NE009

South Hampshire Green Infrastructure Implementation Plan

(June 2019)

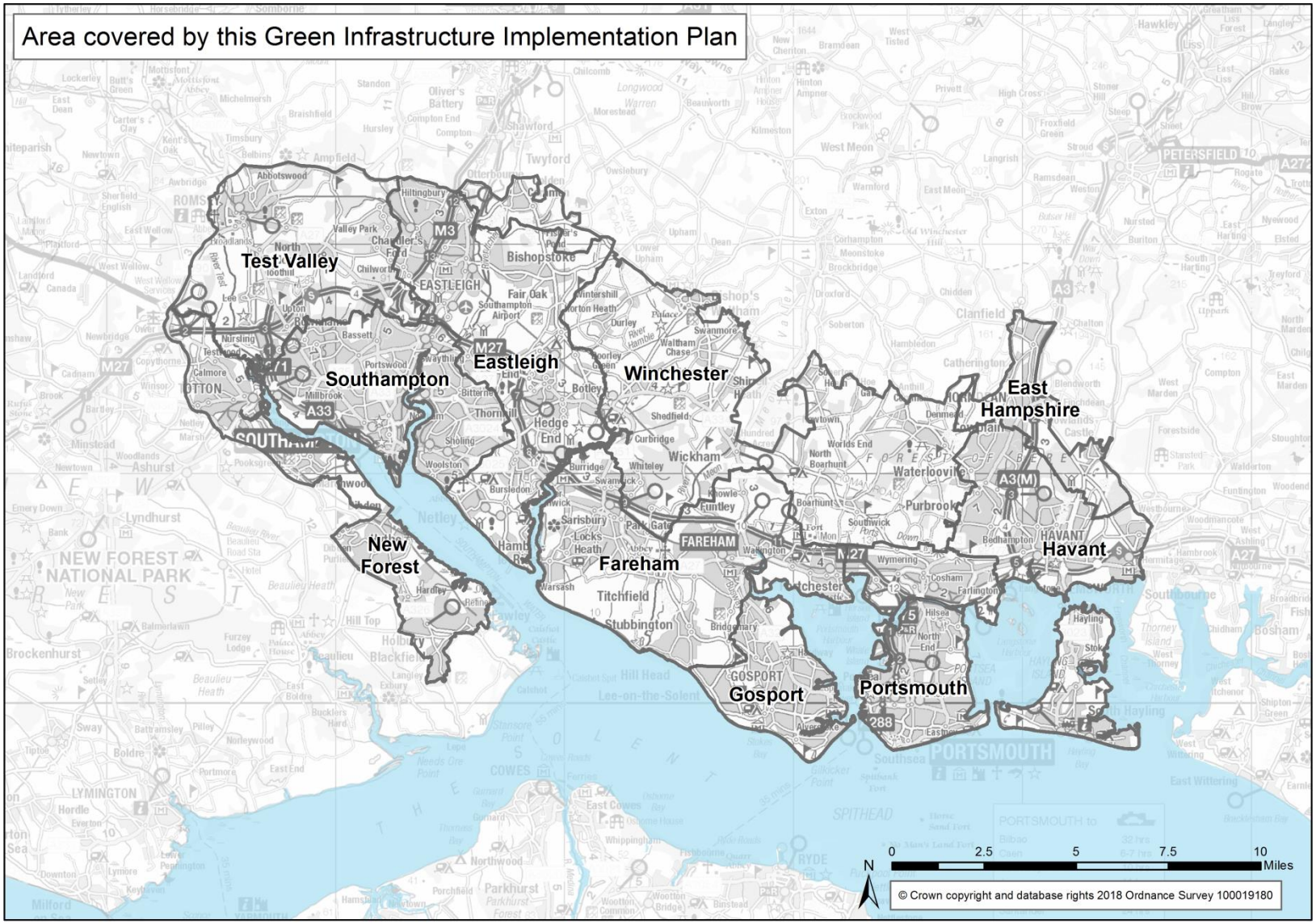
Contents

Figures and Tables

Acronyms/initialisms

ANGst	Accessible Natural Greenspace standards
AONB	Area of Outstanding Natural Beauty
CIL	Community Infrastructure Levy
Defra	Department for the Environment, Food and Rural Affairs
EA	Environment Agency
FCERM GiA	Flood and coastal erosion risk management Grant in Aid
GI	Green infrastructure
HBIC	Hampshire Biodiversity Information Centre
HLF	Heritage Lottery Fund
HRA	Habitats Regulations Assessment
IFCA	Inshore Fisheries and Conservation Authority
LEN	Local Ecological Network
LEP	Local Enterprise Partnership
LLFA	Lead local flood authority
LNP	Local Nature Partnership
LNR	Local Nature Reserve
LPA	Local planning authority
MHCLG	Ministry of Housing, Communities and Local Government
NE	Natural England
NFM	Natural flood management
NNR	National Nature Reserve
NPPF	National Planning Policy Framework
POG	Planning Officers Group
PPG	Planning Practice Guidance
PUSH	Partnership for Urban South Hampshire
RFCC	Regional Flood and Coastal Committee
SAC	Special Area of Conservation
SAM	Scheduled Ancient Monument
SANG	Suitable alternative natural greenspace
SINC	Site of Importance for Nature Conservation
SPA	Special Protection Area
SRMP	Solent Recreation Mitigation Partnership
SRMS	Solent Recreation Mitigation Strategy
SuDS	Sustainable drainage systems
TCPA	Town and Country Panning Association
WEG	Water Environment Grant (EA)
WWNP	Working with natural processes

Figure 1: South Hampshire part of the PUSH sub-region



1. Introduction and Background

1.1 The Partnership for Urban South Hampshire (PUSH) sub-region includes the cities of Portsmouth and Southampton and their hinterlands, together with the Isle of Wight. It includes the larger towns of Eastleigh, Fareham, Gosport, Havant and Waterlooville and a population of well over a million people. This Green Infrastructure (GI) Implementation Plan and its associated GI Strategy cover the South Hampshire part of the PUSH sub-region, the Isle of Wight being subject to separate GI planning processes.

1.2 South Hampshire has a unique geography. The area is bounded on two sides by national parks – by the South Downs National Park to the north and the New Forest National Park to the west and includes part of the Chichester Harbour Area of Outstanding Natural Beauty (AONB) within its eastern boundary. It is a coastal sub-region, with internationally protected environments and important maritime assets and includes a network of rivers and other watercourses, which include the internationally and nationally important rivers - the Itchen, Test, Meon and Hamble.

1.3 South Hampshire also benefits from a wide range of other important habitats including chalk grassland, heathland, wetland and large tracts of woodland. Collectively these habitats support a wide range of important and notable species. Although the area's geography, environmental designations and infrastructure constraints influence its potential to accommodate new development, the value of South Hampshire's natural environment is a key contributor to the quality of life enjoyed by residents and is a major attribute in attracting investment to the sub-region.

1.4 The PUSH Spatial Position Statement 2016, together with the Local Plans of the PUSH constituent planning authorities set out the planned and proposed development that is needed to ensure economic growth and prosperity for an increasing population. The population of South Hampshire creates considerable demand for recreational opportunities, a demand which will increase as the population grows. It is, therefore, vital to conserve and enhance the sub-region's locally distinctive, multifunctional GI; its network of green spaces, habitats, access routes, water and other environmental features in both the urban and rural parts of the area that will help shape the sub-region into the future and conserve and enhance South Hampshire's important natural environment.

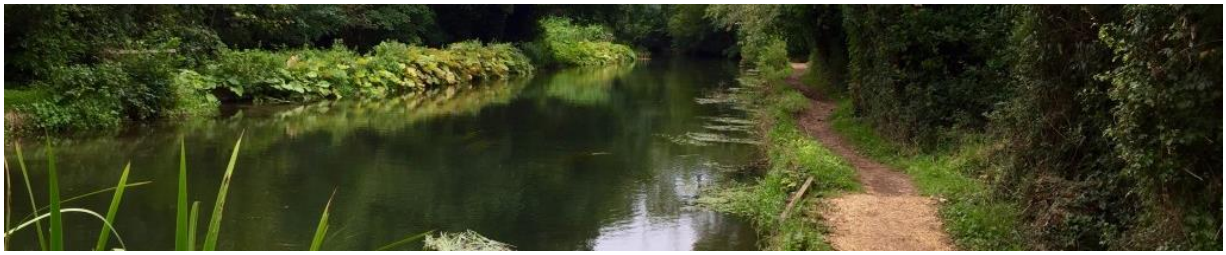
1.5 This Implementation Plan is the delivery plan for South Hampshire Green Infrastructure Strategy 2017-2034 and will support the enhancement of the area's GI network, enabling growth and development across the sub-region and enhancement of the area's natural environment through the delivery of a number of key strategic GI projects/initiatives. The Plan also sets the framework for more locally based GI planned and delivered at the district and community levels.

1.6 The Plan sets out a number of strategic GI projects, together with smaller scale projects which when grouped together are of strategic importance for the sub-region. The Plan details projects that are both ongoing and aspirational and projects that currently have funding and where funding needs to be identified. The intention, therefore, is that the Plan is also used as a bid for resources. Section 5 outlines potential sources of project funding.

1.7 This Plan builds on earlier work undertaken by PUSH. In 2009 PUSH commissioned consultants to translate early baseline work into a GI Strategy in 2010, followed by the preparation of a GI Implementation Framework in 2012. The 2010 GI strategy has been replaced by the South Hampshire Green Infrastructure Strategy 2017-2034[1] and this Implementation Plan replaces the 2012 Implementation Framework. This Plan should be read in conjunction with the published GI Strategy. The vision, aims and objectives of the GI Strategy are presented in Appendix 1.

1.8 This GI Implementation Plan, like the South Hampshire GI Strategy, has been developed by a Steering Group consisting of representatives from all South Hampshire local planning authorities together with Natural England, the Environment Agency, Forestry England, Hampshire and Isle of Wight Wildlife Trust and Bird Aware Solent.

[1] https://www.push.gov.uk/work/planning-and-infrastructure/green-infrastructure-flooding-water-management/



2. The Importance of Green Infrastructure

2.1 The importance of green infrastructure (including blue infrastructure) to people and wildlife is widely recognised, including through the National Planning Policy Framework (NPPF)[2], associated Planning Practice Guidance (PPG)[3] and the government's 25 Year Environment Plan. GI delivery enhances the sub-regions natural capital, and as such increases the benefits (ecosystem services) that this natural capital provides for the area's communities. The 25 Year Environment Plan acknowledges that "*The provision of more and better quality green infrastructure, including urban trees, will make towns and cities attractive places to live and work, and bring about key long-term improvements in people's health. Better green infrastructure will promote local social interaction and help to develop strong community networks through participation and shared achievements*."[4]

2.2 South Hampshire benefits from a strategic GI network that includes rivers, country parks, the coast, large tracts of woodland and an extensive public rights of way network that includes a number of long-distance routes. Local GI includes smaller scale features such as parks, play areas, allotments, street trees and a network of landscape features such as hedgerows. An analysis of GI provision, outlined in Section 3.4 of the GI Strategy, highlights some deficiencies in GI provision across South Hampshire. In delivering GI at both the strategic and local levels, resolving deficiencies and enhancing the network more widely, Natural England and Building with Nature[5] GI standards and guidance, which are referenced in Appendix 2, must be utilised to maximise community and environmental benefits.

2.3 The landscape-scale nature of strategic GI is very much in line with recommendations made in the 'Lawton Report'[6] and subsequent Natural Environment White Paper[7] and relies, for its delivery, on cross-boundary collaborative working. Indeed, Planning Practice Guidance[8] states that "…*authorities need to collaborate with neighbouring authorities and stakeholders such as Local*

[2] Ministry of Housing, Communities and Local Government (2019) National Planning Policy Framework. TSO: London
[3] https://www.gov.uk/government/collections/planning-practice-guidance
[4] HM Government (2018) A Green Future: Our 25 Year Plan to Improve the Environment (p.76). Defra: London
[5] https://www.buildingwithnature.org.uk/
[6] Lawton, J.H. et al (2010) Making Space for Nature: a review of England's wildlife sites and ecological network. Report to Defra.
[7] Defra (2011) The natural choice: securing the value of nature. London: TSO.
[8] Planning Practice Guidance (Paragraph: 007 Reference ID: 8-007-20190721)

Nature Partnerships, Health and Wellbeing Boards and Local Enterprise Partnerships when developing green infrastructure strategies."

2.4 With a focus on strategic level GI, this Plan acknowledges that local authorities will need to plan for GI at a more local level within development plans, district GI strategies and/or local initiatives. Strategic GI features include:

- The strategic Rights of Way network including long distance footpaths and national cycle routes;
- Country Parks;
- Larger-scale suitable alternative natural greenspace (SANG);
- Community Forest;
- River and strategic wildlife corridors / greenways;
- Areas of coastline;
- Internationally and nationally important habitat areas;
- National Nature Reserves (NNR);
- Protected landscapes (National Parks and AONBs);
- Smaller linked GI features that collectively are of strategic importance.

2.5 Multifunctional GI provides a range of benefits to people (ecosystem services) and to wildlife, as set out below. Further detail and evidence related to these benefits is presented in Section 1.2 of the GI Strategy and complemented by the comprehensive GI resource library provided by the Town and Country Planning Association (TCPA)[9].

2.6 Connectivity is a fundamental principle of GI and is highlighted in the NPPF (para 174a and 174b) and the Government sees the planning system as having a role to play in establishing coherent ecological networks (see paragraph 171). The development and enhancement of the sub-region's ecological network is consistent with the purpose of planning which is to help achieve sustainable development and in particular the environmental and social objectives as set out in the NPPF.

Economic Growth and Development

2.7 The delivery of high quality GI is essential to the sustainable economic growth and development of South Hampshire and the wider PUSH sub-region, as well as being an important part of community placemaking. The delivery of strategic and local scale GI will help to enable planned residential and commercial development, supporting an expanding population, providing jobs, improving skills, and improving quality of life. Creating an attractive environment has a positive impact on land and property values, acts as a catalyst for regeneration, attracts inward investment and enhances the sustainable tourism offer.

Flood and Water Management

2.8 The coordinated planning of GI at the strategic and local levels can significantly contribute to reducing flood risk on communities through the development of natural

[9] https://www.tcpa.org.uk/green-infrastructure-research-database

flood management (NFM) measures, including river naturalisation, improvements to flood plain functionality, the multifunctional use of GI assets, improvements in land management and the use of 'naturalised' sustainable drainage systems (SuDS) in urban and peri-urban areas. Collectively these approaches are known as 'working with natural processes' (WWNP) and can replace or complement engineered solutions (grey infrastructure). It is crucial that PUSH, constituent local authorities and other agencies work in an integrated way in delivering GI, including with the relevant Lead Local Flood Authorities (LLFA), Regional Flood and Coastal Committee (RFCC) and Catchment Partnerships. It is also important that GI is planned well beyond administrative boundaries on a catchment basis and employs 'upstream thinking'. Detailed flood and water management issues for South Hampshire are detailed in the PUSH Strategic Flood Risk Assessment (SFRA)[10].

Health and Wellbeing

2.9 Within South Hampshire there is significant health inequality and the provision of GI can help reduce this inequality. High quality, accessible GI provides a range of physical and mental health and wellbeing benefits. Access to high quality green spaces and recreation routes has been proven to have a positive influence on a number of health conditions including obesity, circulatory disease and asthma, largely through increasing physical activity. Furthermore, access to nature and green space has been shown to provide a restorative environment, which can be beneficial in preventing and treating a range of mental health conditions as well as overall mental wellbeing and cognitive function.

Adapting to a Changing Climate and Changes in Weather

2.10 Climate change poses a significant threat to the sub-region. Adapting to climate change and making towns and cities more resilient to extremes of weather is a key aim of the Government. A coordinated approach to GI at the strategic and local levels also has an important part to play in mitigating the impact of extreme weather changes. Well designed flexible GI offers a range of opportunities to store water and manage its flow and modify urban temperatures. Well designed and managed GI can encourage people to travel in a more sustainable way, such as walking and cycling. The use of SuDS to manage surface water run-off not only supports our response to extremes of weather but are also an important part of the wider GI network. GI can also help to mitigate and offset the air quality impacts from development predicted in the recent PUSH Air Quality Impact Assessment[11].

Biodiversity Protection and Enhancement

2.11 GI is important for biodiversity. Natural GI features such as coastal features, woodlands, heathlands, chalk downland, rivers and streams provide important

[10] Atkins (2007) PUSH Strategic Flood Risk Assessment (Partnership for Urban South Hampshire) - as updated by the PUSH Strategic Flood Risk Assessment Update (2016).
[11] Ricardo (2018) PUSH Air Quality Impact Assessment.

habitats for plants and animals, and features such as hedgerows and rivers provide important corridors for wildlife. Public open spaces such as parks and play spaces can also be managed to provide significant benefits for wildlife and act as 'stepping stones'. Connected GI increases opportunities for wildlife to migrate, breed and feed, enabling species populations to be more resilient to environmental change, particularly important for protected species, and mitigate the effects of predicted coastal squeeze. In so doing, well planned GI can also increase the resilience of high value sites, designated for their nature conservation importance across South Hampshire and beyond. PUSH will work closely with the Hampshire and Isle of Wight Local Nature Partnership (LNP)[12] in delivering this Plan.

2.12 The ten 'principles of planning for green infrastructure and biodiversity' developed by the Town and Country Planning Association (TCPA) and the Wildlife Trusts in 2012[13] and the Building with Nature framework of GI standards[14] were fully considered in the preparation of the GI Strategy and this GI Implementation Plan. The implementation of this Plan will ensure that development within the sub-region will deliver 'biodiversity net gain' in line with national planning policy[15].

Delivering Multiple Benefits

2.13 Multifunctionality is one of the two cornerstones of GI, alongside connectivity. New GI features created within the PUSH sub-region should provide the highest level of multifunctionality possible. Consideration should also be given to increasing the multifunctionality of existing GI features, where feasible. In addition to the specific benefits outlined above, the delivery of multifunctional GI can help to minimise the environmental impact of South Hampshire communities on the quality of the sub-region's air, soil and water and on tranquillity (light and noise), and contribute to the provision of clean air, soil and water for the benefit of communities.

2.14 Consideration, however, must be given to the compatibility of different functions. Unfettered recreational access, for instance, will not be compatible with GI that supports ecological sensitivities, where the primary function is nature conservation. Likewise, a children's play area may not be compatible with a flood attenuation function.

[12] https://hantswightlnp.wordpress.com/

[13] Planning for a healthy environment – good practice guidance for green infrastructure and biodiversity. Published by the Town and Country Planning Association and The Wildlife Trusts July 2012.

