

6. Population and Human Health

6.1. Introduction

This chapter considers the potential impacts of the Scheme on population and human health including local community, access and recreation, and biting insects. Impacts relating to traffic and transport, including car parks, are discussed in chapter 13 Traffic and Transport. Visual impacts on the landscape are assessed in chapter 11 Landscape and Visual. The Noise and Vibration assessment is in chapter 7. Impacts on human health from potential contamination within the site are discussed in chapter 9 Geology, Soils and Contamination.

6.1.1. Scheme Overview

The Scheme plan is shown in Figure 6.0, which provides a brief summary of the key features. A more detailed description of the Scheme is provided in chapter 3 The Preferred Option, of this ES.

6.1.2. Scheme Impacts

The Scheme will provide a number of key benefits in the long-term but some negative impacts in the short-term construction phase. As a brief summary, these include (but are not limited to):

- Improved surfacing to sections of existing footpath which are more robust to future site changes.
- Improved safety through segregation of highway and footpath along South Farm Road. Access to other footpaths on the landfill. The raised highway and footpath are above tidal and flood water. Access to South Farm Court greatly improved and more resilient in the future.
- A new private access route to the existing highway adjacent to South Farm Cottages with no public near the residential properties which will improve privacy and traffic.
- Increased flooding to some low-lying sections of footpaths during tidal or rare fluvial flood events. Mitigation measures include raising short sections of the footpath either side of the flooded area, escape routes and signage.
- Improved path safety with additional screening vegetation, hedgerow gap filling and new fencing.
- A new car park separates parking from the pedestrians, where previous parking in verges on South Farm Road adjacent to pedestrians occurred.
- New and improved viewing platforms in various locations across the Scheme.
- The closure of the rear footpath on the shingle bar to improve public safety.
- The general new habitat and wildlife attracted will improve the area's amenity for visitors and the public.
- Temporary path closures and diversions.
- Partial closure of Lime Kiln car park whilst it is required for a satellite construction compound.

The complete details of the Scheme, project development and justification of the preferred option can be found in Chapter 3 The Preferred Option, of this ES.

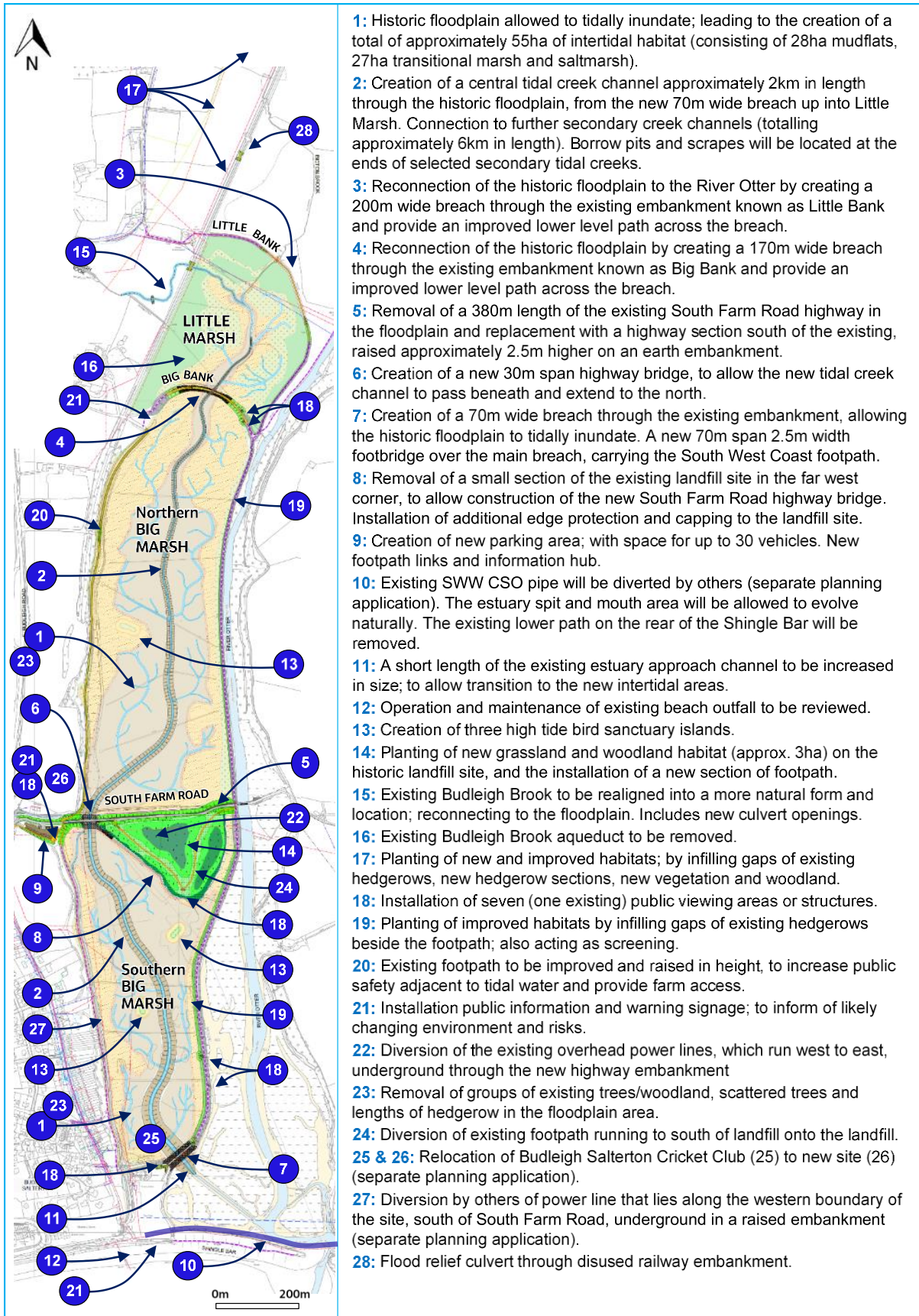


Figure 6.0 – Scheme Overview Plan

6.2. Study area

The study area for population and human health receptors is defined as the site boundary with an additional 250m buffer area from the site boundary. This study area was defined to capture the sensitive population and human health receptors within the vicinity of the Scheme and was based on professional judgement.

