Hayling Island
EIA PROJECT SUMMARY FILENOTE
Stoke Common South

1.0 Background Information

The Hayling Island North, Appraisal Study

The Hayling Island North, Appraisal Study (Environment Agency, 2009) assessed the current level of flood risk along 15.5km of coastal frontage on Hayling Island North in Hampshire. The study identified the Hayling Island North area as being at significant risk of tidal flooding, with 178 residential properties at risk of a 0.5% chance of flooding within any given year (i.e. by a 1 in 200 year event), 60 of which, together with a junior school, are at significant risk.

Current defences in the Hayling Island North area are being managed by a combination of the Environment Agency, the local authority (Havant Borough Council) and private landowners. The protection offered by the defences is variable and many are in poor condition.

In addition, the only transport infrastructure (A3023) providing access to the southern end of Hayling Island where the majority of the 7,500 residents live is also at risk from tidal flooding. This asset is flooded annually by waves overtopping the existing defences, causing minor disruption to road users. Larger storm events (1 in 10 years and greater) would be expected to temporarily close the road, preventing access to Hayling Island.

Due to climate change, the number of properties at risk by 2108 for the 0.5% (1 in 200 year) event has been calculated to increase to 517 residential properties.

North Solent SMP

The final North Solent SMP and supporting appendices were published in December 2010, following a period of consultation on the draft document.

The North Solent SMP covers a 386km stretch of coastline extending from Selsey Bill in the east to Hurst Spit in the west and includes Portsmouth, Langstone and Chichester Harbours, Southampton Water and the tidal extent of the main rivers.

Stoke Common South site falls within policy area ‘5aH108 West Lane (Stoke) to Langstone Bridge’ of the North Solent SMP. The proposed policy option for this frontage is ‘Hold the Line’ with localised managed realignment at Stoke and West Northeney.

Site Location

Stoke Common South is located on the coast at the southern end of Stoke Common, just to the north of Victoria Road (see Figure 1 for location). Approximate grid reference 471665E, 103120N. The site lies within land owned by Havant Borough Council, and has previously been used for landfill.. The site lies within the Chichester and Langstone Harbours SPA/Ramsar as well as a SSSI which has been identified as being in an unfavourable declining condition. An informal footpath crosses the site, running from the car park on Victoria Road and joining back with the Hayling Billy Coastal Path approximately 350m further north.

These works are part of a wider package that also includes sites at Langstone Bridge and Mill Rythe West. Separate environmental documents have been prepared for these sites.

2.0 Alternative Options

Do Nothing

The Do Nothing option is not deemed acceptable at Stoke Common South as the existing defences have been assessed as not providing the current standard of a 1 in 100 year defence level. Without works to the defences, a number of properties in the Hayling Island North area would be at risk of flooding.

Four options were initially identified for Stoke Common South.

	Hayling Island North Improvements Options Summary – Stoke Common South[1]		
	Option 1[2]	**Option 3**	**Option 4**
Description	• An earth embankment with a 300mm deep key into existing ground, 1 in 3 side slopes and a 2m wide crest width • Crest track to be suitable for pedestrian use, as existing. • Approximate embankment volume 280m^3	• Raise Hayling Billy to form the flood defence. • Approximate fill volume required 450m^3	• Construct a wall on the Billy, along its western edge • Local raising of ground at southern end to tie into wall
Key Constraints	• Whole route runs across a former domestic refuse site -closed 1969, believed to be capped • Surface water sewer runs across the northern end • Works within ecologically designated site (Ramsar / SPA / SSSI)	• Gas main runs along the eastern edge of the Billy • Virgin Media cable runs along the western edge of the Billy • Surface water sewer runs across the northern end • Alternative vehicular access required during construction • Route runs along the edge of a former domestic refuse site. • Raising the Billy will reduce its width. • Will impact on Stoke Common SINC (east of the Billy) and the Hayling Billy SINC • Potential loss of trees and mature vegetation.	• Surface water sewer runs across the northern end • Virgin Media cable runs along the western edge of the Billy • Reduced width of the Billy for vehicles • Alternative vehicular access required during construction • Visual appearance requires mitigation • Route runs along the edge of a former domestic refuse site. • Works will impact on the Hayling Billy SINC.
Key Opportunities	• Blends in well with existing grassland • Alternative access routes available • Avoids impact on Hayling Billy • Provides opportunity to improve condition of SSSI through selective vegetation clearance.	• Avoids construction over landfill site. Compliant with WFD assessment objectives. • Opportunity for improvements to the existing surface condition of the Hayling Billy	• Avoids construction over landfill site. Compliant with WFD assessment objectives Avoids route of gas main. • Opportunity for improvements to the Hayling Billy • Minimises removal of mature vegetation.

[1] Option 2 was discounted prior to an options review meeting (March 2010).
[2] Option Nos. refer to the notes of the Options Selection Meeting – 29.03.10

Initially Option 4 was taken forward at outline design stage. However, a number of key constraints including the presence of utilities and significant impacts on vegetation meant that this option was not carried forward to detailed design.