[14] https://www.buildingwithnature.org.uk/how-it-works

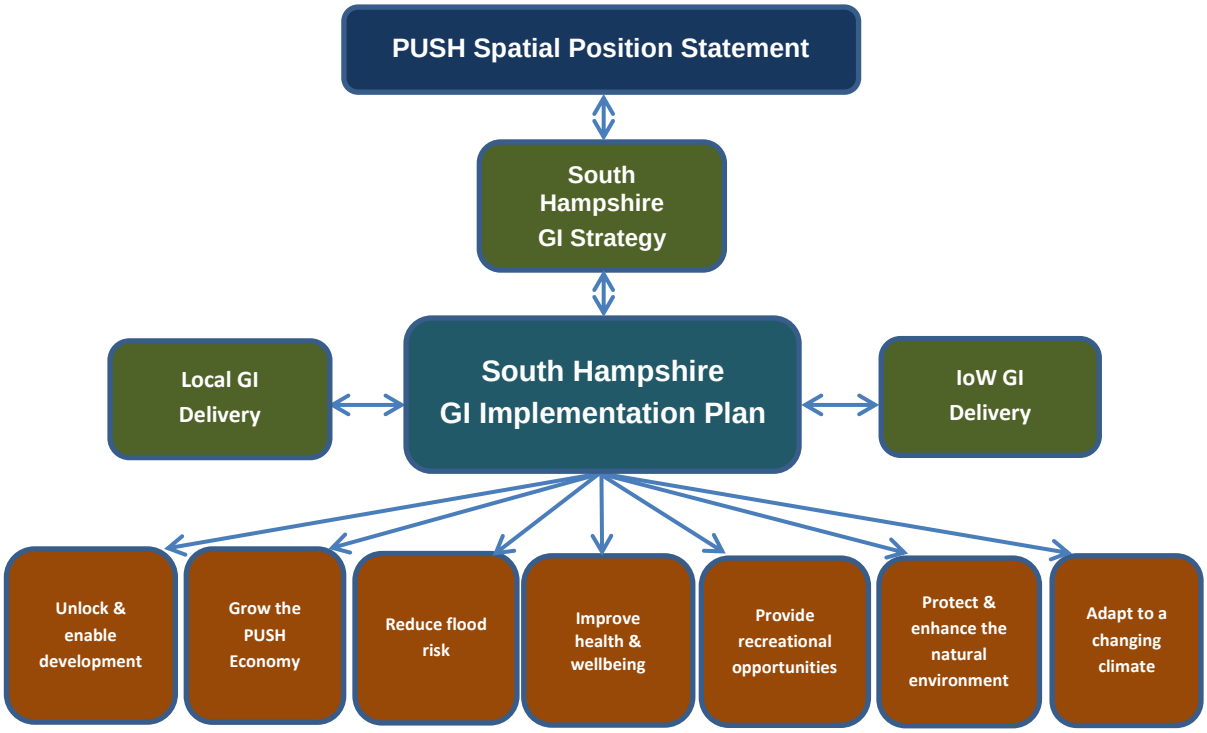
[15] Ministry of Housing, Communities and Local Government (2019) National Planning Policy Framework (para. 170, p49). TSO: London

3. The Implementation Plan

3.1 The purpose of this Implementation Plan is to identify a number of key strategic GI projects and opportunities which PUSH and its partners can focus on, the implementation of which will help deliver the objectives set out in Appendix 1.

3.2 It is acknowledged that the GI projects in this Plan are not the only projects that can help deliver an integrated and multifunctional network of GI across the sub-region and partner authorities will need to assess the need for additional local GI projects to further support the growth and development planned in their Local Plans.

Figure 2: South Hampshire GI delivery context.



3.3 Potential GI projects were evaluated to identify those considered to be of strategic importance against the set of criteria developed in the GI Strategy, as follows (resulting projects are set out in Section 4 of this Plan):

1. Relate to at least one of the strategic GI categories listed in paragraph 2.4 of this Plan;

2. Unlock / enable sustainable growth and development, as set out in the PUSH Spatial Position Statement;
3. Improve the health and well-being of, and recreational opportunities for South Hampshire communities;
4. Mitigate the impact of development on the area's biodiversity and habitats, including the water environment;
5. Provide opportunities to secure biodiversity net gain e.g. in the form of well managed priority habitats forming ecological networks
6. Increase the value of the sub-region's natural capital;
7. Maintain the distinctiveness of the settlement pattern / promote a sense of place and contribute to community cohesion;
8. Enhance the area's resilience to a changing climate;
9. Improve access to, and between, GI features within and beyond the PUSH area;
10. Contribute to the delivery of agreed standards of GI provision;
11. Demonstrate a commitment from the PUSH GI Partnership to deliver;
12. Have a lead partner(s) who will manage delivery.

The Green Grid

3.4 The South Hampshire Green Grid is the strategic network of green infrastructure components essential to the quality of life of South Hampshire's communities and to enable growth and prosperity. The named components of the Green Grid are set out in Appendix 3 and the location and scale of the Green Grid components are shown on one or more of the maps in Appendix 2 of the GI Strategy. Further detail relating to each type of Green Grid component is provided in Appendix 4 of this Plan.

3.5 Connections in the Green Grid are as important as the GI components themselves and are crucial to the delivery of the GI Strategy. These connections can be in the form of habitat and access corridors/links or the degree of proximity that allows features to act as 'stepping stones'.

3.6 This Plan focuses on those elements of GI which are of strategic importance within South Hampshire. The contribution of other elements of GI such as local areas of open space and features such as ponds, hedgerows and small woodlands are important to the areas in which they are located and for the contribution they make to the wider PUSH area. That contribution can be more effectively delivered through the GI strategies and plans produced by partner authorities. A 'live' list of relevant GI strategies, plans and assessments prepared or in preparation by PUSH constituent and adjacent local planning authorities and partnerships, is maintained by PUSH[16].

3.7 Ensuring that strategic GI components integrate with GI at a local level and with GI projects and opportunities in areas adjacent to the PUSH sub-region is also crucial to the delivery of the GI Strategy and to deliver benefits for people and wildlife at the

[16] https://www.push.gov.uk/work/planning-and-infrastructure/green-infrastructure-flooding-water-management/

landscape-scale. It is also important that any conflicts that arise between the need to provide GI to enable growth and development and the need to conserve biodiversity through national and international obligations are very carefully managed.

3.8 It is intended that the delivery of the Green Grid will be achieved through partnership working between the PUSH partners, the relevant agencies, wildlife and heritage organisations, catchment partnerships, private landowners, developers, Town and Parish Councils and community groups. Funding for specific projects will come from a number a sources. Detail of potential funding sources is set out in Section 5.

Opportunities to enhance the Green Grid

3.9 This plan is both realistic and aspirational. It contains a number of defined GI projects that are either on-going and have resources to deliver or are acknowledged as of strategic importance for the sub-region and for which resources will need to be identified. In order to plan for GI and enhancements to the Green Grid into the future it is also important to identify strategic opportunities where future GI projects would help shape the sub-region and make a significant contribution to the quality of life of the sub-region's communities and to its natural environment.

3.10 Opportunities to enhance the Green Grid to deliver the benefits set out in Section 2 of this Plan and reduce development related recreational pressure on Natura 2000 sites, include:

1	Further increase the carrying capacity of South Hampshire's countryside recreational facilities through the improvement/expansion of existing strategic Country Parks and open spaces and the creation of new strategic facilities.
2	Further improve access to, linkages within and usability of South Hampshire's rights of way and access network.
3	Reduce flood risk on and improve water quality for South Hampshire's communities by undertaking additional natural flood management work along key river corridors and in upper catchment areas and implement strategic scale SuDS.
4	Further enhance GI provision and recreational opportunities in relation to the development of the Havant Thicket Reservoir.
5	Provide suitable alternative natural greenspace assets and improved rights of way targeted at reducing pressure on protected sites for nature conservation, including the Solent and New Forest Natura 2000 sites.
6	Further enhance woodland habitat connectivity and extent, and public access within the woodlands of the Forest of Bere area.
7	Create a South West Hampshire Forest Park in Southern Test Valley, bordering Southampton City and Eastleigh Borough (further detail provided in paragraph 3.12).
8	Continue to work with and influence strategic transport management agencies to improve the habitat management of vegetated strategic transport corridors to maximise their value for biodiversity across South Hampshire's Green Grid.
9	Enhance South Hampshire's biodiversity through the creation and enhancement of habitats and habitat linkages in line with the LNP's Local Ecological Network Map for South Hampshire.
10	Integrate the GI planning / work of PUSH with that of constituent and adjacent local planning authorities and other relevant bodies as new opportunities arise, to ensure a holistic GI approach across the PUSH sub-region and beyond.

3.11 The Local Ecological Network (LEN) map (see Appendix 4 for further detail) is a cross-cutting tool that applies to the whole of the sub-region and should be used to inform the location and type of development proposed and the development of GI projects.

3.12 Over 400 hectares of woodland areas in Southern Test Valley, which border Southampton City and Eastleigh Borough, are within close proximity of a large resident population, which has limited access to this resource. Enhancing the woodlands and increasing the ability of communities to access this strategic resource of sub-regional importance would greatly enhance the provision of GI in the western part of South Hampshire, help enable growth and development in the sub-region, improve the health and well-being of local communities and enhance biodiversity. This may also provide an indirect benefit of reducing recreational pressure on the New Forest and Solent Natura 2000 sites. This initiative (South West Hampshire Forest Park) is a long term ambition of Test Valley Borough Council and its partners and will be developed into a defined project in a future iteration of this Plan.

3.13 In developing opportunities to enhance the South Hampshire Green Grid, the recreational impacts of new development on the New Forest Natura 2000 sites, the Solent Special Protection Areas (SPA) and the River Itchen Special Area of Conservation (SAC) must be fully off-set, and reduced where possible for existing communities. Close working with the New Forest National Park Authority and Bird Aware Solent will be crucial in this regard.

3.14 The New Forest Green Halo initiative is working with partners and communities within and beyond the New Forest National Park to identify the benefits that can be realised from ecosystem services, and ensure these are protected, promoted, developed and enhanced through a programme of projects and activities. The initiative may provide future opportunities for green infrastructure delivery that benefits South Hampshire and reduces recreational pressure on the New Forest Natura 2000 sites. It is crucial that the Green Halo Partnership, the Hampshire and Isle of Wight Local Nature Partnership (LNP) and PUSH work in close collaboration on GI delivery to exploit synergies and ensure that project funding is effectively utilised.

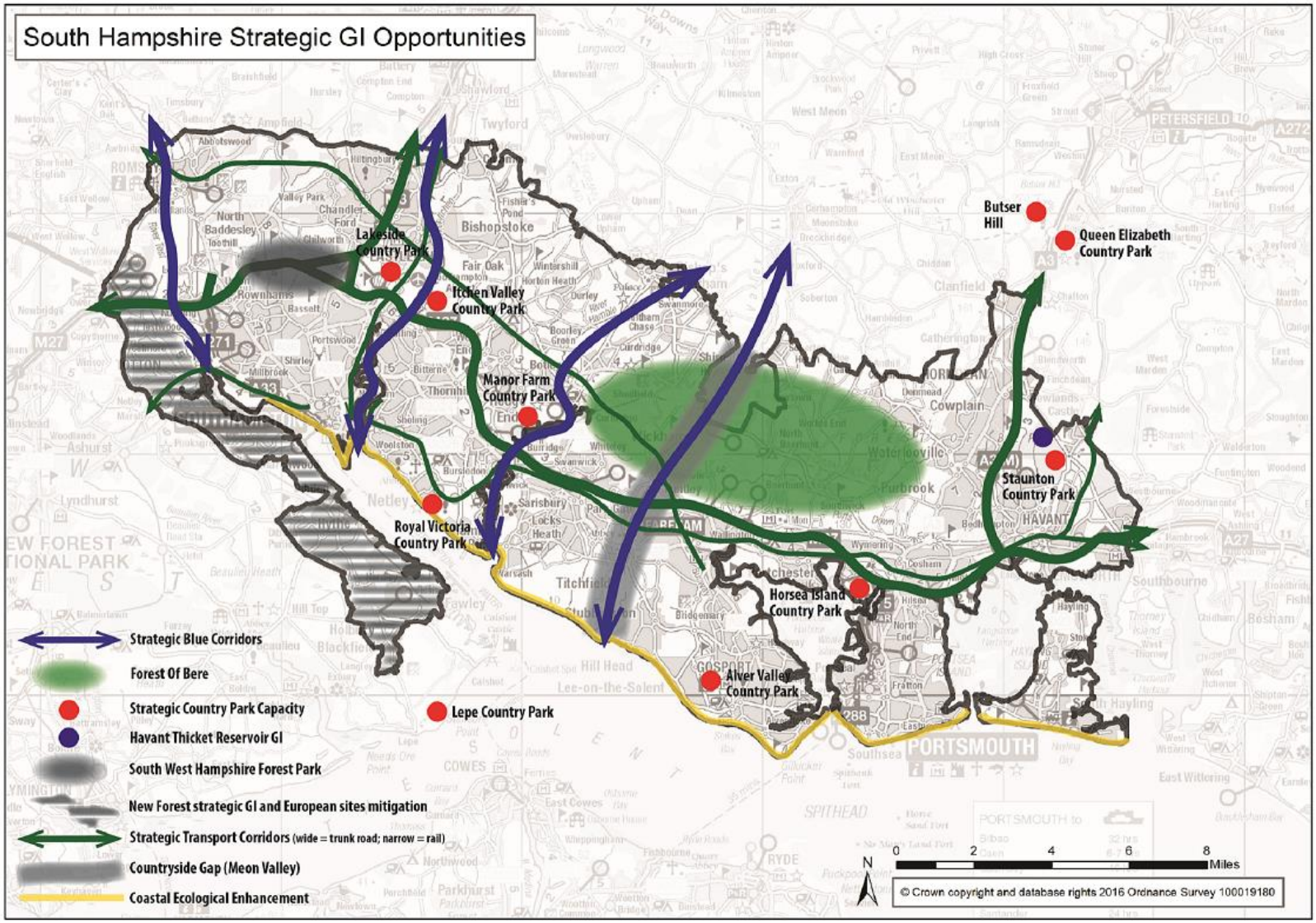
3.15 Six local planning authorities (Test Valley Borough Council; New Forest District Council; New Forest National Park Authority; Eastleigh Borough Council; Southampton City Council and Wiltshire Council) are working with Natural England to gather primary evidence on the visitor catchment of the New Forest and quantify the pressures arising from new development on the New Forest Natura 2000 sites, with the aim of preparing a strategic habitat mitigation framework. The results of the study, expected late 2019, will inform further cross-boundary mitigation work and inform future GI project work within South Hampshire.

3.16 The Environment Agency is working with Portsmouth University on a regional case study project to quantify the natural capital value of the Solent's habitats in the context of water quality (nutrient [nitrogen and phosphorous] assimilation and flows). This is an emerging area of work and policy and the Agency's aim is to extend the

project to include other ecosystem services such as recreation and tourism. This will, however, require additional funding and the Agency are currently exploring funding opportunities.

3.17 A map showing indicative strategic GI opportunities for South Hampshire is provided in Figure 3.

Figure 3: Strategic GI Opportunities for South Hampshire



4. Strategic Projects

4.1 Following assessment of potential projects, a number of strategic GI projects have been identified as being of sub-regional importance against the criteria set out in Section 3 and ones which PUSH and its partners will focus their resources on to bring forward and deliver. The identification of projects is a combination of geographical/functional need and the exploitation of resource opportunities.

4.2 Some strategic projects will be delivered through the implementation of component sub-projects, which collectively are of strategic significance for the PUSH sub-region. Projects listed and detailed represent a mix of established on-going projects, projects with firm commitments and projects at an early stage of consideration. The stage of project development/delivery is indicated in the project summaries, below.

4.3 It should be noted that a number of sub-projects deliver the aims of more than one strategic project. Where this is the case, sub-projects are detailed under one strategic project and cross-referenced under other relevant projects to avoid duplication.

4.4 Following annual review of project delivery, further strategic projects and/or component projects may be added as opportunities arise or removed when projects completed.

4.5 Strategic GI projects and their component sub-projects, together with the indicative investment required (where known) for their delivery, are listed in Table 1. Project costs and delivery timescales are still to be determined for a number of projects. Apart from 'P1(k) - Tipner/Horsea Island New Bridge Link Project', a grey infrastructure project that requires an investment of approximately £35 million, those GI projects that have been costed require an indicative minimum investment of just under £10 million required over the next five years. When all currently listed GI projects have been fully costed, however, the total investment required will be significantly greater than this figure.

Table 1: Strategic projects and component sub-projects

Strategic GI Project	Component Sub-projects	Indicative Investment required (£) (where known)
P1. Strategic Recreation Access Network and Capacity Project	P1(a) Havant Cycling, Walking and Waterways Project	400,000+
	P1(b) Alver Valley Country Park and Related Improvements Project	450,000+
	P1(c) Meon Valley Trail Recreational Route Extension Project	125,000+
	P1(d) Enhanced Woodland Linkages (Forest of Bere Woodlands) Project	410,000+
	P1(e) Botley Woods Enhancement Project (Part of Forest of Bere Woodlands)	To be determined
	P1(f) Hayling Billy Trail Project	175,000
	P1(g) Botley to Bishops Waltham Multi-User Trail Project	423,000+
	P1(h) Peartree Green LNR Footpath Improvement Project	121,000
	P1(i) Shoreburs Greenway Project	135,000
	P1(j) Royal Victoria Country Park Access Route Improvements Project	135,000
	P1(k) Tipner/Horsea Island New Bridge Link Project	35,000,000
	P1(l) England Coast Path Initiative **(detailed as Strategic Project P8)** P1(m) Horsea Island Country Park Development Project **(detailed as Strategic Project P6)**	
P2. Strategic Flood Risk and Water Quality Project	P2(a) Ecological Enhancements - North Portsea Defences and Modified Estuary Edges Project	650,000+
	P2(b) Wallington and Potwell Tributary Natural Flood Management (NFM) Project	2,000,000
	P2(c) Urban River Restoration and Green Space Regeneration Project	1,400,000
	P2(d) New Forest Freshwater Network Project	70,000
	P2(e) Solent Oyster Restoration Project	1,436,000
	P2(f) Strategic Nutrient Neutrality Mitigation Project	To be determined
	P2(g) Southampton Ponds Project	60,000
	P2(h) Alver Valley Country Park and Related Improvements Project **(detailed under Strategic Project P1)**	
P3. Strategic Waders and Brent Goose Refuges Mitigation Project	P3(a) Strategic Waders and Brent Goose Project Coordinator	200,000
	P3(b) Broadmarsh Coastal Park Brent Goose Refuge Project	To be determined
	P3(c) Hayling Island Brent Goose Refuge Project	227,000
	P3(d) Ecological Enhancements - North Portsea Defences and Modified Estuary Edges Project **(detailed under Strategic Project P2)**	
P4. New Forest Strategic GI and European Sites Mitigation Project	P4(a) New Forest Sustainable Waterways Recreation Project	60,000
	P4(b) Bartley Park Extension SANG Project	333,500
	P4(c) Bartley Water Linear Park (Totton) Project	957,000
P5. Havant Thicket Reservoir GI Project		To be determined
P6. Horsea Island Country Park Development Project		To be determined
P7. Southsea Seafront		To be determined
P8. England Coast Path Initiative		To be determined
P9. Strategic Transport Corridor GI Project		On-going management costs
P10. Greening the Urban Environment Initiative		n/a

P1. Strategic Recreation Access Network & Capacity Project

Brief Description

P1.1 The Recreation Access Network is identified in the GI Strategy as a strategic network of high quality, multifunctional routes linking South Hampshire communities to countryside and other green space. The project aims to address deficiencies in access to green space and provide sustainable transport opportunities by providing a coherent network of linear access for walking, cycling and horse riding and providing opportunities for recreational activities along the network. In addition, an enhanced network will provide a desirable recreational resource that will help to reduce recreational pressure on the Solent and New Forest European protected sites from growth and development and provide significant health and well-being benefits for an expanding South Hampshire population.

P1.2 This project will complement the work of the Hampshire Highways Authority in delivering the Hampshire Countryside Access Plan 2015-2025, which forms the Rights of Way Improvement Plan (ROWIP) for the county of Hampshire. The network will include local linkages to transport hubs, local amenities and areas of interest to encourage car-free travel. Project components developed here will not duplicate those elements of countryside access maintenance and improvement which the Hampshire Highways Authority has a statutory duty to undertake.

P1.3 Opportunities will be taken to enhance biodiversity, providing green corridors for wildlife and increasing the value of access routes as linear green space. In areas close to population centres there will be scope for additional enhancements, e.g. information and learning facilities and play areas.

Project Aims

P1.4 The aims of this project are to:

- Contribute to enabling growth and development in the PUSH sub-region.
- Offset the impacts of increased recreational demand of an expanding population in South Hampshire on the Solent and New Forest Natura 2000 sites.
- Provide improved infrastructure to support the development of sustainable tourism in the sub-region.
- Provide a network of green corridors across South Hampshire that link habitats and increase species population resilience.
- Provide opportunities for sustainable, car-free travel.

