

# Strategic Environmental Assessment (SEA) for the Portsmouth Local Transport Plan 4 (LTP4)

Environmental Report

Portsmouth City Council

June 2021

## Quality information

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## Revision History

<b>Revision</b>	<b>Revision date</b>	<b>Details</b>	<b>Name</b>	<b>Position</b>
V1	06/08/20	First draft for internal review	Cheryl Beattie	Senior Environmental Planner
V2	07/08/20	First draft for client review	Cheryl Beattie	Senior Environmental Planner
V3	14/09/20	Final draft for consultation	Cheryl Beattie	Senior Environmental Planner
V4	02/06/21	Final for publication alongside LTP4	Alastair Peattie	Associate Director

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# 1. Introduction

## Background

- 1.1 AECOM has been commissioned to undertake an independent Strategic Environmental Assessment (SEA) of Portsmouth City Council's (PCC) emerging Local Transport Plan 4 (LTP4).

## SEA explained

- 1.2 SEA is a mechanism for considering and communicating the environmental impacts of an emerging plan or strategy and potential alternatives. The aim of SEA is to inform and influence the plan-making process with a view to avoiding and mitigating negative impacts as well as maximising opportunities for positive effects. Through this approach, the SEA seeks to maximise the environmental performance of LTP4.
- 1.3 As prescribed by the Environmental Assessment of Plans and Programmes Regulations 2004<sup>1</sup> (the SEA Regulations) an SEA is required for a plan or programme which is prepared for transport, town and country planning or land use, and which sets the framework for future development consent of projects listed in Annex I or II to Council Directive 85/337/EEC (LTP4 sets a framework for future development consent of infrastructure projects listed in Annex II).
- 1.4 The SEA Regulations require that a report is published for consultation alongside the Draft LTP4 that 'identifies, describes and evaluates' the likely significant effects of implementing 'the plan, and reasonable alternatives'. The report must then be taken into account, alongside consultation responses, when finalising the Plan.
- 1.5 The 'likely significant effects on the environment', are those defined in Annex I of the SEA Directive as 'including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors'. Reasonable alternatives to the plan need to take into consideration the objectives for the plan and its geographic scope. The choice of 'reasonable alternatives' is determined by a means of case-by-case assessment and a decision.<sup>2</sup>
- 1.6 More specifically, the SEA Report must answer the following three questions:
  1. What has plan-making / SEA involved up to this point?
    - Including in relation to 'reasonable alternatives'.
  2. What are the SEA findings at this stage?
    - i.e. in relation to the LTP4
  3. What happens next?
    - What steps will be taken to finalise (and monitor) the LTP4?

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<sup>1</sup> Transposing Directive 2001/42/EC

<sup>2</sup> Commission of the European Communities (2009) Report from the Commission to the Council, The European Parliament, The European Economic and Social Committee and the Committee of the Regions on the application and effectiveness of the Directive on Strategic Environmental Assessment (Directive 2001/42/EC). (COMM 2009 469 final).

## This Environmental Report

- 1.7 This Environmental Report<sup>3</sup> is published alongside the final LTP4, and answers each of the three questions (outlined in paragraph 1.6 above) in turn, with a 'part' of the report dedicated to each.
- 1.8 Before answering the first question however, two initial questions are answered in order to further 'set the scene' – i) what is the LTP4 trying to achieve?; and ii) what is the scope of the SEA?

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<sup>3</sup> See **Appendix I** for further explanation of the regulatory basis for answering certain questions within the Environmental Report and a 'checklist' explaining more precisely the regulatory basis for presenting certain information.

## 2. What is the LTP4 trying to achieve?

- 2.1 This section seeks to explain the context to the preparation of the LTP4 and identify its vision and objectives.

### The need for LTP4

- 2.2 Portsmouth City Council have recognised a need to update the Local Transport Plan in response to a number of existing transport related issues, including; unsustainable levels of carbon emissions from transport, unhealthy polluted air, regular traffic congestion problems and severely reduced levels of physical activity. PCC identify that a new approach is needed to how transport is managed in the city, based on an understanding of the city and how it works.

### Vision of the LTP4

- 2.3 The LTP4 has identified the following vision:

*“By 2038 Portsmouth will have a people centred, connected travel network that prioritises walking, cycling and public transport to help deliver a safer, healthier and more prosperous city.”*

### Objectives of the LTP4

- 2.4 To achieve the vision outlined above, the LTP4 has identified the following objectives:

- **Deliver cleaner air:**

*“Everyone who lives in, works in or visits the city should be able to breathe air that will not damage their health. Unfortunately today this is not possible. Extensive research conducted to develop the Portsmouth Air Quality Local Plan shows that significant intervention is required to improve air quality in the city. Air quality and transport modelling demonstrated that a city centre charging Clean Air Zone (CAZ) would be required to reduce air pollution to within legal limits in the shortest possible time.*

*The CAZ in isolation is unable to deliver the levels of reduction of pollution needed and will therefore be supported by a number of complementary measures. These include: providing more electric vehicle (EV) charge points, including for taxis; progressive change of taxi licensing rules; using parking permit fees to encourage low emission and fewer vehicles; changes to parking capacity and pricing, including expanding park and ride and creating a transport hub; for those travelling from outside of the city and exploring ways to discourage private off-street non-residential car parking while enabling alternatives to car use.*

*Through the delivery of the CAZ and additional complimentary measures and other policies set out in the strategy, we will seek to not only meet the legal limits for air quality, but to exceed them, improving the air quality across the city for all. The Air Quality Strategy produced in 2017 will be updated to reflect the changes being implemented through the Air Quality Local Plan.*

*As well as these measures, the other strategic objectives support reductions in air pollution through their policies.”*

- **Prioritise walking and cycling:**

*“Most trips within the city are short but despite this the car is too often the default choice. This is likely to be related to the walking and cycling infrastructure. Without quality infrastructure we know that people who walk or cycle find routes unappealing and have fears around safety, as well as a perceived convenience of the private car. Issues such as unsegregated and non-continuous routes, street clutter, narrow pavement widths etc. can make walking and cycling an unattractive option.*

*Following the Manual for Streets recommendations of user hierarchy we will prioritise pedestrians and people who cycle followed by public transport users, specialist service vehicles and then other motor traffic. To do this we propose to provide traffic-free cycle routes and high-quality walking connections. This will also provide space to safely accommodate people with mobility issues, those who may need to use a wheelchair or mobility scooter and pushchairs, as well as new technologies, such as e-bikes and e-scooters. Provision of secure cycle parking in areas of demand will also form part of our response, alongside reducing traffic in residential streets, the city centre and high streets. Promoting active travel can result in reduced emissions of air pollutants, helping to tackle climate change and improve air quality, whilst also contributing towards the recommended 150 minutes of physical activity for adults each week.”*

- **Transform public transport:**

*“Whilst the city benefits from five train stations and some high-frequency bus corridors, there are limited public transport services in some areas of the city and a lack of priority slows buses down, making them less attractive. This means that it is routine for people to use private cars for very local journeys. We will introduce a transformational new South East Hampshire Rapid Transit (SEHRT) network, which will build on the existing Eclipse route between Fareham and Gosport and Star corridor from Waterlooville to Clanfield. Across the city, more street space will be dedicated to SEHRT and local bus networks, leading to faster and more reliable journeys. We will work with bus, rail and ferry operators to deliver wider improvements to services both across the city and to longer-distance destinations, improving journey times, creating higher frequency services and continue to simplify fares and support innovation to improve customer service. We will work with operators to try to ensure that all communities have adequate access to bus services. Furthermore, improved interchanges at stops and stations alongside local ‘hubs’ will help integrate public transport with ‘first/last mile’ transport such as cycling, cycle hire and e-scooters, to deliver a truly seamless travel experience.”*

- **Support business and protect our assets:**

*“The success of the economy in Portsmouth is intertwined with the International Port and naval base. The ports, along with the thousands of other businesses and organisations within the city including industrial and business parks, must be served by an efficient transport network. Consequently we will seek to ensure the main highway accesses to the city are focused on supporting essential trips that cannot easily be made by other modes. This is central to delivering a prosperous city, with an economy that can provide good quality jobs. Recognising the vital role goods vehicles play in the city we will work with stakeholders to understand how efficiency and sustainability can be increased. We will support the delivery of freight consolidation that can reduce the number of goods vehicles on our streets, whilst reducing costs for business. We will ensure that the road network and all highway infrastructure is well maintained, its performance monitored and is configured appropriately to enable traffic to flow effectively and efficiently. Technology and innovations will be explored to increase the capabilities of the network and to prepare for the vehicles of the future. Kerbside space will be used efficiently and flexibly, whilst works on the highway will be properly co-ordinated and will maintain adequate access to road users.”*



## 3. What is the scope of the SEA?

### Introduction

3.1 The aim of this section is to introduce the reader to the scope of the SEA, i.e. the sustainability topics/ issues/ objectives that should be a focus of the assessment of the LTP4 and reasonable alternatives. Further information is presented in **Appendix II**.

### Consultation

3.2 The SEA Regulations require that “when deciding on the scope and level of detail of the information that must be included in the report, the responsible authority shall consult the consultation bodies”. In England, the consultation bodies are the Environment Agency, Historic England and Natural England.<sup>4</sup> As such, these authorities were consulted in July 2020. Scoping responses are detailed in **Appendix II**, the responses resulted in minor updates to the baseline and context review as well as the supporting assessment questions of the proposed SEA framework.

### The SEA framework

3.3 The SEA scope is summarised in a list of themes, objectives and questions known as the SEA framework. **Table 3.1** presents the SEA framework as broadly agreed with statutory consultees in 2020.

**Table 3.1: The SEA framework (as broadly agreed in 2020)**

SEA theme	SEA objective	Assessment questions (will the option/ proposal help to...)
Environmental quality	Improve air quality within and surrounding the LTP area.	<ul style="list-style-type: none"> <li>• Reduce emissions of pollutants from transport?</li> <li>• Improve and monitor air quality within AQMAs?</li> <li>• Promote the use of low emission vehicles?</li> <li>• Promote enhancements in sustainable modes of transport, including walking, cycling and public transport?</li> <li>• Promote enhancements to green infrastructure networks to facilitate increased absorption and dissipation of NO2 and other pollutants?</li> </ul>
Environmental quality	Reduce noise pollution in Portsmouth.	<ul style="list-style-type: none"> <li>• Reduce noise pollution arising through transport?</li> </ul>
Biodiversity	Protect and enhance habitats and species within and surrounding Portsmouth.	<ul style="list-style-type: none"> <li>• Protect the integrity of the internationally and nationally designated sites in Portsmouth?</li> <li>• Protect and enhance locally designated and regionally important sites, including LNRs, in Portsmouth?</li> <li>• Protect and enhance priority habitats and species?</li> <li>• Protect and enhance the interconnectivity of habitats?</li> <li>• Achieve a net gain in biodiversity of at least 10% on the existing baseline?</li> <li>• Assist in monitoring the future health and resilience of Portsmouth’s biodiversity?</li> <li>• Increase the resilience of Portsmouth’s biodiversity to the potential effects of climate change?</li> </ul>
Climatic factors	Support climate change mitigation in Portsmouth through limiting the contribution of transport to	<ul style="list-style-type: none"> <li>• Limit the increase in the carbon footprint resulting from new transport infrastructure provision?</li> <li>• Promote the use of sustainable modes of transport, including walking, cycling and public transport?</li> </ul>

<sup>4</sup> These consultation bodies were selected “by reason of their specific environmental responsibilities, [they] are likely to be concerned by the environmental effects of implementing plans and programmes” (SEA Directive, Article 6(3)).

	greenhouse gas emissions in the county.	<ul style="list-style-type: none"> <li>• Reduce the need to travel?</li> <li>• Reduce energy consumption from non-renewable resources?</li> <li>• Encourage the update of electric and alternatively fuelled vehicles?</li> </ul>
Climatic factors	Support the resilience of Portsmouth's transport networks to the potential effects of climate change.	<ul style="list-style-type: none"> <li>• Ensure flood risk is not increased to the local area, and provide betterment (where possible)?</li> <li>• Increase the resilience of the transport network to the potential effects of climate change?</li> <li>• Promote a coordinated approach to the management of flood risk across public infrastructure provision?</li> <li>• Improve and extend green infrastructure networks as part of transport infrastructure provision to support adaptation to the potential effects of climate change?</li> <li>• Sustainably manage water run-off, reducing surface water runoff?</li> <li>• Ensure the potential risks associated with climate change are considered through new transport network programmes?</li> <li>• Reduce the impact of extreme weather events on the condition of the road network?</li> <li>• Increase the resilience of biodiversity in Portsmouth to the effects of climate change, including enhancements to ecological networks?</li> </ul>
Landscape	Protect and enhance the character and quality of Portsmouth's landscapes and townscapes.	<ul style="list-style-type: none"> <li>• Conserve and enhance locally important townscape and landscape features in Portsmouth?</li> <li>• Improve accessibility to Portsmouth's townscape and landscape resources?</li> <li>• Protect and enhance characteristic coastal and harbour areas in Portsmouth, including the harbours and seafront?</li> </ul>
Historic Environment	Protect and enhance the significance of the historic environment, heritage assets (both designated and non-designated) and their settings.	<ul style="list-style-type: none"> <li>• Conserve and where possible enhance the significance of buildings and structures of architectural or historic interest, both designated and non-designated, and their setting?</li> <li>• Conserve and enhance the special interest, character and appearance of conservation areas and their settings?</li> <li>• Support access to, interpretation and understanding of the historic environment?</li> <li>• Conserve and enhance archaeological remains, including historic landscapes?</li> </ul>
Land, soils and water resources	Promote the efficient and effective use of natural resources.	<ul style="list-style-type: none"> <li>• Assist in facilitating the use of previously developed land?</li> <li>• Encourage recycling of materials and minimise consumption of resources during construction, operation and maintenance of new transport infrastructure?</li> <li>• Support improvements to water quality?</li> <li>• Support enhancements to the status and/ or potential of waterbodies under WFD objectives, including the Portsmouth shoreline and its' resources?</li> </ul>
Population and human health	Support sustainable economic development in Portsmouth.	<ul style="list-style-type: none"> <li>• Support sustainable economic development by improving accessibility to employment opportunities?</li> <li>• Support town centre/ urban regeneration and inward investment?</li> </ul>
Population and human health	Improve the health and wellbeing of Portsmouth's residents.	<ul style="list-style-type: none"> <li>• Enhance the provision of, and access to, green infrastructure in the County, in accordance with national standards?</li> <li>• Improve road safety and reduce road accidents?</li> </ul>

- Maintain and enhance the quality of life of residents
- Promote accessibility to a range of leisure, health and community facilities, for all age groups?
- Encourage healthy lifestyles and reduce health inequalities?
- Consider the additional needs of residents with disabilities and/ or those 'in need'?

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Population and human health      Maintain and enhance accessibility for all people

- Encourage modal shift to more sustainable forms of travel?
- Deliver new or improved transport infrastructure that improves connectivity?
- Meet the accessibility needs of all residents?

## **Part 1: What has plan-making/ SEA involved up to this point?**

## 4. Introduction (to Part 1)

- 4.1 In line with regulatory requirements, there is a need to explain how work was undertaken to develop and then appraise reasonable alternatives, and how the Council then took into account appraisal findings when finalising LTP4.
- 4.2 This part of the report presents the information regarding the consideration of reasonable alternatives across the objectives for the LTP4.
- 4.3 The SEA Regulations<sup>5</sup> are not prescriptive as to what constitutes a reasonable alternative, stating only that the Environmental Report should present an appraisal of the “*plan and reasonable alternatives taking into account the objectives and geographical scope of the plan*”.
- 4.4 In accordance with the SEA Regulations the Environmental Report must include:
- An outline of the reasons for selecting the alternatives dealt with; and
  - The likely significant effects on the environment associated with alternatives/ an outline of the reasons for selecting the preferred approach in light of the alternatives appraised.

### Structure of this part of the report

- 4.5 This part of the report is structured as follows:
- **Chapter 5** – explains the process of establishing reasonable alternatives
  - **Chapter 6** – presents the outcomes of assessing reasonable alternatives
  - **Chapter 7** – explains reasons for establishing the preferred option, in light of the assessment.

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<sup>5</sup> Environmental Assessment of Plans and Programmes Regulations 2004

## 5. Establishing the reasonable alternatives

5.1 The SEA Regulations state that alternatives should be explored in light of the objectives and geographical scope of the Plan. The LTP4 has identified four objectives as follows:

- Deliver cleaner air
- Prioritise walking and cycling
- Transform public transport
- Support business and protect our assets

5.2 In line with this, the SEA process has focused on these objectives to develop alternatives. Recognising that the individual objectives are not mutually exclusive the Council and AECOM have worked together to identify realistic and reasonable alternatives. The first step in identifying alternatives is to examine the strategic context for the LTP4.

### Strategic context

5.3 The LTP4 is influenced by other programmes and related schemes, some of which are relatively progressed already. Some key influences to be considered in the context of the objectives of the LTP4 are the Transforming Cities bid, Future Transport Zones Bid, Ministerial Directions, the Local Cycling and Walking Infrastructure Plan (LCWIP) and the subsequent Implementation Plan to support the LTP4.

### Transforming Cities Fund

5.4 Portsmouth, South East Hampshire and the Isle of Wight are set to see significant improvements to active travel and public transport thanks to almost £56 million investment from the government's Transforming Cities Fund. The Portsmouth City Region Transforming Cities Fund (TCF) bid unites Portsmouth City Council, Hampshire County Council, Isle of Wight Council and local public transport operators with a shared commitment to transform the way people travel in the area. The joint bid was awarded almost £56 million towards the total scheme package of £101.7 million, with match funding provided by each of the bidding authorities and their partners First Bus, Stagecoach, and the borough councils. This follows an initial grant of £4 million for the Portsmouth City Region.

### Future Transport Zones

5.5 In March last year, government launched consultation on making journeys easier, smarter and greener through new technology as part of the Future of Transport regulatory review. Alongside the review Government are investing £90 million in funding to trial new transport innovations in 3 new 'future transport zones'. The zones will provide real-world testing for experts, allowing them to work with a range of local bodies such as council, hospitals, airports and universities to test innovative ways to transport people and goods. Portsmouth is part of one of these 3 new zones (the Solent Future Transport Zone). Projects being tested in the zones include drones carrying medical supplies, integrated journeys through smartphone apps, e-cargo bikes for last-mile deliveries and the use of e-scooters.

### Ministerial Directions

5.6 The Government intends, as outlined by 'The Road to Zero' strategy published in 2018<sup>6</sup> for "*all new cars and vans to be effectively zero emission by 2040*" and for almost "*every car and van to be zero emission*" by 2050. In 2018, Ministerial Directions were issued to thirty-three local

<sup>6</sup> HM Gov (2018) The Road to Zero – Next steps towards cleaner road transport and delivering our Industrial Strategy [online] available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/739460/road-to-zero.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/739460/road-to-zero.pdf)

authorities, requiring them to submit studies on the steps they can take to comply with roadside nitrogen dioxide (NO<sub>2</sub>) limits in the shortest amount of time.<sup>7</sup> As a result of this work, Portsmouth has been identified as one of ten local authorities who will now take forward new measures, developed with and funded by central government, to reduce pollution levels. This includes the introduction of a charging city centre Clean Air Zone (CAZ) at the strategic road network surrounding the port.

## Local Cycling and Walking Infrastructure Plan

- 5.7 The Local Cycling and Walking Infrastructure Plan (LCWIP) is being developed alongside the LTP4 in direct response to governments Cycling and Walking Investment Strategy.<sup>8</sup> LCWIPs are a new, strategic, long-term approach to identify improvements to cycling and walking networks which are required in each local area. LCWIPs examine existing and future travel patterns and evidence around barriers preventing people from walking and cycling, and factors which could enable more people to make more cycling and walking journeys

## Implementation Plan

- 5.8 The Implementation Plan will form part of the LTP4 and set out the transport interventions that will be delivered over the lifetime of the LTP4. This Plan will include major schemes, such as the charging Clean Air Zone, South East Hampshire Rapid Transit (SEHRT) and new traffic free cycle routes, as well as a wide range of local schemes, behaviour change programmes and strategies. In this respect, the LTP4 and this accompanying SEA remain strategic in nature.

## LTP4 Objective 1: Deliver cleaner air

- 5.9 As identified previously, as a result of Ministerial Directions, ten of the thirty-three local authorities were identified to take forward new measures, developed with and funded by central government, to reduce pollution levels. Portsmouth City Council were identified as one of these ten local authorities and received direction to carry out more detailed studies and progress identified measures that can bring forward roadside NO<sub>2</sub> limit compliance quicker.
- 5.10 As a result of this work, a significant policy implementation requirement under this objective includes the delivery of a new city centre Clean Air Zone (CAZ). The 2020 Clean Air Zone Framework<sup>9</sup> identifies that a CAZ defines an area where targeted action is taken to improve air quality with the aim to address all sources of pollution using a range of measures tailored to the location. *“Within a clean air zone there is also a focus on measures to accelerate the transition to a low emission economy”*. A CAZ will fall into one of two categories; either charging or non-charging. In the case of Portsmouth, a charging CAZ is being progressed.
- 5.11 The CAZ Framework sets out the minimum requirements in implementing a CAZ, recognising the need to consider the impact on residents, the need for any mitigating measures and avoidance of any displacement effects. A CAZ is clearly expected to:
- be in response to a clearly defined air quality problem, seek to address and continually improve it, and ensure this is understood locally;
  - have signs in place along major access routes to clearly delineate the zone;
  - be identified in local strategies including (but not limited to) local land use plans and policies and local transport plans at the earliest opportunity to ensure consistency with local ambition;
  - provide active support for ultra-low emission vehicle (ULEV) take up through facilitating their use;

<sup>7</sup> HM Gov (2018) Government to fund local authority plans to tackle air pollution [online] available at: <https://www.gov.uk/government/news/government-to-fund-local-authority-plans-to-tackle-air-pollution>

<sup>8</sup> HM Gov (2017) Cycling and Walking Investment Strategy [online] available at: <https://www.gov.uk/government/publications/cycling-and-walking-investment-strategy>

<sup>9</sup> DEFRA (2020) Clean Air Zone Framework [online] available at: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/863730/clean-air-zone-framework-feb2020.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/863730/clean-air-zone-framework-feb2020.pdf)

- include a programme of awareness raising and data sharing;
- include local authorities taking a lead in terms of their own and contractor vehicle operations and procurement in line with this framework;
- ensure bus, taxi and private hire vehicle emission standards (where they do not already) are improved to meet Clean Air Zone standards using licensing, franchising or partnership approaches as appropriate; and
- support healthy, active travel.

5.12 In line with government ambitions and Ministerial Directions, Portsmouth City Council are progressing implementation of the Portsmouth CAZ and supporting this intervention through the LTP4. The charging area has been established and has a clearly defined boundary encompassing the major routes network around the port (see **Figure 5.1**), and the majority of three of the five declared Air Quality Management Areas (AQMAs) in the city.



Figure 5.1: Proposed Portsmouth CAZ



- 5.14 In progressing the implementation of the CAZ, the Council are continuing work to deliver a Class B CAZ in the shortest possible time. The delivery of a Class B CAZ covering the southwest of Portsea Island is legally required per the latest ministerial direction (March 2020). However, since the direction was issued, sensitivity tests have been conducted to consider the possible impacts of the pandemic on future road traffic movements and therefore on concentrations of nitrogen dioxide.
- 5.15 These sensitivity tests have been undertaken on transport and air quality monitoring data to consider the impact of changing travel behaviour and traffic patterns as a result of the pandemic, following methodology agreed by JAQU. Some of the sensitivity tests suggest that a CAZ B might not be sufficient under certain future scenarios and a more stringent CAZ (e.g. CAZ C) could be required, whereas other tests suggest that a CAZ may not be required and that compliance can be achieved naturally due to changing travel behaviour/ patterns. At present JAQU are yet to confirm what action we should take on the basis on the sensitivity tests (if any) and the Council are therefore continuing with plans to deliver a Class B CAZ in the shortest possible time as is legally required.
- 5.16 To support decision-making in this respect, the following options are established as alternatives for consideration through the SEA process:
- **Objective 1 - Option A:** Charging CAZ for Class B
  - **Objective 1 - Option B:** Charging CAZ for Class C
  - **Objective 1 - Option C:** Non-charging CAZ

## LTP4 Objective 2: Prioritise walking and cycling

- 5.17 In terms of walking and cycling, the LTP4 is supported by the emerging Local Cycling and Walking Infrastructure Plan (LCWIP) which has identified the key cycle and pedestrian routes which will remain a focus for active travel movement schemes in the City. The Draft LCWIP identifies eleven types of improvements that could be implemented along the identified routes.
- 5.18 The prioritised cycle routes are identified in **Figure 5.2** and the pedestrian routes are identified in **Figure 5.3**.

Figure 5.2: Cycle routes plan from the Draft LCWIP

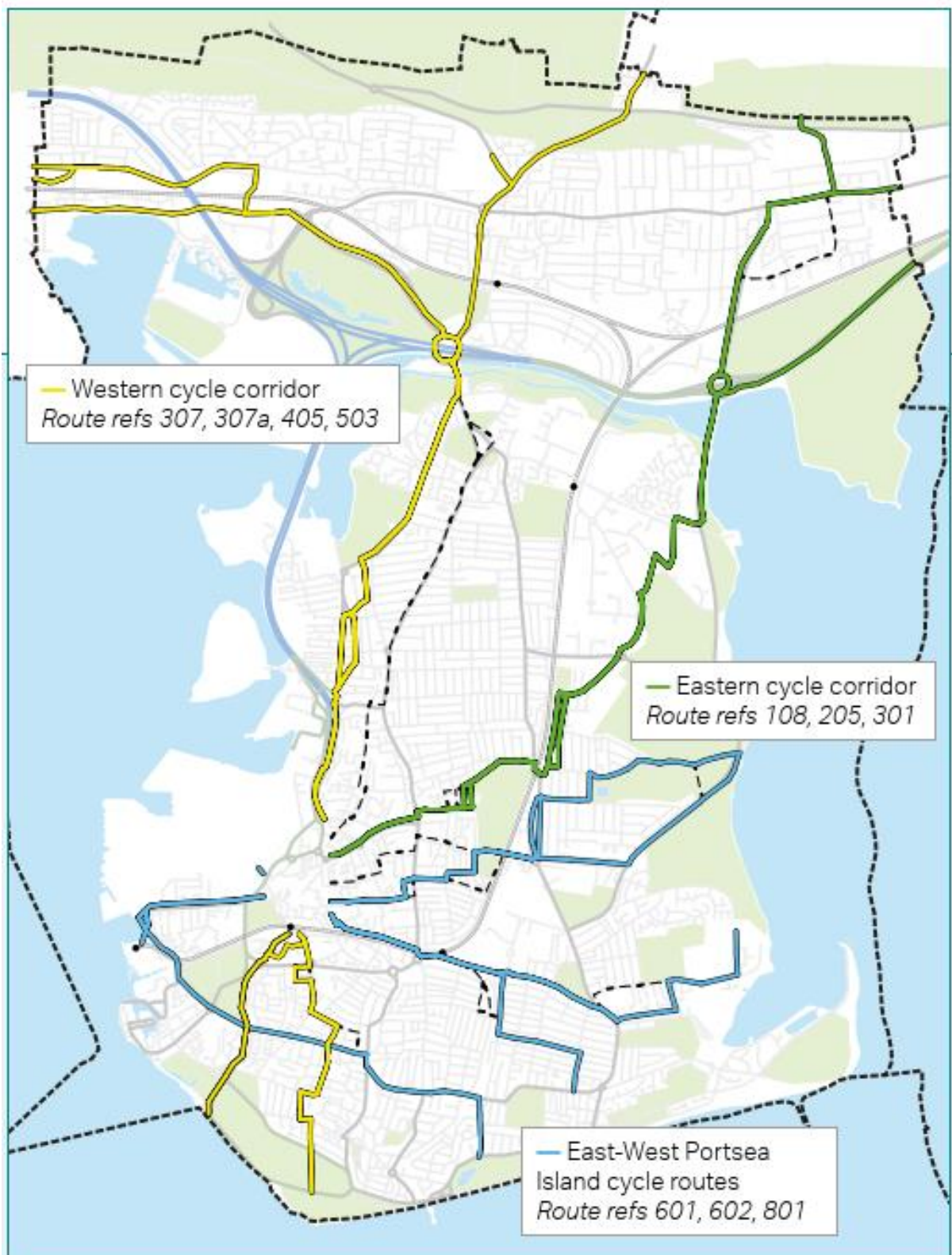
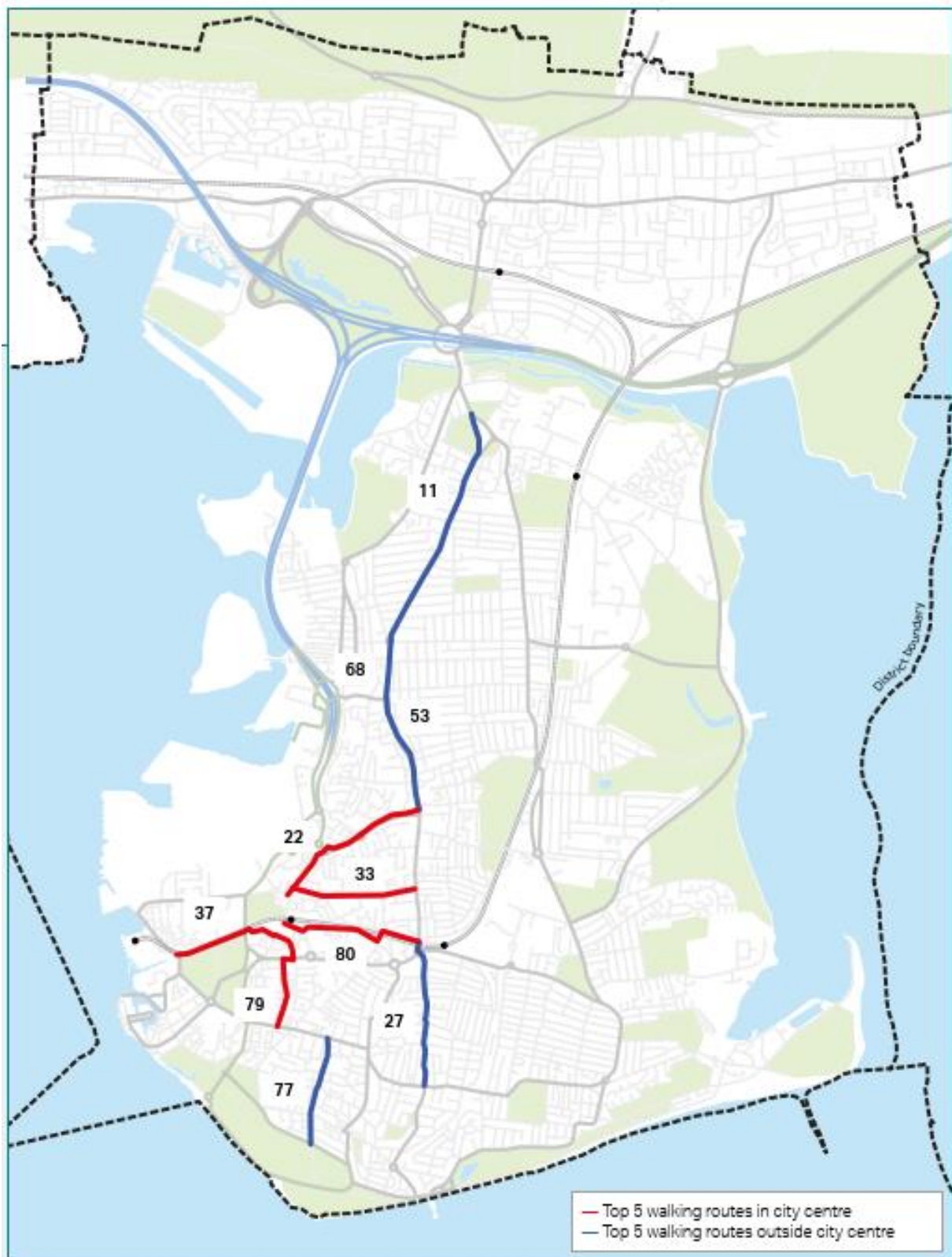


