

REPORT

North Bay Urgent Wall Improvements

EIA Screening Report

Client: Scarborough Borough Council

Reference: PC2176-RHD-ZZ-XX-RP-Z-0002

Status: Final/00

Date: 22 July 2022

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1 Introduction to North Bay Asset Refurbishment Scheme

1.1 Background to Proposed Works

Scarborough Borough Council (SBC) has a requirement to undertake urgent repairs/ refurbishment (the proposed works) of the existing coastal defence assets located in North Bay, Scarborough, North Yorkshire (**Figure 1**). The proposed works, part of the North Bay Urgent Wall Improvements Project, will extend the residual life of the coastal defences. Phase 1 of the Project was completed in 2014 and was the first of four planned phases that will conclude with a delayed capital scheme, anticipated in 2042. The remaining phases are (**Figure 2**):

- Phase 2 - repair works to 470 m of the frontage (31% of the total frontage)
- Phase 3 - anticipated to commence in 2030, it will consist of (further) repair works to 430 m of the frontage (28% of the total frontage)

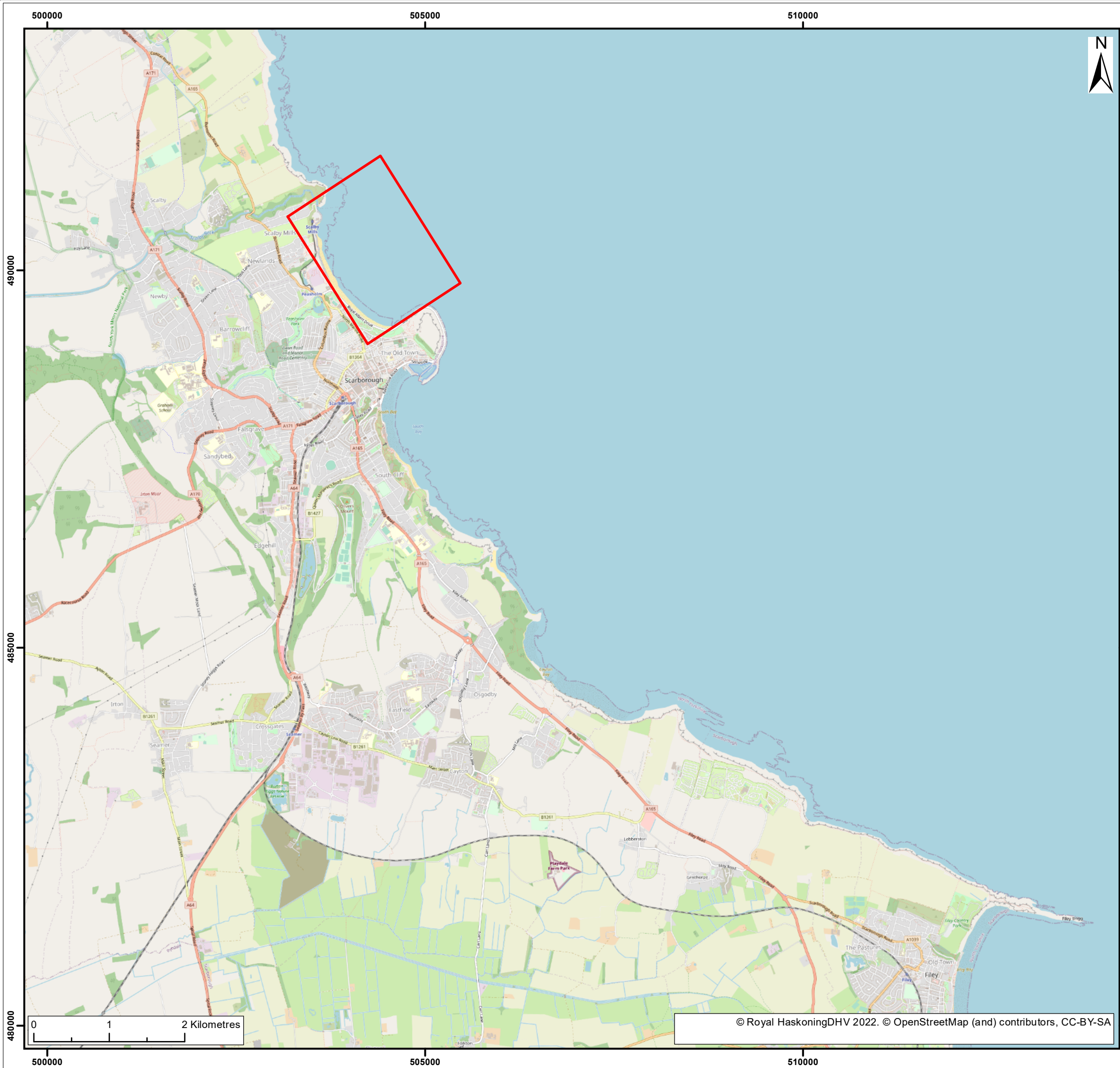
The assets under protection are located along 1.5 km of coastal frontage and fall within two of the Management Units (MU) of the Scarborough Coastal Defence Strategy - Holbeck to Scalby Mill (2009)¹:

- North Bay Cliffs (MU 20A/2-20A/7)
- Clarence Gardens (MU 20B/1-20B/3)

The Scarborough Coastal Defence Strategy is currently subject to a 2022 refresh, which is anticipated to be completed in 2023. This frontage is also covered by the River Tyne to Flamborough Head Shoreline Management Plan (SMP) 2 (2007)².

¹ <https://www.scarborough.gov.uk/home/environment/coastal-protection>

² <http://www.northeastsmp2.org.uk/docs/finalsmp2/nontech/Hartlepool-NTS.pdf>



Legend:
 Site Location

S0	P01	12/07/2022	For Review and Comment	MCP	IJ	IJ
SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR

Title:
Site Location Plan

Figure: 1 Drawing No: PB2176-RHD-ZZ-XX-DR-Z-0001

Co-ordinate system: British National Grid	Page Size: A3	Scale: 1:50,000
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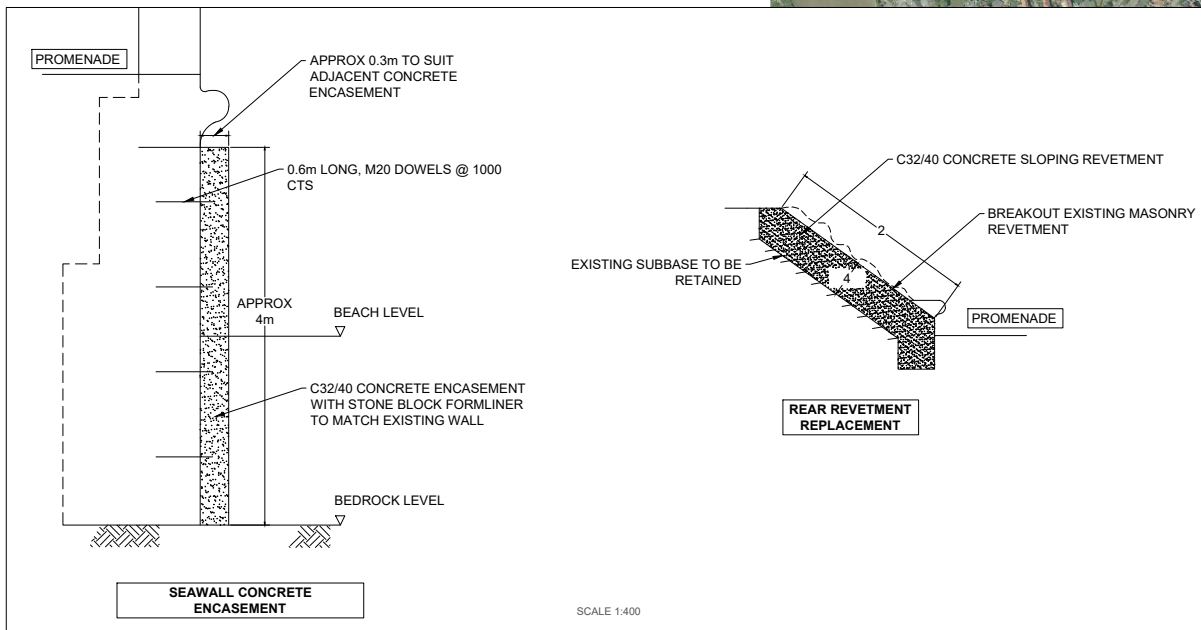
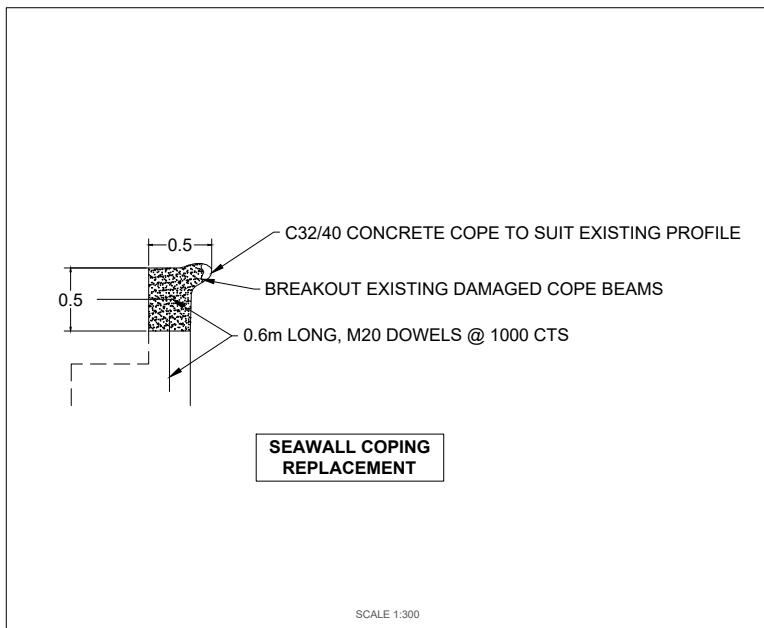
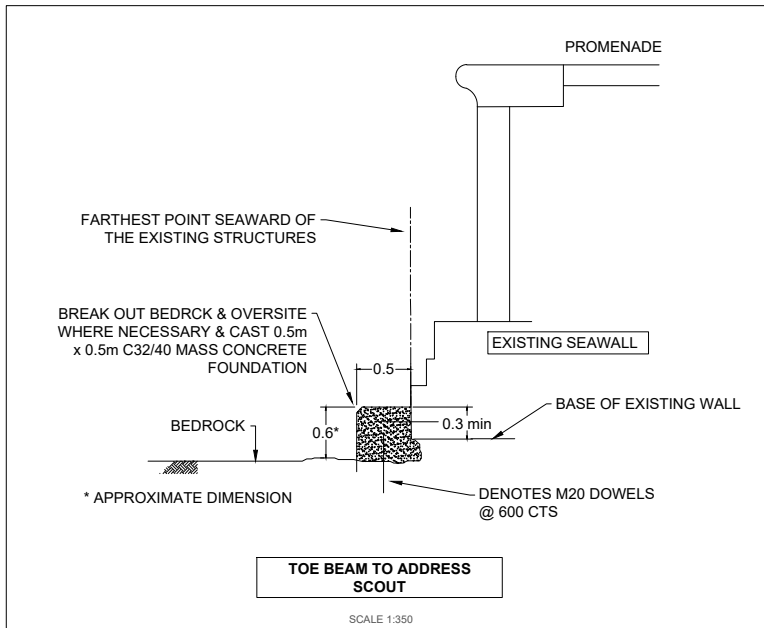
Client Project: Scarborough Borough Council - North Bay	Report: EIA Screening Report
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DO NOT SCALE



SITE PLAN
SCALE 1:5000

NOTES

- ALL LEVELS IN METRES RELATIVE TO ORDNANCE DATUM NEWLYN.
- ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
- DO NOT SCALE FROM THIS DRAWING.

LEGEND

- LENGTH OF PROPOSED REPAIR WORKS (APPROX)
- AREA OF PROPOSED REPAIR WORKS (APPROX)
- BLUE - PHASE 2
- RED - PHASE 3

FOR APPROVAL

P02	08/06/22	FOR INFORMATION	JR	SB	SB
P01	18/03/22	FOR INFORMATION	DJH	SB	SB
REV	DATE	DESCRIPTION	BY	CHK	APP

REVISIONS

PROJECT
SCARBOROUGH
NORTH BAY REPAIRS



TITLE
NORTH BAY
URGENT WALL IMPROVEMENTS
SITE PLAN



DRAWN	J.R.	CHECKED	S.B.	APPROVED	S.B.
DATE	JUNE 2022	SCALE	AT A1	AS SHOWN	REF: PC2176
DRAWING No.	PC2176-RHD-XX-XX-DR-C-0002	SUITABILITY	S4	REVISION	P02

1.1.1 Strategic Context

The coastal defence assets in North Bay are Victorian in age, dating back to 1890 and extend around North Bay from the Sea Life Centre in the North to the Castle headland and around into South Bay. The assets which are the subject of the North Bay Urgent Wall Improvements run from just south of the Sea Life Centre to the start of the East Pier, Castle Headland and the Holms coast protection scheme at the southern end of North Bay, which was completed in 2005. There have been many developments and modifications to the structures over the last hundred years.

The 2009 Strategy assessed the structural stability of the assets as being at high risk of failure, with an annual probability of failure of 10% to 50% in any one year under the Do Nothing scenario.

The coastal defence assets consist of a variety of concrete and masonry near-vertical seawalls of varying heights and an assortment of access points (steps and slipways), which are in varying conditions. The capital works for Phase 1 of this North Bay Urgent Wall Improvements project were completed in 2014, and improved the condition of 15 m of seawalls in the North Bay Cliffs management unit and 525 m of seawalls in the Clarence Gardens management unit.

The intention of the 2022-23 Scarborough Coastal Defence Strategy Refresh is to review, and where appropriate, update the current preferred options in the Strategy based on the most up to date guidance, data, and information available. The preferred strategic options from the current 2009 Strategy are seawall repairs and slope stabilisation for the North Bay Cliffs MU and rock revetment, seawall repairs and slope stabilisation for the Clarence Gardens MU.

The 2009 Strategy recognises that in the short term, prior to any capital scheme being implemented for the two frontages, an option of *'emergency coastal slope and defence works and repairs to defences and landslips as and when required'* would be essential. In this context, the North Bay Urgent Wall Improvements project aims to facilitate future capital works projects by prolonging the life of the existing assets whilst the longer term strategic aspirations are determined. The Strategy operates within the framework of the 'Hold the Line' policy set out in the SMP2 (2007). The recent SMP2 health check process (2020) did not identify any requirement for further consideration of the policy units which this project falls under as part of the SMP Refresh.

1.2 Purpose of this report

This Environmental Impact Assessment (EIA) Screening Report is intended to provide the supporting information required by:

- (i) SBC to provide an EIA Screening Opinion in accordance with the Town and Country Planning (Environmental Impact Assessment) (EIA) Regulations 2017
- (ii) Marine Management Organisation (MMO) to provide an EIA Screening Opinion in accordance with the Marine Works (Environmental Impact Assessment) Regulations 2007, as amended

In summary, the above regulations require the following information to be provided alongside a request for an EIA Screening Opinion:

- a chart or map (or both) sufficient to identify the location of the project and of the regulated activity
- a description of the development, including:
 - the physical characteristics of the development, and where relevant, of demolition works

- the location of the development, with regard to the environmental sensitivity of geographical areas likely to be affected
- a description of the aspects of the environment likely to be significantly affected
- to the extent the information is available, a description of any likely significant effect of the proposed scheme on the environment, resulting from:
 - the expected residues and emissions and the production of waste
 - the use of natural resources, in particular soil, land, water and biodiversity
- such other information or representations as the person making the request may wish to make 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

A summary of the relevant regulations is provided in **Section 2**, with a description of the proposed works provided in **Section 3**. Summary details regarding the environmental baseline is provided in **Section 4**, whilst **Section 5** identifies the potential environmental impacts of the proposed scheme on the existing environment. **Section 6** presents the conclusions of this report.

2 Relevant Regulations

2.1 The Town and Country Planning (EIA) Regulations 2017

The Town and Country Planning (EIA) Regulations 2017 (SI 2017/571) includes two schedules of development, namely:

- Schedule 1: development that requires an EIA
- Schedule 2: development that may require an EIA depending on the scale of the development, its characteristics and the sensitivity of the environment in which the development will take place

This Report seeks a Screening Opinion from SBC on the requirement, or otherwise, for an EIA under the Town and Country Planning (EIA) Regulations 2017.