6.3. Environmental Impact Assessment Methodology

For this assessment, the receptors are people, whilst the resources are the facilities, services and land that those people use or depend upon. The receptors (people) are considered in terms of their sensitivity to potential changes from the Scheme, whilst the resources are considered in terms of their value to the population (receptors) who use them. There is no standard guidance on the valuation of resources and receptors for this topic. The proposed criteria for assigning sensitivity are set out below in Table 6.1. These criteria have been developed using professional judgement and experience from similar projects and follows the approach as described in section 4.3.1 of chapter 4 The Environmental Assessment Process.

Table 6.1 – Description of Significance Criteria

Sensitivity	Criteria	
High	Population	High vulnerability groups i.e. children (schools), elderly (retirement homes), sick (hospitals).
	Commercial and residential areas	Nationally important employment site (examples include large business parks or factory) and high-density residential areas.
	Public Rights of Way (PRoWs)	Public Rights of Way, National Trails, national and key routes that are well connected, provide good access to the countryside or other popular recreational destinations, are likely to be well-used by the community and for which there is limited alternative provision.
Medium	Population	Groups sensitive to change during daytime hours i.e. commuters.
	Commercial and residential areas	Medium-density residential area and regionally important employment sites/ small to medium sized employment sites.
	PRoW	Public Rights of Way/permissive footpaths used mainly for informal recreational purposes but for which alternative routes and sites could be used.
Low	Population	Groups with some sensitivity to change during daytime hours i.e. visitors, tourists or recreational users.
	Commercial and residential areas	Employment sites with transient site users. Sparse residential.

Sensitivity	Criteria	
	PRoW	Public Rights of Way/permissive footpaths that have fallen into disuse, such as through past severance, or which are scarcely used.
Negligible	Population	Healthy population.
	Commercial and residential areas	Individual employment or residential properties where a very low number of people will be impacted.
	PRoW	Informal routes such as desire lines or land such as derelict sites that may attract use but which are not designed for public use.

The magnitude of impact on population and human health receptors is summarised in Table 6.1, based on professional judgement. This follows the approach as described in section 4.3.1 of chapter 4 The Environmental Assessment Process.

Table 6.2 – Description of magnitude criteria

Magnitude	Criteria
High negative	Where the Scheme would cause a major deterioration to the wellbeing of the population or a major disruption to the recreational opportunities of the site.
Medium negative	Where the Scheme would cause a deterioration to or wellbeing of the population or a disruption to the recreational opportunities of the site.
Low negative	Where the Scheme would cause a minor deterioration to the wellbeing of the population or a minor disruption to the recreational opportunities of the site.
Negligible	Where the Scheme would cause no change to the wellbeing of the population or the recreational opportunities of the site.
Low positive	Where the Scheme would cause a minor improvement to wellbeing of the population or the recreational opportunities of the site.
Medium positive	Where the Scheme would cause an improvement to wellbeing of the population or the recreational opportunities of the site.
High positive	Where the Scheme would cause a major improvement to the wellbeing of the population or the recreational opportunities of the site.

The methodology for determining the significance of effect from the sensitivities and magnitude of impacts is shown in Table 4.1 of chapter 4 The Environmental Assessment Process.

6.4. Regulatory and Policy Context

6.4.1. Regulatory Context

Legislation relevant to this chapter is:

- The Countryside and Rights of Way Act 2000

6.4.2. Policy Context

The relevant policy documents identified in chapter 5 Planning Policy Context of this ES have been reviewed and a summary of the relevant national and local development plan policies is presented in Table 6.3. These policies have been considered during the development of the Scheme and have informed the level of mitigation required to ensure compliance with planning policy as far as possible. A full assessment of the Scheme’s compliance against these policies, taking account of the mitigation described in section 6.8 of this chapter, is provided in the Planning Statement.

Table 6.3 – Summary of planning policies

Document	Overview
National Planning Policy	
National Planning Policy Framework (NPPF)	<p>Para 91: Planning policies and decisions should aim to achieve healthy, inclusive and safe places which:</p> <ul style="list-style-type: none"> a) promote social interaction, including opportunities for meetings between people who might not otherwise come into contact with each other – for example through mixed-use developments, strong neighbourhood centres, street layouts that allow for easy pedestrian and cycle connections within and between neighbourhoods, and active street frontages; b) are safe and accessible, so that crime and disorder, and the fear of crime, do not undermine the quality of life or community cohesion – for example through the use of clear and legible pedestrian routes, and high quality public space, which encourage the active and continual use of public areas; and c) enable and support healthy lifestyles, especially where this would address identified local health and well-being needs – for example through the provision of safe and accessible green infrastructure, sports facilities, local shops, access to healthier food, allotments and layouts that encourage walking and cycling. <p>Para 92: To provide the social, recreational and cultural facilities and services the community needs, planning policies and decisions should:</p> <ul style="list-style-type: none"> a) plan positively for the provision and use of shared spaces, community facilities (such as local shops, meeting places, sports venues, open space, cultural buildings, public houses and places of worship) and other local services to enhance the sustainability of communities and residential environments;