3.0 Continuing Consultation

Internal Consultation

Consultation with a number of internal specialists at the Environment Agency has been ongoing throughout the options appraisal process. Specialists have had the opportunity to provide their input to options through a questionnaire that accompanied an options pack. In addition, internal and external consultees have been consulted on the ground investigation (GI) through anEIA low risk filenote for the GI. Internal consultees were also consulted on the scoping consultation document for the outline design based on Option 4

The following internal functions were consulted:

- Environmental Management
- Planning Liaison
- Groundwater and Contaminated land
- Archaeology
- Marine Team
- Fisheries, Recreation and Biodiversity

Internal consultees will be consulted on this Environmental Filenote.

External Consultation

Consultation with a number of statutory and non-statutory consultees has taken place throughout the options appraisal and outline design, including Natural England, Hampshire County Council and Havant Borough Council. A number of site visits have also taken place with representatives from the above. External consultees were also consulted on the scoping consultation document for the outline design based on Option 4

External consultees will be consulted on this Environmental Filenote; including the following:

- Natural England
- English Heritage
- Havant Borough Council
- Hampshire County Council
- RSPB
- Hampshire and Isle of Wight Wildlife Trust
- Langstone Harbour Board
- Sustrans

Natural England will be consulted through an Appendix 11 (Appropriate Assessment screening) for works carried out in/or adjacent to an SPA and SAC, and Section 28 consent application (Appendix 3 Form) for works carried out in an SSSI.

4.0 Proposed Option

The proposed option is ‘Option 1’, a low flood bund, with 1 in 3 side slopes, on top of the landfill to the west of the Hayling Billy. The bund would be 4.5m wide, 0.5m high and approximately 200m long. The bund would be constructed along the alignment of the existing informal path. A new footpath would be constructed on top of the bund to tie in with the existing at the northern end.

The proposal also includes habitat creation, which involves the placement of 1,000 tonnes of 6N type fill material on top of the landfill. This material will have an inert waste classification. This would be spread around, in the areas marked on the drawings in Appendix B, to a depth of 150-

250mm (depending on existing profiles and undulations). This would then be seeded with a Clay/Acid Meadow seed mix from a native source.

Prior to the construction of the bund, the areas to be filled and eventually seeded will be treated with a glyphosate herbicide to eradicate any undesirable species (in line with HLS prescription requirements).

A scheme design drawing, showing the key environmental constraints and indicative landscaping proposals for the scheme is provided in Appendix B.

5.0 Consenting Regime of the Proposed Option

The consenting regime, under which the works will fall, is being determined.

Following an internal screening exercise it was determined that the works were unlikely to give rise to significant environmental effects and therefore did not require a statutory EIA. Instead, the Environment Agency are producing an EIA Filenote, to take account of the environmental impacts of their activities.

As the work will be undertaken within a SSSI, a formal notice ‘Appendix 3’ will be completed to fulfil the requirements of Section 28H of the Wildlife and Countryside Act 1981 as incorporated by the Countryside and Rights of Way Act (CROW) 2000. Furthermore, the project has been screened under the Conservation of Habitats and Species Regulations 2010; an ‘Appendix 11’ form has been prepared and has concluded that there will be no likely significant effect on the European designated sites.

6.0 Key Environmental Issues

The outline design drawings in Appendix B identify the existing features, statutory and non-statutory designations of the sites and surrounding landscapes. The sections below outline the existing baseline conditions at the site.

6.1 Flora and Fauna

A walk-over survey has been carried out to identify the mosaic of habitats present and provide an initial assessment of their ecological interest. The site was also assessed for its potential to support protected and notable species of conservation importance. Existing ecological data for the site and surrounding area has been collated and reviewed.

Statutory Designated Sites

The Stoke Common South site is located just inside the eastern boundary of the Chichester and Langstone Harbours Special Protection Area (SPA)/Ramsar and just outside the eastern boundary of the Solent Maritime Special Area of Conservation (SAC). The site also lies within the Langstone Harbour Special Site of Scientific Interest (SSSI) and West Hayling Local Nature Reserve (LNR). Information on the features of importance of thesedesignated sites is provided in Table 1 below.

Table 1: Designated Sites.

