Item 9

Policy Group – 16 May 2018

Swanage Green Infrastructure Strategy

1. Purpose of report

2. To seek approval to adopt the Swanage Green Infrastructure Strategy as a Supplementary Planning Document (SPD).

Key issues

2.1 The Swanage Green Infrastructure Strategy (the GI Strategy) provides additional detail to support the implementation of policies SGI (Swanage Green Infrastructure) and OSR (Open Space and Recreation) of the Swanage Local Plan.

2.2 The GI Strategy contains an audit and analysis of the existing green infrastructure network in Swanage, which identifies deficiencies in the provision of associated benefits such as biodiversity, flood alleviation, surface water drainage, visual amenity and resilience to climate change. It also identifies individual zones where the level of provision and the functional qualities of the existing green infrastructure are low.

2.3 A schedule of costed projects and initiatives is included in the GI Strategy. The total cost of the projects included in the Strategy is estimated to be £317,000. Potential sources of funding are identified in the Strategy (pages 31-32 of **Appendix 1** - available online as part of the agenda papers for this meeting with a colour paper copy for councillors to view in the Members' Room at Westport House). Community groups, Swanage 2027 and the Swanage and Purbeck Development Trust are best placed to apply for funding and implement projects, and the Strategy identifies this as the agreed mechanism for implementation. PDC's role will be advisory only. Priority projects include green infrastructure improvements to Main Beach and North Beach car parks, a tree planting and wildflower meadow project for low GI areas in Herston, an Ulwell Stream flood management project, street and parkland tree planting, and extension of the Dorset County Council 'Living Verges' initiative to include Swanage. A further priority project is the production of guidance for developers to ensure that proposals are meeting the requirements of the GI Strategy and Policy SGI in the Swanage Local Plan. This guidance has now been produced and is attached as **Appendix 3**.

2.4 Following agreement at Council in September 2015, the draft Swanage Green Infrastructure Strategy was published for consultation from 24 September to 6 November 2015. The revised GI Strategy (**Appendix 1**) has been updated as a result of the consultation. The delay in publishing the strategy has been due to:

2.4.1 Re-drafting / structuring of the Strategy to incorporate representations made during the consultation period, plus inclusion of a new section to address compliance with The Woodland Trust's Access Standard, and Natural England's Accessible Natural Greenspace Standard; and

2.4.2 The Purbeck Local Plan Review process taking priority.

2.5 A summary of the consultation responses can be found in **Appendix 2**. A summary of the main changes made can be found in section 5 of this report.

3. Recommendation

A report be submitted to Council recommending:

(1) that the Council adopts the Swanage Green Infrastructure Strategy Supplementary Planning Document, as set out at appendix 1; and

(2) that the Council delegates agreement of minor changes to the SPD prior to adoption to the General Manager, Planning and Community Services, in consultation with the relevant Portfolio Holder

4. Policy issues

4.1 How will this affect the environment, social issues and the local economy?

4.1.1 The Swanage GI Strategy includes accurate mapping and description of the current green infrastructure resource in Swanage, and includes proposals to improve identified areas of deficiency. As such, the Strategy will help to deliver the one of the Council's corporate priorities, to protect and enhance the natural environment.

4.2 Implications

4.2.1 Resources

The GI Strategy has been prepared within the existing budget and resources of the planning policy team.

4.2.2 Equalities

There are no equalities implications arising from the GI Strategy SPD. A number of projects will be progressed by the local community, encouraging widespread participation by a cross section of Swanage residents.

5. Further information

Changes to the draft SPD

5.1 The consultation from 9 October to 20 November 2015, attracted 26 comments. The comments are attached in Appendix 2. Officers used the feedback to amend the SPD incorporating the following key changes to the consultation document:

- The structure of the GI Strategy document has been revised so that the GI audit and analysis form Appendix 1 (rather than being in the main body of the report).
- Recognition of the need for the Ulwell Stream flood management scheme to apply for Flood Drainage.
- The addition of action points for a new Sport and Recreation Strategy and a requirement for tree planting within developments.

- An additional recommendation that tree planting is included in the brief for the town centre improvements.

- The natural and semi-natural green spaces section of the GI Strategy has been re-written so that it responds to relevant standards, and the creation of new accessible woodland is proposed where there is to be new housing.

- Development considerations are covered in the new GI design guidance for developers (see Appendix 3).

Appendices:

1 - Swanage Green Infrastructure Strategy Supplementary Planning Document
2 - Summary of Comments on the Consultation Document
3 - GI design guidance for developers

Background papers:
- Report to Council, 8 September 2015: Swanage Local Plan Pre-submission Consultation

For further information contact:-
Alison Turnock, Natural Heritage and Tourism Manager

Helen Lilley, Senior Landscape Architect

Swanage

Green Infrastructure Strategy

Supplementary Planning Document

Adopted June 2018

Purbeck District Council

Thriving communities in balance with the natural environment

Executive summary

- The requirement for a green infrastructure (GI) strategy for Swanage was identified at the Swanage Local Plan natural environment issues and options workshops in 2013. The workshop group felt that more 'green' and 'blue' assets could be provided, and that more should be done to maintain and connect the existing assets and help Swanage become more sustainable and more resilient in the face of climate change.
- The Swanage GI Strategy provides additional detail to support the implementation of policies SGI (Swanage Green Infrastructure) and OSR (Open Space and Recreation) of the Swanage Local Plan (SLP). The draft GI Strategy was published for public consultation along with the SLP Pre-submission Document in 2015. Following the incorporation of comments, the Strategy was adopted as a supplementary planning document (SPD) in June 2018.
- Purbeck District Council had produced the Strategy with information gathered at a GI workshop held in 2014, and a field survey of GI assets undertaken in 2015. The workshop was attended by community and voluntary groups, and representatives from organisations with an interest in the project. The field survey was completed by volunteers from the local community.
- The Strategy contains an audit and analysis of the existing GI network, which identifies deficiencies in the provision of associated benefits such as biodiversity, flood alleviation, surface water drainage, visual amenity and resilience to climate change. It also identifies individual zones where the level of provision and the functional qualities of the existing GI are low.
- A schedule of costed projects and initiatives and a list of possible sources of funding is included in the Strategy. Priority projects include GI improvements to Main Beach and North Beach car parks, a tree planting and wildflower meadow project for low GI areas in Herston, an Ulwell Stream flood management project, street and parkland tree planting, and extension of the Dorset County Council 'Living Verges' initiative to include Swanage. The next steps are described, and include the coordination and implementation of the proposals by Swanage 2027 and the Purbeck Development Trust.
- Implementation of the Strategy will result in the provision of a 'green infrastructure network of interlinked multipurpose open spaces with good connections to the open countryside', which is the vision for Swanage identified at the GI workshop. This network will respond to the issues identified in the GI audit, and provide a robust GI network which will help the town respond to the issues associated with climate change.
- The Strategy also reinforces the need to improve the walking and cycling network in and around Swanage as identified in the Swanage Local Plan. A separate project group including members with relevant experience needs to be set up to run this project, which should complement this Strategy.

Foreword

Green infrastructure (GI) is 'a network of multi-functional green space, urban and rural, which is capable of delivering a wide range of environmental and quality of life benefits for local communities' [1]

There is an increase in the political interest in and consequent policy on GI. The Government's National Planning Policy Framework, the Natural Environment White Paper and Local Plan policies are encouraging action to increase the understanding of and improve GI. This increasing importance is developing in response to a growing understanding of the quantifiable benefits of GI across a wide range of topic areas.

The most common drivers include aesthetics, improving the look and feel of a location for visitors, workers and residents, and attracting investment. Other drivers include resilience to climate change, reduction of flood risk, improving air quality, increasing biodiversity, health and wellbeing and the protection and stewardship of existing assets.

Swan Brook and the grounds of St Mary's Church are both classified as green infrastruture.

1 *National Planning Policy Framework (2012) Department for Communities and Local Government http://www.communities.gov.uk/documents/planningandbuilding/pdf/2116950.pdf*

Why does Swanage need a green infrastructure strategy?

During the early stages of putting together the Swanage Local Plan, community, voluntary and business groups attended workshops to discuss current issues in the town, and various options to address these issues. The natural environment issues and options workshop group identified that the town's green spaces, watercourses and other areas of water are important because they:

- contribute to the character of the town.
- provide 'breathing space' in built up areas.
- support wildlife.
- have the potential to help Swanage be resilient in the face of climate change.

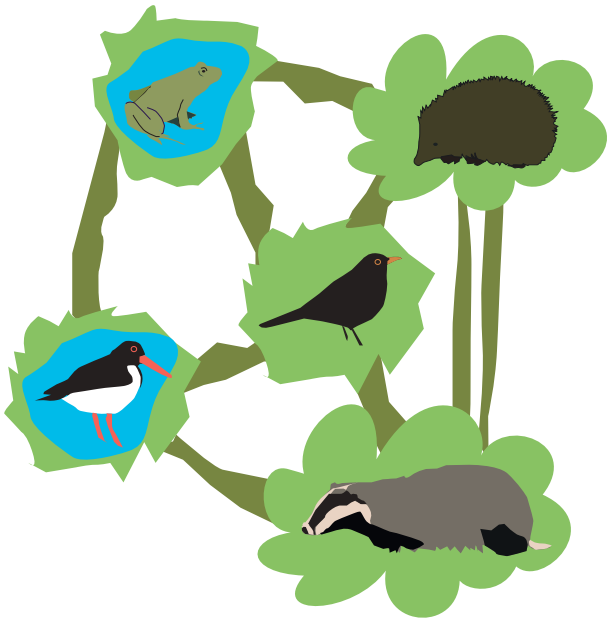
The group felt that more green assets could be provided, and that more should be done to maintain and connect the existing assets. The group concluded that to achieve this, the existing assets need to be better understood, and a strategy for change and improvement based on this better understanding developed.

What do we hope the strategy will achieve?

There is plenty of evidence from around the country that producing a GI strategy will benefit Swanage in obvious, and some not so obvious ways. For example Thetford in Norfolk has enhanced its reputation by undertaking a GI audit, and producing proposals for improvements. This is because the process has demonstrated action on green issues locally, and positive relationships have been developed, demonstrating that communities can lead the way in GI initiatives, bringing partners with them.