2.2 The Marine Works (Environmental Impact Assessment) (Amendment) Regulations 2017

The Marine Works (EIA) (Amendment) Regulations 2017 (SI 2017/588) includes two schedules of development:

- Schedule A1: development that requires an EIA
- Schedule A2: development that may require an EIA depending on the scale of the development, its characteristics and the sensitivity of the environment in which the development will take place

This Report seeks a Screening Opinion from the Marine Management Organisation (MMO) on the requirement, or otherwise, for an EIA under the Marine Works (EIA) (Amendment) Regulations 2017.

2.3 The Water Framework Directive 2000

The Water Framework Directive (WFD) (2000/60/EC) establishes a legal framework to protect and restore clean water across Europe and to ensure its long term sustainable use.

2.4 The Bathing Waters Directive 1976

The objective of the Bathing Waters Directive (76/160/EEC) is to protect public health and the environment from faecal pollution in areas designated as bathing waters.

3 Description of the Proposed Works

This section of the Report describes the proposed works, the programme of works, construction methodology, and operation and maintenance of the proposed works.

3.1 Site location and access

The proposed works are located within North Bay, Scarborough, adjacent to both Royal Albert Drive and North Bay Promenade. The assets which are the subject of the North Bay Urgent Wall Improvements run from just south of the Sea Life Centre to the start of the East Pier, Castle Headland and the Holms coast protection scheme at the southern end of North Bay (**Figure 1**).

Foreshore access from the promenade for vehicles and machinery is limited. To avoid having to track machinery long distances along the foreshore from the slipway at Peasholm Gap, and adjacent to The Sands residential development, it may be possible to temporarily re-open the slipway halfway along the Clarence Gardens frontage for the duration of the works.

An alternative access point is from the north at The Sea Life Centre, located at the northern end of the North Bay Promenade.

3.2 Programme of works

The proposed works are expected to take up to one year (12 months) to complete.

The beach in North Bay is a popular amenity beach and during the peak tourist season is extremely busy. Disruption from construction during the peak tourist season could have an adverse impact on local businesses and Scarborough's reputation as a premier seaside resort, therefore works should be programmed outside of the peak tourism season (school summer holidays July-August) as far as possible.

Additionally, as the works will be taking place on the foreshore in a tidal area the works will need to be programmed outside of the winter months (December-February) due to severe and unpredictable wave and weather conditions.

3.3 Proposed works and construction methodology

The proposed Phase 2 works involve the following repairs or replacement works (**Figure 2**):

- Installation of mass concrete scour protection at locations where undercutting of the wall has occurred due to erosion of the bed rock and/ or lowering of beach levels
- Replacement of eroded masonry sets with new concrete encasement
- Breaking out and replacement of a number of badly damaged promenade slabs and slipway slabs.
- Replacement of several badly damaged seawall copes (recurved)
- Replacement of damaged secondary defence wall.

The construction of the proposed works will involve using conventional land-based plant. It is not expected that other materials will be imported to site and no waste materials needing to be re-used, recycled or transported off-site for disposal.

The proposed works involve simple scour protection and re-facing repairs which are relatively easy to install and can be undertaken in localised sections but are constrained by tidal working and the need to minimise disruption to tourist use of the beach.

The wall repair scheme elements do not require planning permission and are unlikely to be controversial in terms of their impact on the seafront, therefore there is little risk of delays, objections or changes to the design as a result of licences, consents or application processes.

3.4 Operation and maintenance

It is envisaged that the proposed works will be very low maintenance and will also reduce damage potential to concrete elements installed previously. However, there will be regular walkover inspections during the operation and maintenance phase and repairs, if required, for future storm damage.

3.5 Decommissioning

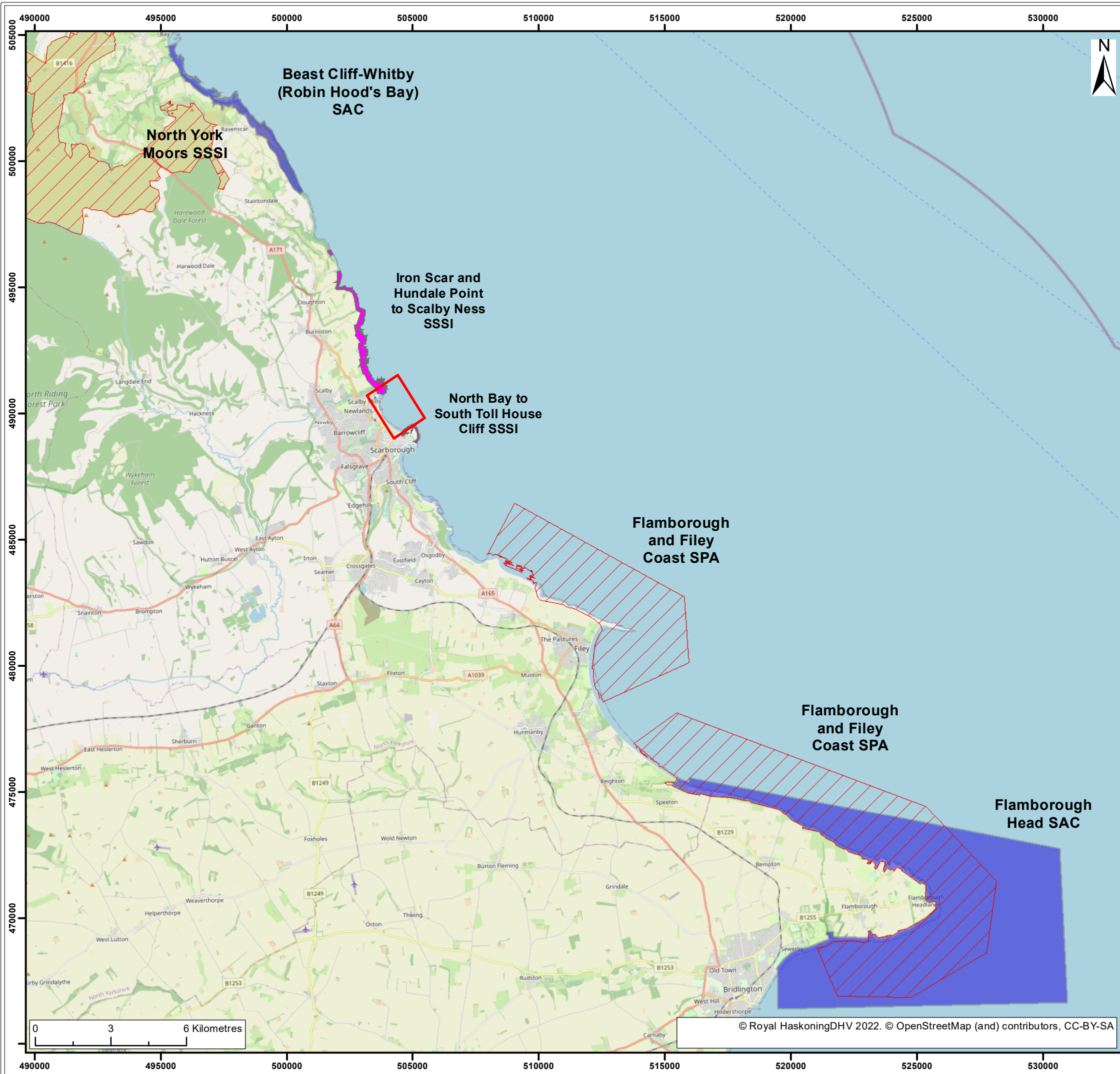
The works are not planned to be decommissioned.

4 Summary of Environmental Baseline

The following section provides details on the environmental baseline for the proposed works including relevant conservation designations. There are a number of such sites in relatively close proximity to North Bay, as shown in **Figure 3** and **Figure 4**, and detailed in **Table 4-1**.