Figure 5.3: Walking routes plan from the Draft LCWIP

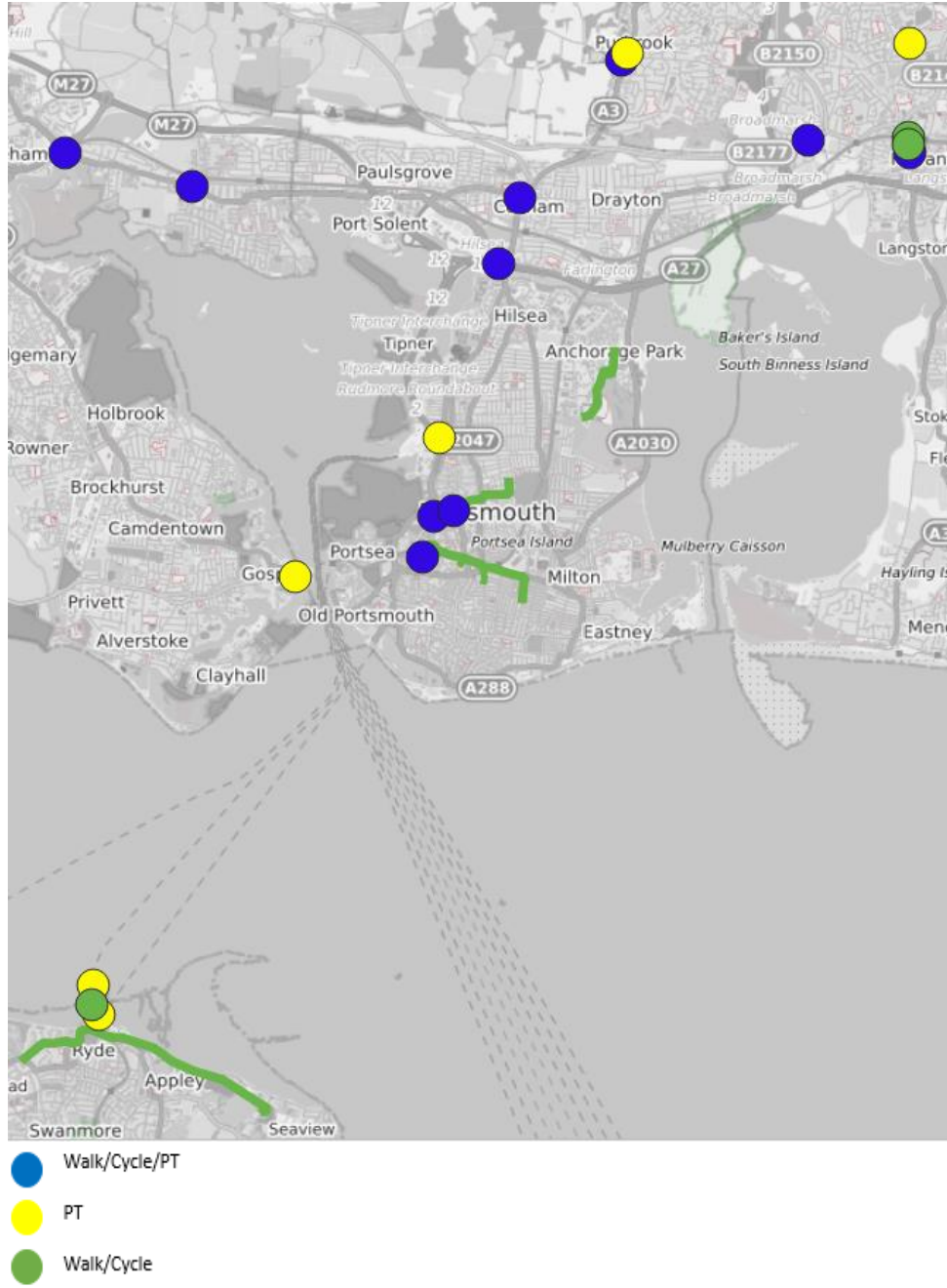


- 5.20 To assist in the potential implementation of LTP4 policy supporting these routes, each prioritised route was taken forward for high-level assessment of potential environmental constraints/ sensitivities in relation to key receptors. A methodology for this high-level assessment is presented in **Appendix III**. The initial screening identified those routes that have constraints or sensitivities. The eleven potential types of intervention were also screened to examine high level mitigation considerations in relation to the framework of SEA objectives with the aim of identifying where policy mitigation may support sustainable development objectives.

## LTP4 Objective 3: Transform public transport

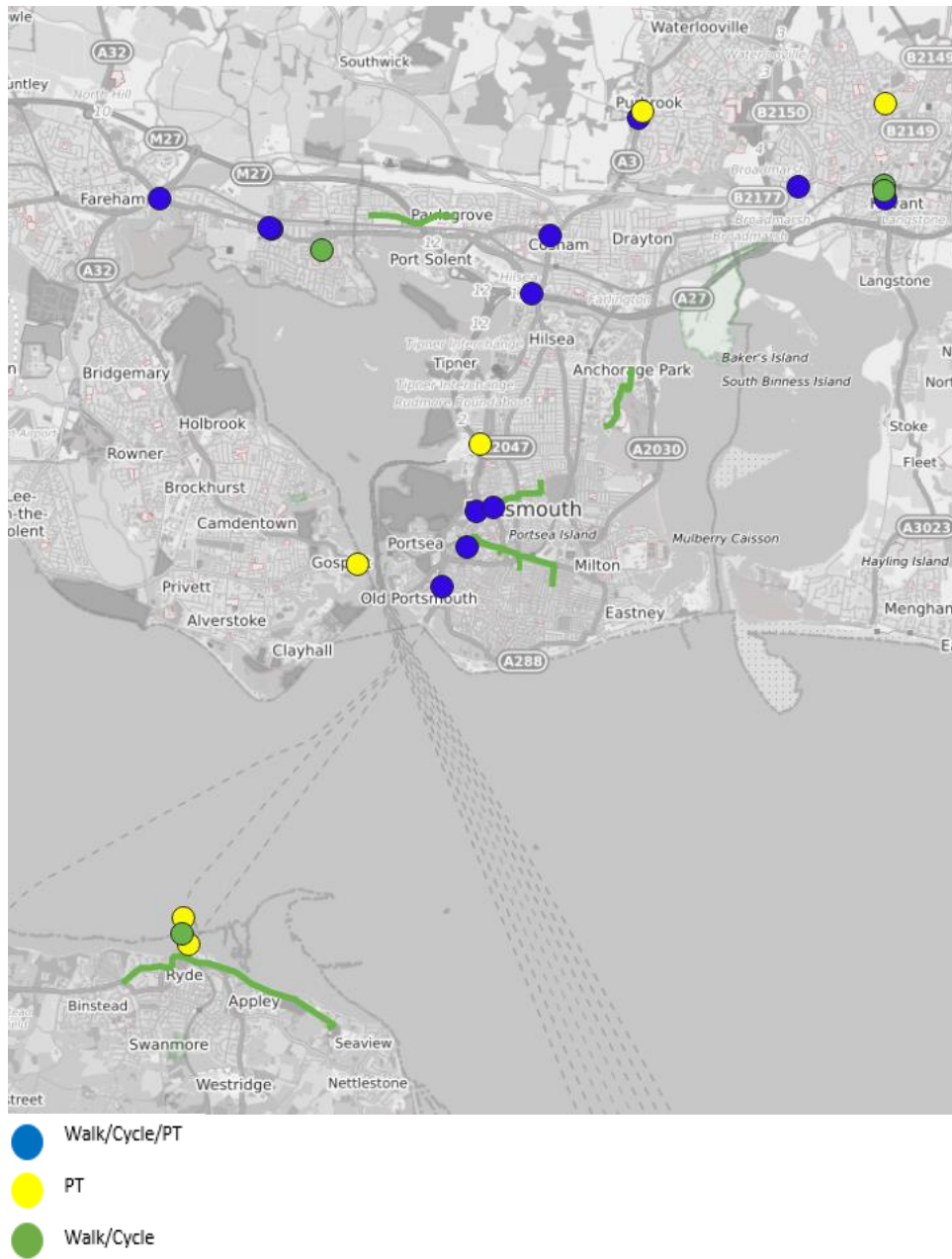
- 5.21 As part of the Transforming Cities Tranche 2 Rebid 2, 170 highway, walking and cycling schemes were subject to initial sifting, quantitative assessment and qualitative assessment to arrive a package of options within the specified budget.
- 5.22 The initial sift assessed the schemes against three criteria sequentially; deliverability, contribution to raising productivity and contribution to reducing CO<sub>2</sub> emissions. 61 schemes remained from the initial sift, which were scored quantitatively against nine objectives defined in the assessment. Following the quantitative scoring and weighting of schemes a qualitative assessment was undertaken to form the schemes into Packages. Engagement between HCC, PCC, IWC, Atkins and Systra teams has informed the resultant three package options in the Rebid.
- 5.23 Package 1 consists of a 'core' set of 23 schemes that performed strongly through the assessment, the locations of which are identified in **Figure 5.4**.

Figure 5.4: Transforming Cities Tranche 2 Rebid Package 1 schemes



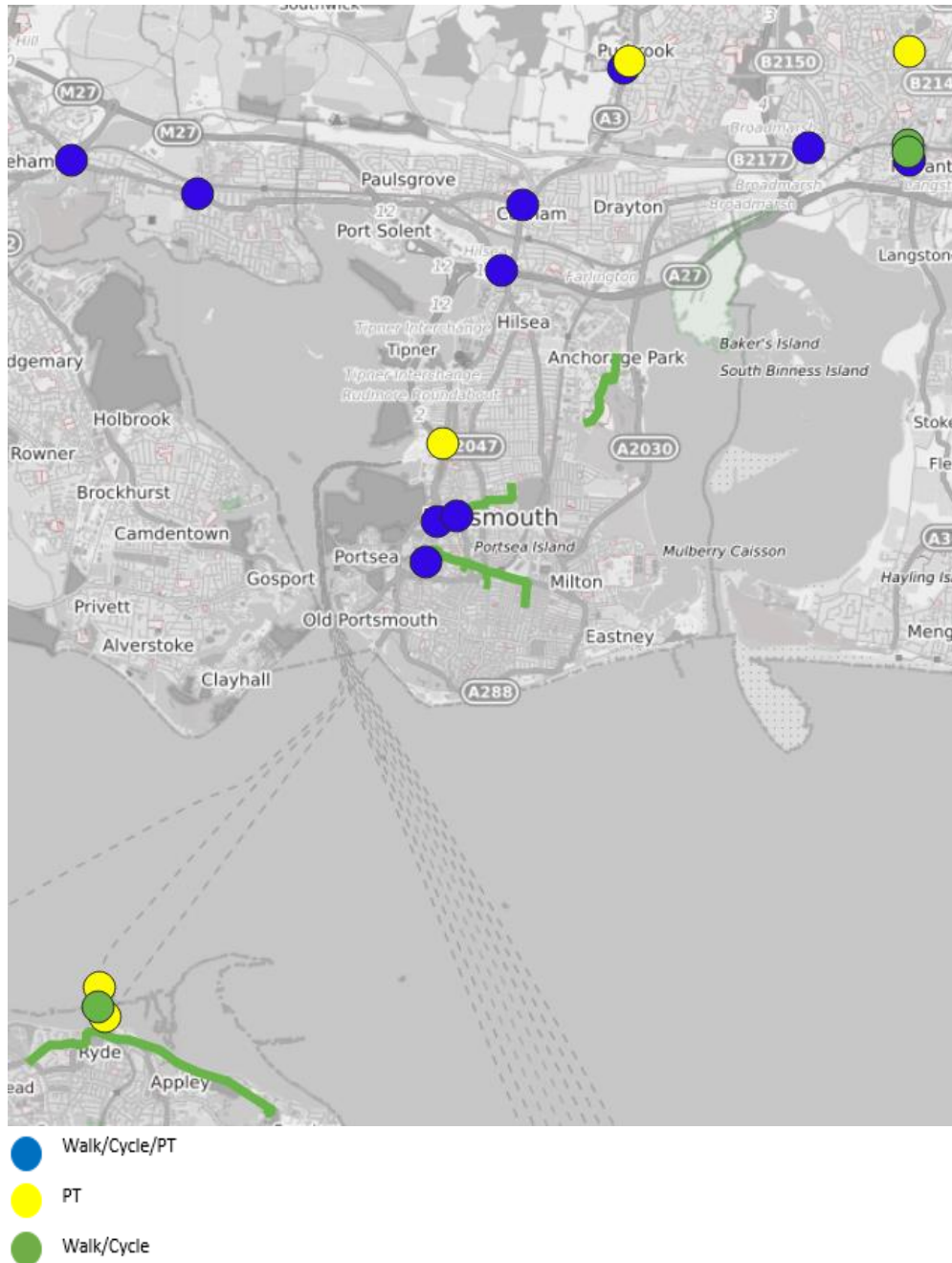
5.24 Package 2 consists of the same 'core' set of schemes as Package 1 plus an additional 4 schemes that performed strongly and could complement the 'core' schemes. The locations of the schemes within Package 2 are identified in **Figure 5.5**.

**Figure 5.5: Transforming Cities Tranche 2 Rebid Package 2 schemes**



5.25 Package 3 consists of the 'core' set of schemes minus the Gosport Interchange (HCC-13) scheme, as depicted in **Figure 5.6**.

**Figure 5.6: Transforming Cities Tranche 2 Rebid Package 3 schemes**



5.26 Across the packages, nine of the 'core' bus, walking and cycling schemes are located within the Portsmouth area, and one additional scheme in Portsmouth is submitted under Package 2. The walking and cycling schemes will be progressed through the Draft LCWIP.

5.27 The schemes arising in the Transforming Cities Tranche 2 Rebid packages (outside of the Draft LCWIP) were screened to assess the potential for significant effects, and this work is also detailed in **Appendix III**. No schemes were identified for potential significant negative effects at this stage, noting that the accompanying HRA will examine potential effects in relation to European designated biodiversity sites.



## LTP4 Objective 4: Support business and protect our assets

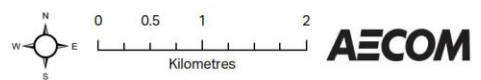
- 5.28 A key issue to address under this theme is reducing the impact of freight movement on the highways network. The Council have identified that the one of the main drives to affect freight movement will be through the progression of new consolidation measures.
- 5.29 The aim of consolidation measures are to reduce the number of large vehicles on the city streets, whilst reducing costs for businesses, and the scheme is interlinked with proposals to improve the sustainability of 'last mile' deliveries (using low-emission vehicles). Consolidation centres seek to effectively consolidate vehicle loads, so the minimum number of vehicles are required in undertaking the transportation of any goods. It is intended in Portsmouth that consolidation centres will also link with e-cargo bikes for the 'last mile' deliveries. There are both macro and micro consolidation measures which form part of a strategic network to serve demand whilst minimising vehicle movements. In the case of Portsmouth, macro consolidation centres are likely to be out-of-city and located on key routes. Micro consolidation centres will be delivered within the city confines close to specific locations with high demand for deliveries. Micro consolidation centres can range in form from lockers and collection points to mobility hub locations.
- 5.30 No specific locations for edge of city macro consolidation centres have been identified at this stage. This predominantly reflects the requirement for partnership working in the wider Solent area, where locations outside of the city may better serve the strategic network. However, eight potential locations have been identified as options for further consideration and investigation for micro consolidation centres within the city. These locations are identified in **Figure 5.7**.
- 5.31 These potential options are taken forward for assessment against the framework of SEA objectives as follows:
- **Objective 4 - Option A:** D-Day Car Park (off-street, Seafront area)
  - **Objective 4 - Option B:** Flathouse Road (on-street, city centre area)
  - **Objective 4 - Option C:** Museum Road (on-street, city centre area)
  - **Objective 4 - Option D:** St Georges Road (on-street, city centre area)
  - **Objective 4 - Option E:** Airport Service Road Industrial Estate (on-street, Hilsea area)
  - **Objective 4 - Option F:** Park and Ride expansion and transport hub (off-street, Tipner area – on P&R site)
  - **Objective 4 - Option G:** Cosham Interchange (dependent on bus interchange removal)
  - **Objective 4 - Option H:** Warren Avenue (LGV only)

Figure 5.7: Potential micro consolidation centre locations



Micro Consolidation Site Options

Portsmouth LTP SEA



## 6. Assessing the reasonable alternatives

6.1 This sections presents the summary assessment findings in relation to the reasonable alternatives established in the previous section. This section should be read in conjunction with **Appendix IV** which provides the full and detailed assessment findings.

### Summary alternatives assessment findings

#### Objective 1: Deliver cleaner air

6.2 As identified in the previous section, two options were identified for assessment under Objective 1 as follows:

- **Objective 1 - Option A:** Charging CAZ for Class B
- **Objective 1 - Option B:** Charging CAZ for Class C
- **Objective 1 – Option C:** Non-charging CAZ

6.3 **Table 6.1** below provides the summary findings for the assessment of these options. The full detailed assessment is presented in **Appendix III**.

**Table 6.1: Summary assessment findings for options under Objective 1**

SEA theme	Option A	Option B	Option C
Environmental quality	Yes likely significant positive effect	Yes likely significant positive effect	Yes likely significant positive effect
Biodiversity	No likely significant effect	No likely significant effect	No likely significant effect
Climatic factors:	Yes likely significant positive effect	Yes likely significant positive effect	Yes likely significant positive effect
Landscape	No likely significant effect	No likely significant effect	No likely significant effect
Historic environment	No likely significant effect	No likely significant effect	No likely significant effect
Land, soils and water resources	No likely significant effect	No likely significant effect	No No likely significant effect
Population and human health	Yes likely significant positive effect	Yes likely significant positive effect	Yes likely significant positive effect

6.4 Under all options the introduction of a city centre CAZ is considered for benefits in relation to environmental quality, biodiversity, climate change, landscape, the historic environment, and population and human health. Significant positive effects are anticipated under the SEA themes of environmental quality, climate change mitigation and human health and these are likely to be enhanced by an incentivised increased uptake in Options A and B given the charging schemes and financial implications attached to these options.

6.5 Option B (Class C) is considered for slightly enhanced positive effects by its increased coverage/ capture of more polluting vehicles. However, it is recognised that Option B (Class C) also has increased financial implications for smaller business, the self-employed and social networks in the city.

## Objective 2: Prioritise walking and cycling

6.6 As identified in the previous section, prioritised routes were taken forward for high-level assessment of potential environmental constraints/ sensitivities in relation to key receptors. A methodology for this high-level 'RAG' assessment is presented in **Appendix III** and the results are presented in **Table 6.2** below.

**Table 6.2: 'RAG' analysis of routes where infrastructure is proposed under Objective 2**

Route	Fluvial Flood Risk	Surface Water Hotspot	Conservation Area	Registered Park or Garden	Scheduled Monument	Listed Building	Locally Listed Building	Area of Archaeological Constraint	SAC	SPA/ pSPA	Ramsar	SW Brent Goose Network	SSSI	LNR	LWS	Priority Habitat	Ecological Network Opportunity Area	Ancient woodland	TPO
108	Red	Red	Green	Green	Green	Yellow	Red	Red	Red	Yellow	Yellow	Red	Red	Yellow	Yellow	Red	Green	Green	Red
205	Red	Red	Green	Green	Green	Red	Red	Red	Red	Yellow	Yellow	Red	Red	Green	Yellow	Red	Green	Green	Red
301	Red	Red	Green	Green	Green	Green	Red	Red	Red	Yellow	Yellow	Red	Red	Green	Red	Red	Green	Green	Red
307	Red	Red	Red	Red	Yellow	Red	Yellow	Red	Green	Red	Red	Yellow	Red	Green	Yellow	Red	Green	Green	Red
405	Red	Red	Red	Red	Yellow	Red	Red	Red	Green	Red	Red	Yellow	Red	Green	Green	Red	Green	Green	Red
503	Red	Red	Yellow	Green	Yellow	Red	Red	Red	Green	Red	Yellow	Red	Red	Green	Green	Red	Green	Green	Red
601	Red	Green	Red	Yellow	Green	Red	Red	Red	Yellow	Yellow	Yellow	Red	Red	Green	Green	Yellow	Green	Green	Red
602a	Red	Green	Green	Yellow	Green	Red	Yellow	Red	Yellow	Green	Yellow	Red	Red	Green	Yellow	Yellow	Green	Green	Yellow
602b	Red	Green	Green	Yellow	Green	Red	Yellow	Red	Yellow	Green	Yellow	Red	Red	Green	Red	Yellow	Green	Green	Yellow
801	Green	Green	Yellow	Yellow	Green	Yellow	Red	Red	Green	Yellow	Yellow	Yellow	Green	Green	Green	Yellow	Red	Green	Yellow

6.7 The potential types of improvements within these routes were explored in more detail in relation to the framework of SEA objectives to identify any potential high-level mitigation considerations. The findings for this screening work are provided in **Table 6.3** below and in **Appendix III**.

**Table 6.3: Screening of infrastructure proposals along the identified routes under Objective 2**

Type of improvement	Mitigation considerations (applicable to all types of improvement)
Raised tables At-grade crossing facilities Parklets Grade-separated crossings Shared-use or segregated cycle paths Bus by-pass/ Floating bus stop Bus-gates Mandatory or advisory cycle lanes Wider pedestrian refuge islands Footway buildouts with pedestrian priority across junctions	<ul style="list-style-type: none"> <li>Any changes to levels and heights in road infrastructure and any introduction of new hard surfaces, should consider an appropriate long-term drainage strategy to avoid negative effects in relation to surface water flood risk affecting road infrastructure. Permeable surfaces should be used where possible.</li> <li>Development should consider short-term impacts and long-term effects on the setting of any designated or non-designated heritage assets nearby. This should be reflected through appropriate design considerations.</li> <li>Development should seek to minimise the loss of or disturbance to habitats, particularly any road side verge habitats that contribute to ecological connectivity.</li> <li>Development within the vicinity of national or European designated biodiversity sites should consider any potential</li> </ul>

Type of improvement	Mitigation considerations (applicable to all types of improvement)
	<p>changes to the natural flow of water (particularly in a flood event) which may affect biodiversity.</p> <ul style="list-style-type: none"> <li>• Where development provides an opportunity to deliver new habitats or green infrastructure this should be encouraged.</li> <li>• Where appropriate, archaeological investigation should be prioritised prior to development works.</li> </ul>

### Objective 3: Transform public transport

6.8 As identified in the previous section, additional schemes to those being progressed through the Draft LCWIP have been submitted as part of the Transforming Cities Tranche 2 Rebid. These schemes were explored in more detail in relation to the framework of SEA objectives to identify any potential for significant effects. The summary findings for this screening work are provided in **Table 6.4** below and the detailed table can be found in **Appendix III**.

**Table 6.4: Screening of additional schemes under Objective 3**

Scheme reference	Likely significant effect?
PCC-1	The area forms part of a Surface Water Hotspot. The infrastructure proposals which may lead to increased hard surfacing should seek to manage the effects in relation to both flood risk, and polluted surface water run-off affecting water quality.
PCC-4	<p>The area is constrained by flood risk and located within proximity of designated habitats which are sensitive to effects in relation to water quality.</p> <p>The infrastructure proposals which may lead to increased hard surfacing should seek to manage the effects in relation to both flood risk, and polluted surface water run-off affecting water quality.</p> <p>The area also falls within areas of archaeological restraint. Where appropriate, archaeological investigation and mitigation may be required prior to construction.</p>
PCC-10	The area falls within areas of archaeological restraint. Where appropriate, archaeological investigation and mitigation may be required prior to construction.
PCC-11	The area contains numerous Listed Buildings lying adjacent to the Guildhall and Victoria Park Conservation Area and Victoria Park Registered Park and Garden (which contains Priority Habitats). Negative effects in relation to the historic environment are likely to be predominantly short-term during construction phases, and no residual significant effects are considered likely.
PCC-13	The area contains numerous Listed Buildings lying adjacent to the Guildhall and Victoria Park Conservation Area and Victoria Park Registered Park and Garden (which contains Priority Habitats). Negative effects in relation to the historic environment are likely to be predominantly short-term during construction phases, and no residual significant effects are considered likely.
PCC-18	<p>The area is constrained by flood risk and located within proximity of designated habitats which are sensitive to effects in relation to water quality.</p> <p>Any proposals which may lead to increased hard surfacing should seek to manage the effects in relation to both flood risk, and polluted surface water run-off affecting water quality.</p> <p>The area also falls within areas of archaeological restraint. Where appropriate, archaeological investigation and mitigation may be required prior to construction.</p>
PCC-15	<p>The area forms part of a rich heritage setting; surrounded by three Conservation Area and near to Southsea Common Registered Park or Garden. The area also lies close to flood risk areas and is located within proximity of designated habitats which are sensitive to effects in relation to water quality.</p> <p>Negative effects in relation to the historic environment are likely to be predominantly short-term during construction phases, and no residual significant effects are considered likely. Further consultation with Historic England is recommended in progression of this scheme.</p> <p>The infrastructure proposals which may lead to increased hard surfacing should seek to manage the effects in relation to both flood risk, and polluted surface water run-off affecting water quality.</p>

## Objective 4: Supporting business and protecting our assets

6.9 As identified in the previous section, eight locations are being considered as potential areas for new micro consolidation centres and these form the options for assessment under this objective. The locations are:

- **Objective 4 - Option A:** D-Day Car Park (off-street, Seafront area)
- **Objective 4 - Option B:** Flathouse Road (on-street, city centre area)
- **Objective 4 - Option C:** Museum Road (on-street, city centre area)
- **Objective 4 - Option D:** St Georges Road (on-street, city centre area)
- **Objective 4 - Option E:** Airport Service Road Industrial Estate (on-street, Hilsea area)
- **Objective 4 - Option F:** Park and Ride expansion and transport hub (off-street, Tipner area – on P&R site)
- **Objective 4 - Option G:** Cosham Interchange (dependent on bus interchange removal)
- **Objective 4 - Option H:** Warren Avenue (LGV only)

6.10 The summary findings for the assessment of these options is provided below and the full detailed assessment is presented in **Appendix III**.

6.11 The assessment found that none of the options are likely to result in a significant effect in relation to any of the SEA objectives.

6.12 Minor positive effects are considered likely overall for all of the objectives, given the reduced presence of polluting vehicles supporting improved air quality, climate change mitigation objectives, and a more pleasant environment in general in terms of character and quality of place. Any infrastructure proposals under the options are likely to be small-scale and will utilise available brownfield land opportunities. Despite this it is recognised that any infrastructure proposals will need to consider the following:

- Fluvial/ tidal flood risk constraints at Options A, E, F and G;
- Mitigation to protect water quality and reduce flood risk impacts at Options E and G, which are located close to a Surface Water Hotspot;
- Opportunities to deliver biodiversity net gain (at all options, but particularly Option F);
- Designated heritage assets and their settings, ensuring development is responsive to local character and historic features at all options except Option F.

## 7. Developing the preferred approach

- 7.1 This section presents the Council's response to the alternatives assessment and outlines the main reasons for developing the preferred approach in terms of schemes/ policy directions to improve the function, efficiency and sustainability of transport and movement in Portsmouth in line with the identified objectives for the Plan.

### Objective 1: Deliver cleaner air

- 7.2 The progression of the city centre CAZ will be further influenced by the outcomes of sensitivity testing and further consultation with central government. At this stage, the Council are continuing to work to deliver a Class B city centre CAZ in the shortest possible time to address its legal requirements.

### Objective 2: Prioritise walking and cycling

- 7.3 The assessed routes under this option are all being progressed as part of the identified network consulted upon through the Draft LCWIP development. The SEA has highlighted where there is a potential for impacts (both positive and negative) which will be taken into consideration as the projects progress.

### Objective 3: Transform public transport

- 7.4 The progression of schemes assessed under this objective will largely be reflective of the outcomes of the Transforming Cities Tranche 2 rebid. The SEA has highlighted where there is a potential for impacts (both positive and negative) which will be taken into considerations as the schemes progress.

### Objective 4: Support business and protect our assets

- 7.5 All sites are likely to be progressed as micro consolidation site options, although the extent of each individual scheme has yet to be determined. The SEA has highlighted where there is a potential for impacts (both positive and negative) which, alongside consultation responses, will inform further decision-making in this respect.

## **Part 2: What are the SEA findings at this stage?**



## 8. Introduction (to Part 2)

8.1 Part 2 of the report presents an appraisal of the LTP4 as a whole; including the 18 draft policies which are aligned with the objectives of the plan as outlined in **Table 8.1** below.

**Table 8.1: Proposed policies in the LTP4**

Objective	Aligned policies
Deliver cleaner air	Policies A to F
Prioritise walking and cycling	Policies G to I
Transform public transport	Policies J to M
Support businesses and protect our assets	Policies N to R

## Methodology

8.2 The appraisal identifies and evaluates 'likely significant effects' of the LTP4 on the baseline, drawing on the sustainability themes and objectives that were identified through scoping (see **Table 3.1**) as a methodological framework. In total, there are seven themes relating to:

- Environmental quality
- Biodiversity
- Climatic factors
- Landscape
- Historic environment
- Land, soil and water resources
- Population and human health

8.3 Every effort is made to predict effects accurately; however, this is inherently challenging given the high-level nature of the proposals under consideration and understanding of the baseline (now and in the future under a 'no plan' scenario) that is inevitably limited. Given uncertainties there is a need to make assumptions, e.g. in relation to Plan implementation and aspects of the baseline that might be impacted. Assumptions are made cautiously and explained within the text (with the aim to strike a balance between comprehensiveness and conciseness/ accessibility). In many instances, given reasonable assumptions, it is not possible to predict 'significant effects', but it is nonetheless possible and helpful to comment on merits (or otherwise) of the Strategy in more general terms.

8.4 Finally, it is important to note that effects are predicted taking account of the effect characteristics and 'significance criteria' presented within Schedules 1 and 2 of the SEA Regulations.<sup>10</sup> So, for example, account is taken of the probability, duration, frequency and reversibility of effects as far as possible. Cumulative/ in-combination effects are also considered, i.e. the potential for the Plan to impact an aspect of the baseline when implemented alongside other plans, programmes and projects. Explicit reference is made within the appraisal as appropriate (given the need to balance the desire of systematic appraisal with a desire to ensure conciseness/accessibility).

<sup>10</sup> Environmental Assessment of Plans and Programmes Regulations 2004

## 9. SEA of the LTP4

9.1 This section presents the appraisal of the LTP4 under the SEA themes, which are linked to the SEA framework (see **Table 3.1**).

### Assessment of the LTP4

#### Environmental quality

9.2 In terms of air quality, with a dedicated objective to deliver cleaner air, LTP4 proposes policies to support this objective and is predicted overall to have long-term positive effects for environmental quality. Key measures are promoted to directly affect air quality in Portsmouth, which include:

- a new charging city centre Clean Air Zone;
- increasing the number of available electric vehicle (EV) charging points in the plan area;
- changing parking capacity and pricing, including expanding park and ride;
- using the parking permits fee to encourage low emission and fewer vehicles;
- progressive tightening of taxi licensing rules; and
- exploring ways to discourage private off-street parking while promoting alternatives to car use.