Research also shows that GI can create an attractive setting, which encourages inward investment. Employers in Cumbria have even reported that an improved environment and the involvement of staff in activities to increase the diversity of habitats for wildlife have boosted morale, which has in turn led to higher staff retention and productivity.

We hope that this GI strategy for Swanage will help achieve the following vision:



'To provide a green infrastructure network of interlinked multipurpose open spaces with good connections to the open countryside'

To achieve this the strategy will:

- respond to and inform GI policies in the Swanage Local Plan, the Purbeck Local Plan, the Dorset Area of Outstanding Natural Beauty (AONB) Management Plan and the National Planning Policy Framework;
- raise the profile of GI issues locally;
- place Swanage on the map for being forward thinking on green/climate change issues;
- propose projects to enhance the function of existing and provide new GI assets, and to create/reinforce connections between them;
- provide a project programme which will initially focus investment where most impact will be made;
- identify potential funding partners for projects;
- provide a marketing package targeted towards potential funders, which will identify and inspire the implementation of 'quick-win' projects alongside longer-term regeneration and improvement projects;

Implementing the strategy will:

- improve the appearance of the town and its approaches.
- make it a greener, healthier place to live.
- make green spaces more accessible and inclusive.
- encourage economic growth.
- improve connections between the town and the open countryside.
- reduce pressure on sensitive landscapes like heathland.
- make the town more resilient to the effects of climate change.
- involve the community in initiatives to 'green' the town.
- develop relationships with funding and delivery partners.
- benefit wildlife.

Who should use the strategy?

- landowners and land mangers including Dorset County Council, Purbeck District Council and Swanage Town Council;
- developers;
- Swanage and Purbeck Development Trust and Swanage 2027;
- funding and delivery partners.

How did we put the strategy together?

Once it was agreed that a GI strategy was needed, Purbeck District Council (PDC) facilitated a workshop to inform and get feedback from local community groups, the Town Council, infrastructure and environmental agencies and other interested groups.

The workshop groups identified and categorised existing GI assets, and listed functions and benefits for each. The groups then mapped where the existing GI is poor, and proposed ways to improve it. They also looked at how new GI could help to integrate new housing proposed in the Purbeck District Local Plan into Swanage successfully, and how on the back of this, the existing edges of the town could be 'softened' and the landscape and visual impact of Swanage on the AONB reduced. The participants at the workshops also generated the vision for the strategy.

The information provided by the workshop groups was then collated, refined and audited by PDC using Geographical Information Systems (GIS) and aerial photography. A physical survey of the main GI assets was then undertaken by local volunteers to confirm the accuracy of the mapped data, and gather more detailed information on the quality and quantity of GI. All of the information gathered was then analysed, and potential opportunities to enhance the existing GI were worked up into individual projects and initiatives with an action plan. This GI audit and analysis is included as APPENDIX 1.

The GI audit and analysis provides the basis for the GI Strategy which was drafted by PDC and presented for public consultation along with the draft Swanage Local Plan between 24 September and 6 November 2015. Comments from the public consultation were incorporated and the Strategy which was then adopted by Purbeck District Council as a Supplementary Planning Document in June 2018. The strategy provides the background and detail supporting policy SGI of the Swanage Local Plan.

To be signed by Richard Smith – Chairman of the Swanage Local Plan GI working group, and PDC Environment portfolio holder Councillor Peter Webb

Contents

Appendices

What is green infrastructure?

1. GI includes:

   - natural and semi-natural rural and urban green spaces – including woodland and scrub, grassland (for example downland and meadow), heath and moor, wetlands, open and running water, brownfield sites, bare rock habitats (for example cliffs and quarries), coasts, beaches, and community forests;
   - parks and gardens – urban parks, country and regional parks, formal and private gardens, and institutional grounds (for example at schools and hospitals);
   - amenity green space – informal recreation spaces, play areas, outdoor sports facilities, housing green spaces, domestic gardens, community gardens, roof gardens, village greens, commons, living roofs and walls, hedges, civic spaces, and highway trees and verges;
   - allotments, city farms, orchards, and suburban and rural farmland.
   - cemeteries and churchyards;
   - green corridors – rivers and canals (including their banks), road verges and rail embankments, cycling routes, and rights of way;
   - sites selected for their nature conservation value – Sites of Special Scientific Interest and local sites (local wildlife sites and local geological sites);
   - Nature Reserves (statutory and non-statutory);
   - green space designations (selected for historic significance, beauty, recreation, wildlife, or tranquillity);
   - green archaeological and historic sites;
   - functional green space such as sustainable drainage schemes (SuDs) and flood storage areas.

2. The individual elements are called GI assets.

3. The definition used by Natural England, the public body responsible for protecting and improving England's natural environment is:

   'A strategically planned and delivered network comprising the broadest range of high quality green spaces and other environmental features. It should be designed and managed as a multifunctional resource capable of delivering those ecological services and quality of life benefits required by the communities it serves and needed to underpin sustainability. Its design and management should also respect and enhance the character and distinctiveness of an area with regard to habitats and landscape types'.

4. Green Infrastructure includes established green spaces and new sites and should thread through and surround the built environment and connect the urban area to its wider rural hinterland. Consequently it needs to be delivered at all spatial scales from sub-regional to local neighbourhood levels, accommodating both accessible natural green spaces within local communities and often much larger sites in the urban fringe and wider countryside'. [2]

5. The Natural England definition refers to GI as being multi-functional. This is because each asset may have an obvious primary function, but there are other functions and services that provide significant contributions to social, environmental and economic agendas.

2 *Green infrastructure guidance Natural England 2009*

Benefits of green infrastructure: why invest?

6. The benefits that GI delivers fall into categories contributing to aesthetic, environmental, social and economic objectives.

Economic benefits

7. There is an increasing number of studies that identify economic benefits as a result of GI. Well planned improvements to public spaces encompassing green infrastructure in town centres can boost commercial trading by up to 40%.[3] An example of the economic benefits is provided by the soft landscaping and security improvements undertaken at Langthwaite Grange Industrial Estate, Wakefield. Since starting in 2005, 16 new businesses have moved in bringing over £12m investment and creating 200 new jobs. Crime has also fallen by 70% in 12 months.[4]

8. Research from the US shows that in retail areas, trees positively affect judgments of visual quality and also appear to influence consumer responses and behaviours. People report a willingness to travel further, stay longer and spend more in business districts with trees as compared to those without.[5]

9. The increase in footfall that this generates is a compelling driver for improving the existing GI in Swanage.

Amenity value and access to nature

10. The appearance of an area is important. GI can help to create an attractive setting using a sustainable approach, which enhances local identity and helps to create a sense of place. It can transform the outward appearance of workplaces and have a significant effect on increasing the 'dwell time' of visitors. It can also increase the area's attractiveness to potential investors.

11. Employers in Cumbria have reported that an improved environment and the involvement of staff in activities to benefit biodiversity has boosted morale. This has led to better staff retention with the knock-on benefits of lower recruitment costs, retaining experienced staff and reducing the disruption of staff changes – leading to higher productivity.[6]

12. Trees are associated with a higher perception rating of amenity and visual quality and people are likely to spend more time, visit more frequently and travel further distances to places with trees compared to places with no trees.[7] Property values are also greater where there are trees and open space nearby.

13. The provision of good quality green open spaces also creates healthier urban environments. These green open spaces are the 'green lungs' of towns and cities where people can spend time relaxing and getting exercise. These activities are vital to health and wellbeing. Contact with nature has also been shown to be an important factor in reducing stress.

3 *The Economic Benefits of Green Infrastructure: The Public and Business Case for Investing in Green Infrastructure and a Review of the Underpinning Evidence Natural Economy North West 2008*
4 *Benefits of green infrastructure: Report to Defra and CLG Forest research 2010*
5 *The Environmental Psychology of Shopping: Assessing the Value of Trees Kathleen L. Wolf 2007*
6 *Natural Benefits for Business – Case Studies Natural Economy North West 2009*
7 *The Environmental Psychology of Shopping: Assessing the Value of Trees Kathleen L. Wolf 2007.*

Improved air quality

14. 'Estimates indicate that air pollution reduces life expectancy in the UK by seven to eight months.'[8] 'Poor air quality combined with high temperatures also increases the risks of cardiovascular and respiratory disease, especially in the elderly and vulnerable.'[9] Urban vegetation influences air quality – in particular, trees can absorb significant quantities of gaseous pollutants such as sulphur dioxide, ozone, nitrogen dioxide, and can also absorb particulates like dust and soot from the air. Particulates are the deadliest form of pollution, as they can penetrate deep into the lungs and bloodstream undiluted, causing lung diseases, heart attacks and ultimately death.

Flood attenuation and water resource management

15. As experienced in Swanage historically, flooding can have a large impact on an area, with rapid flash flooding in particular causing damage to business property. Measures to reduce flood risk have been implemented, but there are still locations in the town where localised flooding occurs. Further measures to reduce flood risk are required.

16. The provision GI which includes of sustainable drainage systems (SuDs) can reduce peak water flows (which tend to be increased in urban environments), improve water quality by removing pollutants and replicate natural drainage patterns so that base groundwater flows are maintained.[10] This can improve business resilience and potentially reduce insurance premiums.

17. There are various types of SuDs, but the majority follow the principle of allowing surface/flood water to drain naturally back into the ground. The water may be stored temporarily if the volume is too great for the ground to absorb straight away. The process of percolation through vegetation and the soil removes harmful contaminants such as oil, petrol and diesel, and micro organisms in the soil convert bacteria from for example dog waste, into harmless substances.

18. Using this method to deal with surface/flood water is sustainable because clean water ultimately recharges the water table and therefore follows the same cycle that it would take if it fell on natural ground.

Biodiversity

19. As well as working with, and making use of natural processes and systems, it is important therefore that we replace habitat where it is lost as a result of development, and support biodiversity where this is possible.