Site Name and Designation	Features of Importance
Chichester and Langstone Harbours Special Protection Area (SPA)	Little tern *Sterna albifrons* (breeding) Common tern *Sterna hirundo* (breeding) Sandwich tern *Sterna sandvicensis* (breeding) Bar-tailed godwit *Limosa lapponica* (wintering) Pintail *Anas acuta* (over winter) Shoveler *Anas clypeata* (over winter) Teal *Anas crecca* (over winter) Wigeon *Anas Penelope* (over winter) Turnstone *Arenaria interpres* (over winter) Brent goose *Branta bernicla bernicla* (over winter) Sanderling *Calidris alba* (over winter) Dunlin *Calidris alpina alpine* (over winter) Ringed plover *Charadrius hiaticula* (over winter) Red-breasted Merganser *Mergus serrator* (over winter) Curlew *Numenius arquata* (over winter) Grey plover *Pluvialis squatarola* (over winter) Shelduck *Tadorna tadorna* (over winter) Redshank *Tringa totanus* (over winter) Waterfowl (over winter)
Chichester and Langstone Harbours Ramsar Site	The site includes intertidal mudflats, saltmarsh, sand and shingle spits and sand dunes. Assemblages of international importance - Species with peak counts in winter: 76480 waterfowl. Species/populations occurring at levels of international importance. *Species with peak counts in spring/autumn:* • Ringed plover, *Charadrius hiaticula* • Black-tailed godwit, *Limosa limosa islandica* • Common redshank, *Tringa totanus tetanus* *Species with peak counts in winter:* • Dark-bellied brent goose, *Branta bernicla bernicla* • Common shelduck, *Tadorna tadorna*, • Grey plover, *Pluvialis squatarola* • Dunlin, *Calidris alpina* *Species regular supported during the breeding season:* Little Tern, *Sterna albifrons*
Solent Maritime Special Area of Conservation (SAC)	Estuarine & intertidal habitats Spartina swards *Spartinion maritimae* Atlantic salt meadows *Glauco-Puccinellietalia* Sandbanks which are slightly covered by seawater all the time Mudflats and sandflats not covered by seawater at low tide Coastal lagoons Annual vegetation of drift lines Perennial vegetation of stony banks *Salicornia* and other annual colonising mud and sand Shifting dunes along the shoreline with *Ammophila arenaria* (“white dunes”) Invertebrate species: molluscs Desmoulin`s whorl snail *Vertigo moulinsiana*
Langstone Harbour Special Site of Scientific Interest (SSSI)	Neutral grassland Littoral sediment Arable and horticulture
West Hayling Local Nature Reserve (LNR)	Oyster beds Mudflats

An Appendix 11, which screens the need for a Habitats Regulations Assessment (HRA), has been prepared and will be appended to the final version of this document. The Appendix 11 concludes that there will be no likely significant effect to the interest features of the designated sites, as a result of the proposed works.

Non-Statutory Designated Sites

The proposed works are situated to the west of Hayling Billy Line Site of Importance for Nature Conservation (SINC). The main interest feature for the site designation is divided sedge *Carex divisa*.

Located to the north-east of the site, outside of the proposed works boundary, is the Stoke Common SINC. This site has been designated for the following plant species: divided sedge *Carex divisa*; distant sedge *Carex distans*; and sea sandwort *Honckenya peploides*.

Habitats

The proposed construction site comprises an informal footpath located to the west of the Hayling Billy footpath. Habitats within and adjacent to the proposed works site comprise short species-poor grassland and areas of scattered patches of dense scrub. This area is subject to a significant degree of disturbance from dog walkers and pedestrians; the SSSI citation currently notes it as being in unfavourable declining condition, primarily due to a lack of scrub management in addition to disturbance issues. The site was included in the SSSI designation for the purpose of providing roosting habitat for wintering birds above the high tide level. The habitat is sub-optimal for this purpose due to the aforementioned issues. It is considered that the works would not comprise a significant adverse effect on existing habitat.

Habitat in the surrounding area comprises a mixture of hedgerow, drainage ditches with small isolated parcels of common reed *Phragmites australis*, residential properties and associated gardens, wet rough grassland and dense scrub vegetation. An extensive gravel beach is present to the west of the site. The shingle beach is very sparsely vegetated, although less disturbed areas provide nesting opportunities for little terns. The foreshore comprises a mixture of mudflat, gravel, cobbles and sand, which has been colonised by algae. The works would not have a significant adverse effect on surrounding habitat, either through habitat loss or through other means such as disturbance. No habitat loss outside of the proposed works footprint is anticipated and control measures would be in place throughout the construction phase, to ensure no adverse effects arise.

The proposals for the flood defence works include habitat creation/enhancement leading to a positive significant effect in the medium to long term. Landscape proposals will create a botanically diverse meadow habitat, which would be of greater ecological value than the current habitat on site. A native species mix comprising typical neutral grassland species would be used. It is likely that physical disturbance by dog walkers and pedestrians will still be a limiting factor to habitat diversification in this area.

Species

Bats comprise European Protected Species under the Habitats and Species Regulations 2010, and are listed on the UK Biodiversity Action Plan as a species of conservation concern. There is some potential that the site itself is used as a foraging resource, although the grassland in this area is considered to be sub-optimal for supporting either high numbers or a high diversity of invertebrates, which bats feed upon.

Badgers *Meles meles* are protected under The Protection of Badgers Act 1992, mainly for animal welfare reasons. . The site itself is considered to be sub-optimal for supporting badgers for foraging or refuge purposes.

Mitigation is not required for bats and badgers during the works.

Common reptile species are protected under the Wildlife and Countryside Act 1981. There is the potential for reptiles to be present in the vicinity of the site and possibly within the proposed works area associated with transitional edge habitat (interface between scrub and long grass/ruderal vegetation). The open areas of short species-poor grassland are considered to be sub-optimal for supporting reptiles. A check for reptiles will be undertaken by an ecologist prior to works commencing in any areas of habitat considered to be suitable for supporting reptiles. Any reptiles found, would be moved off-site to a safe area and reptile exclusion fencing would be used if considered necessary. With mitigation measures in place, no significant adverse effects are considered likely during construction for these species.