9.3 The Clean Air Zone emerges as a result of Ministerial Directions requiring the Council to achieve compliance with legal limits for NO<sub>2</sub> in the shortest possible time. Technical modelling undertaken in fulfilment of these Ministerial Directions demonstrates that introducing a Class B charging Clean Air Zone (CAZ) in the city is likely to be the most effective measure to deliver cleaner air and meet the legal obligation faced by the council. Policy A of the LTP4 identifies the Council's intent to "*implement a Government directed city centre Clean Air Zone in 2021.*" The CAZ will encompass four out of the five AQMAs in the City to reduce NO<sub>2</sub> levels where they are highest. The CAZ will charge the most polluting vehicles within the zone, including buses, coaches, taxis, private hire vehicles and heavy goods vehicles. The charges can not only incentivise alternative and less polluting vehicles, but also capture costs at source point to support future mitigation. The CAZ is considered likely to support significant long-term positive effects for air quality in this respect.

9.4 A large part of implementing the zone includes working with commercial sectors to make vehicle fleets that operate in the city more sustainable; of which low emissions vehicles which can avoid future charges will be a prominent feature. In this respect Policy B seeks to "*support infrastructure for alternative fuelled vehicles*" to ensure that the built environment adapts to support these changes. The policy recognises the governments intent to ban the sale of diesel and petrol cars by 2030, which requires a significant investment in infrastructure to support the emerging new technologies. To meet these needs the Council outlines its aims to continue successful existing schemes such as the 'On-street Residential Chargepoint Scheme' and invest in new infrastructure. This includes the upgrading of off-street council owned car parks, and a strategic network of rapid charging hubs. A Parking Strategy is also being developed to support these measures, and the Council intends to "*require EV charging infrastructure where car parking is provided in new developments*". Lower emission buses are also anticipated to support expanded Park and Ride opportunities and partnership working across the Solent region is recognised for its potential to support strategic network connections.

9.5 To target emissions from residents, Policy C captures the opportunity to utilise the existing parking permit scheme to incentivise fewer and cleaner vehicles, as well as car clubs. These schemes currently charge residents to park on-street outside their homes (disincentivising ownership) and limits permits to two per household in zones with the greatest parking pressures. To support cleaner air in these areas, the Council intends to "*introduce differential charging for permits of the first vehicle according to emissions. If it is electric the permit will be free*" or alternatively the charge is reduced for lower emission vehicles. Further to this the

Council maintains that “*there will be no discount for a second or third vehicle to discourage multiple vehicle ownership*”. Car clubs are also recognised for their potential to support residents who only need infrequent access to a car and reduce vehicle ownership in this respect.

- 9.6 To support an alternative and more sustainable option for movement through the city, the Council capitalises on opportunities to “*expand the Portsmouth Park and Ride and create a transport hub*” under Policy D; recognising the benefits of both reducing the number of vehicles travelling within the city, and supporting low-emission vehicles to make these trips. Policy D recognises the benefits of an interlinked approach in expanding the Park and Ride while simultaneously reducing parking provision within the city; to intercept more traffic before it reaches the city centre and incentivise its use. Further to this, it is intended for the expanded Park and Ride to connect directly with the proposed new cycle network to provide an alternative active travel option into the city centre.
- 9.7 Policy E specifically addresses the issue of non-residential parking within the city, recognising that the ease of access to private parking at workplaces is a large contributor to the high-levels of in-commuting by car. Whilst providing attractive alternatives to the car plays large role, the Council recognises that “*increasing the cost and reducing the number of private non-residential parking spaces will be a key part of bringing about the change in travel patterns needed*”. In this respect, the Council outlines its intentions to explore a Workplace Parking Levy (WPL) to reduce levels of in-commuting and support new revenue streams that can fund enhancements to more sustainable infrastructure provisions/ schemes. Targeting behavioural change is a theme which continues through Policy F, which seeks to “*deliver residential and business behaviour change initiatives*”; recognising the additional benefits of aligning infrastructure investment with behavioural change to maximise effects.
- 9.8 This is considered alongside the further objectives and measures of the Plan to support increased public transport use and active travel, including through an improved bus, cycle and pedestrian route network, and reduce freight journeys on the core road network; which on the whole is likely to support a reduced vehicle dominance in the Plan area. Measures such as new consolidation centres and the South East Hampshire Rapid Transit scheme can directly reduce vehicle use on the core road network in Portsmouth, particularly motorway traffic contributing to noise and as well as air pollution effects.
- 9.9 Policy N proposes targeted capacity improvements, including exploring the potential for the delivery of a new link to Junction 1 of the M275. This could help minimise impacts of proposed strategic growth through the emerging Local Plan on air quality, as well as help to address existing traffic and air quality issues at the Rudmore Roundabout.

## Summary

- 9.10 As a result of the significant investment in schemes and measures to support a move to low emission vehicle movements (particularly within the areas which current exceed emissions limits), the LTP4 policies are considered likely to directly improve environmental quality in the city, and **long-term significant positive effects** are anticipated overall.

## Biodiversity

- 9.11 In relation to biodiversity, the overall drive of the LTP4 to move towards more efficient networks with reduced traffic and congestion is likely to provide indirect support for habitats and species in the Plan area, by improving air quality, and reducing the effects of noise and light pollution.
- 9.12 The European designated biodiversity sites that surround Portsmouth are likely to come under pressure, particularly when considering potential construction phases for associated schemes, including the new Tipner and Horsea Link Bridge. The measures outlined to directly improve air quality, such as the Clean Air Zone under Policy A will also support the integrity of these sites. The LTP4 is being accompanied by a HRA which will assess in detail the potential effects in relation to the integrity of the European Designated Sites and provide mitigation recommendations where necessary.

- 9.13 An analysis of schemes which form the Transforming Cities Tranche 2 Rebid and Draft Local Cycling and Walking Infrastructure Plan (LCWIP) has identified additional potential constraints in relation to biodiversity. Most routes intersect a Site of Special Scientific Interest (SSSI) and Priority Habitats, additionally, Routes 301 and 602b both also intersect a Local Wildlife Site (LWS).
- 9.14 Negative effects may arise (particularly in the short-term during construction of infrastructure proposals); as a result of increased disturbance, noise and light pollution. However, it is recognised that all schemes seek to contribute to the outlined Plan objectives and are likely to support biodiversity in the longer-term, particularly as a result of cleaner air.
- 9.15 To enhance the potential for positive effects, it is recognised that where appropriate, some of the infrastructure proposals could contribute to improved ecological connectivity and deliver net gains. This is a particular consideration for the Portsmouth Park and Ride expansion and transport hub scheme which lies within an Ecological Network Opportunity Area with SW Brent Goose Network site in the south eastern area.
- 9.16 Policy N proposes targeted capacity improvements, including exploring the potential for the delivery of a new link to Junction 1 of the M275. These infrastructure improvements could have impacts on biodiversity; however, the nature and significance of effects is uncertain at this stage until further details are known.

## Summary

- 9.17 Whilst negative effects for biodiversity may arise (particularly in the short-term during construction) as a result of increased disturbance, noise and light pollution, the overall effects are considered likely to be **indirect minor positive effects** given the interventions identified which are likely to support biodiversity with cleaner air and reduced effects of noise pollution.

## Climatic factors

- 9.18 The objectives of the LTP4 to deliver cleaner air, prioritise walking and cycling, and transform public transport all provide direct support for climate change mitigation objectives and long-term positive effects are anticipated in this respect.
- 9.19 Measures are outlined, as explored under the environmental quality SEA theme above, which specifically target reducing emissions in the city and upgrading infrastructure to prepare for low and zero carbon vehicles. This includes the introduction of a charging city centre Clean Air Zone (Policy A) to incentivise alternative and less polluting vehicles as well as capture costs at source point for more polluting vehicles to support future mitigation. A large part of implementing the zone also includes working with commercial sectors to make vehicle fleets that operate in the city low emissions vehicles. Supported by Policy B which seeks to “*support infrastructure for alternative fuelled vehicles*” significant measures are taken to ensure that the built environment adapts to support the required technological changes. This includes the ‘On-street Residential Chargepoint Scheme’, upgrading of off-street council owned car parks, and a strategic network of rapid charging hubs. A Parking Strategy is also being developed to support these measures, and the Council intends to “*require EV charging infrastructure where car parking is provided in new developments*”. To incentivise fewer and cleaner vehicle ownership in residents, differential charging for parking is promoted through Policy C.
- 9.20 Lower emission buses are also anticipated to support expanded Park and Ride opportunities proposed through Policy D. Further to this, it is intended for the expanded Park and Ride and transport hub to connect directly with the proposed new cycle network to provide an alternative active travel option into the city centre.
- 9.21 Policy E specifically addresses the issue of non-residential parking within the city, recognising that the ease of access to private parking at workplaces is a large contributor to the high-levels of in-commuting by car. Whilst providing attractive alternatives to the car plays large role, the Council recognises that “*increasing the cost and reducing the number of private non-residential parking spaces will be a key part of bringing about the change in travel patterns needed*”. In this respect, the Council outlines its intentions to explore a Workplace Parking Levy (WPL) to reduce levels of in-commuting and support new revenue streams that can fund enhancements

- to more sustainable infrastructure provisions/ schemes. It is also recognised that a reduced parking capacity has the potential to free up brownfield land opportunities to support more efficient housing and employment growth opportunities.
- 9.22 This is supported by significant measures to prioritise walking and cycling, including new and continuous walking and cycling routes identified through the supporting Draft Local Cycling and Walking Infrastructure Plan (LCWIP). Policy G seeks to deliver “*continuous cycleways, as well as widened and higher-quality footways, improved crossings*” and “*public realm schemes in local centres to improve their attractiveness*”. Policy C recognises that “*micro-mobility can play an important role in enabling convenient and seamless travel across the city without a car*”. The Council are currently participating in a government rental e-scooter trial scheme with a number of fully-racked mandatory parking areas located in the city, from which people can collect and return e-scooters.
- 9.23 In terms of public transport, the implementation of Policy K to “*develop a rapid transit network that connects key locations in the city with South East Hampshire, and facilitates future growth*” will provide significant support for wider sustainable transport connections. The dedicated service is targeted at improving both connectivity and journey times, with increased city centre connections (to include growth at Tipner and Horsea Island) and bus priority measures. This is supported by the measures outlined through Policy J to “*prioritise local bus services over general traffic*” and “*make journeys by public transport quicker and more reliable*” with a focus “*on less well served connections east-west in the city*”.
- 9.24 This is considered alongside Policy L, which seeks to “*deliver high quality transport interchanges, stations and stops*” in support of ‘seamless’ journeys; including Real Time Information, cycle parking and cycle hire provisions to support ‘first or last mile’ journeys and ‘Transport Hubs’ at key interchanges. Policy J further seeks to deliver ‘Demand Responsive Transport’ services to support local communities where bus services are less viable (being particularly promoted through the Future Transport Zones programme). The policies are considered in this respect for their cumulative benefits in creating a coherent strategic movement network that provides real and better alternatives to the private car. This is also supported by Policy M which seeks to improve the affordability of public transport services, incentivising increased usage in this respect.
- 9.25 Policies N and O are also considered for their integrated efforts to improve access to and from the port and reduce the impacts of freight movement. This includes through the introduction of consolidation centres supported by low emission ‘last mile’ journeys; ultimately reducing the numbers of the most polluting vehicles in the city.
- 9.26 The measures coherently address both the technological and behavioural changes required to support climate change mitigation and the Council’s intentions to become carbon neutral by 2030 (given their recent declaration of climate emergency); significant long-term positive effects are anticipated overall in this respect.
- 9.27 In relation to climate change adaptation, it is recognised that a number of the schemes may ultimately result in new infrastructure or increased hard surfacing, and potentially within areas of high to medium fluvial or surface water flood risk. Surface-water management to avoid any increases in polluted run-off or flood risk is required to ensure that development supports long-term adaptation requirements in respect of water quality and reducing flood risk. Whilst the provisions of the NPPF and Local Plan are likely to ensure that development does not lead to any significant effects, it is recognised that the LTP4 has the opportunity to identify the links between policy initiatives and the Council’s intent to support sustainable development in this respect.

## Summary

- 9.28 The LTP4 policies together are considered for significant interventions in support of climate change mitigation and the Council’s aim to become carbon neutral by 2030. This includes targeted interventions to improve air quality and prioritise active travel opportunities and public transport connections, as well as efforts to reduce the impact of freight movements, particularly that associated with port operations. As a result, **long-term significant positive effects** are anticipated overall in relation to climate change mitigation.

- 9.29 In relation to climate change adaptation, the flood constraints in the city will need to be considered in infrastructure proposals, and surface water management to avoid polluted run-off should be considered where applicable. However, given existing mitigation provided through the NPPF and Local Plan policies, no significant effects are considered likely. Despite this, it is recognised that the LTP4 has the opportunity to identify the links between policy initiatives and the Council's intent to support sustainable development in this respect.

## Landscape

- 9.30 In relation to the cityscape of Portsmouth, the overall drive of the LTP4 to move towards more efficient movement networks, with reduced traffic, particularly in terms of freight movements and heavy goods vehicles (Policies N and O), is likely to support a more scenic and harmonious atmosphere that supports the experience of the place. Improving strategic access to the ports is likely to improve the cityscape feel for residents in particular; who are subject to strategic operational movements in the city that support the wider region and beyond. As outlined through Policies G, I, L and R, the LTP4 seeks to improve the public realm, particularly by improving footways, crossings and movement at key transport interchanges. This is considered for likely long-term minor positive effects in relation to the cityscape.
- 9.31 The LTP4 is not considered likely to significantly affect any designated landscape areas; however, potential localised cityscape impacts are recognised through the schemes that may affect areas of parkland and protected trees. The effects are likely to be most pronounced in the short-term during construction phases and to avoid any long-term negative effects, infrastructure proposals should seek to avoid any loss of trees or natural features which contribute to the character of the area.
- 9.32 Policy N proposes targeted capacity improvements, including exploring the potential for the delivery of a new link to Junction 1 of the M275. These infrastructure improvements could have impacts on landscape and townscape; however, the nature and significance of effects is uncertain at this stage until further details are known.

## Summary

- 9.33 Infrastructure proposals will need to avoid any loss of trees or natural features to avoid localised minor negative effects arising for landscape character. On this assumption, **long-term minor positive effects** are considered likely overall; as a result of reduced traffic and congestion impacts affecting landscape character, and targeted interventions to improve the public realm.

## Historic environment

- 9.34 In relation to the historic environment, the overall drive of the LTP4 is to move towards more efficient networks with reduced traffic and congestion. This is likely to provide indirect support for the historic environment, in reducing traffic and congestion, improving accessibility, and promoting a higher-quality public realm. This is considered conducive to opportunities to both appreciate and better reveal the significance of the historic environment in Portsmouth, as well as improving the settings of both designated and non-designated assets.
- 9.35 An analysis of schemes which form the Transforming Cities Tranche 2 Rebid and Draft Local Cycling and Walking Infrastructure Plan (LCWIP) has identified potential constraints in relation to the historic environment. Cycle routes 307 and 405 both intersect a Registered Park or Garden, and alongside these two routes, routes 601, 603 and 802 also intersect a Conservation Area. Most cycle and walking routes intersect Listed Buildings or Locally Listed Buildings, as well as areas of archaeological restraint. On this basis it is recognised that there is potential for negative effects; however, these are considered likely to be predominantly minor and short-term during construction phases.
- 9.36 Infrastructure proposals will need to demonstrate due consideration of heritage assets and their settings to minimise any localised impacts. Given the existing policy mitigation provided through the NPPF and Local Plan policies, no significant negative effects are considered likely.

- 9.37 Targeted interventions outlined through Policies G, I, L and R seek to improve the public realm, particularly by improving footways, crossings and at key transport interchanges. These interventions are considered for their contribution to place-making and local character; providing support for heritage settings, including Conservation Areas. Minor long-term positive effects are anticipated in this respect.
- 9.38 Policy N proposes targeted capacity improvements, including exploring the potential for the delivery of a new link to Junction 1 of the M275. These infrastructure improvements could have impacts on the historic environment; however, the nature and significance of effects is uncertain at this stage until further details are known.

### Summary

- 9.39 A potential for negative effects is identified as a result of infrastructure proposals which intersect designated heritage settings; however, these effects are considered likely to be predominantly minor and short-term during construction, and protections for these settings are provided through the NPPF and Local Plan policies. Overall, the targeted interventions to improve the public realm are considered likely to lead to **residual minor long-term positive effects**.

## Land, soil and water resources

- 9.40 Policy E specifically seeks to address the issue of non-residential parking within the city, recognising that the ease of access to private parking at workplaces is a large contributor to the high-levels of in-commuting by car. Whilst providing attractive alternatives to the car plays large role, the Council recognises that *“increasing the cost and reducing the number of private non-residential parking spaces will be a key part of bringing about the change in travel patterns needed”*. In this respect, the Council outlines its intentions to explore a Workplace Parking Levy (WPL) to reduce levels of in-commuting and support new revenue streams that can fund enhancements to more sustainable infrastructure provisions/ schemes. Indirect benefits for land use are recognised in this ambition, as a reduced parking capacity has the potential to free up brownfield land opportunities to support more efficient housing and employment growth opportunities as well as new green spaces. On this basis, minor long-term positive effects are anticipated in relation to soils and efficient land use.
- 9.41 In relation to water quality, it is recognised that a number of the infrastructure proposals may ultimately result in increased hard surfacing. Surface-water management to avoid any increases in polluted run-off is required to ensure that development supports WFD requirements in respect of water quality. Whilst the provisions of the NPPF and Local Plan are likely to ensure that development does not lead to any significant effects, it is recognised that the LTP4 has the opportunity to identify the links between policy initiatives and the Council’s intent to maintain or improve water quality in this respect.
- 9.42 Policy N proposes targeted capacity improvements, including exploring the potential for the delivery of a new link to Junction 1 of the M275. These infrastructure improvements could have impacts on land and water quality; however, the nature and significance of effects is uncertain at this stage until further details are known.

### Summary

- 9.43 The LTP4 policy provisions to reduce parking capacity are recognised for likely **minor long-term positive effects** in relation to efficient land use; by freeing up brownfield land opportunities for alternative housing and growth or new green spaces. Whilst infrastructure proposals which increase hard surfacing in the city will need to manage the effects of polluted water run-off in relation to water quality, no significant effects are anticipated, particularly considering the existing policy mitigation provided through the NPPF and Local Plan. Despite this, it is recognised that the LTP4 has the opportunity to identify the links between policy initiatives and the Council’s intent to maintain or improve water quality in this respect.

## Population and human health

- 9.44 The policies and objectives of the LTP4 are considered for their potential to support the SEA objectives in relation to sustainable economic development, improving the health and wellbeing of residents, and maintaining and enhancing accessibility for all people; and deliver long-term positive effects in this respect.
- 9.45 In relation to supporting sustainable economic development, the LTP4 seeks to ultimately improve the movement networks within and surrounding the city, which is likely to directly benefit local and regional economies with improved accessibility. The proposals seek to enhance key connections within the city (e.g. the Tipner and Horsea new link bridge) as well as beyond. This includes the proposed rapid transit network connecting key locations in the city with South East Hampshire (Policy K), as well as a strategic network of macro and micro consolidation measures, supported by 'last mile' delivery schemes to reduce the traffic impact of freight movement (Policy O). This is considered likely to support local businesses with a more efficient local goods movement network which is less impacted (including financially) by traffic and congestion. Reduced general traffic flows through the city centre promoted through Policy I (and supported by the measures of other policies) are also considered for evidenced economic benefits which include "*higher levels of footfall*" and "*reduced vacancy rates*".
- 9.46 Whilst some of the proposed measures have the potential to impact local economies, the policies outline the measures that will be taken to ensure economic vitality is maintained and enhanced. For example, the Council outlines under Policy A its intentions to support local fleets, including with significant investment, to upgrade vehicles and ensure fleets that operate daily in the proposed charging CAZ are not disproportionately affected by its introduction.
- 9.47 Whilst the introduction of a Work Place Levy (WPL) has the potential to affect local businesses, the Council outlines its intentions under Policy E to work closely with them "*to ensure that it does not negatively impact the economy and offer benefits to business*". Reducing parking capacity in the city centre will also provide brownfield land opportunities and new green spaces in highly accessible areas to support enhanced economic vitality and growth and significant long-term positive effects in this respect.
- 9.48 Policies N and O seek to improve access to the port and reduce the impact of freight movements in the city, and consolidation centres are also considered for their potential to reduce costs for businesses moving goods in the city. The policies are likely to lead to minor long-term positive effects for both local and regional economies in this respect.
- 9.49 In relation to resident health and wellbeing, the LTP4 seeks to improve movement networks in the city, which will benefit resident health and wellbeing in a number of ways. Measures are outlined to tackle poor air quality in the city to the direct benefit of resident health and wellbeing (as explored in detail under the 'air quality' SEA theme above). The measures are considered likely to reduce the impacts on health associated with poor air quality, particularly for more vulnerable groups such as those with existing respiratory illnesses.
- 9.50 Improved cycle and pedestrian networks provide greater and more attractive active travel opportunities, again to the direct benefit of resident health and wellbeing. Further to this, measures to manage parking in the city will free up space for future housing and employment development as well as new green spaces, which is likely to support reduced deprivation through improved access to high-quality new homes, jobs and natural spaces. An overall focus on reducing traffic and congestion, as well as private vehicle use may also support improved safety and reduced accidents/ transport-related injuries to some degree.
- 9.51 In terms of accessibility, a significant proportion of the LTP4 policies are dedicating to supporting the objectives to prioritise walking and cycling and transform public transport and significant long-term positive effects are anticipated in this respect. In relation to walking and cycling, the LTP4 is supported by the Draft Local Cycling and Walking Infrastructure Plan (LCWIP) which has identified a network of walking and cycling routes in the city that connect residential areas with the city centre, local high streets, employment and health sites. In this respect the LTP4 Policy G seeks to support this network by delivering "*continuous cycleways, as well as widened and higher-quality footways, improved crossings*" and "*public realm schemes in local centres to improve their attractiveness*". Policy H supports the implementation



of 'Low Traffic Neighbourhoods', designed to reduce through traffic in residential streets. Benefits for residents are recognised in these schemes through reducing traffic, making these streets safer and supporting a more pleasant environment (and promoting active travel in this respect). Policy C further seeks to support shared transport modes. The Council outlines intentions to create a bike/ e-bike shared network and continue with the rental e-scooter trial through the 'Future Transport Zone' programme.

- 9.52 In terms of public transport, the implementation of Policy K to “*develop a rapid transit network that connects key locations in the city with South East Hampshire, and facilitates future growth*” will provide significant support for residents in accessing wider housing and employment opportunities, as well as educational, leisure and recreational opportunities in the wider region. The dedicated service is targeted at improving both connectivity and journey times, with increased city centre connections (to include growth at Tipner and Horsea Island) and bus priority. This is supported by the measures outlined through Policy J to “*prioritise local bus services over general traffic*” and “*make journeys by public transport quicker and more reliable*” with a focus “*on less well served connections east-west in the city*”.
- 9.53 This is considered alongside Policy L, which seeks to “*deliver high quality transport interchanges, stations and stops*” in support of ‘seamless’ journeys; including Real Time Information, cycle parking and cycle hire provisions to support ‘first or last mile’ journeys and ‘Transport Hubs’ at key interchanges. Policy J further seeks to deliver ‘Demand Responsive Transport’ services to support local communities where bus services are less viable (being particularly promoted through the Future Transport Zones programme). The policies are considered in this respect for their cumulative benefits in creating a coherent strategic movement network that provides real and better alternatives to the private car.
- 9.54 Further to the above, Policy M seeks to “*work with public transport operators to deliver integrated, efficient and affordable services promoting local and regional connectivity*”. This includes measures such as integrated ticketing across transport operators and types and mobility credits.

## Summary

- 9.55 Whilst some of the LTP4 proposals are considered for potential impacts on local economies, the overall drive to work with businesses and support sustainable economic development, improve the movement networks in the city; including active travel networks, improve air quality, and improve accessibility, are considered likely to benefit communities and human health. As a result, overall **significant long-term positive effects** are considered likely.

## Cumulative effects

- 9.56 While there is the potential for interventions proposed within the LTP4 to interact with and have cumulative impacts with development proposed in the emerging Local Development Plans as well as other plans and strategies, the majority of these interactions are likely to result in long term positive effects. The LTP4 seeks to improve congestion and access to sustainable modes of transport, it will help to minimise the impacts of housing and employment growth and the predicted increased in population on transport infrastructure.
- 9.57 While there is the potential for localised cumulative negative effects as a result of individual interventions interacting with the development of new homes/ employment it is considered that there is suitable mitigation available at the project level to ensure that any residual negative effects are not significant.
- 9.58 It will be vital for housing, employment and transport infrastructure to be delivered in a co-ordinated manner in order to maximise potential benefits, such as a modal shift away from the private vehicle, while minimising potential negative impacts such as significant increases in congestion.

# 10. Conclusions

10.1 **Table 10.1** below draws together the conclusions under each of the SEA themes.

**Table 10.1: Conclusions from the appraisal of the LTP4**

SEA theme	Conclusions
Environmental quality	As a result of the significant investment in schemes and measures to support a move to low emission vehicle movements (particularly within the areas which current exceed emissions limits), the LTP4 policies are considered likely to directly improve environmental quality in the city, and <b>long-term significant positive effects</b> are anticipated overall.
Biodiversity	Whilst negative effects for biodiversity may arise (particularly in the short-term during construction) as a result of increased disturbance, noise and light pollution, the overall effects are considered likely to be <b>indirect minor positive effects</b> given the interventions identified which are likely to support biodiversity with cleaner air and reduced effects of noise pollution.
Climatic factors	<p>The LTP4 policies together are considered for significant interventions in support of climate change mitigation and the Council's aim to become carbon neutral by 2030. This includes targeted interventions to improve air quality and prioritise active travel opportunities and public transport connections, as well as efforts to reduce the impact of freight movements, particularly that associated with port operations. As a result, <b>long-term significant positive effects</b> are anticipated overall in relation to climate change mitigation.</p> <p>In relation to climate change adaptation, the flood constraints in the city will need to be considered in infrastructure proposals, and surface water management to avoid polluted run-off should be considered where applicable. However, given existing mitigation provided through the NPPF and Local Plan policies, no significant effects are considered likely. Despite this, it is recognised that the LTP4 has the opportunity to identify the links between policy initiatives and the Council's intent to support sustainable development in this respect.</p>
Landscape	Infrastructure proposals will need to avoid any loss of trees or natural features to avoid localised minor negative effects arising for landscape character. On this assumption, <b>long-term minor positive effects</b> are considered likely overall; as a result of reduced traffic and congestion impacts affecting landscape character, and targeted interventions to improve the public realm.
Historic environment	A potential for negative effects is identified as a result of infrastructure proposals which intersect designated heritage settings; however, these effects are considered likely to be predominantly minor and short-term during construction, and protections for these settings are provided through the NPPF and Local Plan policies. Overall, the targeted interventions to improve the public realm are considered likely to lead to <b>residual minor long-term positive effects</b> .
Land, soil and water resources	The LTP4 policy provisions to reduce parking capacity are recognised for likely <b>minor long-term positive effects</b> in relation to efficient land use; by freeing up brownfield land opportunities for alternative housing and growth or new green spaces. Whilst infrastructure proposals which increase hard surfacing in the city will need to manage the effects of polluted water run-off in relation to water quality, no significant effects are anticipated,

particularly considering the existing policy mitigation provided through the NPPF and Local Plan. Despite this, it is recognised that the LTP4 has the opportunity to identify the links between policy initiatives and the Council's intent to maintain or improve water quality in this respect.

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Population and human health

Whilst some of the LTP4 proposals are considered for potential impacts on local economies, the overall drive to work with businesses and support sustainable economic development, improve the movement networks in the city; including active travel networks, improve air quality, and improve accessibility, are considered likely to benefit communities and human health. As a result, overall **significant long-term positive effects** are considered likely.

## **Part 3: What happens next?**

# 11. Next steps

11.1 This section seeks to explain next steps in the plan-making / SEA process.

## Strategy finalisation

11.2 The LTP4 and this Environmental Report will be discussed in detail by full cabinet and if approved, will be adopted at full council. At the time of adoption an 'SEA Statement' will be published that explains the process of plan-making/ SEA in full and presents 'measures decided concerning monitoring'.

# Appendices

# Appendix I: Regulatory requirements

As discussed in Chapter 1 of the main report, Schedule 2 of the Environmental Assessment of Plans Regulations 2004 explains the information that must be contained in the SEA Report. **Table A** below signposts broadly how/ where this report presents the information required by the SEA Regulations.

**Table A: ‘Checklist’ of how (through the SEA process) and where (within this report) regulatory requirements have been, are and will be met.**

Regulatory requirement	Discussion of how requirement is met
1. An outline of the contents, main objectives of the plan or programme, and relationship with other relevant plans and programmes;	Chapter 2 (‘What is the LTP4 trying to achieve’) presents this information.
2. The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme;	<p>These matters were considered in detail at the scoping stage, which included consultation on a Scoping Report published in 2020.</p> <p>The outcome of scoping was an ‘SEA framework’, and this is presented within Chapter 3 (‘What is the scope of the SEA’).</p> <p>More detailed scoping information - i.e. messages established through context and baseline review - is presented within Appendix II.</p>
3. The environmental characteristics of areas likely to be significantly affected;	<p>These matters were considered in detail at the scoping stage, which included consultation on a Scoping Report published in 2020.</p> <p>The outcome of scoping was an ‘SEA framework’, and this is presented within Chapter 3 (‘What is the scope of the SEA’).</p> <p>More detailed scoping information - i.e. messages established through context and baseline review - is presented within Appendix II.</p>
4. Any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC and 92/43/EEC.;	<p>These matters were considered in detail at the scoping stage, which included consultation on a Scoping Report published in 2020.</p> <p>The outcome of scoping was an ‘SEA framework’, and this is presented within Chapter 3 (‘What is the scope of the SEA’).</p> <p>More detailed scoping information - i.e. messages established through context and baseline review - is presented within Appendix II.</p>
5. The environmental protection, objectives, established at international, Community or national level, which are relevant to the plan or programme and the way those objectives and any environmental, considerations have been taken into account during its preparation;	<p>The Scoping Report (2020) presents a detailed context review and explains how key messages from the context review (and baseline review) were then refined in order to establish an ‘SEA framework’. An updated context review is provided in Appendix II of this SEA Report.</p> <p>The context review informed the development of the SEA framework and topics, presented in Chapter 3.</p> <p>With regards to explaining “how... considerations have been taken into account”:</p> <ul style="list-style-type: none"> <li>• Chapter 5 explains how reasonable alternatives were established in 2020.</li> <li>• Chapter 6 set out the summary findings of the appraisal of the reasonable alternatives, with the detailed appraisal provided in Appendix IV.</li> <li>• Chapter 7 explains the Council’s ‘reasons for supporting the preferred approach’, i.e. explains how/why the preferred approach is justified in-light of alternatives appraisal (and other factors).</li> <li>• Chapter 9 sets out the findings of the appraisal of the LTP4.</li> </ul>

<p>6. The likely significant effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors. (Footnote: These effects should include secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative effects);</p>	<ul style="list-style-type: none"> <li>• Chapter 6 sets out the summary findings of the appraisal of the reasonable alternatives for the LTP4 with the detailed appraisals provided in Appendix IV.</li> <li>• Chapter 9 presents the LTP4 appraisal.</li> </ul> <p>As explained within the various methodology sections, as part of appraisal work, consideration has been given to the SA scope, and the need to consider the potential for various effect characteristics/dimensions.</p>
<p>7. The measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme;</p>	<p>The appraisal of reasonable alternatives presented in Chapters 6 and of the LTP4 in Chapter 9 identify how the plan might potentially 'go further' in certain respects and makes a number of specific recommendations.</p>
<p>8. An outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information;</p>	<p>Chapters 5, 6 and 7 deal with 'Reasons for selecting the alternatives dealt with', in that there is an explanation of the reasons for focusing on particular issues and options.</p> <p>Also, Chapter 7 explains the Council's 'reasons for selecting the preferred option' (in light of alternatives appraisal).</p> <p>Methodology is discussed at various places, ahead of presenting appraisal findings, and limitations/assumptions are also discussed as part of appraisal narratives.</p>
<p>9. Description of measures envisaged concerning monitoring in accordance with Art. 10;</p>	<p>Chapter 10 presents measures envisaged concerning monitoring.</p>
<p>10. A non-technical summary of the information provided under the above headings</p>	<p>The NTS is provided in a separate document.</p>
<p>authorities with environmental responsibility and the public, shall be given an early and effective opportunity within appropriate time frames to express their opinion on the Draft Plan or programme and the accompanying environmental report before the adoption of the plan or programme (Art. 6.1, 6.2)</p>	<p>This SEA Report is published alongside the LTP4, so that representations might be made ahead of submission.</p>
<p>The environmental report prepared pursuant to Article 5, the opinions expressed pursuant to Article 6 and the results of any transboundary consultations entered into pursuant to Article 7 shall be taken into account during the preparation of the plan or programme and before its adoption or submission to the legislative procedure.</p>	<p>Appraisal findings presented within this current SEA Environmental Report alongside consultation responses will inform a decision on whether or not to finalise and adopt the Plan.</p>



# Appendix II: Scoping information

## Introduction

As discussed in Chapter 2 (What is the scope of the SEA?) the SEA scope is primarily reflected in a list of objectives ('the SEA framework'), which was established subsequent to a review of the sustainability 'context' / 'baseline', analysis of key issues, and consultation. The detailed scoping information was presented in a draft Scoping Report sent to statutory consultees in 2020.