20. It is this biodiversity that underpins most if not all ecosystem services, which are crucial to human survival. The resilience of these ecosystems is can depend on the presence or survival of a single species. It is therefore in our interest to ensure that vulnerable species are supported and biodiversity conserved.

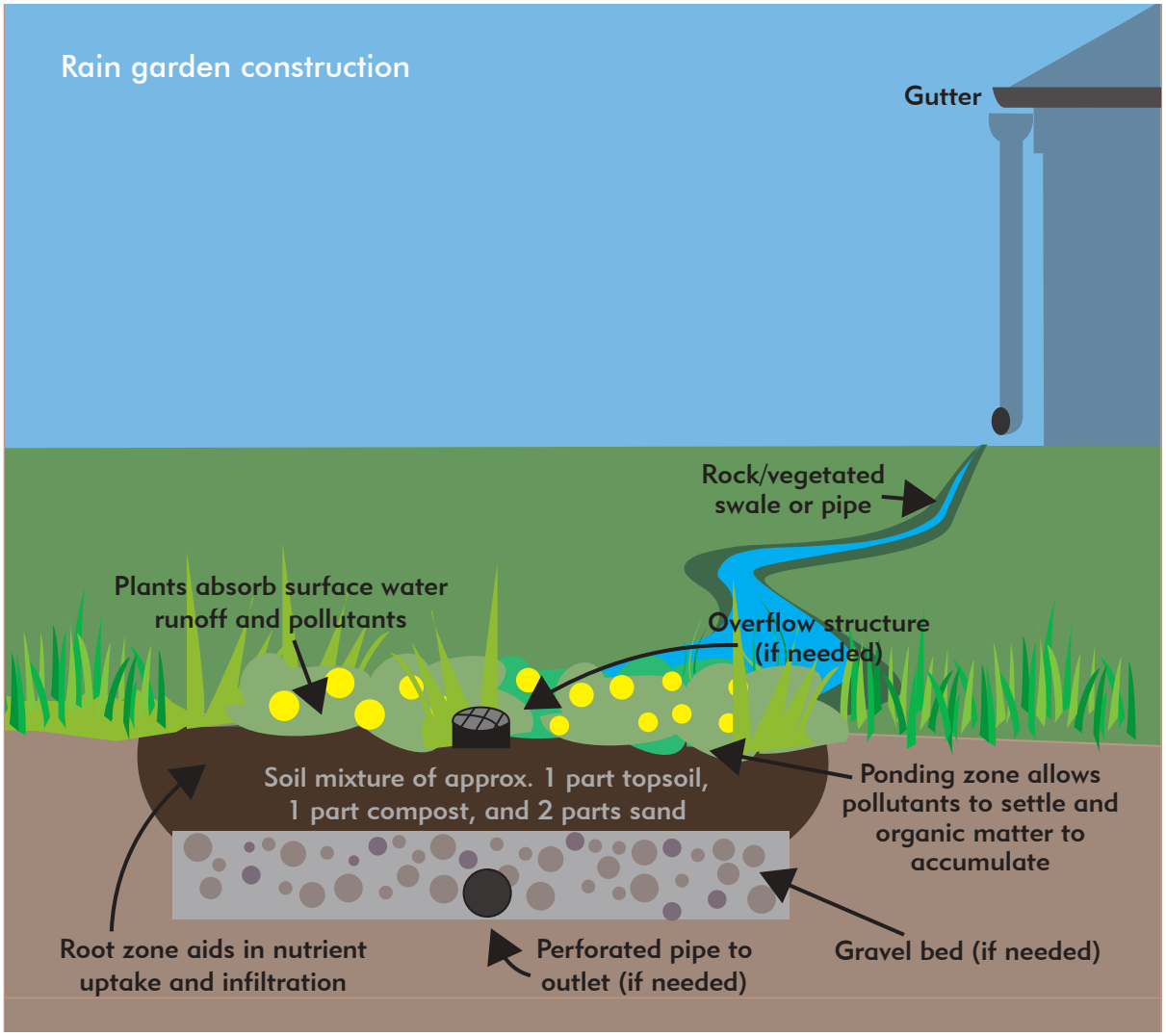
8 *Urban Air Quality Woodland Trust 2012.*
9 *Trees in Our Towns: The Role of Trees and Woodland in Managing Urban Water Quality and Quantity Woodland Trust 2012*
10 *Interim Code of Practice for Sustainable Drainage Systems National SuDs Working Group 2004*

21. The ecological benefits that urban GI can provide are largely related to the provision of habitat, which in turn increases resources for wildlife. Well-designed GI can create targeted habitat and contribute to habitats of importance (for example, those published in England as a list under section 41 of the Natural Environment and Rural Communities (NERC) Act), as well as local habitat objectives, thereby conserving biodiversity.

Resilience to climate change

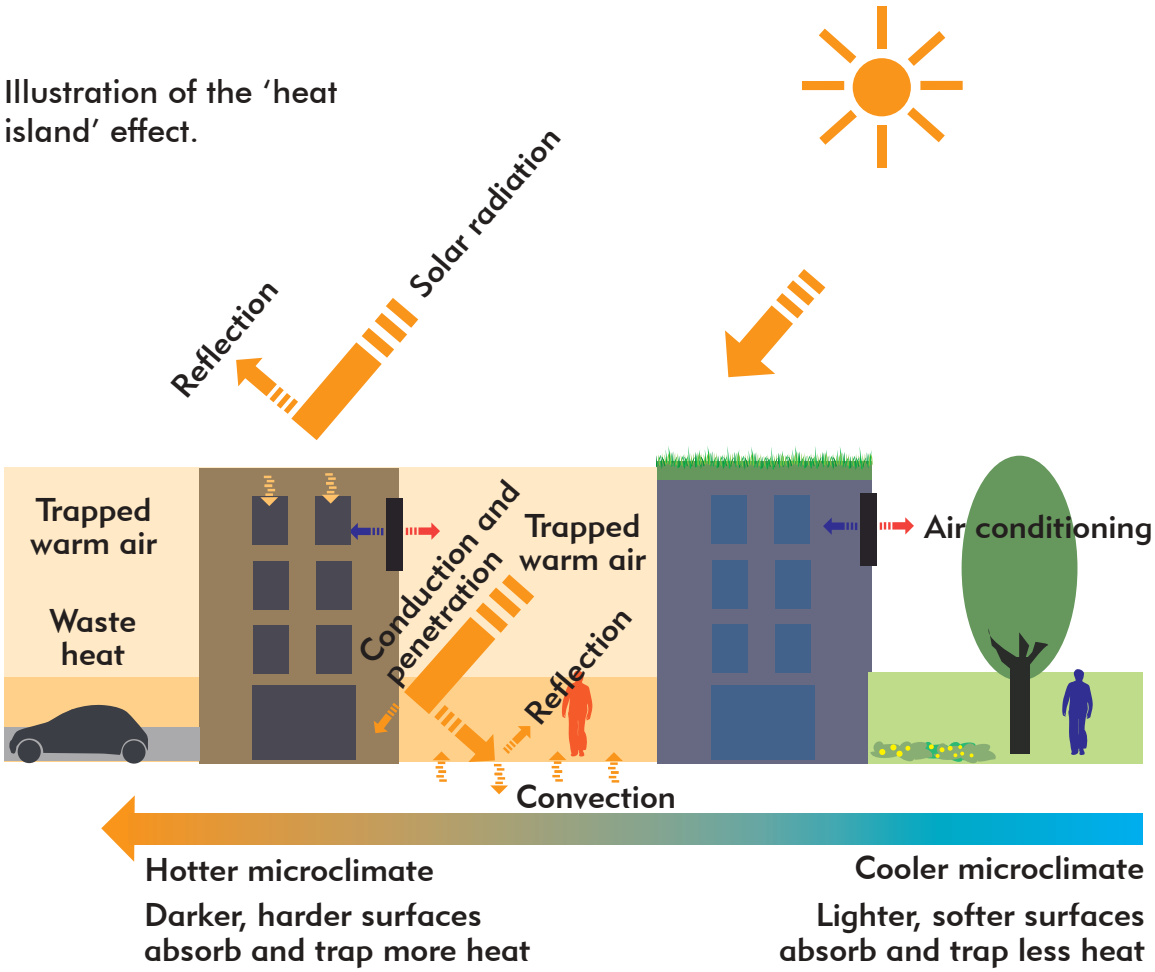
22. Climate change predictions indicate that the UK will be affected by hotter, drier summers and warmer, wetter winters along with more extreme weather events such as flash flooding, droughts, heatwaves and storms. The effects of climate change could result in a negative impact on businesses, for example due to increased flooding due to the wetter winters, or the requirement to install air conditioning to cope with increased summer temperatures.

23. Resilience to the increased risk of flooding can be provided through the implementation of GI based SuDs as identified above. Where practicable SuDs can be designed to collect and store the surface water, which can then be used supply planted areas with water during periods of hot weather and or drought. The diagram below illustrates a 'rain garden' which operates on these principles.



24. GI can also provide cooling effects, which will increase thermal comfort especially in urban areas, which are susceptible to the heat island effect. This in turn contributes to global warming. The heat island effect is created when the cumulative effect of pollution, the production of waste heat from for example air conditioning and vehicle engines, and changes in the chemical and physical properties of the atmosphere resulting from human activities result in an increase in temperature. The urban area becomes markedly warmer than the surrounding countryside. Heat islands can also develop in 'pockets' around single buildings, with temperature differences of 4°c have been reported along a single street.

Illustration of the 'heat island' effect.



25. Careful selection and strategic placement of vegetation can reduce the urban heat island effect and cool the air by between 2°c and 8°c.[11] It achieves these results through evaporative cooling and vapotranspiration, reflectance of radiation and shading to reduce the direct gain of energy.[12] (vapotranspiration is the process by which plants release water vapour into the air when they convert carbon dioxide and water into food in the presence of sunlight).

Carbon sequestration

26. Carbon dioxide is a major greenhouse gas. It is formed in many ways, both natural and through man-made processes. The amount of carbon dioxide in the atmosphere has increased dramatically since the industrial revolution, because the burning of fossil fuels releases it. Too high a level of carbon dioxide in the atmosphere is also dangerous for human and animal life, because it displaces the amount of oxygen in the atmosphere and can therefore cause suffocation.

