Shadow Habitat Regulations Assessment

Tees Valley Bottom Ash Facility
Grangetown Prairie, Dorman Point
Prepared on behalf of Viridor Waste Limited
March 2023

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SHADOW HABITAT REGULATIONS ASSESSMENT
VIRIDOR WASTE LIMITED
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1.0 Introduction

1.1 This report has been prepared in support of an outline planning application seeking approval for the construction of a Bottom Ash (BA) processing facility at the Grangetown Prairie Land site, east of John Boyle Road and west of Tees Dock Road, Grangetown. Due to the proximity of the application site to the Teesmouth and Cleveland Coast Special Protection Area (SPA) and Ramsar a Habitat Regulations Assessment has been prepared to support the application.

1.2 The application site location lies within 2km of the Teesmouth and Cleveland Coast SPA and Ramsar. This is a statutory designated site that forms part of the National Site Network (NSN). The location of the proposed development site relative to the designated site is shown in figure 1.

1.3 NSN sites receive statutory protection under the Conservation of Habitats and Species 2017 (as amended), (the 'Habitats Regulations'). The Habitats Regulations afford a high level of protection to sites supporting habitats or rare species (other than birds) considered scarce or vulnerable at a European community level (SACs) and areas that hold significant populations of certain bird species (SPAs).

1.4 Under the Habitats Regulations, Redcar and Cleveland Borough Council (RCBC) is a competent authority, responsible for ensuring that development management decisions do not adversely affect the integrity of sites within the NSN. This document provides information for the Habitats Regulations Screening Assessment that RCBC will need to undertake as part of the process of determining the planning application. This document screens the proposed development for likely significant effects on the NSN site both alone, and in combination with other plans and projects.

2.0 Legislative context and tests of the Habitat Regulations

2.1 Special Protection Areas (SPAs) and Special Areas of Conservation (SACs) receive statutory protection under the Habitats Regulations. The most recent amendments to this legislation reflect the changes set out in the Conservation of Habitats and Species Amendment (EU Exit) Regulations 2019. The 2019 regulations detail the amendments required to the 2017 regulations following the end of the transition period in December 2020. The Habitats Regulations afford a high level of protection to sites classified as areas that hold significant populations of certain bird species (SPAs). They also afford the same level of high protection to tracts of land supporting habitats or rare species (other than birds) considered scarce or vulnerable at a European level (SACs).

2.2 SACs and SPAs form part of a network of nature protection areas within the UK known as the National Site Network (NSN). Prior to the UK leaving the European Union the NSN were known as Natura 2000 sites, and are protected in the determination of a planning application. Ramsar sites are designated as wetlands of international importance and are afforded similar legislative protection to SPAs and SACs. Government has issued policy statements relating to the special status of Ramsar sites. This extends the same protection to Ramsar sites as that afforded to SPAs and SACs through the Habitat Regulations.

2.3 Under Regulation 63 of the Habitats Regulations the competent authority is responsible for assessing whether land use plans or proposed developments could adversely affect a site(s) within the NSN. This requires a process known as a Habitat Regulations Assessment (HRA) encompassing two tests required under Regulation 63(1) of the Habitats Regulations.

2.4 **Test 1:** having ascertained that the plan is not directly connected to, or necessary for site management for nature conservation, the first test of the HRA, commonly referred to as a screening test, considers whether or not a plan or project is likely to have a significant effect on a site either alone or in combination with other plans or projects. A significant effect is any effect that would undermine the conservation objectives for the respective NSN site and may include physical loss and/or damage of a habitat, disturbance

effects, and changes to water availability, deposition of contaminants through changes in air quality etc.

2.5 **Test 2:** The second test of the HRA is relevant to those plans or projects that are screened as likely to have a significant effect alone or in combination with other plans or projects, and requires an appropriate assessment. The role of the appropriate assessment is to consider the implications of the plan or project for the conservation objectives of the NSN sites in question, and determine whether they will have an adverse effect on the integrity of the site. In carrying out an appropriate assessment, a local authority must have regard to the manner in which the project is proposed to be carried out, or to any conditions or restrictions subject to which it proposes that the consent, permission or other authorisation should be given.

2.6 The European Court Judgment (ECJ) People Over Wind and Sweetman v Coillte Teoranta (C-323/17) altered the process of screening for likely significant effects by overturning the 2008 Hart District Council vs. Secretary of State judgment (2008), known as Dilley Lane. This Dilley Lane judgment stated "*there is no legal requirement that a screening assessment…. must be carried out in the absence of any mitigation measures that form part of that plan or project*."

2.7 The People Over Wind and Sweetman ruling states that "*it is not appropriate, at the screening stage, to take account of measures intended to avoid or reduce the harmful effects of the plan or project on that site"*. This means that mitigation measures must be excluded from assessing whether a project is likely to have a significant effect, either alone or in combination with other plans and projects.

2.8 At the time of writing, it is understood that all courts in the UK, with the exception of the Supreme Court, will continue to be bound by judgements of the Court of Justice of the European Union handed down prior to the 31 December 2020.

2.9 A likely significant effect is any effect that is likely to undermine the site's conservation objectives, in light of the characteristics and specific environmental conditions of the SAC or SPA.

Conservation objectives

2.10 Conservation objectives are identified for all NSN sites and cover all features that qualify the site for classification or designation. The conservation objectives apply under the Habitats Regulations and must be considered during a Habitats Regulation Assessment, including an Appropriate Assessment.

3.0 Description of development

3.1 Bottom Ash (BA) is the burnt-out residue from the combustion process that takes place within an energy recovery facility (ERF). BA is a recyclable non-hazardous waste. The proposed Tees Valley ERF is currently designed to transport the BA off-site where it will be used to make sustainable aggregates suitable for construction projects and road construction. 100% of the bottom ash from the ERF can therefore be used for secondary aggregate production.

3.2 Viridor Waste Limited is now proposing an alternative solution for the Tees Valley ERF BA, where 100% of the BA (approximately 100,000 tonnes per annum (tpa)) is transferred to the BA Facility site immediately adjacent to its eastern boundary and the initial stages of treatment are carried out there. In addition to the 100,000 tpa from the Tees Valley ERF, the proposed new BA Facility would be designed to accommodate up to 80,000 tpa from third party sources.

3.3 The application site covers 4.74ha and is currently being used for stockpiling material removed from the adjacent ERF site. Remediation of the BA Facility site has recently been completed.

3.4 The process will involve the transfer, by covered conveyor, direct access or by road, of the raw BA from the ERF to the raw BA hall at the proposed BA Facility site. BA from third party sites would be delivered to the BA hall by road. A wheel loader will then be used to pick up the raw BA and place it into storage bays for maturation over a 14-56 day period.

3.5 Over the 14-56 day maturation period the pH of the BA drops, as does the moisture content. This enables the screening of the BA to be optimised for metal extraction and separation into fraction sizes to be achieved.

3.6 Screening and sorting of the matured BA then takes place. Following screening and sorting the processed ash is collected by a bottom conveyor and discharged to an BA aggregates (BAA) bay for removal, and either loaded straight into trucks or retained for a short period in the BAA buffer storage area. The BAA storage bay will be designed to accommodate a

buffer in case there is the need to store BAA on site (i.e. if it is not taken off site as fast as it is being produced).

3.7 Dust arising from the process is likely to be limited based on experience of contractors elsewhere. Nevertheless, some dust suppression measures will be employed. Externally, 'dust busters' will be placed at strategic ash handling points to provide dust suppression during loading of materials. A tractor with a water bowser for dust suppression around site, including on roads and stockpiles, will also be employed where necessary.

3.8 For internal dust management, a bespoke dust suppression system will be employed that is likely to comprise of overhead sprays (under ceiling) in areas of potential dust, for example loading of raw BA into the screening systems. However, from experience elsewhere, dust will be limited as the BA is stored internally as moist and is processed while still humid.

3.9 Within the internal BA storage bays there will be drainage channels cut into the floor, with overlay grates where these run below the ash storage that cross the threshold of each end of the storage bays. The captured BA water runoff will be directed to a site surface water capture lagoon. Within this lagoon, the collected water will be stored and any ash within the water will typically rise to the surface and can be skimmed off, filtered and issued into the BA processing plant. The water from the lagoon can be pumped out for use as external dust suppression for the site roadways and BAA storage area if required.