The aim of this appendix is to present a summary of the scoping information and ensure that the information required under Schedule 2 of the SEA Regulations is provided. As part of the scoping process, it was recognised that transportation will be dealt with in detail through the LTP4 itself, and as such for the purposes of the SEA process, transportation has been scoped out. The more detailed context review and baseline information can be found in the Strategic Environmental Assessment (SEA) for the Portsmouth Local Transport Plan (LTP) Scoping Report (June 2020).

## Scoping consultation

A draft Scoping Report (July 2020) was shared with the Environment Agency, Historic England and Natural England for formal consultation over the period 1<sup>st</sup> July to 5<sup>th</sup> August 2020. The responses received are presented in **Table All.1** below.

**Table All.1: Scoping consultation responses**

Consultee	Comment	How the response was considered and addressed in the SEA?
Historic England	Thank you for inviting Historic England to comment on the above document. We would broadly support the content of the scoping report, insofar as it relates to the historic environment. However, we do have a number of specific comments, as set out below.	Many thanks, please see below for how the specific comments have been incorporated in the updated baseline and policy review provided in this appendix.
Historic England	Current baseline 6.11 It is not correct to state that the HER is not searchable. The HER should be consulted using the named Portsmouth City Council contact (Jennifer.Macey@portsmouthcc.gov.uk).	Portsmouth City Council have provided information in relation to the HER which is included in the updated baseline review below. GIS shapefiles for Areas of Archaeological Restraint have also been used in the assessment of constraints.
Historic England	6.12 Lambeth uncovered coat store including tower and attached tunnels is located outside the plan area (in Kingston-upon-Thames). Please note, the Heritage at Risk Register is searchable by local authority area, using the 'More Search Options' tool: <a href="https://historicengland.org.uk/advice/heritage-at-risk/searchregister/advanced-search">https://historicengland.org.uk/advice/heritage-at-risk/searchregister/advanced-search</a>	Many thanks, the baseline information has been updated accordingly.
Historic England	6.12 It is important to identify the grade of assets on this list, particularly as a number of those listed are grade II*. Grade II* assets are among those considered to be of the highest significance (NPPF para 194). These assets make up just 5.5% of the total number of listed buildings (with grade I assets representing just 2.5%).	Many thanks, the baseline information has been updated to identify the grade of those assets identified at risk.
Historic England	6.13 Fort Fareham is located outside the plan area.	Noted, with thanks.
Historic England	Future baseline & key sustainability issues 6.19-6.21 Transport infrastructure, particularly roads and associated installations such as guard rails, traffic signs and lights, as well as air and noise pollution can have a negative impact on the historic environment, as well as the	Many thanks, the future baseline has been updated accordingly.

	public realm in general. This should be acknowledged in these sections.	
Historic England	I hope these comments are helpful. Please come back to me if you require any clarifications.	Thank you for taking the time to review and support the SEA.
Environment Agency	<p>Thank you for providing us with an opportunity to comment on the Strategic Environmental Assessment (SEA) Scoping Report for the Portsmouth Local Transport Plan (LTP), as provided by email dated 1 July 2020. Thank you also for providing us with a few extra days to provide our comments.</p> <p>We are in general pleased with the report and the evidence base cited within. Please see our specific comments set out below.</p>	Many thanks for taking the time to review and comment on the scope of the SEA. Please see below for how the specific comments have been incorporated into the updated baseline and context review provided in this appendix.
Environment Agency	<p>Section 3.2</p> <p>We would recommend that the last bullet point is amended as follows:</p> <p><i>“High quality open spaces should be protected, or their loss mitigated replaced by equivalent or better provision, unless a lack of need is established.”</i></p> <p>This is in reference to paragraph 97 of the NPPF.</p>	Noted with thanks, the NPPF context has been updated accordingly.
Environment Agency	<p>Section 3.4</p> <p>This section needs re-wording</p>	Please see updated policy context provided in this appendix.
Environment Agency	<p>Section 3.9</p> <p>The Solent and Dorset Coast was confirmed as an SPA on 16 January 2020. The table in this section and wording in Section 3.16 should be updated accordingly.</p>	Noted with thanks, the baseline information has been updated.
Environment Agency	<p>Section 3.22</p> <p>This paragraph seems incomplete (it ends with the words “Locally Designated Sites”).</p>	This is a formatting error in the subtitle that has been rectified, many thanks.
Environment Agency	<p>Section 3.26</p> <p>We would strongly support the aims specified here to improve habitat connectivity. You could refer to the potential use of ‘living walls’ as a method to increase biodiversity, increase connectivity and assist with the reduction of air pollution. There is a recent reasonably local example of the incorporation of a living wall at the Millbrook roundabout in Southampton; a link to the council’s article is shown below –</p> <p><a href="https://www.southampton.gov.uk/news/article.aspx?id=tcml:63-415616">https://www.southampton.gov.uk/news/article.aspx?id=tcml:63-415616</a>.</p>	Noted, with thanks. Additional text has been added to the key issues and opportunities to identify the potential for living walls.
Environment Agency	<p>Section 3.28</p> <p>In regard to the bullet point “Will the option/ proposal help to: Achieve a net gain in biodiversity?” you could be more aspirational here. The upcoming Environment Bill will mandate net gain, and guidance is that a development should provide for at least 10% net gain on the existing baseline. Perhaps this particular bullet point could be expanded to say “Achieve a net gain in biodiversity of at least 10% on the existing baseline”.</p>	Noted, with thanks. The supporting assessment questions have been updated accordingly. Please see Table 3.1 in the main report.
Environment Agency	<p>You may also wish to ask whether an option/proposal “will assist in monitoring the future health and resilience of Portsmouth’s biodiversity?” Monitoring biodiversity is a fundamental aspect of protecting species and habitats now and in the future; any data collected can give valuable insight into biodiversity health and be fundamental in informing future plans in an area. This important aspect of long-term monitoring and recording seems to be an overlooked aspect of development.</p>	Noted and agreed, with thanks. The supporting assessment questions have been updated accordingly. Please see Table 3.1 in the main report.

Environment Agency	Natural England have developed Natural Capital Atlases which may assist with identifying opportunities for biodiversity net gain and enhancements. The atlases will be available at data.gov.uk, and should be published there during August 2020.	Noted with thanks.
Environment Agency	Section 4 We are pleased that flood risk is specified as a theme of this section on climatic factors.	Noted, with thanks.
Environment Agency	Section 4.3, 3) We would recommend a minor addition as shown below: "Where development is necessary, it should be made safe for its lifetime without increasing levels of flood risk elsewhere."	Many thanks, the NPPF context has been updated accordingly.
Environment Agency	Section 4.11 The UKCP18 was updated significantly in September 2019, mainly to incorporate the UKCP Local (2.2km) projections as well as providing a general update. You should include reference to this update, and check that the figures provided in Section 4.12 are still correct.	Noted with thanks, the data was as accessed in 2020 and appears to be the latest available evidence.
Environment Agency	Figure 4.1 This map is not very clear – would it be better to have a few maps that are smaller in scale rather than incorporating the whole area into one map?	Noted, with thanks. Detailed GIS information has been used to inform the assessment and the identified map is provided for overview purposes only.
Environment Agency	Figure 4.2 We cannot see the date on this map, but it should be checked to ensure it reflects the latest flood map information available - our Flood Map for Planning for the Portsmouth area was updated earlier this year.	Noted, with thanks. The GIS data uses national datasets which are checked regularly for updates.
Environment Agency	Section 4.23 We support the statements in this section. We would recommend some additions to improve this section if agreeable: "Transport infrastructure development should avoid increasing flood risk (including future flood risk) and provide betterment in terms of decreasing local flood risk wherever possible, particularly in the introduction of new hard-surfacing.	Noted, with thanks. The key sustainability issue has been updated accordingly.
Environment Agency	Section 4.24 We recommend that an additional question is added as shown below: "Will the option/ proposal help to: <input type="checkbox"/> Ensure flood risk is not increased to the local area, and provide betterment (where possible)?"	Noted, with thanks, the recommended question has been added to the supporting assessment questions in the SEA framework provided in Table 3.1 of the main report.
Environment Agency	Section 7 This section should acknowledge the following designated protected areas: <ul style="list-style-type: none"> <li>Portsmouth Harbour, Langstone Harbour and Spithead and Stokes Bay Shellfish Waters.</li> <li>Eastney and Southsea East Bathing Waters.</li> </ul>	Noted, with thanks, the baseline data has been updated accordingly.
Environment Agency	Section 7.23 We fully agree with the four identified key issues within this section. We recommend a minor addition to bullet point 3 as shown below: "Portsmouth contains many waterbodies, some of which are in 'bad' or 'poor' ecological condition. Transport infrastructure development will need to manage and mitigate the effects of development on waterbodies, including the effects of surface water run-off, and any	Noted, with thanks. The key issue has been updated in line with the suggested text.

increased flood risk, and support the WFD objectives in relation to good water quality.”

Please do not hesitate to contact me using the contact details shown below should you have any queries regarding the above information.

Many thanks for taking the time to inform the scope of the SEA.

## Relationship with other plans and programmes

The following plans and programmes provide the key policy context for LTP4:

- **National Planning Policy Framework (NPPF)<sup>11</sup>**: sets out the Government’s planning policies for England and how these are expected to be applied. The framework acts as guidance for local planning authorities, covering a range of environmental, social and economic themes, including:
  - The commitment to halt the overall decline in biodiversity by minimising impacts and achieving net gains in biodiversity wherever possible;
  - Adopting proactive strategies to adaptation and manage risks through adaptation measures including well planned green infrastructure;
  - Considering the potential cumulative impact of a number of smaller developments on air quality as well as more substantial ones;
  - Using technology to reduce the need to travel;
  - Encouraging land use and transport development which support reductions in greenhouse gas emissions and reduced congestion; and
  - Supporting new and emerging business sectors, including positively planning for ‘clusters or networks of knowledge driven, creative or high technology industries’.
  - Direct development away from areas highest at risk of flooding, with development ‘not to be allocated if there are reasonably available sites appropriate for the proposed development in areas with a lower probability of flooding’. Where development is necessary, it should be made safe for its lifetime without increasing levels of flood risk elsewhere.
  - High quality open spaces should be protected, or their loss mitigated replaced by equivalent or better provision, unless a lack of need is established
- **The Clean Air Strategy 2019<sup>12</sup>** identifies how government will tackle all sources of air pollution and is aimed at complementing the Industrial Strategy, Clean Growth Strategy and 25-Year Environment Plan. The strategy proposes new goals to cut public exposure to particulate matter pollution and sets out the comprehensive action that is required from across all parts of government and society to meet these goals. The proposed measures include new legislation and new local powers to take action in areas with an air pollution problem, including through the creation of ‘Clean Air Zones’.
- **The Air Quality Standards Regulations 2010** transpose into UK law the Ambient Air Quality Directive (2008/ 50/ EC) which sets legally binding limits for outdoor concentrations of major air pollutants which impact public health.
- **The statutory Air Quality Plan for nitrogen dioxide (NO<sub>2</sub>) (2017)<sup>13</sup>**, sets out how the UK will be reducing roadside nitrogen dioxide concentrations. These documents and zone plans set out the UK’s comprehensive approach to meeting the statutory limits for nitrogen dioxide, and the policy background. The Direction requires specified local authorities to carry out studies to identify how to meet legal limits for nitrogen dioxide in the shortest possible time and sets deadlines.
- **The Carbon Plan (2011)** sets out the Government's plans for achieving the greenhouse gas emissions reductions committed to in the Climate Change Act 2008 and the first four carbon

<sup>11</sup> Department for Communities and Local Government (2012) National Planning Policy Framework [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/6077/2116950.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/6077/2116950.pdf)

<sup>12</sup> DEFRA et al. (2019) Clean Air Strategy 2019 <https://www.gov.uk/government/publications/clean-airstrategy-2019>

<sup>13</sup> DEFRA et al. (2017) Air Quality Plan for nitrogen dioxide (NO<sub>2</sub>) in the UK <https://www.gov.uk/government/publications/air-quality-plan-for-nitrogen-dioxide-no2-inuk-2017>

budgets.<sup>14</sup> The Carbon Plan aims to reduce the UK's greenhouse gas (GHG) emissions by 80% by 2050.<sup>15</sup>

- **A Green Future: Our 25 Year Plan to Improve the Environment (2018)**<sup>16</sup>: sets out government action to help the natural world regain and retain good health. It aims to deliver cleaner air and water in our cities and rural landscapes, protect threatened species and provide richer wildlife habitats.
- **Biodiversity 2020 Strategy**<sup>17</sup> builds on 'A strategy for England's wildlife and ecosystem services, 2011 and the Natural Environment White Paper and sets out the "*strategic direction for biodiversity policy for the next decade*", aiming to halt biodiversity loss and improve the ecological networks and ecosystems for all people.
- **The Natural Environment White Paper (NEWP)**<sup>18</sup> sets out the importance of a healthy, functioning natural environment to sustained economic growth, prospering communities and personal well-being. It was in part a response to the UK's failure to halt and reverse the decline in biodiversity by 2010 and it signalled a move away from the traditional approach of protecting biodiversity in nature reserves to adopting a landscape approach to protecting and enhancing biodiversity. The NEWP also aims to create a green economy in which economic growth and the health of our natural resources sustain each other and markets, business and Government better reflect the value of nature. It includes commitments to:
  - Halt biodiversity loss, support functioning ecosystems and establish coherent ecological networks by 2020;
  - Establish a new voluntary approach to biodiversity offsetting to be tested in pilot areas;
  - Enable partnerships of local authorities, local communities and landowners, the private sector and conservation organisations to establish new Nature Improvement Areas; and
  - Address barriers to using green infrastructure to promote sustainable growth.
- Published in June 2015, the **Highways England (HE) Biodiversity Plan**<sup>19</sup> identifies the approach which HE is taking to meet the challenge of a national decline in biodiversity. The Plan contains five specific outcomes, with a series of related actions. These outcomes aim to provide the most support for biodiversity across the HE networks, and include:
  - Outcome 1: HE and our suppliers are equipped to produce good biodiversity performance;
  - Outcome 2: The Strategic Road Network is managed to support biodiversity;
  - Outcome 3: We have delivered biodiversity enhancements whilst implementing a capital programme of network improvements;
  - Outcome 4: We have addressed the legacy of biodiversity problems on our network via a targeted programme of investment; and
  - Outcome 5: We are fully transparent about our biodiversity performance (achieved via the production of annual progress reports).
- **Climate Change Act 2008**<sup>20</sup>: established a framework to develop an economically credible emissions reduction path. The Act sets targets for greenhouse gas (GHG) emission reductions through action in the UK of at least 80% by 2050, and reductions in CO2 emissions of at least 26% by 2020, against a 1990 baseline.

<sup>14</sup> HM Government (2011) Carbon Plan: Delivering our low carbon future  
[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/47613/3702-the-carbon-plan-delivering-our-lowcarbon-future.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/47613/3702-the-carbon-plan-delivering-our-lowcarbon-future.pdf)

<sup>15</sup> Relative to 1990 base year levels.

<sup>16</sup> HM Gov (2018) A Green Future: Our 25 Year Plan to Improve the Environment  
[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/693158/25-year-environment-plan.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/693158/25-year-environment-plan.pdf)

<sup>17</sup> Defra (2011) Biodiversity 2020: A strategy for England's wildlife and ecosystem services

<https://www.gov.uk/government/publications/biodiversity-2020-a-strategy-for-england-s-wildlife-and-ecosystem-services>

<sup>18</sup> Defra (2012): 'The Natural Choice: securing the value of nature (Natural Environment White Paper)' [online] available from:  
<http://www.official-documents.gov.uk/document/cm80/8082/8082.pdf> last accessed [22/02/20].

<sup>19</sup> Highways England (2015): 'Biodiversity Plan' [online] available to download from:  
<https://www.gov.uk/government/publications/biodiversity-plan> last accessed [23/02/20].

<sup>20</sup> Climate Change Act 2008 <http://www.legislation.gov.uk/ukpga/2008/27/contents>

- **The UK Climate Change Risk Assessment** is published on a 5-yearly cycle in accordance with the requirements of the Climate Change Act 2008. It required the Government to compile an assessment of the risks for the UK arising from climate change, and then to develop an adaptation programme to address those risks and deliver resilience to climate change on the ground. For both the 2012 and the 2017 UK Climate Change Risk Assessment, the Adaptation Sub-Committee commissioned an evidence report to achieve the following:

- ‘Based on the latest understanding of current, and future, climate risks and opportunities, vulnerability and adaptation, what should the priorities be for the next UK National Adaptation Programme?’<sup>21</sup>

The evidence report contains six priority risk areas requiring additional action in the next five years, see below:

- 1) Flooding and coastal change risks to communities, businesses and infrastructure;
  - 2) Risks to health, well-being and productivity from high temperatures;
  - 3) Risk of shortages in the public water supply, and for agriculture, energy generation and industry;
  - 4) Risks to natural capital, including terrestrial, coastal, marine and freshwater ecosystems, soils and biodiversity;
  - 5) Risks to domestic and international food production and trade; and
  - 6) New and emerging pests and diseases, and invasive non-native species, affecting people, plants and animals
- **Flood and Water Management Act (2010)**<sup>22</sup>: sets out measures to ensure that risk from all sources of flooding, not just rivers and seas, is managed more effectively. This includes: incorporating greater resilience measures into the design of new buildings; utilising the environment in order to reduce flooding; identifying areas suitable for inundation and water storage to reduce the risk of flooding elsewhere; rolling back development in coastal areas to avoid damage from flooding or coastal erosion; and creating sustainable drainage systems (SuDS).
  - **Conservation Area Designation, Appraisal and Management: Historic England Advice Note 1 (February 2019)**<sup>23</sup> outlines ways to manage change that conserves and enhances historic areas in order to positively contribute to sustainable development. Principally, the advice note emphasises the importance of:
    - Understanding the different types of special architectural and historic interest which underpin the designations; and
    - Recognising the value of implementing controls through the appraisal and/ or management plan which positively contribute to the significance and value of conservation areas.
  - **Historic Environment Good Practice Advice in Planning Note 3: The Setting of Heritage Assets (2nd Edition) (December 2017)**<sup>24</sup> provides general advice on understanding setting, and how it may contribute to the significance of heritage assets and allow that significance to be appreciated, as well as advice on how views can contribute to setting. Specifically, Part 2 of the advice note outlines a five stepped approach to conducting a broad assessment of setting:
    - Step 1: Identify which heritage assets and their settings are affected;
    - Step 2: Asses the degree to which these settings make a contribution to the significance of the heritage asset(s) or allow significance to be appreciated;

<sup>21</sup> GOV UK: ‘UK Climate Change Risk Assessment Report January 2017’, [online] available to download from: <<https://www.gov.uk/government/publications/uk-climate-change-risk-assessment-2017>> last accessed [23/02/20].

<sup>22</sup> Flood and Water Management Act (2010) <http://www.legislation.gov.uk/ukpga/2010/29/contents>

<sup>23</sup> Historic England (2019) Conservation Area Designation, Appraisal and Management: Historic England Advice Note 1 [online] available at: <https://historicengland.org.uk/images-books/publications/conservation-area-appraisal-designation-management-advice-note-1/>

<sup>24</sup> Historic England (2017) ‘Setting of Heritage Assets: 2nd Edition’ <https://historicengland.org.uk/images-books/publications/gpa3-setting-of-heritage-assets/>

- Step 3: Assess the effects of the proposed development, whether beneficial or harmful, on that significance or on the ability to appreciate it;
  - Step 4: Explore ways to maximise enhancement and avoid or minimise harm; and
  - Step 5: Make and document the decision and monitor outcomes.
- **Sustainability Appraisal (SA) and Strategic Environment Assessment (SEA): Historic England Advice Note 8 (December 2016)**<sup>25</sup> provides support to all stakeholders involved in assessing the effects of certain plans and programmes on the historic environment. It offers advice on heritage considerations during each stage of the SA/SEA process and helps to establish the basis for robust and comprehensive assessments.
  - **The EU's Soil Thematic Strategy**<sup>26</sup> presents a strategy for protecting soils resources in Europe. The main aim of the strategy is to minimise soil degradation and limit associated detrimental effects linked to water quality and quantity, human health, climate change, biodiversity, and food safety.
  - **The Water Framework Directive (WFD)** drives a catchment-based approach to water management. In England and Wales there are 100 water catchments and it is Defra's intention to establish a 'framework for integrated catchment management' across England. The Environment Agency is establishing 'Significant Water Management Issues' and recently presented second River Basin Management Plans to ministers. The plans seek to deliver the objectives of the WFD namely:
    - Enhance the status and prevent the further deterioration of aquatic ecosystems and associated wetlands which depend on aquatic ecosystems;
    - Promote the sustainable use of water;
    - Reduce the pollution of water, especially by 'priority' and 'priority hazardous' substances; and
    - Ensure the progressive reduction of groundwater pollution.
  - **The 'Ready for Ageing?' report**, published by the Select Committee on Public Service and Demographic Change<sup>27</sup> warns that society is underprepared for an ageing population. The report states that *'longer lives can be a great benefit, but there has been a collective failure to address the implications and without urgent action this great boon could turn into a series of miserable crises'*. The report recognises that the supply of specialist housing for the older generation is insufficient for the demand. There is a need for central and local Government, housing associations, and house builders to ensure that these housing needs are better addressed, giving as much priority to promoting an adequate market of social housing for the older generation as is given to the younger generation.
  - The Fair Society, Healthy Lives ('The Marmot Review') investigated health inequalities in England and the actions needed in order to tackle them. Subsequently, a supplementary report was prepared providing additional evidence relating to spatial planning and health on the basis that there is: "overwhelming evidence that health and environmental inequalities are inexorably linked and that poor environments contribute significantly to poor health and health inequalities".
  - **Health Equity in England: The Marmot Review 10 Years On (2020)** has been produced by the Institute of Health Equity and commissioned by the Health Foundation to mark 10 years on from the landmark study Fair Society, Healthy Lives (The Marmot Review).<sup>28</sup> The report highlights that:
    - people can expect to spend more of their lives in poor health;

<sup>25</sup> Historic England (2016) 'SA and SEA: Advice Note 8' <https://historicengland.org.uk/imagesbooks/publications/sustainability-appraisal-and-strategic-environmental-assessment-advice-note-8/>

<sup>26</sup> European Commission (2006) 'Soil Thematic Policy' [online] available at: [http://ec.europa.eu/environment/soil/index\\_en.htm](http://ec.europa.eu/environment/soil/index_en.htm) [accessed 28/02/20].

<sup>27</sup> Select Committee on Public Service and Demographic Change (2013) Ready for Ageing? [online] available at: <http://www.parliament.uk/business/committees/committees-a-z/lords-select/public-services-committee/report-ready-for-ageing/> last accessed [26/02/20]

<sup>28</sup> Health Equity in England: The Marmot Review 10 Years on (2020) <https://www.health.org.uk/publications/reports/the-marmot-review-10-years-on>

- improvements to life expectancy have stalled, and declined for the poorest 10% of women;
  - the health gap has grown between wealthy and deprived areas; and
  - place matters – for example living in a deprived area of the North East is worse for your health than living in a similarly deprived area in London, to the extent that life expectancy is nearly five years less.
- **The 2012 DfT report Resource guide for Local Authorities: Transport solutions for older people**<sup>29</sup> identifies barriers that older people face in using transport systems. It notes that local transport plans (LTPs) offer “*the opportunity to tackle these barriers in a clear and systematic way. Any improvements will benefit not just older people but improve access for many other members of the community*”. The resource guide covers a wide range of transport issues facing older people including affordability (given many older people are likely to be on fixed incomes) and accessibility in terms of providing transport options to destinations older people need to access. The guide also notes that nationally the number of older people in rural areas has increased at a faster rate than in urban areas, particularly those aged over 85. It goes on to note that “*a lack of frequent, accessible public transport is a particular concern for people living in rural areas. It may, therefore, be necessary to consider alternative transport solutions and innovative means of service delivery to help maintain access to key health, shopping and leisure facilities*”.
  - **The Portsmouth Plan**<sup>30</sup> (adopted 2012) sets out a range of objectives and policies for the city that are relevant to many of the SEA themes. Portsmouth City Council is currently preparing a new Local Plan that will update and replace the current planning policy framework (consisting of the Portsmouth Core Strategy (2012), two Area Action Plans and saved policies from the Portsmouth City Local Plan (2006)). The policies in the new Local Plan and their effect on the environment will be considered through the accompanying SA process.
  - In 2017, Portsmouth City Council released an **Air Quality Strategy (2017-2027)**<sup>31</sup>, to formalise the Council’s implementation of current local and national planning policy and legislation, in addition to setting strategic objectives for delivering key milestones over the 10-year period. The aims of the strategy are:
    - Foster closer working relationships between council directorates and external partners.
    - Create a focus on sustainable travel, including the promotion of a modal shift in transport from the car to active travel.
    - Provide high quality information and guidance on local air quality to members of the public.
    - Develop and implement measures to reduce traffic and congestion related emissions, addressing road network flow and functionality.
    - Support and stimulate sustainable citywide economic growth, including a focus on reducing carbon emissions.
    - Ensure that as a council we lead by example in supporting sustainable working practices, minimising our own emissions and carbon footprint.
  - **Portsmouth’s Climate Change Strategy**<sup>32</sup> produced by Portsmouth Sustainability Action Group (PSAG) focusses on climate mitigation and adaptation measures for the city. The strategy outlines the following key priorities:
    - Reduce Portsmouth’s carbon footprint;
    - Adapt to climate change;
    - Energy strategy for the city; and
    - Community involvement.

<sup>29</sup> Department for Transport (2012) Resource guide for Local Authorities: Transport solutions for older people [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/4478/transport-solutions-for-older-people.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/4478/transport-solutions-for-older-people.pdf)

<sup>30</sup> Portsmouth City Council (2012) The Portsmouth Plan – Portsmouth’s Core Strategy [online] available at: <https://www.portsmouth.gov.uk/ext/documents-external/pln-portsmouth-plan-post-adoption.pdf>

<sup>31</sup> Portsmouth City Council (2017) Air Quality Strategy [online] available at: <https://www.portsmouth.gov.uk/ext/documents-external/env-air-quality-strategy.pdf>

<sup>32</sup> Portsmouth Sustainability Action Group (no date) Portsmouth Climate Change Strategy [online] available at: <https://www.portsmouth.gov.uk/ext/documents-external/cmu-climate-strategy-full.pdf>



- **The Hampshire Minerals and Waste Plan (HMWP)**<sup>33</sup> (adopted 2013), explains how mineral resources should be extracted and supplied as well as the necessary waste management infrastructure needed so that Hampshire's environment will be protected, its communities maintained and the local economy supported, including Portsmouth City Council. The following policies relate directly to the Land, Waste and Water resources theme for Portsmouth:
  - Policy 19: Aggregate wharves and rail depots
  - Policy 34: Safeguarding potential minerals and waste wharf and rail depot infrastructure
- **The South Hampshire Green Infrastructure Implementation Plan (2019)**<sup>34</sup>, together with the Portsmouth Plan sets out the planned and proposed development that is needed to ensure economic growth and prosperity for the populations of Portsmouth, Southampton and their hinterland, which directly relates to the Population and Human Health theme.

## Baseline review

### Environmental quality

In line with Part IV of the Environment Act (1995) for Local Air Quality Management, local authorities are required to review and assess air quality within their area. Portsmouth City Council released its Air Quality Annual Status Report (ASR)<sup>35</sup> in June 2019. Monitoring is undertaken to assess levels of nitrogen dioxide, sulphur dioxide, ozone, benzene and particulates. Where exceedances exist, areas are declared as Air Quality Management Areas (AQMAs) and local authorities are required to produce an Action Plan (AQAP) which describes the measures that the local authority intend to take to improve local air quality. Portsmouth City Council has submitted an Air Quality Local Plan to the Government. This Plan seeks to achieve legal limits of nitrogen dioxide in the shortest possible time, in line with the wider Portsmouth Air Quality Strategy (PAQS)<sup>36</sup>. The PAQS, adopted in 2017, outlines the long-term strategy for delivering improvements to air quality in the plan area up to the end of the decade (2027).

The ASR lists five historic AQMAs within the LTP area, all identified due to exceedances in annual NO<sub>2</sub> National Quality Objectives (NAQOs) within their area. Prior to 2009, there were thirteen AQMAs present within the plan area, but eight of these have since been revoked. **Table AII.1** outlines the present AQMAs<sup>37</sup> and their extent.

**Table AII.1: Declared AQMAs**

<sup>33</sup> Hampshire (Portsmouth, Southampton, New Forest National Park & South Downs National Park) (2013): 'Hampshire Minerals and Waste Plan' [online] available to download via:

<https://documents.hants.gov.uk/mineralsandwaste/HampshireMineralsWastePlanADOPTED.pdf> [accessed 09/03/20].

<sup>34</sup> PUSH (2019) South Hampshire Green Infrastructure Implementation Plan [online] available at: <https://www.push.gov.uk/wp-content/uploads/2019/08/South-Hampshire-Green-Infrastructure-Implementation-Plan-June-2019-.pdf>

<sup>35</sup> Portsmouth City Council: '2019 Air Quality Annual Status Report (ASR)', [online] available to download via: <<https://www.portsmouth.gov.uk/ext/documents-external/asr-defra-final.pdf>> last accessed [17/02/20].

<sup>36</sup> Portsmouth City Council: 'Air Quality Strategy'. [online] available to download via: <<https://www.portsmouth.gov.uk/ext/documents-external/env-air-quality-strategy.pdf>> last accessed [17/02/20].