Habitat within the proposed works area is of value for breeding birds, particularly in areas of dense scrub. Vegetation should be chopped back outside of the bird nesting season.

Nearby gravel spits, located to the west of the proposed works area, are of value for breeding birds and wintering bird species (see Table 1 above for species types). A proportion of the intertidal area to the west of the site, in addition to the shingle spits of the oyster beds, have been identified as potentially suitable habitats for Brent geese in the emerging Hampshire and Isle of Wight Wildlife Trust (HWT) Brent Geese and Wader Strategy. The spit is also known to be of value for roosting dunlin and breeding terns. Areas of mudflat near to the site provide feeding areas for a range of birds and invertebrates.

The works will be undertaken in late March to avoid significant disturbance to wintering birds within the surrounding area. However, works will be undertaken during the bird breeding season. It is considered that major breeding areas for species such as gulls and terns would not be significantly disturbed by the works due to the distance between these areas and the works site. There may be a degree of minor incidental disturbance displacement for waders which use nearby adjacent intertidal areas for loafing and feeding purposes. In addition, breeding birds may be displaced from nearby scrub. However these effects are considered to be not significant in view of the temporary nature of the works, the current background level of existing disturbance present (e.g. dog walkers and the public), and the availability of suitable alternative habitat in the wider locality.

The proposed habitat improvements of grassland diversification should provide a significant positive effect for birds, invertebrates and other species of fauna in the medium to long term, although the disturbance to fauna on site by dog walkers and pedestrians will limit the value of the site for ecology.

6.2 Landscape and Visual Amenity

Baseline environment

The Stoke Common South site is situated on the western coastline of Hayling Island on a former landfill site, to the west of the Hayling Billy, a disused railway line that now forms part of a coastal walk and National Cycle Route 2.

The site is located within the South Coast Plain national landscape character area. This broad area has been further subdivided into regional landscape character areas by Havant Borough Council. The site is located on the boundary of two areas:

- 30 – Stoke and North-west Hayling; and
- 32 – Langstone Harbour

The character of the area is described as predominantly flat with some slight mounding, dominated by a patchwork of small pasture fields with thick boundary hedgerows and mature hedgerow trees forming a sense of enclosure.

The site is characterised by a mix of scrub, grassland and informal pedestrian routes. The site is bounded to the east by the Hayling Billy, which is lined by scrub and mature trees forming a discontinuous hedgerow on both sides of the track, and to the west by internationally and nationally designated coastal mudflats and saltmarsh. Despite a history of landfill and the presence of a former train track, the tranquillity and natural character of the landscape means the wider area has a high sensitivity to change.

Due to the nature and location of the works, the only visual receptors within the zone of theoretical visibility are:

- recreational users of the Hayling Billy and other informal tracks; and
- recreational users of Langstone Harbour.



Stoke Common South site photo. View looking south with the Hayling Billy to the left of the image

Assessment and evaluation of environmental impacts

Any impacts during the construction phase of the proposed works are likely to be short-term only. Operational effects are described with reference to year one of operation.

During construction, the clearance of vegetation, presence of construction equipment, import of material and general site activity would temporarily impact upon the character of the site. However, the wider presence of mature vegetation, throughout the former landfill site and along the Hayling Billy would protect the setting of the landscape away from the main site area. The

impact on the character of Langstone Harbour would also be lessened due to the wider presence of mature vegetation. Therefore, the magnitude of change to landscape character is judged to be low. The low magnitude of change, assessed alongside the high sensitivity of the landscape means the impact of the proposed works during construction is judged to be minor adverse. Due to the presence of mature vegetation along the line of the Hayling Billy and in the wider landfill area, recreational users of the coastal path and Langstone Harbour would experience a low magnitude of change, which, when assessed alongside the high sensitivity of the receptors, means the impact is judged to be minor adverse.

During operation, the low height of the flood bund, the creation of habitats contiguous with the existing character of the landscape and the re-creation of an informal route along the bund means the proposed flood embankment would have a negligible effect on the character of the surrounding landscape and nearby visual receptors.

6.3 Cultural Heritage, Archaeology and Material Assets

Baseline environment

There are no Scheduled Monuments on or adjacent to the proposed works. A series of cultural heritage assets are recorded on the Havant Historic Environment Record, which indicate the longevity of human occupation and activity in this area.

The Hayling Billy coastal path, to the immediate east of the site, is on the line of a disused railway which served the oyster industry. The oyster beds formed a feature of the landscape throughout the post medieval period and their impact on the modern landscape can still be appreciated.

Assessment and evaluation of environmental impacts

There is the potential for further discoveries of archaeological interest throughout this locality, however, as the works are located on the landfill it is considered unlikely that there would be any impact on any finds of archaeological interest.

6.4 Water Environment

Baseline environment

The site is identified as lying within an area that could be affected by flooding, either from rivers or the sea, if there were no flood defences. This area could be flooded from the sea by a flood that has a 0.5% (1 in 200) or greater chance of happening each year, or from a river by a flood that has a 1% (1 in 100) or greater chance of happening each year.