3.10 Should the lagoon approach near capacity then water can be tankered off-site for treatment at a licensed facility. Every two to three years, it may be necessary to empty and dredge out sludge from the lagoon for off-site disposal at a licensed facility.

3.11 Other surface water will be stored on site by means of Sustainable Urban Drainage Systems (SUDS). This stored water will be discharged into the Holme Beck at a controlled rate. The Holme Beck is located approximately 300m west of the site and flows north, discharging into the River Tees.

3.12 The main BA processing building will not exceed 13,000 sqm and maximum building height will be up to 16m. The BA loading and unloading bays will

be enclosed or under cover. The bays will be constructed on a purpose-built impermeable surface with sealed drainage.

3.13 Ancillary buildings and structures may comprise office and welfare accommodation for staff / visitors in the form of portable cabins, together with a weighbridge. A double walled fuel tank for storage of diesel for the wheel loader used on site will be installed and maintained in accordance with strict site rules. A wheel wash will also be provided to clean the wheels and chassis of vehicles leaving the site to prevent material from being tracked off site and onto the local highway network.

3.14 As all BA processing activities will take place within an enclosed building, noise levels will be limited. Mobile plant used on site / externally will have white noise reversing bleepers and all plant and machinery will be fitted with suitable noise reduction measures as necessary.

3.15 The BA Facility site will be operational six days a week, from 06.00 to 18.00 Monday to Saturday, including Bank Holidays. There will also be work on a Sunday in association with maintenance activities.

3.16 The BA Facility will employ approximately eight staff (four per shift and two shifts per day) plus two engineering technicians anticipated in relation to mechanical, electrical, maintenance support and servicing activities.

3.17 Car parking for staff and visitors will be provided on-site. It is anticipated that approximately 20 car parking spaces will be provided, including two electric vehicle charging points, together with two secure cycle racks.

3.18 Site preparation and construction activities are expected to take approximately 35-40 weeks. Construction work audible outside of the site boundary will take place during standard hours, e.g. 07.00 – 18.00 Monday – Saturday with no work on Sundays. Delivery of any oversize plant and equipment, internal fit out, internal works and other non-intrusive works may take place outside of these times. Extraordinary events such as concrete pours may also need to take place outside these hours, as by their nature they need to be continuous.

3.19 Access to / from the BA Facility site will be gained during construction and operation from the new road infrastructure to be provided by STDC between

the site and Eston Road, and from there onto the A66 and the wider network.

3.20 It is anticipated that up to 34 people will be employed on site during construction. All construction staff will park on site, within a temporary construction compound. Traffic movements during the construction period are expected to be an average daily 2-way movements of 40 HGV and light goods vehicles (vans) and 22 car movements during the 30-week construction phase. Up to 88 HGV movements each way per day (i.e. 176 movements in total) are anticipated during the one-week period of peak construction activity.

3.21 During the operation of the proposed BA facility (assuming all 180,000tpa arriving by road) there is predicted to be a net daily increase of 86 HGV movements, 4 van and 14 car movements. These numbers are well below the DMRB screening criteria (1,000 annual average daily traffic (AADT) total vehicles, or 200 AADT HGVs), so the impact of the Proposed Development in-isolation can be screened out. The BA Facility will not operate without the adjacent ERF. The BA Facility may reduce the HGV movements modelled for the removal of BA from the ERF, however, given the final design is yet to be developed, we have considered BA arriving to the BA facility by road for this assessment.

3.22 No modifications or specific measures have been included in the design of the BA facility to reduce impacts on the NSN site. It should be noted that the BA facility will include embedded mitigation measures to reduce the risk of dust emissions. As a result of these embedded measures, the risk of dust emissions reaching the NSN site from the operation of the BA facility is negligible.

4.0 Description of the NSN site

4.1 The following section sets out the location, designation criteria and conservation objectives of the NSN site included in this HRA screening. The location of the NSN site relative to the application site is shown in figure 1. Consideration of the potential for land within or close to the BA Facility site to act as functionally linked land to the SPA site is detailed in section 5.

4.2 Teesmouth and Cleveland Coast SPA lies approximately 1.3km to the north of the application site. The site qualifies under Article 4.1 by regularly supporting more than 1% of the GB breeding populations of the following Annex 1 species:

- Little tern: 81 breeding pairs representing at least 4.3% of the GB breeding population (2010-2014)
- Common tern: 399 breeding pairs representing at least 4% of the GB breeding population (2010-2014)
- Pied avocet: 18 breeding pairs representing at least 1.2% of the GB breeding population (2010-2014)

4.3 The site also regularly supports a passage population of sandwich tern of 1,900 individuals (1988-1992) representing at least 4.3% of the GB breeding population. The most recent average for this species is 149 individuals (2009/10-2013/14).

4.4 The site also regularly supports more than 1% of the GB non-breeding population of the following Annex 1 species:

- Ruff: mean of 19 overwintering individuals (2011/12-2015/16) representing at least 2.4% of the GB wintering population

4.5 The site qualifies under Article 4.2 by regularly supporting more than 1% of the biogeographic populations of two regularly occurring migratory species:

- Red knot: mean of 5,509 overwintering individuals representing at least 1.6% of the NE Canada/Greenland/Iceland/UK population (1991/92-1995/96)

- Common redshank: mean of 1,648 passage individuals representing at least 1.1% of the East Atlantic wintering population (1987-1991)

4.6 The SPA also qualifies under Article 4.3 by regularly supporting a waterbird assemblage of more than 20,000 individuals (site average 26,014 – 2011/12-2015/16) including gadwall, northern shoveler, sanderling, Eurasian wigeon, northern lapwing, herring gull and black-headed gull.

4.7 The SPA also encompasses the Teesmouth and Cleveland Coast Ramsar. The interest features of the Ramsar site are the same as the SPA. Between 2011/12 and 2015/16 the Ramsar site supported an average mean peak of 26,786 individual waterbirds. This includes mute swan and greylag goose, species not included in the SPA total given above.

4.8 The conservation objectives for the Teesmouth and Cleveland Coast SPA have been prepared by Natural England. With regard to the site and the individual species and assemblage of species for which the site has been classified (the 'qualifying features'), and subject to natural change; the conservation objectives aim to ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the aims of the Wild Bird Directive, by maintaining or restoring**:**

- The extent and distribution of the habitats of the qualifying features
- The structure and function of the habitats of the qualifying features
- The supporting processes on which the habitats of the qualifying features rely
- The population of each of the qualifying features
- The distribution of the qualifying features within the site

4.9 The SPA site covers 12,210.62 ha. Copies of the SPA and Ramsar citations are included in Appendix 1.

5.0 Impact Pathways assessment

Impact pathways which may impact on Teesmouth and Cleveland Coast SPA/Ramsar

5.1 The development of the application site may result in the loss of supporting habitat used by birds associated with the Teesmouth and Cleveland Coast SPA/Ramsar. The application site may be used for feeding, breeding or roosting. Previous bird surveys undertaken by INCA as part of the Prairie Site Remediation application recorded herring gull, lapwing, mallard and common shelduck in the area, with herring gull, mallard and common shelduck using ponds across the wider Prairie Site.

5.2 Herring gull, lapwing, mallard and common shelduck will form part of the overall assemblage of the SPA/Ramsar but the numbers recorded were very small. A Phase 1 habitat survey undertaken by Ramboll in February 2022 did not record any ponds within the application site.

5.3 Survey work has not identified any roosts of birds or regular feeding flocks that would indicate that a significant number of SPA/Ramsar birds use this site on a regular basis. The Habitat Regulations Assessment undertaken for the Prairie Site Remediation application (which covers the BA application site) concluded the remediation works would not impact on any of the SPA/Ramsar species.

5.4 This application site does not appear to be functionally linked to the SPA/Ramsar site and the development of the application site is not considered likely to have any adverse impact on the interest features of the Teesmouth and Cleveland Coast SPA/Ramsar.

5.5 Noise created by machinery and vehicles during construction and operation has the potential to disturb birds, causing them to cease feeding or fly away from the source of disturbance. The occurrence of disturbance will depend on the type and nature of the noise, the strength of the noise at the source and the loss in strength of the noise as it spreads out to and reaches a receptor (in this case birds that may be using habitats within the SPA/Ramsar). It is recognised that very loud and short duration noises that mimic gunshot sounds tend to have the greatest potential to cause disturbance to birds, although some birds have been shown to habituate to

similar noises occurring at repeated intervals. The short, sharp precursive noises that can be associated with certain construction methods (e.g. hammering of metal piles) can cause disturbances to birds.