11 Air Temperature Regulation by Urban Trees and Green Infrastructure Forestry Commission research note 2013
12 Air Temperature Regulation by Urban Trees and Green Infrastructure Forestry Commission research note 2013

27. Plants, remove carbon dioxide from the atmosphere and break it down into carbon and oxygen. The oxygen is released back into the air, and the carbon is locked away in the structure of the plant. When the plant dies, the carbon is released into the soil, where is enriches the soil and makes it more fertile.

28. Removal of carbon from the atmosphere in this way is called carbon sequestration, which has the potential to significantly reduce the amount of carbon that exists in the atmosphere as carbon dioxide.

29. A recent study undertaken by Torbay Borough Council and Treeconomics found that the trees in Torbay store 98,000 tonnes of carbon, as well as playing a significant role in removing airborne pollution. The financial value of the carbon storage is calculated as being £1.5 million, and the value of air pollution removal as £1.3 million. The cost of replacing all of the trees in Torbay is estimated at £280 million.

30. The information provided by this study has been used to justify an investment of £25,000.00 in Torbay's tree maintenance budget, which will help to stop the decline in health of the town's trees that has been seen in recent years.

Reduced energy consumption

31. Trees can reduce the energy consumption of buildings by sheltering them from cooling winds in the winter and shading them from direct sunlight in the summer. "This will prove increasingly beneficial with the anticipated effects of climate change"[13] and deciduous trees will also allow sunlight through in winter. Appropriately designed green roofs and walls can provide an insulating effect that reduces the transfer of heat between the external and internal environment or vice versa. As a result, building temperatures can be 4.5°c warmer in the winter and nearly 15°c cooler in the summer; this reduces the internal heating and cooling costs.[14] Green roofs can also therefore help to reduce the urban heat island effect, as less warm air escapes into the surrounding environment.

Multi-functionality

32. GI assets not only provide local benefits in situ, but should contribute a wider function as part of other infrastructure planning, for example, to segregate cycle and traffic lanes or providing barriers to vehicular access. Integrated GI that is intelligently designed and managed provides multi-functional benefits across streets, neighbourhoods, towns and beyond.

33. For example, a single tree or green roof will provide some localised benefits at and around its physical location, such as temperature reduction and the increase in biodiversity. A cluster of trees and green roofs will however provide greater cumulative net benefit to the wider area (including water retention and improved air quality).

34. Well connected GI assets help to create places that are adaptive and resilient to changes in climate, and the more extreme weather events that we can expect as a result, and are especially important in urban areas due to the limited amount of available space.[15]

13 *Trees in the Townscape: A Guide for Decision Makers Trees and Design Action Group 2012*

14 *Building Greener: Guidance on the use of green roofs, green walls and complementary features on buildings (c644) CIRIA 2007*

15 *Green Infrastructure: An integrated approach to land use Landscape Institute 2013.*

Green infrastructure in Swanage

Existing GI network

35. The GI audit results show that the existing GI network consists of a range of assets which can be divided into 14 categories, or typologies. Each is capable of delivering a number of the functions and benefits described in the previous chapter. The following table shows the number of GI assets present in each typology, followed by the functions and benefits provided:

GI asset type	Number of GI assets	Functions	Benefits
Amenity green space	26	Visual amenity	Greener built environment
Farmland	18	Food production	Contribution to local economy, biodiversity (hedges and copses), mitigation of soil sealing, maintain open character, creation of jobs, aesthetic
Notable private gardens and roads	17	Informal recreation, potential for domestic food production, connectivity	Human wellbeing, more attractive built environment, mitigation of heat island effect, strengthening resilience to climate change, higher property values and local distinctiveness, permeability, ecological corridors
Public Rights of Way	11	Walking, riding	Human wellbeing, informal recreation, connections to open countryside, enhanced, tourism and recreation, landscape/ permeability
Civic spaces/ public realm	7	Pedestrian links, events, seating, public art including performances	Higher property values and local distinctiveness, permeability, enhanced tourism and recreation, more attractive built environment, maintain open character, informal recreation, socialisation
Sports and recreation	7	Formal recreation	Better health and human wellbeing, mitigation of land take and soil sealing, maintain open character
Waterbodies and watercourses	7	Drainage, flood prevention	Strengthen ecosystem resilience, biodiversity, more attractive built environment, mitigation of heat island effect, strengthening resilience to climate change, ecological corridors, mitigation of heat island effect, aesthetic, informal recreation

GI asset type	Number of GI assets	Functions	Benefits
Natural and semi-natural green spaces	6	Nature conservation, Informal recreation, education	Mitigation of soil sealing, biodiversity, strengthen ecosystem resilience, strengthen resilience to climate change, maintain open character, mitigation of land take, carbon storage and sequestration, improved habitats for wildlife, landscape permeability, ecological corridors, aesthetic
Formal parks and gardens	4	Gatherings, informal recreation, aesthetic enjoyment	Higher property values and local distinctiveness, mitigation of soil sealing, more attractive built environment, better health and wellbeing, maintain open character, benefit wildlife, mitigation of land take, landscape permeability, mitigation of heat island effect
Caravan parks	4	Holiday/ temporary accommodation	Mitigation of soil sealing, enhanced tourism, creation of jobs
Cemeteries and churchyards	3	Burials	Mitigation of soil sealing, local distinctiveness, quiet contemplation, strengthen ecosystem resilience, maintain open character, mitigation of land take
School grounds	3	Formal and informal recreation, education	Mitigation of soil sealing, strengthen ecosystem resilience, maintain open character, mitigation of land take
Allotments	1	Food and flower production	Mitigation of soil sealing, strengthen ecosystem resilience, mitigation of heat island effect, strengthening resilience to climate change, maintain open character, better health and wellbeing, mitigation of land take
Derelict land	1	-	Biodiversity

Condition

36. The condition of the GI assets in Swanage varies across the town, with those that are owned by the individual local authorities and housing associations being average, or in some cases poor.

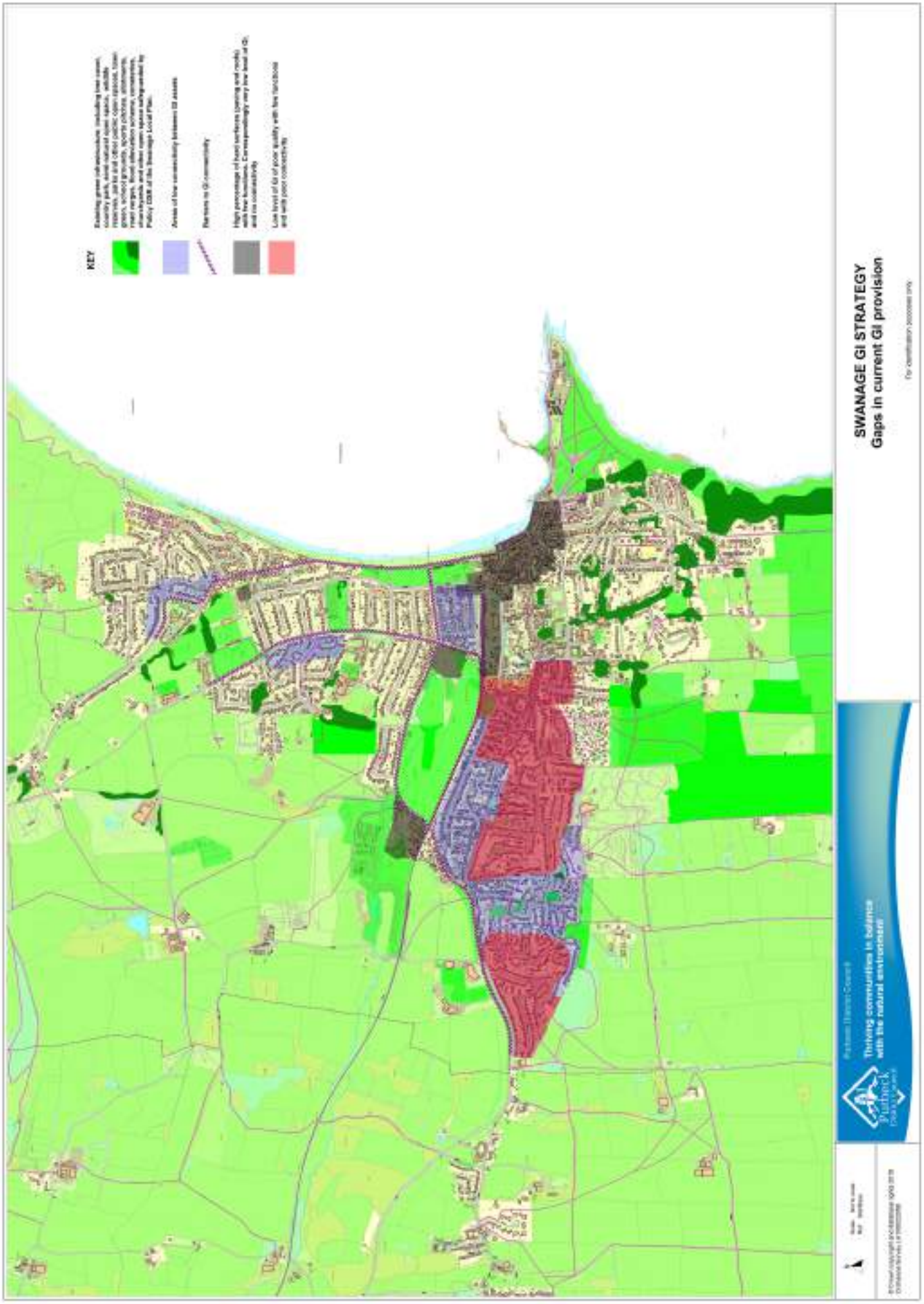
37. Condition does not just relate to the quality of maintenance, it also relates to structure of the asset. For example the Swan Brook as it flows past the Mowlem might appear to be in good condition, but as a GI resource it has little structure and therefore limited benefits. It is confined to a hard sided engineered channel, which contains few footholds or cover for wildlife, and is therefore comparatively sterile compared to further upstream. In GI terms it would have a better structure if there was vegetation lining the banks. Not only would this attract wildlife, it would be more attractive and contribute more to the setting, provide more by way of cooling in hot conditions, do more to link habitats, and provide a framework for the natural systems which are fundamental to ecosystems. The more stratification there is and elements there are in the structure of the asset, the more interactions and benefits it supports.

