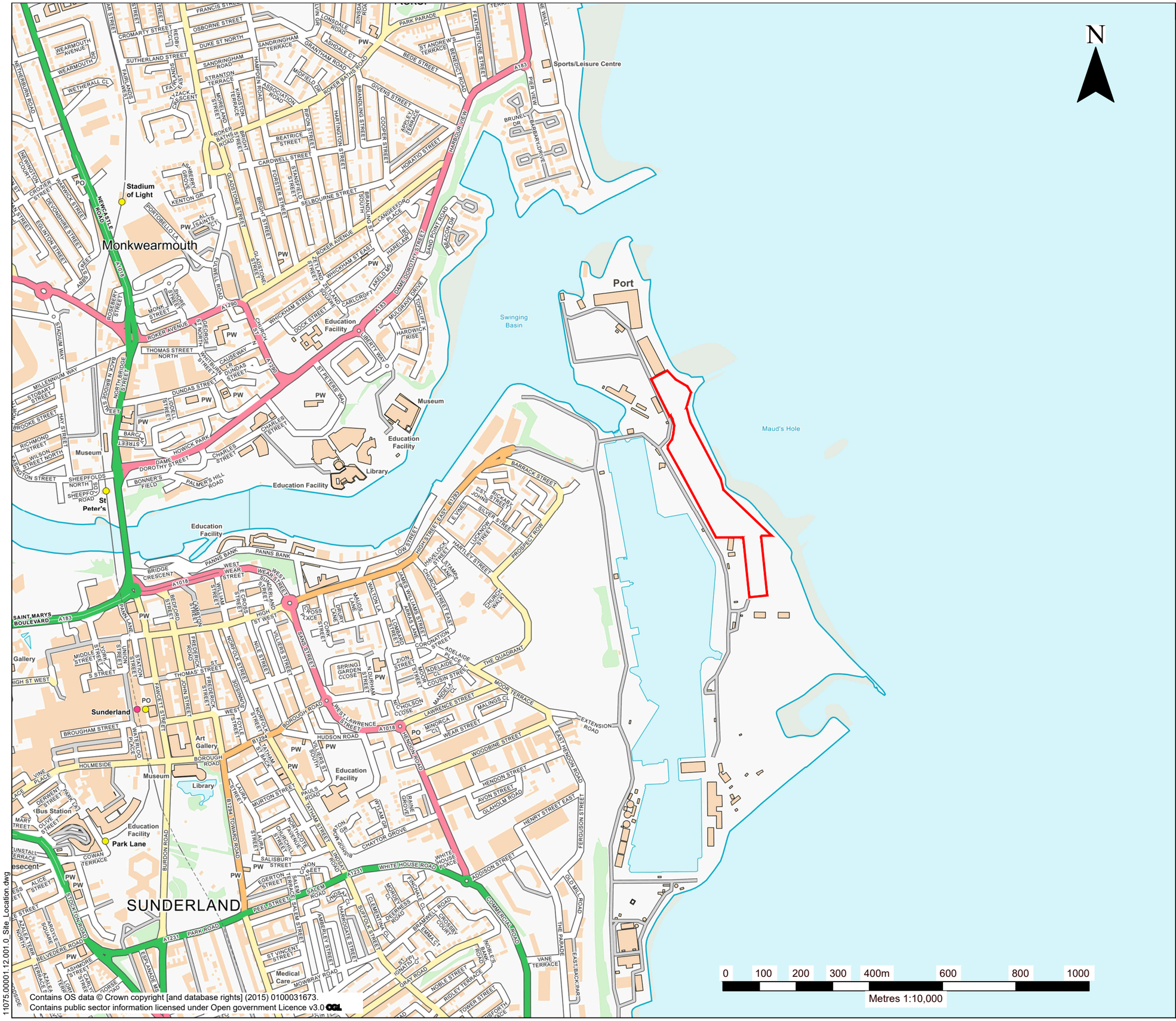

EAST ELEVATION 1:500


WEST ELEVATION 1:500




VIEW FROM SOUTHEAST

# DRAWINGS




LEGEND

SITE BOUNDARY

| 0 | IG | CL | 07/21 | |
|---|---|---|---|---|
| Revision | By | Chk'd By | Date | Comments |

QUANTAFUEL

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Site
PORT OF SUNDERLAND

Project
PROPOSED WASTE PLASTIC TREATMENT FACILITY

Drawing Title
**SITE LOCATION PLAN**

Scale
1:10,000 @ A3

Date
JULY 2021

Drawing Number
**DRAWING 1**

Revision
**0**

11075.00001.12.001.0_Site_Location.dwg

N

Warehouse 7

Warehouse 8

Greenwells Quay Hardstanding Area

Half Tide Basin East Wall

Wear Dock Yard

Gatehouse

Transit Shed Quay

Youngs Quay

Cross Quay

East Quay North - Hudson Dock

East Quay South - Hudson Dock

Jubilee Quay

Loco Shed

HUDSON DOCK

QUANTAFUEL SUNDERLAND LTD

Site Area:
~48500m²
~12ac

Aggregate Stock Piles

CAR PARKING

ROAD

CRANE PAD

FENCE

Gravel Area

Tarmac road

Gravel strip

Sand

Maud's Hole

New South Pier

Mean High & Mean Low Water

Mean High and Mean Low Water

Mean Low Water

BM 4.82m

Boulders

Shingle

South Rocks

MLW

MHW

Groyne

Sloping masonry

Shingle and Boulders

Mean High Water

Mean Low Water

Ranks

NOTES

1. INFORMATION SHOWN IS TAKEN REPRODUCED FROM QUANTAFUEL SUNDERLAND LIMITED DRAWING, REFERENCE 37110-C-020; DATED JUNE 2021.

LEGEND

SITE BOUNDARY

0 10 20 30 40m 60 80 100

Metres 1:1000

| Revision | By | Chk'd By | Date | Comments |
|---|---|---|---|---|
| 0 | IG | CL | 07/21 | |

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Site
PORT OF SUNDERLAND

Project
PROPOSED WASTE PLASTIC TREATMENT FACILITY

Drawing Title
**SITE PLAN**

Scale
1:1000 @ A0

Date
JULY 2021

Drawing Number
**DRAWING 2**

Revision
**0**

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