Document	Overview
	<p>b) take into account and support the delivery of local strategies to improve health, social and cultural well-being for all sections of the community;</p> <p>c) guard against the unnecessary loss of valued facilities and services, particularly where this would reduce the community's ability to meet its day-to-day needs;</p> <p>d) ensure that established shops, facilities and services are able to develop and modernise, and are retained for the benefit of the community; and</p> <p>e) ensure an integrated approach to considering the location of housing, economic uses and community facilities and services.</p> <p>Para 96: Access to a network of high quality open spaces and opportunities for sport and physical activity is important for the health and well-being of communities.</p> <p>Para 97: Existing open space, sports and recreational buildings and land, including playing fields, should not be built on unless:</p> <p>a) an assessment has been undertaken which has clearly shown the open space, buildings or land to be surplus to requirements; or</p> <p>b) the loss resulting from the proposed development would be replaced by equivalent or better provision in terms of quantity and quality in a suitable location; or</p> <p>c) the development is for alternative sports and recreational provision, the benefits of which clearly outweigh the loss of the current or former use.</p> <p>Para 98: Planning policies and decisions should protect and enhance public rights of way (PRoW) and access, including taking opportunities to provide better facilities for users, for example by adding links to existing PRoW networks including National Trails.</p>
Local Planning Policy	
East Devon District Council Local Plan 2013-2031	
<p>RC1 - Retention of Land for Sport and Recreation</p>	<p>Proposals that would result in the loss of open space currently or previously used for recreation and/or sports uses, play areas or playing fields will not be permitted unless:</p> <ol style="list-style-type: none"> 1. Alternative provision of equivalent community benefit is made available and will be appropriately laid out by the applicant as a replacement. Or 2. Sports and recreational facilities can best be retained and enhanced through the redevelopment of a small part of the site. Or 3. Locally There is an excess of public open space, children's play areas or sports pitch provision in the area as the case may be.
<p>RC4 - Recreation Facilities in the</p>	<p>Planning permission will be granted for outdoor recreation facilities in the countryside and on the coast provided that the nature of the activities undertaken, or the space requirements of the proposal require a countryside or coastal location and:</p>

Document	Overview
Countryside and on the Coast	<p>1. The facilities or development proposals are in scale with the character, environmental characteristics and setting of the area and do not conflict with countryside, nature or landscape policies, nor detract from the amenities of the area.</p> <p>2. The proposals allow for safe access and discreet parking arrangements, particularly in environmentally sensitive areas, and do not result in the loss of or cause unacceptable disruption to existing PRow.</p> <p>3. On site facilities should be appropriate to meet the needs of the proposal and links with adjacent footpaths and bridleways should be suited to any proposed site uses.</p> <p>Where indoor areas are required use should be made of existing buildings. Any new buildings and necessary extensions should be limited in scale and be in close proximity to existing groups of buildings or an existing settlement. Where it is proposed to extend or intensify an existing use the cumulative effect of the use will be considered in the interests of the character of the area.</p>
TC4 - Footpaths, Bridleways and Cycleways	<p>TC4 - Footpaths, Bridleways and Cycleways</p> <p>Development proposals will be required to include measures to provide, improve and extend facilities for pedestrians and cyclists commensurate with the scale of the proposal. Footways and routes for pedestrians and cyclists within and through new development schemes will be encouraged. These measures may include both shared and exclusive surfaces to provide safe, convenient and attractive routes, and must be designed to take account of the needs of persons with restricted mobility. Wherever possible the opportunity should be taken to join, upgrade and extend existing or proposed networks.</p> <p>Development which would result in the loss, or reduce the convenience or attractiveness of an existing or proposed footpath, cycleway or bridleway, will not be permitted unless an acceptable alternative route is provided.</p>
Budleigh Salterton Neighbourhood Plan	
POLICY CLW1: Protecting and Enhancing Recreational Facilities	<p>The following outdoor sports and recreation facilities will be protected:</p> <ul style="list-style-type: none"> • Football - Budleigh Salterton AFC, Greenway Lane • Golf - East Devon Golf Club, Links Road • Croquet - Budleigh Salterton Croquet Club, Westfield Close • Bowls - Budleigh Salterton Bowls Club, Cricket Field Lane • Tennis - Cricket Field Lane • Children's Play Parks - Greenway Lane; Norman Crescent; Lime Kiln Car Park • Allotments - Budleigh Salterton Community Gardens, Greenway Gardens and Frewins • Adult Gym Equipment - The Green, Lime Kiln Car Park • Moormead Community Orchard <p>Proposals to enhance and improve these and any other local outdoor and recreation</p>

Document	Overview
	facilities will be supported where they: <ul style="list-style-type: none"> a) do not have an adverse impact on residential amenity b) provide suitable access and car/cycle parking
POLICY CLW2: Relocation of Budleigh Salterton Cricket Club	Proposals that would result in the relocation of the Cricket ground from its present site in East Budleigh to Budleigh Salterton will be supported if: <ul style="list-style-type: none"> a) a suitable site can be found in the parish which is of an equivalent or larger size to the existing provision: b) the quality of the alternative site must be of an appropriate recreational standard: c) the location of the alternative site must be accessible by foot and adequate parking facilities should be provided: and d) any adverse impact of a new site is satisfactorily mitigated.
East Budleigh with Bicton Neighbourhood Plan	
Policy L1:- Enhancing Recreational Facilities	Proposals to enhance and improve outdoor sports and recreation facilities will be supported where they: a) do not have an adverse impact on residential amenity; and b) provide suitable access and car parking.
Policy L2 – Budleigh Salterton Cricket Ground	Proposals that would result in the loss of all or part of the cricket ground will not be supported unless alternative and equivalent space is provided. Alternative provision will be required to meet the following criteria unless exceptional circumstances dictate otherwise and justification to that effect is put forward:- a) the alternative site must be of an equivalent or larger scale to the existing provision; b) the quality of the alternative site must be of an appropriate recreational standard; and c) the location of the alternative provision must be accessible by foot, and parking facilities should be provided.
Policy G1 - To protect and enhance the network of PRowS and bridleways around the Parish	PRowS in the Parish are to be protected from development.