How will the project be delivered?

P1.5 The project will be delivered through the implementation of a number of component sub-projects, which collectively are of strategic significance for the PUSH sub-region.

In addition to the projects identified below, further suitable sub-projects will be identified and delivered as opportunities are identified.

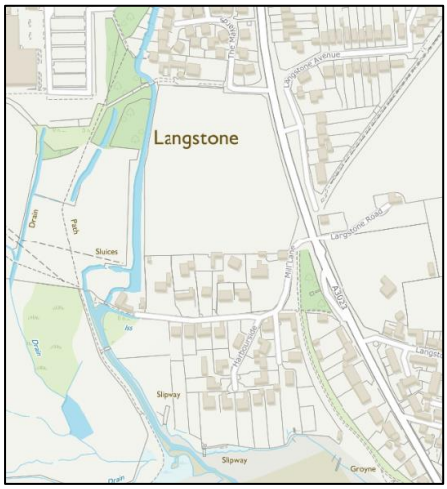
Who needs to be involved?

P1.6 In addition to the lead and supporting partners identified for each sub-project proposal below, Hampshire Highway Authority and Countryside Service, relevant local planning authorities, relevant Parish Councils and community groups, the Ramblers Association, Cyclists Touring Club and the British Horse Society should be involved. Where projects have a cross-boundary element with areas beyond the PUSH boundary it is important that adjacent Highway Authorities and local planning authorities are involved.

Sub-Projects

P1(a) Havant Cycling, Walking and Waterways Project

Location (grid ref: SU 71949 07372 – area centre)



Description

The Havant Cycling, Walking and Waterways project will increase sustainable travel and health and wellbeing opportunities for Havant and Hampshire residents by improving the footpaths, cycleways and river habitat associated with Havant's Hermitage and Lavant urban streams. These urban rivers are constrained and difficult to access, especially in less affluent areas and have not enjoyed the benefits from rejuvenation works that rural communities have gained from the restoration of the Meon, Itchen and other rural river corridors.
https://www.havant.gov.uk/cycle-paths-and-cycleways

Economic and other benefits

- Provides alternative recreational spaces and activity for Hampshire residents and visitors, reducing recreational pressure on the Solent SPAs.

- Provides a necessary GI support to the 11,000 new homes and other housing development in surrounding boroughs.
- Provides sustainable travel options, reducing dependency on motor vehicles.
- Enhances the biodiversity value and water quality of Havant's heavily culverted streams.

Who needs to be involved?
East Hampshire Catchment Partnership (lead partner); Havant Borough Council; Environment Agency; Arun & Rother Rivers Trust; Groundwork South; Friends of Hermitage Stream; relevant community groups.

Timescale
2020/21 - 2022/23

Investment required
£400,000+

Where are the funds likely to come from?
Environment Agency (Water Environment Improvement Fund GiA); Havant Borough Council (CIL); emerging Local Cycling Walking Infrastructure Network (LCWIP); possible National Lottery Heritage Fund bid; and other sources (to be determined).

P1(b) Alver Valley Country Park and Related Improvements Project

Location (grid ref: SU 57852 00492)

Description

The Alver Valley Country Park is an extensive area of some 157 hectares located between Gosport and Lee-on-the-Solent. Large parts of the Alver Valley have been used for gravel extraction and subsequent restoration works have largely been completed. The area encompasses a wide diversity of habitats and landscapes including a range of wetlands, woodlands and grasslands. It is an important corridor linking the open land to the north with the coast. It has sea views over the Solent and is in close proximity to Stokes Bay and the Lee-on-the-Solent shoreline. It is also recognised as of sub-regional importance as a suitable alternative natural greenspace (SANG).

There have been a number of improvements to the Country Park over recent years including the creation of a network of trails, car parking facilities, a major playground and a BMX track as well as smaller features including interpretation and dog dips.

There are further improvements planned in accordance with the Gosport Borough Council's Alver Valley Country Park Strategy. This includes the following:

- Grange Farm Gateway: a visitor hub, café, garden centre and toilets.
- Western Gateway: extension to car park, changing places standard toilet, and food/drink concession.
- Further extension of trails within the park including the northward extension of the Alver Way and a north-south cycle route.
- Improved connectivity to the site from outside particularly from the north and north east. This could include providing a safe route along Shoot Lane.

A major issue facing the Country Park is the regular flooding of the Apple Dumpling Bridge area which is the only crossing point within the Country Park and such incidents separate the western and eastern parts of the site, detracting from the visitor experience. This flooding is caused by regular blocking of the River Alver outfall at Stokes Bay which exacerbates the

water quality problem for the River Alver which is currently classified by the Environment Agency as 'bad'. Flooding also has a detrimental impact on the quality of the river habitat. The Council has been working closely with the Environment Agency and the Eastern Solent Coastal Partnership and it is considered that a beach management project may represent a potential solution. Other potential solutions may also need to be considered (such as raising land levels in the Apple Dumpling Bridge area and the construction of a longer and higher pedestrian/cycle bridge).

In the medium to longer term there may be opportunities to extend the Country Park southwards subject to any decision by the Ministry of Defence (MoD) to release land known as Browndown Common (34 hectares). This would provide a natural extension to the Country Park, increase the diversity of natural features, incorporate the World War One training trenches, and secure public access to the site for recreational purposes. If the opportunity were to arise there would be costs involved in purchasing the land and integrating the site into the rest of the Country Park.

Economic and other benefits

- Help mitigate the impact of residential development growth on Solent Natura 2000 sites from increased recreational disturbance.
- Improve opportunities for health and well-being benefits for local residents in an area which has significant health deprivation.
- Provide a solution to a regular flooding issue through a beach management solution which will improve links through the park, assist in improving river quality and its habitats, and provide a supply of beach material that will assist in flood management measures along the eastern Solent Coast.

Who needs to be involved?

Gosport Borough Council (lead partner); Environment Agency; Eastern Solent Coastal Partnership; Natural England; Historic England; MoD; Hampshire County Council (as Highway Authority); potential beneficiaries from beach replenishment.

Timescale

Certain projects will be undertaken over the next 12 months (such as Western Gateway car park extension, toilet and café) with other projects taking place over the next 5 years (including resolving the Apple Dumpling Bridge flooding issue, the Grange Farm Gateway Garden Centre, visitor information, toilet and café). The Council's Alver Valley Country Park Strategy identifies aspirations that will be exploited as opportunities arise over the longer term (e.g. incorporating additional areas into the Country Park and creating a second crossing).

Investment required

Some of the improvements identified are to be funded from Gosport Borough Council's capital budget such as those at the Western Gateway. There are a number of schemes, however, where a funding source has yet to be identified.

- River Alver Outfall / Apple Dumpling Bridge / Beach Management project (£250,000+)
- Improved access to the Country Park from the north and north east including a safe route along Shoot Lane (cost to be determined).

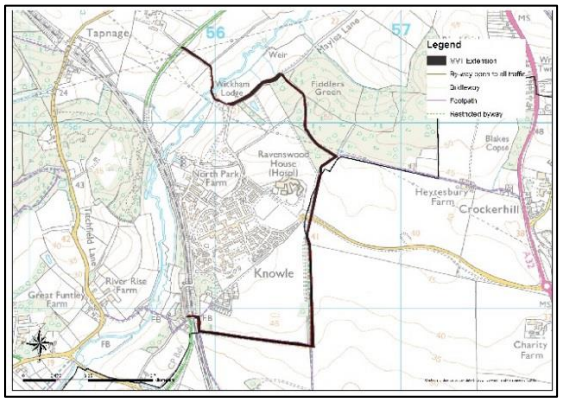
- Extension of the Alver Way northwards through the Country Park, improved cycle route and other trails (£200,000+).
- Incorporation of the Browndown North site into the Country Park if the opportunity arises (cost to be determined).

Where are the funds likely to come from?

Gosport Borough Council capital funds and developer contributions, funding bids to a potential variety of grant funding sources including any available through the Council's Heritage Action Zone status (Historic England, National Lottery). The potential for local partner funding will also be explored (such as Bird Aware Solent, Solent LEP, Hampshire County Council and the Environment Agency).

P1(c) Meon Valley Trail Recreational Route Extension Project

Location (grid ref: SU 56484 09488 – centre of route)



Description

The project will deliver approximately 1km of extension to the Meon Valley Trail (MVT), providing a link between the existing route of the MVT (Wickham 501) and the bridleway network to the south of Knowle (Wickham 515 and Fareham 515), with the possibility of using Footpaths 23a (Fiddlers Green/Dash Wood), 86 and 15 (edge of Welborne Boundary or Mayles Lane) to join the route. This will complete the MVT route providing:

- An off-road multi-user route from Fareham to the South Downs, thereby encouraging active travel and promoting more sustainable transport choices.
- Sustainable tourism opportunities with an off-road link from the national rail network at Fareham to the South Downs National Park.
- Improved connectivity between the communities of Fareham, Knowle, Welborne, Wickham, Droxford, Meonstoke and West Meon.

Economic and other benefits

The project will enhance countryside access, recreational opportunities and improve the health and wellbeing of local communities. The project will also provide an enhanced green infrastructure connection that will support an expanding local population.

Who needs to be involved?

Hampshire County Council Countryside Service; Winchester City Council; South Downs National Park; Ramblers Association; relevant landowners; relevant Parish Councils and local community groups. Lead partner to be determined.

Timescale

Timescale confirmed when funding secured.

Investment required

£125,000+

Where are the funds likely to come from?

There are no specific allocated funds for this project. Funding opportunities are being identified. Elements of the project will be delivered as opportunities arise.

P1(d) Enhanced Woodland Linkages (Forest of Bere Woodlands) Project

Location (grid ref: SU 62890 10586 – area centre)

Description

The Enhanced Woodland Linkages project will facilitate the eventual completion of a 30km multi-user circular route linking the West of Waterlooville developments, Creech Wood, West Walk, Welborne and Portsdown Hill in addition to providing links to the wider recreational network, including the Meon Valley Rail Path, Wayfarer's Walk and Pilgrim's Trail, providing countryside access, recreation and health and wellbeing benefits. Delivery of the route as one project is not a viable option but part schemes should come forward and integrate to form a continuous route.

Economic and other benefits

The project would provide an access and wildlife corridor between Creech Woods and West Walk and provide sustainable tourism opportunities with an off-road link from the national rail network at Fareham to the South Downs National Park and improved connectivity between communities as an alternative transport option. The project would lead to health and well-being improvements for local communities and enhance the green infrastructure network.

Who needs to be involved?

Forestry Commission/Forest Enterprise (lead partner); Hampshire County Council Countryside Service; Fareham Borough Council; Eastleigh Borough Council; Winchester City Council; Havant Borough Council; relevant private landowners; South Downs National Park; Ramblers Association; relevant Parish Councils and local community groups.

Timescale

Timescale confirmed when funding secured.

Investment required

£410,000+

Where are the funds likely to come from?

There are no specific allocated funds for this project and funding opportunities are being identified. Elements of the project will be delivered as opportunities arise.

P1(e) Botley Woods Enhancement Project (Part of Forest of Bere Woodlands)

Location (grid ref: SU 55017 10629 – area centre)

Description

The Botley Woods Enhancement project will provide enhanced facilities for informal recreation through the establishment of a network of way-marked trails, visitor facilities, and provision for natural play, together with enhanced ancient woodland management and visitor management and protection of ancient woodland.

Economic and other benefits

The project would deliver significant health and wellbeing, biodiversity and other environmental benefits, including the protection of ancient woodland from increasing recreational impacts from housing development (north Whiteley and planned housing growth in Fareham Borough), as well as enhance the green infrastructure network.

Who needs to be involved?

Forestry Commission/Forest Enterprise (lead partner); Landowners; Hampshire County Council Countryside Service; Winchester City Council; South Downs National Park; Ramblers Association; Parish Councils; local community groups.

Timescale

Timescale confirmed when funding secured.

Investment required

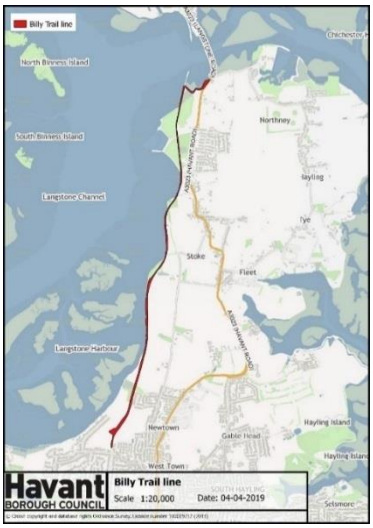
Funding sources currently being identified

Where are the funds likely to come from?

There are no specific allocated funds for this project and funding opportunities are being identified. Elements of the project will be delivered as opportunities arise.

P1(f) Hayling Billy Trail Project

Location (grid ref: SU 71474 01934 - centre point of trail)



Description

This project proposes a phased approach to the realignment of the Billy trail – focusing on a section which has been subject to emergency repairs in recent years. Much of the western coast of Hayling Island is identified as 'no active intervention' by the North Solent Shoreline Management Plan. This means that the natural process of coastal erosion will gradually shift the shoreline inland by around 50m over the next century. In the first instance, this will involve the relocation of this part of the trail inland and resurfacing with weather proof material. Realigning the section of the route threatened by erosion will preserve the trail for all users.

Economic and other benefits

The Hayling Island Billy trail is an extremely well-used walking, cycling and horse-riding route which links Havant Town Centre with the south of Hayling Island through an almost entirely off-road trail. The trail provides significant health and wellbeing benefits to local communities and visitors alike.

Who needs to be involved?

Havant Borough Council (lead partner); Hampshire County Council Countryside Service.

Timescale

Timescale confirmed when funding secured.

Investment required

£175,000

Where are the funds likely to come from?

There are no specific allocated funds for this project and funding opportunities are being identified. Elements of the project will be delivered as opportunities arise.

P1(g) Botley to Bishops Waltham Multi-User Trail Project

Location (grid ref: SU 53613 15597 – centre of proposed trail)

Description

This project will deliver the Botley to Bishops Waltham multi-user trail, along the 6.1km length of the disused railway line linking the two settlements

Economic and other benefits

The project will enhance countryside access, recreational opportunities and improve the health and wellbeing of local communities. The route will provide an off-road utility trail which links Bishops Waltham to the railway network at Botley, providing a gateway link from the urban fringe to the South Downs National Park and thereby encouraging active travel and promoting more sustainable transport choices.

Who needs to be involved?

Winchester City Council; Hampshire County Council Countryside Service. Lead partner to be determined.

Timescale

Timescale confirmed when funding secured.

Investment required

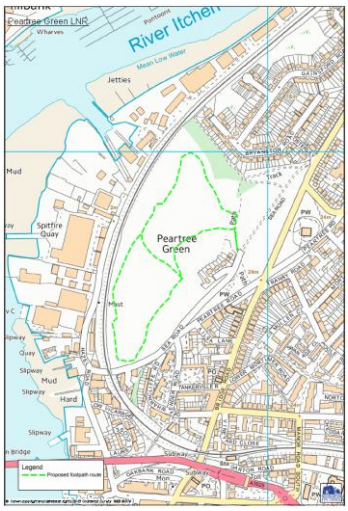
£423,000+

Where are the funds likely to come from?

There are no specific allocated funds for this project and funding opportunities are being identified. Elements of the project will be delivered as opportunities arise.

P1(h) Peartree Green LNR Footpath Improvement Project

Location (grid ref: SU 43780 11776)



Description

The Peartree Green LNR Footpath Improvement project will provide a 1.6 km surfaced footpath comprising a 1.5km circular path with a 100m connecting route which will create one large and two shorter circular walks connected as a figure of eight, together with new interpretation. The upgraded footpath will be promoted to new and existing residents via a leaflet and guided walks. The site is ideally located to divert recreational activity away from Weston Shore. The project is located adjacent to high population density and would be highly accessible. There is local desire to use the project area for walking but residents are deterred by the lack of suitable footpaths.

Economic and other benefits

The project will provide significant opportunities for recreation and for the improvement of the health and well-being of local communities. The project will also provide an enhanced green infrastructure connection that will support an expanding local population.

Who needs to be involved?

Southampton City Council (lead partner); Friends Group. Works to be undertaken by Southampton City Council Landscape team.

Timescale

The project will be implemented by 2021/2022.

Investment required

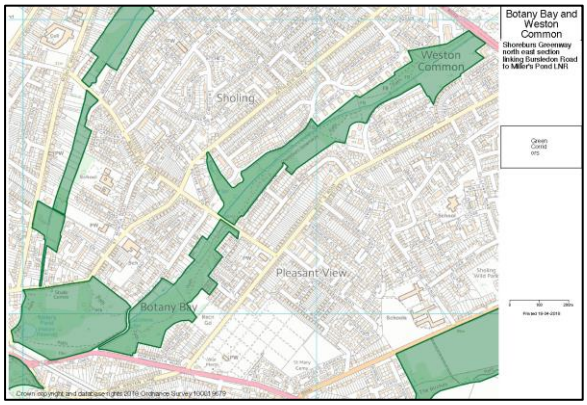
£121,000

Where are the funds likely to come from?

Funding is being identified, but may include developer contributions through Section 106 obligations / Community Infrastructure Levy (CIL) and City Council green space budgets.

P1(i) Shoreburs Greenway Project

Location (grid ref: SU 45839 11503 – centre point of greenway)



Description

This footpath improvement and flood risk project is an extension of the work currently being undertaken on the southern section of the greenway (Victoria Road to Botany Bay Road). The project will involve the removal of fallen trees and repairs to the river bank to resolve the flooding problems, followed by repairs to approximately 2.3km of footpaths and the provision of additional way-marking and interpretation boards. The project is located adjacent to high population density and would be highly accessible.

The greenway would provide an ideal alternative to Weston Shore as it is both sheltered and easily accessible on foot for local residents and will be promoted to residents as such. The greenway is well located for new residents being close to Centenary Quay and on-going in-fill housing development. It can also be reached easily by bicycle from the City Centre. There is local desire to use the project area for walking but residents are deterred by the lack of suitable footpaths.

Economic and other benefits

The project will provide significant opportunities for recreation and for the improvement of the health and well-being of local communities. The project will also provide an enhanced green infrastructure connection that will support an expanding local population.

Who needs to be involved?

Southampton City Council (lead partner). Works to be undertaken by Southampton City Council Arboriculture and Landscape teams.

Timescale

The project will be implemented by 2021/2022.

Investment required

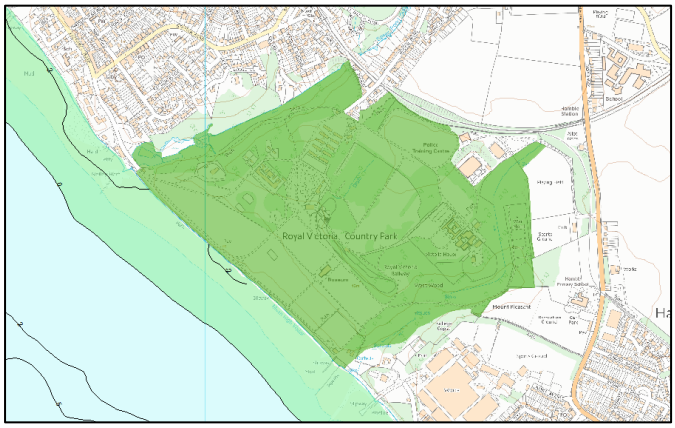
£135,000

Where are the funds likely to come from?

Funding is being identified, but may include developer contributions through Section 106 obligations / Community Infrastructure Levy (CIL) and City Council green space budgets.