Table 4-1 Designated sites located in close proximity to North Bay, Scarborough

Designated site	Distance/ Direction from North Bay	Reason for designation
Peasholm Park	190 m west	<ul style="list-style-type: none"> Registered parks and gardens (non-statutory)
North Bay to South Toll House Cliff SSSI	335 m southeast	<ul style="list-style-type: none"> The site comprises both cliff and foreshore exposures which together demonstrate a remarkably complete succession through the Callovian Stage and the Lower Oxfordian Substage.
Iron Scar and Hundale Point to Scalby Ness SSSI	350 m north northeast	<ul style="list-style-type: none"> The cliffs and intertidal reefs between Iron Scar and Scalby Ness provide an almost complete section through the rocks of the Lower and Middle Jurassic Aalenian, Bajocian and Bathonian Stages and the exposures here are of national importance. In addition, important fossil plant localities occur at Cloughton Wyke and Scalby Ness.
St Mary's Church	480 m southeast	<ul style="list-style-type: none"> Scheduled monument, also a Grade I listed building
Castle Hill	620 m east southeast	<ul style="list-style-type: none"> Scheduled monument
Flamborough and Filey Coast SPA	5.5 km southeast	<ul style="list-style-type: none"> Gannet, <i>Morus bassanus</i> - A016, b Guillemot, <i>Uria aalge</i> - A199, b Kittiwake, <i>Rissa tridactyla</i> - A188, b Razorbill, <i>Alca torda</i> - A200, b Seabird assemblage
Beast Cliff-Whitby (Robin Hood's Bay) SAC	8.7 km north	<ul style="list-style-type: none"> H1230 Vegetated sea cliffs of the Atlantic and Baltic coasts
North York Moors SPA	10.4 km north northwest	<ul style="list-style-type: none"> Golden plover, <i>Pluvialis apricaria</i> - A140, b Merlin, <i>Falco columbarius</i> - A098, b
Flamborough Head SAC	17.7 km southeast	<ul style="list-style-type: none"> H1170 Reefs H1230 Vegetated sea cliffs of the Atlantic and Baltic coasts H8330 Submerged or partially submerged sea caves



Legend:


- Site Location
- Sites of Special Scientific Interest (England) © Natural England
- Special Protection Areas (England) © Natural England
- Special Areas of Conservation (England) © Natural England

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Designated Sites

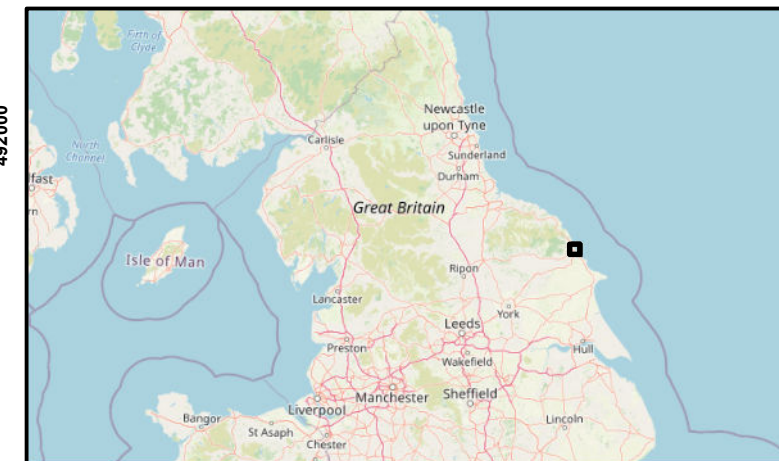
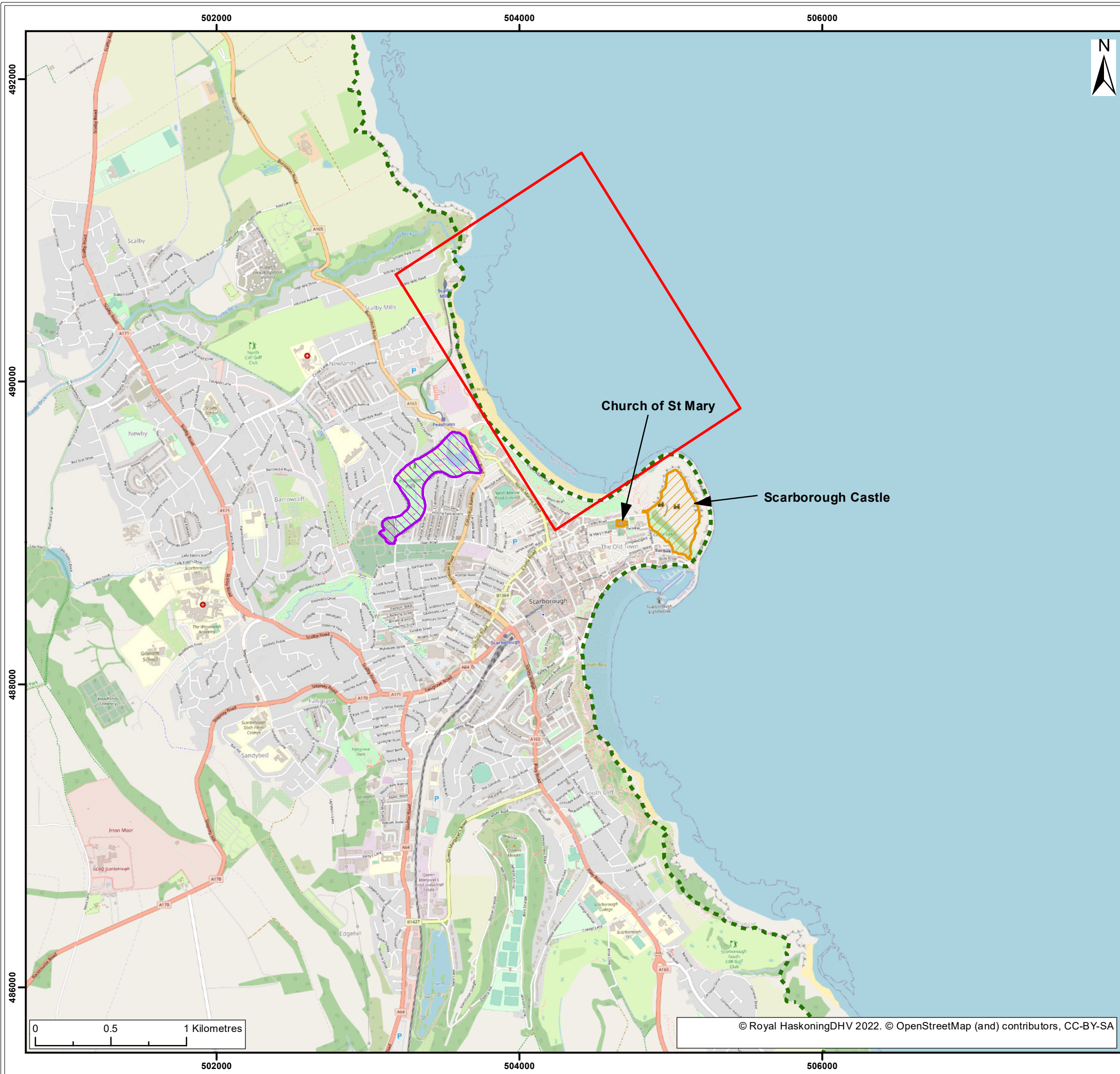
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- Legend:
- Site Location
 - Scarborough Castle and Church of St Mary
 - Peasholm Park
 - England Coast Path Route

S0	P01	12/07/2022	For Review and Comment	MCP	IJ	IJ
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Title:

**Scheduled Monuments and
Registered Parks and Gardens**

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4.1 Nature conservation designations and biodiversity

There are no Special Areas of Conservation (SAC), Special Protection Areas (SPA) or Ramsar sites located at North Bay or immediately adjacent. The closest site is the Flamborough and Filey Coast SPA, located approximately 5.5 km to the southeast. There are two Sites of Special Scientific Interest (SSSI) located in close proximity to North Bay, one at the northern end and one at southern ends. However, these are designated for geological purposes (see **Section 4.2**) and are therefore not applicable to this section of the Report.

There are no Marine Conservation Zones (MCZs) located at North Bay. The closest MCZ to North Bay is located at Runswick Bay, approximately 30 km north.

The intertidal zone in front of the existing defences comprises mostly sand, with patches of rocky shore present towards the south and around the Sea Life Centre in the north. The sandy intertidal zone is considered to be of low biodiversity value; however the rocky shore is deemed to be of moderate importance due to its potential to support foraging birds. The rocky intertidal zone in front of the Sea Life Centre and around Scalby Ness is known to support overwintering birds. The number of individuals present is not known to be nationally significant (Halcrow, 2008).