(Source - http://maps.environment-agency.gov.uk/)

WFD Assessment

The European Water Framework Directive (WFD) sets out a strategy for protecting and enhancing the quality of our groundwater, rivers, lakes, estuaries and coasts. It introduces an integrated approach to river basin management which the Environment Agency are currently applying to the 11 River Basin Districts in England and Wales; identifying and characterising water bodies and protected areas in each district, and the pressures and risks upon them.

The Stoke Common South site is located adjacent to the Langstone Harbour and Langstone Oyster Beds coastal water bodies as defined within the present South East River Basin Management Plan (RBMP). Both are classified as Heavily Modified Water Bodies and are therefore assessed in relation to Ecological Potential under the WFD.

The current ecological potential of the Langstone Harbour water body is ‘Moderate’, and is not currently in compliance with the WFD overall aim of ‘Good’ ecological Potential (GEP). The status objective is to achieve ‘Good by 2027’. Five mitigation measures have been identified for this water body in order to improve hydromorphological condition required to support GEP.

The current ecological potential of the Langstone Oysterbeds water body is ‘Moderate’ based on expert judgement, as no biological or physio-chemical quality elements have been assessed for this water body. It is not currently in compliance with the WFD overall aim of ‘Good’ ecological Potential. The status objective is to achieve ‘Good by 2027’. Seven mitigation measures have been identified for this water body in order to improve hydromorphological condition required to support GEP. For Langstone Oyster Beds mitigation measures are predominantly focused on management of dredging and sediment regimes, and therefore the proposed works at Stoke Common South are unlikely to be able to contribute to the achievement of those mitigation measures.

A separate WFD assessment has been undertaken for the project, using the following Assessment Objectives as a guide to determine WFD compliance:

- Objective 1: Does not cause deterioration in the status of the biological and physiochemical elements of the water body;
- Objective 2: Does not compromise the ability of the water body to achieve its status objectives (via the mitigation measures);
- Objective 3: Does not cause a permanent exclusion or compromised achievement of the WFD objectives in other bodies of water within the same RBD;
- Objective 4: Contributes towards the delivery of the wider WFD objectives (e.g. Protected Area Objectives).

The assessment was in relation to a proposed flood defence option along the Hayling Billy Route, however, a review has confirmed that the conclusions of the assessment remain valid for the current scheme.

Assessment and evaluation of environmental impacts
The assessment concludes that the proposed Stoke Common South scheme is compliant with the requirements of the WFD in relation to the above assessment objectives, in that the proposed works are not expected to significantly impact upon the ecological quality of the Langstone Harbour and Langstone Oysterbeds water bodies as defined in the present South East RBMP. It is recommended that a wider-scale, long-term coastal flood risk management strategy is developed for these water bodies in consideration of continued pressures associated with predicted climate change and sea level rises.

6.5 Soil, Geology and Hydrogeology

Baseline environment
The site and surrounds was an area of rough grassland until a refuse tip receiving domestic waste was constructed on part of Stoke Common, as shown on the 1969 OS map. The refuse was alternated with layers of inert soils and reported to be capped with approximately 600mm of soil. The Hayling Island Railway and the oyster beds were also disused by this time. The landfill is not shown on the 1991 OS map and the Hayling Billy Coastal Path had been constructed on the disused railway line. The site and surrounds are currently in a similar configuration.

Two ground investigations have been undertaken on or near to the site by Fugro Engineering Services Limited (FESL) in September 2010 and August 2011. The September 2010 exploratory hole locations were positioned on the Hayling Billy coastal path near to the site. The August 2011 exploratory hole locations were positioned on, or very near to the location of the proposed flood bund and were positioned above the historical landfill. The scope of the investigation was confirmed with the local authority by the Environment agency. The local authority confirmed that they were in agreement with the Environment Agency assessment that the proposed low bund is unlikely to represent a significant loading on the landfill, and is therefore unlikely to have any significant adverse effect on leachate or gas generation rates. Soil samples were collected during both ground investigations and submitted for contamination testing.

The stratigraphy in the area of the proposed bund comprises Made Ground associated with the historical landfill overlying Upper Chalk. The logs from the 2011 ground investigation indicate that the shallow Made Ground (excavated in the investigation to 0.45m below ground level) comprises the landfill capping layer which contains small amounts of landfill materials.

Assessment and evaluation of environmental impacts
The potential for significant contamination to be present in the shallow soils (up to 0.4m below ground level) at the site is considered to be low based on the results of the FESL ground investigations. The risk of harm to construction workers and site neighbours is assessed to be very low based on the ground investigation results, although good practice construction measures are required to reduce exposure to as low as reasonable practical. This should include the implementation of a contamination watching brief, appropriate personal protection equipment and hygiene practice, dust control measures and verification testing of imported materials. It is unlikely that future users of the site will actually come into contact with in-situ landfill soils in the proposed area of development, as soils will be covered with approximately 500m^3 of clean imported materials, which should be tested for suitability prior to importation to the site.