5.6 Such a disturbance event may cause the birds to take flight (either returning to the same location or dispersing), to cease their feeding or roosting activity and to temporarily abandon eggs or chicks, leaving them vulnerable to chilling/predation. Taking flight or ceasing to feed is unlikely to have immediate effects on the bird affected in terms of survival or productivity. Increased disturbance of feeding over an extended period could place individual birds at risk during adverse weather or result in their being weakened prior to important life cycle stages such as migration and breeding season. The result could affect the survival or productivity of that bird and could become significant if a number of birds of a particular population are affected.

5.7 With regard to threshold figures, guidance has been provided within the Waterbird Disturbances Mitigation Toolkit, which has been produced by the Institute of Estuarine & Coastal Studies (IECS) University of Hull in 2013. In summary, the following absolute noise level guidance thresholds are provided in respect to assessing the potential noise impacts on wintering or passage birds:

- Low level noise disturbance – Noise levels of less than 55dB (at bird)
- Moderate noise disturbance – Sudden noise levels of 55-60 dB (at bird) or continuous/repetitive noise levels of 60-72dB (at bird)
- High noise disturbance – Sudden noise levels of over 60 dB (at bird) or continuous/repetitive noise levels of over 72dB (at bird)

5.8 Mudflats, other intertidal substrate and open water is present within the designated sites around 1.5km north of the proposed development. These areas may be used by species such as common redshank, shelduck, cormorant and foraging terns. Known nesting locations for common tern and avocet are considerably further away (over 3km). Current noise modelling indicates that noise levels will not exceed 55dB at the boundary of the SPA/Ramsar.

5.9 The distance between the application site boundary and the SPA/Ramsar is sufficient to conclude that disturbance associated with vibrations created during construction or operation can be screened out.

5.10 With regard to guidance relating to visual disturbance, the Waterbird Disturbances Mitigation Toolkit, which has been produced by the Institute of Estuarine & Coastal Studies (IECS) University of Hull in 2013, provides the following descriptions of differing levels of visual disturbance. This has been used to assess the potential visual impacts on wintering or passage birds:

- Low level visual disturbance – This is stimuli that is unlikely to cause a response in birds using an adjacent wetland. Most works would not qualify as low-level impact unless they were out of sight of the birds and any disturbance would then be considered noise-related disturbance (there remain overflight issues for some species whereby flights to and from inland feeding and roost sites can mean that behind bank works have an effect). Long-term works including plant on a flood bank are also considered to be low impact. This type of work would initially qualify as moderate disturbance but with the absence of workers on the flood bank, birds would quickly become habituated. If workers were to appear alongside plant this would immediately increase the disturbance to moderate.
- Moderate visual disturbance – Typified as either high level disturbance which has occurred over long periods so that birds become habituated to it or less intrusive works which still cause a degree of disturbance. This describes visual stimuli such as works or third parties on the flood bank. Habituation occurs less with workers on the flood bank or foreshore working outside machinery. If a worker leaves plant it usually increases the disturbance level to high. There is a cross-over in the moderate and high level thresholds, although unless a species is particularly sensitive or it is a new activity then the lower band can be assumed.
- High visual disturbance – This is typified by regular reactions to visual stimuli with birds moving away from the works (source) to areas which are less disturbed. Most birds will show a degree of response to stimuli. Birds that remain in the affected area may not forage efficiently and if there are additional pressures on the birds (cold weather, extreme heat

etc.) then this may impact upon the survival of individual birds or their ability to breed. Visual stimuli reaches high levels of disturbance extremely easily with workers operating outside of equipment, fast movement, large plant and close proximity to the birds (especially encroachment on mudflats) contributing to this level of disturbance.

5.11 Maximum alert distances given for roosting and feeding waders (set by the presence of the most sensitive species) can be as great as 300m from the point of visual disturbance. Some species of duck are even more sensitive in certain circumstances, with maximum alert distances to visual disturbance of 500m for common shelduck and mallard recorded. The mudflats, open water and intertidal areas within the designated site are c1.5km away from the proposed development.

5.12 Given the distance of the application site from the SPA/Ramsar site, noise, visual disturbance and vibrations caused during construction or operation of the BA facility are not considered likely to have any adverse impact on the interest features of the Teesmouth and Cleveland Coast SPA/Ramsar.

5.13 The BA Facility will be handling non-hazardous waste material. The scheme will collect and reuse water (draining from stored material) to reduce dust. Excess water stored in the on-site lagoon would be tankered off-site for treatment at a licensed facility if the on-site storage capacity was in danger of being exceeded. The BA facility has no current foul or surface water connection. It is expected waste water from welfare facilities and offices on site will be directed to the main sewage network (when provided by STDC) and will be treated in line with standard industry practices. In the absence of a mains connection on-site a system of on-site storage and removal would be used. No realistic impact pathway for polluted water (in the form of waste water) to enter the SPA/Ramsar exists. The risk of waste water from the BA Facility site reaching the SPA/Ramsar is considered to be negligible.

5.14 Surface water will be collected and stored on site by means of Sustainable urban Drainage Systems (SuDS). This stored water will be discharged into the Holme Beck at a controlled rate. The Holme Beck is located approximately 300m west of the site and flows north, discharging into the River Tees. This presents a potential impact pathway allowing polluted water,

in the form of contaminated surface water, to reach the SPA/Ramsar via the SuDS system and the Holme Beck.

5.15 Works associated with construction have the potential to mobilise contaminants in the soils which could leach, via the movement of groundwater, into off-site watercourses (e.g. Holme Beck, Cross Connector culvert and/or Knitting Wife Beck culvert). These watercourses drain into the Teesmouth and Cleveland Coast SPA/Ramsar.

5.16 However, site remediation has been completed that included the removal of contaminated soils and other material from the BA Facility site (Planning ref: R/2020/0318/FFM). This work will remove the risk of construction works associated with the facility mobilising toxic compounds in the soils. Given that remediation work is already taking place on site it is concluded that no realistic impact pathway related to contaminated land during construction will exist. The construction works would not mobilise any toxic compounds in the soil that would be likely to impact on the interest features of the Teesmouth and Cleveland Coast SPA/Ramsar.

5.17 Dust has been screened out as a potential impact on the NSN site in line with the methodology outlined within the 2016 Institute of Air Quality Management (IAQM) guidance document *Guidance on the assessment of dust from demolition and construction*. The intention of the IAQM guidance is that 500m is the distance from the area of muddy ground where dust could be deposited by vehicles leaving the site and re-suspended by vehicles using the road network.

5.18 The SPA/Ramsar is over 1km from the application site boundary. Construction vehicles will access the BA Facility site from the A66 and use major roads to transit to and from the site. As the NSN site considered in this assessment is located over 500m from the boundary of the application site as is the affected stretch of the A66 no detailed assessment of impacts related to dust is required in line with the IAQM guidance.

5.19 Although the scheme includes embedded mitigation to contain dust emission during operation (see para 3.7 and 3.8), this is not provided to mitigate impacts on the SPA/Ramsar. Due to the distance of the application site from the SPA/Ramsar site, dust associated with construction, operation

or decommissioning of the facility is not considered likely to have any adverse impact on the interest features of the Teesmouth and Cleveland Coast SPA/Ramsar with or without the embedded mitigation.

5.20 Natural England (2018) guidance document *Natural England's approach to advising competent authorities on the assessment of road traffic emissions under the Habitats Regulations* explains that it is widely accepted that imperceptible impacts are those which are less than 1% of the critical level or load, which is considered to be roughly equivalent to 1,000 AADT for cars and 200 AADT for HGVs. This was based on the Design Manual for Roads and Bridges (DMRB) screening tool using Department for Transport data to calculate whether the nitrogen oxides (NOx) output could result in a change of more than 1% of the critical level/load.

5.21 Research produced by Air Quality Consultants (AQC) has highlighted the need to also consider the ammonia (NH_3) released from vehicles when assessing the impact on nitrogen sensitive habitats (*Ammonia Emissions from Roads for Assessing Impacts on Nitrogen-sensitive Habitats,* AQC (2020). This is especially important for future years as reductions in NOx emissions have outpaced reductions in NH_3 emissions. Both NOx and NH_3 contribute to nitrogen deposition and the positive effect of reduced levels of NOx in exhaust gases (reducing nitrogen deposition) is offset for ecological receptors by the elevated levels of NH_3.