6.5. Limitations and Assumptions

It is assumed that the commercial properties at South Farm Court will remain the same as that stated within the baseline for the duration of the Scheme and therefore the number of visitors expected will also remain the same.

It is assumed that the site compound located within Lime Kiln car park will not impact the children's play area and skate park, and these facilities can continue to be used safely during construction and operation of the Scheme.

It is important to note, as outlined fully in Chapter 3 The Preferred Option of this ES; if the Scheme did not progress then future climate change impacts are likely to create uncontrolled breaches through the existing floodplain embankments with footpaths as the area becomes more unsustainable to manage through intensive intervention. These uncontrolled breaches would lead to a deterioration in the recreational opportunities of the site and/or the human health of the population. This has been taken into consideration during the assessment within this chapter.

6.6. Existing environment

6.6.1. Local Community

The site and the local community features can be seen on Figure 1.2 in Appendix A.

The site lies to the east of Budleigh Salterton, a small town on the south coast in East Devon. The rear gardens of residential properties on Granary Lane, the nearest residential receptors, back onto the western boundary of the site, between its southern extent and South Farm Road. These medium-density residential areas are considered to be of medium sensitivity. South Farm Cottages lie to the north of South Farm Road on the western boundary of the site. The commercial and residential properties of South Farm Court and residential dwelling of Otter Rise lie immediately to the east of the site beyond the River Otter. The residents of these sparse properties are of low sensitivity.

Pulhayes Farm to the northwest of the site and South Farm to the east of the site, are tenanted working farms and their cattle graze on the fields within the site boundary. The landowners and tenants of Pulhayes and South Farm are of low sensitivity.

6.6.2. Access

The South West Coast Path (SWCP) follows the eastern boundary of the site, from Lime Kiln car park along the flood embankment to the south of South Farm Road and over the River Otter on White Bridge, to the east of the site (see Figure 1.11 in Appendix A). According to Table 6.1 SWCP is of high sensitivity due to its national significance. However, given that it is only a very short section (approximately 950m) of the entire footpath (1,014km) that is being impacted by LORP, the sensitivity in this assessment is deemed to be medium.

National Cycle Network (NCN) Route 2 passes through the site from East Budleigh Road, along South Farm Road, over White Bridge, before heading northwards along a track just outside of the site boundary. This route is shown on Figure 10.1 in Appendix A. NCN Route 2 is of high sensitivity.

There are several footpaths within the site that have been officially designated as PRow by DCC (shown on Figure 1.11 in Appendix A). East Budleigh Footpath 2 follows the existing Otter flood embankment along the same route as the SWCP and is therefore of medium sensitivity. East Budleigh Footpath 3 runs along the western border of the site to the north of South Farm Road and is of medium sensitivity; Otterton Footpath 1b runs along Big Bank and links Otterton Footpath 1 to East Budleigh Footpath 3. Otterton Footpath 1b is of medium sensitivity, Budleigh Salterton Footpath 12 lies along the western boundary of the site to the south of South Farm Road. It is well used by the community but has alternative routes and is therefore of medium sensitivity. Otterton Footpath 2 follows the alignment of South Farm Road and is of medium sensitivity. These medium sensitivity PRows are designated as such because there are alternative routes available as per Table 6.1..

East Budleigh Footpath 1 and Otterton Footpath 1a follows the alignment of Little Bank. According to Table 6.1 these PRoWs are of high sensitivity, because there are no alternative access routes and therefore no diversions are available. However, given that these PRoWs are predominantly for recreational use (not for access) and therefore others can be used, their sensitivity for this assessment has been reduced to medium.

Budleigh Salterton Footpath 30 runs along the length of the shingle spit. It is considered to be of high sensitivity. There is another permissive path along the northern edge of the shingle spit, which attracts use but is secondary to the main Budleigh Salterton 30 footpath and is therefore of negligible sensitivity.

East Budleigh Footpath 1a follows the south western boundary of the historic landfill to the south of South Farm Road. This footpath is overgrown, inaccessible in sections and defunct as it has no connectivity and is therefore considered to be of low sensitivity.

6.6.3. Recreation

Numerous types of visitors access the site, all of which are of low sensitivity as they are transient and have some sensitivity to day time change (see Table 6.1). These include:

- Dog walkers;
- Walkers without dogs;
- Runners/joggers;
- Birdwatchers;
- Wildlife photographers;
- Visitors with limited mobility;
- Users of Budleigh Salterton beach and the River Otter; and
- Recreational cyclists.

Over 250,000 people per annum currently use the SWCP on the estuary embankment (East Devon Area of Outstanding Natural Beauty (AONB) people counter data), with the adjacent estuary, cliffs and grazing marsh habitats of the Otter Estuary providing an iconic backdrop and principal attraction. The recreational use of the site as a popular walking destination and is well connected is considered to be of high sensitivity (as per Table 6.1).