There are no habitats listed on the Priority Habitat Inventory³ along the North Bay frontage, seaward of the existing defence (e.g., maritime cliff and slope, mudflat, saltmarsh, sand dunes). The closest such habitat is an area of deciduous woodland located approximately 50 m inland of the existing defence, to the north of the open air theatre.

4.2 Geology and soils

There are two Sites of Special Scientific Interest (SSSI), designated for geological purposes, located in close proximity to North Bay, one at the northern end and one at southern end.

4.2.1 Iron Scar and Hundale Point to Scalby Ness SSSI

Iron Scar and Hundale Point to Scalby Ness SSSI is located immediately north of the Sea Life Centre. The cliffs and intertidal reefs between Iron Scar and Scalby Ness provide an almost complete section through the rocks of the Lower and Middle Jurassic Aalenian, Bajocian and Bathonian Stages and the exposures here are of national importance. In addition, important fossil plant localities occur at Cloughton Wyke and Scalby Ness.

This SSSI was classified as being 100% favourable within Natural England's Condition Summary in February 2022⁴. The site is also considered to be of national importance in the Geological Conservation Review due to its Palaeobotanical interest.

4.2.2 North Bay to South Toll House Cliff SSSI

North Bay to South Toll House Cliff SSSI is located around the Holms and along the north side of Castle Headland. The site comprises both cliff and foreshore exposures which together demonstrate a remarkably complete succession through the Callovian Stage and the Lower Oxfordian Substage.

³ <https://naturalengland-defra.opendata.arcgis.com/datasets/priority-habitat-inventory-north-england/explore?location=54.297473%2C-0.401710%2C15.214>

⁴ <https://designatedsites.naturalengland.org.uk/SiteUnitList.aspx?SiteCode=S1003380&SiteName=iron%20scar&countyCode=&responsiblePerson=&unitId=&SeaArea=&IFCAArea=>

Two of the SSSI units were classified as being 100% favourable by Natural England's Condition Summary in February 2013⁵. However, one unit, the geological cliff exposures (ref. 1012829) was assessed as unfavourable – declining. The Natural England Designated Site View portal states “*The development of scrub and other vegetation is obscuring geological features and access to them. Work is required to remove scrub in targeted areas.*” It is not known whether such works have been undertaken and the unit returned to a favourable condition.

The site is also considered to be of national importance in the Geological Conservation Review for the cliff and foreshore exposures.

4.3 Archaeology and cultural heritage

There are no World Heritage Sites at North Bay or immediately inland.

The principal built heritage feature within the North Bay area is Scarborough Castle which surmounts Castle Headland to the south of North Bay (**Figure 4**). The castle is a Scheduled Monument and is open to the public on a seasonal basis (English Heritage 2012). The ruins and below ground remains of St Mary's medieval church, also a Scheduled Ancient Monument, are located on Castle Headland to the west of Scarborough Castle (English Heritage, 2012). There are no protected ship wreck sites within the vicinity of North Bay.

There are a number of listed buildings inland and south of North Bay, many of which border the A165 road. The southern part of North Bay, from Peasholm Gap southwards is within the Scarborough Conservation Area. Conservation Areas are designated by local Councils for “*areas of special architectural or historic interest, the character or appearance of which is desirable to preserve or enhance*”.

4.4 Tourism and recreation

The town supports a substantial leisure and tourism industry, providing in the order of 4,000 full time equivalent jobs and generating annual revenues estimated at around £140 million. An essential feature of this tourism is the traditional beach use and this, both within North Bay (and South Bay), are key local recreational aspects of the frontage (Halcrow, 2008). North Bay is a Blue Flag beach, which is awarded to beaches that are compliant with 32 criteria covering water quality, environmental management, safety and services and environmental education and information.

The coastal recreation opportunities within and immediately adjacent to North Bay include walking along the beach, water sports, fun parks and attractions including Peasholm Park, miniature railway, golf at Scarborough North Cliff Golf Club, Scarborough open air theatre and Scarborough Sea Life Centre. There are also 70 self-catering apartments located at The Sands development, which is located immediately north of Peasholm Gap.

Scarborough North Bay is bordered by the England Coastal Path, specifically the section which runs from Filey Brigg to Newport Bridge in Middlesbrough. Part of this stretch comprises the coastal part of the existing Cleveland Way National Trail. The Cleveland Way National Trail is a 176 km walking route which starts at the market town of Helmsley and runs around the North York Moors National Park and along the North Yorkshire coastline to Filey (National Trail, 2012).

⁵

<https://designatedsites.naturalengland.org.uk/SiteUnitList.aspx?SiteCode=S1004394&SiteName=North%20Bay%20to%20South%20Toll%20House%20Cliff%20&countyCode=&responsiblePerson=&unitId=&SeaArea=&IFCAAra=>

At Scarborough, the trail passes through Scalby Mills past the Sea Life Centre and along the seafront at North Bay. The trail leaves North Bay by turning off the seafront onto Albert Road where it passes up onto the cliff top. The main advantage for the coastal sections of this existing National Trail becoming part of the England Coast Path (**Figure 4**) is the ability of the path to adapt to coastal erosion via rollback. This rollback approach ensures that the path will be available for walkers in perpetuity.

4.5 Critical infrastructure

The A165 runs approximately north-south from Burniston in the north, and through Scarborough, and onto Bridlington, 25 km to the south. It is located approximately 150 m west of North Bay at Peasholm Gap. Adjacent to the coast at the southern end of North Bay runs Royal Albert Drive, which was protected by the 2005 East Pier, Castle Headland and the Holms scheme, and which is the main coastal route linking Scarborough's North Bay and South Bay.

Yorkshire Water completed work, in 2012, to improve the storage, transfer and treatment of storm water in Scarborough, at five locations across the town including Scalby Mills and Peasholm Gap at the centre of the North Bay frontage (Yorkshire Bathing Water Partnership, 2011). The work included a new pumping station at Scalby Mills adjacent to the existing station. While the work at Peasholm Gap involved the installation of an underground storm overflow chamber.

The Royal National Lifeboat Institution (RNLI) maintains a lifeguard station at Scarborough South Bay, while North Bay is a lifeguarded beach. There are a number of access points onto the foreshore from the promenade, including steps and slipways.

4.6 Water

4.6.1 Bathing waters

The objective of the Bathing Waters Directive (76/160/EEC) is to protect public health and the environment from faecal pollution in areas designated as bathing waters. Designated bathing waters require regular water quality monitoring, carried out by the Environment Agency, throughout the bathing season (15 May to 30 September) to ascertain whether they meet mandatory or guideline standards. Guideline standards are 20 times stricter than the mandatory standard, and meeting the guideline standard is one of the main criteria for the award of the European Blue Flag status.

North Bay is a designated bathing water. Water quality is currently classified by the Environment Agency as 'excellent', meaning that the water meets the stricter UK standards of the Bathing Water Directive⁶.

A catchment of approximately 60 km² drains into the North Bay bathing water (

⁶ <https://environment.data.gov.uk/bwq/profiles/profile.html?site=uke2206-07300>

Figure 5). Peasholm Beck, a partly culverted stream runs through the northern half of Scarborough town and drains into Peasholm Lake. The overflow from the lake discharges into North Bay through a storm overflow close to the bathing water. The bathing water is also affected by Scalby Beck which drains into the North Sea to the north of the bathing water.

Scalby Beck passes through a partly rural and partly urban catchment. At the top of Scalby Beck is a flood gate which separates the watercourse from the River Derwent. During normal weather the flood gate is closed. However, during or after heavy rainfall, this flood gate opens releasing flood water from the River Derwent into Scalby Beck (Environment Agency, 2021).