5.22 Traffic movements during the construction period are expected to be an average daily 2-way movements of 40 HGV/LGV movements and 22 car movements during the 35-40 week construction phase. During the operation of the proposed BA facility there is predicted to be a net daily increase of 86 HGV, 4 vans and 14 car movements. These numbers are well below the DMRB screening criteria (1,000 annual average daily traffic (AADT) total vehicles, or 200 AADT HGVs), so the impact of emissions associated with traffic movements can be screened out.

5.23 It should be noted that for the vast majority of the SPA/Ramsar close to roads on the southern side of the Tees River, background critical levels of NOx and NH_3 do not exceed the relevant critical level. Critical levels are defined as "*concentrations of pollutants in the atmosphere above which*

direct adverse effects on receptors, such as human beings, plants, ecosystems or materials, may occur according to present knowledge".

5.24 For NOx the critical level is set at 30µg/m^3 (annual mean) and for NH_3 it is set at 3µg/m^3. There are no areas close to the A1085 and A66 east of Middlesborough where NOx or NH_3 critical levels are exceeded. NOx critical levels do exceed the site-specific critical level in the centre of Middleborough towards the western end of the SPA/Ramsar around the Tees Transporter Bridge.

5.25 These areas of exceedance are localised, are mostly open water or intertidal habitat and largely occur over 200m from the A66. No HGVs will travel along the A178 due to the weight limit on the Tees Transporter Bridge. No other areas of SPA/Ramsar habitat lie within 200m of road to the west of the proposed development along which development-generated traffic is likely to travel, until the junction of the A66 with the A19. At this distance from the proposed development the small amount of development-generated traffic would be expected to disperse significantly.

5.26 No significant traffic generation is anticipated on the A1085 towards Redcar. Here parts of Coatham Marsh lie within 200m of the A1085. Although there is a consented waste incineration project at the Redcar Bulk Terminal (the Redcar Energy Centre, REC, ref: R/2020/0411/FFM), this proposal includes an BA processing facility to process all BA from the REC. Access to the REC is to the west of Dormanstown and the relevant sections of the SPA/Ramsar lie to the north-east of Dormanstown, even if some material from the REC were sent to the proposed development the HGVs generated would not pass within 200m of the SPA/Ramsar.

5.27 The APIS website provides a background level of NOx is 18.6-19 μ g/m^3 at Coatham Marsh. The very small increases in traffic likely to occur along the A1085 as the result of this proposal would not result in the critical level being exceeded at this point.

5.28 Table 1 below provides a summary of the impact pathway screening conducted for the Teesmouth and Cleveland Coast SPA/Ramsar and highlights where potential likely significant effects have been identified. These impacts are assessed in detail in section 7.

Site	Receptor	Impact pathway	Assessment summary	LSE?
Teesmouth and Cleveland Coast SPA/Ramsar	Wintering/passage/ breeding birds	Loss of supporting habitat	Application site does not provide supporting habitat for SPA/Ramsar species	No
	Wintering/passage/ breeding birds	Construction noise	Distance between application site and SPA/Ramsar sufficient to screen out potential disturbance.	No
	Wintering/passage/ breeding birds	Visual disturbance	Distance between application site and SPA/Ramsar sufficient to screen out potential disturbance.	No
	Wintering/passage/ breeding birds	Disturbance caused by vibration	Distance between application site and SPA/Ramsar sufficient to screen out potential disturbance.	No
	Wintering/passage/ breeding birds	Mobilisation of on-site contaminants	Site remediation works will address this issue prior to construction works commencing.	No
	Wintering/passage/ breeding birds	Increased levels of NOx within protected site	Minimal traffic increases are predicted and most of the road network affected is over 200m from SPA/Ramsar boundary.	No
	Wintering/passage/ breeding birds	Increased levels of NH_3 within protected site	Minimal traffic increases are predicted and most of the road network affected is over 200m from SPA/Ramsar boundary.	No
	Wintering/passage/ breeding birds	Increased levels of NH_3 within protected site	Minimal traffic increases are predicted and most of the road network affected is over 200m from SPA/Ramsar boundary.	No
	Wintering/passage/ breeding birds	Polluted surface water draining into protected site	Pollution control measures within SUDS system will be required	Yes
	Wintering/passage/ breeding birds	Dust	Distance between application site and SPA/Ramsar sufficient to screen out potential impacts on vegetation.	No

Table 1: Summary of impact pathway assessment

6.0 Likely significant effect (LSE) test

6.1 The first test of Regulation 63 of the Habitats Regulations requires an assessment of whether the emissions from the scheme or any other activities, are likely to have a significant effect on the NSN site in question, either alone or in combination with other plans and projects.

6.2 As noted in section three no specific measures to reduce the impact on the NSN site have been included as part of the project. Therefore, this project can be screened for likely significant effects in line with the recent People Over Wind ruling.

6.3 Table 1 has identified one potential impact pathway that could lead to likely significant effects arisings on the interest features of the SPA/Ramsar alone.

7.0 Water quality appropriate assessment

7.1 The BA Facility will give rise to surface water run-off from the roads within the site, buildings, vehicle parking areas and other hardstanding areas. The surface water run off will be stored on site in a SuD system.

7.2 Full details of the SuDS design are not available at present but it is expected that to reduce the risk of pollutants entering the NSN site collected surface water will be passed through oil interceptors and polishing filter before being discharged at greenfield runoff rates into Holme Beck to the west of the application site.

7.3 A more detailed description of the surface water drainage arrangements for the BA Facility will be required to be submitted as part of future reserved matters applications.

7.4 The implementation of an appropriate surface water drainage strategy is considered to be mitigation for the potential operational impacts on the Teesmouth and Cleveland Coast SPA/Ramsar identified in paragraph 5.14. To ensure the proposed development will not adversely affect the integrity of the site once operational the surface water drainage strategy will need to be reassessed at reserved matters stage.

8.0 In-combination assessment

Teesmouth and Cleveland Coast SPA/Ramsar

8.1 The potential in-combination effects for this project are limited to increases in road traffic on the local road network. For the purposes of this assessment it has been assumed that negligible traffic from the proposed facility will travel along the A178 north of the River Tees. This is because the route across the River Tees on the A178 requires the use of the Tees Transporter Bridge, which has a maximum weight limit per vehicle of 3 tonnes.

8.2 Vehicles travelling to and from the proposed facility from the north would use the A19 and A689 for transit. At no point along the route are these major roads within 200m of the SPA/Ramsar until the A19 crosses the River Tees (see Figure 2). As such there is no potential for in-combination effects from HGV traffic north of the River Tees. Traffic emissions on the A1085 south of the Tees do have the potential to act in-combination to increase traffic emissions on some parts of the SPA/Ramsar.

8.3 Coatham Marshes is located adjacent to the A1085. Coatham Marshes is a mix of grassland, scrub, reedbed and open water habitat. The Magic website, managed by Natural England, identifies a significant part of the site as being the priority habitat coastal floodplain and grazing marsh. APIS provides a critical load range of 20-30kg/N/ha/yr for coastal floodplain and grazing marsh. It does not provide a critical load for eutrophic standing waters noting that deposition of NH_3, nitrate and other forms of nitrogen deposition from the atmosphere is unlikely to be the largest source of eutrophic standing water. The website states that, in general, nitrogen deposition is unlikely to be very harmful to eutrophic standing waters, even when close to sources.

8.4 The APIS website provides background rates for nitrogen deposition of 15.7-15.9kg/N/ha/yr. at Coatham Marsh. The background level of NOx is 18.6-19 μ g/m^3. Source apportionment analysis on APIS shows that currently road traffic accounts for 1.82kg/N/ha/yr. of total nitrogen deposition onto the NSN site each year (long and short-range sources). Based on current rates of deposition, even if traffic flows along this stretch of road doubled as a result

of the developments in the area (compared to the current baseline) nitrogen deposition would still fall below the lower end of the critical load range given for coastal floodplain and grazing marsh.