P1(j) Royal Victoria Country Park Access Route Improvements Project

Location (grid ref: SU 46435 07660)



Description

The project will increase the recreational carrying capacity of currently under-utilised sections of Royal Victoria Country Park including the provision of:

1. A surfaced 5km 'Canine Trail' would be created with associated interpretation / educational resources. The project would be delivered with the help of volunteers / volunteer organisations providing opportunities for skills development.
2. 3.2km of circular walks, including a 0.5km Sophie's Pond Boardwalk, including associated interpretation and education resources.

Economic and other benefits

- The project will help mitigate the impact of residential development growth on Solent Natura 2000 sites from increased recreational disturbance by increasing the carrying capacity and recreational offer at the Country Park.
- The project will also provide health and well-being benefits for local residents in an area which has significant health deprivation.

Who needs to be involved?

Hampshire County Council Countryside Service (lead partner); community organisations.

Timescale

2019/20 – 2022/23

Investment required

1. £95,000
2. £40,000

Where are the funds likely to come from?

Specific funding has yet to be identified, but could include the Solent Growth Fund.

P1(k) Tipner/Horsea Island New Bridge Link Project

Location (grid ref: SU 64199 03591)

Description

The project is to develop a new bridge adjacent to the M275 to provide access to the new Horsea Island Country Park. In part this should be facilitated by an extension of the Gosport to Fareham Bus Rapid Transport link through into Portsmouth.

Economic and other benefits

The project will enable greater sustainable travel, not only to access the new Horsea Island Country Park, but also other green spaces on the island such as Southsea Seafront and other green spaces around the sub-region.

Who needs to be involved?

Portsmouth city council; bus operators; Hampshire County Council. Lead partner to be identified.

Timescale

5-10 years.

Investment required

Approximately £35 million.

Where are the funds likely to come from?

Portsmouth City Council; Central Government funding; and local funding initiatives.

P1(l) England Coast Path Initiative

Included as a separate Strategic Project (P8), below.

P1(m) Horsea Island Country park Development Project

Included as a separate Strategic Project (P6), below.

P2. Strategic Flood Risk & Water Quality Project

Brief Description

P2.1 The GI Strategy confirmed the considerable cost to the economy that flooding events entail and the associated impacts on households, business, power and water utilities, road infrastructure, agriculture, human health and biodiversity. Furthermore, the PUSH Strategic Flood Risk Assessment (SFRA)[17] confirmed the risk of flooding on the sub-region's communities from coastal, fluvial (inundation from rivers and other watercourses), pluvial (surface water) and groundwater sources. Without the implementation of flood risk measures, further development in South Hampshire will elevate flood risk, further exacerbated by the effects of climate change.

P2.2 Coordinated planning of GI at the strategic and local levels can significantly contribute to reducing flood risk on communities through the development of natural flood management (NFM) measures (also referred to as 'working with natural processes' - WWNP), including river naturalisation, improvements to flood-plain functionality, measures to mitigate coastal squeeze, the multifunctional use of GI assets, improvements in land management and the use of 'naturalised' sustainable drainage systems (SuDS). These measures also deliver the associated benefit of improving water quality in South Hampshire's watercourses.

P2.3 Through the delivery of component sub-projects, this strategic project will help to enable sustainable growth and development within the PUSH sub-region by reducing flood risk on existing and new South Hampshire communities, help to mitigate the effects of coastal squeeze and improve water quality. The project will complement the work of other flood and coastal agencies, and relevant Catchment Partnerships and water companies.

Project Aims

P2.4 The aims of this project are to:

- Contribute to enabling growth and development in the PUSH sub-region.
- Work with natural processes to provide upstream natural flood management (NFM) measures to attenuate/manage water flow and reduce downstream flood risk on South Hampshire communities;
- Improve water quality.
- Address urban surface water management issues using strategic and local multifunctional SuDS.
- Help mitigate the effects of coastal squeeze.
- Provide a more cost effective and sustainable approach to reducing flood risk by removing the need for or complementing engineered flood measures.

[17] Atkins (2007) PUSH Strategic Flood Risk Assessment (Partnership for Urban South Hampshire) - as updated by the PUSH Strategic Flood Risk Assessment Update (2016).

How will the project be delivered?

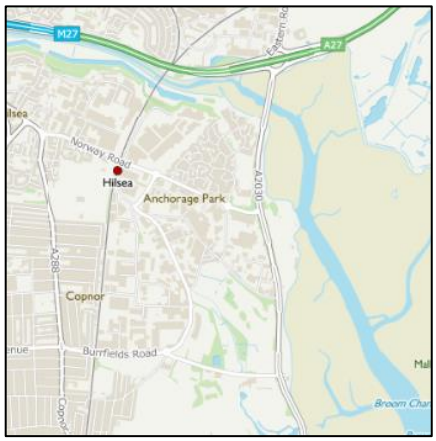
P2.5 The project will be delivered through the implementation of a number of sub-projects, which collectively are of strategic significance for the PUSH sub-region. In addition to the projects identified below, further suitable sub-projects will be identified and delivered as opportunities are identified.

P2.6 Where projects have a cross-boundary 'upstream' element with areas beyond the PUSH boundary it is important that PUSH and its partners work with adjacent authorities and agencies to ensure an integrated approach to maximise benefits for South Hampshire.

Sub-Projects

P2(a) Ecological Enhancements - North Portsea Defences and Modified Estuary Edges Project

Location (grid ref: multiple locations)



Description

Ecological enhancements are needed to soften the impact on ecology of coastal squeeze and the construction of sea walls on Portsea Island to allow the area's redevelopment. There are kilometres of man-made structures around Southampton Water and other estuaries in the PUSH area and the aim of this project is to reduce the dramatic decline in saltmarsh and other intertidal habitats, and the impact on bird and marine life.

Economic and other benefits

- The area of undisturbed high tide roost sites will be increased to help the survival of SPA bird populations. The lack of undisturbed high-tide wader roosts is considered by Natural England to be one of the most important limiting factors affecting SPA bird populations. This disturbance and the threat of increased disturbance has been directly attributed to the increased development in the PUSH area. Therefore, any measure to reduce this

impact will be beneficial to both the environment and to the enabling of future development.
- To reduce the environmental impact of the redevelopment of North Portsea Island.
- These measures will enable the survival of saltmarsh, mudflats and the wildlife these vital habitats support as they become increasingly threatened by coastal squeeze.

Who needs to be involved?
Environment Agency (lead partner), Eastern Solent Coastal Partnership, Natural England, Hampshire County Council, members of East Hants Catchment Partnership, members of the Solent Forum.

Timescale
Timescale to be determined when funding identified.

Investment required
£200,000+ to trial textured concrete on the new Portsea sea wall, especially the eastern side (trials are starting spring 2019);
£200,000+ to develop rock pools;
£200,000+ high-tide wader roosts;
£50,000+ to develop rafts and other artificial methods of growing saltmarsh.

Where are the funds likely to come from?
Initial funds are available from the Environment Agency (Water Environment Improvement Fund GiA), the local Regional Flood Coastal Committee and Natural England.

P2(b) Wallington and Potwell Tributary Natural Flood Management (NFM) Project

Location (grid ref: SU 61709 09355 - area centre)

Description

Natural Flood Management (NFM) measures due to be trialled in 2020 need to be replicated at many points along the river network to gain major reductions in flood risk. As part of this, the sediment in Southwick Lake needs to be reduced and fish passage and habitat to be installed at the west-end of the lake.

Economic and other benefits

- Reduced flood risk from upstream Wallington and Potwell Tributary catchments to existing and potential future properties downstream east and north of Fareham and in the headwaters west of Waterlooville and Purbrook.
- Improved river and waterbody ecology, including enhanced and improved habitat and fish passage.

Who needs to be involved?

Environment Agency (lead partner), Fareham Borough Council, Winchester City Council (potentially), Southwick Estate, East Hampshire Catchment Partnership, Portsmouth & District Angling Society.

Timescale

Trial starts summer 2019, with work on other reaches planned for 2020/21 and 2021/22, although this is dependent on other funding.

Investment required

£2m overall.

Where are the funds likely to come from?

Environment Agency Water Environment Improvement Programme Grant in Aid (GiA); flood risk GiA; Regional Flood and Coastal Committee funding (RFCC); and other sources (to be determined).

P2(c) Urban River Restoration and Green Space Regeneration Project

Location

Multiple locations (see below)

Description

1. Romsey Waterways and Wetlands:
The town of Romsey lies on the River Test, one of the country's most important chalk rivers and is an important area for recreation including fishing and walking. The river is designated a Site of Special Scientific Interest (SSSI) whilst adjacent habitats are designated as Sites of Importance for Nature Conservation (SINC) and Local Nature Reserves (LNR). Unfortunately, development in the area has had serious detrimental effects on the wildlife, heritage and amenity value of the local waterways, and the town has a history of suffering losses through flood events. Aspirations for the town's waterways and wetlands include improving their ecology and landscape setting, improving public access to them, and protecting and enhancing heritage features associated with the waterways.

2. Tanners Brook
Tanners Brook flows from North Baddesley through to Southampton, emerging under the docks into Southampton Water. A substantial part of the river is accessible to the public, particularly through Lordswood and Southampton, where a Greenway runs immediately adjacent to the river. Sections of this river urgently require maintenance and enhancement and this project offers considerable scope to improve the value of the area, offer opportunities for increased health & well-being, as well as better management of surface water flooding issues.

3. Monks Brook
Monks Brook flows from the top of Chandler's Ford through Eastleigh before discharging into the Itchen near Woodmill in Southampton. Some improvements have been made over the years to the watercourse, with culverted sections being daylighted and some sections of concrete channel being broken up to allow more natural form and support ecological gain. Monks Brook has been identified as a 'pipeline' Flood Alleviation Scheme, and there are opportunities to bring about flood risk benefits which will also support a more naturally functioning ecosystem.

4. Riverside Park
Riverside Park Stream, in Southampton, is starved of its historic supply of water, previously via a sluice from the River Itchen and is now mainly fed by surface water run-off from residential/urbanised development. As a result, the stream is mostly dry/damp mud, rarely flows, suffers from poor water quality and is overgrown by willow scrub and receives no management. Consequently, it is considered of no evident value to the local community and to biodiversity. The stream's lower reach flows through a buried pipe, before discharging into the upper Itchen estuary. When the stream is flowing, the pipe is subject to regular blockage from debris and is challenging to maintain.

Riverside Park Stream was once a part of the River Itchen system with its high conservation value, sustained by River Itchen water, and it is part of Riverside Park, a 'destination park' and major greenspace in Southampton City. A large scale public engagement exercise in 2017 for the Environment Agency's Woodmill Project, raised the issue of the Riverside Park stream as demonstrably very important to local residents and their representative groups/fora.

Economic and other benefits

- Reduction of flood risk on local communities through improved attenuation.
- Provision of enhanced alternative recreational facilities to help off-set impacts of recreation disturbance on New Forest and Solent Natura 2000 sites.
- Improved health and well-being benefits for existing and new South Hampshire residents.
- Improved marginal and channel habitat quality and habitat connectivity, including the provision of more naturalised channel morphology, improvements for fish passage by removal of in-channel barriers.
- Improved water quality, through addressing diffuse pollution issues.
- Reduction in the spread of invasive non-native species.
- The Riverside Park project has the potential to reduce operational costs for Southampton City Council associated with pipe clearance, and better management of surface flows which could help accommodate increase surface water flow during high rainfall events.

Who needs to be involved?

Depending on the specific scheme, the following partners will be involved:
Test Valley Borough Council; Hampshire County Council; Environment Agency; Natural England, Hampshire & Isle of Wight Wildlife Trust; Romsey & District Society; Eastleigh Borough Council; Riverside Park Residents Group; Groundwork; Southampton City Council; Test & Itchen Catchment Partnership.
A lead partner will be allocated for each sub-project

Timescale

Timescale to be determined as and when funding identified.

Investment required

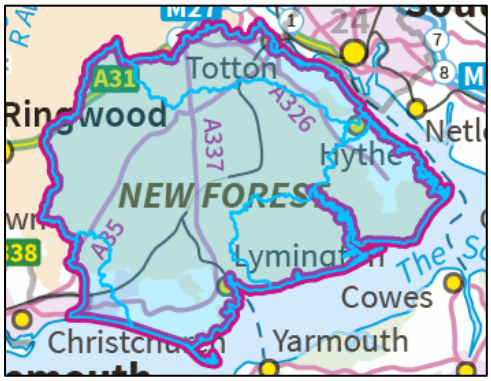
1) £100k
2) £600k
3) £500k
4) £200k

Where are the funds likely to come from?

Match funding opportunities are currently being explored.

P2(d) New Forest Freshwater Network Project

Location (grid ref: SU 31423 02829 - catchment centre)



Description

There is increasing recognition of the high biodiversity and natural capital value of New Forest freshwaters and associated critical freshwater species. However, there is a risk that edge effects, fragmentation and isolation may lead to deterioration and declines. There is a clear vision that future planning within and adjacent to the New Forest will need to incorporate high quality freshwater habitats to ameliorate these effects. The New Forest Freshwater Network will include the development of an ecological network for the freshwater environment, adding a blue network to the green network already being developed.

Economic and other benefits

- Help mitigate the impact of development and growth in the PUSH sub-region on the ecology of the New Forest.
- Reduce nutrient discharge to the Solent, acknowledged by Natural England and the Environment Agency, as threats to the Solent Natura 2000 sites.
- Provide high quality habitats that would benefit residents, potentially adding to the value of housing.
- Provide health and wellbeing benefits with greater access to an enhanced GI network.

Who needs to be involved?

New Forest catchment Partnership (lead partner), Fresh Water Habitats Trust; Environment Agency; Natural England; New Forest National Park Authority; landowners/managers; Southern Water.

Timescale

2024/2025

Investment required

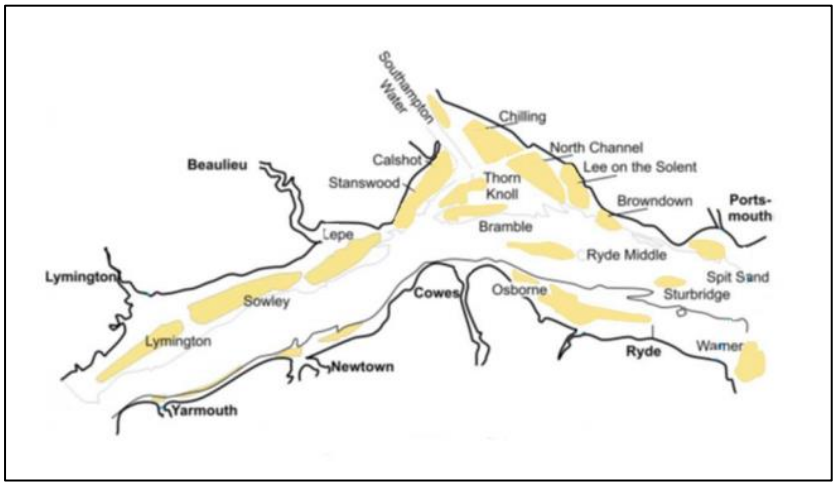
£70,000 over 3 years. First year would include planning and consultation and following years would include delivery of up to 3 projects per year.

Where are the funds likely to come from?

Funding opportunities currently being identified.

P2(e) Solent Oyster Restoration Project

Location (grid ref: multiple locations)



Description

Starting with two trials in the PUSH area, this project aims to restore native oyster populations by improving water quality, improving habitat, re-seeding oysters, managing over-fishing and non-native species. Historically shellfish was a thriving industry and its potential economic value is at least £1.5 million a year in the initial stages, according to a natural capital study[18]. Once the oyster and its habitat are re-established, there are considerable additional benefits for other fish, and therefore for commercial and recreational fishing.

The project will be managed on a day-to-day basis by Blue Marine Foundation staff in close collaboration with the Southern IFCA. Blue Marine Foundation senior management and technical staff will be responsible for daily project management with expert advice and support provided by other project partners, consultants and from academia.

Economic and other benefits

- Reinvigorate recreational and commercial fishing, provide local seafood to the local food industry, raise local people's identity with a valuable resource.
- Restore an element of the sub-region's natural environment that is in serious decline (seventeen of eighteen shellfish waters are failing).

Who needs to be involved?

Blue Marine Foundation (lead partner – in close collaboration with Southern IFCA); local authorities; Environment Agency; Natural England; fishing industry. Lead partner(s) to be determined.

Timescale

[18] https://secure.toolkitfiles.co.uk/clients/25364/sitedata/files/PC-SolShellfish-val-mod-007-April-2018.pdf

Trials are underway now (Spring 2019) and roll out of the project in late 2019 is currently being assessed. Project end date will be dependent on the success of oyster population establishment.

Investment required

The current total cost of the project is estimated at £1,436,500, This includes the costs of implementing the various work packages as well as day to day management and administration costs.

Where are the funds likely to come from?

Blue Marine Foundation fundraising and other sources (to be determined).

P2(f) Strategic Nutrient Neutrality Mitigation Project

Location
Multiple locations across South Hampshire

Description
This project is currently being developed by PUSH partners to address the impacts of increased nutrients on the Solent internationally designated sites. There are high levels of nitrogen and phosphorus input to the water environment in the Solent with evidence that these nutrients are causing eutrophication affecting Natura 2000 sites. An Integrated Water Management Study for South Hampshire was commissioned by the PUSH Authorities to examine the delivery of growth and development in relation to legislative and government policy requirements for designated sites and wider biodiversity.

In light of this uncertainty, Natural England advises that a nitrogen budget – the principal nutrient that tends to drive eutrophication in the marine environment - is calculated for developments. This will show that development either avoids harm to European protected sites or provides the level of mitigation required to ensure that there is no adverse effect. To provide confidence that development will be deliverable, Natural England recommends that proposals achieve nitrogen neutrality by securing the required mitigation.

Mitigation can be 'direct' through upgrading sewage treatment works and through alternative measures, e.g. wetlands; or 'indirect' by offsetting the nitrogen generated from new development by taking land out of nitrogen intensive uses, e.g. where fertiliser is applied to crops. Mitigation measures will need to be secured for the duration over which the development is causing the effects, generally 80-125 years.

Work is currently underway by local authorities to identify areas for mitigation to enable developments allocated within relevant local plans to come forward and for the local plans themselves to be able to conclude no adverse impact on European sites within their Habitats Regulations Assessments (HRA). Consideration is being given to identifying mitigation options and strategic areas of land may be needed to offset nutrients coming from new development. There is the opportunity for these sites to deliver a number of GI functions.

A project example may include fields north of the Eastleigh Strategic Growth Option (SGO). Natural England are working with Eastleigh Borough Council to identify parcels of land (e.g. two fields north of their main allocation) to provide capacity to deliver reductions in nitrogen from local plan related development and development potentially from elsewhere in catchment.

Economic and other benefits

- Help mitigate the impact of development and growth in the PUSH sub-region on the ecology of the Solent Natura 2000 sites by reducing nutrient discharge entering the Solent from South Hampshire.

Who needs to be involved?
Natural England (lead partner); PUSH local authorities; Environment Agency; PUSH Catchment Partnerships; Solent Forum; developers.

Timescale
Timescale to be determined as and when necessary mitigation projects are identified.

Investment required
Investment to be determined as and when individual projects identified

Where are the funds likely to come from?
Identification of issues and mitigation sites funded from local planning authority and Natural England planning policy budgets. Funding for individual mitigation projects to be identified and may include Community Infrastructure Levy (CIL) and Section 106 legal agreements.

P2(g) Southampton Ponds Project

Location (locations across Southampton)

Description

Three ponds in the centre of Southampton have provided an important free angling resource in the past but are increasingly suffering issues including siltation, vegetation encroachment, oxygen crashes, fish disease and mortality. Dialogue with local stakeholders and angling interest groups has confirmed the importance of the nature reserve and pond as a local angling recreational resource.

Economic and other benefits

- Improved free urban fishing recreational facilities.
- Enhanced urban biodiversity (aquatic and terrestrial).
- Improved health and well-being opportunities for urban residents resulting from enhanced outdoor recreational opportunities and access to nature.