4.6.2 Water Framework Directive

The Water Framework Directive (WFD) (2000/60/EC) establishes a legal framework to protect and restore clean water across Europe and to ensure its long term sustainable use. The following water bodies are present within North Bay (

Figure 5):

- **river** - the Burniston Beck/ Sea Cut/ Scalby Beck Catch to North Sea water body⁷ (**Table 4-2**)
- **coastal** - the Yorkshire North coastal waterbody⁸, extending from Staithes in the north to Flamborough in the south (**Table 4-3**)
- **groundwater** - the Derwent North Yorkshire Moors Ravenscar groundwater body⁹ (**Table 4-4**)

Table 4-2 Burniston Beck/ Sea Cut/ Scalby Beck Catch to North Sea water body

Parameter	Detail
Overview	
Waterbody ID	GB104027067980
Type	River
Hydromorphological designation	Heavily modified
Catchment area	3,212.6 ha
Length	22.4 km
Classifications	
Overall waterbody	Moderate (2019)
Ecological	Moderate (2019)
Biological quality elements	Good (2019)
]Physico-chemical quality elements	High (2019)
Hydromorphological supporting elements	Supports good (2019)
Supporting elements (surface water)	Moderate (2019)
Specific pollutants	-
Chemical	Fail (2019)
Priority hazardous substances	Fail (2019): <ul style="list-style-type: none"> • polybrominated diphenyl ethers (PBDE) • perfluorooctane sulphonate (PFOS) • mercury and its compounds
Priority substances	Good (2019)
Other pollutants	Does not require assessment (2019)

Table 4-3 Yorkshire North Coastal Body

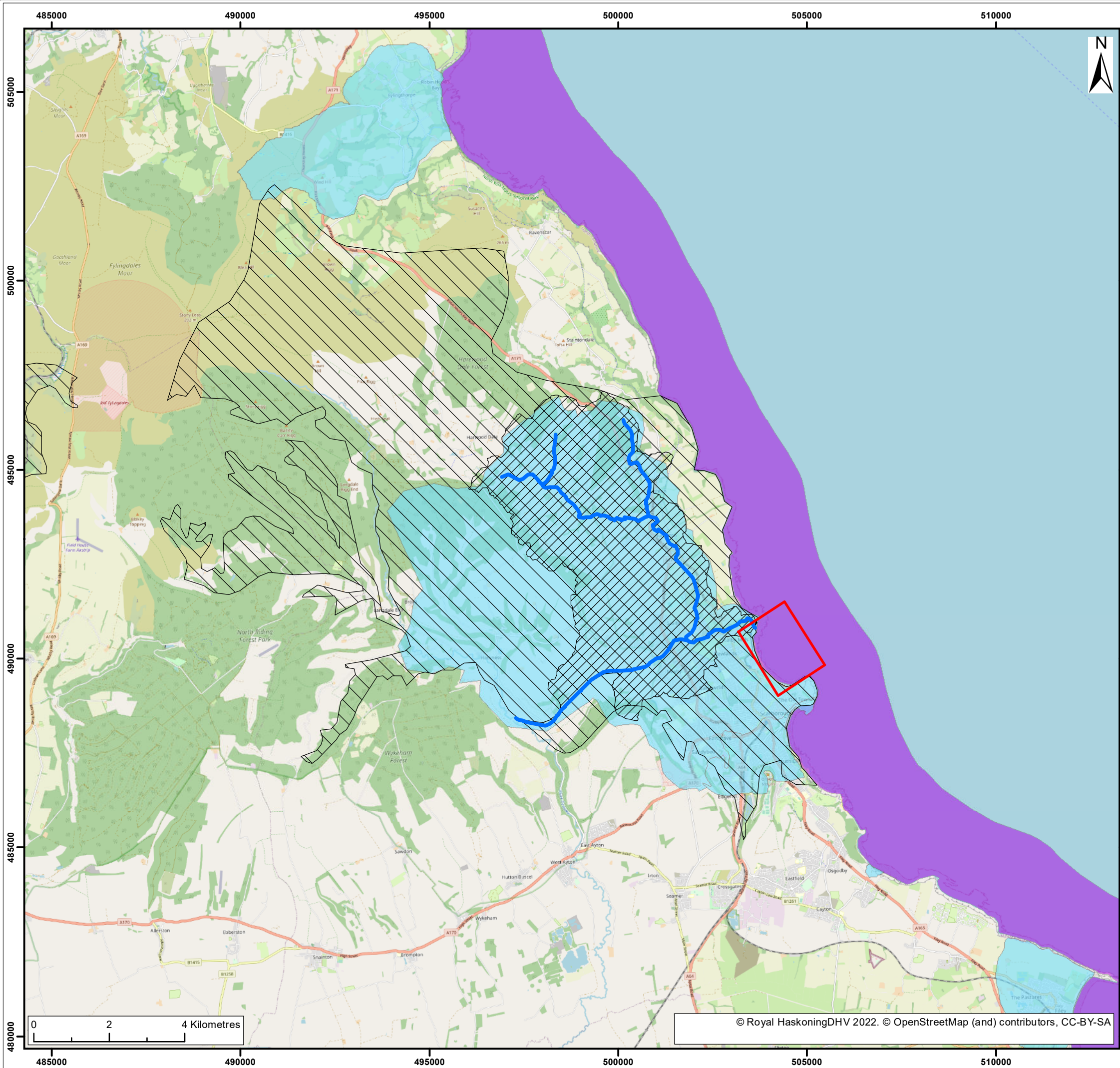
Parameter	Detail
Overview	
Waterbody ID	GB650401500004
Type	Coastal water
Hydromorphological designation	Heavily modified
Surface area	18,049.1 ha
Classifications	

⁷ <https://environment.data.gov.uk/catchment-planning/WaterBody/GB104027067980>⁸ <https://environment.data.gov.uk/catchment-planning/v/c3-draft-plan/WaterBody/GB650401500004>⁹ <https://environment.data.gov.uk/catchment-planning/v/c3-draft-plan/WaterBody/GB40402G700800>

Parameter	Detail
Overall waterbody	Moderate (2019)
Ecological	Moderate (2019)
Biological quality elements	Good (2019)
Physico-chemical quality elements	High (2019)
Supporting elements (surface water)	Moderate (2019)
Specific pollutants	High (2019)
Chemical	Fail (2019)
Priority hazardous substances	Fail (2019): <ul style="list-style-type: none"> polybrominated diphenyl ethers (PBDE) mercury and its compounds
Priority substances	Good (2019)
Other pollutants	Does not require assessment (2019)

Table 4-4 Derwent North Yorkshire Moors Ravenscar Water Body

Parameter	Detail
Overview	
Waterbody ID	SE6798095373
Type	Groundwater
Hydromorphological designation	Not applicable
Groundwater area	40,950.1 ha
Classifications	
Overall waterbody	Poor (2019)
Quantitative	Good (2019)
Chemical	Poor (2019)
Trent Assessment	Upward (2019)



Legend:

- Site Location
- Burniston Beck / Sea Cut / Scalby Beck Catch to North Sea
- Derwent North Yorkshire Moors Ravenscar
- WFD_Coastal_Water_Bodies_Cycle_2
- Surface Water Catchment Boundary
- Surface Water Course

S0	P01	12/07/2022	For Review and Comment	MCP	IJ	IJ
SUI	REV	DATE	DESCRIPTION	DRW	CHK	APR


Title:

WFD Waterbodies and Bathing Waters

Figure: 5 Drawing No: PB2176-RHD-ZZ-XX-DR-Z-0005

Co-ordinate system: British National Grid	Page Size: A3	Scale: 1:100,000
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Client Project: Scarborough Borough Council - North Bay	Report: EIA Screening Report
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4.7 Landscape and seascape character

The most dominant landscape feature at North Bay is Castle Headland, which divides North Bay and South Bay, rising to 78 m Above Ordnance Datum (AOD). From Scalby Ness, where the cliffs rise to approximately 37 m AOD, to the centre of North Bay at Peasholm Gap, the sea frontage is mostly sandy beach, backed mainly by recreational uses, protected by the sea wall (Halcrow, 2008).

Between Peasholm Gap and Castle Headland, the sea wall continues along Royal Albert Drive, which fronts a broad sandy beach backed by a cliff which grows in height to become the headland. Rock armour is present in front of the seawall at the very southern end of North Bay. Late 19th century terraced housing, mainly providing holiday accommodation, line the cliff tops (Halcrow, 2008). The cliff slopes are primarily semi-natural grassland, with footpaths and some recreational facilities.

There are no designated 'Areas of Outstanding Natural Beauty' (AONB) within or close to the study area.