8.5 Given that traffic flows are not predicted to increase significantly along the A1085 as a result of the project, the relatively low background rates of nitrogen deposition and low levels of NOx in the Coatham Marshes area and the fact recommended critical loads and levels are not currently exceeded and the limited zone of impact related to traffic emissions, no in-combination effects relating to increases in traffic flows along the A1085 adversely affecting Coatham Marsh are anticipated.

8.6 Due to the distance of the proposed BA facility and the proposed ERF from the boundary of the SPA/Ramsar, it is not considered there is any potential for in-combination effects to arise relating to either noise or visual disturbance during construction or operation.

9.0 Conclusion

9.1 This document has considered a number of potential impacts pathways on interest features of the Teesmouth and Cleveland Coast SPA / Ramsar from the development alone.

9.2 It has been concluded that there is only one realistic impact pathway from the proposed development that has the potential to result in likely significant effects on the interest features of the Teesmouth and Cleveland Coast SPA / Ramsar when considered alone.

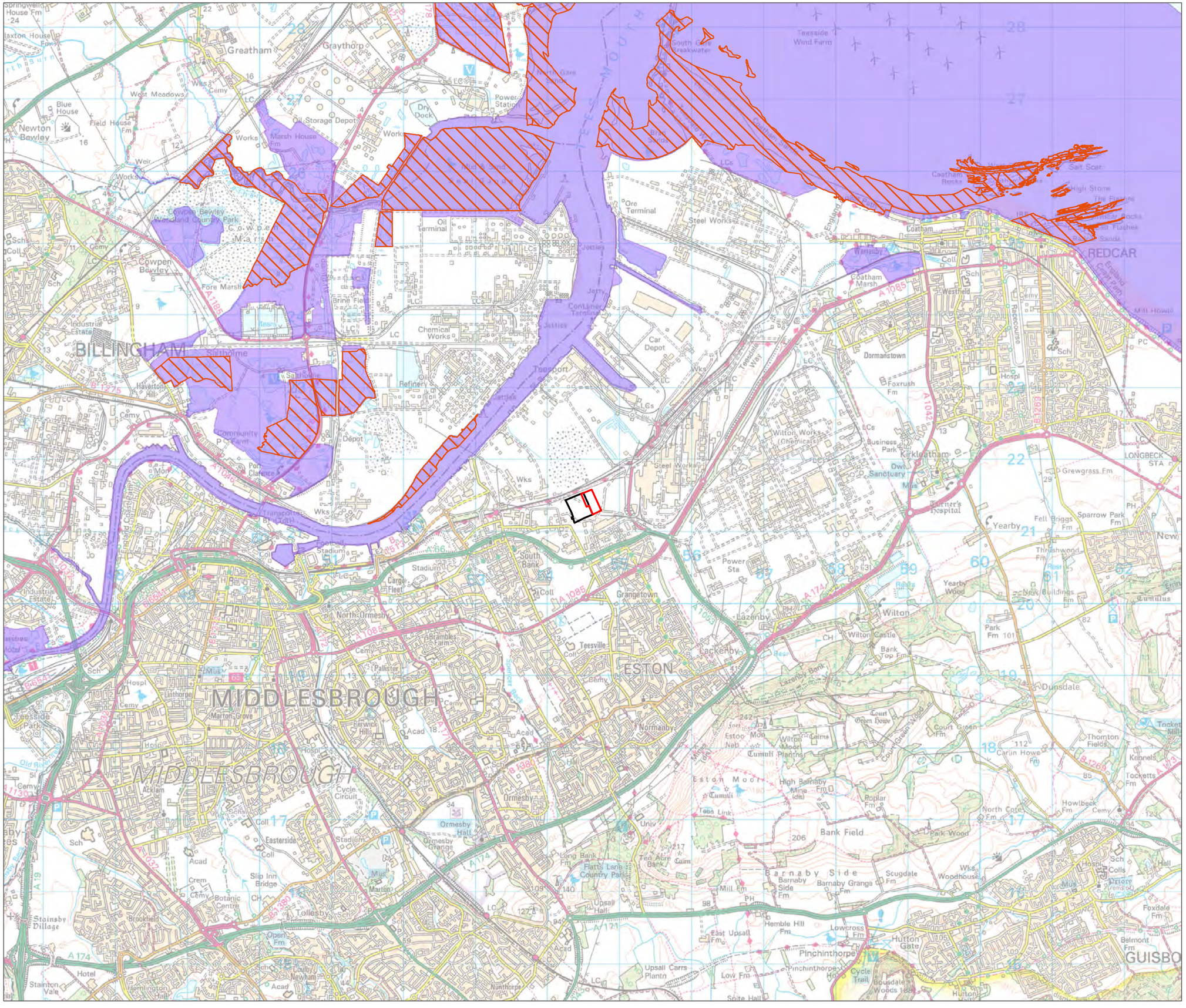
9.3 The proposals include a SuDS within the application boundary discharging to a water course that drains into the Teesmouth and Cleveland Coast SPA/Ramsar. Without appropriate pollution control measures there is a risk that contaminated water could enter the NSN site.

9.4 An appropriate assessment has identified the need for the proposed SuDS on site to include appropriate pollution control measures to ensure water discharged to the Holme Beck is not contaminated. Full details of the SuD system will need reassessment at reserved matters stage to ensure the pollution control measures are adequate. This assessment has concluded that with the appropriate mitigation in place the proposals will not adversely affect the integrity of the Teesmouth and Cleveland Coast SPA/Ramsar.

9.4 This document also considers the potential for other plans and projects to act in-combination with the scheme. A potential impacts pathway relating to changes in air quality within parts of the Teesmouth and Cleveland Coast SPA / Ramsar have been considered. In-combination impacts relating to noise and visual disturbance were also assessed. The potential for likely significant effects on interest features of the Teesmouth and Cleveland Coast SPA / Ramsar have been screened out and it has been concluded that these in-combination effects will not result in likely significant effects on the interest features of the NSN site.

9.5 As the competent authority, RCBC is required to undertake its own independent Habitat Regulations Assessment. The council can choose to adopt this document, following professional scrutiny to evaluate the evidence presented and examine the conclusions reached; or it can

undertake its own appropriate assessment using the material provided as part of the planning application and any other relevant material from the applicant requested under Regulation 63.



Tees Valley Bottom Ash Facility

Viridor Waste Limited

0 1,200 m

N

Figure 1: Site location and NSN sites

Dwg no/227707B/Ec001	Revision	
Status	01 April 2022	
Scale: 1:50,000 @A3	Drawn by: JC	Checked by: JP