<b>Declared AQMA</b>	<b>Extent</b>
<b>AQMA6</b>	An area encompassing many residential properties extending north along Fratton Road; from Fratton Bridge into Kingston Road, continuing into London Road until the roundabout junction with Stubbington Road and Gladys Avenue.
<b>AQMA7</b>	An area encompassing several residential properties along Hampshire Terrace and St Michaels Road gyratory.
<b>AQMA9</b>	An area encompassing several residential properties near to the southernmost section of Eastern Road from Sword Sands Road south into Velder Avenue and its junction with Milton Road.
<b>AQMA11</b>	An area encompassing many residential properties east of the west transport corridor extending along part of the M275 and Mile End Road stretching from Rudmore roundabout south to Church Street roundabout.
<b>AQMA12</b>	An area encompassing several residential properties along Queen Street mainly an area stretching from The Hard to St James's Road.

In addition to the AQMAs noted above, the severity of AQMA6 has resulted in implementation of a number of measures to reduce emissions between 2012 and 2017. These included a combination of new surfaces, lining and traffic calming at junctions. The measures aim to improve safety for cyclists along the A2047, reduce accidents and speeds, and smooth traffic flow along this road.

Four of the five AQMAs are located along the western corridor. This corridor comprises the M275 and tributary routes and carries most traffic to the city. Though there have been significant improvements, localised air quality issues are still an issue.

In addition to these five AQMAs, two other areas have been identified as potential hotspots for pollution, given predictions that their mean NO<sub>2</sub> value will exceed the annual designated limit. These are:

- A3, Alfred Road between Hope Street roundabout and the Queen Street / Anglesea Road/ Alfred Road intersection.
- A3 Commercial Road (south of Church St roundabout)

However, both areas are expected to achieve compliance in line with statutory NO<sub>2</sub> limits between 2020-2023, as set by the Ambient Air Quality Directive (AAQD). This will be dependent on the implementation of policies and mitigation measures.

In addition, Portsmouth City Council have raised noise pollution concerns in the plan area, primarily sourced from traffic from the M275. Two main roads (the M27 and A27) are also potential contributors to excess noise within Portsmouth.

### **Future baseline**

The development of new transport infrastructure has the potential to increase the amount of traffic on the key routes throughout the plan area, through the exacerbation of pollutants, such as nitrogen dioxide and particulates, especially in areas within AQMA hotspots, and within proximity of main motorways.

Additional transport development also has the potential to exacerbate noise pollution hotspots within the plan area, particularly in areas surrounding key motorways in the north east. This could cause long term detriment to pre-existing communities within proximity of these developments.

However, there is also an opportunity for the council to improve air and noise pollution levels around major transport networks, by providing alternative routes for vehicles to access key services as well as access to more sustainable transport modes, including electric vehicle charging points and active travel networks.

Improvements in future air quality will be dependent on the successful implementation of the PAQS, and adoption of the Air Quality Local Plan.

### **Key sustainability issues**

Considering the baseline and context review, the following key issues have been identified:

- As of 2009, there were 13 AQMAs within the plan area. Following the revoking of eight of these sites, there are currently 5 AQMAs present within the plan area which are sensitive locations in relation to traffic and transport.
- Traffic and congestion arising from planned development has the potential to exacerbate NO<sub>2</sub> levels in Portsmouth, particularly in areas near the M275 and M27, which pass through the plan area.

## Biodiversity

The Portsmouth Biodiversity Action Plan (BAP) (in development), directly relates to the biodiversity theme. The plan is to include an updated list of BAP habitats and species in Portsmouth. The City Council published a Biodiversity Background Paper in 2019 to facilitate the development of the emerging Local Plan.<sup>38</sup> The document outlines key information regarding Portsmouth's natural environment, including international, national and local wildlife designations.

The sites in **Table AII.2** comprise the European sites ('international habitat sites') network within the Portsmouth area; four SPAs, four SACs, and three Ramsar sites. A number of these designations overlap each other.

**Table AII.2: International Designations potentially within the influence of the LTP4<sup>39</sup>**

Internationally designated site	SAC	SPA	Ramsar
Portsmouth Harbour		Yes	Yes
Chichester and Langstone Harbours		Yes	Yes
Solent and Dorset Coast		Yes	
Solent Maritime	Yes		
<i>Solent and Isle of White Lagoons</i>	Yes		
Solent and Southampton Water		Yes	Yes
South Wight Maritime	Yes		
Briddlesford Copses	Yes		
River Itchen	Yes		

Further details on the internationally designated sites that fall within the plan area are provided below.

Chichester and Langstone Harbours SPA/ Ramsar site (5,810.03 ha) covers two large, estuarine basins. Urban development surrounds the west of Langstone Harbour, whereas farmland surrounds most of the Chichester Harbour. Together, with neighbouring Portsmouth Harbour, the area forms one of the most sheltered intertidal areas on the South Coast of England. Both Chichester and Langstone Harbours contain extensive intertidal mudflats and sandflats with areas of seagrass beds, saltmarsh, shallow coastal waters, coastal lagoons, coastal grazing marsh and shingle ridges and islands. These habitats support internationally and nationally important numbers of overwintering and breeding bird species, including:

- Bar-tailed godwit (*Limosa lapponica*), Non-breeding
- Common tern (*Sterna hirundo*), Breeding
- Curlew (*Numenius arquata*), Non-breeding
- Dark-bellied brent goose (*Branta bernicla bernicla*), Non-breeding
- Dunlin (*Calidris alpina alpina*), Non-breeding

<sup>38</sup> Portsmouth City Council (2019): 'Biodiversity and Portsmouth' [online] available to download from: <<https://www.portsmouth.gov.uk/ext/documents-external/pln-local-plan-biodiversity-background-paper-final-draft-feb-2019.pdf>> [accessed 23/02/20].

<sup>39</sup> Portsmouth City Council (2019): 'Biodiversity and Portsmouth [Table 1]' [online] available to download from: <<https://www.portsmouth.gov.uk/ext/documents-external/pln-local-plan-biodiversity-background-paper-final-draft-feb-2019.pdf>> [accessed 23/02/20].

- Grey plover (*Pluvialis squatarola*), Non-breeding
- Little tern (*Sternula albifrons*), Breeding
- Pintail (*Anas acuta*), Non-breeding

The Solent and Southampton Water SPA/ Ramsar site (5,505.86 ha) is a complex major estuarine system consisting of coastal plain estuaries including the Yar, Medina, King's Quay Shore, and the Hamble. Bar-built estuaries including Newtown Harbour and Beaulieu also occupy the SPA. The Solent and its inlets are unique in Britain and Europe for their unusual tidal regime, including double tides and long periods of tidal stand at high and low tide. Estuarine sediments within the site support rich populations of invertebrates that provide an important food source for wintering birds. The Solent exceeds 90,000 waders annually and the mudflats, coastal lagoons, shingle and saltmarsh provide vital feeding and roosting grounds for these. The shingle banks also provide important breeding grounds for terns. The Solent also supports 10-13% of world's population of dark-bellied brent geese.

The Portsmouth Harbour SPA/ Ramsar site (1248.77 ha) is composed of extensive intertidal mudflats and sandflats with seagrass beds, areas of saltmarsh, shallow coastal waters, coastal lagoons and coastal grazing marsh. At low tide the extensive mudflats are exposed, the water drained by channels and creeks uniting to form a narrow exit into the Solent. There is comparatively little freshwater input to Portsmouth Harbour. The largest input is the River Wallington, which flows into Fareham Creek in the north-west of Portsmouth Harbour. The estuarine sediments support rich populations of intertidal invertebrates, which provide an important food source for overwintering birds, including:

- Dark-bellied brent goose;
- Red-breasted merganser; dunlin; and
- Black-tailed godwit.

There are approximately 77 ha of seagrass beds in Portsmouth Harbour, which are found mainly in the north-west of the harbour. These beds include both *Zostera marina* (found on the low shore) and *Zostera noltii* (on the upper to mid shore). The seagrass beds are amongst the most extensive in Britain and are an important food source for dark-bellied brent goose. The saltmarsh areas are mainly comprised of cordgrass (spartina) swards and provide feeding and roosting areas for overwintering birds. In addition, there are approximately 77 ha of seagrass beds in Portsmouth Harbour, mainly in the north-west of the neighbourhood plan area. These beds include *Zostera nolitt* and *Zostera marina* and *spartina*, all important food sources for several bird species.

The Solent Waders and Brent Goose Strategy<sup>40</sup> identifies that the birds use a wider area to roost than the immediate SPA and where important undesignated sites come under development pressure an Appropriate Assessment under the Habitats Regulations may be required. Policy W&BG1 identifies that "*Planning Authorities will recognise the importance of the wading bird and Brent Goose sites outside of the statutory designated areas in the Solent.*" Policy W&BG5 further highlights that "*development proposals which could affect important wading bird and Brent Goose sites outside of the statutory designated areas need to demonstrate levels of impact, alone and in combination with other proposals.*"

The Solent and Dorset Coast pSPA is located on the south coast within the English Channel. The site is approximately 255.2 nm2 and extends from the Isle of Purbeck in the West to Bognor Regis in the East, following the coastline on either side to the Isle of Wight and into Southampton Water. The pSPA is proposed to protect important foraging areas at sea used by qualifying interest features from colonies within adjacent, already classified SPAs. These qualifying interest features are three species of tern: common tern, sandwich tern and little tern.<sup>41</sup>

The Solent Maritime SAC covers 11,243 ha with four coastal plain estuaries, four bar-built estuaries and is the only site for smooth cord-grass in the UK. It is primarily designated for the following three habitats:

<sup>40</sup> Hampshire and Isle of Wight Wildlife Trust (2010) Solent Waders and Brent Goose Strategy [online] available at: <https://solentwbgs.files.wordpress.com/2017/02/solent-waders-and-brent-geese-strategy.pdf>

- **Spartina swards** (*Spartinion maritimae*) - Solent Maritime is the only site for smooth cord-grass *Spartina alterniflora* in the UK and is one of only two sites where significant amounts of small cord-grass *S. maritima* are found.
- **Estuaries** - The Solent encompasses a major estuarine system on the south coast of England with four coastal plain estuaries (Yar, Medina, King's Quay Shore, Hamble) and four bar-built estuaries (Newtown Harbor, Beaulieu, Langstone Harbour, Chichester Harbour). The Solent and its inlets are unique in Britain and Europe for their hydrographic regime of four tides each day, and for the complexity of the marine and estuarine habitats present within the area.
- **Atlantic salt meadows** (*Glauco-Puccinellietalia maritimae*) - The Solent contains the second-largest aggregation of Atlantic salt meadows in south and south-west England. Solent Maritime is a composite site composed of many separate areas of saltmarsh.

Sites of Special Scientific Interest (SSSIs) are protected by law to conserve national wildlife or geology. Natural England is a statutory consultee on development proposals that might impact on SSSIs. There are three SSSIs within the LTP area:

- Langstone Harbour SSSI;
- Portsmouth Harbour SSSI; and
- Portsdown Hill SSSI.

The condition status of each SSSI are shown in **Table AII.3**.

**Table All.3: Condition of SSSIs<sup>42</sup>**

SSSI Name	Favourable	Unfavourable- Recovering	Unfavourable – no change	Unfavourable – Declining	Partially Destroyed	Destroyed
Portsmouth Harbour	2.58%	25.7%	71.21%	0.15%	0.0%	0.35%
Langstone Harbour	8.39%	91.05%	0.56%	0.00%	0.00%	0.00%
Portsmouth Hill	9.19%	88.22%	0.00%	0.00%	0.00%	2.59%

**Langstone Harbour SSSI** is the centre of three linked harbours on Hampshire’s southeast coast, with Portsmouth Harbour to the west and Chichester Harbour to the east. The harbour is important for its environmental designations, and commercial shipping, fishing and recreational boating have been supported in the harbour for many years.<sup>43</sup> Langstone Harbour is a tranquil and largely undisturbed area providing refuge for a variety of animals and vegetative species. In the north of the harbour are located several small islands. The harbour is host to a diverse range of habitats, including intertidal mudflats, Seagrass meadows, and Atlantic saltmarsh. These habitats provide feeding grounds and refuge for internationally important assemblages of wildfowl and wading birds, perfect conditions for a Bass nursery, and even a haul out site for a small colony of Harbour Seals. These islands along with their associated mudflats together form a reserve managed by the RSPB. The Farlington Marshes can be found in the north west corner of the harbour and is an important nature reserve that is managed by the Hampshire Wildlife Trust.

**Portsmouth Harbour SSSI** is a large, industrialised estuary. Together with the adjacent Chichester and Langstone Harbours, it forms one of the most important sheltered intertidal areas on the south coast of England. The harbour has a significant number of internationally and nationally important numbers of birds and vegetative species, including nationally significant landscape features.

**Portsmouth Hill SSSI** is a standalone site of national interest, designated for its species-rich chalk grassland formed by its geographical conditions as an isolated east-west chalk anticline with a long south-facing escarpment.

Local Nature Reserves (LNRs) may be established by Local Authorities in consultation with English Nature under Section 21 of the National Parks and Access to the Countryside Act 1949 and are habitats of local importance. There are several LNRs within Portsmouth, including:

- Eastney Beach - contains several nationally rare plant species such as Sea Holly, Sea Kale and Yellow Horned Poppy, as well as a valuable roosting and breeding site for bird life.
- Milton Common and Tamworth Hill - a 46ha area of grassland, scrub and lakes that is a highly valued space within Portsmouth and contains a wide variety of wildlife.
- Farlington Marshes - one of Hampshire’s oldest nature reserves, with over 125 ha of flower rich grazing marsh and saline lagoon.
- Farlington Triangle - Bordered by hedgerow, the area consists mainly of unimproved marshland east of Farlington playing fields. The lower wetland contains some rare species of marsh flora.
- Fort Cumberland - The open space surrounding the Fort is composed of many areas of different coastal habitats, each with its own wildlife and species composition.

<sup>42</sup> Natural England (2020): ‘Designated Sites View’ [online]. available to download from: <<https://designatedsites.naturalengland.org.uk/SiteSearch.aspx>> [accessed 18/02/2020].

<sup>43</sup> Langstone Harbour Board (n.d.): ‘About Langstone Harbour’ [online] available to download from: <<http://www.langstoneharbour.org.uk/about.php>> [accessed 23/02/20].

- Great Salterns - This large open space has changed considerably over the years to cater for the increased needs of sports pitches, golf course, archery range, horse paddocks and allotments. There still remains a significant natural area that is of great wildlife interest.
- Halsea Lines - Probably the most varied wildlife haven on Portsea Island, this area contains woodland, hedgerows, meadows fresh and brackish water areas, marshland and coastal habitat.
- Portsdown Hill - A wide variety of plants and animals, particularly butterflies, thrive on the chalk grassland and include some species not commonly found elsewhere in Britain. Grassland management is used to enhance the Site of Special Scientific Interest adjacent to Fort Widley.

**Figure All.1** depicts most designated biodiversity sites in the plan area, with the exception of SNCIs. **Figure All.2** depicts the National Biodiversity Action Plan Priority Habitats in the plan area.

### Future baseline

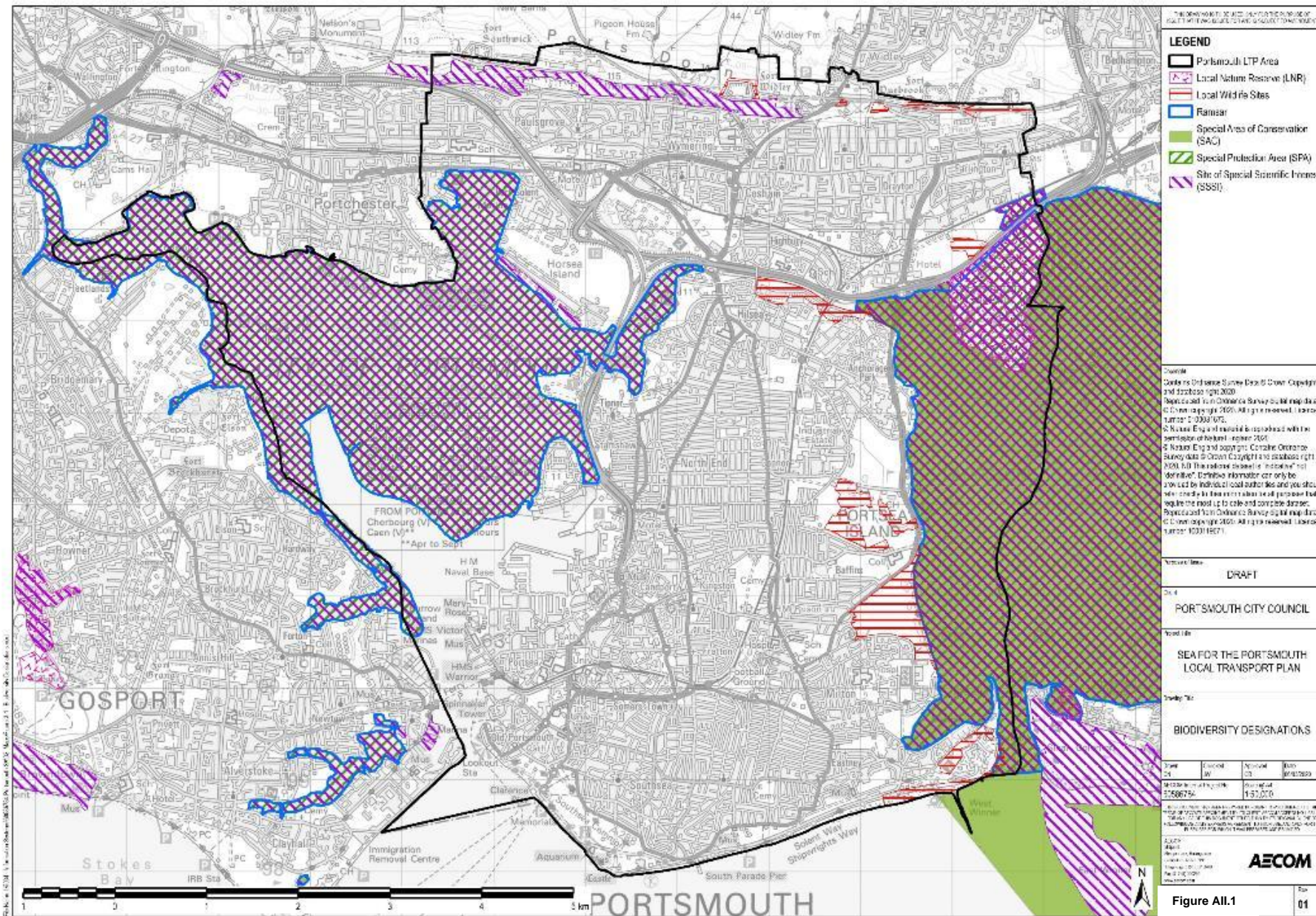
Habitats and species will potentially face increasing pressures from infrastructure delivery within Portsmouth, including transport development, with the potential for negative impacts on the wider ecological network. This may include a loss of habitats and impacts on biodiversity networks. The potential impacts on biodiversity from climate change are likely to include changes in habitat, changes in species distribution, changes in hydrology and changes in the ecosystem, particularly the marine ecology of the area.

To maintain and improve the condition of biodiversity in the future, it will be important to not only protect and enhance important habitats but the connections between them. It will be crucial to effectively coordinate the delivery of infrastructure to ensure that opportunities to improve green infrastructure and ecological corridors are maximised.

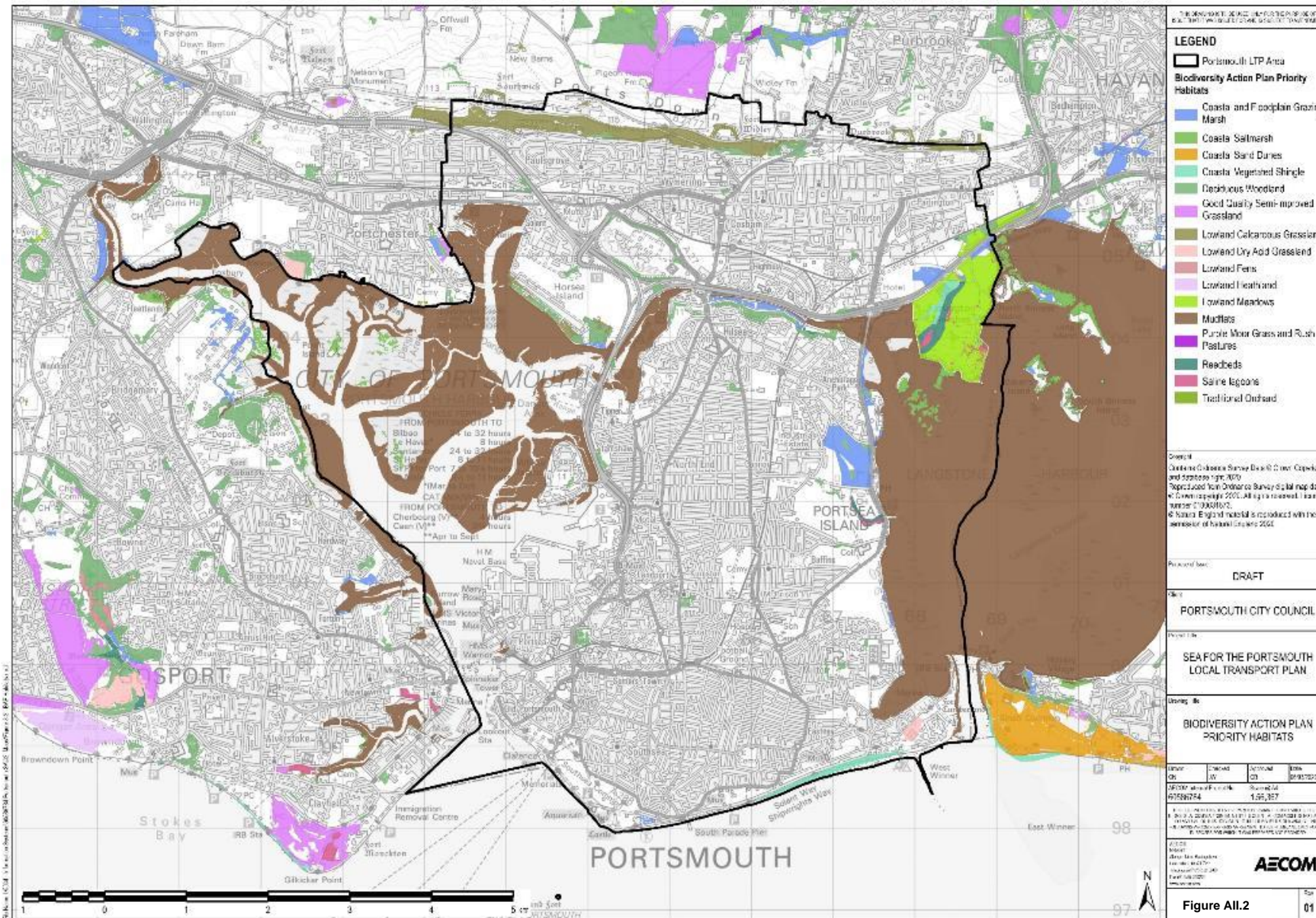
### Key sustainability issues

Considering the baseline and context review, the following key issues have been identified:

- There are 6 internationally designated sites located wholly or partially within the LTP area: 2 SPAs, 1 pSPA, 2 Ramsar sites and 1 SAC), and three nationally designated SSSIs. Increased noise and light pollution, particularly during construction, as well as any increased traffic flows on roads that run in the vicinity of these sites has the potential to disrupt the wildlife at these protected sites.
- There are 11 Local Nature Reserves (LNRs) within Portsmouth, including: Eastney Beach, Milton Common and Farlington Marshes. Transport infrastructure should avoid any direct loss of habitats and minimise the effects of development (such as noise, light and air pollution).
- Opportunities to achieve biodiversity net gains could be identified through interventions, including measures such as 'living walls'.



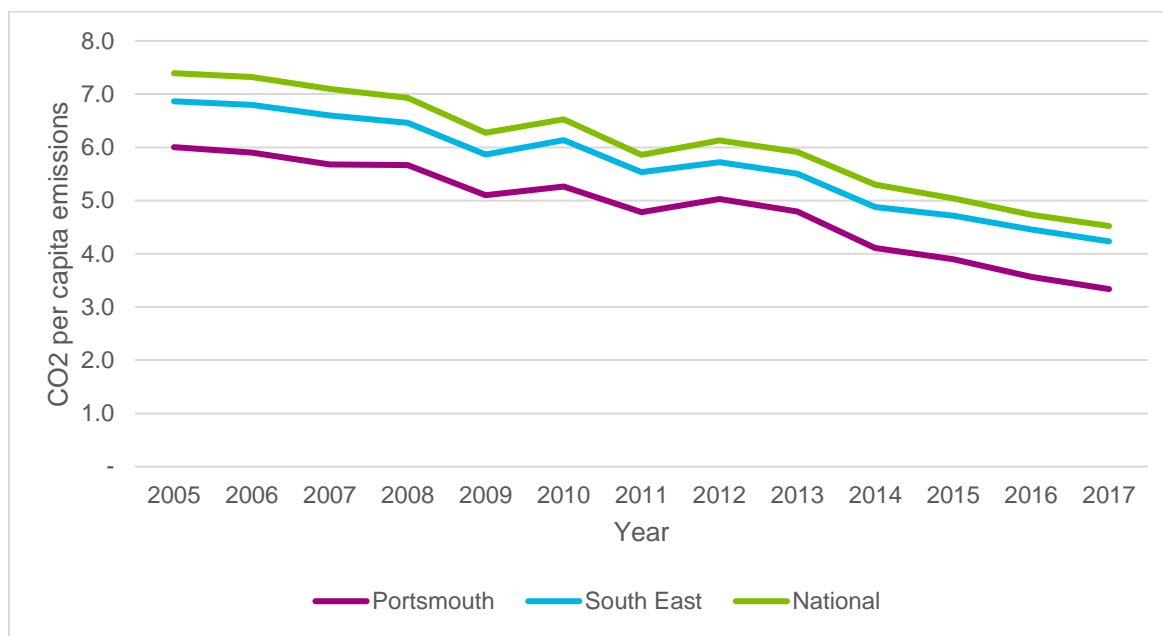




## Climatic factors

In relation to greenhouse gas emissions, source data at the Department of Energy and Climate Change (2017) suggests that Portsmouth has had lower per capita emissions than both the South East of England and England since 2005. Further, Portsmouth has seen a greater rate of decrease in emissions since 2014 (6%) in comparison to regional (4%) and national (4.9%) statistics. **Figure All.3** outlines this below.

**Figure All.3: Carbon Dioxide Emissions (2005-2017)**



The data itself identifies that the industry and commercial sector is currently the biggest contributor to emissions in the District, followed by domestic and transport sectors. Within the Industry and commercial sector, electricity is the largest contributor to emissions, followed by commercial gas. For the domestic sector however, the opposite trend is seen. Finally, within the transport sector, A roads are the biggest contributor to emissions, followed by minor roads.

Research on the probable effects of climate change in the UK was released in 2018 by the UK Climate Projections (UKCP18) team<sup>44</sup>. UKCP18 gives climate information for the UK up to the end of this century and projections of future changes to the climate are provided, based on simulations from climate models. Projections are broken down to a regional level across the UK and are shown in probabilistic form, which illustrate the potential range of changes and the level of confidence in each prediction.

As highlighted by the research, the effects of climate change (under medium emissions scenarios 50<sup>th</sup> percentile) for the South East of England during the period 2040-2059 compared to the period 1981-2000 are likely to be as follows<sup>45</sup>:

- The central estimate of increase in annual mean temperatures of between 1°C and 2°C; and
- The central estimate of change in annual mean precipitation of 0 to +20% in winter and -10% to -30% in summer.

Due to such changes, a variety of risks may exist for the plan area, including:

- Increased incidence of heat related illnesses and deaths during the summer;

<sup>44</sup> The data was released on 26<sup>th</sup> November 2018: Available from: <http://ukclimateprojections.metoffice.gov.uk/>

<sup>45</sup> Met Office (2018): 'Land Projection Maps: Probabilistic Projections', [online map] available at: <https://www.metoffice.gov.uk/research/collaboration/ukcp/land-projection-maps> [accessed 23/02/20].

- Increased incidence of illnesses and deaths related to exposure to sunlight (e.g. skin cancer, cataracts);
- Increased incidence of pathogen related diseases (e.g. legionella and salmonella);
- Increase in health problems related to rise in local ozone levels during summer;
- Increased risk of injuries and deaths due to increased number of storm events;
- Effects on water resources from climate change;
- Reduction in availability of groundwater for abstraction;
- Adverse effect on water quality from low stream levels and turbulent stream flow after heavy rain;
- Increased risk of flooding, including increased vulnerability to 1:100-year floods;
- Changes in insurance provisions for flood damage;
- A need to increase the capacity of wastewater treatment plants and sewers;
- A need to upgrade flood defences;
- Soil erosion due to flash flooding;
- Loss of species that are at the edge of their southerly distribution;
- Spread of species at the northern edge of their distribution;
- Deterioration in working conditions due to increased temperatures;
- Changes to global supply chain;
- Increased difficulty of food preparation, handling and storage due to higher temperatures;
- An increased move by the insurance industry towards a more risk-based approach to insurance underwriting, leading to higher cost premiums for business;
- Increased demand for air-conditioning;
- Increased drought and flood related problems such as soil shrinkages and subsidence;
- Risk of road surfaces melting more frequently due to increased temperature; and
- Flooding of roads.

An energy study conducted by the Partnership for Urban South Hampshire (PUSH) indicated that less than 1% of energy produced in South Hampshire was generated from renewables.<sup>46</sup> Considering climatic effects, and pressure from the UK government to meet EU renewables targets by the end of the decade, the PUSH study has emphasised the importance of improving access to renewable energy. The following are aspirational outcomes of the strategy:

- Higher proportion of energy used within the city will come from renewable/ decentralised sources.
- Renewable/ decentralised energy installations – both domestic and commercial, will be developed around the city.
- Better public understanding and take up of renewable/ decentralised energy.
- Reduced tariffs for renewable/ decentralised energy produced in the city.