4.7.1 National Character Areas

Natural England has divided England into 159 'National Character Areas' (NCA) (previously Joint Character Areas), which have similar landscape character at the national scale. The study area is located within the North Yorkshire Moors and Cleveland Hills NCA (Natural England, 2012)¹⁰. The area is a clearly demarcated block of high land in the northeast of Yorkshire and Cleveland. Along the area's southern margin the Tabular Hills dip gently to the south and east but there is still a distinct change in slope where the land drops down to the Vale of Pickering to the southwest of Scarborough.

4.7.2 Seascape character

The closest Heritage Coast to North Bay is North Yorkshire and Cleveland Coast, which has its southern limit at Scalby Ness. This Heritage Coast is the seaward edge of the North York Moors National Park and consists of high cliffs and headlands cut by bays and woodland (Natural England, 2012).

¹⁰ <http://publications.naturalengland.org.uk/publication/2646022?category=587130>

5 Potential Environmental Impacts

Table 5-1 provides an overview of the potential environmental impacts that could arise as a result of the proposed scheme and, where applicable, describes measures that have been identified to date to avoid or mitigate these impacts throughout the development of the proposed scheme. Given the nature and location of the proposed scheme, the following aspects are considered relevant:

- Flood risk and coastal defence
- Coastal processes
- Navigation
- Water and sediment quality
- Biodiversity flora and fauna
- Waste
- Land quality and geology
- Landscape and visual
- Tourism and recreation
- Noise and vibration
- Air quality
- Road traffic
- Archaeology and cultural heritage
- Land use
- Human health
- Major accidents and disasters (including climate change)
- Cumulative impacts

To avoid or mitigate any adverse impacts that could arise as a result of the proposed scheme, industry good practice guidance will be adhered to throughout the programme of construction works, such as:

- Pollution Prevention Guidelines/ Guidelines for Pollution Prevention¹¹, e.g., GPP5: works in, near or liable to affect watercourses and PPG6: working at construction and demolition sites
- CIRIA Environmental Good Practice on Site Guide (CIRA report C741)

Table 5-1 Description of the potential environmental impact of the proposed scheme

Identification of potential effect or impact	Characteristics of the potential effect or impact
Flood risk and coastal defence	
Flood risk and drainage	<p>The proposed scheme footprint is located in Flood Zone 3¹².</p> <p>Given the coastal location, construction workers could be subject to health and safety risks during construction as a result of sea flooding events.</p> <p>Best practice measures will be adopted (including signing up to flood alerts) to minimise flood risk to construction workers and plant during the construction phase.</p> <p>The works are also considered to be water compatible development.</p>
Changes to coastal erosion	<p>The proposed scheme is designed to prevent erosion of the North Bay promenade over a length of approximately 1.5 km. The bay is confined to the north by Scalby Rocks and to the south by Castle Cliff, there is not expected to be acceleration of erosion elsewhere along the coastline.</p>
Coastal processes	
Changes to coastal processes	<p>The preferred option aims to repair the existing defences through re-facing the seawall and replacement of toe protection, where required. These works would result in approximately 50 m of toe protection being extended 0.5 m seawards and also approximately 50 m of seawall extending approximately 0.3 m seawards as a result of the resurfacing works. These changes are deemed to be negligible when considering their potential to affect the existing coastal processes.</p>
Navigation	

¹¹ <https://www.netregs.org.uk/environmental-topics/guidance-for-pollution-prevention-gpp-documents/guidance-for-pollution-prevention-gpps-full-list/>

¹² <https://flood-map-for-planning.service.gov.uk/flood-zone-results?easting=503782&northing=489748&location=north%2520bay%2520scarborough&fullName=%2520&recipientemail=%2520>

Identification of potential effect or impact	Characteristics of the potential effect or impact
Impacts upon shipping	There are no marinas or ports located within North Bay, therefore, there will be no impact on navigation or navigational channels.
Deposition of sediment within navigational channels	Due to only localised and small magnitude effects upon existing relatively coarse foreshore sediments, there is not expected to be any impact on navigational channels caused by deposition of disturbed sediment.
Water and sediment quality	
Accidental spills or leaks causing contamination of water during construction	The proposed works have the potential to affect the status of the coastal waterbody and river waterbody through the release of fuels from accidental leaks or spillages. Mitigation measures will be implemented during the construction phase (through the implementation of the Construction Environmental Management Plan (CEMP)) to reduce the potential for reductions in water quality, including the use of drip trays underneath machinery.
Impact to water and sediment quality	The hydromorphology of the waterbody is considered unlikely to change given that the works are effectively maintaining the present day conditions, with no significant changes to the existing structures.
Impact to groundwater	Given the nature and location of the proposed works, it is considered that there is no mechanism for impacts on the groundwater body. It is also considered that the works would not influence the bathing water quality at North Bay (due to the controls which would be adopted during construction). The contractors will adhere to best practice when undertaking the works and will adhere to Environment Agency guidelines, with the aim of maintaining the status of the WFD waterbodies. With such measures in place, no significant impacts are predicted.
Biodiversity flora and fauna	
Impacts to terrestrial ecology	It is understood that the areas of rocky foreshore to the north and south of the bay are utilised by feeding birds. Given the nature of the proposed works (i.e. localised small scale repairs) and the fact that the foreshore is subject to recreational use (and therefore birds are likely to be accustomed to the presence of people on the foreshore), it is considered unlikely that significant disturbance impacts would arise to feeding birds on the areas of rocky foreshore.
Impacts to marine ecology	
Impacts to birds using adjacent designated sites for nature conservation	There are no designated sites for nature conservation located adjacent to North Bay. The closest designated site for nature conservation is the Flamborough and Filey Coast SPA, located approximately 5.5 km southeast. Therefore, no significant impacts are predicted.
Impacts to protected species	There would be a negligible loss of intertidal habitat as a result of the proposed works, as the repair work would extend the existing footprint by approximately 0.5 m.
Waste	
Generation of waste	It is expected that minimal waste will be generated during the construction phase and construction good practice will be followed as well as compliance with relevant waste legislation. No wastes are predicted to be generated during operation. Therefore, no significant impact is envisaged regarding waste generation and management.
Land quality and geology	
Potential risk to health of construction workers	As the proposed scheme involves repairing existing concrete infrastructure, in the inter-tidal environment, there is no requirement for humans to interact with soils / groundwaters during the works, and therefore no mechanism for humans to come in contact with potentially contaminated soils or groundwaters. No significant impacts to health of construction workers are predicted.
Potential impact to features of geological interest	The proposed works footprint is not located within a designated site of geological interest. There are two designated sites for geology located in close proximity to the North Bay:

Identification of potential effect or impact	Characteristics of the potential effect or impact
	<ul style="list-style-type: none"> North Bay to South Toll House Cliff SSSI - 335 m southeast Iron Scar and Hundale Point to Scalby Ness SSSI - 350 m north northeast <p>The proposed scheme will not disturb underlying ground, therefore, there is no potential for direct impacts on these SSSI's. In addition, the proposed works are predicted to have a negligible impact on coastal processes; as a result, it follows that indirect impacts to the SSSI's due to a change in coastal processes would not occur.</p>
Impacts to land quality (contaminated land)	The proposed scheme will not change the nature/ use of the land. Due to the small scale, temporary nature of the proposed scheme there will be no impact to land quality.
Potential reduction in soil/ water quality due to accidental spill or leak causing contamination of sediment during construction	As with any construction project at the coastal margin, there is potential for reductions in water quality due to the spillage or leakage of fuels / oils from construction plant. To minimise the risk of such impacts occurring, a CEMP will be prepared and implemented for the proposed scheme which will include pollution prevention control measures and measures to deal with any spills or leaks during construction activities.
Landscape and visual	
Potential effect on landscape character and visual impact	<p>The proposed works will temporarily affect the local landscape / seascape character and amenity value through the presence of construction materials, machinery and personnel. In addition to adhering to best practice guidance, the following measures are proposed to minimise any adverse effects:</p> <ul style="list-style-type: none"> locally advertising the proposed works conducting the works outside of the peak tourism period (if possible) informing local residents of the proposed works <p>During operation, the proposed works are considered unlikely to significantly impact upon the existing landscape/ seascape as they do not represent a change to the present day management of the frontage.</p>
Tourism and recreation	
Reduction in access during and after construction	The proposed construction works have the potential to effect recreational users of the area through increased noise and vibration, increased traffic, reduced access to the beach and visual impacts. It is likely that temporary restrictions to the workings areas along the frontage will need to be put in place to manage health and safety restrictions to members of the public.
Potential impact on tourism	<p>The significance of impacts to tourists and recreational users will be dependent on the proposed construction programme. If the construction works could be undertaken during the winter months rather than the summer, impacts to tourists and recreational users would be significantly reduced given the increased visitor numbers during the summer months.</p> <p>The avoidance and mitigation measures proposed for noise and vibration and landscape, seascape and visual amenity value will assist with reducing the significance of impacts to tourism and recreational users. The proposed construction works should also be scheduled around any pre-organised events or festivals along the frontage, where possible. As such the potential adverse effects to tourism and recreation are considered to be minor.</p> <p>It is considered that the degradation and eventual loss of the existing defences in the absence of the proposed works would result in a significantly greater impact on the tourism and recreational resources than the short term construction phase impacts anticipated to arise from the proposed scheme.</p>
Noise and vibration	
Generation of noise and vibration during construction	There are a number of residential properties within close proximity to the proposed works (within 100 m). The beach area at North Bay is a popular location for walking and various other