6.6.4. Biting insects

Clinton Devon Estates (the Estate) has supported a study undertaken by Public Health England (PHE), (funded by The Natural Environment Research Council (NERC)) by collecting samples over a two-year period (2017 to 2018). The surveys have confirmed that *Anopheles claviger*, a non-biting mosquito species, and *Aedes caspius*, a biting mosquito species are present within the freshwater grassland area of the site. The number of *Anopheles claviger* peak in April, while *Aedes caspius* are active as adults between June to September and peak in number in September. *Aedes detritus*, a biting mosquito species associated with saltmarsh, has not been recorded at the site. As a worst-case scenario, the human receptors who could be vulnerable to biting insects have been assigned a high sensitivity.

6.7. Likely significant effects

6.7.1. Local Community

Construction

Given that construction works are expected to last around two years there is likely to be some disruption (increased noise, adverse visual effects, increased traffic etc.) felt by local communities such as the residents of properties on Granary Lane. The cumulative effects of the disruptive activities are assessed in chapter 14 Cumulative Effects. Due to the phasing of the construction programme and seasonal constraints, this disruption will not be consecutive or in the same locations. For more information on the construction details please refer to chapter 3 The Preferred Option, section 3.2 Construction Overview. The construction works could cause a deterioration in wellbeing through stress and anxiety. As per table 6.2, the magnitude of impact is medium negative. The residents of Granary Lane are of medium sensitivity and so the significance of effect is moderate adverse. Due to their increased proximity to the works, the magnitude of impact on the mental health of the residents of South Farm Cottages, Otter Rise and South Farm Court (low sensitivity), is considered to be high negative. This results in a moderate adverse significance of effect. Mitigation measures to reduce impacts on the local communities are discussed in section 6.8.1.

Operation

In its current situation, South Farm Road is inundated during times of flood cutting off the usual access to Otter Rise and South Farm Court (low sensitivity). The raising and improvements to South Farm Road will prevent this from happening which will result in a major improvement of the wellbeing of the residents of these properties. This is a high positive magnitude of impact which results in a moderate beneficial significance of effect.

The residents of Granary Lane and South Farm Cottages will experience no change relating to population and human health during operation and therefore there is no impact.

6.7.2. Access

Construction

During the construction works for the breach of the River Otter embankment (near Lime Kiln car park), public access along the SWCP (East Budleigh Footpath 2) will be prohibited. As per section 6.6.2 the SWCP is of medium sensitivity. The closure of the SWCP is expected to be in place for approximately four months and is a high negative magnitude of impact as it is causing a major disruption to the SWCP. This results in a major adverse effect and is significant, which requires mitigation. This is discussed in section 6.8.2

During the construction works for the breach of Little Bank, the East Budleigh Footpath 1 and Otterton Footpath 1a (see Figure 1.11 in Appendix A) will need to be closed. As per section 6.6.2 these footpaths are of **medium** sensitivity. Given that the temporary closure (approximately two months) will cause disruption to this footpath, the magnitude of impact is considered to be medium negative (see table 6.2). The significance of effect is moderate adverse and is therefore significant. Mitigation measures for this are discussed in section 6.8.1.

During the construction works for the breach of Big Bank (approximately three months), East Budleigh Footpath 3 and Otterton Footpath 1b (medium sensitivities) will need to be temporarily closed. These PRowS can be seen in Figure 1.1 in Appendix A. The temporary closure is deemed a medium negative magnitude of impact. The significance of effect is moderate adverse and is therefore significant and requires mitigation (see section 6.8.2).

During construction works for the two short sections of improved, raised path along East Budleigh Footpath 3 (medium sensitivity), a temporary footpath closure will be required. This PRow can be seen in Figure 1.11 in Appendix A. The temporary closure is deemed a medium negative magnitude of impact. The significance of effect is moderate adverse and is significant. Mitigation measures are discussed in section 6.8.2.

During construction, the PRow Budleigh Salterton Footpath 12 that links Lime Kiln car park and South Farm Road (as shown in Figure 1.11 in Appendix A) will need to be temporarily closed during the tie-in of the new South Farm Road to the existing South Farm Road which will cause a disruption and so the magnitude of impact is medium negative. Budleigh Salterton Footpath 12 is of medium sensitivity. The effect is moderate adverse and therefore significant and requires mitigation (discussed in section 6.8.1).

Construction works relating to the landfill will be undertaken along the route of East Budleigh Footpath 1a. Given the existing overgrown nature of the footpath and that it cannot be used by walkers the magnitude of impact is considered to be negligible.

Otterton Footpath 2 (medium sensitivity) along South Farm Road (see Figure 1.11 in Appendix A) will be kept open to pedestrians for the majority of the construction works using construction traffic management for pedestrian safety and segregation. However, during the tie ins of the new road into either end of South Farm Road there will be a very short period of closure (two weeks) which will cause a minor disruption and so is a low negative magnitude of impact. The significance of effect is minor adverse which is not significant.

The NCN Route 2 is of high sensitivity and will also need to be closed for a period of two weeks (low negative magnitude of impact). This results in a moderate adverse significance of impact. Mitigation measures are discussed in section 6.8.2.

Operation

Through operation of the Scheme there will be a major improvement to the SWCP in the long-term protection from flooding that is afforded as part of the Scheme. The new breach will lessen the risk of an uncontrolled breach occurring and resulting in path/bank failures. As the relevant section of SWCP is of medium sensitivity, this is a major beneficial significance of effect and is significant.

As part of the Scheme the unpassable East Budleigh Footpath 1a will be diverted to traverse the southern edges of the landfill (see Figure 1.3 to 1.8 in Appendix A). This PRow will be permanently adopted by DCC, replacing the removed, existing East Budleigh Footpath 1a, and is a high positive magnitude of impact. As per section 6.6.2 the sensitivity of this route is low. Therefore, the significance of effect is moderate beneficial and is significant.