The Portsmouth Strategic Flood Risk Assessment (SFRA)<sup>47</sup> was undertaken as part of the sub-regional Partnership for Urban South Hampshire (PUSH) in 2016. The types of flood risk described are identified as:

- Surface water flooding;
- Fluvial flooding; and

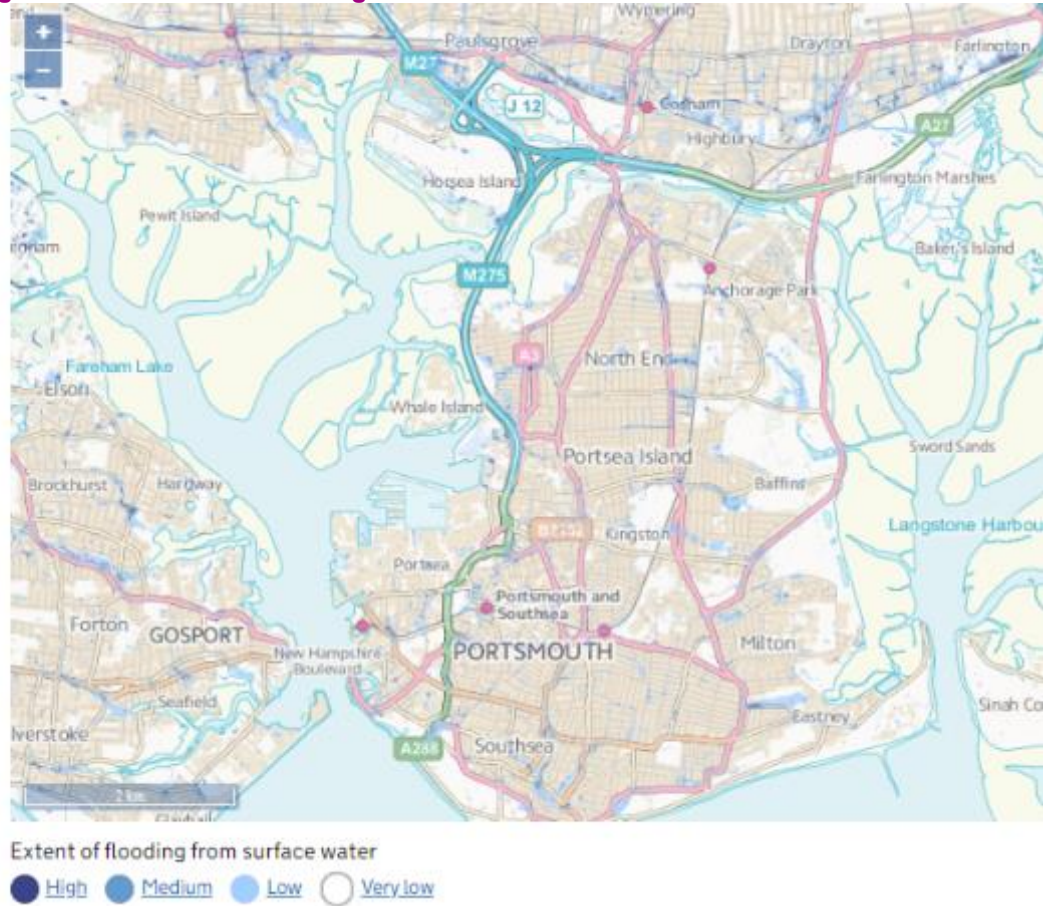
<sup>46</sup> Partnership for Urban South Hampshire (2015): 'Solent Energy Strategy' [online] available to download from: <<https://www.push.gov.uk/wp-content/uploads/2018/05/Solent-Energy-Strategy-2015.pdf>> [accessed 23/02/20].

<sup>47</sup> Portsmouth City Council (2016): 'Strategic Flood Risk Assessment 2016 Update. [online] available to download from: <<https://www.portsmouth.gov.uk/ext/documents-external/push-sfra-2016-update.pdf>> [accessed 22/02/20].

- Coastal flooding.

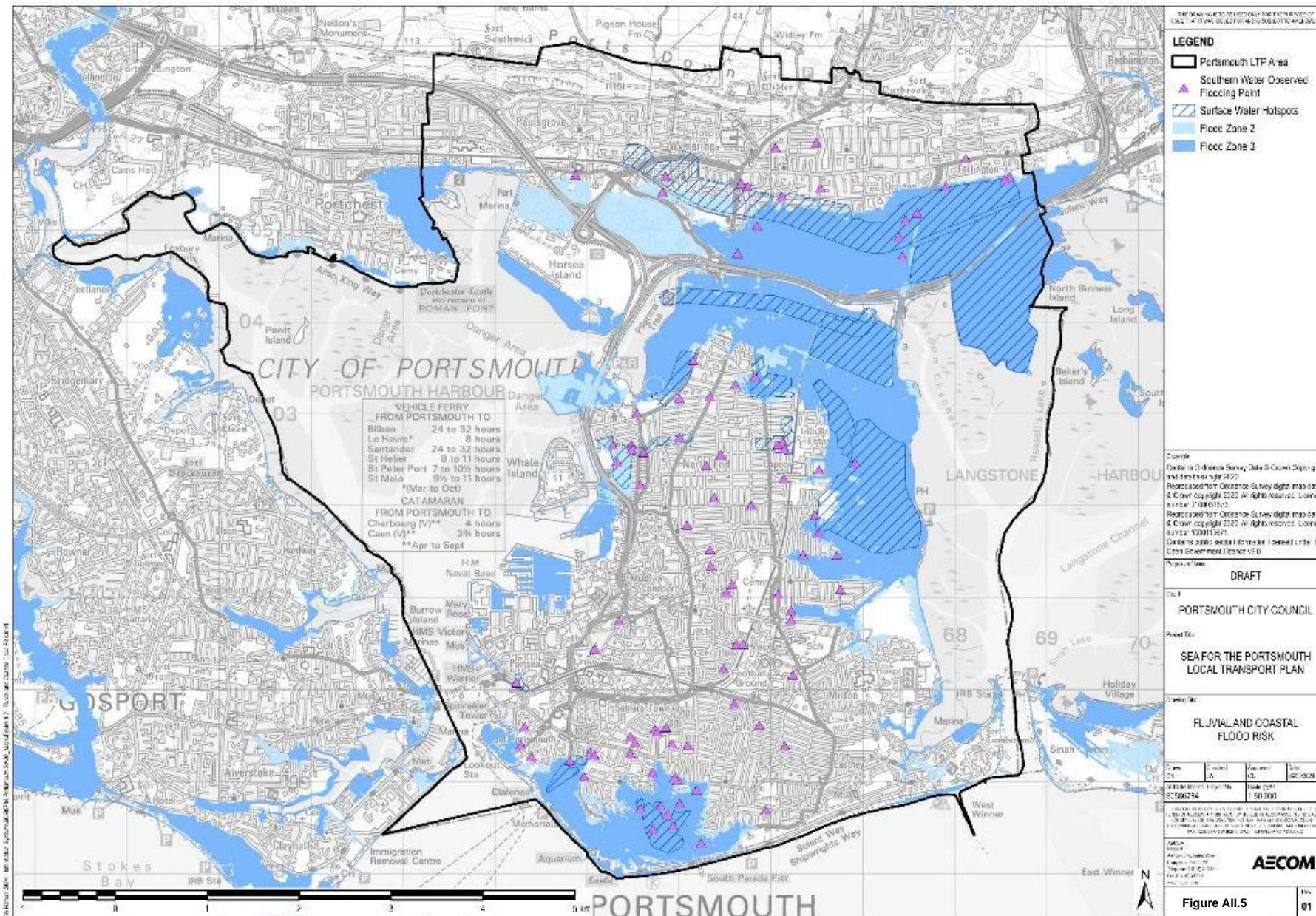
Surface water flooding occurs when the rate of rainfall exceeds the infiltration rate of the ground it falls upon, which is primarily dependent on topography. In urban areas this often tends to follow road networks and shows ponding in localised depressions. **Figure AII.4** shows the extent of surface water flood risk in Portsmouth.

**Figure AII.4: Extent of Flooding from Surface Water<sup>48</sup>**



**Figure AII.5** identifies the areas that are at risk from fluvial and coastal flooding, as well as Surface Water Hotspots.

<sup>48</sup> UK Government (n.d.): 'Flood Risk from Surface Water' [online] available from: <<https://flood-warning-information.service.gov.uk/long-term-flood-risk/map>> [accessed 22/02/20].



In Portsmouth, regionally important transport links are at risk of coastal flooding and erosion, including the mainline railway links from Portsmouth, the M27 and M275, due to increasing sea levels and forebulging (sinking of low-lying land). In response, the Eastern Solent Coastal Partnership (ESCP) formed an alliance in 2012 to deliver a combined, efficient and comprehensive coastal management service across the coastlines of four Local Authorities: Havant Borough Council, Portsmouth City Council, Gosport Borough Council and Fareham Borough Council.

As a unitary authority, Portsmouth City Council is designated as a Lead Local Flood Authority (LLFA) under the Flood and Water Management Act 2010 (the 'act'). The act places a statutory duty on LLFA's to develop, maintain, implement and monitor a Local Flood Risk Management Strategy<sup>49</sup> to manage local flood risk in its area. As part of this process, Portsmouth produces several management plans. Portsmouth Council's Surface Water Management Plan<sup>50</sup> identified areas within the LTP area at higher risk of flooding. Local flood risk is defined as flood risk originating from sources other than main rivers, the sea and large reservoirs and hence principally flood risk from: a) surface runoff b) groundwater, and c) ordinary watercourses. Subsequently, the plan identified 5 areas most at risk of 'intermediate' local flooding, designated as 'flooding hotspots.' These are as follows:

- Cosham (north of railway line);
- Farlington Marshes;
- War dept sewer;
- Pier Road (Little Morass); and
- Southsea (Great Morass).

### Future baseline

Climate change has the potential to increase the occurrence of extreme weather events in Portsmouth, in line with increases in mean temperature, fluctuations in rainfall and localised storms. This is likely to increase water-related events such as surface, fluvial and coastal flood risk, resulting in an increased need for resilience and adaption for transport infrastructure.

A notable concern is rising sea levels, given the nature of the LTP area as a coastal city, and the ongoing forebulging putting shoreline assets, residents and developments at risk of flooding from the sea.

With regards to climate change mitigation, per capita emissions are likely to continue to decrease as energy efficiency measures, renewable technology production and new technologies become more readily available and widely adopted. This includes relating to the update of more energy efficient and less polluting vehicles, including electric cars.

### Key sustainability issues

Considering the baseline and context review, the following key issues have been identified:

- A range of flood risk issues exist across Portsmouth, including fluvial, surface water and tidal/coastal flooding. Transport infrastructure development should avoid increasing flood risk (including future flood risk) and provide betterment in terms of decreasing local flood risk wherever possible, particularly in the introduction of new hard-surfacing.
- The transport network in Portsmouth has the potential to become increasingly vulnerable to the potential effects of climate change in forthcoming years. As such, the resilience of the transport network to the likely impacts of climate change will be a factor in its effective functioning.

## Landscape

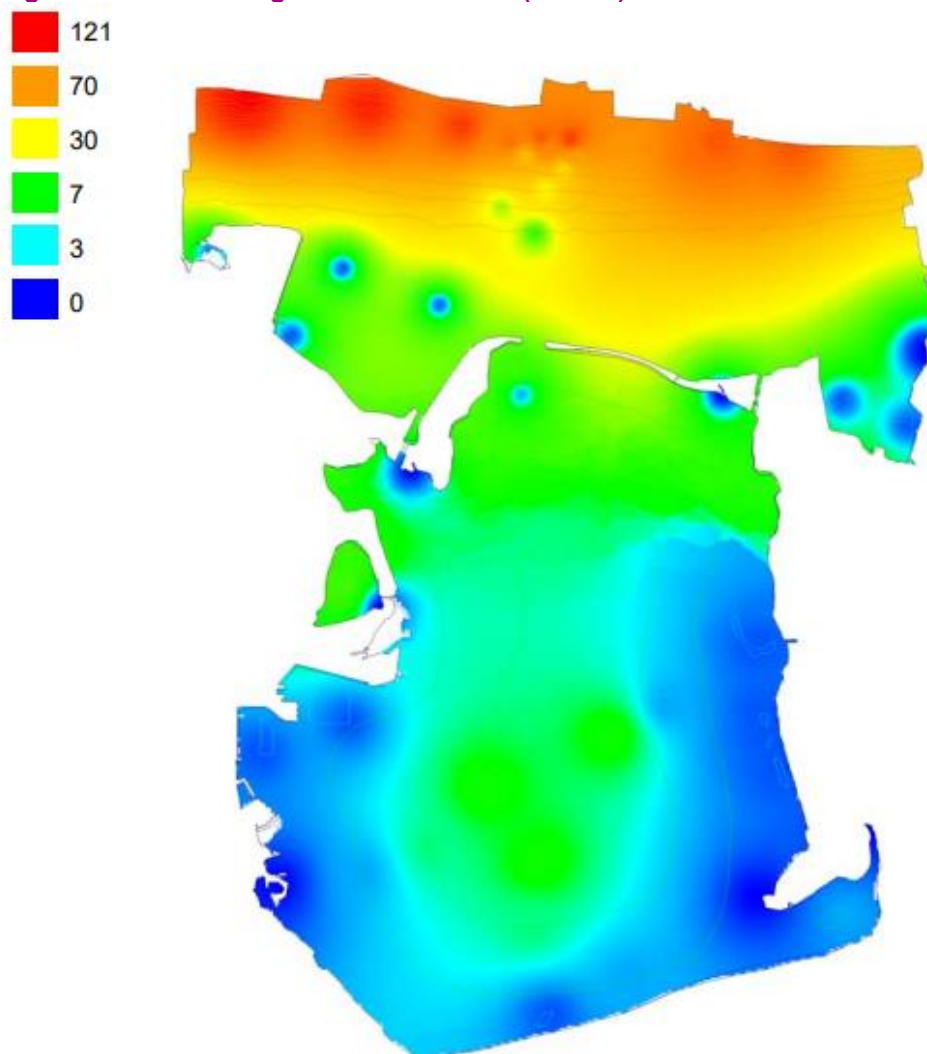
The topography of Portsmouth is highly varied, with the land rising dramatically (over 121 meters above sea level) to the north of the LTP area, in comparison to the low-lying edges of the City (see **Figure AII.6**). Portsmouth is the only city in the UK to be situated primarily on an island (Portsea

<sup>49</sup> Portsmouth City Council (2015): 'Local flood risk management strategy' [online]. available to download from: <<https://www.portsmouth.gov.uk/ext/documents-external/cou-flood-risk-management-plan.pdf>> [accessed 22/02/20].

<sup>50</sup> Portsmouth City Council (2012): 'Surface Water Management Plan' [online]. available to download from: <<https://www.portsmouth.gov.uk/ext/documents-external/env-surface-water-management-plan-2019.pdf>> [accessed 22/02/20].

Island). Bounded by two inter-tidal harbours to the east and west, and The Solent to the south, a narrow tidal strip known as Ports Creek separates Portsea Island, on which the bulk of the city is located, from the mainland<sup>51</sup>. The majority of Portsea Island is artificial/ man made in its nature, with obvious sea defences and development right up to the valuable deep harbour edges and dredging of channels. Except for Portsdown Hill, which forms the northern boundary of the city, a defining characteristic of Portsmouth is that it is extremely flat. Few areas on Portsea Island extend much beyond above sea level, resulting in large parts of the city being at risk from tidal flooding. On the mainland, land heights gradually increase towards Portsdown Hill to the north. This hill is popular with residents its large areas of open space offer opportunities for recreation space and spectacular panoramic views across the city.

**Figure All.6: Land height above sea level (meters)**



National Character Areas (NCAs) are landscape areas which share similar characteristics, following natural lines in the landscape rather than administrative boundaries. Developed by Natural England, NCA profiles describe the natural and cultural features that shape each of these landscapes, providing a broad context to its character. The LTP area sits within the South Coast Plain NCA (126)<sup>52</sup>, which is described as: *a flat, coastal landscape with an intricately indented shoreline lying between the dip slope of the South Downs and South Hampshire Lowlands and the waters of the English Channel, Solent and part of Southampton Water.* Key features include:

<sup>51</sup> Portsmouth City Council (2011): 'Urban Characterisation Study' [online] available to download via: <https://www.portsmouth.gov.uk/ext/documents-external/pln-local-dev-design-urban-characterisation.pdf> [accessed 23/02/20].

<sup>52</sup> Natural England (2014): 'National Character Area profile: 126. South Coast Plain'. [online] available to download from: <http://publications.naturalengland.org.uk/publication/4923911250640896> [accessed 20/02/20].

- Plain slopes that slope gently southwards towards the coast. From the coastal plain edge there are long views towards the sea and the Isle of Wight beyond.
- The underlying geology of flinty marine and valley gravels extends several miles inland to the dip slope of the South Downs and the South Hampshire Lowlands. This gives rise to deep and well-drained high-quality soils.
- In places, streams and rivers flow south from the higher land of the downs to the sea.

Hampshire County Council has conducted landscape character area assessments<sup>53</sup> within the county, where areas possess similar characteristics. The following characteristics are relevant to Portsmouth include:

- Langstone and Chichester Harbours - a shallow marine basin enclosed by a low lying natural and man-made sea defence shoreline of low walls and embankments.
- Western Solent - a former Pleistocene river valley, flowing west to east with a shingley silty undulating seabed with overlying muds.
- Eastern Solent - a former Pleistocene river, sheltered from predominant south-westerly winds, with very busy shipping, including commercial huge container vessels, tankers, ferries, high speed vessels, hovercraft and recreational sailing.

No assessment to date has been conducted for Portsmouth Harbour.

At the local level, Portsmouth County Council conducted a Landscape Character Assessment (LCA) in 2012 for Portsea Island, identifying information regarding the Landscape Character Areas (LCAs) within the region for a flood risk and coastal assessment.<sup>54</sup> There are three key coastal 'areas' located within the LTP area:

- **The Seafront** stretches from the Portsmouth Harbour entrance in the west through to the Langstone Harbour entrance in the east. It covers four miles, with a diverse character, varying from built waterfront to semi-natural shingle beach. The seafront is a developed western end that becomes gradually more informal towards east. There are extensive areas of public open space along coastline between built frontage and sea. Additionally, there are predominant shingle storm beaches interspersed with historic sea defences and piers, providing harsh exposure to the elements, such as winds, storms and sunshine. Land is predominantly for recreational use, with considerable public access to the shoreline open space.
- **The North Coast** provides an outlook across harbours and creek to nearby mainland and Portsdown Hills beyond from an engineered shoreland. There are extensive areas of public open space and walking routes along whole extent, but the area is still influenced by nearby motorway and traffic noise, and busy routes/ crossings. Historic land defences create unusual landform and moats. The formality of western end changes towards informality in more remote parts of north and east.
- **The East Coast** is characterised by an adapted/ engineered shoreline, with banks, walls and boulders. There are extensive areas of public open space and a walking route along the whole extent. The main transport corridor influences the overall character of the area and restricts harbour side spaces physically to a narrow strip, except at Common. Further, there is some informality of open spaces with signs of disuse and neglect. Adjacent housing areas in the East Coast include: Milton, Baffins and Anchorage Park.

In addition to the Portsmouth coastal LCA, the Council conducted an urban characterisation study in 2011, which depicted the following additional 21 urban landscape character areas. Each of these has been grouped into nine character types within the LTP area with the following characteristics:

- The Historic Core:
  - Large areas covered by conservation area status.
  - Interesting streetscape with historic lighting, paving and structures.

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<sup>54</sup>Portsmouth City Council (2012): 'Landscape Character Assessment- Portsea Island Coastal Defence Flood Risk' [online] available to download from: <https://www.portsmouth.gov.uk/ext/documents-external/dev-seafront-masterplan-portseaisland-landscape-character-assessment.pdf> [accessed 23/02/20].



- Vistas across Portsmouth Harbour and The Solent.
- Strong sense of place and maritime links.
- Few busy vehicular routes through the area.
- Early Victorian Expansion:
  - Buildings dating between 1830 and 1870.
  - Later infill developments.
  - Large Victorian houses converted into flats.
  - Vibrant retail and leisure at Southsea Town Centre.
  - Large expanse of open space at Southsea Common providing range of tourist attractions.
- Pre-War Terraces:
  - Buildings generally dating from 1870-1920.
  - Uniform 2 storey terraced housing.
  - Streets set out in a rigid grid pattern.
  - Predominantly red brick houses with slate or tiled roofs.
  - High density dwelling.
- Inter and Post-War Housing:
  - Buildings predominantly dating from 1915-1980 with later infill development.
  - Served by small local centres.
  - Lower than average dwelling density.
  - Areas of terraced housing, generally larger than those of Pre-War Type.
  - Modern cul-de-sac developments of varying ages and styles.
- Post-War Estates:
  - Buildings date between 1950 and 1980.
  - Largest range of building heights in centre and south of city.
  - Some large block patterns which fragment street networks.
  - Grass verges, communal open spaces and small play areas scattered throughout.
  - Small pockets of older terraced housing survive in some areas.
- Mixed-Use:
  - Mix of residential, industrial, commercial and leisure uses.
  - Residential development typically dates from 1980 onwards but earlier in some in places.
  - Cul-de-sac layout of houses and taller apartment blocks common.
  - Green verges, communal open areas and off-street parking are common features.
  - Important areas of employment and retail.
- Civic/ University Core:
  - Range of building styles and ages.
  - Building heights typically between 3 and 5 storeys.
  - Strong sense of place with several distinctive buildings.
  - Large open areas to the west.
  - Good public transport links.
- Harbours:

- Portsmouth Harbour- a busy commercial and naval port, with a predominantly developed coastline that provides essential links to Europe, the Isle of Wight and Gosport, and marinas and sailing schools along the shoreline.
- Langstone Harbour- a quiet harbour used predominantly for leisure activities, with a marina located at Eastney lake, moorings throughout and a small commercial ferry to Hayling Island to the North.
- H.M. Naval Base:
  - Operational Naval Base- contains listed buildings dated pre-1870, an active naval base with associated uses and restricted public access, with short facilities including ship building and fleet support.
  - Portsmouth Historic Dockyard- contains listed buildings dated pre-1870, with strong maritime character and a major tourist attraction (with sights including the Mary Rose, H. M. S. Victory and various museums).

### Future baseline

New infrastructure, including transport, could negatively impact the natural and built environment of the plan area, through small, incremental changes to the landscape and townscape character of Portsmouth. Improved transport links providing greater accessibility for visitors and locals could harm the tranquil town and marine landscape in certain shielded areas, such as Langstone Harbour.

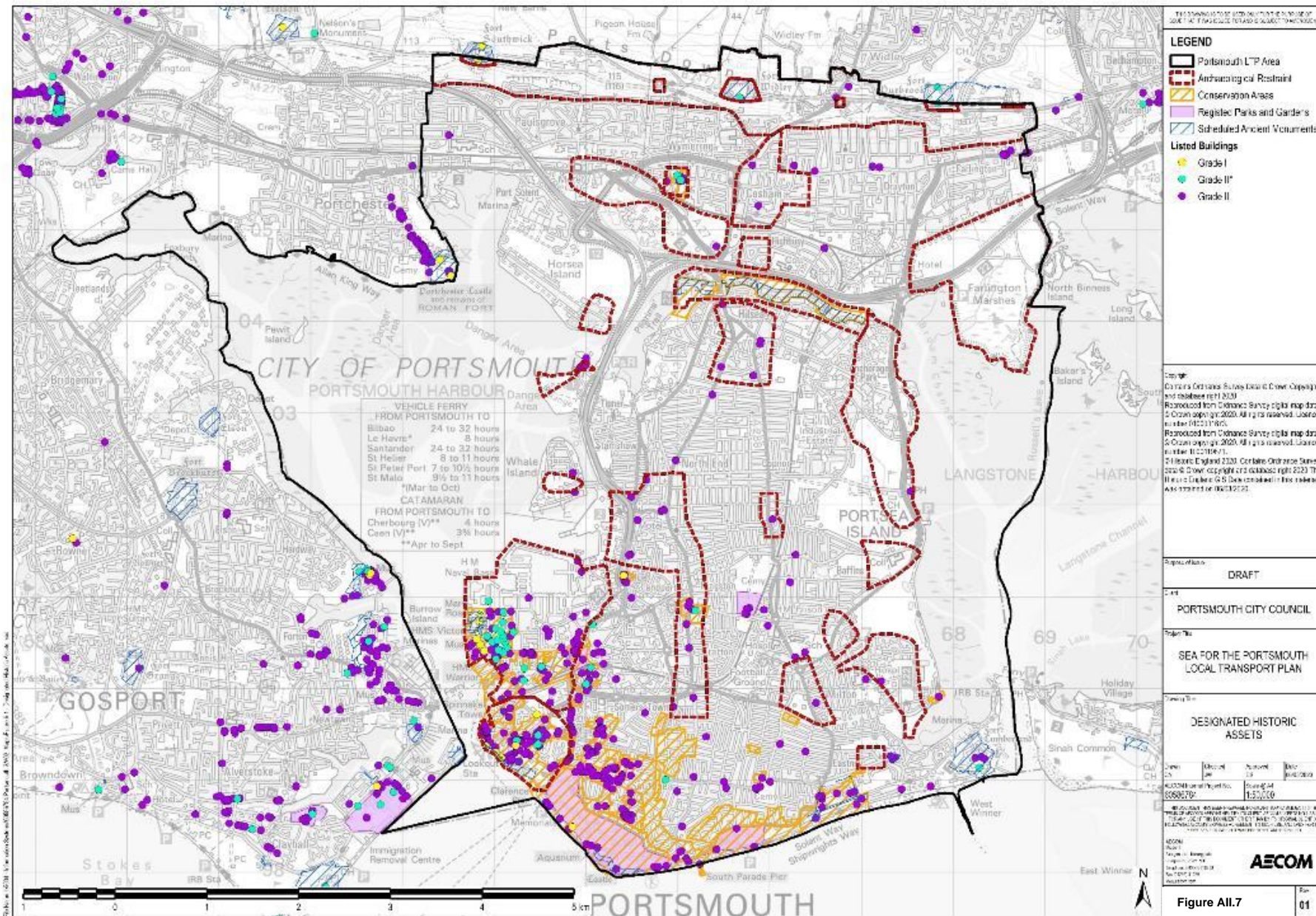
### Key sustainability issues

Considering the baseline and context review, the following key issues have been identified:

- Coastal areas may be affected by transport infrastructure development which encroaches upon key spaces, including open spaces and scenic views.
- Enhanced active travel connections can provide opportunities for people to better experience key vistas and views.
- Development will need to consider both short-term and temporary impacts (during construction) as well as longer term potential impacts including visual impacts and any increase of hard surfacing.

### Historic environment

**Figure AII.7** presents the historic environment designations within the LTP area which are further discussed below.



The Historic Environment Records (HERs), provide information services relating to local archaeological finds, historic buildings and landscapes.

There are over 450 listed buildings in the plan area. These include: 13 Grade I listed buildings, 33 Grade II\* listed buildings and 408 Grade II listed buildings. 10 of these buildings have been identified as being 'at risk' by Heritage England within the Heritage at Risk Register<sup>55</sup>, which indicates a greater risk of loss through neglect, decay or inappropriate development. These are:

- Church of St Mary (Grade II\*);
- Church of St Luke (Grade II);
- Church of St Cuthbert (Grade II);
- No. 25 Store (Grade II\*);
- Iron and Brass Foundry (Grade II\*);
- 2-8, The Parade (Grade II\*);
- The Beneficial School (Grade II\*);
- Former Royal Naval Academy (Grade II\*);
- Fort Purbrook (Grade II\*); and
- Wymering Manor (Grade II\*).

Scheduled monuments are sites of national importance and protected by the Ancient Monuments and Archaeological Areas Act 1979. According to the Natural Heritage Register for Heritage England, there are 18 scheduled monuments within the plan area, including Portsmouth Garrison Church and Portsmouth Dockyard, the Docks. Of these, 6 are identified as being 'at risk' by Heritage England. These are:

- Fort Cumberland;
- No.5 and No.6 Dock;
- Hilsea Lines – Centre Bastion;
- Horse Sand Fort;
- Fort Southwick; and
- Fort Widley.

Historic parks and gardens are noted as a fragile and finite resource by Historic England<sup>56</sup>, as they can easily be damaged beyond repair or lost. There are 3 registered parks and gardens within the plan area, all listed as Grade II. These are:

- Victoria Park;
- Southsea Common; and
- Kingston Cemetery.

Conservation areas are designated because of their special architectural and historic interest.<sup>57</sup> Conservation area appraisals are a tool to demonstrate the area's special interest, explaining the reasons for designation and providing a greater understanding and articulation of its character. There are 30 designated conservation areas in Portsmouth.<sup>58</sup>

There are 1698 monument records on the HER for the area within the Portsmouth City Council boundary. These include findspots, archaeological sites/features, monuments, historic buildings etc. They range in date from the Palaeolithic to the 20th century, with each period represented i.e.

<sup>56</sup> Historic England (2018): 'Registered Parks and Gardens' [online] available to download from:

<<https://www.historicengland.org.uk/listing/what-is-designation/registered-parks-and-gardens/>> last accessed [18/02/20].

<sup>57</sup> Historic England (2018): 'Conservation Areas', [online] available to access via: <<https://historicengland.org.uk/listing/what-is-designation/local/conservation-areas/>> last accessed [28/02/20].

<sup>58</sup> Portsmouth City Council (n.d.): 'Conservation areas' [online] available to download from: <https://www.portsmouth.gov.uk/ext/documents-external/dev-all-cons-areas-map.pdf> [accessed 18/02/20].

Palaeolithic, Mesolithic, Neolithic, Bronze Age, Iron Age, Roman, Saxon/Early Medieval, Medieval, Post Medieval and Modern. The largest percentage of records will date to the Post Medieval period.

Portsmouth hosts a rich archaeological history. Portsdown Hill is an area particularly rich in Prehistoric and early-medieval archaeology. Bronze Age cremation and inhumation burials found at Southwick Hill Crossroads and Gob's barrow are some of the earliest sites in the area. Evidence of Iron Age activity includes a small occupation site recorded during excavations near the George Inn, stock enclosures at Hoylake Road and a field system at Gillman Road.

Portsmouth city has an extensive maritime heritage. The area was once heavily fortified with a line of defensive works during its reign as a naval city, including walls, bastions, and moats protecting the town of Portsmouth (now Old Portsmouth), and another line encompassing Portsea and the Dockyard. By 1850 Portsmouth dockyard was considered the largest industrial complex in the world. Part of the dockyard has now become the Historic Dockyard and a major visitor attraction.<sup>59</sup> Subsequently, Portsmouth is one of the world's best-known ports, whereby HMRB Portsmouth is the home of the UK's Naval Base, located on the eastern shore of Portsmouth Harbour.

Despite its long history of human occupation, most buildings in Portsmouth date from the Georgian, Victorian and Edwardian eras. Large scale housing development as the dockyard grew mainly took the form of terraced houses for the workforce. Accompanying this were other buildings to serve the growing population such as churches, public houses, shops, cemeteries, banks and schools. Later other building types such as cinemas were added. Modern post war housing estates are generally found further north.

### Future baseline

Transport infrastructure, particularly roads and associated installations such as guard rails, traffic signs and lights, as well as air and noise pollution can have a negative impact on the historic environment, and the public realm in general. New transport infrastructure provision within Portsmouth has the potential to impact on the fabric and setting of cultural heritage assets; for example, through increasing local and visitor footfall within sensitive historic assets, particularly the historic Dockyard and seascape, which are major visitor attractions in the city, and sensitive to deterioration in the long term.

However, there is some potential for development to provide beneficial enhancement of heritage assets in the plan area, with emphasis on the city's seascape views, harbours and sights from Portsdown Hill.

### Key sustainability issues

Considering the baseline and context review, the following key issues have been identified:

- There is a wealth of designated and non-designated assets within the Plan area. Transport infrastructure development has the potential to impact upon key designated heritage settings, particularly during construction. Development should avoid loss of any open spaces that contribute to the character of historic towns and villages, particularly within designated Conservation Areas and seek to manage the impacts of congestion and parking in these areas.
- Development of transport infrastructure should ensure that any necessary archaeological investigation is undertaken prior to any works.
- Development should maximise upon opportunities for positive effects in relation to the historic environment, potentially through accessibility improvements, including increased active travel opportunities within historic areas, and reducing signage which contributes to a 'cluttered' street scene.

### Land, soils and water resources

The Agricultural Land Classification classifies land into six Grades (plus 'non-agricultural' and 'urban'), where Grades 1 to 3a are recognised as being the 'best and most versatile' land and Grades 3b to 5 are of poorer quality. According to the Agricultural Land Classification map London and the South East (ALC007) (published 2010), most of the plan area is classified as being 'Non-Agricultural Land',

<sup>59</sup> Portsmouth City Council (2017): 'Sustainability Appraisal Scoping Report' [online] available to download from: <<https://www.portsmouth.gov.uk/ext/documents-external/lplan-sustainability-appaisal-scoping-report.pdf>> [accessed 18/10/20].

as 'Land predominantly in urban use', with some areas identified as 'Other land primarily in non-agricultural use'.