Who needs to be involved?

Southampton City Council (lead partner), local stakeholder groups, residents and local experts, Sholing Valley group, Angling Trust, local business (e.g. John Lewis, ABP), Angling interest groups.

Timescale

Timescale to be determined as and when funding identified.

Investment required

£60,000

Where are the funds likely to come from?

Funding opportunities currently being identified.

P2(h) Alver Valley Country Park and Related Improvements Project

Included as a sub-project under Strategic Project (P1), above

P3. Strategic Waders and Brent Goose Refuges Mitigation Project

Brief Description

P3.1 One of the consequences of housebuilding within the PUSH sub-region is the pressure of new development on the international nature conservation sites including the Special Protection Areas and their supporting habitat.

P3.2 New housing will lead to increased recreational activity at the coast, which could lead to increased disturbance to waders and wildfowl within the Solent Special Protection Areas (SPAs). Research has quantified this impact and a strategic and coordinated approach has been taken to this issue through the preparation of the Solent Recreation Mitigation Strategy (SRMS) by Bird Aware Solent (the public facing brand of the work of the Solent Recreation Mitigation Partnership (SRMP)[19]. Delivery of housing development planned through the PUSH Spatial Position Statement and local plans, within the zone of influence of the SPAs, is only achievable with coordinated mitigation.

P3.3 Of crucial importance to the delivery of the mitigation strategy is the provision of alternative GI features, such as new/enhanced country park facilities to provide additional countryside recreational opportunities away from the sensitive areas (detailed under other strategic projects in this Section), and a network of refuges ('functionally linked' habitat) and enhancement projects to support SPA bird populations. The delivery of recreational facilities at the coast would not be appropriate where likely to increase disturbance on the Solent SPAs.

P3.4 A further consequence of development pressure in the region is the loss of supporting habitat from direct land-take and indirect effects from development on sites adjacent to the supporting habitat. Supporting habitat is land outside of the designated area that is protected under the Habitats Regulations[20] due to the fundamental role it plays in supporting the overwintering birds. In the Solent, the supporting habitat is often agricultural land or amenity grasslands.

P3.5 The Solent Waders and Brent Goose Strategy (SWBGS)[21] aims to protect this network of supporting habitat. Guidance on Mitigation and Offsetting Requirements has been prepared by the SWBGS Steering Group[22] in consultation with the local planning authorities. Whilst it is preferred that development on these sites is avoided in the first instance, the significant development pressure in the region has been

[19] Bird Aware Solent (2017) Solent Recreation Mitigation Strategy
[20] The Conservation of Habitats and Species Regulations 2017 (as amended)
[21] Solent Waders and Brent Goose Strategy Guidance on Mitigation and Off-setting Requirements Final Report October 2018
[22] The partnership Steering Group includes Natural England, Hampshire and Isle of Wight Wildlife Trust (HIWWT), County Ecologists, Royal Society for the Protection of Birds (RSPB) and East Solent Coastal Partnership (ESCP).

recognised and a pragmatic way forward has been developed to secure a network of permanent bird reserves to mitigate the loss of sites used by Brent Geese and waders at high tides. This approach supports the aims of the Bird Aware Solent mitigation strategy.

Project Aims

P3.6 The aims of this project are to:

- Contribute to enabling growth and development in the PUSH sub-region.
- Provide strategic bird reserves and improved connectivity and enhancement of the network for Solent SPA species and other wildlife.
- Mitigate the impacts of recreational disturbance on waders and brent geese.

How will the project be delivered?

P3.7 The project will be delivered through the implementation of a number of sub-projects, which collectively are of strategic significance for the PUSH sub-region. In addition to the projects identified below, further suitable sub-projects will be identified and delivered as opportunities are identified.

Who needs to be involved?

P3.8 Natural England, Hampshire Wildlife Trust, Bird Aware Solent, Solent Waders and Brent Goose Strategy Steering Group, Hampshire County Council and relevant PUSH constituent authorities that have habitat mitigation areas and coastal sectors located within their administrative areas and/or whose development will be enabled. Housebuilders, planning agents and landowners will also play a crucial role in the selection and delivery of sites. Lead partners are set out for each sub-project, below.

How much is it likely to cost?

P3.9 As delivery of the whole project will be achieved as sub-project opportunities arise it is not possible to provide a realistic total estimate. Estimates for current proposed sub-projects are provided below where available.

Where are the funds likely to come from?

P3.10 The most likely sources of funding include Solent LEP; Community Infrastructure Levy (CIL); mitigation packages provided through Section 106 agreements, local planning authority capital spending programmes; and Heritage Lottery Fund (HLF).

Sub-Projects

P3(a) Strategic Waders and Brent Goose Project Coordinator

Location

The whole of the South Hampshire area that comprises the Solent SPA designated sites and supporting habitat network.

Description

Strategic Bird Reserves and enhancement projects, as well as access management measures, are required across the whole of the Solent network to deliver the mitigation to enable development in the PUSH sub-region.

The Bird Aware Solent mitigation strategy includes site specific and visitor management projects to address recreational disturbance. For supporting habitat, the SWBGS guidance sets out that some mitigation can be delivered by funding the management and maintenance of strategic bird reserves and other enhancement projects across the network.

Local planning authorities are already securing funding from developments, via section 106 agreements, to be used to enhance, manage and monitor the wider Solent waders and brent goose ecological network. This funding is currently managed by each respective local authority and will be used to support schemes across the network, including those in neighbouring authority boundaries. Each local planning authority needs to secure appropriate enhancement projects to offset the loss of this supporting habitat in order for development to proceed.

A Strategic Waders and Brent Goose Project Coordinator will provide a dedicated resource to facilitate the work. The role of the coordinator will be to:

- provide advice on the location and design of strategic bird reserves and enhancement projects;
- coordinate and facilitate site-specific and visitor management projects;
- cost, manage and ensure delivery of the projects with landowners, local planning authorities and key stakeholders; and
- ensure the long term monitoring of projects to evaluate effectiveness.

The coordinator will also track and manage the developer contributions arising from the Solent Waders and Brent Goose Strategy. The role will prevent the duplication of time and work for local planning authorities, thereby helping with resources and achieving economies of scale.

Economic and other benefits

The project will help mitigate the impact of residential development growth on Solent Natura 2000 sites and their qualifying species from loss of supporting habitat and increased recreational disturbance near the South Hampshire coast.

Securing a network of permanent reserves across the Solent helps facilitate development across South Hampshire and also secures biodiversity and environmental gain. It will protect and enrich the unique and highly valued Solent landscape and improve the quality of the Solent's natural capital, leading to associated socio-economic and well-being benefits.

Who needs to be involved?

Bird Aware Solent (lead partner), Natural England, Hampshire Wildlife Trust, Solent Waders and Brent Goose Strategy Steering Group and relevant PUSH constituent authorities that have habitat mitigation areas and coastal sectors located within their administrative areas and/or whose development will be enabled.

Timescale

On-going through local plan period

Investment required

Approximately £200,000 - to fund 1 FTE post to co-ordinate project work for first 5 years. Review after 5 years.

Where are funds likely to come from?

The most likely sources of funding include Solent LEP; CIL; Section 106 agreements, LPA capital spending programmes, a 10% management fee from SWBGS contributions.

P3(b) Broadmarsh Coastal Park Brent Goose Refuge Project

Location (grid ref: SU 69957 05446)

Description

The Broadmarsh Coastal Park Brent Goose Refuge project site is currently used for informal recreation, including two car parks extending to 7.7ha, and is bounded by Langstone Harbour to the south and Harts Farm Way to the north. Another car park, boat storage and a slipway are located to the east.

The project will provide a permanent fenced refuge containing a mix of grassland and winter wheat between September and April. The eastern half of the site is a Secondary Support Area whilst the western side is a Core Site. Though the latter is used by relatively few birds, the adjacent foreshore is hugely important for the SPA species. There is potential to significantly improve the site for SPA species through improved management.

The use of the site for informal recreation will be actively encouraged, particularly the eastern side of the site which is less suitable for SPA species, and around the edge of the site if there is suitable screening.

Additional refuges will be required to provide habitat for Brent Geese and other wader species to offset the loss of sites in the network of sites used by the SPA species. Sites are likely to provide more suitable habitats for supporting SPA/Ramsar bird species where they are large, close to coastal habitats, contain improved grassland, are free from significant disturbance.

The project will clearly integrate with the objectives of the Solent Waders and Brent Goose Strategy 2019 and complement the Bird Aware Solent project.

Economic and other benefits

The project will provide a suitable replacement habitat to offset the impact of development at Campdown (H40) which is a Primary Support Area and Secondary Support Area to mitigate the established direct significant effect on the Chichester and Langstone SPA.

The delivery of the goose refuge will provide the following benefits:

- Enable mixed-use development of about 560 dwellings, a convenience store, open space and community centre with sporting facilities at Campdown.
- Raise awareness of the SPA species and their importance, particularly those using the site for informal recreation.

Who needs to be involved?

Havant Borough Council (lead partner); Natural England; Solent Waders and Brent Goose Partnership; Bird Aware Solent; and developer.

Timescale

Discussions between the developer and the Council as the landowners are at an early stage, though the project is anticipated to be implemented by 2020/21 before first completions on site.

Investment required

At this stage, the cost of securing replacement habitat, initial habitat management and to develop on-site infrastructure has yet to be established.

Where are the funds likely to come from?

The funding to compensate for the loss of habitat will be secured via legal agreement on grant of planning permission for the Campdown site.

P3(c) Hayling Island Brent Goose Refuge Project

Location (grid ref: SU 71479 01131)

Description

The Hayling Island Brent Goose Refuge project site relates to a series of agricultural fields extending to approximately 34ha between Langstone Harbour and West Lane on Hayling Island.

The project will provide a permanent fenced refuge containing a mix of grassland and winter wheat between September and April. These fields already support substantial numbers of geese and waders when the land is managed appropriately. Whilst the land is managed on a rotational basis at present, securing the land as a wintering bird refuge would provide suitable habitat every winter.

Additional refuges will be required to provide habitat for Brent Geese and other wader species to offset the loss of sites in the network of sites used by the SPA species. Sites are likely to provide more suitable habitats for supporting SPA/Ramsar bird species where they are large, close to coastal habitats, contain improved grassland, are free from significant disturbance.

The project will clearly integrate with the objectives of the Solent Waders and Brent Goose Strategy 2019 and complement the Bird Aware Solent project.

Economic and other benefits

The project will provide a suitable replacement habitat to offset the impact of development on inland Solent Wader and Brent Goose sites.

The delivery of the brent goose refuge will provide the following benefits:

- Enable the delivery of 1,750 new homes across Havant borough (within the 5.6 km developer contribution area) by 2021.

- Raise awareness of the SPA species and their importance, particularly those using the Hayling Billy trail.
- Realignment of the Hayling Billy trail which is a well-used walking, cycling and horse-riding route which is currently subject to coastal erosion.

Who needs to be involved?
Havant Borough Council (lead partner); Natural England; Solent Waders and Brent Goose Partnership; Bird Aware Solent; and developers and landowners.

Timescale
Discussions with the landowner(s) are ongoing, though subject to the terms of any lease agreement, the project could be implemented relatively quickly.

Investment required
An estimated £370,000 is required to secure the management of the land through a long lease. £82,000 is required for initial habitat management and to develop on-site infrastructure such as fencing, hides, and interpretative signage.

Where are the funds likely to come from?
The proposal already benefits from grant funding (£225,000) from the Solent Local Enterprise Partnership's Solent Growth Deal but this will only part fund the delivery of the refuge. Whilst this is a more cost effective than purchasing the land, there currently remains a funding shortfall of £227,000.

Additional funding will need to be identified, but this may include funding for site specific Bird Aware projects as well as developer contributions through Section 106 obligations / Community Infrastructure Levy (CIL).

P3(d) Ecological Enhancements - North Portsea Defences and Modified Estuary Edges Project

Detailed as a sub-project under Strategic Project (P2), above

P4. New Forest Strategic GI & European Sites Mitigation Project

Brief Description

P4.1 It has been recognised through the New Forest National Park Management Plan 2015-2020 and New Forest District (outside the National Park) Local Plan 2009-2026 and Local Plan Review 2016-2036 that future residential development close to the New Forest, including within the PUSH sub-region, will increase visitor pressure on the European protected habitats of this area. Without appropriate avoidance and mitigation measures, increasing recreational impacts arising from new development are likely to have a detrimental effect on the integrity of the New Forest Special Area of Conservation (SAC), Special Protection Area (SPA) and Ramsar site. Mitigation to address these recreational impacts includes the need for additional visitor management measures together with the provision of suitable alternative natural green spaces (SANGs) and routes for recreational use in less sensitive locations, aimed at reducing visits to protected areas.

P4.2 In addition to specific sub-projects listed below there is a need to:

- Maintain a strategic green gap between Eling and Marchwood (south of Totton), encompassing Eling Conservation Area and Goatee Shore;
- Provide green links between the New Forest National Park and Testwood Lakes, and to the north of Totton as part of the strategic housing allocation;
- Maintain strong GI links between the New Forest and the Coast along the Waterside – between Marchwood and Hythe, and Hythe and Fawley.

Project Aims

P4.3 The aims of this project are to:

- Contribute to enabling growth and development in the PUSH sub-region.
- Help reduce recreational pressure on the New Forest European Natura 2000 sites by providing suitable alternative natural greenspace and associated recreational opportunities.
- Provide increased recreational capacity to service the existing and expanding South Hampshire population.
- Provide additional habitat areas and improved connectivity for wildlife.
- Improve the health and wellbeing of local communities by providing improved recreational opportunities and access to nature.

How will the project be delivered?

P4.4 The project will be delivered through the implementation of a number of sub-projects, which collectively are of strategic significance for the PUSH sub-region. In addition to the projects identified below, further suitable sub-projects will be identified and delivered as opportunities are identified.

Who needs to be involved?

P4.5 Partners for each sub-project are set out in the following sections.

Sub-Projects

P4(a) New Forest Sustainable Waterways Recreation Project

Location
The project will operate across the New Forest area and include its river catchments and geographically specific projects will be developed.

Description
The New Forest is a recreational hub for the area and receives a large influx of visitors throughout the year, particularly in the summer. Growth and development within the PUSH sub-region will lead to an increase in recreational pressure on the New Forest Natura 2000 sites. This project will increase awareness of the impact that our recreational activities have on water quality and the importance of a thriving environment to the New Forest economy in order to protect and sustain designated and ecologically sensitive areas. The project also provides an opportunity to challenge behaviours not just when visiting the New Forest, but also when visitors return home.

Economic and other benefits
- Help mitigate the impact of growth and development in the PUSH sub-region on the New Forest Natura 2000 sites from growing recreational use and demand.
- By raising awareness of the potential impacts that we each have on the natural environment, this project will help change attitudes and behaviours that will benefit the environment beyond the New Forest and across South Hampshire.

Who needs to be involved?
New Forest Catchment Partnership (co-lead partner); New Forest National Park Authority (co-lead partner); New Forest District Council; Forestry Commission; Freshwater Habitats Trust; Other partners to be confirmed.

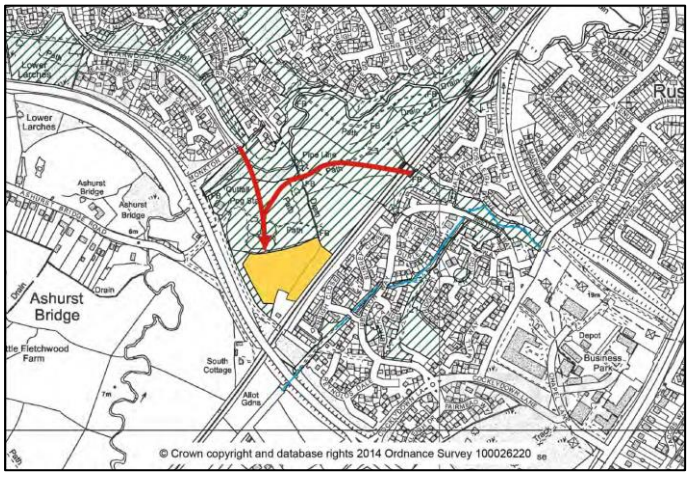
Timescale
Initial funding secured for 2019/20 for pilot study/further project planning work which will test remedies to develop future interventions and work. Much of this will involve behaviour change but there could be scope for on the ground GI work where small wetlands could assist control of pollution.

Investment required
Approximately £60,000 (£20k per year over 3 years) to fund 0.5 FTE post to co-ordinate project work.

Where are the funds likely to come from?
Funding opportunities are being identified and in kind contributions are being sourced from partners.

P4(b) Bartley Park Extension SANG Project

Location (grid ref: SU 34667 12320)



Description

Bartley Park, Totton will be extended to include the area of land south of the skateboard park (1.49ha). This extension will provide additional natural green space for informal recreation. The area will be designed to provide areas of informal natural green space with enhanced biodiversity and will include areas of grassland, including meadow. The footpath network in Bartley Park will be extended to link to the extension area and to Ashurst Bridge Road. There will be improvements to the signposting of recreational walking routes in and around Bartley Park. Information and interpretation boards will be provided, together with an off-lead dog exercise area.

Economic and other benefits

It is estimated that the project will include mitigation of 1,500 visits per annum. The project will enhance the local green infrastructure network providing enhanced recreational opportunities and health and wellbeing benefits for the local densely populated communities and help to reduce/mitigate recreational disturbance pressures on the New Forest Natura 2000 sites from residential development within the PUSH area.

Who needs to be involved?

New Forest District Council (lead partner), local community groups, developers.

Timescale

2019/20 – 2025/26

Investment required

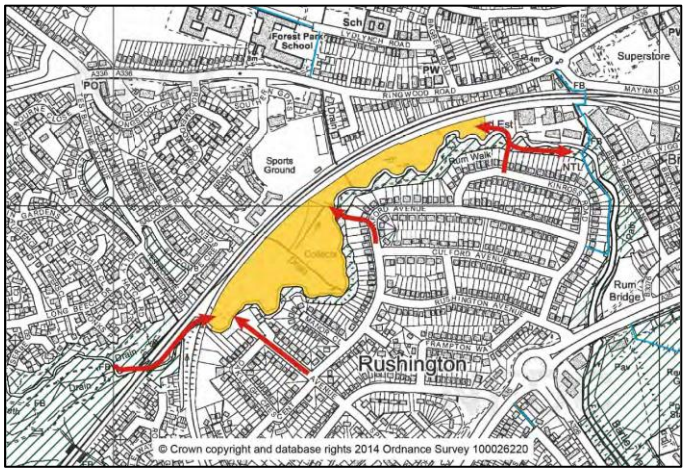
£333,500

Where are the funds likely to come from?

Funding is being identified, but may include developer contributions through Section 106 obligations / Community Infrastructure Levy (CIL).

P4(c) Bartley Water Linear Park (Totton) Project

Location (grid ref: SU 35339 12911)



Description

The Bartley Water Linear Park project includes the creation of a new 4.23ha area of publicly assessable natural green space between the railway line and Bartley Water, Totton, with access from Bartley Avenue, Lackford Avenue and Brokenford Lane. The area will be designed to provide areas of informal natural green space with enhanced biodiversity and will include areas of grassland including meadow. There will be improvements to the signposting of recreational walking routes in and around Bartley Park as well as from Brokenford Lane and Lackford Avenue. Information and interpretation boards will be provided on-site, together with the provision of a footbridge across Bartley Water. A cycleway linking Bartley Park with Brokenford Lane is also proposed through the site.

Economic and other benefits

It is estimated that the project will include mitigation of 4000 visits per annum. The project will enhance the local green infrastructure network providing enhanced recreational opportunities and health and wellbeing benefits for the local densely populated communities and help to reduce/mitigate recreational disturbance pressures on the New Forest Natura 2000 sites from residential development within the PUSH area.

Who needs to be involved?