During infrequent large fluvial flood events the breached section of Little Bank will be inundated and inaccessible to the public. The disruption to East Budleigh Footpath 1

and Otterton Footpath 1a will be a temporary, medium negative magnitude of impact. Due to the medium sensitivity of these PRowS (see section 6.6.2), the significance of effect is moderate adverse and is therefore significant. Mitigation measures are discussed in section 6.8.2.

Once operational, the breached section of East Budleigh Footpath 3 and Otterton Footpath 1b (medium sensitivity) on Big Bank will be inundated during high tide and during infrequent fluvial flood events. This disruption will be short term but is likely to occur most days and so the magnitude of impact is major negative. The significance of effect is major adverse and is therefore significant. Mitigation measures are discussed in section 6.8.2.

Once operational, the existing low-lying long sections of the East Budleigh Footpath 3 (medium sensitivity) further south from Big Bank, will be inaccessible during large peak fluvial flood events and more regular high spring tides. This disruption will be short term but likely occur most days and so is a high negative magnitude of impact. The significance of effect is major adverse and is therefore significant. Mitigation measures are discussed in section 6.8.2.

In its current situation the NCN Route 2 (high sensitivity) and Otterton Footpath 2 (medium sensitivity) are inundated during times of large flood events, cutting off the route to cyclists and pedestrians. The raising and improvements to South Farm Road will greatly reduce the risk of this happening which will result in an improvement to the NCN Route 2 and Otterton Footpath 2. Other improvements to the route include a safer road space due to improved surfacing and layout. Pedestrians will be segregated away from cyclists and vehicles on their own footpath. The new car park to the west of South Farm Road will take existing parked vehicles on verges away from highway which will result in more space for cyclists, etc. This is a major magnitude of impact which results in a major beneficial significance of effect on both the NCN Route 2 and Otterton Footpath 2. This is therefore significant.

During periods of high spring tides Budleigh Salterton Footpath 12 (medium sensitivity) will be flooded, following the construction of LORP. This disruption will be short term and is likely to occur once every four days and so is a medium negative magnitude of impact. The significance effect is moderate adverse and therefore significant. Mitigation measures to minimise this are discussed in section 6.8.2.

There will be no impacts to Otterton Footpath 1 (north of South Farm Road) or the SWCP (East Budleigh Footpath 2) during operation.

Further information on the visual impacts on PRowS is provided in section 11.6.5. of chapter 11 Landscape and Visual.

6.7.3. Recreation

Construction

During construction there will be a temporary disruption to the bird watchers who visit the site. During the approximately four-month closure of the SWCP, bird watchers (low sensitivity) will be unable to use the existing bird hide on the SWCP. This temporary closure of a recreational feature is considered to be a medium negative magnitude of impact. Therefore, the significance of effect is minor adverse and is not significant.

The NCN Route 2 along South Farm Road (see Figure 1.11 in Appendix A) will be kept open to pedestrians for the majority of the construction works using construction traffic management for pedestrian safety and segregation. However, during the tie ins

at either end of South Farm Road there will be a very short period of closure which is a low negative magnitude of impact. The recreational cyclists that use this route are of low sensitivity and therefore the significance of effect is minor adverse which is not

Users of Budleigh Salterton beach and the River Otter (swimmers, paddleboarders, boaters etc) may observe an increase in sediment in the bathing waters, as a result of construction works upstream of the River Otter and coming out of the estuary. As per section 6.6.3, these visitors are of low sensitivity. The magnitude of impact is medium negative. The significance of effect is temporary minor adverse, which is not significant.

Operation

In its current situation, NCN Route 2 is inundated during times of large flood events. The raising and improvements to South Farm Road will greatly reduce the risk of this happening which will result in a minor improvement of the wellbeing of the cyclists who use the route (low sensitivity). As per Table 6.2 this is a medium positive magnitude of impact which results in a minor beneficial significance of effect and is not significant.

The Scheme will establish 27ha of saltmarsh and 28ha of mudflats that will support feeding opportunities for overwintering birds. The following improvements, in the form of enhanced viewing opportunities are to be incorporated as part of the Scheme (see the Landscape General Arrangement Figures 1.3 to 1.8 in Appendix A).

- Improvements to the existing timber viewing structure on the River Otter embankment, looking east;
- Installation of a new timber viewing structure on an extended section of the River Otter embankment, looking west over the new habitat area;
- Installation of a new viewing mound at the edge of Lime Kiln Car Park, to overlook the new habitat areas to the north;
- Installation of a new timber viewing structure at the southern corner of the old landfill site, overlooking the new habitat area to the south;
- Installation of a new timber viewing shelter, with a roof, at the eastern edge of the new car park, off South Farm road, looking east; and
- Installation of two new timber viewing structures (likely to be bird hides) on Big Bank, looking north towards Little Marsh and south towards Big Marsh.

These Scheme enhancements will benefit and likely increase the number of visitors to the site, particularly those who are interested in the habitat creation elements of the Scheme e.g. birdwatchers and wildlife photographers (low sensitivity). The bird hides and viewing areas will be permanent and the magnitude of impact on recreation is high positive. The significance of effect is moderate beneficial and therefore significant.

Due to the increased tidal prism coming through the estuary, velocities will also be greater which could pose a risk to visitors, particularly at the distal end of the spit. Any risk to public safety is considered to be a major magnitude of impact. Therefore, the significance of effect is moderate adverse and is significant. Mitigation measures are discussed in section 6.8.3.

The increased tidal prism caused by the Scheme, will also increase erosion rates. This will likely result in increased sediment within the bathing waters. However, this effect will only be temporary as erosion rates are expected to return to the existing situation

after six months to one year. Therefore, the magnitude of impact is medium negative and the overall significance of effect is low adverse, which is not significant.