38. Likewise the condition of a grassed verge would be much improved if it contained trees and shrubs to give it structure. This would create cover and food for wildlife, enhance visual interest, increase carbon sequestration, and to absorb more air pollution. Unchanged, grass verges are single function open space, which would not normally even be classed as GI.

39. Many of the amenity green spaces, especially in more recent development and in the housing association estates, consist of areas of what can be referred to as space left over after planning, or SLOAP. These are the awkward shaped pieces of land in car parking areas, or verges where there are underground services, and represent the pieces of land that are left over after as much development has been provided in as possible. They are not planned, so they have no real function. They are often just short mown grass or low maintenance shrubs that are of little aesthetic of wildlife value. Because these areas have been poorly planned, and are often in poor condition, the benefits that they provide as GI assets are very limited.

Gaps in the network

40. Detailed analysis of the baseline information and the GI audit indicates that there are specific zones where the provision of GI is low when assessed against national standards such as The Woodland Trust's Woodland Access Standards, and Natural England's Accessible Natural Green Space Standards.


KEY
SWANAGE GI STRATEGY
Gaps in current GI provision

41. The audit also highlights that the lack of connections to the open countryside via the Rights of Way network is an issue, along with the lack of adequate maintenance of that network. There is an aspiration from previous studies that the possibility of creating 'Greenways' be looked at as part of a Rights of Way project too. This would be highly beneficial for the ongoing health and vitality of the GI network of Swanage, as the more layers of connectivity into the countryside, the greater the level of function and health of the GI network will be.

42. Connectivity between GI assets in the town is poor in certain locations. It is likely that connectivity has decreased over recent years due to increases in infill and density of new development. New development has also not contributed enough good quality new GI, and that provided is often not designed to create new connections. Also, fewer properties now have large gardens, and the number of street trees has declined as Victorian plantings have been removed as they become over-mature, diseased, or due to the requirements of new development.

43. There is unfortunately no up to date sports and recreation strategy for the district so it is not possible to say whether the sports and recreational facility provision in Swanage is sufficient. There is however some indication that the facilities that are provided are not necessarily targeted towards the right demographic as the number of retired people in the town increases, and the number of younger people decreases.

Other issues

44. There are additional needs that should be considered at the same time as addressing the physical gaps in the network, a lack of connections between assets, and low numbers of benefits for individual assets.

45. A range of needs are identified in the Swanage Community Strategic Plan (SCSP)[16], the Swanage Local Plan (SLP)[17], and the UK Biodiversity Strategy – 2020.[18] These needs are assessed in detail in the appraisal section of appendix 1, and it is clear that a number of these can be addressed through improvements to the existing GI network. The following table summarises these needs, and contains suggestions as to how they might be address by GI interventions:

16 *Swanage Community Strategic Plan – Swanage: Looking to the future 2007-2027 Swanage Market and Coastal Towns Initiative Working Group 2007*

17 *Swanage Local Plan Pre-Submission Document - prepared in partnership by PDC, Swanage Town Council and Swanage Town and Community Partnership Sept 2016*

18 *Biodiversity 2020: A strategy for England's wildlife and ecosystem services Defra 2011*

Need	Potential GI interventions
Economic • encourage a diverse, thriving and prosperous local economy	Improve inward investment through creating a more attractive environment for people to live and work in, and for people to visit: • introduce GI to enhance the main approaches, arrival points and business areas - for example the A351, main beach car park, the station and the top end of the main retail area; • ensure all new large scale development includes a high proportion of well designed and visually attractive GI
Social • encourage informal leisure pursuits; • improve the quality of and access to public amenities and open spaces within the town and its environs	• promote the provision of a sports and recreation strategy; • promote a rights of way project which will improve connectivity to the wider countryside and include walking routes and cycle paths which can be combined into 'greenways'; • provide natural and attractive green open spaces including woodland. Provide GI enhancements on and adjacent to the seafront, and in Herston where there is the greatest social deprivation. Research potential for the creation of new green open spaces including woodland to provide more opportunities for informal recreation in a natural environment thereby improve physical and mental wellbeing
Environmental • a more sustainable town, with improved resilience to climate change and flooding; • protect and enhance the natural environment; • enhance and create open green spaces; • provide links to the countryside; • restore and improve ecological and landscape value by connecting fragmented habitats; • minimise all forms of pollution to the local environment	• Improve the existing GI and create a more robust network and respond to climate change, improve the natural environment, and help reduce pollution: • introduce SuDs on open land to reduce localised flooding, and design these to support ecological systems, remove pollutants, and contribute to re-charging the water supply; • create green corridors and stepping stones to improve physical and ecological links in the town and to the countryside; • introduce greater variety of management techniques in green open spaces, and vary range of planting and replace bedding plants with flowering shrubs, which require less water, and are longer lived, and introduce more tree planting; • plant trees along main routes and around the station and the town centre to reduce air pollution • provide adequate and well designed open space/GI with new development, and create new green open spaces where possible

Conclusions

46. Analysis of the GI resource reveals that although there are a good number of GI assets in and surrounding Swanage, there are potential benefits that are poorly represented. These are resilience to climate change, biodiversity, flood alleviation, connections to the open countryside, sustainable surface water drainage, and in certain locations visual amenity. This is not the case across the board, but these issues have arisen as areas of concern that require further attention.

47. These benefits are poorly represented partly because of the poor condition of a number of the GI assets, but also because of gaps in provision and low levels of connectivity.

48. There are also a range of economic, social and environmental needs that present in the town that can be partly addressed through to provision of an improved GI network.

Recommended improvements

49. The GI audit and analysis shows that the condition of the GI network needs to be improved if a full range of benefits is to be provided and identified needs addressed. The physical gaps in provision therefore need to be addressed, new connections made, and the range of function of many of the GI assets increased.

50. The analysis identifies a range of improvements that can be made to existing GI assets, and suggestions are made for new assets and connections. These suggested improvements must be reviewed in the context of the GI network as a whole if the improvements made are to provide the greatest benefit to Swanage.

Add functions and strengthen connections

51. The diagram on the next page shows how the number of benefits provided and therefore the condition of the GI network can be improved by adding functions to GI assets and connecting them together.

52. If the condition of the GI network is improved in this way, it will be more robust and capable of providing a sustained response both to climate change, and to the other identified economic, social and environmental needs - the overall value of the network will increase.

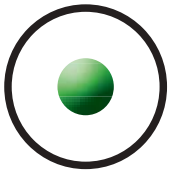
53. The table on pages 2-22 of appendix 1 contains a column identifying additional functions that could be provided by each of the audited GI assets. These are then translated into potential projects and initiatives. These projects and initiatives are wide ranging, varying from simple changes to management practices, to major tree planting schemes and SuDs schemes.

54. In order to rationalise the potential projects and initiatives and produce a more targeted list, they are correlated against the results of the functional and spatial analyses. By doing this the potential of the proposals to address strategic issues is tested, and gaps in strategic function revealed. The table on pages 77-80 of appendix 1 shows the results of this assessment.

55. This process, along with mapping the results of the audit is what indicates where new connections and additional GI functions and assets should be located in order to achieve the best outcome.

Single benefit

Individual amenity green spaces deliver a single function



For example a grassed verge

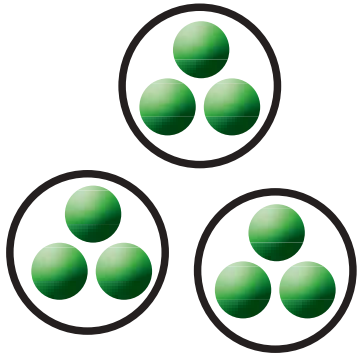
Maximising single benefit

Maximising use of individual amenity green spaces by adding other functions

Add sustainability by creating SuDs and planting trees

Multiple benefit

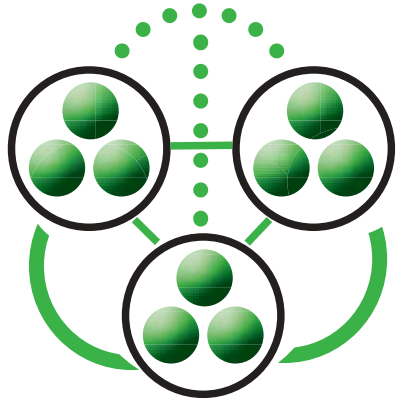
Individual amenity green spaces deliver multiple functions and benefits



Creates a multifunctional GI asset that reduces surface water flooding issues, helps to replenish the underground water supply, provides food and shelter for wildlife, helps to reduce air pollution and cools the air during hot weather, improves amenity etc.