New Forest District Council (lead partner), local community groups, developers.

Timescale

2019/20 – 2025/26

Investment required

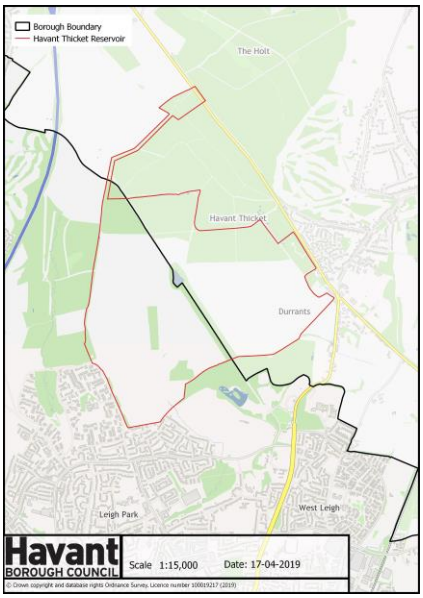
£957,000

Where are the funds likely to come from?

Funding is being identified, but may include developer contributions through Section 106 obligations / Community Infrastructure Levy (CIL).

P5. Havant Thicket Reservoir GI Project

Location (grid ref: SU 71601 09867)



Brief Description

P5.1 Havant Thicket is an area of woodland and open space north of Leigh Park, Havant, east of Rowlands Castle and close to Staunton Country Park to the south. Part of the area is planned to become a Portsmouth Water winter storage reservoir to hold around 8,700 million litres of water, supplied from surplus winter yield from the prolific Havant & Bedhampton Springs. A major component of the reservoir initiative, and the subject of this project, will be associated green (and blue) infrastructure, including new footpaths, cycleway, bridleway, open water, marshland, reedbed, new woodland planting and wildflower meadow. The project will also include a visitor centre and water sports facilities. An outline plan of the reservoir project and supporting information is available[23]. The creation of the reservoir and associated facilities are supported in the Water Resource Management Plans (WRMP) of both Portsmouth Water and Southern Water.

Project Aims

P5.2 The aims of this project are to:

- Contribute to enabling growth and development in the PUSH sub-region by providing much needed potable water distribution capacity.
- Help reduce recreational pressure on the coast by providing alternative attractive recreational facilities within easy reach of a large urban population, which complements that provided by Staunton Country Park.

[23] https://www.portsmouthwater.co.uk/havant-thicket-reservoir/

- Improve recreational access connectivity and contribute to the Strategic Recreation Access Network Project.
- Provide significant additional aquatic, wetland and terrestrial habitat area and improved connectivity for wildlife.
- Potential to improve the health and wellbeing of local communities by providing enhanced walking, cycling and water related recreational opportunities.

How will the project be delivered?

P5.3 The project will be delivered through partnership working between the three landowners, the Forestry Commission, Hampshire County Council, Portsmouth Water and local volunteers. The project has been broken down into discrete phases. The project lead for each phase will be determined by the dominant land owner for that aspect of the project.

Who needs to be involved?

P5.4 Portsmouth Water (lead partner); Havant Borough Council; Hampshire County Council Countryside Service; Forestry Commission; East Hants District Council; Natural England; Historic England; Rowlands Castle Parish Council; Leigh Park Community Board; Havant Thicket Winter Storage Reservoir Stakeholder Group.

Timescale

P5.5 The reservoir will be constructed in phases and delivered by 2029

Investment required

P5.6 Project costs are being determined and will be based on the final agreed options, e.g. level of recreational facilities incorporated and additional facilities required by project partners beyond the scope Portsmouth Water's masterplan.

Where are the funds likely to come from?

P5.7 Most funding will come from Portsmouth Water and Southern Water. The potential scope of additional funding to deliver additional green infrastructure will be explored.

P6. Horsea Island Country Park Development Project

Location (grid ref: SU 64118 04485)

Description

P6.1 The project is the continued development of Horsea Island Country Park and will create around 52ha of new strategic scale open green space for people to access and enjoy, most of which will be semi-natural areas with extensive tree planting and meadow creation. Masterplans for the site are available on the Portsmouth City Council website[24]

Economic and other benefits

P6.2 The further development of the country park will provide the following benefits:

- Help reduce recreational disturbance pressures from the existing population and planned increases in residential development on nearby protected habitats, particularly the Solent SPAs.
- Help to deliver development and regeneration at Port Solent and Horsea Island
- Maintain and improve green space provision and access to nature to an increasing population in Portsmouth, without which provision/access per head of population would decrease.
- Improve the health and wellbeing of local communities and provide additional recreational opportunities, particularly walking, jogging and cycling.
- Enhance the local green infrastructure network, improving access and habitat linkages.

Who needs to be involved?

P6.3 Portsmouth City Council (lead partner); local community groups.

[24] https://www.portsmouth.gov.uk/ext/development-and-planning/regeneration/horsea-island-country-park

Timescale

P6.4 The anticipated opening date for the strategic country park is 2020.

Investment required

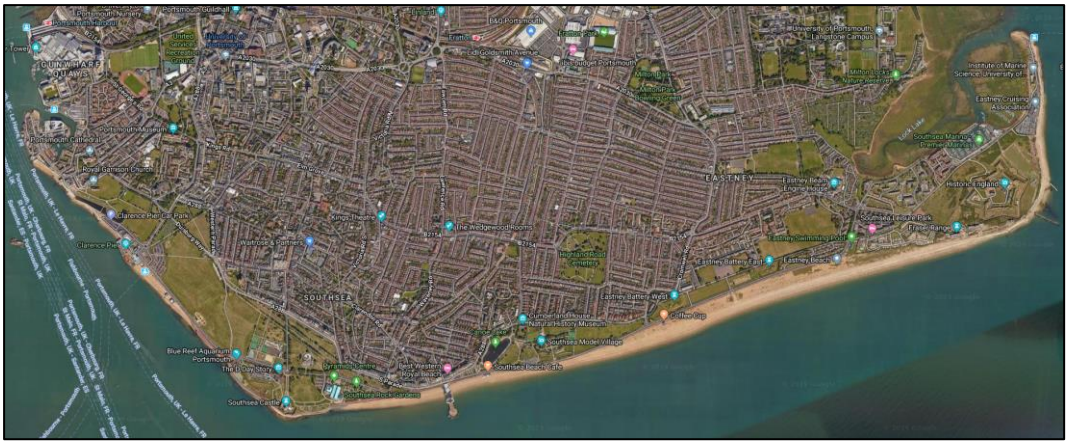
P6.5 The country park is being brought forward under existing arrangements with Veolia as part of the remediation of the site. Additional opportunities for enhancements may be identified and costed as and when opportunities arise.

Where are the funds likely to come from?

P6.6 The project has benefitted from £390,000 from the Local Enterprise Partnership Growth Deal. Further funding opportunities will be identified along with enhancements.

P7. Southsea Seafront

Location (grid ref: SZ 65835 98299 – centre point of Seafront)



Brief Description

P7.1 As a seafront with a beach, a promenade and Southsea Common adjoining, Southsea is unique in the sub-region. It is the most visited part of the Solent coast, both generally and also for a number of specific activities. The Seafront is popular for informal recreational such as walking or playing at the Splash Pad at Canoe Lake, or enjoying the vista across to the Isle of Wight. There are a number of issues which need to be addressed for the Seafront to reach its full potential as a recreational resource and a driver of economic growth.

P7.2 The coastline along Southsea Seafront is maintained by Portsmouth City Council using permissive power under the Coastal Protection Act. The seafront has a combination of man-made coastal defences and natural beaches that combine to manage flood and coastal risk to thousands of properties along the seafront. The seafront and associated facilities provide significant green infrastructure resources.

Project Aims

P7.3 The overall aim for the seafront is to build on the current successes of the area and improve the offer to residents, visitors and wildlife. There are a number of highly valued assets including Southsea Castle, Canoe Lake and Eastney Beach. The intention is to enhance the current attractions, improve the links and connectivity between them to ensure that more people visit and that they come back more often.

P7.4 Benefits of the projects will include:

- Increased numbers of people using Southsea Seafront year round by ensuring a range of experiences suited to a wide spectrum of age groups.
- Help reduce recreational disturbance pressures on the Solent SPAs.

- An enhanced role in the city's economy for Southsea Seafront through identifying opportunities for new attractions that bring life to the area during the day and into the evening.
- The best use being made of existing Southsea Seafront assets such as Southsea Castle.
- High quality improvements to the public realm, including clearer signage and information and public art.
- Improved connections between Southsea Seafront and other parts of the city and an increase in the number of people using public transport, walking and cycling to access the Seafront.
- A raised awareness of the rare and valuable habitat located at Eastney beach and protection of this important natural resource.

How will the project be delivered?

P7.5 Portsmouth City Council has produced a masterplan for the seafront, which is currently being updated. The masterplan is intended to guide improvements to the Seafront area. It contains proposals that respond to the overarching vision and aims of the Seafront Strategy (2010-26)[25]. The masterplan seeks to:

- Set out a framework of guidance relating to the Southsea Seafront area as a whole, including opportunities for improving accessibility and ease of movement
- Articulate a clear identity and role for each of Southsea Seafront's six unique character areas and set out the opportunities for development and public realm improvements
- Establish a high quality baseline for proposals including design principles, potential mix of uses, and guidance for buildings and public spaces.

P7.6 This draft masterplan demonstrates that the council is committed to enhancing and improving Southsea Seafront. The document provides a foundation for investment and change by identifying a vision for the area. It will provide landowners and developers with guidance about what would be appropriate at the Seafront and how proposals will be assessed.

P7.7 The City Council has a major role to play in delivering public realm improvements at Southsea Seafront as much of the land in the area is within its ownership. The Council cannot, however, deliver all the proposals outlined in the framework on its own and will work with other stakeholders across the private and public sectors to realise the vision for the area. Close collaboration and partnership working with investors and landowners will also be required.

Who needs to be involved?

P7.8 Portsmouth City Council (lead organisation); Eastern Solent Coastal Partnership; Seafront Attractions Forum; Friends of the Seafront; Seafront Traders Forum; East Southsea Residents Forum.

[25] https://www.portsmouth.gov.uk/ext/development-and-planning/regeneration/southsea-seafront-strategy

Timescale

P7.9 Not all the opportunities will be realised immediately. It is anticipated that the projects identified in the Seafront Strategy will be delivered as and when funding opportunities allow.

How much is it likely to cost?

P7.10 At this stage the proposals contained in the framework are not fully costed or funded. Rather, it is intended that the framework will provide the basis for proposals to be taken forward, giving stakeholders a degree of certainty as to the potential opportunities at Southsea Seafront. It will also act as a guide for future city council investment at the Seafront and will provide a framework for future bids for public funding.

Where are the funds likely to come from?

P7.11 The Council will be dependent on external funding to deliver the changes set out in the Seafront Strategy. It is anticipated that some of the works to the Promenade will be incorporated into the planned Coastal Defence Programme. Some proposals involving improvements to transport and highways may be incorporated into the city's Local Transport Plan. Other proposals could attract grants from Heritage and Sports Lottery funding bodies. Funding may also come from the Community Infrastructure Levy (CIL).

P8. England Coast Path Initiative

Brief description

P8.1 The Marine and Coastal Access Act 2009 (Part 9) places a duty on Natural England to improve access to the English coast through the creation of a continuous long-distance walking route around the coast and a margin of accessible land along it. The project will provide a significant GI resource and enhance connectivity across the PUSH sub-region.

Desired outcomes

P8.2 The desired outcomes of this project are to:

- Deliver a coastal route that meets the requirements of the 2009 Act.
- Draw people away from sections of the coast sensitive to recreational disturbance on Solent SPAs.
- Provide a multi-user trail for South Hampshire's residents and visitors.
- Provide greater connectivity with the wider recreational network and GI features and improve the health and wellbeing of South Hampshire residents.
- Improve access connections to the England Coastal Path.
- Protect and enhance biodiversity by providing a green corridor that connects habitats and promotes species movement.
- Promote sustainable tourism opportunities.
- Promote sustainable transport by linking coastal communities with an off-road multi-user trail.

How will the project be delivered?

P8.3 As per NE446 – Coastal Access: Natural England's Approved Scheme, as amended[26]. Proposals for much of the route across South Hampshire are still being developed. It is crucial that the implementation of the initiative does not conflict with the objectives of Bird Aware Solent and delivery of its Solent Recreation Mitigation Strategy (SRMS).

Who needs to be involved?

P8.4 The project is being led by Natural England. For South Hampshire – PUSH, Hampshire County Council and Bird Aware Solent are key partners.

How much is it likely to cost?

P8.5 The cost of this project has yet to be quantified.

Where are the funds likely to come from?

P8.6 Sources of funding for this project are being explored.

[26] https://www.gov.uk/government/publications/england-coast-path-in-the-south-of-england

P9. Strategic Transport Corridor GI Project

Brief Description

P9.1 Vegetated road and rail corridors are important strategic GI features in the South Hampshire landscape and therefore integral parts of the Green Grid. Long, continuous vegetated corridors on road and rail embankments, together with areas of vegetation associated with major roundabouts, road junctions and naturalised road drainage features can support biodiversity as well as the movement of wildlife across the South Hampshire and neighbouring landscapes and between high value sites, when appropriately managed. Disused transport corridors may also provide important recreational routes for walking and cycling as well as providing refuges for wildlife.

P9.2 Securing appropriate habitat management of vegetation within active road and rail corridors is crucial to the contribution that these linear GI assets make and can make to the biodiversity of South Hampshire and beyond.

Project Aims

P9.3 The aims of this project are to:

- Contribute to enabling growth and development in the PUSH sub-region by enhancing the Green Grid.
- Enhance South Hampshire's biodiversity by seeking the optimum management for transport corridor habitats.
- Enhance habitat connectivity across the South Hampshire Green Grid.
- Reduce the habitat fragmentation impact of transport corridors on South Hampshire's biodiversity

How will the project be delivered?

P9.4 The project will be delivered by seeking to secure the best achievable habitat management of strategic transport corridor verges/embankments as part of the planned cyclical management of such by the appropriate management agencies.

Who needs to be involved?

P9.5 Highways England (lead partner - trunk routes); Hampshire Highways Authority (lead partner - non-trunk routes); Network Rail (lead partner - rail corridors); Natural England; and PUSH partners

Timescale

P9.6 On-going

How much is it likely to cost?

P9.7 Costs are internal for each agency.

Where are the funds likely to come from?

P9.8 Each management agency will source funding from within their respective capital vegetation management budgets. Additional funding could be sought to enhance management at particular locations.

P10. Greening the Urban Environment Initiative

Brief Description

P10.1 This initiative is included in this Implementation Plan to represent the myriad and diverse smaller scale local GI projects that will be required to enable the development, regeneration and enhancement of urban areas across South Hampshire, whilst protecting and enhancing the natural environment.

P10.2 These projects will also help resolve issues of local inadequacy in GI provision, contribute to local character, identity and community cohesion, improve the health and wellbeing of local communities, mitigate the impacts of development and make urban areas more resilient to the affects of climate change.

P10.3 Projects will include, but not exclusively, the creation, provision or enhancement of:

- Green Roofs and Walls
- Street trees
- Smaller 'suitable alternative natural greenspaces' (SANGs)
- Local greenways
- Local sustainable drainage systems (SuDS)
- Pocket parks and Picnic sites
- Local Green Space (designated)
- Local Wildlife Sites and Local Nature Reserves (LNR)
- Grass sports pitches
- Small urban and urban-fringe woodlands
- Urban watercourses and ponds
- Local rights of way
- Environmental / countryside interpretation
- The diversification of park and pitch management

P10.4 Where GI projects do not meet the criteria for specific delivery through this Plan, they will be delivered by PUSH constituent planning authorities, local communities and developers, through local GI planning and delivery. Nevertheless, these local GI projects are a vital component of South Hampshire's GI network. The consideration of the current network of private residential gardens as an important part of the overall GI network will help maximise the delivery of GI benefits.

P10.5 It is important that the delivery of strategic GI projects is integrated wherever possible with the delivery of local GI projects and vice versa. Any GI Implementation Group established to oversee and monitor the delivery of this Plan will need to be aware of local GI planning and delivery to ensure integration.

P10.6 Funding and resources are likely to come from CIL; Section 106 agreements; developer implementation, community groups; Landfill Communities Fund; and other sources of local resourcing. Costs will vary from a few thousand pounds to hundreds of thousands of pounds depending on the nature and scale of the proposed works. A number of cost and value estimators for local GI delivery are available[27].

[27] https://www.tcpa.org.uk/green-infrastructure-research-database

5. GI Delivery

5.1 This Implementation Plan is about supporting the delivery of new GI projects to support the sustainable growth and development of South Hampshire. The delivery of the strategic projects identified will require considerable resources at a time when there is limited public sector funding. The continued uncertainty surrounding the economy also makes the delivery of projects challenging for lead organisations. Each project will require its own approach in terms of how most effectively it can be delivered.

Delivery of strategic projects

5.2 For each strategic project and component sub-project there will be a lead partner who will be responsible for its delivery, supported by partner organisations. It will be for each lead partner to determine the approach it will want to adopt to manage the project.

5.3 To provide an overview of progress in delivering this Plan a GI Implementation Working Group representing the key partners (Appendix 5) should be established to review progress and assist in the resolution of implementation issues and barriers. To provide a link to the delivery of the wider PUSH Spatial Position Statement 2016 the group could report to the PUSH Planning Officers Group (POG).

Local Nature Partnership

5.4 The Hampshire and Isle of Wight Local Nature Partnership (LNP) comprises a wide range of organisations who believe “that a healthy natural environment is critical to economic prosperity and the health and wellbeing of society, and therefore investing in nature is essential for a sustainable future.” The LNP’s aims are to:

- Protect and improve the natural environment on land and at sea, creating bigger, better and more joined up places for nature;
- Promote a sustainable green economy in which economic prosperity and the health of our natural resources sustain each other;
- Reconnect people and nature - strengthening the connections between people and nature and improving the health of both; and
- Promote the need to invest in nature for the many benefits and ecosystem services it provides and to put its value at the heart of decision-making right across the two counties.

5.5 The LNP, through the Hampshire Biodiversity Information Service (HBIC), provided the Local Ecological Networks map for the GI Strategy (see Appendix 4) and the LNP is a key partner in delivering improvements to South Hampshire’s Green Grid.

Bird Aware Solent

5.6 The aim of Bird Aware Solent, the public facing brand of the Solent Recreation Mitigation Partnership (SRMP)[28], is to facilitate joint working by local authorities and other bodies on the implementation of measures to mitigate the impact of additional recreational activity resulting from planned housing development on the integrity of the three Special Protection Areas (SPA) in the Solent. This will be achieved through the delivery of the Solent Recreation Mitigation Strategy (SRMS)[29]. PUSH will work closely with Bird Aware Solent to deliver the GI necessary to deliver the SRMS and enable growth and development.

Catchment Partnerships

5.7 South Hampshire is covered by four Water Framework Directive (WFD) Catchments - New Forest; Test and Itchen; East Hampshire; and Arun and Western Streams. Catchment Partnerships, including a wide range of stakeholders, were established for each catchment and each partnership has prepared a Catchment Action Plan for its respective geographic area. It is crucial that PUSH works closely with relevant Catchment Partnerships in delivering this Implementation Plan, in particular project P2. Strategic Flood Risk & Water Quality Project. Catchment action Plans incorporate significant GI content and projects.

Engaging with the Solent LEP

5.8 The quality of South Hampshire's environment has an important role to play in the development of a successful local economy. The Solent Local Enterprise Partnership (LEP) is the key interface and lead for economic development in the Solent and it will be important to complement the work of the LEP and work jointly with them.

5.9 PUSH has been successful in bidding to the Solent LEP's Local Growth Fund to enable the creation of four new/expanded strategic Country Parks / green spaces in 2015 – 2018 as part of the work undertaken by the Solent Recreation Mitigation Partnership (SRMP), also known as Bird Aware Solent, in delivering the Solent Recreation Mitigation Strategy (SRMS).