6.6 Population

Baseline environment
The Hayling Billy is a coastal walk and National Cycle Route 2. The route is well used by equestrians, pedestrians and cyclists. There are informal pedestrian routes across the landfill site in the vicinity of the Stoke Common site, and the proposed bund follows the line of one of these paths. Recreational users access these paths from a number of points including a gap in the hedge line along the edge of the Hayling Billy in the Stoke Common South area. The nearest residential receptors to the site are a small number of properties approximately 100m from the site, on Havant Road.

Assessment and evaluation of environmental impacts The amenity value of the Hayling Billy would be indirectly affected during construction by the proposed works at Stoke Common South as a result of the movement of construction equipment across the route to access the site compound. These movements would be controlled by a banksman.
Pedestrian routes across the landfill would be directly affected by the proposed works, but walkers could be diverted along the Hayling Billy. Following completion of the works a new footpath would be available, improving the amenity value of this route.

6.7 Land Use

Baseline environment
The site is currently an area of open space used for recreational purposes including horse-riding and dog walking. The site is managed through a Higher Level Stewardship (HLS) agreement, which aims to return the SSSI land to favourable or unfavourable recovering status. From the SSSI perspective, the key interest in this unit is to provide suitable high tide roost habitat for use by birds, with the main considerations being around the import of material and levelling of the site to make it easier for Havant to manage in the future, and the control of weeds and scrub. A set of prescriptions have been outlined to achieve the HLS objectives, including retaining and managing the sward, not causing heavy poaching, not applying fertilisers or organic manures and controlling undesirable species.

Assessment and evaluation of environmental impacts
The proposals will contribute towards the aim of levelling the site to provide suitable high tide roost habitat, through the import and distribution of material. They will also contribute to the control of undesirable species through a programme of herbicide application, deposition of a low nutrient substrate and seeding with an appropriate wildflower seed mix.

6.8 Air and Climate

There are no Air Quality Management Areas within the borough of Havant. There are a limited number of residential receptors within close proximity to the proposed site, however these are likely to experience only minor air quality impacts arising from dust during construction.

6.9 Noise

There are very few noise sensitive human receptors in close proximity to the study area, with only a small number of residential properties on Havant Road. Construction activities do not include 'noisy activities' such as piling and are anticipated to cause minimal disturbance.

A number of avian receptors are located in close proximity to the site. However, the works will be undertaken between March and September to avoid significant disturbance to wintering birds and the major bird breeding areas would not be significantly disturbed by the works due to the distance between these areas and the works site (see section 6.1 for further details of the location and potential impacts on avian receptors).

6.10 Use of Natural Resources

The main potential waste stream produced as a result of the works is likely to be stripped vegetation, which would be composted off site. It is possible that a small amount of contaminated spoil will arise during the works. Any contaminated waste arisings will either be integrated into the construction of the bund and capped with clean material or dealt with appropriately and disposed of to a licensed landfill.

6.11 Cumulative Effects

Environment Agency works to flood defences at Stoke Common South and Mill Rythe will also be undertaken at the same time as the proposed works at Langstone Bridge. Some minor cumulative traffic impacts may occur, however, all sites are managed through the same contractor who will co-ordinate deliveries and traffic movements to minimse congestion and disruption.

6.11 Consideration of Environmental Impact

Key constraints in relation to the Stoke Common South site are identified on the outline design drawings in Appendix B. The drawings also illustrate the proposed environmental mitigation and environmental outcome measures to be undertaken.

An Environmental Action Plan (EAP) has been produced that summarises the actions required to implement the project in accordance with this Environmental Filenote. The EAP sets out objectives and targets defining the way in which the Environment Agency wishes to complete works during the detailed design, construction and post-construction phases. It also details roles and responsibilities for those involved in the project and refers to temporary and permanent works. A copy of the EAP is provided in Appendix C of this document.