The Water Framework Directive (WFD) drives a catchment-based approach to water management with a view to improving the overall water quality of watercourses in any given catchment. Portsmouth is located within the South East River District, specifically, the East Hampshire Management catchment and East Hampshire Rivers operational catchment. The East Hampshire Rivers operational catchment contains 12 water bodies, of which 8 are river, canal and surface water transfers and 1 is identified as a lake. **Table All.4** sets out the ecological and chemical classification for surface waters in the Catchment as measured in 2016. Although none of these run directly through Portsmouth City Centre, there are four watercourses flowing into Portsmouth Harbour and Langstone Harbour that are monitored by the Environment Agency twelve times a year and tested for chemistry, biology and nutrient levels.

Within Portsmouth Harbour are a series of lakes, including Fountain Lake near the harbour, Portchester Lake in the central south, Brick Kiln Lake and Tipner to the east, and Bombketch and Spider Lakes to the west. In the channel further to the northwest, around Portchester, are Wicor, Cams, and Great Cams Lakes, and the large tidal inlet of Langstone Harbour lies to the east of Portsea Island. Protected waterbodies include the Portsmouth Harbour, Langstone Harbour and Spithead and Stokes Bay Shellfish Waters and the Eastney and Southsea East Bathing Waters.

**Table All.4: Ecological and chemical classification for surface waters**

Number of water bodies	Ecological status Bad	Ecological status Poor	Ecological status Moderate	Ecological status Good	Ecological status High	Chemical status Fail	Chemical status Good
12 water bodies	1 water body	1 water body	7 water bodies	3 water bodies	0 water bodies	0 water bodies	12 water bodies

The reasons for those 9 surface bodies who have not achieved a 'Good' status with regards to Ecological status or potential include:

- Agriculture and rural land management;
- Domestic General Public;
- Industry;
- Local and Central Government;
- Urban and transport; and
- Water Industry.

Southern Water collects and treats waste water (including surface water) in Portsmouth. It owns and maintains a range of assets which are essential to effective flood risk management in the city. Havant Borough Council has a partial land boundary with Portsmouth, and the southern part of the boundary (Hayling Island) interacts with Langstone Harbour by means of surface water, treated waste water and, occasionally, in times of extreme weather events. Partially treated dilute wastewater which is discharged via consented storm overflows. Budds Farm Wastewater Treatment Works treats the wastewater from homes across Portsmouth and the wider area.<sup>60</sup> The flows from the city travel from Eastney Pumping Station along a pipeline within a 7.8km tunnel that runs beneath Langstone Harbour to Budds Farm.

Portsmouth has a shoreline with a total length of 43.5 km, 32 km around Portsea Island and 11.5 km on the mainland. It also has 3 km of drainage channels. The Council is directly responsible for 23 km of Portsmouth's coastline with the remaining 21 km in private ownership, predominantly to the Ministry of Defence. The East Solent Coastal Partnership (2013-2030)<sup>61</sup>, builds on policies set by the original coastal plan for Portsmouth Harbour ('The North Solent SMP') to decide how the coastline surrounding Portsea island, Portsmouth and Hampshire will be managed for the current century. The

<sup>60</sup> Southern Water (2011): 'Management of Wastewater in Portsmouth and Havant' [online] available to download from: [https://www.southernwater.co.uk/Media/Default/images/3060\\_PortsmouthHavant\\_WWT\\_v4.pdf](https://www.southernwater.co.uk/Media/Default/images/3060_PortsmouthHavant_WWT_v4.pdf) [accessed 23/02/20].

<sup>61</sup> East Solent Coastal Partnership (2013): 'Portsea Island Coastal Strategy' [online] available to download from: < <https://www.escp.org.uk/portsea-island-coastal-strategy>> [accessed 23/02/20].

strategy, in combination with the Portchester Castle to Emsworth Coastal Flood and Erosion Risk Management Strategy (2013), completes the long-term strategic approach to Portsmouth's entire coastline.

Portsmouth City Council's Interim Nutrient Neutral Mitigation Strategy<sup>62</sup> identifies that high levels of nitrogen draining from the Solent catchment area have caused excessive growth of green algae (a process called eutrophication), which is having a recognised, detrimental impact upon the region's internationally protected habitats. The strategy identifies that *"all new development involving, or generating additional, overnight stays should be 'nutrient neutral', as one means of ensuring that development does not add to the existing nutrient burdens"*. Impacts from additional wastewater on water quality must also be appropriately assessed *"in order for the Appropriate Assessments [as required by the Habitats Regulations<sup>63</sup>] of proposals to conclude that there are no adverse effects on habitat sites."*

Portsea Island is part of a broad low-lying plain of flinty marine and valley gravels, underlain by clays, sands and gravelly deposits of gravel and brickearth. Underlying these are the Chalk and Tertiary folded strata, one of which forms Portsdown Hill where the chalk face has been exposed through natural fault and cutting (for the M27 corridor). In terms of elevation, a large part of the island is vulnerable to flooding, particularly at Hilsea Lines, where the land has been evacuated for defence purposes in order to create moats and embankments.<sup>64</sup>

According to the Hampshire Minerals and Waste Plan, Portsea Island contains two active disposal sites: one Waste Transfer Station (WTS) and one Material Recovery Facility (MRF). The mainland is home to a Household Waste Recycling Centre (HWRC) and Metal recycling site (MRS & ELV).

## Future baseline

Future development of land for infrastructure has the potential to take place on greenfield land.

In terms of water quality, the requirements of the Water Framework Directive should lead to continued improvements to water quality in watercourses, as well as planning policy regarding the introduction of sustainable drainage systems in new development. Water quality is also likely to continue to be affected by pollution incidents in the area, the presence of non-native species and physical modifications to water bodies.

Water availability in the wider area may be affected by increases in population and an increased occurrence of drought, which is estimated to become increasingly prevalent as a result of climate change.

## Key sustainability issues

Considering the baseline and context review, the following key issues have been identified:

- As a predominantly urban area, greenfield land is limited, and its loss should be avoided where possible.
- Due to increasing legislative and regulatory requirements, there are increasing pressures to improve recycling rates and re-use of materials within the County. Subsequently, recycling measures for resources will be important for the council to maintain.
- Portsmouth contains many waterbodies, some of which are in 'bad' or 'poor' ecological condition. Transport infrastructure development will need to manage and mitigate the effects of development on waterbodies, including the effects of surface water run-off, and any increased flood risk, and support the WFD objectives in relation to good water quality
- Portsmouth's extensive shoreline is managed by Portsmouth City Council and Ministry of Defence, whilst the extent of the four main watercourses that flow through the centre into the harbours are monitored twelve times per year by the Environment Agency. Any infrastructure development should seek to support the objectives of the relevant strategies associated with shoreline, coastal area and river body management.

<sup>62</sup> Portsmouth City Council (2019) Interim Nutrient Neutral Mitigation Strategy for New Dwellings for the 2019 – 2023/24 period [online] available at: <https://www.portsmouth.gov.uk/ext/documents-external/pln-interim-nutrient-neutral-strategy-v2.pdf>

<sup>63</sup> Conservation of Habitats and Species Regulations 2017 (as amended).

<sup>64</sup> <sup>64</sup> Natural England (2014): 'National Character Area profile: 126. South Coast Plan'. [online] available to download from: <file:///C:/Users/lauren.egan/Downloads/126%20South%20Coast%20Plain.pdf> [accessed 20/02/20].

## Population and human health

As indicated in **Table All.5**, total population change for Portsmouth between 2001 and 2011 was 9.83%, considerably higher than the average growth for the South East (7.83%) and England as a whole (7.88%).

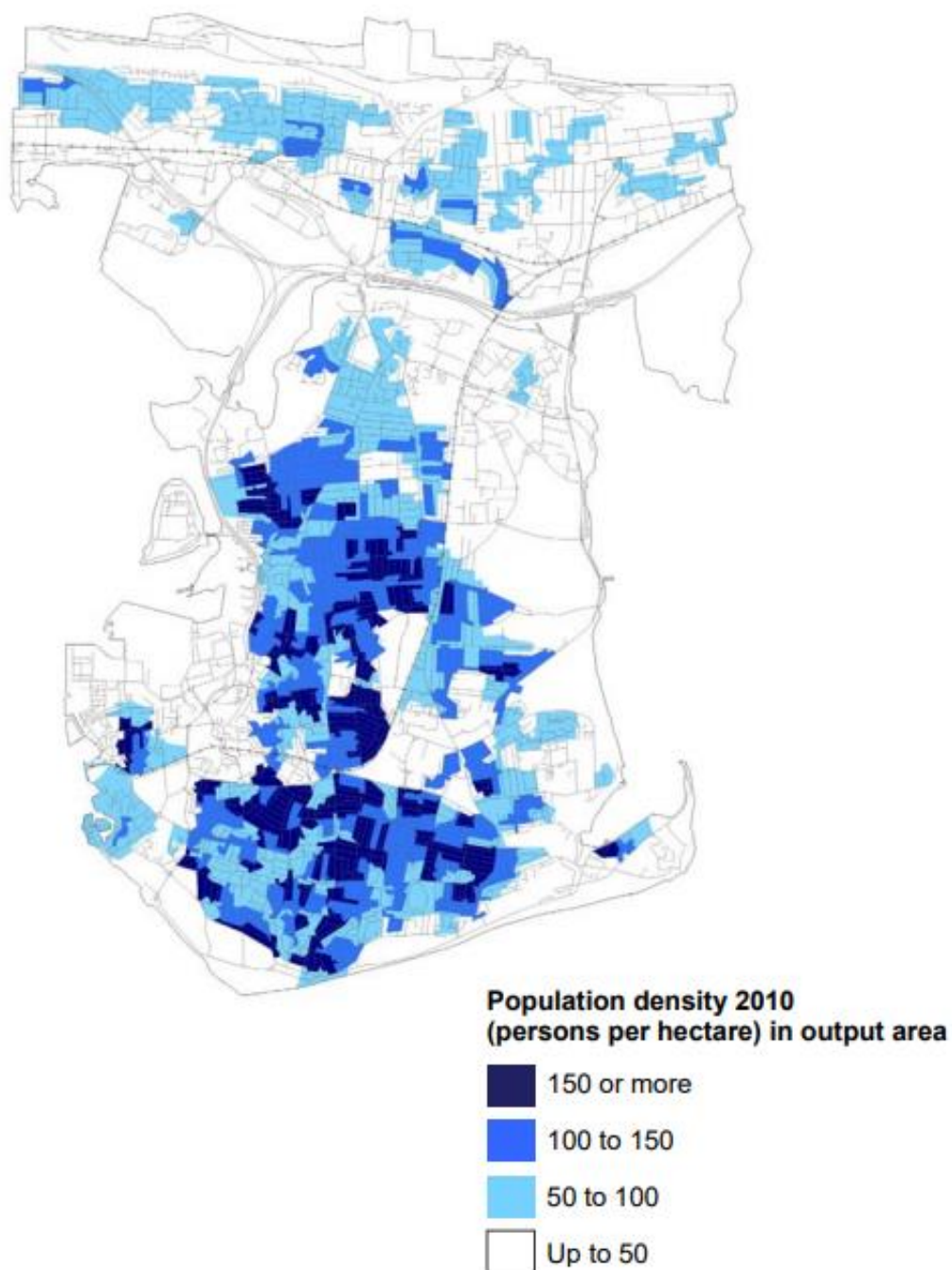
**Table All.5: Population Growth 2001-2011**

Date	Portsmouth	South East	England
2001	186,701	8,000,645	49,138,831
2011	205,056	8,634,750	53,012,456
Population Change	9.83%	7.93%	7.88%

Portsmouth's relatively high levels of urbanisation have led to a high population density, particularly in the urban centre. ONS estimates indicate a density of 5,146 people p sq/ km<sup>65</sup>. **Figure All.8** outlines population density across the plan area.

<sup>65</sup> ONS (2010): 'Population Density 1981-2010' [online] available to download from: <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/datasets/populationdensitytables> [accessed 23/02/20].



**Figure All.8: Population Density (2010)<sup>66</sup>**

<sup>66</sup> Portsmouth City Council (2010): 'Urban Characterisation Study' [online] available from: <https://www.portsmouth.gov.uk/ext/documents-external/pln-local-dev-design-urban-characterisation.pdf> [accessed 23/02/20].

**Table AII.6** identifies that generally, there is a higher proportion of residents aged between 16-44 (46.3%) in the plan area in comparison to figures for the South East (37.7%) and England (39.4%) as a whole. Similarly, the proportion of residents within the working age category (25-44) is higher in Portsmouth than for the region and nation. Conversely, the proportion of residents over the age of 60 (18.2%) is lower for Portsmouth than for the South East (23.4%) and England as a whole (22.3%).

**Table AII.6: Age Structure**

Age	Portsmouth	South East	England
0-15	18.4%	19.0%	18.9%
16-24	17.8%	11.2%	11.9%
25-44	28.5%	26.5%	27.5%
35-59	17.1%	19.9%	19.4%
60+	18.2%	23.4%	22.3%
Total Population	205,056	8,634,750	53,012,456

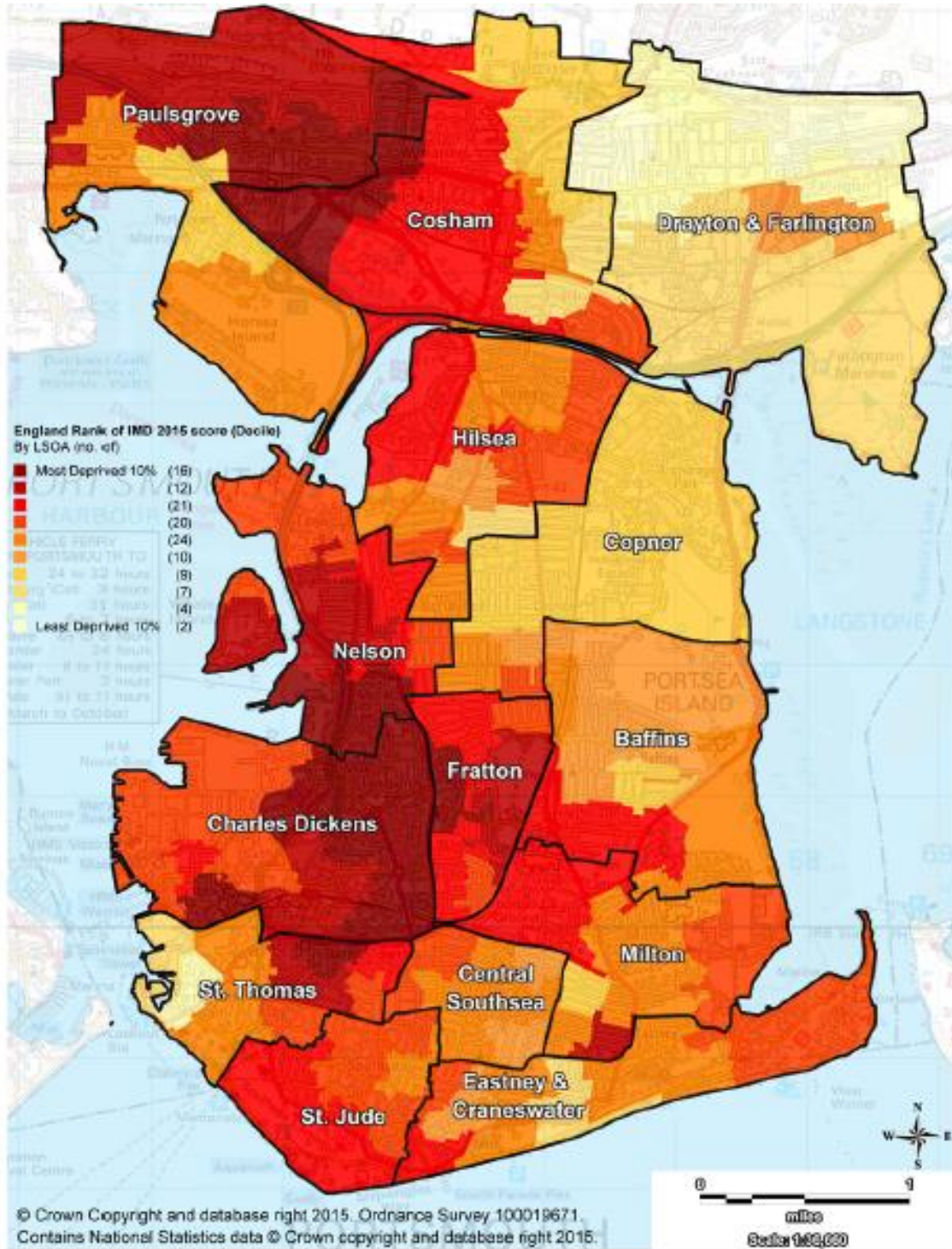
The Index of Multiple Deprivation 2015 (IMD) is an overall relative measure of deprivation constructed by combining seven domains of deprivation according to their respective weights, as described below. The seven deprivation domains are as follows:

- **Income:** The proportion of the population experiencing deprivation relating to low income, including those individuals that are out-of-work and those that are in work but who have low earnings (satisfying the respective means tests).
- **Employment:** The proportion of the working-age population in an area involuntarily excluded from the labour market, including those individuals who would like to work but are unable to do so due to unemployment, sickness or disability, or caring responsibilities.
- **Education, Skills and Training:** The lack of attainment and skills in the local population.
- **Health Deprivation and Disability:** The risk of premature death and the impairment of quality of life through poor physical or mental health. Morbidity, disability and premature mortality are also considered, excluding the aspects of behaviour or environment that may be predictive of future health deprivation.
- **Crime:** The risk of personal and material victimisation at local level.
- **Barriers to Housing and Services:** The physical and financial accessibility of housing and local services, with indicators categorised in two sub-domains.
  1. 'Geographical Barriers': relating to the physical proximity of local services
  2. 'Wider Barriers': relating to access to housing, such as affordability.
- **Living Environment:** The quality of the local environment, with indicators falling categorised in two sub-domains.
  1. 'Indoors Living Environment' measures the quality of housing.
  2. 'Outdoors Living Environment' measures air quality and road traffic accidents.

Two supplementary indices (subsets of the Income deprivation domains), are also included:

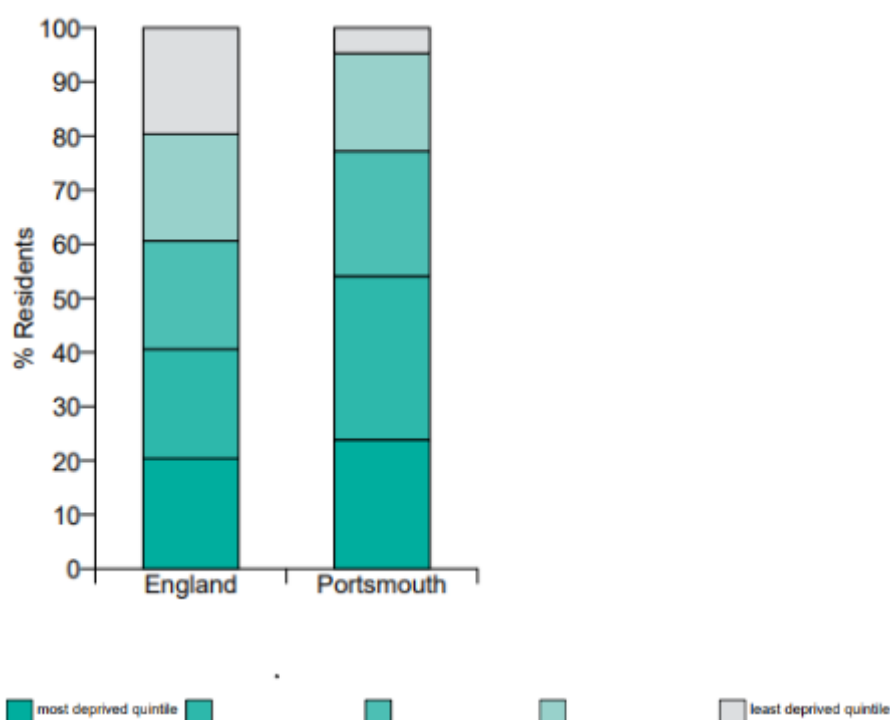
- **Income Deprivation Affecting Children Index:** The proportion of all children aged 0 to 15 living in income deprived families.
- **Income Deprivation Affecting Older People Index:** The proportion of all those aged 60 or over who experience income deprivation.

The spatial distribution of deprivation (English indices of deprivation (2015)) within the plan area are shown in **Figure AII.9** below.

Figure All.9: Indices of Deprivation for Portsmouth (2015)<sup>67</sup>

As shown in **Figure All.10** a higher percentage of residents in Portsmouth live in deprived quintiles in comparison to national figures. The reverse trend can be seen for the least deprived quartiles.

<sup>67</sup> Department for Communities and Local Government (2015): 'Indices of Deprivation' in: Joint Strategic Needs Assessment (2016) available to download from: <<https://www.portsmouth.gov.uk/ext/documents-external/hlth-jsna-annualsummary-2016.pdf>> [accessed 21/02/20].

**Figure All.10: Percentage of population living in each quintile of deprivation**

According to Portsmouth's most recent Joint Strategic Needs assessment (JSNA), Portsmouth is ranked 63<sup>rd</sup> out of 326 local authorities nationally.<sup>68</sup> As shown in **Figure All.9** (above), the electoral wards with the highest levels of deprivation are mostly condensed to the central west and north west regions, with the eastern areas demonstrating lower areas of deprivation. The ward demonstrating the most significant levels of deprivation (10% most deprived nationally) is Charles Dickens, with a high unemployment rate (9%).

Portsmouth is a key employer in the sub-region, and employs over 100,000 residents, with the strongest sectors being public administration, defence, education and health. However, it has been noted that opportunities within the centre aren't diverse enough to attract high profile employers, leading residents to commute to areas surrounding Portsmouth with greater opportunities in professional services, finance, infrastructure, retails and construction sectors. The retail area in the City Centre (Gunwharf Quays) supports the needs of residents; however, the cities' leisure and entertainment offer are somewhat limited, with relatively few restaurants suitable for dining.<sup>69</sup> In comparison, Southsea town centre, positioned close to the seafront, benefits from a stronger restaurant offer for residents, alongside independent shops, national high street chains, supermarkets and bars for local entertainment. There are 10 secondary schools and 50 primary schools in Portsmouth, alongside the University of Portsmouth, which has over 23,000 students. In addition, there are 18 community centres within Portsmouth.

Green spaces play an important role in improving both physical and mental wellbeing. The plan area has over 65 parks, gardens and open spaces. The largest area of open space is Portsdown Hill, in the north, which rises to 125 meters and affords spectacular views across the Solent to the Isle of Wight and northwards over Hampshire's rolling countryside, in addition to a variety of wildlife and historic assets for residents to enjoy.<sup>70</sup> Other open community areas include:

- Watersedge Park;

<sup>68</sup> Portsmouth City Council (2016): 'Joint Strategic Needs Assessment' [online] available to download from: <<https://www.portsmouth.gov.uk/ext/documents-external/hlth-jsna-annualsummary-2016.pdf>> [accessed 21/02/20].

<sup>69</sup> DDPS Consulting (2015): 'Portsmouth Retail Study 2015 Vol. 1' [online] available to download from: <<https://www.portsmouth.gov.uk/ext/documents-external/lplan-portsmouth-retail-study-2015-volume-1-05-05-15.pdf>> [accessed 21/02/20].

<sup>70</sup> Portsmouth City Council (no date): 'City of Portsmouth Parks, Gardens and Open Spaces' [online] available to download from: <<https://www.portsmouth.gov.uk/ext/documents-external/cul-parks-openspaces.pdf>> [accessed 21/02/20].

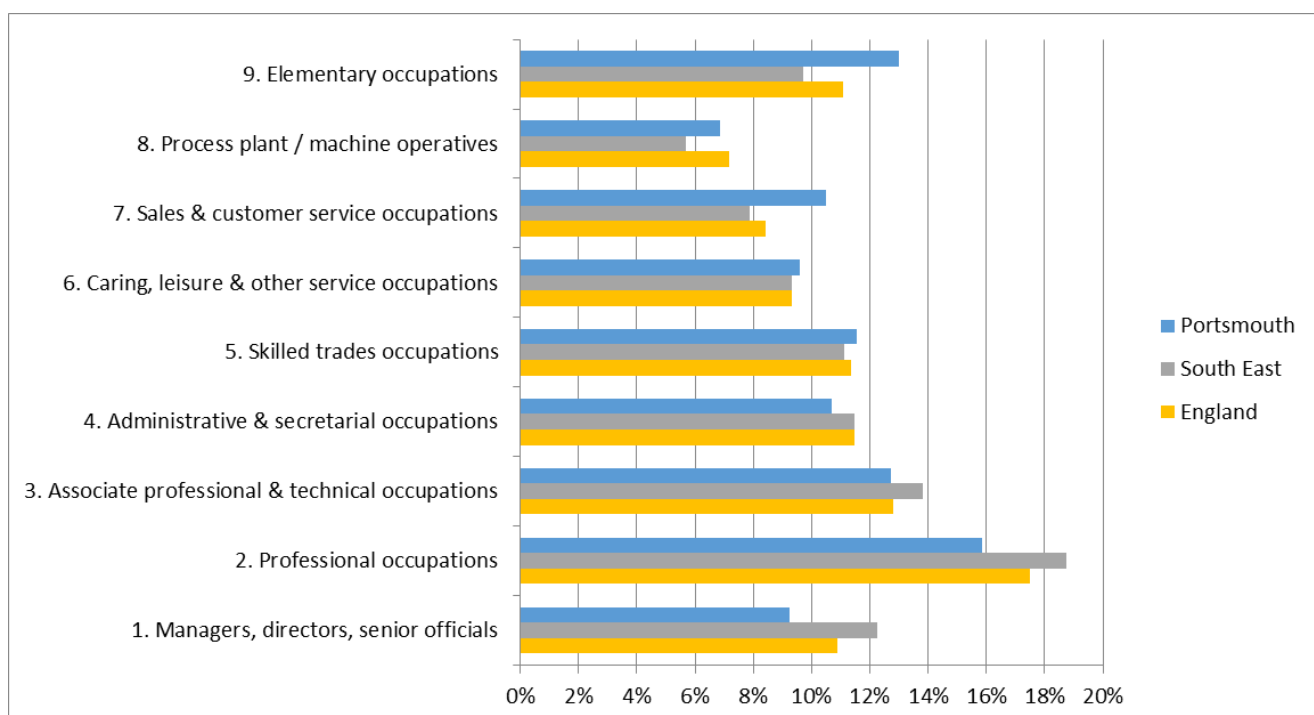
- Waterworks Field Play area;
- Coastal Path;
- King George V Playing Fields;
- Anchorage Park;
- Stamshaw Park;
- Gatcombe Gardens; and
- Alexandra Park and Mountbatten Centre.

As shown in **Figure All.11**, census data suggests that the following categories describe most residents' occupational statuses:

- Professional occupations (15.9%)
- Elementary occupations (12.9)
- Associate professional & technical occupations (12.74%)
- Skilled trades occupations (11.6%)

Notably, the proportion of residents in elementary and sales & customer service occupations is greater in Portsmouth (23.5%) than for the South East (17.6%) and England as a whole (19.5%). Further, the proportion of residents in managerial, director or senior roles (9.2%) is also lower than figures for the South East (12.3%) and England as a whole (10.9%).

**Figure All.11: Resident Occupations**



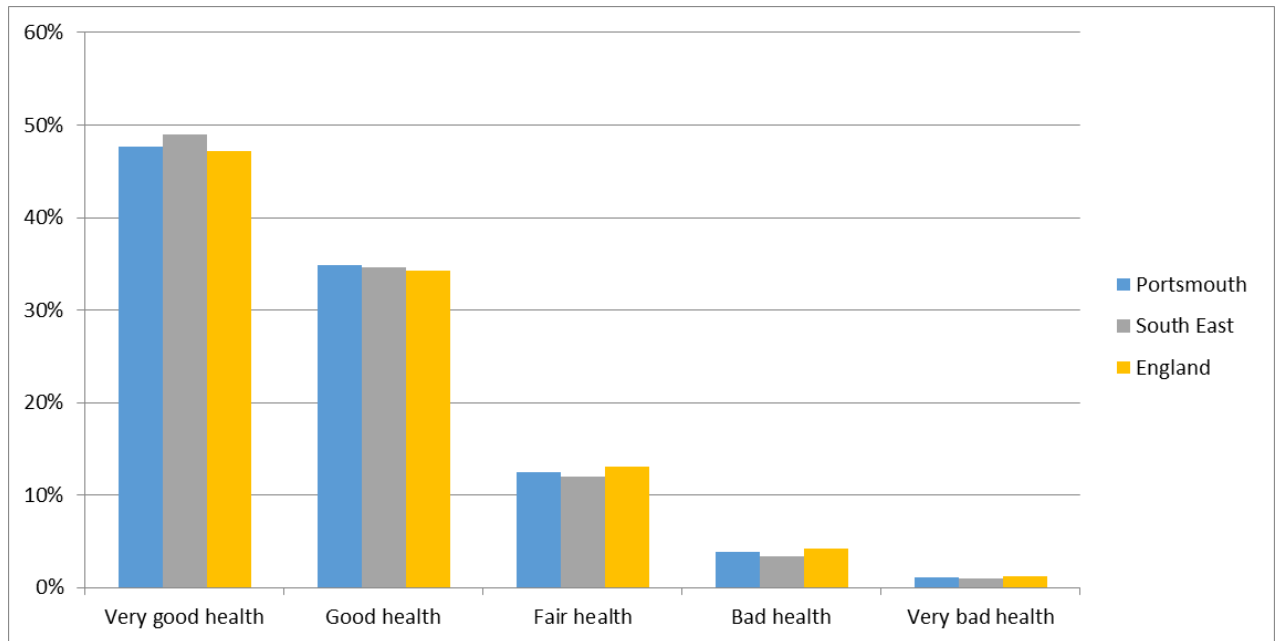
The census concept of economic activity is compatible with the standard for economic status defined by the International Labour Organisation (ILO). It is one of several definitions used internationally to produce accurate and comparable statistics on employment, unemployment and economic status.<sup>71</sup> In addition, Census data indicates that 68.9% of residents are 'economically active', which is lower than figures for the South East (72.06%), but in line with figures for England as a whole (69.9%).

As highlighted in **Figure All.12**, a total of 82.5% of residents in the plan area deem themselves to be of at least 'Good' health. This figure is in line with statistics for the South East (83.5%) and Nation as

<sup>71</sup> Office for National Statistics (2011): 'Economic Activity' [online] available from: <<https://www.nomisweb.co.uk/census/2011/qs601ew>> [accessed 23/02/20].