Emerging GI Plans for South Hampshire

5.10 A number of PUSH constituent authorities and adjacent authorities are currently preparing or updating GI strategies/plans for all or part their respective administrative areas. A 'live' list of relevant GI strategies, plans and assessments prepared or in preparation is maintained by PUSH[30]. It is likely, therefore, that additional GI projects and opportunities will come forward that are of strategic importance to the sub-region

[28] http://www.birdaware.org/
[29] Bird Aware Solent (2017) Solent Recreation Mitigation Strategy
[30] https://www.push.gov.uk/work/planning-and-infrastructure/green-infrastructure-flooding-water-management/

will need to be incorporated into or considered by this Plan to ensure integration across South Hampshire and with surrounding areas. As such, this plan needs to be regularly reviewed and where necessary updated.

Funding

5.11 The delivery of strategic GI will require significant resources both financial and time invested by partner organisations in bringing projects forward. It will be for each lead partner, with support from other key GI partners (see Appendix 5), to decide the funding mechanisms both capital and revenue for the projects it is responsible for. Making best use of the various funding streams available will require innovative approaches to secure the resources necessary to bring strategic GI projects forward, particularly at a time when the capacity of the public sector to support GI initiatives is constrained. Smaller more limited funding sources may be useful to provide the match-funding necessary to draw down more substantial financial resources.

5.12 The GI Strategy identified a number of potential sources of funding and other resources for GI projects, updated below:

- Solent LEP Local Growth Fund
- National Lottery Heritage Funding (NHLF)
- Developer contributions e.g. Section 106 agreements and Community Infrastructure Levy (CIL)
- Developer implemented (e.g. SuDS)
- Landfill Communities Fund
- Private endowments and Trusts
- Charitable Trusts
- The voluntary sector
- Other National Lottery grants
- Local Authorities
    - Capital spending programmes
    - Small projects grant funding
- Flood and coastal erosion funding
    - Flood and coastal erosion risk management Grant in Aid (FCERM GiA)
    - Local Levy
    - Natural Flood Management (NFM) funding
    - Water Environment Grant (WEG)
- Rural grants and payments
    - English Woodland Grant Scheme
    - Countryside Stewardship
    - Environmental Land Management Scheme (ELMS) (when launched)
    - England Coast Path Establishment Fund (ECPEF)
- Government Marginal Viability Funding (e.g. for SANGs)
- Post-BREXIT funding opportunities.

5.13 One of the key functions of this Plan is to provide a base for exploring the extent to which the sources referred to above and others, together with other investment programmes for non-GI specific projects, can help support the development of the projects identified and other elements of GI.

Long-term management

5.14 Long-term management of created or enhanced GI features is crucial to ensure that the South Hampshire Green Grid continues to deliver planned benefits to the area's communities and wildlife and continues to enable growth and prosperity. It is essential to build maintenance costs into feasibility and project design to ensure long-term viability.

5.15 As important as maintenance funding is management agency. It is crucial that the management of GI features/facilities is sustainable, and the management agency chosen or created has the appropriate governance to enable positive management and long-term resource acquisition. Funding is available for the establishment of charitable bodies, voluntary groups, etc. (e.g. National Lottery, charitable foundations). Management of GI features/facilities or elements of these may be undertaken by:

- Local planning authorities
- Parish and town councils
- Charitable bodies, e.g. Wildlife Trusts or bodies created specifically for the feature or facility.
- Community Development Trusts
- Management Companies
- Co-operatives and partnerships
- Voluntary organisations

Next steps and monitoring

5.16 This Plan takes forward the South Hampshire GI Strategy in identifying a number of key projects of sub-regional importance on which PUSH and its partners will focus their resources. The next phase of the delivery process will be for each lead organisation to develop in more detail how their projects will be taken forward and delivered. This is likely to include feasibility studies and, where appropriate, master planning, detailed estimates of cost, sources of funding and timetable for implementation.

5.17 It is crucial that this Plan remains up to date, particularly as PUSH constituent local planning authorities continue to develop their own GI strategies/plans and Local Plan processes, and as new opportunities arise. As such it is recommended that this Plan is reviewed, updated and project delivery monitored on an annual basis by a GI Implementation Group formed from the PUSH GI Steering Group. As part of the monitoring process a natural capital approach could be employed to help measure the success of project delivery. The Natural Capital Planning Tool[31] and other similar tools[32] may be useful in this regard.

[31] http://ncptool.com/
[32] https://ecosystemsknowledge.net/tool

Appendix 1: Vision and Objectives

Vision for the South Hampshire GI Strategy 2017-2034:

Delivering an integrated and multifunctional green infrastructure network of South Hampshire's distinctive local environments that can adapt to climate change and is managed and valued by South Hampshire's communities as part of sustainable, prosperous and healthy lifestyles.

The key aims of the GI Strategy are to:

- Recognise the importance and value of GI to growth and prosperity in South Hampshire;
- Provide a strategic policy framework;
- Identify the key components of the strategic green grid for South Hampshire;
- Identify how GI can be used to mitigate the recreational impact of new housing development on New Forest, River Itchen, Solent European sites and other protected habitats;
- Set the framework for the identification of strategic GI projects;
- Promote a co-ordinated and collaborative approach to maintaining and enhancing South Hampshire's GI network.

The Objectives for the GI Strategy are to:

- Enable and complement planned sustainable economic growth and development.
- Contribute to reducing flood risk on local communities.
- Improve the health and well being of communities by providing green areas for recreation and by addressing the impacts of noise, air and water pollution.
- Help communities and the natural environment adapt to a changing climate.
- Protect and enhance biodiversity, providing mitigation for the impact of development taking place within the sub-region and in-combination with that taking place adjacent to it.
- Promote access to GI through greater connectivity of spaces, in so far as this does not compromise environmental sensitivities.
- Create new areas of GI to serve new and existing developments.
- Where appropriate, maximise multifunctionality of new and existing GI.
- Enhance the quality of the landscape and maintain the distinctiveness of settlement pattern and promote sense of place.
- Provide a strategic framework for locally prepared GI strategies within the sub-region.
- Integrate PUSH strategic GI priorities with those of neighbouring GI strategies / frameworks.

Appendix 2: Green Infrastructure Standards

The provision of high quality, accessible GI both at the strategic and local levels should, wherever possible, be in accordance with agreed standards of provision. Natural England's accessible natural greenspace standards (ANGst)[33] provide a useful benchmark in this regard and compliment other local planning authority open space standards. In order to meet agreed standards in those urban areas where there is inadequate provision of GI, local GI planning may need to look at retrofitting GI or seek opportunities for GI delivery as part of urban regeneration. ANGst recommends that everyone, wherever they live, should have accessible natural greenspace:

- Of at least 2 hectares in size, no more than 300 metres (5 minutes walk) from home;
- At least one accessible 20 hectare site within two kilometre of home;
- One accessible 100 hectare site within five kilometres of home; and
- One accessible 500 hectare site within ten kilometres of home; plus
- A minimum of one hectare of statutory Local Nature Reserve (LNR) per thousand population.

Natural England will begin to roll out a set of reviewed and updated GI standards in line with the aims of the 25 Year Environment Plan[34] from late 2019 onwards. This Plan will be reviewed to incorporate these standards.

In addition, Building with Nature[35] is a nationally recognised initiative that supports the design, implementation and management of green infrastructure. It provides a framework of principles - Building with Nature Standards - that provide planners and developers with the know-how and good practice guidance to deliver high-quality, liveable, places where people can enjoy healthy, sustainable lifestyles.

The planning and delivery of GI projects within the PUSH area must make use of the latest Natural England and Building with Nature GI standards.

[33] http://webarchive.nationalarchives.gov.uk/20150902180000/http://publications.naturalengland.org.uk/publication/40004

[34] HM Government (2018) A Green Future: Our 25 Year Plan to Improve the Environment (p.77). Defra: London

[35] https://www.buildingwithnature.org.uk/

Appendix 3: Named Components of the Green Grid

Special Areas of Conservation
Shortheath Common
Solent Maritime
New Forest
River Itchen
Butser Hill (in Queen Elizabeth Country Park)
Emer Bog (and Baddesley Common)

Special Protection Areas
Portsmouth Harbour
Chichester/Langstone Harbour
New Forest
Solent & Southampton Water

Ramsar Sites
Chichester & Langstone Harbours
Solent & Southampton Water
Portsmouth Harbour
New Forest

Protected Landscapes
South Downs National Park
New Forest National Park

National Nature Reserves
Butser Hill (in Queen Elizabeth Country Park)
North Solent
Old Winchester Hill
Titchfield Haven

South Hampshire Coast
Chichester Harbour AONB
Langstone Harbour
Portsmouth Harbour

Rivers & Wildlife corridors
River Itchen
River Test
River Hamble
River Meon
Heritage Stream
River Wallington
Monks Brook
Tanner's Brook
Itchen Valley
Lower Test Valley

Recreation areas
Large areas of recreational woodland
Southsea Seafront and Common
Southampton Common
Forest of Bere
Stokes Bay
Lee on the Solent
Hayling Island seafront

Established Country Parks
Manor Farm Country Park
Itchen Valley Country Park
Royal Victoria Country Park
Staunton Country Park
Queen Elizabeth Country Park
Lepe Country Park
Lakeside Country Park
Alver Valley Country Park
Horsea Island Country Park (not yet open in 2019)

Other Visitor facilities
Titchfield Haven
Testwood Lakes
Portsdown Hill
Westwood Woodland Park
Farlington Marshes Nature Reserve

National Cycle Network Routes
Route 23 (Reading to Southampton via Eastleigh, Winchester and Basingstoke)
Route 24) Bath to Salisbury joining route 23 at Eastleigh)
Route 2 (the South Coast Route between Dover in Kent and St Austell in Cornwall via Hayling Island, Portsmouth, Gosport, Southampton and the New Forest)

Long Distance Footpaths
England Coast Path – South East
Solent Way (60 miles)
Test Way (44 miles)
Itchen Way (30 miles)
Shipwrights Way (50 miles)
Meon Valley Trail
South Downs Way (footpath and bridleway)
Pilgrims Trail
Avon Valley Path
Hangers Way
Staunton Way
Wayfarers Walk

Appendix 4: Green Grid Components – Further Information

Statutory Protected Sites

Wetlands of International Importance (Ramsar sites), European Sites (Natura 2000 sites) such as Special Areas of Conservation (SAC) and Special Protection Areas (SPA), and national Sites of Special Scientific Interest (SSSI) and National Nature Reserves (NNR) all benefit from strong legal protection. They are the key biodiversity assets of the region and can be regarded as core areas for biodiversity conservation. The Green Grid is intended to help buffer these areas against the effects of development, increase their resilience to climate change and other pressures, contribute to their positive management, connect them with their wider landscape, and enhance the nature conservation value of adjacent areas to support their ecology and allow the expansion of their habitats and species populations.

National Parks and Areas of Outstanding Natural Beauty (AONB) are afforded the highest status of protection in relation to landscape and scenic beauty and the PUSH authorities have a legal duty to 'have regard' to the purposes of National Parks and AONBs when preparing plans and projects that could affect these designated areas. Likewise, Scheduled Ancient Monuments (SAM) and sites on the Historic England's Register of Historic Parks and Gardens benefit from legal protection. They represent some of South Hampshire's key historic and cultural assets, which are often GI assets in their own right. GI planning can contribute to their protection, management and improve their accessibility.

Sites of Importance for Nature Conservation (SINCs)

SINCs are sites of importance for nature conservation at the city/county level and they are identified under a common framework of agreed criteria for Hampshire. They can range in size from small fields to extensive areas of woodland. They support valuable habitats and species and are important nodes of biodiversity. When viewed in total, they provide a large and significant network of biodiversity resources. There are over 4,000 of these sites across Hampshire covering 9% of the county. Collectively they form a valuable network of biodiversity and offer considerable opportunities for access to nature. The Lawton Review recommended that Government provide greater protection to other priority habitats and features that form part of ecological networks, particularly Local Wildlife Sites, ancient woodland and other priority habitats.

Biodiversity Opportunity Areas

The England Biodiversity Strategy[36] focuses on restoring biodiversity at the landscape scale. This involves maintenance, enhancement and re-connection of fragmented habitats across significant geographic areas. This landscape-scale approach is necessary to maintain ecosystem functions and to ensure that biodiversity is resilient in the face of climate change.

[36] Biodiversity 2020: A strategy for England's wildlife and ecosystem services. Defra: TSO

The purpose of BOAs is to guide support for land management to maintain and maximise robustness of the natural environment. These areas are considered priority for targeting land management support schemes and initiatives and regional agencies and local biodiversity partnerships are expected to identify how they will support these objectives. A map of South Hampshire's BOAs is presented in Appendix 2 of the GI Strategy.

BOAs in Hampshire have been identified by the Hampshire Biodiversity Information Centre (HBIC). It should also be noted that many BOAs coincide with South Hampshire's most valued landscapes such as the major river valleys, the coast and the Forest of Bere. Local authorities will need to work with private landowners, developers and consider the opportunities for promoting the objectives of BOAs when considering spatial plans and individual development proposals.

South Hampshire's Ecological Network

The Local Ecological Network (LEN) map for Hampshire and the Isle of Wight has been prepared by HBIC (see Appendix 2 of the GI Strategy). The network comprises statutory designations (e.g. NNR, LNR, SAC, SPA, SSSI and Ramsar sites) non-statutory designated sites (notably Sites of Importance for Nature Conservation - SINC) and any other non-designated ancient woodlands, and other priority habitat, broad habitats including ''fen, marsh and swamp'', water bodies not already designated or mapped as priority habitat and important Wader and Brent Goose sites. The ecological network mapping also identifies areas where there is the greatest potential to enhance the network (including BOAs), referred to as the network opportunities layer, based on habitat suitability indices.

The LEN has been mapped to inform the shaping of proposals for development such that they take account of the significance of it and enhance it as part of the wider planning objective of achieving sustainable development. In particular the issues of fragmentation and connectivity should be addressed. There is a close relationship between ecological networks and green infrastructure.

The LEN is presumed to be compatible with the concept of the Nature Recovery Network (NRN), the development of which is an aim of Defra's 25 Year Environment Plan, and is intended to allow recovery of biodiversity objectives at a national scale.

Rivers

In addition to the main rivers and their respective corridors identified in the opportunities map (Figure 3), smaller but nevertheless important rivers and streams also provide valuable wildlife and landscape corridors. Some of South Hampshire's rivers are afforded European, national or local nature conservation protection. Collectively, South Hampshire's watercourses and their respective floodplains provide valuable ecosystem services including flood management and drinking water provision. The Water Framework Directive sets standards for the achievement of good biological and chemical status in rivers and aquifers. Achieving these challenging standards will require interventions in the use and management of the wider landscape, through a catchment approach, which can be facilitated through the protection and management of the Green Grid.

Strategic / Local / Countryside Gaps

These gaps refer to areas of land, much of it countryside, between the main urban settlements of South Hampshire. South Hampshire owes much of its character to the presence of undeveloped areas of land between settlements, which helps to maintain the identities of those settlements. As South Hampshire is due to accommodate considerable growth over the period to 2034 it is recognised in the PUSH Spatial Position Statement 2016 that there is a need to deliver this in a way that will ensure the integrity of the area's highly valued natural environment and that key elements of the settlement pattern are maintained. PUSH will undertake further work to define these gaps. The approach also recognises that these gaps have the potential to provide valuable functions and services in support of the adjacent urban settlements, use for recreational purposes being one example.

The Spatial Position Statement recognises that the Meon Valley gap is of particular significance as it demarcates the boundary of the Portsmouth and Southampton Housing Market Areas. Other gaps of sub regional and local significance are or will be identified through Local Plans. It is important that a long-term vision is provided for such areas to provide multifunctional environmental, economic and social benefits. A list of gaps in the South Hampshire area is provided in Appendix: 6.

Strategic Public Open Spaces

South Hampshire has the benefit of several large public green spaces including Country Parks such as Manor Farm Country Park; Royal Victoria Country Park and Itchen Valley Country Park, commons such as Southampton Common and Southsea Common, and large municipal parks such as Fleming Park in Eastleigh. These important public spaces provide vital recreational opportunities and access to nature for hundreds of thousands of people in South Hampshire each year, as do countryside facilities within close proximity of the PUSH boundary such as Lepe Country Park and Queen Elizabeth Country Park.

However, the GI Strategy identified that there are some inadequacies in GI provision across South Hampshire when assessed against Natural England's ANGst standards (standards set out in Appendix 2). Enhancing the Green Grid is intended to help address this deficiency by connecting and improving accessibility to a network of accessible green spaces across South Hampshire.

Strategic Rights of Way network

The Countryside and Rights of Way Act (2000) requires all Highways Authorities to undertake a review of their public rights of way networks and to produce Rights of Way Improvement Plans in consultation with local communities. Hampshire County Council as Highways Authority for South Hampshire maintains its Improvement Plan in the form of the Hampshire Countryside Access Plan 2015-2025. Strategic recreational routes include footpaths, bridleways, byways and long-distance routes that extend across and beyond the South Hampshire area, forming a network of major connecting routes linking the settlements of South Hampshire to GI features and the wider countryside. Section 4 details the Strategic Recreation Access Network and Capacity Project (P1).

Major transport corridors

Rail, road and canal corridors are important strategic linear GI features and therefore integral parts of the Green Grid. They often provide long, continuous habitat corridors, which support the movement of wildlife within and beyond the PUSH sub-region. Disused transport corridors may also provide important recreational routes for walking and cycling as well as being refuges for wildlife. The appropriate management of vegetation on active road and rail corridors by the Highways Agency/Highways Authority and Network Rail (respectively) is crucial to the contribution that these linear GI assets make to biodiversity. This importance is reflected in the inclusion of the Strategic Transport Corridor GI Project (P9).