TERENCE O'ROURKE

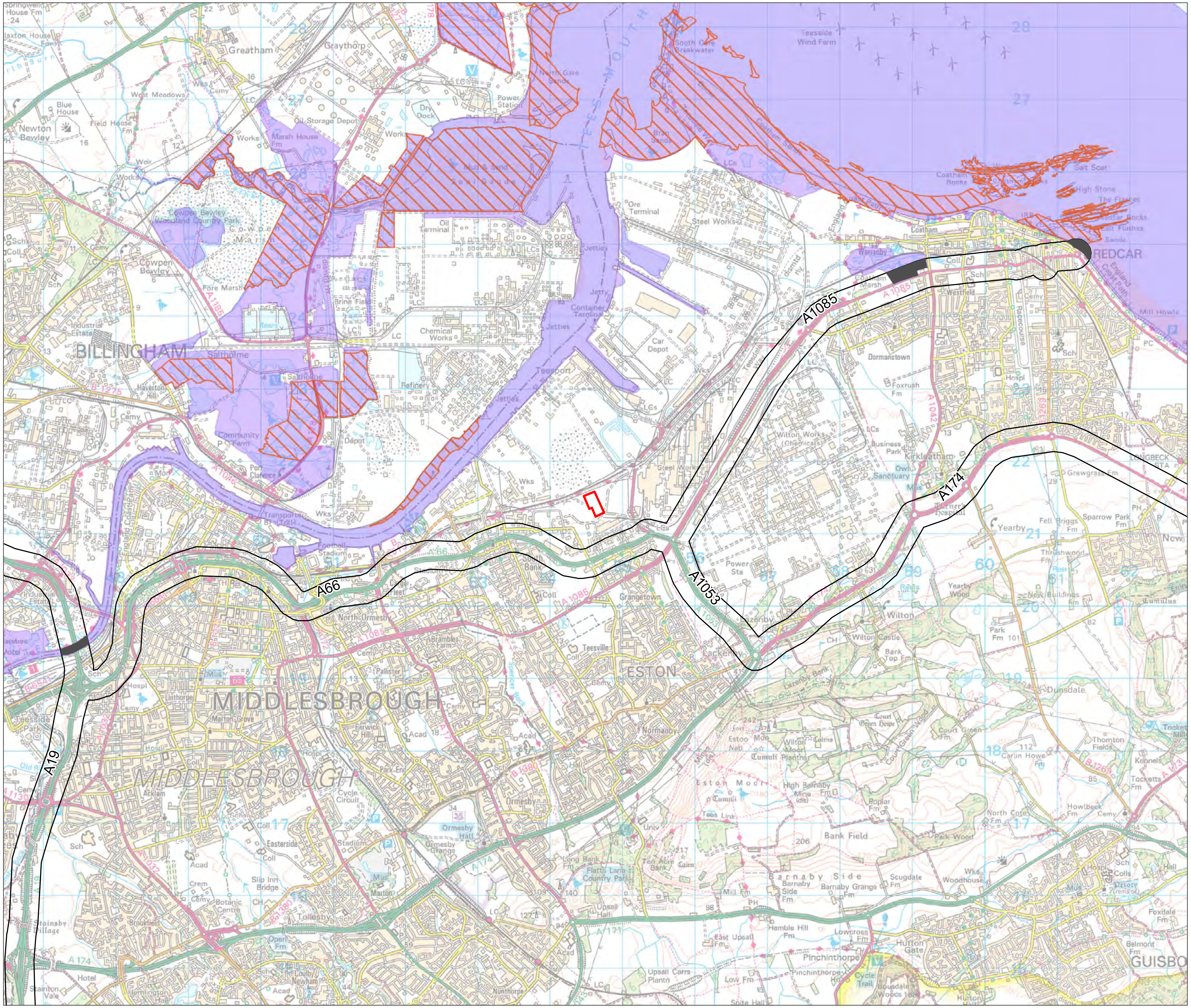
LONDON
23 Heddon Street
London W1B 4BQ

BIRMINGHAM
3 Edmund Gardens 117 Edmund Street
Birmingham B3 2HJ

BOURNEMOUTH
Everdene House Deansleigh Road
Bournemouth BH7 7DU

TELEPHONE
020 3664 6755

www.torltd.co.uk



- IBA Facility site boundary
- Areas where the Teesmouth and Cleveland Coast SPA and Ramsar overlap with the 200m buffer of main access routes to site
- 200m buffer from main access roads to site
- Teesmouth and Cleveland Coast Special Protection Area
- Teesmouth and Cleveland Coast Ramsar site

Tees Valley Bottom Ash Facility
Viridor Waste Limited

0 1,200 m

N

Figure 2: 200m buffer zone along main transport routes to and from the IBA Facility

Dwg no/227707B/Ec002	Revision	
Status	01 April 2022	
Scale: 1:50,000 @A3	Drawn by: JC	Checked by: JP

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BOURNEMOUTH
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020 3664 6755

www.torltd.co.uk

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www.apis.ac.uk

www.magic.defra.gov.uk

www.bto.org/our-science/projects/wetland-bird-survey

https://iaqm.co.uk/text/guidance/construction-dust-2014.pdf

Appendix 1

EC Directive 79/409 on the Conservation of Wild Birds
Special Protection Area (SPA)

Name: Teesmouth and Cleveland Coast SPA

Unitary Authority/County: Durham County Council, Hartlepool Borough Council, Redcar & Cleveland Borough Council, Stockton-on-Tees Borough Council.

Consultation proposal: The existing Teesmouth and Cleveland Coast SPA was classified on 15 August 1995; an extension to that area has been recommended to enlarge the area within the Tees Estuary and along part of the foreshore to the north because of the site's European ornithological interest.

The Teesmouth and Cleveland Coast Special Protection Area is a wetland of European importance, comprising intertidal sand and mudflats, rocky shore, saltmarsh, freshwater marsh and sand dunes. Large numbers of waterbirds feed and roost on the site in winter and during passage periods; in summer Little Terns breed on the sandy beaches within the site.

Boundary of SPA: The original SPA includes all or parts of Seal Sands SSSI; Seaton Dunes and Common SSSI; Cowpen Marsh SSSI; Redcar Rocks SSSI; and South Gare and Coatham Sands SSSI. The extended area is within or coincident with the above SSSI boundaries and will also include parts of Durham Coast SSSI and all of Tees and Hartlepool Foreshore and Wetlands SSSI. For boundary of extended SPA see map.

Size of SPA: The extension covers an area of 304.75 ha, giving a revised SPA area of 1247.31 ha.

European ornithological importance of SPA: The extended SPA is of European importance because:

a) the site qualifies under **article 4.1** of the Directive (79/409/EEC) as it is used regularly by 1% or more of the GB populations of the following species listed on Annex I, in any season:

Annex I species	5 year peak mean	% of GB population
Little Tern *Sterna albifrons*	40 pairs – breeding (1995 - 1998)	1.7%
Sandwich Tern *Sterna sandvicensis*	1,900 individuals – passage (1988 - 1992)	6.8%

b) the site qualifies under **article 4.2** of the Directive (79/409/EEC) as it is used regularly by 1% or more of the biogeographical populations of the following regularly occurring migratory species (other than those listed on Annex I), in any season:

Migratory species	5 year peak mean	% of population
Knot *Calidris canutus islandica*	5,509 individuals - wintering (1991/92 - 1995/96)	1.6% NE Can/Grl/Iceland/UK
Redshank *Tringa totanus totanus*	1,648 individuals - passage (1987 - 1991)	1.1% Eastern Atlantic (wintering)

c) the site qualifies under **article 4.2** of the Directive (79/409/EEC) as it is used regularly by over 20,000 waterfowl in any season:

Period	Season	Population
1991/92 - 1995/96	Wintering	21,312 individuals

d) The wintering waterfowl assemblage qualifying under **article 4.2** includes the wintering species of European importance, as well as the following species in numbers of national importance:

Species	5 year peak mean	% GB population
Cormorant *Phalacrocorax carbo*	140 individuals – wintering (1993/94 - 1997/98)	1.1%
Shelduck *Tadorna tadorna*	1,030 individuals - wintering (1993/94 - 1997/98)	1.4%
Teal *Anas crecca*	1,265 individuals - wintering (1987/88 - 1991/92)	1.3%
Shoveler *Anas clypeata*	129 individuals - wintering (1991/92 - 1995/96)	1.3%
Sanderling *Calidris alba*	601 individuals - wintering (1993/94 - 1997/98)	2.6%

Non-qualifying species of interest: Marsh Harrier *Circus aeruginosus* (Annex I species) occurs on passage in small numbers and once bred (1996).

Status of SPA:

1) Teesmouth and Cleveland Coast was classified as a Special Protection Area on 15 August 1995.
2) Consultations commenced on the proposal to extend the site on 29 September 1999.
3) The extended area of Teesmouth and Cleveland Coast SPA was classified on 31 March 2000.

Information Sheet on Ramsar Wetlands (RIS)

Categories approved by Recommendation 4.7 (1990), as amended by Resolution VIII.13 of the 8th Conference of the Contracting Parties (2002) and Resolutions IX.1 Annex B, IX.6, IX.21 and IX. 22 of the 9th Conference of the Contracting Parties (2005).

Notes for compilers:

1. The RIS should be completed in accordance with the attached *Explanatory Notes and Guidelines for completing the Information Sheet on Ramsar Wetlands*. Compilers are strongly advised to read this guidance before filling in the RIS.

2. Further information and guidance in support of Ramsar site designations are provided in the *Strategic Framework for the future development of the List of Wetlands of International Importance* (Ramsar Wise Use Handbook 7, 2nd edition, as amended by COP9 Resolution IX.1 Annex B). A 3rd edition of the Handbook, incorporating these amendments, is in preparation and will be available in 2006.

3. Once completed, the RIS (and accompanying map(s)) should be submitted to the Ramsar Secretariat. Compilers should provide an electronic (MS Word) copy of the RIS and, where possible, digital copies of all maps.

1. Name and address of the compiler of this form:

FOR OFFICE USE ONLY.