6.7.4. Biting insects

Construction

There are no construction impacts relating to biting insects anticipated as a result of LORP.

Operation

Aedes detritus is a biting mosquito that breeds in stagnant bodies of saline water. The period of maturation, from egg to adult is approximately two weeks. The design of the proposed intertidal habitat areas and creek channels provide sufficient gradients, which minimises the risks of standing pools of saline water occurring for longer than two weeks.

The design will allow complete drainage from the site between tides and water will not be able to pool behind the embankments. Therefore, the habitat will be less suitable for biting *Aedes detritus*. There is not expected to be any colonisation of *Aedes detritus* and so the magnitude of impact is negligible and not significant.

6.8. Mitigation

All mitigation measures will be detailed in the Environmental Action Plan in Appendix K.

6.8.1. Local Community

Construction

The majority of construction takes place within the floodplain areas away from properties, and therefore the noise and visual impacts are lessened. These issues are assessed further in chapters 7 Noise and Vibration and 11 Landscape and Visual respectively. The impacts on the local community will be mitigated to manage the constructions impacts on the local roads and PRowS to reassure the local community that their safety is paramount. Mitigation measure relating to Traffic and Transport are discussed in chapter 13. A Construction Management Plan and Traffic Management Plan will be produced to manage impacts. Regular consultation will be carried out with the local residents to provide updates on progression of the construction work. This will result in a low negative magnitude of impact. Sensitive working practices will be used including timing of construction works. The Scheme programme will ensure that the bulk of construction works and material transport around the site/storage fields to will be limited to 8am-6pm Monday to Friday, 8am-1pm Saturday, with no working on Sundays or bank holidays. As discussed in section 6.7.1 due to construction phasing, works will not be continuous for the whole construction programme and will not always be in the same location. The magnitude of impact will be reduced to low negative. As Granary Lane residents are of medium sensitivity and South Farm Cottages, Otter Rise and South Farm Court residents are of low sensitivity, this will result in a minor adverse significance of effect on all these residents, which is not significant.

6.8.2. Access

Construction

During construction and the necessary closures of the SWCP (East Budleigh Footpath 2), a diversion will direct users along the PRow bordering the west of the site (Budleigh Salterton Footpath 12) and along South Farm Road (Otterton Footpath 2). As per section 6.7.2 this short section of the SWCP is of medium sensitivity. The programme of works will ensure that the temporary closure of the SWCP is not at the same time of the temporary closure of the PRow along South Farm Road (Otterton Footpath 2) or during the tie in of Budleigh Salterton Footpath 12 to South Farm Road and the resultant temporary closure of Budleigh Salterton Footpath 12. The quality of path surface on Budleigh Salterton Footpath 12 is not to the same standard of the SWCP and therefore less able users will be at a disadvantage. This will result in a medium negative magnitude of impact and thus a moderate adverse significance of effect, which is significant.

There are no feasible diversion routes for the temporary closure of East Budleigh Footpath 1 and Otterton Footpath 1a on Little Bank, during the breach construction works. Clear signage will be erected to provide advance warning of the closure so that users can plan ahead and use alternative routes. This will result in a low negative magnitude of impact and thus a minor adverse significance of effect.

During the temporary closure of East Budleigh Footpath 3 and Otterton Footpath 1b (on Big Bank) a diversion will direct users along South Farm Road (Otterton Footpath 2), over White Bridge and northwards along Otterton Footpath 1 (see Figure 1.11) as this alternative route is within a similar setting. This will reduce the magnitude of impact to low and thus the overall significance of effect is minor adverse.

During construction works for the improvements to East Budleigh Footpath 3 a diversion will direct users along South Farm Road (Otterton Footpath 2), over White Bridge and northwards along Otterton Footpath 1 (see Figure 1.11) as this alternative route is within a similar setting. This will reduce the magnitude of impact to low and thus the overall significance of effect is minor adverse.

During the temporary closure of Budleigh Salterton Footpath 12, users will be diverted along the SWCP (Otterton Footpath 2) and along South Farm Road (Otterton Footpath 2). The programme of works will ensure that these alternative routes are open during this time. This will reduce the magnitude of impact to low and thus the overall significance of effect is minor adverse.

Throughout construction there will be a clear signage and warnings notifying cyclists and pedestrians of the dates of the two-week closure of the NCN Route 2 and Otterton Footpath 2, to encourage them to avoid using the route during this time. Occasional access will possibly be allowed for cyclists and pedestrians during a break in construction. This will be managed by a contractor operative. An alternative access route will be provided to the east of South Farm which leads to Otterton. This is shown in chapter 13 Traffic and Transport. This will reduce the magnitude of impact to negligible which is not significant.

Operation

To mitigate for the operational, short-term disruption to East Budleigh Footpath 1 and Otterton Footpath 1a on Little Bank (medium sensitivity) during periods of particularly high tide or flooding of the River Otter, permanent warning signage and depth gauge

boards will be installed to notify users of the risks. Edge markers of low-lying path will be provided and a more robust concrete path surfacing installed. Access will still be available along high ground to the east or west of the breach during emergencies. This will reduce the magnitude of impact to low negative and therefore the significance of effect to minor adverse which is not significant.

To mitigate for the short-term disruption to East Budleigh Footpath 3 and Otterton Footpath 1b (on Big Bank) during daily high tides or flooding of the River Otter, permanent warning signage and depth gauge boards will be installed to notify users of the risks. Edge markers of low-lying path will be provided and a more robust concrete path surfacing installed. Access will still be available along high ground to the east or west of the breach during emergencies. This will reduce the magnitude of impact to medium negative and therefore the significance of effect to moderate adverse which is significant.