Appendix 5: PUSH Green Infrastructure Key Partners

In alphabetical order:

Chichester Harbour Conservancy
East Hampshire Catchment Partnership
East Hampshire District Council
Eastern Solent Coastal Partnership
Eastleigh Borough Council
Environment Agency
Fareham Borough Council
Forestry England
Gosport Borough Council
Hampshire and Isle of Wight Local Nature Partnership (LNP)
Hampshire and Isle of Wight Wildlife Trust
Hampshire County Council and Lead Local Flood Authority
Havant Borough Council
Isle of Wight Council
Natural England
New Forest Catchment Partnership
New Forest District Council
New Forest National Park Authority
Portsmouth City Council
Partnership for Urban South Hampshire (PUSH)
Solent Forum
Solent Recreation Mitigation Partnership (Bird Aware Solent)
South Downs National Park Authority
Southampton City Council
Test and Itchen Catchment Partnership
Test Valley Borough Council
Winchester City Council

Appendix 6: Strategic/Local/Countryside Gaps in South Hampshire

Eastleigh Borough	The strategic gaps of Southampton–Eastleigh and Southampton–Hedge End/Bursledon/Netley are identified in Policy 2.CO of the adopted Eastleigh Borough Local Plan 2001-2011. The emerging Eastleigh Borough Local Plan does not distinguish between strategic and local gaps and provides a longer list of 'countryside gaps' in policy S8, between Eastleigh and Southampton; Eastleigh and Bishopstoke; the two new communities at the Strategic Growth Option; the Strategic Growth Option and Colden Common; the Strategic Growth Option and Lower Upham/Upham; Fair Oak (including the Strategic Growth Option) and Horton Heath; Botley and Boorley Green; Hedge End and Botley; Hedge End and Southampton; Hedge End and Horton Heath; Hedge End and Bursledon; Bursledon/Netley and Southampton; Bursledon and Hamble/Netley; Boyatt Wood and Otterbourne Hill; Boyatt Wood and Allbrook.
East Hampshire District	Policy CP23: Gaps Between Settlements, of the East Hampshire District Local Plan: Joint Core Strategy (adopted 2014) includes two gaps that are relevant to South Hampshire: Clanfield / Old Clanfield Horndean / Catherington / Clanfield; and Horndean / Blendworth Rowlands Castle / Havant
Fareham Borough	Core Strategy Policy CS22: Development within Strategic Gaps, in the adopted Local Plan 2011, refers to two Strategic Gaps between Stubbington/Fareham and Western Wards/Whiteley (the Meon Gap) and; Stubbington/Lee on Solent and Fareham/Gosport.
Gosport Borough	Policy LP3: Spatial Strategy of the Gosport Borough Local Plan 2011-29 (adopted 2015) refers to the preservation of the settlement gaps between Gosport/Fareham and Lee-on-the-Solent/Stubbington will be preserved.
Havant Borough	Policy CS11.9 of the Havant Borough Core Strategy 2011 establishes the principle of undeveloped gaps between the 'mainland' settlements of Emsworth/Havant, Havant/Waterlooville, Havant/Portsmouth, Emsworth/Westbourne and Leigh Park/Rowlands Castle. The Core Strategy states that land with a gap function will be identified in the Allocations Plan. The main study supporting Policy AL2: Urban Area Boundaries and Undeveloped Gaps between Settlements (Havant Borough Local Plan (Allocations) – Adopted Version 2014 is 'The Formation of Strategic and Local Gaps in Havant Borough' report produced for the Council by Kirkham Landscape Associates in 2008 and updated in the Havant Borough Gaps Review (2012), which assessed the impact of potential housing and employment

	allocations, incorporating detailed analysis of the gaps for their landscape qualities and value in separating settlements.
New Forest District	Policy CS10: Spatial Strategy, of the New Forest District Council Local Development Framework Core Strategy (adopted 2009) seeks to maintain the distinct identity of settlements. Continuing to maintain gaps between settlements.
Portsmouth City	n/a
Southampton City	Policy CS.21 of the Local Development Framework Core Strategy Development Plan Document – Partial Review 2015 seeks the protection of strategic gaps between Southampton and Eastleigh and Southampton and Hedge End / Bursledon / Netley.
Test Valley Borough	Local Plan Policy E3: Local Gaps, of the Test Valley Borough Local Plan 2011-2029, defines the following Local Gaps within South Hampshire: Ampfield-Valley Park; North Baddesley-Chilworth; North Baddesley-Valley Park; Romsey-North Baddesley; Southampton-Eastleigh.
Winchester District	Policy CP18: Strategic and Local Gaps, of the Winchester District Local Plan Part 1 (2013) replaces saved policies CE.1: Strategic Gaps and CE.2: Local Gaps of the 2006 Local Plan. Strategic Gaps refers to the Meon Gap, which is included on the GI opportunities map in Figure 3 and referenced in Appendix 4 of this document. Local Gaps within the District of relevance to South Hampshire include: Bishop's Waltham – Swanmore – Waltham Chase – Shedfield – Shirrell Heath; Denmead – Waterlooville; and Otterbourne – Southdown.

Appendix 7: Glossary

Accessible Natural Greenspace Standard (ANGst)
Tool developed by Natural England based on the minimum distances people would travel to green spaces.

Ancient woodland
In the United Kingdom, an ancient woodland is a woodland that has existed continuously since 1600 or before.

Area of Outstanding Natural Beauty (AONB)
An area designated under the National Parks and Access to the Countryside Act 1949 (as amended by the Countryside and Rights of Way (CRoW) Act 2000) as being of national importance for its natural beauty, including flora fauna, geology and landscape, which should be conserved and enhanced.

Biodiversity
The total variety of life on earth (biological diversity), including all genes, species, ecosystems and the ecological processes of which they are part.

Biodiversity net gain
Where development leaves biodiversity in a measurably better state than prior to development. This will require all residual losses of biodiversity to be offset on-site or off-site using an appropriate metric. *(Defra's 25 Year Environment Plan references 'Environmental Net Gain'. Biodiversity Net Gain is due to be rolled out at a national level as the first component of this wider Environmental Net Gain)*

Biodiversity Opportunity Area (BOA)
Specific geographical areas with the best opportunity to restore and create habitats of regional importance. They are defined entirely on the basis of identifying those areas where conservation action is likely to have the most benefit for biodiversity based on existing biodiversity interest and opportunities for enhancement. The purpose of BOAs is to guide support for land management as they represent those areas where assistance for land management and habitat restoration would have particular benefit.

Bird Aware Solent
Bird Aware Solent is an initiative to raise awareness of the birds that spend the winter on the Solent, so that people can enjoy the coast and its wildlife without disturbing the birds. Bird Aware Solent is the brand name of the Solent Recreation Mitigation Partnership (SRMP).

Blue infrastructure/spaces
Otherwise known as water infrastructure - a network of water assets such as rivers, streams, ponds and ditches. Blue infrastructure is usually included within the definition of green infrastructure, as it is within this strategy.

Catchment
A catchment is an area of land from which all surface water run-off flows through a series of streams, rivers and, possibly, lakes to a particular point in the water course such as a river confluence.

Catchment (Action) Plans
Action Plans prepared by Catchment Partnerships to deliver improvements to the water environment within their respective catchments. The plans deliver the priorities of all partners in addition to water quality improvements in line with the Water Framework Directive.

Catchment Partnerships
Partnerships of organisations and individuals established for each of the Environment Agency's Management Catchments in line with the Government's Catchment Based Approach (CaBA).

Climate change
Long-term shift in weather patterns in a specific region or globally, involving changes in overall weather patterns, including precipitation, temperatures and cloud cover and thought to be leading to an increased frequency of extreme weather events. Much of the observed and predicted climate change is attributed to human activities that have resulted in increased concentrations of greenhouse gases in the atmosphere, such as carbon dioxide.

Climate Change Adaptation
Adjustments to natural or human systems in response to actual or expected climatic factors or their effects, including from changes in rainfall and rising temperatures, which moderate harm or exploit beneficial opportunities

Climate Change Mitigation
Action to reduce the impact of human activity on the climate system, primarily through reducing greenhouse gas emissions.

Coastal Squeeze
The term used to describe what happens to coastal habitats that are trapped between a fixed landward boundary, such as a sea wall, and rising sea levels and/or increased storminess. The habitat is effectively 'squeezed' between the two forces and diminishes in quantity and/or quality.

Community Infrastructure Levy (CIL)
A levy that local authorities in England and Wales can choose to charge on new developments in their area. The levy is designed to be fairer, faster and more transparent than the system of agreeing planning obligations between local councils and developers under section 106 of the Town and Country Planning Act 1990 (although Section 106 agreements will remain, albeit in a more limited role).

Connectivity
One of the core principles of green infrastructure, connectivity is about how green infrastructure features are linked together to form a network or 'Green Grid'.

Countryside Access Plan
A plan of how rights of way and access to the countryside will be managed that fulfils the requirement for highways authorities to publish a 'Rights of Way Improvement Plan' introduced by the Countryside and Rights of Way (CRoW) Act 2000.

Countryside and Rights of Way (CRoW) Act 2000
The Act provides for public access on foot to certain types of land, amends the law relating to public rights of way, increases measures for the management and protection for Sites of Special Scientific Interest (SSSI) and strengthens wildlife enforcement legislation, and provides for better management of Areas of Outstanding Natural Beauty (AONB).

Country Park
Usually an accredited natural green spaces which have been granted Country Park status by Natural England after demonstrating 15 essential criteria and 10 desirable criteria. Some of the essential criteria include: at least 10 ha in size, readily accessible to the population which they intend to serve, entry free of charge, must predominantly consist of natural or semi-natural landscape, buildings must account for less than 5% of the land, and they should provide opportunities for the local community to have an influence over the management and development of the site. Some sites are also given the title Country Park informally without accreditation.

Countryside Stewardship
Agri-environment funding scheme designed to encourage farmers and land managers to manage their land for the benefit of wildlife and habitats.

Ecological Network
Network of habitats that allow animals and plants to move through the landscape and which provides functional support to existing areas of ecological importance. The movement of organisms between populations in a connected landscape maintains genetic diversity, enabling populations to adapt to future changes in environmental conditions. In relation to this strategy the Ecological Network is a mapped hierarchy of international, national and locally designated sites of importance for biodiversity, wildlife corridors and stepping stones that connect them and areas identified by local partnerships for habitat restoration or creation. The need for ecological networks is set out in the Lawton Report[37].

Ecosystem Services
The benefits people obtain from ecosystems such as, food, fuel, water, flood and disease control, materials and recreation.

Fluvial flooding
Flooding which occurs in the floodplains of rivers when the capacity of water courses is exceeded as a result of rainfall or snow and ice melts within catchment areas further upstream.

Functionally linked habitat / land
Habitat / land which supports ecological interest features but which falls outside of the boundaries of European designated sites (SPA or SAC)

Green Grid
The South Hampshire Green Grid is the network of green infrastructure components which are essential to South Hampshire mapped to show how they are connected.

Green Infrastructure (GI)
A network of multifunctional green space, urban and rural, which is capable of delivering a wide range of environmental and quality of life benefits for local communities. Green infrastructure includes parks, open spaces, rights of way, river corridors, playing fields, woodlands, street trees, allotments and private gardens.

[37] Lawton JH, Brotherton PNM, Brown VK et al. (2010) Making Space for Nature: A review of England's wildlife sites and ecological network. Report to Defra.

Green Roof
Also known as a 'living roof', a roof on which vegetation is intentionally grown and/or habitats for wildlife are established. Green roofs provide different types of habitat, together with water storage capacity, flood alleviation and energy saving potential.

Green Wall
Walls that are partially or completely covered with vegetation, includes a growing medium, such as soil or a substrate. Most green walls also feature an integrated water delivery system. A green wall is also known as a living wall or vertical garden.

Grey Infrastructure
Traditional infrastructure such as roads, rail, sewers, pipes, culverts, etc. The term is often associated with engineered solutions for dealing with flood and water management.

Habitat
An ecological or environmental area that is inhabited by individuals or populations of a particular species of animal, plant or other type of organism.

Habitats Regulations Assessments (HRA)
As required by the Habitats Directive and the Habitats Regulations, the identification of any aspects of an emerging plan or project that would have the potential to cause a likely significant effect on Natura 2000 and Ramsar sites (either in isolation or in combination with other plans and projects), and to begin to identify appropriate mitigation strategies where such effects are identified (see also Appropriate Assessment).

Historic environment
All aspects of the environment resulting from the interaction between people and places through time, including all surviving physical remains of past human activity, whether visible, buried or submerged, and landscaped and planted or managed flora.

Landscape-Scale
Landscape-scale conservation is characterised by the pursuit of multiple benefits across a large area (e.g. water quality, biodiversity, access). The best examples also make links to wider economic and social priorities, where enhancing nature can provide benefits to the local economy and quality of life.

Lead Local Flood Authority (LLFA)
Unitary authorities or county councils that are responsible for developing, maintaining and applying a strategy for local flood risk management in their areas and for maintaining a register of flood risk assets. They also have lead responsibility for managing the risk of flooding from surface water, groundwater and ordinary watercourses.

Local Enterprise Partnership (LEP)
Voluntary partnerships between local authorities and businesses set up in 2011 by the Department for Business, Innovation and Skills to help determine local economic priorities and lead economic growth and job creation within the local area. The principal LEP for the PUSH sub-region is the Solent LEP.

Local Green Space (designated)
Sites designated in local and neighbourhood plans which are of particular importance to local communities.

Local Nature Partnership (LNP)
Partnership of a broad range of local organisations, businesses and people who aim to help bring about improvements in their local natural environment. The PUSH sub-region is covered by the Hampshire and Isle of Wight LNP.

Local Nature Reserve (LNR)
A statutory designation made (by principal local authorities) under Section 21 of the National Parks and Access to the Countryside Act 1949. They are places of local, but not necessarily national, wildlife or geological importance and also often have good public access and facilities. LNRs are almost always owned by local authorities, who often pass the management of the Local Nature Reserves to local Wildlife Trusts.

Local Plan
A plan prepared by a local planning authority (LPA) which sets the rules for how the local area will develop over time. The Local Plan, along with any Neighbourhood Plans, forms the overall Local Development Plan for the area. Planning decisions must normally be taken in accordance with the development plan.

Local planning authority (LPA)
The public authority whose duty it is to carry out specific planning functions for a particular area. For the purposes of this document, the PUSH local planning authorities include the unitary authorities of Portsmouth, Southampton and the Isle of Wight; Hampshire County Council and the district authorities of Eastleigh, East Hampshire, Fareham, Gosport, Havant, New Forest, Test Valley and Winchester. Parts of East Hampshire, New Forest, Test Valley and Winchester Districts fall outside the PUSH area.

Mitigation
Measures to secure a neutral effect on the environment from development and land use change.

Multifunctional
The ability to provide multiple cross cutting functions, by integrating different activities and land usage, on individual sites and across a whole green infrastructure network.

Natura 2000
Natura 2000 is an ecological network of protected areas in the territory of the European Union, comprising Special Areas of Conservation (SAC) and Special Protection Areas (SPA).

Natural Capital
The world's stock of natural resources, which includes geology, soils, air, water and all living organisms. Some natural capital assets provide people with free goods and services, often referred to as ecosystem services.

Natural Flood Management (NFM)
Techniques that aim to work with natural hydrological and morphological processes, features and characteristics to manage the sources and pathways of flood waters. These techniques include the restoration, enhancement and alteration of natural features and characteristics, but exclude traditional flood defence engineering that works against or disrupts these natural processes.

Natural England (NE)
A non-departmental public body sponsored by the Department for Environment, Food and Rural Affairs (Defra), responsible for ensuring that England's natural environment, including its land, flora and fauna, freshwater and marine environments, geology and soils, are protected and improved. It also has a responsibility to help people enjoy, understand and access the natural environment.

Nature Recovery Network
Defra's 25 Year Environment Plan pledges to develop a Nature Recovery Network (NRN) to allow recovery of biodiversity (and other) objectives at a national landscape scale. *(The Hampshire & IoW LEN is presumed to be compatible with this initiative but further details are awaited)*

National Nature Reserve (NNR)
Sites designated under the National Parks and Access to the Countryside Act 1949 and the provisions of the Wildlife and Countryside Act 1981.

National Planning Policy Framework (NPPF)
Government policy framework that sets out planning policies for England and how they are expected to be applied. It provides guidance for local planning authorities and decision-takers, both in preparing development plans and development management.

Notable species
Species protected under European legislation and the Wildlife & Countryside Act 1981(as amended) and species listed in the Natural Environment & Rural Communities Act 2006 and IUCN List of Threatened Species; the Birds of Conservation Concern Red List, and species listed as being nationally or locally rare or scarce

Peri-urban
Peri-urban areas (also called urban fringe or hinterland) can be described as the landscape interface between town and country or the rural-urban transition zone where urban and rural uses mix and often conflict.

Planning Practice Guidance (PPG)
A web-based resource which brings together national planning guidance on various topics into one place and provides further clarity on the interpretation of the National Planning Policy Framework (NPPF).

Pluvial flooding
Surface water flooding caused by rainwater run-off from urban and rural land with low absorbency.

Priority Habitats
Habitats listed as 'habitats of principal importance in Section 41 of the NERC Act 2006 (formally 'priority habitats' in the UK Biodiversity Action Plan (BAP).

Protected Species
Species that are protected by international or national legislation or Government policy.

Public Rights of Way (PRoW)
A way where the public has a right to walk, and in some cases ride horses, bicycles, motorcycles or drive motor vehicles, which will be designated either as a footpath, bridleway, road used as a public path (RUPP) or byway.

PUSH (Partnership for Urban South Hampshire)
PUSH consists of the eleven local authorities dedicated to sustainable economic led growth and improving prosperity and quality of life for everyone who lives, works and spends their leisure time in South Hampshire.

Ramsar Site
An internationally important wetland, designated under the Convention on Wetlands of International Importance especially as Wildfowl Habitat (Ramsar, Iran) 1971 and, as a matter of government policy, are afforded the same protection as a site designated under the EU Habitats and Birds Directives.

Regional Flood and Coastal Committee (RFCC)
Committees established by the Environment Agency (EA) under the Flood and Water Management Act 2010 that bring together members appointed by Lead Local Flood Authorities (LLFAs) and independent members with relevant experience.

Registered Parks and Gardens

The Historic England Register of Historic Parks and Gardens includes "gardens and other land" situated in England that appear to be of special historic interest.

Scheduled Ancient Monument (SAM)
Nationally important archaeological sites included in the Schedule of Ancient Monuments maintained by the Secretary of State under the Ancient Monuments and Archaeological Areas Act 1979.

Section 106 Agreements
Planning obligations under Section 106 of the Town and Country Planning Act 1990 (as amended), commonly referred to as S106 agreements, are mechanisms which make an otherwise unacceptable development proposal acceptable in planning terms. They are focused on site specific mitigation of the impact of development. S106 agreements are often referred to as 'developer contributions', along with highway contributions and the Community Infrastructure Levy (CIL).

Sites of Importance for Nature Conservation (SINC)
Sites of Importance for Nature Conservation (SINC) are designations used by local authorities in the United Kingdom for non-statutory sites of substantive local nature conservation value.

Sites of Special Scientific Interest (SSSI)
A site designated by Natural England as an area of special interest by reason of any of its flora, fauna, geological or physiographical features and of national importance.

Solent Recreation Mitigation Partnership (SRMP)
A partnership to facilitate joint working by local authorities and other bodies on the implementation of measures to mitigate the impact of additional recreational activity that will result from planned housing development ensuring that it does not have a significant effect on the three Solent Special Protection Areas. The partnership's brand name is 'Bird Aware Solent'.

Solent Recreation Mitigation Strategy (SRMS)
The strategy aims to prevent disturbance to birds associated with the three Solent Special Protection Areas from recreational activities, through a series of management measures

which actively encourage all coastal visitors to enjoy their visits in a responsible manner rather than restricting access to the coast or preventing activities that take place there.

Southern IFCA (Inshore Fisheries and Conservation Authority)
Leads, champions and manages a sustainable marine environment and inshore fisheries, by securing the right balance between social, environmental and economic benefits to ensure healthy seas, sustainable fisheries and a viable industry.

Special Areas of Conservation (SAC)
A site designated under the European Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora and part of the European network of Natura 2000 sites.

Special Protection Area (SPA)
A site designated under the European Directive on the Conservation of Wild Birds as being of international importance for the breeding, feeding, wintering or the migration of rare and vulnerable species of birds, and part of the European network of Natura 2000 sites.

Stepping stones
Pockets of habitat that, while not necessarily connected, facilitate the movement of species across otherwise inhospitable landscapes.

Suitable alternative natural greenspace (SANG)
Green space that is of a quality and type suitable to be used as mitigation to offset the impact of new development on sensitive areas, for instance areas of high biodiversity or landscape value and/or the provision of alternative green space recreational opportunities.

Sustainable development
The use of resources, to meet the needs of the present, without compromising the ability of future generations to meet their own needs.

Sustainable drainage systems (SuDS)
Techniques to control and manage surface water run-off before it enters a water course including preventative measures (recycling), filter strips, swales, permeable surfaces, infiltration devices, basins and ponds. SuDS also aim to control pollution, recharge ground water, control flooding, and enhance the environment. Previously known as sustainable urban drainage systems.

Upstream thinking
Planning for flood and water management, water quality and other environmental improvements upstream in a river catchment, where land management improvements and other measures may have disproportionately beneficial outcomes for downstream communities, for instance by increasing the floodplain's capacity to attenuate water flow.

Working with natural processes (WWNP)
Measures to protect, restore and emulate the natural functions of catchments, floodplains, rivers and the coast.

Watercourses
Comprising the water body and the land immediately adjacent to it.

Wildlife corridor
An area of habitat that connects two or more habitat patches that would otherwise be isolated.