Connected multiple benefits

Connecting together multiple function/benefit amenity green spaces to create healthy green infrastructure



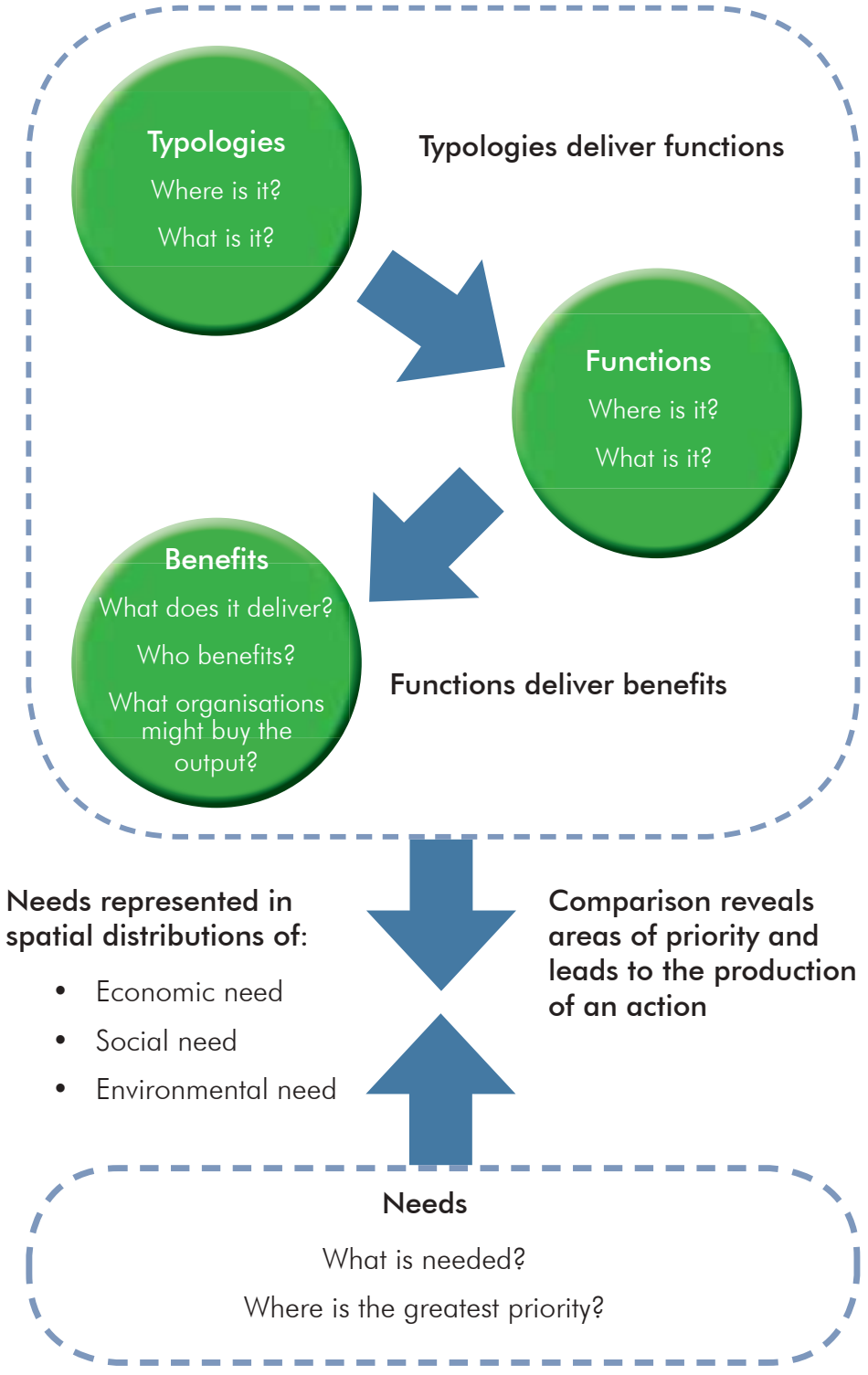
Green infrastructure assets linked together by paths, green corridors/stepping stones, which provides multiple benefits such as connecting habitats by supporting the movement of wildlife, creating a built environment that is more resilient to the impact of climate change

INCREASING VALUE

Targeted actions

56. The final step in refining the projects and initiatives targets those which are most important in terms of the benefits provided, and 'best fit' responses to the economic, social and environmental needs identified in the previous chapter.

57. The diagram below illustrates how this process produces the list of prioritised actions, which are included in the final proposals list on page 28:



Proposals

58. The highest priority proposals are those which respond to the areas of greatest need and deficiency in the existing GI network, and that will make the biggest overall contribution.

59. Not all proposals identified in the audit are covered as the contribution that some would make to improvement of the overall condition of the GI network and their relevance to social or environmental needs is limited. A coordinated approach to delivering the proposals and initiatives is needed, and it is suggested that Swanage 2027 and the Swanage and Purbeck Development Trust are ideally placed to provide this.

Proposals in priority order		Estimate of cost	Mechanism for implementation
1.	Main Beach car park GI improvements – resurfacing, tree planting in tree pits designed as rain gardens to aid surface water drainage	£100,000.00	Engage with Swanage Town Council. Engage consultant to design scheme. Funding application. Planning application may be required
2.	Herston tree planting and wildflower meadow project	£10,100.00	Consult landowners, check for over/ underground services. Consult specialist for design advice. Seek funding from landowners/make funding application. Involve volunteers in planting where possible. Public Liability Insurance may be required. Secure arrangements for future maintenance. Engage with the community (especially young people) to encourage a sense of ownership
3.	Street tree planting projects • Raised verges on western approach to Swanage • Victoria Avenue tree avenue reinstatement • Park Road replanting • Northbrook Road • Main shopping streets	£60,000.00	Engage with DCC tree specialists to discuss feasibility and for design advice. Check for underground/over ground services. Seek funding. Ensure arrangements for future maintenance agreed

Proposals in priority order		Estimate of cost	Mechanism for implementation
4.	Park/garden/recreation ground/The Downs – management and planting proposals	£39,500.00	Engage with Swanage Town Council. Engage consultant to design planting proposals and produce a management plan for each site based on the recommendations of this strategy. Work with Swanage Town Council to seek external funding
5.	North Beach car park improvements – resurfacing, tree planting in tree pits designed as rain gardens to aid surface water drainage	£30,000.00	Engage with Swanage Town Council. Engage consultant to design scheme. Funding application. Planning application may be required
6.	Ulwell stream flood management scheme	£30,000.00	Engage with landowner (DCC) and Environment Agency. Engage consultant to design scheme. Funding application. Planning application may be required. Flood Defence Consent may be required from the Environment Agency.
7.	GI brief for town centre improvement scheme/ promoted housing sites/ seafront improvement scheme	-	Engage with PDC. Ensure that tree planting is included where possible, especially in the brief for the town centre improvements.
8.	Greyseeds Wood – creation of 2ha of accessible woodland on open land to the south of the 'Greyseeds Estate'	£5,000.00	Engage with landowner – Dorset County Council. Engage consultant to design scheme. Funding application. Planning application may be required – consult Forestry Commission
9.	Cauldron Barn Wood – creation of 2ha of accessible woodland on open land to the west of Cauldron Barn caravan park	£5,000.00	Engage with landowner – Cauldron Barn caravan park. Engage consultant to design scheme. Funding application. Planning application may be required - consult Forestry Commission

Proposals in priority order		Estimate of cost	Mechanism for implementation
10.	Whitecliff Wood – creation of 2ha accessible woodland on open land to the west of Whitecliff Road	£5,000.00	Engage with landowner – National Trust. Engage consultant to design scheme. Funding application. Planning application may be required - consult Forestry Commission
11.	Developers GI Guide	-	Linked to Policy GI in the Swanage Local Plan. To be used forall major development, butprinciples can be applied to any sizeof development where siting and layout is a consideration. Adopt as SPD
12.	Pocket parks project • Land between Rabling Road and Prospect Crescent • Site of Crabtree Cottage, off Locarno Road	£10 – 25,000.00	Engage with landowner. Engage consultant to design scheme if necessary. Planning application may be required. Apply for funding
13.	Living churchyards project • Queens Road non-conformist burial ground • St. Mary's churchyard and upper churchyard • Northbrook cemetery • Godlingston cemetery	£4,000.00	Engage with landowner. Engage with consultant to design proposals. Apply for funding. Volunteers may be able to help with planting. Public Liability Insurance may be required
14.	Swanage Railway green corridor and green bridge project	Unknown	Engage with Swanage Railway Company, and DCC as landowner. Discuss feasibility. DCC bridge design service may be able to help with green bridge design. Investigate possibility of green walls (climbers) for existing bridge where railway passes under Victoria Ave
15.	Living verges initiative	Unknown	Engage with DCC

Proposals in priority order		Estimate of cost	Mechanism for implementation
16.	Caravan parks biodiversity and tree planting project	Unknown	Engage with caravan site owners
17.	Green roof initiative	-	Survey of existing flat roofs to see if suitable replacement with green roofs. Refer to guidance from Victoria BID GI Audit for guidance. Investigate feasibility
18.	Farmland hedge gapping up and wildflower meadow project	Unknown	Seek guidance from DCC countryside rangers/Durlston Country Park/Dorset AONB team
19.	Schools biodiversity project (all schools)	£2,100.00	Engage with schools. Could the project form part of curriculum activity? Students could help with planting. External funding may be available
20.	Community orchard/tree nursery project (allotment site)	Unknown	Engage with Swanage Town Council and allotment tenants to discuss feasibility
21.	Stream clearance volunteering project	-	Obtain consent and guidance from Environment Agency. Volunteers may need Public Liability Insurance
22.	Private/housing association garden biodiversity initiative	-	Publicity material required. Liaise with Dorset Wildlife Trust to see if have similar initiative that could be relevant. Include a 'Hedges for Hedgehogs' campaign. Work with local housing associations to increase biodiversity on their land especially by replacing evergreen hedges with deciduous species
23.	Local Nature Reserve application • King George's recreation ground/ Forres Field to flood alleviation scheme • The Downs	-	Additional survey work may be required. Application to DCC
24.	Green alley project	-	Approach land owners to discuss feasibility

Proposals in priority order		Estimate of cost	Mechanism for implementation
25.	Support the provision of a Dorset sport and recreation strategy	-	Liaise with DCC and PDC
26.	New Rights of Way, greenway and cycle links	-	Set up a Rights of Way, greenway and cycle links task group to take this work forwards in conjunction with Dorset County Council Rights of Way Team
27.	Pick up after your dog campaign	£2,000.00	Seek guidance from PDC Public Health and Housing. Produce leaflets and posters

Potential sources of funding

UK funding

60. Some of the sources of funding are included in the South East Dorset Green Infrastructure Strategy and may be useful although it should be noted that some may no longer available. These and other potential funding sources are listed below.

European funding

61. The European Commission has produced a series of guides to assist authorities and stakeholders to invest in GI under the new European Regional Development Fund and the Cohesion Fund for 2014-2020. The first is a guide to 'multi-benefit cohesion policy investments in nature and green infrastructure'. It looks at the values of nature and how they are important for cohesion policy objectives, and offers a useful toolkit and information source for the development and implementation of GI investments under the cohesion policy for 2014–2020.