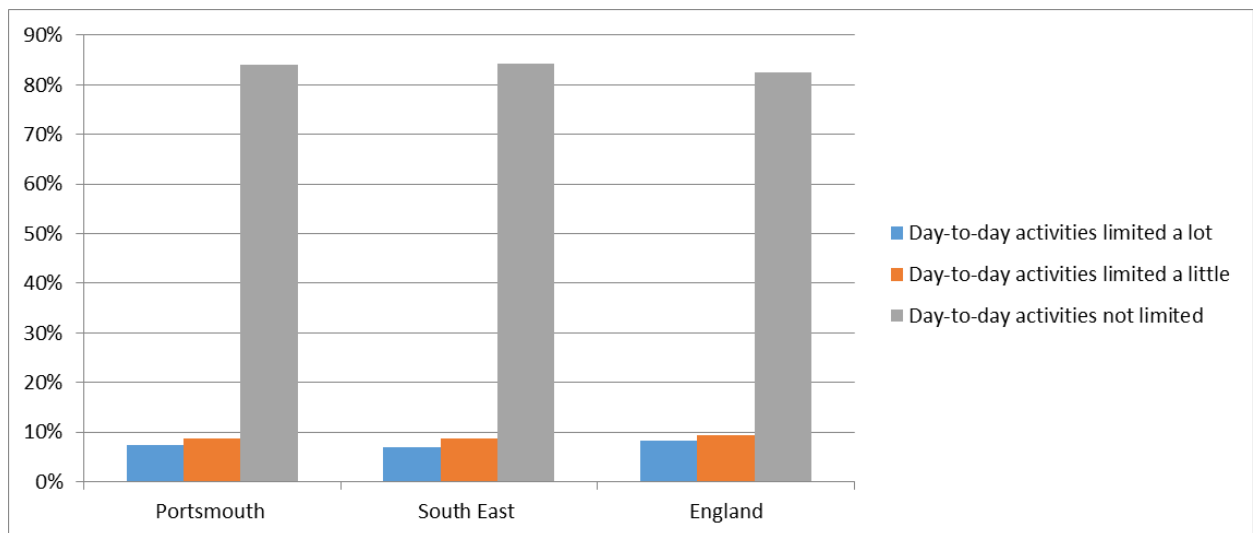
a whole (81.4%). The similar trend is seen for those who identify as having at least 'Bad' health (5.05%).

**Figure All.12: Health indicators and deprivation**



**Figure All.13** demonstrates that a lower proportion of disabled residents state that their day-to-day activities are limited 'a lot' (7.4%) in comparison to figures for England as a whole (8.3%), however, this is not the case for figures for the region (6.9%). Further, 83.9% of residents' activities aren't limited at all, which is higher than both regional (84.3%) and national (82.4%) figures.

**Figure All.13: Disability restrictions**



The most recent Joint Strategic Needs Assessment (JSNA) for Portsmouth describes the current and future wellbeing, health and care needs of residents in the plan area. Key findings from this publication are provided below:

- 63% of adults in Portsmouth are overweight or obese.
- Levels of physical activity in the city decline with age. The largest increases in inactivity take place from 55 years of age.
- Portsmouth has significantly higher rates of factors which are risks for mental ill health (e.g. relative deprivation, alcohol misuse and violent crime) but lower recorded rates than the national average of, for example, depression.

- Twenty-two per cent of all dependent children under the age of 20 years are living in poverty, which is above the England average with levels at twice the national average in some areas of the city (Charles Dickens ward).
- Life expectancy for both Portsmouth males and females is now significantly shorter than the England average.
- Compared to England, Portsmouth has a significantly higher rate of children in need: 175 children had a recorded disability.
- The local Health and Lifestyle Survey found that 33% of adults in Portsmouth are drinking alcohol at levels that put them at 'increasing risk' of developing an alcohol use disorder, with a further 12% drinking at 'high risk' levels.
- The local rate of alcohol-related hospital admission episodes has continued to decline and is now (2014/ 15) significantly lower than the national rate (2021 episodes per 100,000 persons of all ages compared to 2139 episodes per 100,000 persons of all ages)
- Some specific populations in Portsmouth are at risk of ill-health due to lifestyle choices.

### Future baseline

The ageing population of Portsmouth has the potential to increase issues relating to accessibility to services, facilities and amenities.

Obesity is seen as an increasing issue by health professionals, and one that will contribute to significant health impacts on individuals, including increasing the risk of a range of diseases, including heart disease, diabetes and some forms of cancer. Transport planning will play a key role in encouraging active transport choices (e.g. walking and cycling) as well as accessibility to sports and recreation facilities.

High levels of deprivation in certain areas of Portsmouth (such as Charles Dickens wards) provides an opportunity for improved transport links to enhance and improve the access of disadvantaged groups to local health and community services.

Although health and wellbeing services in Portsmouth are, overall, in line with regional and national averages, certain disadvantaged groups will require additional support. This should be acknowledged during transportation planning.

### Key sustainability issues

Considering the baseline and context review, the following key issues have been identified:

- In terms of deprivation, Portsmouth is ranked 63<sup>rd</sup> out of 326 local authorities nationally<sup>72</sup>, and exceeds the national average. As such, infrastructure development has the potential to benefit the needs of more deprived wards within Portsmouth by improving accessibility.
- Census data indicates that 68.9% of residents are 'economically active', which is lower than figures for the South East (72.06%). Suitable transport development could benefit the economic vitality of the region by maximising links to employment centres both within and outside the vicinity of the plan area and seeking infrastructure development that maximises inward investment opportunities.
- Lifestyle choices are a significant risk factor for residents' ill health. Transport infrastructure, particularly development of active travel networks, can improve access to facilities such as open spaces, areas of leisure and attraction in order to benefit the overall wellbeing of the population and encourage healthier lifestyle choices and sustainable modes of travel.
- Portsmouth has an ageing population, which has the potential to require specialist services, such as healthcare, supported by good public transport links. Hence, improvement transport links could enhance the accessibility for vulnerable residents to services.

<sup>72</sup> Portsmouth City Council (2016): 'Joint Strategic Needs Assessment' [online] available to download from: <<https://www.portsmouth.gov.uk/ext/documents-external/hlth-jsna-annualsummary-2016.pdf>> [accessed 21/02/20].

# Appendix III: Alternatives assessment

This appendix presents the detailed assessment of alternatives, as established in Section 5 of the main report. Summary findings for the below assessments are also provided in Section 6 of the main report. Alternatives are established in light of LTP4 objectives and assessed against the SEA framework of objectives (see **Table 3.1** in the main report).

## Methodology

For each of the options, the assessment examines likely significant effects on the baseline, drawing on the sustainability objectives identified through scoping (see Table 3.2) as a methodological framework. **Green** is used to indicate significant positive effects, whilst **red** is used to indicate significant negative effects.

Every effort is made to predict effects accurately; however, this is inherently challenging given the high-level nature of the interventions under consideration. The ability to predict effects accurately is also limited by understanding of the baseline (now and in the future under a 'no plan' scenario). In light of this, there is a need to make considerable assumptions regarding how interventions will be implemented 'on the ground' and what the effect on particular receptors would be. Where there is a need to rely on assumptions in order to reach a conclusion on a 'significant effect' this is made explicit in the appraisal text.

Finally, it is important to note that effects are predicted taking into account the criteria presented within Regulations.<sup>73</sup> So, for example, account is taken of the duration, frequency and reversibility of effects.

## Objective 1: Deliver cleaner air

As established in Section 5 of the main report, the focus for assessment under this objective is the Vehicle Classes to be captured in the city centre Clean Air Zone (CAZ). Three options for the CAZ are established as follows:

- **Objective 1 - Option A:** Charging CAZ for Class B
- **Objective 1 - Option B:** Charging CAZ for Class C
- **Objective 1 - Option C:** Non charging CAZ

The three options are assessed against the SEA framework and the detailed findings for this assessment are presented below.

SEA theme	Option A	Option B	Option C
Environmental quality	Yes a likely significant positive effect	Yes a likely significant positive effect	Yes a likely significant positive effect

### Environmental quality commentary:

Across all options significant positive effects are considered likely in relation to air quality, as all options will deliver a CAZ; a targeted intervention to improve air quality. Options A and B are considered for potential positive effects of greater significance by not only incentivising alternative and lower emissions vehicles, but also gaining new revenues from the most polluting vehicles to fund further mitigation and future investments. The CAZ covers the majority of four or the five designated AQMAs in the city, targeting those areas of highest emissions. The move to ultra-low emission vehicles is also likely to assist in reducing road related noise pollution.

Option B (Class C) is considered for slightly enhanced positive effects in relation to environmental quality, by its increased coverage/ capture of more vehicle types.

<sup>73</sup> Schedule 1 of the Environmental Assessment of Plans and Programmes Regulations 2004.



SEA theme	Option A	Option B	Option C
Biodiversity	No likely significant effect	No likely significant effect	No likely significant effect

#### Biodiversity commentary:

All options are considered likely to lead to minor indirect positive effects for biodiversity, predominantly as a result of improved air quality supporting habitats, species and healthy functioning ecosystems. Again, it is likely that these effects will be slightly enhanced (although they are still considered to remain minor and indirect) under Option B, by means of its charging incentives, and increased coverage/ capture of more vehicle types.

SEA theme	Option A	Option B	Option C
Climatic Factors	Yes a likely significant positive effect	Yes a likely significant positive effect	Yes a likely significant positive effect

#### Climatic factors commentary:

Across all options significant positive effects are considered likely in relation to air quality and climate change mitigation, as all options will deliver a CAZ; a targeted intervention to improve air quality and incentivise a switch to alternative and lower emissions vehicles. Given the charging schemes under Options A and B, it is considered that vehicle fleets which operate daily within the zone are more likely to be upgraded to meet lower emission standards in light of the financial implications, and where the most polluting vehicles continue to operate new revenues can be gained to fund further mitigation and future investments. Enhanced positive effects are therefore anticipated under Options A and B.

Option B (Class C) is considered for slightly enhanced positive effects in relation to climate change mitigation by its increased coverage/ capture of more vehicle types.

The options differ by the types of vehicle included within the charging framework or non-charging framework, in this respect none of the options are considered likely to affect flood risk.

SEA theme	Option A	Option B	Option C
Landscape	No likely significant effect	No likely significant effect	No likely significant effect

#### Landscape commentary:

No significant effects are anticipated in relation to landscape under any of the options. All options are likely to incentivise use of low-emission vehicles, however; it is recognised this is likely to be to a greater degree under options A and B as more vehicles will seek to avoid a financial incursion when operating within the defined zone. The likely increased use of electric vehicles in the city is considered for positive implications in terms of roadside noise levels, supporting a more harmonious atmosphere in relation to the cityscape to some degree. Minor indirect positive effects are anticipated under all options in this respect.

Again, it is likely that these effects will be slightly enhanced (although they are still considered to remain minor and indirect) under Option B (Class C), by means of its charging schemes and increased coverage/ capture of more vehicle types.

SEA theme	Option A	Option B	Option C
Historic environment	No likely significant effect	No likely significant effect	No likely significant effect

#### Historic environment commentary:

Like the findings for landscape above, no significant effects in relation to the historic environment are anticipated under any of the options. All options are likely to incentivise use of low-emission vehicles, however; it is recognised this is likely to be to a greater degree under options A and B as more vehicles will seek to avoid a financial incursion when operating within the defined zone. The likely increased use of electric vehicles in the city is considered for positive implications in terms of roadside noise levels, supporting a more harmonious atmosphere in relation to the historic environment to some degree. Minor indirect positive effects are anticipated under all options in this respect.

Again, it is likely that these effects will be slightly enhanced (although they are still considered to remain minor and indirect) under Option B (Class C), by means of its charging schemes and increased coverage/ capture of more vehicle types.

SEA theme	Option A	Option B	Option C
Land, soils and water resources	No likely significant effect	No likely significant effect	No likely significant effect

#### Land, soils and water resources commentary:

None of the options relate to any type of construction or new infrastructure that may affect this SEA theme. Neutral effects are therefore anticipated.

SEA theme	Option A	Option B	Option C
Population and human health	Yes a likely significant positive effect	Yes a likely significant positive effect	Yes a likely significant positive effect

#### Population and health commentary:

All options are considered to have the potential for significant positive effects in relation to human health, given the direct intervention to improve air quality within the defined zone, particularly where this currently exceeds the national limits. Options A and B and both considered likely to lead to positive effects of enhanced significance given the charging schemes associated with these options. Option B (Class C) is also considered for slightly enhanced positive effects in relation to health, by its increased coverage/ capture of more vehicle types (incentivising more low emission vehicle types in the zone).

The options differ by the types of vehicles that will be subject to charges when driving within the defined zone and/ or inclusion of a charging scheme. Under both Options A and B buses, coaches, taxis, private hire vehicles and heavy goods vehicles are subject to charges, but Option B (Class C) extends to also include vans and minibuses. This ultimately means that more businesses operating within the zone, particularly self-employed small businesses/ van drivers may be faced within financial implications in continued operation. The inclusion of minibuses may mean that the viability of local transport connections, including school buses, and social and health clubs are more directly affected by the scheme. In this respect, greater partnership working may be required to ensure that these groups are not disproportionately affected and continue to support local communities. This is considered likely to be less of an issue under Option C.

#### Overall Summary:

Under all options the introduction of a CAZ is considered for benefits in relation to environmental quality, biodiversity, climate change, landscape, the historic environment, and population and human health. Significant positive effects are anticipated under the SEA themes of environmental quality, climate change mitigation and human health and these are likely to be enhanced by an incentivised

increased uptake in Options A and B given the charging schemes and financial implications attached to these options.

Option B (Class C) is considered for slightly enhanced positive effects by its increased coverage/capture of more polluting vehicles. However, it is recognised that Option B (Class C) also has increased financial implications for smaller business, the self-employed and social networks in the city.

## Objective 2: Prioritise walking and cycling

Section 5 of the main report identifies cycle routes and walking routes that are the focus for assessment under Objective 2. These routes have been subject to high-level GIS 'RAG' analysis (utilising the Council's data) according to the criteria presented in **Table AIII. 1** below. All GIS data was provided by PCC and uses straight line distance/ overlap measurement.

**Table AIII.1: 'RAG' analysis criteria**

Criteria	'RAG' rules	Assumptions
Fluvial flood risk	Red = > intersects with Flood Risk Zone 2 or 3 Green = Flood Risk Zone 1	While it is important to avoid development in flood zones, there is the potential to address flood risk at the development management stage, when a 'sequential approach' can be taken to ensure that uses are compatible with flood risk. There is also the potential to design-in Sustainable Drainage Systems (SuDS).
Surface water hotspot	Red = > intersects with surface water hotspot Green = does not intersect	Assumptions the same as the cell above for fluvial flood risk.
Conservation Area/ Registered Park or Garden/ Scheduled Monument/ Listed Building/ Locally Listed Building/ Area of Archaeological Restraint	Red = Intersects or is adjacent Amber = <50m Green = >50m	It is appropriate to 'flag' a red where an intervention is within, intersects or is adjacent to a Conservation Area. It is also appropriate to flag interventions that might more widely impact on the setting of a Conservation Area and a 50m threshold has been assumed. It is recognised that distance in itself is not a definitive guide to the likelihood or significance of effects on a heritage asset. It is also recognised that the historic environment encompasses more than just designated heritage assets.
SAC/ SPA/ pSPA/ Ramsar	Red = Intersects or adjacent Amber = <500m Green = >500m	It is recognised that distance in itself is not a definitive guide to the likelihood or significance of effects on a European site or site designated for its biodiversity values. This will be dependent on a variety of information, including the relevance of the intervention (e.g. a review of signal timings is unlikely to affect designated biodiversity), some of which is not available at this stage, such as the precise scale, type, design and layout of development as well as level of mitigation to be provided. It is also important to note that the Strategy will be subject to Habitats Regulations Assessment and this will consider the likelihood of the interventions having a significant effect on European sites.
SW Brent Goose Network	Red = Intersects or adjacent Amber = <500m Green = >500m	Assumptions the same as the cell above for SAC/ SPA/ pSPA/ Ramsar.
SSSI	Red = <200m Amber = <1km Green = >1km	As above, it is recognised that distance in itself is not a definitive guide to the likelihood or significance of effects on a biodiversity site. This criterion will help to highlight the SSSI that lies in closest proximity to the intervention location.

Criteria	'RAG' rules	Assumptions
Local Nature Reserve (LNR)/ Local Wildlife Site/ Priority Habitat	Red = Intersects or is adjacent Amber = <50m Green = >50m	There is an assumption that these are of less significance and therefore less sensitive than internationally and nationally designated biodiversity.
Ecological Network Opportunity Area	Red = >50m Amber = <50m Green = Intersects or is adjacent	This seeks to highlight if an intervention could support ecological connectivity objectives.
Ancient woodland/ Tree Preservation Order (TPO)	Red = Intersects or is adjacent Amber = <50m Green = >50m	This seeks to flag if an intervention could result in the loss of Ancient Woodland or protected trees. It also helps to flag if there is the potential for disturbance to woodland within 50m of the site.

The results of this GIS analysis, alongside with an initial screening of the underlying schemes for each route are presented in **Tables AIII.2 and AIII.3** below.

**Table AIII.2: GIS route analysis under Objective 2**

Route	Fluvial Flood Risk	Surface Water Hotspot	Conservation Area	Registered Park or Garden	Scheduled Monument	Listed Building	Locally Listed Building	Area of Archaeological Constraint	SAC	SPA/ pSPA	Ramsar	SW Brent Goose Network	SSSI	LNR	LWS	Priority Habitat	Ecological Network Opportunity Area	Ancient woodland	TPO
108	Red	Red	Green	Green	Green	Yellow	Red	Red	Red	Yellow	Yellow	Red	Red	Yellow	Yellow	Red	Green	Green	Red
205	Red	Red	Green	Green	Green	Red	Red	Red	Red	Yellow	Yellow	Red	Red	Green	Yellow	Red	Green	Green	Red
301	Red	Red	Green	Green	Green	Green	Red	Red	Red	Yellow	Yellow	Red	Red	Green	Red	Red	Green	Green	Red
307	Red	Red	Red	Red	Yellow	Red	Yellow	Red	Green	Red	Red	Yellow	Red	Green	Yellow	Red	Green	Green	Red
405	Red	Red	Red	Red	Yellow	Red	Red	Red	Green	Red	Red	Yellow	Red	Green	Green	Red	Green	Green	Red
503	Red	Red	Yellow	Green	Yellow	Yellow	Yellow	Red	Green	Red	Yellow	Yellow	Red	Green	Green	Red	Green	Green	Red
601	Red	Green	Red	Yellow	Green	Red	Red	Red	Yellow	Yellow	Yellow	Yellow	Red	Green	Green	Yellow	Green	Green	Red
602a	Red	Green	Green	Yellow	Green	Red	Yellow	Red	Yellow	Green	Yellow	Red	Red	Green	Yellow	Yellow	Green	Green	Yellow
602b	Red	Green	Green	Yellow	Green	Red	Yellow	Red	Yellow	Green	Yellow	Yellow	Red	Green	Red	Yellow	Green	Green	Yellow
801	Green	Green	Yellow	Yellow	Green	Yellow	Red	Red	Green	Yellow	Yellow	Yellow	Green	Green	Green	Yellow	Red	Green	Yellow

The table identifies that most routes are affected by flood risk, and constrained by areas of archaeological restraint, listed and locally listed buildings, and designated habitats. Many of the routes also intersect protected trees. Additionally, three routes directly intersect a Conservation Area, and two routes directly intersect a Registered Park or Garden.

Most routes also intersect Ecological Network Opportunities Areas, where infrastructure proposals can support objectives with targeted biodiversity net gains.

**Table AIII.3: Screening of schemes under Objective 2**

<b>Type of improvement</b>	<b>Mitigation considerations (applicable to all types of improvement)</b>
Raised tables At-grade crossing facilities Parklets Grade-separated crossings Shared-use or segregated cycle paths Bus by-pass/ Floating bus stop Bus-gates Mandatory or advisory cycle lanes Wider pedestrian refuge islands Footway buildouts with pedestrian priority across junctions	<ul style="list-style-type: none"> <li>• Any changes to levels and heights in road infrastructure and any introduction of new hard surfaces, should consider an appropriate long-term drainage strategy to avoid negative effects in relation to surface water flood risk affecting road infrastructure. Permeable surfaces should be used where possible.</li> <li>• Development should consider short-term impacts and long-term effects on the setting of any designated or non-designated heritage assets nearby. This should be reflected through appropriate design considerations.</li> <li>• Development should seek to minimise the loss of or disturbance to habitats, particularly any road side verge habitats that contribute to ecological connectivity.</li> <li>• Development within the vicinity of national or European designated biodiversity sites should consider any potential changes to the natural flow of water (particularly in a flood event) which may affect biodiversity.</li> <li>• Where development provides an opportunity to deliver new habitats or green infrastructure this should be encouraged.</li> <li>• Where appropriate, archaeological investigation should be prioritised prior to development works.</li> </ul>

## Objective 3: Transform public transport

Section 5 details the process of establishing options under this theme, which are closely interlinked with Objective 2 and the potential outcomes of the Transforming Cities Tranche 2 Rebid.

As part of the Transforming Cities Tranche 2 Rebid, additional schemes to those identified through the Draft LCWIP are screened in **Table AIII.4** for any likely significant effects.

**Table AIII.4: Screening of additional schemes under Objective 3**

Scheme reference	Likely significant effect?
PCC-1	The area forms part of a Surface Water Hotspot. The infrastructure proposals which may lead to increased hard surfacing should seek to manage the effects in relation to both flood risk, and polluted surface water run-off affecting water quality.
PCC-4	The area is constrained by flood risk and located within proximity of designated habitats which are sensitive to effects in relation to water quality. The infrastructure proposals which may lead to increased hard surfacing should seek to manage the effects in relation to both flood risk, and polluted surface water run-off affecting water quality. The area also falls within areas of archaeological restraint. Where appropriate, archaeological investigation and mitigation may be required prior to construction.
PCC-10	The area falls within areas of archaeological restraint. Where appropriate, archaeological investigation and mitigation may be required prior to construction.
PCC-11	The area contains numerous Listed Buildings lying adjacent to the Guildhall and Victoria Park Conservation Area and Victoria Park Registered Park and Garden (which contains Priority Habitats). Negative effects in relation to the historic environment are likely to be predominantly short-term during construction phases, and no residual significant effects are considered likely.
PCC-13	The area contains numerous Listed Buildings lying adjacent to the Guildhall and Victoria Park Conservation Area and Victoria Park Registered Park and Garden (which contains Priority Habitats). Negative effects in relation to the historic environment are likely to be predominantly short-term during construction phases, and no residual significant effects are considered likely.
PCC-18	The area is constrained by flood risk and located within proximity of designated habitats which are sensitive to effects in relation to water quality. Any proposals which may lead to increased hard surfacing should seek to manage the effects in relation to both flood risk, and polluted surface water run-off affecting water quality. The area also falls within areas of archaeological restraint. Where appropriate, archaeological investigation and mitigation may be required prior to construction.
PCC-15	The area forms part of a rich heritage setting; surrounded by three Conservation Area and near to Southsea Common Registered Park or Garden. The area also lies close to flood risk areas and is located within proximity of designated habitats which are sensitive to effects in relation to water quality. Negative effects in relation to the historic environment are likely to be predominantly short-term during construction phases, and no residual significant effects are considered likely. Further consultation with Historic England is recommended in progression of this scheme. The infrastructure proposals which may lead to increased hard surfacing should seek to manage the effects in relation to both flood risk, and polluted surface water run-off affecting water quality.



## Objective 4: Support business and protect our assets.

As established in Section 5 of the main report, the focus for assessment under this objective is the assessment of potential micro consolidation centre locations.

Eight potential locations are identified for micro consolidation centres as follows (see **Figure 5.8** in the main report for the location of the identified micro consolidation centres):

- **Objective 4 - Option A:** D-Day Car Park (off-street, Seafront area)
- **Objective 4 - Option B:** Flathouse Road (on-street, city centre area)
- **Objective 4 - Option C:** Museum Road (on-street, city centre area)
- **Objective 4 - Option D:** St Georges Road (on-street, city centre area)
- **Objective 4 - Option E:** Airport Service Road Industrial Estate (on-street, Hilsea area)
- **Objective 4 - Option F:** Park and Ride expansion (off-street, Tipner area – on P&R site)
- **Objective 4 - Option G:** Cosham Interchange (dependent on bus interchange removal)
- **Objective 4 - Option H:** Warren Avenue (LGV only)

These locations are assessed against SEA framework and the detailed findings are presented below.

### Environmental quality assessment:

All options are considered likely to support improved air quality in the long-term as part of a strategic network of consolidation centres which can reduce the number of polluting freight vehicle movements through the city and minor long-term positive effects are anticipated in this respect.

The following options are located within or adjacent to a designated AQMA:

- Option D – lies within an AQMA
- Options B, C and H – lie adjacent to an AQMA

Targeted reductions in vehicle movements in these areas are considered for their potential enhanced positive effects by focusing on areas of poorest air quality. None of the options are likely to have a significant effect on environmental quality.

### Biodiversity assessment:

In relation to biodiversity, all options are considered likely to indirectly support habitats and species, through their direct support for reduced polluting freight movements and improved air quality in the city.

Given the following observations for each of the options, all are notably constrained by the wealth of biodiversity assets within and surrounding the city:

- Option A: Whilst this location does not contain any identified habitats, it lies adjacent to the Solent and Dorset Coast Potential SPA and is surrounded by sites that form part of the SW Brent Goose Network. The car park also lies immediately adjacent to identified Ecological Network Opportunity Areas.
- Option B: There are no immediate land habitats or notable areas within this location, it does however lie close to the Solent and Dorset Coast Potential SPA.
- Option C: Whilst there are no immediate habitats or notable areas within this location, there are areas along Museum Road which have been identified as Ecological Network Opportunity Areas. The location also lies close to the Solent and Dorset Coast Potential SPA.
- Option D: The location lies close to the Solent and Dorset Coast Potential SPA.
- Option E: Whilst this location does not contain any identified habitats, it lies close to the Chichester and Langstone Harbour SPA and Solent Maritime SAC as well as sites that form

part of the SW Brent Goose Network. There are also identified Ecological Network Opportunity Areas on Mitchell Way and Airport Service Road.

- Option F: The Park and Ride site at Tipner lies close to Portsmouth Harbour SPA and the Solent and Dorset Coast Potential SPA. It is also identified as an Ecological Network Opportunity Area with SW Brent Goose Network sites in the south east (just north of Tipner Road and Target Road).
- Option G: Whilst there are no immediate habitats or notable areas within this location, the adjacent green spaces (Cosham Park and King George Playing Field) are identified as Ecological Network Opportunity Areas. The location also lies close to the Portsmouth Harbour SPA.
- Option H: Whilst there are no immediate habitats or notable areas within this location, there are areas off Warren Road which have been identified as Ecological Network Opportunity Areas. The location also lies close to the Chichester and Langstone Harbour SPA and Solent Maritime SAC as well as sites that form part of the SW Brent Goose Network and Milton Common LWS.

Infrastructure proposals under the options are likely to be small-scale, and the accompanying HRA is likely to identify any necessary mitigation required to ensure that development protects the integrity of the European designated sites surrounding the city. To support ecological connectivity all infrastructure proposals should seek to support the biodiversity net gain principle where appropriate. This particularly applies to the Tipner Park and Ride expansion area given it contains habitats identified as part of the SW Brent Goose Network, and its recognition as an Ecological Network Opportunity Area. None of the options are likely to have a significant effect on biodiversity.

#### **Climatic factors assessment:**

All options are considered likely to support climate change mitigation in the long-term as part of a strategic network of consolidation centres which can reduce the number of polluting freight vehicle movements through the city and connect to more sustainable (low emission) onward journeys. Minor long-term positive effects are anticipated in this respect.

Whilst infrastructure proposals under the options are likely to be small-scale, due consideration to flood risk mitigation will be required at Options A (D-Day Car Park), E (Airport Service Road), F (Tipner Park and Ride expansion), and G (Cosham Interchange) given their location within an area of fluvial or tidal flood risk (Flood Risk Zone 2 and/ or 3).

Options E (Airport Service Road) and G (Cosham Interchange) also lie close to a Surface Water Hotspot where consideration will need to be given to managing surface water runoff so as to ensure that flood risk is not increased, as well as recognising where appropriate, where mitigation such as attenuation schemes can support a reduced flood risk.

Overall, no options are likely to have a significant effect on climatic factors.

#### **Landscape assessment:**

All options can be considered for minor indirect positive effects in relation to the cityscape, as part of a network of consolidation centres which can reduce the number of heavy goods vehicles on the roads and contribute to a more pleasant atmosphere in this respect.

Any direct effects in relation to this SEA theme are considered to predominantly relate to the design and layout of any new infrastructure, which will ultimately be shaped by Local Plan policy and the development management process. Any infrastructure proposals under the options are likely to be small-scale, and no significant effects are anticipated in relation to landscape. None of the options are likely to have a significant effect on landscape.

Commentary:

In relation to the historic environment, all options are considered for potential minor indirect positive effects, as a result of a likely reduction in heavy goods vehicles on the roads contributing to a more pleasant atmosphere, particularly within areas of key historic interest, such as the Conservation Areas.

The following observations are made for each of the options:

- Option A: This location lies within the Southsea Common Registered Park and Garden and The Sea Front Conservation Area, immediately adjacent to the Southsea Castle Scheduled Monument.
- Option B: Flathouse Road forms the border of an identified Area of Archaeological Restraint. Whilst Listed Buildings including the Charles Dickens Birthplace Museum lie nearby at Mill Lane/ Victoria Street, the existing development and A3 in between is likely to provide a barrier to any direct views.
- Option C: Museum Road forms part of the Old Portsmouth Conservation Area, with Listed Buildings on the south side of the road and along High Street. It is also an identified Area of Archaeological Restraint.
- Option D: St George's Road lies partially within or directly adjacent to the Old Portsmouth Conservation Area, with Listed Buildings concentrated further east and along High Street. It is also an identified Area of Archaeological Restraint.
- Option E: Airport Service Road lies partially within/ adjacent to an identified Area of Archaeological Restraint.
- Option F: No immediate constraints.
- Option G: Cosham Interchange forms the border of an identified Area of Archaeological Restraint.
- Option H: Warren Avenue, east of Shelford Road forms part of an identified Area of Archaeological Restraint near to St James Hospital Listed Buildings.

Except for Option F, all options are constrained to some degree by designated heritage assets and their settings. This is a particular consideration for Options A, C and D; with Option A immediately in a designated setting, and Options C and D falling within a Conservation Area.

Any infrastructure proposals under the options will need to ensure that design is responsive to local character and does not detract from the significance of these assets or their settings. Any proposals are likely to be small-scale and considered alongside the existing mitigation provided through both NPPF and Local Plan policies, significant effects are not considered likely. None of the options are likely to have a significant effect on the historic environment.

#### **Land, soil and water resources assessment:**

Any infrastructure proposals under the options are likely to be small-scale with minimal land-take. Despite this, all options (except potentially Option F; Tipner Park and Ride expansion site) will utilise brownfield land opportunities and positive effects in relation to efficient land use are anticipated as a result.

As identified under the climatic factors SEA theme, Options E (Airport Service Road) and G (Cosham Interchange) are located close to a Surface Water Hotspot where development will need to consider the effects of surface water run-off on water quality. This is likely to be addressed through the development management process, and no significant effects are anticipated under any option.

#### **Population and human health assessment:**

All options are considered for indirect positive effects in relation to human health in the long-term through their direct support for reduced polluting freight movements and improved air quality in the city. No direct effects are considered likely.

#### **Assessment Summary:**

Delivering micro consolidation centres at any of the options identified is not considered likely to lead to any significant effects in relation to the SEA framework of objectives.

Minor positive effects are considered likely overall for all of the objectives, given the reduced presence of polluting vehicles supporting improved air quality, climate change mitigation objectives, and a more pleasant environment in general in terms of character and quality of place. Any infrastructure proposals under the options are likely to be small-scale and will utilise available brownfield land

opportunities. Despite this it is recognised that any infrastructure proposals will need to consider the following:

- Fluvial/ tidal flood risk constraints at Options A, E, F and G;
- Mitigation to protect water quality and reduce flood risk impacts at Options E and G, which are located close to a Surface Water Hotspot;
- Opportunities to deliver biodiversity net gain (at all options, but particularly Option F);
- Designated heritage assets and their settings, ensuring development is responsive to local character and historic features at all options except Option F.