To mitigate for the short-term disruption to Budleigh Footpath 3 (south of Big Bank) during daily high tides or flooding of the River Otter, improvements have been made including the raising of lower sections of the footpath to provide safe areas for pedestrians during emergencies. Permanent warning signage and depth gauge boards will be installed to notify users of the risks. Edge markers of low-lying path will be provided and a more robust concrete path surfacing installed. This will reduce the magnitude of impact to medium negative and therefore the significance of effect to moderate adverse which is significant.

To mitigate the operational, short-term cut-off of Budleigh Salterton Footpath 12 during daily high tides, permanent warning signage and depth gauge boards will be installed to notify users of the risks. Edge markers of low-lying path will be provided and a more robust concrete path surfacing installed. Access will still be available along high ground to the east or west of the breach during emergencies. This will reduce the magnitude of impact to medium negative and therefore the significance of effect to moderate adverse which is significant.

6.8.3. Recreation

Operation

To minimise the public safety risk of increased velocities on users of the bathing waters and Budleigh Salterton beach (low sensitivity), signs will be erected to warn users of the dangers of getting too close to the estuary mouth. This will decrease the magnitude of impact to medium negative. This will reduce the overall significance of effect is minor adverse, which is not significant.

6.9. Residual effects

Following the mitigation measures detailed in section 6.8, some residual effects will still remain. These are outlined in table 6.4.

Table 6.4 – Table of Residual Effects

Key Issue	Significance of Effect (before mitigation)	Residual Effect (after mitigation)
Local Community - construction		
Impact on the mental well-being of the residents of Granary Lane South Farm Cottages, Otter Rise and South Farm Court.	Moderate adverse (significant)	Minor adverse (not significant)
Access - construction		
Temporary closure of SWCP (East Budleigh Footpath 2) during construction.	Major adverse (significant)	Moderate adverse (significant)
Temporary closure of East Budleigh Footpath 1a and Otterton Footpath during breach of Little Bank.	Moderate adverse (significant)	Minor adverse (not significant)
Temporary closure of East Budleigh Footpath 3 and Otterton Footpath 1b during breach of Big Bank.	Moderate adverse (significant)	Minor adverse (not significant)
Improvements works to East Budleigh Footpath 3.	Moderate adverse (significant)	Minor adverse (not significant)
Temporary closure of Budleigh Salterton Footpath 12 during tie in to the new South Farm Road	Moderate adverse (significant)	Minor adverse (not significant)
Temporary closure of NCN Route 2 during construction of the new South Farm Road.	Moderate adverse (significant)	Negligible (not significant)
Access – operation		
Improvements to the SWCP during operation, through reduced risk of flooding.	Major beneficial (significant)	Major beneficial (significant)
Diversion of East Budleigh Footpath 1a to traverse the southern edges of the landfill.	Moderate beneficial (significant)	Moderate beneficial (significant)
Infrequent disruption to East Budleigh Footpath 1 and Otterton Footpath 1a (on Little Bank) during periods of particularly high tide or flooding of the River Otter.	Moderate adverse (significant)	Minor adverse (not significant)

Key Issue	Significance of Effect (before mitigation)	Residual Effect (after mitigation)
Frequent but temporary disruption to East Budleigh Footpath 3 and Otterton Footpath 1b (on Big Bank) during high tide or flooding of the River Otter.	Major adverse (significant)	Moderate adverse (significant)
Frequent but temporary disruption to the low lying parts East Budleigh Footpath 3 (south of Big Bank) during high tide or flooding of the River Otter.	Major adverse (significant)	Moderate adverse (significant)
Improvements to the NCN Route 2 and Otterton Footpath 2 during operation, through reduced risk of flooding.	Major beneficial (significant)	Major beneficial (significant)
Temporary disruption to Budleigh Salterton Footpath 12 during periods of high spring tides	Major adverse (significant)	Moderate adverse (significant)
Recreation - operation		
Impacts of Scheme enhancements on site visitors	Moderate beneficial (significant)	Moderate beneficial (significant)
Impacts of increased velocities on users of the bathing waters.	Moderate adverse (significant)	Minor adverse (not significant)

6.10. Conclusion

During construction, the Scheme will result in some adverse effects on the local population and recreational opportunities e.g. PRowS. However, these can be mitigated through direct communication with the local residents and through diversion of the PRowS. The closure of the SWCP will cause disruption to less able users as the diversion along Budleigh Salterton Footpath 12 is not of the same standard of quality.

Once operational the Scheme will result in several, long-term significant beneficial effects. The enhanced viewing opportunities of the site and increased bird populations through the creation of the saltmarsh and mudflats will benefit both local users and visitors to the site. The Scheme will also result in improvements to local PRowS including the SWCP and NCN Route 2 and Otterton Footpath 2 through reduced risk of flooding and longevity of recreational opportunities.

Despite mitigation measures to reduce the impacts, some residual effects will remain during the daily inundation of East Budleigh Footpath 2 and Otterton Footpath 1b and Budleigh Salterton Footpath 12. However, bearing in mind that without the Scheme tidal flooding of the area is likely to increase due to sea level rise from climate change.

The Scheme will make the majority of the footpaths more sustainable in the long term. It is therefore considered that the overall benefits of the Scheme outweigh these adverse effects.

6.11. Abbreviations

AONB	Area of Outstanding Natural Beauty
DCC	Devon County Council
ES	Environmental Statement
NCN	National Cycle Network
NERC	The Natural Environment Research Council
PHE	Public Health England
PRoW	Public Right of Way
SWCP	South West Coast Path