62. The second guide 'connecting smart and sustainable growth through smart specialisation' aims to assist ERDF managing authorities across the EU to integrate sustainable growth objectives linked to eco-innovation, ecosystem services and sustainable energy into their research and innovation strategies (RIS3).
http://ec.europa.eu/regional_policy/ information/brochures/index_en.cfm#. http://ec..europa.eu/environment/nature/ecosystems/

63. This funding will not however be available once the UK finally exits the European Union.

Public agencies

Land management and improvement funding from national public agencies such as:

- Natural England – Countryside Stewardship Mid or High Tier schemes: Hedgerows and Boundaries Grant; Woodland Creation Grant
https://www.gov.uk/government/collections/countryside-stewardship-get-paid-for-environmental-land-management#mid-tier
- Forestry Commission - English Woodland Grant scheme, Farm Woodland Premium scheme, Farm Woodland scheme, Woodland Grant scheme
http://www.forestry.gov.uk/england-grants

Infrastructure funding from national public agencies eg.

- Environment Agency - investment programme for managing flood risk
https://www.gov.uk/guidance/flood-and-coastal-defence-funding-submit-a-project

Lottery funds:

- Big Lottery – Awards for All, Community Spaces, BIG Local Trust
https://www.biglotteryfund.org.uk/Home/Funding/Funding%20Finder
- Heritage Lottery – Parks Matter, Landscapes Partnerships programme, Parks for People programme
https://www.hlf.org.uk/looking-funding/what-we-fund/land-and-natural-heritage

Dorset County Council/Dorset AONB grant schemes eg. countryside and conservation projects.

General revenue budget of a local authority in relation to publicly owned land, leisure services, highways, rights of way, countryside and regeneration

Land management budgets of large institutional land owners

Third sector
• RSPB – Woodland Biodiversity Project http://www.rspb.org.uk/whatwedo/projects/details/344293-woodland-biodiversity-project#funding • Woodland Trust – Trees in Hedgerows scheme, MOREwoods project, First World War Centenary Wood scheme, PUR Project for farmland trees http://www.woodlandtrust.org.uk/plant-trees/trees-on-land/grants-and-funding/from-us/ • Esmée Fairbairn Foundation – Environment fund http://esmeefairbairn.org.uk/what-we-fund/environment • Grow Wild England https://www.growwilduk.com/content/about-community-projects
Private sector
Local businesses, organisation sponsorship Market led schemes and income generation Business Improvement Districts (BIDs)

The next steps

64. As already noted, coordinated approach to delivering the proposals and it is suggested that Swanage 2027 and the Swanage and Purbeck Development Trust are ideally placed to be able to provide this. The following paragraphs provide recommendations on next steps.

Consultation

65. Consultation with landowners, local groups and community representatives will be essential to effective delivery and long term maintenance of the proposals. A period of consultation with potential partners should take place which will:

- allow interested parties to comment on proposals on their property, or related to sites and infrastructure in which they have an interest;
- ensure that an opportunity is provided to raise any concerns about the proposals, identify constraints, and comment on potential design;
- enable Swanage 2027/Swanage and Purbeck Development Trust to refine the priorities and deliver GI enhancements with the support of the partners and the wider business and resident communities.

66. Consultation with the local councils should be undertaken as a priority, as many of the proposals are in the public realm and public open spaces, which DCC, PDC and STC manage.

Additional surveys

67. Further survey work will be required for some proposals to ensure that the site or building is suitable for the proposed feature. For example for the green roof project all buildings will require a structural survey to ensure they can bear the additional weight that the installation of a green roof generates.

68. For the street tree planting proposals, surveys will be needed to identify the presence of soil or substrate or buried services. It may not be possible to deliver all of these projects if underground infrastructure is present, and the planted trees will not thrive if there is not enough suitable substrate to support healthy root growth.

Design

69. Many of the smaller projects can be delivered without the need for design input from specialists. For the larger projects however, design advice should be sought. Appropriate types of design guidance include:

- planting advice at existing parks and gardens, including species which are beneficial to wildlife;
- horticultural expertise will be important for most features, in order to ensure that an appropriate species list is identified for the conditions (e.g. flood resistant and pollution tolerant in rain gardens, plants suitable for seaside locations for sites close to the seafront);

- the expertise of a landscape architect may be required for the design of larger projects, especially where structures, ground modelling, street furniture, hard surfaces, SuDs and detailed planting proposals are required.

Consents

70. Various statutory consents or notice may be required before the work can proceed. Some of these are identified in the proposals table. Consents take time to acquire and this varies on the type of consent. Early contact with the consenting body is always recommended. The following table gives further detail about the consents that may be needed:

Description of work	What to check	What to do next
Cutting back, pruning or felling trees	Are the trees protected by a Tree Preservation Order (TPO)? If they are, apply to PDC for consent to do the work	Follow the instructions given on the PDC trees and hedgerows page of the Dorset for you website: https://www.dorsetforyou.gov.uk/treesandhedgerows/purbeck
	Are the trees in a Conservation Area? If they are, give PDC 6 weeks notice	
	If more than one large tree is to be felled a felling licence may be required	Follow the instructions given on the Forestry Commission website: http://www.forestry.gov.uk/forestry/infd-6dfkxf
Removing a section of hedgerow	Does the hedge grow in or adjacent to any common land, National Nature Reserve, Site of Special Scientific Interest, or land used for agriculture, forestry or for the breeding or keeping of horses, ponies and donkeys AND has a continuous length of at least 20 metres, or if less than 20 metres meets another hedgerow at each end? If it does PDC require a hedgerow removal notice	Follow the instructions given on the PDC trees and hedgerows page of the Dorset for you website: https://www.dorsetforyou.gov.uk/treesandhedgerows/purbeck

Description of work	What to check	What to do next
Removing scrub, saplings or shrubs	Is the site in a Conservation Area? If it is, are any branches 75mm or more in diameter at 1.5 metres above ground level? If there are, these trees and shrubs are protected from felling, lopping and pruning. Give PDC six weeks notice	Follow the instructions given on the PDC trees and hedgerows page of the Dorset for you website: https://www.dorsetforyou.gov.uk/treesandhedgerows/purbeck
Digging trenches or other excavations or earth moving	Does the work involve the use of machinery? If it does planning permission may be required	Follow the instructions given on the PDC Development Management page of the Dorset for you website: https://www.dorsetforyou.gov.uk/article/418400/Development-Management-in-Purbeck
Placement of planters, or other street furniture	Will the work be done by DCC/PDC/STC? If it is, it may be Permitted Development. If not, it will probably need planning permission. Is the site is in a Conservation Area? If it is refer to the Conservation Area appraisal for guidance on design: https://www.dorsetforyou.gov.uk/purbeck/adopted_conservation_area_appraisals	Follow the instructions given on the PDC Development Management page of the Dorset for you website: https://www.dorsetforyou.gov.uk/article/418400/Development-Management-in-Purbeck

Delivery

71. Delivery of the green infrastructure projects s to be coordinated by the Swanage and District Development Trust or Swanage 2027, but may be implemented by partner organisations. There may also be external funding initiatives relating to the various functions that the GI opportunities will deliver.

72. Where enhancements will deliver direct benefits to specific companies, it may be appropriate for the Trust/Swanage 2027 to negotiate for the enhancement to be partly or wholly funded by with these business partners. This will maximise the enhancements that can be delivered with other funding.

Maintenance

73. Maintenance of the new GI features will be essential to maintain provision of functions such as alleviation of surface water flooding, and their appearance. The options for maintenance need to be considered at the outset, as this is likely to influence prioritisation of the projects. There should be a maintenance plan in place prior to delivery, including which partners will be responsible for maintaining the features. As many of the projects are within the public realm, the local councils will have a key role to play in agreeing where responsibility for management and maintenance will lie. There may be a need for the Swanage and District Development Trust/Swanage 2027 to oversee GI maintenance in some instances.

Monitoring

74. A monitoring approach should be agreed for the delivery of projects. This should monitor:

- the delivery of the GI features and the extent of green features across the town;
- the quality of the GI features, and maintenance.

75. Monitoring will provide quantified information to enable the success and outputs of the investment to be measured.

Glossary

Amenity area

Most commonly found in residential areas and function as informal recreation areas, green space in and around housing estates and village greens. Amenity areas are usually publicly accessible.

Area of Outstanding Natural Beauty (AONB)

A rural area designated by the Countryside Commission under Section 87 of the National Parks and Access to the Countryside Act 1949, with the primary aim of conserving and enhancing the natural beauty of the landscape.

Balancing pond

Ponds designed to control flow rates by storing floodwater and releasing it slowly once the risk of flooding has passed.

Biodiversity

The variety of life on earth. It includes plants, animals and micro-organisms which interact in complex ways with the environment to create living ecosystems.

Bioretention

Surface water is collected into the treatment area which consists of a grass buffer strip, sand bed, ponding area, organic layer or mulch layer, planting soil, and plants. The vegetation and layers within the structure of the bioretention system remove contaminants and sedimentation from surface water runoff.

Bug hotel

A man-made structure which provides invertebrates such as bumblebees, beetles and spiders a place to shelter and hibernate over the winter period.

Business improvement district (BID)

A business-led and funded body formed to improve a defined commercial area. A BID is funded through the BID levy, which is a small percentage of a businesses' rateable value.

Canopy cover

The branches and leaves of an individual tree or group of trees that form an overhead umbrella or canopy.

Carbon management

Minimising energy use, raw material consumption, and waste generation in order to maximise efficiencies in the consumption of resources that contribute to climate change.

Community infrastructure levy (CIL)

A planning charge, introduced by the Planning Act 2008 as a tool for local authorities in England and Wales to help deliver infrastructure to support the development of their area.

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.

Culvert

A structure that allows water to flow under a road, railway, path, or similar obstruction from one side to the other side. Typically encased in soil, a culvert may be made from a pipe, reinforced concrete or other material.

Deciduous

Plants that are deciduous lose their leaves in the winter. The leaves appear again in the spring after that plant has gone through a period of dormancy where it saves its energy and builds up resources for the growing season.