DD MM YY

Designation date | Site Reference Number

Joint Nature Conservation Committee
Monkstone House
City Road
Peterborough
Cambridgeshire PE1 1JY
UK
Telephone/Fax: +44 (0)1733 – 562 626 / +44 (0)1733 – 555 948
Email: RIS@JNCC.gov.uk

2. Date this sheet was completed/updated:

Designated: 15 August 1995

3. Country:

UK (England)

4. Name of the Ramsar site:

Teesmouth and Cleveland Coast

5. Designation of new Ramsar site or update of existing site:

This RIS is for: Updated information on an existing Ramsar site

6. For RIS updates only, changes to the site since its designation or earlier update:

a) Site boundary and area:

** Important note: If the boundary and/or area of the designated site is being restricted/reduced, the Contracting Party should have followed the procedures established by the Conference of the Parties in the Annex to COP9 Resolution IX.6 and provided a report in line with paragraph 28 of that Annex, prior to the submission of an updated RIS.

b) Describe briefly any major changes to the ecological character of the Ramsar site, including in the application of the Criteria, since the previous RIS for the site:

7. Map of site included:

Refer to Annex III of the *Explanatory Notes and Guidelines*, for detailed guidance on provision of suitable maps, including digital maps.

a) A map of the site, with clearly delineated boundaries, is included as:

i) **hard copy** (required for inclusion of site in the Ramsar List): *yes* ✓ -or- *no* □;
ii**) an electronic format** (e.g. a JPEG or ArcView image) Yes
iii) **a GIS file providing geo-referenced site boundary vectors and attribute tables** *yes* ✓ -or- *no* □;

b) Describe briefly the type of boundary delineation applied:

e.g. the boundary is the same as an existing protected area (nature reserve, national park etc.), or follows a catchment boundary, or follows a geopolitical boundary such as a local government jurisdiction, follows physical boundaries such as roads, follows the shoreline of a waterbody, etc.

The site boundary is the same as, or falls within, an existing protected area.

For precise boundary details, please refer to paper map provided at designation

8. Geographical coordinates (latitude/longitude):

54 37 50 N 01 07 07 W

9. General location:

Include in which part of the country and which large administrative region(s), and the location of the nearest large town.

Nearest town/city: Middlesborough

Teesmouth and Cleveland Coast lies 48 km south-east of the city of Newcastle-upon-Tyne on the north-east coast of England.

Administrative region: Cleveland; Durham; Hartlepool; Redcar and Cleveland; Stockton-on-Tees

10. Elevation (average and/or max. & min.) (metres): 11. Area (hectares): 1247.31

Min. -1
Max. 4
Mean 1

12. General overview of the site:

Provide a short paragraph giving a summary description of the principal ecological characteristics and importance of the wetland.

Medium-large site encompassing a range of habitats (sand and mudflats, rocky shore, saltmarsh, freshwater marsh and sand dunes) on and around an estuary which has been much-modified by human activities. Together these habitats support internationally important numbers of waterbirds.

13. Ramsar Criteria:

Circle or underline each Criterion applied to the designation of the Ramsar site. See Annex II of the *Explanatory Notes and Guidelines* for the Criteria and guidelines for their application (adopted by Resolution VII.11).

5, 6

14. Justification for the application of each Criterion listed in 13 above:

Provide justification for each Criterion in turn, clearly identifying to which Criterion the justification applies (see Annex II for guidance on acceptable forms of justification).

Ramsar criterion 5

Assemblages of international importance:

Species with peak counts in winter:

9528 waterfowl (5 year peak mean 1998/99-2002/2003)

Ramsar criterion 6 – species/populations occurring at levels of international importance.

Qualifying Species/populations (as identified at designation):

Species with peak counts in spring/autumn:

Common redshank , *Tringa totanus totanus*,	883 individuals, representing an average of 0.7% of the GB population (5 year peak mean 1998/9-2002/3)

Species with peak counts in winter:

Red knot , *Calidris canutus islandica*, W & Southern Africa (wintering)	2579 individuals, representing an average of 0.9% of the GB population (5 year peak mean 1998/9-2002/3)

Contemporary data and information on waterbird trends at this site and their regional (sub-national) and national contexts can be found in the Wetland Bird Survey report, which is updated annually. See www.bto.org/survey/webs/webs-alerts-index.htm.
Details of bird species occuring at levels of National importance are given in Section 22

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15. Biogeography (required when Criteria 1 and/or 3 and /or certain applications of Criterion 2 are applied to the designation):

Name the relevant biogeographic region that includes the Ramsar site, and identify the biogeographic regionalisation system that has been applied.

a) biogeographic region:
Atlantic

b) biogeographic regionalisation scheme (include reference citation):
Council Directive 92/43/EEC

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16. Physical features of the site:

Describe, as appropriate, the geology, geomorphology; origins - natural or artificial; hydrology; soil type; water quality; water depth, water permanence; fluctuations in water level; tidal variations; downstream area; general climate, etc.

Soil & geology	basic, neutral, shingle, sand, mud, clay, alluvium, peat, sedimentary, sandstone, sandstone/mudstone, boulder
Geomorphology and landscape	lowland, coastal, floodplain, subtidal sediments (including sandbank/mudbank), intertidal sediments (including sandflat/mudflat), open coast (including bay), enclosed coast (including embayment), estuary, lagoon, pools, intertidal rock
Nutrient status	eutrophic, mesotrophic
pH	circumneutral
Salinity	brackish / mixosaline, fresh, saline / euhaline
Soil	mainly mineral
Water permanence	usually permanent

Summary of main climatic features	Annual averages (Durham, 1971–2000) (www.metoffice.com/climate/uk/averages/19712000/sites/durham.html) Max. daily temperature: 12.5° C Min. daily temperature: 5.2° C Days of air frost: 52.0 Rainfall: 643.3 mm Hrs. of sunshine: 1374.6

General description of the Physical Features:

Teesmouth and Cleveland Coast includes a range of coastal habitats – sand- and mud-flats, rocky shore, saltmarsh, freshwater marsh and sand dunes – on and around an estuary which has been considerably modified by human activities.

17. Physical features of the catchment area:

Describe the surface area, general geology and geomorphological features, general soil types, general land use, and climate (including climate type).

Teesmouth and Cleveland Coast includes a range of coastal habitats – sand- and mud-flats, rocky shore, saltmarsh, freshwater marsh and sand dunes – on and around an estuary which has been considerably modified by human activities.

18. Hydrological values:

Describe the functions and values of the wetland in groundwater recharge, flood control, sediment trapping, shoreline stabilization, etc.

Shoreline stabilisation and dissipation of erosive forces

19. Wetland types:

Inland wetland, Marine/coastal wetland

Code	Name	% Area
G	Tidal flats	45
Tp	Freshwater marshes / pools: permanent	20
E	Sand / shingle shores (including dune systems)	14
H	Salt marshes	7
D	Rocky shores	7
K	Coastal fresh lagoons	3
F	Estuarine waters	2
M	Rivers / streams / creeks: permanent	1
J	Coastal brackish / saline lagoons	1

20. General ecological features:

Provide further description, as appropriate, of the main habitats, vegetation types, plant and animal communities present in the Ramsar site, and the ecosystem services of the site and the benefits derived from them.

Teesmouth and Cleveland Coast comprises intertidal sand and mudflats, rocky shore, saltmarsh, freshwater marsh and sand dunes. The Tees Estuary has been much-modified by such activities as land-claim, construction of breakwaters and training walls, and deep dredging. The remaining intertidal areas within the estuary are composed of mud and sand, with some *Enteromorpha* beds in sheltered areas. Outside the estuary mouth, sandflats predominate, but with significant rocky foreshores and reefs at both Redcar and Hartlepool and anthropogenic boulder beds at South Gare. Moderately extensive sand dune systems flank the estuary mouth, while a smaller dune system lies north of Hartlepool; foredunes are dominated by *Ammophila*, *Elytrigia juncea* and *Leymus* communities, fixed dunes by *Festuca rubra* communities. Surviving saltmarsh is very limited in

extent, and is largely typified by *Puccinellia*. Behind the dunes and sea-defences a number of significant areas of grazing marsh are found, where *Festuca rubra* saltmarsh persists alongside inundation grassland, a range of swamp communities and several shallow water bodies.