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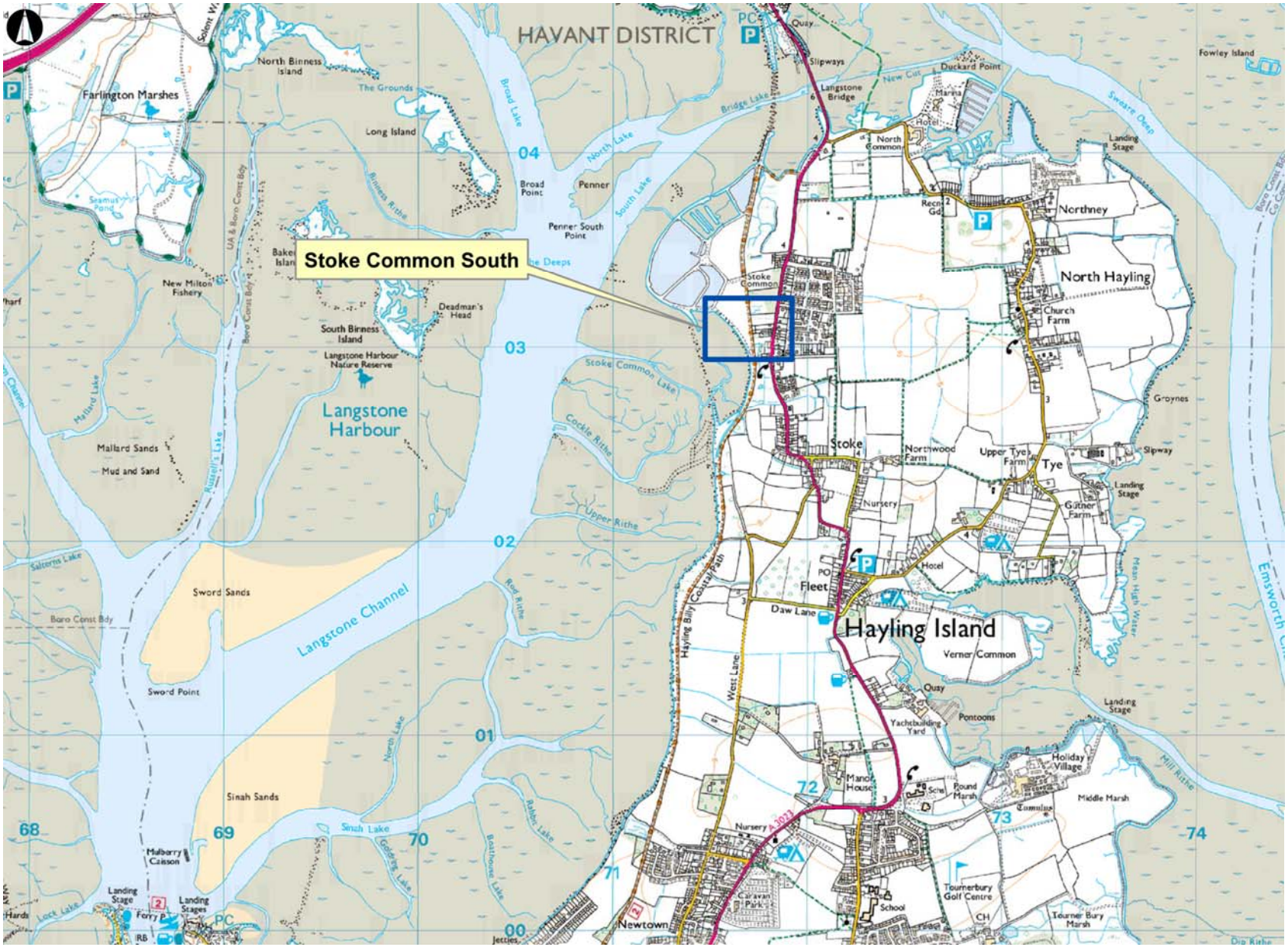
Appendix A: Location Plan



Appendix B: Outline Designs

A1

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Extent and location of habitat area to be agreed on site with Site Supervisor

Existing informal footpaths

Extent of vegetation clearance (via herbicide application) to match the extent of imported fill. Refer to the Specification for details of herbicide treatment.

Habitat Area to consist of 250mm thick seeded Highway Agency general fill type 6N material to be recycled under the WRAP scheme or similar material to have an inert waste classification. Vegetation clearance of the habitat areas to be completed as per the Specification. Disposal method to be agreed with the Environment Agency. See Note 8.

Coastal Area is designated as a SAC. Any works should avoid disturbance to this sensitive habitat and the species it supports. Further information on the features of the SAC is provided in the EIA filenote

Informal footpath to be closed at Hayling Billy Coastal Path and signed

Proposed bund to tie into existing gravel path at 3.6m AOD.

Geotextile for use on the embankment shall be Tensar SS30 Geogrid or a similar approved product

Extent and location of habitat area indicative only, exact extent to be confirmed with Contractor on site

Typical 2022

Typical 2022

Bund to follow existing path alignment

Works Area located on a former refuse tip. Works must be undertaken in accordance with the Specification and the EAP.

Hayling Billy Coastal Path to remain open throughout the works and therefore no site access without prior permission from Site Supervisor. The Hayling Billy is also a SINC - Sensitive ecological receptor, due to the presence of notable plant species including Divided Sedge.

Approximate toe of Class 1 or 2 material

Shingle

Shingle

Approximate toe of recycled material slope

Bund to tie into existing high level ground to maintain 3.6m AOD level

Public access to be maintained to and from the Hayling Billy Coastal Path

Top of bund to be sloped down at 1:20 to tie into car park level

Assumed proposed compound area (car park closed to public)

Assumed site access

Victoria Road

Filling Station

A3023 Havant Road

A3023 Havant Road

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

In addition to the hazards normally associated with the types of work detailed on this drawing, note the following risks and information:

CONSTRUCTION:

Ci Public access. The Contractor shall manage public access along the Hayling Billy Coastal Path and other informal paths during the works.

Cii Contaminated Land. The site is a disused refuse tip, there is a low potential for contaminated materials to be encountered during the construction works. However, the contractor shall avoid any excavation. The contractor shall maintain a contamination watching brief throughout the works.

Environment:

Ei Area designated as a Ramsar site, SPA, SAC, SSSI and LNR, Any works should avoid disturbance of this sensitive habitat and the species it supports. Details of each designation are provided in the EIA filenote.