Identification of potential effect or impact	Characteristics of the potential effect or impact
	<p>recreational activities. Although there are no ecologically designated sites within North Bay, it is understood that the areas of rocky shore do provide habitat for feeding birds.</p> <p>There is therefore potential for the proposed scheme to impact upon a variety of human (and ecological) receptors due to noise and vibration disturbance. In order to limit disturbance, the proposed works should be undertaken outside of the peak tourism period where possible. Information signs will be placed around the site compound providing contact details for any complaints to be sent to and addressed.</p> <p>In addition, a letter drop exercise should be carried out to all affected residents and commercial properties, well in advance of the proposed works stating the proposed construction period and providing contact details in case of complaint. Machinery used during the construction phase should be well maintained and switched off when not in use to reduce unnecessary noise.</p> <p>In order to reduce the potential effects to residential and commercial properties within the area, the proposed working hours will be confirmed with Scarborough Borough Council in advance (recognising the tidal constraints within the works area).</p>
Air quality	
Increase in road traffic during construction	<p>The proposed construction works are not being carried out in or near to an Air Quality Management Area (AQMA)¹³.</p> <p>It is envisaged that the majority of the construction of the Phase 2 works will be undertaken over a 5-month period between May 2023 (mobilisation) and September 2023, contingent on procurement of a suitable Contractor and receipt of the necessary funding. It is likely that the works will pause over the months of July and August to minimise the impact on tourism. The final stage of construction will be completed upon receipt of the MMO licence, in the appropriate months, likely to be April/ May 2024.</p> <p>A limited number of well-maintained construction plant is predicted to be required during construction; as a result, it is not expected that there will be a significant impact on air quality during construction (with no impact predicted during operation). The construction contractor will adhere to a CEMP which will include measures to manage / control air quality impacts during construction.</p>
Road traffic	
Increase in road traffic during construction	<p>The delivery of equipment and materials to site is anticipated to be by road, e.g. the A165. It is considered that traffic management systems and consultation with affected parties (including residential and commercial properties) are likely to be required in order to reduce the potential impact on road traffic. The proposed works will be locally advertised with a letter drop to all properties within 500 m of the proposed works. It is also suggested that delivery times could be organised to not coincide with peak traffic periods, such as commuting periods.</p>
Archaeology and cultural heritage	
Loss or damage to existing assets of archaeological significance	<p>There are no designated heritage assets within the proposed working areas at North Bay. There are a number of heritage assets located inland of the defences, as well as to the south. The proposed works will ensure that the life of the existing asset is prolonged, delaying the need for a much larger capital project which could have greater potential for impact to known and currently unknown heritage assets.</p> <p>Consultation with SBCs Conservation Officer during 2012, prior to commencement of the previous phase of repair works along the frontage, confirmed that phased repair works would have no adverse impacts on the character or appearance of the Scarborough Conservation Area. As the proposed works are very similar to those previously undertaken within North Bay, it is concluded</p>

¹³ <https://uk-air.defra.gov.uk/aqma/maps/>

Identification of potential effect or impact	Characteristics of the potential effect or impact
	that the same position would apply with regard to impact on the Conservation Area, i.e., no adverse impacts on the character or appearance of the Conservation Area.
Loss or damage to previously unidentified finds of archaeological significance	<p>The risk of encountering previously unidentified archaeological remains is low given the proposed scheme does not involve excavation of soils during construction.</p> <p>If previously unidentified archaeological remains are encountered during construction, these interactions would be of relatively small-scale, and the extent of any impact will depend on the presence, nature and depth of any archaeological remains present.</p> <p>Any impacts would therefore be anticipated to occur within a small and well-defined footprint area. To mitigate any potential impacts, i.e., loss of or damage to previously unknown archaeological finds, a programme of archaeological recording will take place, should any archaeological finds or features be identified. Following the implementation of agreed mitigation, the impact of the proposed scheme to cultural heritage is not considered to be significant.</p>
Change to the setting	The proposed works footprint is located within a recreational setting. The use of machinery and vehicles is not characteristic of this setting. However, the nature of the works is in line with current use and coastal infrastructure of the setting and, therefore, will not impact or change the setting.
Land use	
Changes in land use	The proposed scheme footprint is located within a recreational setting. There is no proposed to change the land use of the setting.
Major accidents, disasters and climate change risk	
Risk of major accident/disaster to the proposed scheme	The main disaster risk to the proposed scheme is associated with flood risk as the works are located within Flood Zone 3 ¹⁴ . As noted earlier, significant flood risk impacts are not anticipated as the contractor will sign up to receive flood alerts, and consequently significant disaster related risks are not predicted. The contractor will also prepare an Emergency Response Plan (ERP).
Release of greenhouse gases during construction	The construction works will result in the release of greenhouse gases due to the requirement for construction plant. However, the works will be small scale in nature and the construction phase is not predicted to cause a significant increase in road traffic. Therefore, no significant climate change impacts are anticipated.
Human health	
Human health - Reduction in human health	The pathways for possible reductions in human health are linked to land quality, noise and vibration, water and sediment quality, air quality and climate change. However, as noted above, significant impacts are not predicted for any of these parameters, and therefore no significant impacts on human health are anticipated.
Cumulative impacts.	
<p>There are no other known planned or permitted developments within the surrounding area of the works that are considered to have the potential to generate a significant cumulative impact.</p> <p>Given that no significant environmental impacts are predicted from the proposed scheme, it is concluded that there would be no potential for significant cumulative impacts with other planned and proposed schemes around North Bay, Scarborough, for either the construction or operational phases.</p>	

¹⁴ <https://flood-map-for-planning.service.gov.uk/flood-zone-results?easting=503800&northing=489746&location=scarborough&fullName=%2520&recipientemail=%2520>

6 Conclusion of the EIA Screening Report

This EIA Screening Report is intended to provide the information required to assist the MMO and SCC in forming screening opinions in accordance with the relevant EIA Regulations.

The proposed scheme does not fall within the development types listed in Schedule A1 of the Marine Works (EIA) Regulations 2007 (as amended), or Schedule 1 of the Town and Country Planning (EIA) Regulations 2017. Hence, there is no mandatory requirement for an EIA.

With regard to Schedule 2 development, Part 10(m) of Schedule 2 of the Town and Country Planning (EIA) Regulations 2017 and Part 69 of Schedule A2 of the Marine Works (EIA) Regulations 2007 (as amended) covers the following type of development:

“Coastal work to combat erosion and maritime works capable of altering the coast through the construction, for example, of dykes, moles, jetties and other sea defence works, excluding the maintenance and reconstruction of such works”.

The proposed scheme is considered to comprise maintenance repairs of an existing sea defence, and therefore the proposed scheme is not considered to fall within a development type listed in Schedule 2 of either set of regulations.

Given the considerations and the embedded mitigation measures outlined in **Table 5-1**, **the Report concludes that the proposed scheme will not require an EIA** under the Town and Country Planning (EIA) Regulations 2017 nor the Marine Works (EIA) Regulations 2007 (as amended).

Regardless of the outcome of the screening process, it is recognised that further (focussed) environmental appraisal, such as Habitats Regulations Assessment (HRA), and Water Framework Directive (WFD) assessments, will be required in support of an application for a Marine Licence.

7 References

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