Ecosystem services

21. Noteworthy flora:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in **12**. Justification for the application of the Criteria) indicating, e.g. which species/communities are unique, rare, endangered or biogeographically important, etc. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.*

Nationally important species occurring on the site
Higher Plants:
Festuca arenaria, Puccinellia rupestris, Ranunculus baudotii (all Nationally Scarce)

22. Noteworthy fauna:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in **12**. Justification for the application of the Criteria) indicating, e.g. which species/communities are unique, rare, endangered or biogeographically important, etc., including count data. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.*

Birds

Species currently occurring at levels of national importance:

Species regularly supported during the breeding season:

Little tern , *Sterna albifrons albifrons*, W Europe	40 pairs, representing an average of 2% of the GB population (Five year mean for 1995 to 1998)

Species with peak counts in spring/autumn:

Northern shoveler , *Anas clypeata*, NW & C Europe	7 individuals, representing an average of 0% of the GB population (5 year peak mean 1998/9-2002/3)
Common greenshank , *Tringa nebularia*, Europe/W Africa	7 individuals, representing an average of 1.1% of the GB population (5 year peak mean 1998/9-2002/3)

Species Information

Nationally important species occurring on the site
Invertebrates:
Pherbellia grisescens, Thereva valida, Longitarsus nigerrimus, Dryops nitidulus, Macroplea mutica, Philonthus dimidiatipennis, Trichohydnobius suturalis (all RDB)

23. Social and cultural values:

Describe if the site has any general social and/or cultural values e.g. fisheries production, forestry, religious importance, archaeological sites, social relations with the wetland, etc. Distinguish between historical/archaeological/religious significance and current socio-economic values.

Environmental education/ interpretation
Fisheries production
Livestock grazing
Non-consumptive recreation
Scientific research
Sport fishing
Sport hunting
Transportation/navigation

b) Is the site considered of international importance for holding, in addition to relevant ecological values, examples of significant cultural values, whether material or non-material, linked to its origin, conservation and/or ecological functioning? No

If Yes, describe this importance under one or more of the following categories:

i) sites which provide a model of wetland wise use, demonstrating the application of traditional knowledge and methods of management and use that maintain the ecological character of the wetland:

ii) sites which have exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland:

iii) sites where the ecological character of the wetland depends on the interaction with local communities or indigenous peoples:

iv) sites where relevant non-material values such as sacred sites are present and their existence is strongly linked with the maintenance of the ecological character of the wetland:

24. Land tenure/ownership:

Ownership category	On-site	Off-site
Non-governmental organisation (NGO)	+	
Local authority, municipality etc.	+	+
National/Crown Estate	+	+
Private	+	+

25. Current land (including water) use:

Activity	On-site	Off-site
Nature conservation	+	+
Recreation	+	+
Current scientific research	+	+
Collection of non-timber natural products: (unspecified)	+	
Fishing: commercial		+
Fishing: recreational/sport	+	+
Bait collection	+	
Arable agriculture (unspecified)		+
Permanent pastoral agriculture	+	+
Hunting: recreational/sport	+	+
Industrial water supply		+
Industry		+
Sewage treatment/disposal		+
Harbour/port	+	+
Flood control	+	+
Irrigation (incl. agricultural water supply)		+
Transport route	+	+
Urban development		+

26. Factors (past, present or potential) adversely affecting the site's ecological character, including changes in land (including water) use and development projects:

Explanation of reporting category:

1. *Those factors that are still operating, but it is unclear if they are under control, as there is a lag in showing the management or regulatory regime to be successful.*
2. *Those factors that are not currently being managed, or where the regulatory regime appears to have been ineffective so far.*

NA = Not Applicable because no factors have been reported.

Adverse Factor Category	Reporting Category	Description of the problem (Newly reported Factors only)	On-Site	Off-Site	Major Impact?
Eutrophication	2			+	+

For category 2 factors only. What measures have been taken / are planned / regulatory processes invoked, to mitigate the effect of these factors? Eutrophication - Under Asset Management Plan AMP4 Northumbrian Water is obliged to introduce tertiary treatment to its Billingham Sewage Treatment Works, and to undertake a major investigation into the occurrence and spread of *Enteromorpha* algal mats and water/sediment quality issues.
Is the site subject to adverse ecological change? YES

27. Conservation measures taken:

List national category and legal status of protected areas, including boundary relationships with the Ramsar site; management practices; whether an officially approved management plan exists and whether it is being implemented.

Conservation measure	On-site	Off-site
Site/ Area of Special Scientific Interest (SSSI/ASSI)	+	+
National Nature Reserve (NNR)	+	
Special Protection Area (SPA)	+	
Site management statement/plan implemented	+	
Other	+	+

b) Describe any other current management practices:

The management of Ramsar sites in the UK is determined by either a formal management plan or through other management planning processes, and is overseen by the relevant statutory conservation agency. Details of the precise management practises are given in these documents.

28. Conservation measures proposed but not yet implemented:

e.g. management plan in preparation; official proposal as a legally protected area, etc.

No information available

29. Current scientific research and facilities:

e.g. details of current research projects, including biodiversity monitoring; existence of a field research station, etc.

Fauna:

Numbers of migratory and wintering wildfowl and waders are monitored annually as part of the national Wetland Birds Survey (WeBS) organised by the British Trust for Ornithology, Wildfowl & Wetlands Trust, the Royal Society for the Protection of Birds and the Joint Nature Conservation Committee.

Waterfowl monitoring: Durham University Dept of Biological Sciences as part of the above contract
Ringing programmes: Tees Ringing Group.

Habitat:

Monitoring of the effects of Northumbrian Water sewage inputs (NWL, EA, EN).
Breeding bird surveys of Teesmouth NNR (EN) and Cowpen Marsh SSSI (Industry Nature Conservation Association).
Annual monitoring of breeding Little Terns (INCA).
Monitoring of seal usage of site and breeding success (INCA).

30. Current communications, education and public awareness (CEPA) activities related to or benefiting the site:

e.g. visitor centre, observation hides and nature trails, information booklets, facilities for school visits, etc.

The Teesmouth Field Centre approximately 3000 schoolchildren annually on a variety of study programmes. There are three public hides and several interpretive panels. English Nature, Hartlepool Countryside Wardens and Tees Valley Wildlife Trust undertake regular guided walks and events. British Energy and Huntsman Tioxide have provided hides which are available during guided visits.

31. Current recreation and tourism:

State if the wetland is used for recreation/tourism; indicate type(s) and their frequency/intensity.

Activities, Facilities provided and Seasonality

Land based recreation:

The main activities are walking (especially dog walking), beach recreation, golf, and birdwatching, which take place year-round (though with a pronounced summer peak). The South Gare area has beach huts, car parks and a caravan site. Car parks are also located at North Gare and Seaton Carew. Seaton Carew and Cleveland Golf Clubs have courses adjacent to and impinging slightly on the site. Use is mainly April to September, but golf is played year-round.

Illegal use of motorcycles, quad-bikes and 4WD vehicles is particularly prevalent at South Gare, but is also increasing at Seaton Sands.

Wildfowling is confined to small areas of Cowpen Marsh and Saltholme Pools(1 September to 31 January).

Water based recreation:

In summer, power-boating, jet-skiing, dinghy-sailing and windsurfing all occur but at a low intensity (apart from Coatham Sands, where 'extreme sports' such as kite-surfing are increasing), and primarily on the open coast. Angling is largely confined to breakwaters (year-round), while bait-gathering in intertidal areas can be locally intensive, especially on Bran Sands (adjacent to the South Gare Breakwater).

32. Jurisdiction:

Include territorial, e.g. state/region, and functional/sectoral, e.g. Dept. of Agriculture/Dept. of Environment, etc.

Head, Natura 2000 and Ramsar Team, Department for Environment, Food and Rural Affairs, European Wildlife Division, Zone 1/07, Temple Quay House, 2 The Square, Temple Quay, Bristol, BS1 6EB

33. Management authority:

Provide the name and address of the local office(s) of the agency(ies) or organisation(s) directly responsible for managing the wetland. Wherever possible provide also the title and/or name of the person or persons in this office with responsibility for the wetland.

Site Designations Manager, English Nature, Sites and Surveillance Team, Northminster House, Northminster Road, Peterborough, PE1 1UA, UK

34. Bibliographical references:

Scientific/technical references only. If biogeographic regionalisation scheme applied (see **15** above), list full reference citation for the scheme.

Site-relevant references

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