It is assumed that all works will be carried out by a competent contractor working, where appropriate, to an approved method statement

Full ecological watching brief required during any clearance of scrub.

Clearance of scrub must be undertaken outside of the breeding bird season (March - September). Refer to the EAP for further details on ecological mitigation required. Vegetation clearance must be undertaken by hand to minimise the disturbance to reptiles.

0 5 10 20 Metres

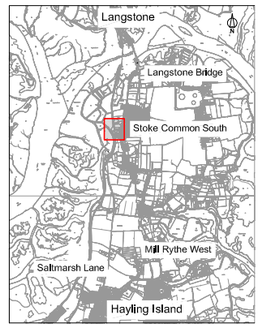
Scale 1:500

Notes

1. All dimensions are in millimetres unless noted otherwise.
2. All levels are given in metres Above Ordnance Datum (m AOD).
3. No services are anticipated but the Contractor should satisfy himself of this prior to construction.
4. This work has been created using a site survey supplied by Maltby Land Surveys. Survey correct as at September 2010.
5. Removal of vegetation is to be agreed with Site Supervisor on site, prior to commencement of works.
6. Flood embankment to be constructed as per the Specification of works for Stoke Common South.
7. Fixing of Geotextile to be in accordance with manufacturers recommendations.
8. All subgrades on which geotextile is to be laid shall be free of protrusions or sharp edges. The geotextile shall be laid such that it does not span across depressions or undulations in the subgrade surface
9. Habitat areas to be marked out and agreed with Site Supervisor prior to placement of fill.

Legend

- Proposed Flood Defence Crest
- Proposed Habitat Areas
- Assumed Proposed Compound Area
- Toe of Flood Defence
- Existing Desire Line



Location Plan

Issue	Date	By	Chkd	Appd
03	11/01/12	BA	SS/DS	CU
Draft Tender				
02	22/11/11	BA	SS	DS
Issued for Comment				
01	22/11/11	BA	SS	DS
Issued for Comment				

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www.arup.com

Client

Environment Agency

Job Title

Hayling Island North Improvements

Drawing Title

Stoke Common South
Plan of Works

Scale at A1 1:500

Discipline Civil

Drawing Status

Draft Tender

Job No	Drawing No	Issue
216885	2021	03

Do not scale

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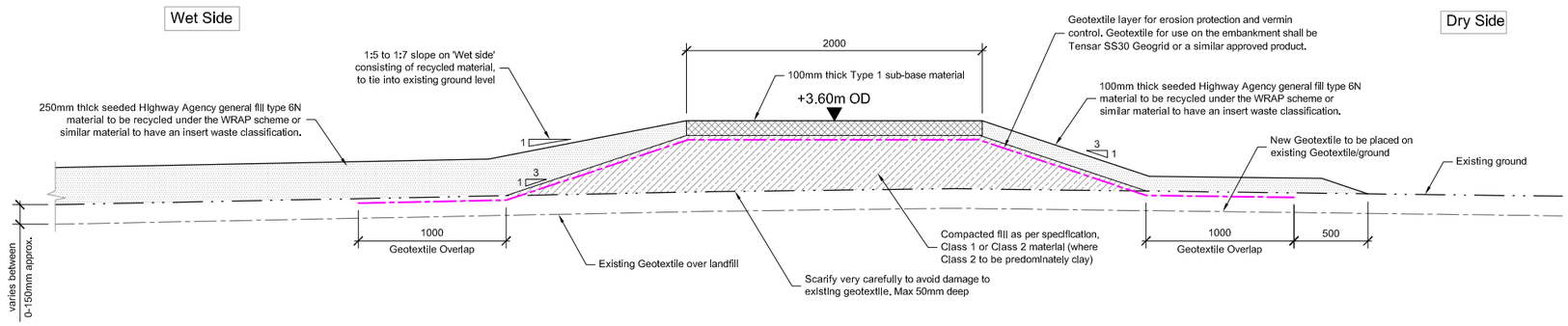

Typical Section

Scale 1:20

Notes

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2. All levels are given in metres Above Ordnance Datum (m AOD).
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5. Removal of vegetation is to be agreed with Site Supervisor on site, prior to commencement of works.
6. Flood embankment to be constructed as per the Specification of works for Stoke Common South.
7. Fixing of Geotextile to be in accordance with manufacturers recommendations
8. All subgrades on which geotextile is to be laid shall be free of protrusions or sharp edges. The geotextile shall be laid such that it does not span across depressions or undulations in the subgrade surface.

Legend

- Compacted fill material
- Type 1 material
- Recycled material

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

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0 0.1 0.2 0.3 0.4 0.5 1.0 Metres

Scale 1:20

Issue	Date	By	Chkd	Appd
03	11/01/12	BA	SS/DS	CU
Draft Tender				
02	22/11/11	BA	SS	DS
Issued for Comment				
01	22/11/11	BA	SS	DS
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Client

Job Title
Hayling Island North Improvements

Drawing Title
Stoke Common South Details

Scale at A1 1:20

Discipline Civil

Drawing Status
Draft Tender

Job No	Drawing No	Issue
216885	**2022**	**03**

Do not scale

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Appendix C: Environmental Action Plan