Detention basin

A storage basin or facility that provides flow control by collecting surface water runoff. Detention basins are normally dry and in certain situations the land may also function as a recreational facility.

Ecology

The relationship between living things and their environment.

Ecosystem

A collection of organisms (plant, animal and other living things) living together in a certain space, and their environment. Together, these components and their interactions with and relationships to each other form a dynamic and complex new whole, functioning as an ecological unit, with additional characteristics that can't be found in the individual components. The individual components cannot survive on their own without involving other species in the ecosystem.

Ecosystem services

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

Ecosystem approach

A strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use equally and which recognises that humans are an integral component of many ecosystems.

Eco-town

A town consisting of houses that are built in a way that is designed to cause less damage than usual to the environment, for example, by using power from the sun or wind, not using much electricity, and not producing much carbon dioxide.

Evergreen

Plants that are evergreen retain their leaves throughout the year. Their appearance generally not changing from season to season as a result.

Filter strip

Gently sloping, vegetated strips of land that provide opportunities for slow conveyance and infiltration of surface water, and remove sediment and contamination in the same way as a bioretention system.

Geocellular system

Used to control and manage rainwater surface water runoff either as a soakaway or as a storage tank. The modular/honeycomb nature of geocellular systems means that they can be tailored to suit the specific requirements of any site.

Geographic information system (GIS)

A spatially referenced database, or a system to collect, store, manipulate, analyse and present spatially referenced data.

Green infrastructure (GI)

A strategically planned and delivered network of high quality green spaces and other environmental features. It is designed and managed as a multifunctional resource capable of delivering a wide range of environmental and quality of life benefits. GI includes parks, open spaces, playing fields and private gardens.

Green corridor

Strip of habitat connecting wildlife populations that wildlife can use to travel between those populations.

Green finger

Area of habitat which penetrates into the urban area from wildlife populations, and allows for migration of the wildlife into the urban area.

Green infrastructure asset

Open space such as parks and gardens, allotments, woodlands, fields, hedges, lakes, ponds, playing fields, coastal habitats, as well as footpaths, cycleways or rivers. Also includes urban interventions such as green roofs and street trees. GI assets can be specific sites at the local level or broader environmental features at the landscape scale within and between rural and urban areas such as wetlands, moors and mountain ranges.

Green infrastructure function

The roles that GI assets can play especially if planned, designed and managed in a way that is sensitive to, and includes provision for, natural features and ecosystem services. They may have obvious primary functions, but each asset can perform different functions simultaneously. For example, street trees add aesthetic quality to an urban area, but also reduce airborne pollution, provide shade, reduce urban heat island effects, mitigate wind chill and turbulence, and increase biodiversity.

Green roof

A system of roofing where a layer or soil or mineral substitute is laid onto a suitable liner and seeded or planted up with flowers, grasses, mosses and drought tolerant succulents such as sedums. The vegetated surface provides a degree of retention, retention and treatment of rainwater, and promotes evaporation. If designed accordingly green roofs can also contribute to local biodiversity.

Green wall

A wall with plants growing on its surface without the need to root in ground level soil. A green facade is an alternative approach where climbing plants are rooted in the ground and trained to grow on a support system attached to the wall.

Greenway

Traffic-free routes which are attractive, generally well separated from traffic and continuous over obstacles and through road junctions. Although Greenways are often rural, many of the most popular and important ones thread their way through urban areas. They may connect urban and rural areas, and where they continue along roads through towns are referred to as 'green streets'. Traffic-free urban routes of high quality are referred to as 'promenades'.

Guerrilla gardening

The covert unauthorised act of cultivation and planting in a public location.

Habitat

The area or natural environment in which an organism or population normally lives. A habitat is made up of physical factors such as soil, moisture, range of temperature, and availability of light as well as factors such as the availability of food and the presence of predators.

Hard engineering

Controlled disruption of natural processes by using man-made structures.

Herbaceous

Plants without woody stems and which generally die back at the end of each growing season.

Infiltration basin

The same as a detention basin, but also removes sediment and contamination from the surface water runoff.

Local enterprise Partnership (LEP)

A partnership between local authorities and businesses to decide what the priorities should be for investment in infrastructure, buildings and facilities in the area.

Multi-functionality

Refers to the potential for green infrastructure to have a range of functions, to deliver a broad range of ecosystem services. Multi-functionality can apply to individual sites and routes, but it is when the sites and links are taken together that a fully multi-functional GI network is achieved.

Native plants

Plants including trees and shrubs that occur naturally in the countryside, and have not been introduced from another country.

Natural systems

The physical and biological materials and their intertwined processes that exists in nature, independent of any human involvement.

Open water

Ponds, ditches and swales covered by water for more than 6 months of the year.

Ornamental plants

These are plants that have been introduced to the UK from other countries. They have often been introduced because of their particular more showy appearance or impact in garden situations. There was a strong movement in Victorian times to bring unusual or exotic plant species back to the UK, and evidence of this can be seen in many of the plantings of the time that took place in Swanage.

Permeable paving

Paving that has joints or pores in it so that surface water can drain through it

Rain garden

In its simplest form, a rain garden is a shallow depression, with absorbent, but free draining soil, planted with vegetation that can withstand occasional temporary flooding. Rain gardens help to deal more effectively with heavy rain, but they also filter and clean surface water runoff.

Rainwater harvesting

The collection of rain water from surfaces and subsequently storing this water for later use. Normally water is collected from the roofs of buildings and stored in rainwater tanks.

Rights of way

A route over which the public have a right to pass and re-pass, for example a public footpath or a bridleway. The route may be used on foot, on a horse, on a pedal cycle or with a motor vehicle, depending on its status.

Soft engineering

The use of ecological principles and practices to reduce erosion and achieve the stabilisation and safety of shorelines and the area surrounding rivers, while enhancing habitat and improving aesthetics.

Species

A group of living organisms consisting of similar individuals that actually or potentially interbreed in nature.

Stepping stones

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

Street trees

A tree planted at the side of a street or in another hard surfaced public place.

Sustainable drainage systems (SuDs)

An approach to surface water management that combines a sequence of management practices and control structures designed to drain surface water in a more sustainable fashion than some conventional techniques. SuDs work by slowing and holding back the water that runs off from a site, allowing natural processes to break down pollutants. They can provide additional habitats for wildlife as well as improved visual amenity. SuDs can comprise streetscape assets such as permeable paving or rain gardens, as well as soft landscape assets such as swales.

Site of Nature Conservation Interest (SNCI)

Sites of considerable nature conservation interest at a local level. Some may include habitats of comparable quality to SSSIs but are of smaller area or of a more fragmented nature.

Site if Special Scientific Interest (SSSI)

Areas that are protected by law to conserve their wildlife or geology. They are designated by Natural England under the Wildlife and Countryside Act 1981.

Swale

A shallow, broad, vegetated channel designed to store surface water runoff. Swales may be used as conveyance structures to pass the runoff to other systems, and can be designed to promote infiltration where soil and groundwater conditions allow. A swale that has vegetation and filtration layers within the structure to remove contaminants and sedimentation is called a bio-swale.

Transpiration

This is the movement of water through a plant and its evaporation from aerial parts, such as from leaves but also from stems and flowers.

Urban heat island

The increased temperature of urban air compared to its rural surroundings. The term ‘heat island’ is used because warmer urban air lies in a ‘sea’ of cooler rural air.

Vision

The ability to imagine how a place could be in the future.

Wetland

Areas that are frequently inundated or saturated by surface or ground water, which remains for a long enough time to support vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Wildflower meadow

Areas of grass that are filled with wild flowers, are actively managed, and are not improved by fertilisers. They may be cut for hay in late June to early July after summer flowering. The flowering plants set seed before the hay is cut and true meadows are grazed in autumn.

References and recommended further reading

EU strategy and information

European Commission green infrastructure web page.

http://ec.europa.eu/environment/nature/ecosystems/

Green infrastructure, 2010, European Commission

four-page factsheet on green infrastructure.

http://ec.europa.eu/environment/nature/info/pubs/docs/greeninfrastructure.pdf

Green infrastructure (GI) – enhancing Europe's natural capital, COM, 2013 249 final

communication from the European Commission.

http://eur-lex.europa.eu/resource.html?uri=cellar:d41348f2-01d5-4abe-b817-4c73e6f1b2df.0014.03/DOC_1&format=PDF

European Commission video on green infrastructure (2013).

http://www.tvlink.org/mediadetails.php?key=dccba5fad56721ede710&title=Green+infrastructure+%E2%80%93+Building+blocks+of+modern+life&titleleft=Environment

Connecting smart and sustainable growth through smart specialisation: A practical guide for ERDF managing authorities, 2012, European Commission

a practical document with concrete recommendations and examples of good practice that show potential ways forward and to facilitate discussion between public authorities and stakeholders

http://ec.europa.eu/regional_policy/sources/docgener/presenta/green_ growth/greengrowth.pdf

The guide to multi-benefit cohesion policy instruments in nature and green infrastructure, 2013, European Commission

directed at helping with on-going implementation of Cohesion Policy 2007-2013, as well as form a useful toolkit and information source for the development and implementation of Cohesion Policy 2014-2020.

http://ec.europa.eu/regional_policy/sources/docgener/studies/pdf/guide_ multi_benefit_nature.pdf

Review of LIFE projects supporting GI: LIFE building up Europe's Green Infrastructure, 2010, European Commission

introduces the concept of a green infrastructure strategy for Europe with the aim of finding ways to reduce landscape fragmentation, improve ecosystem resilience, protect biodiversity, adapt to climate change, and promote integrated spatial planning.

http://ec.europa.eu/ environment/life/publications/lifepublications/lifefocus/ documents/green_infra.pdf

GI Guidance

Green infrastructure guidance (NE176), Natural England, 2011

articulates natural England's position in relation to green infrastructure planning and delivery, which is increasingly recognised as an essential part of sustainable spatial planning. This is due in no small part to the role of green infrastructure as a 'life support system', able to deliver multiple environmental functions and to play a key part in climate change mitigation and adaptation.

http://publications.naturalengland.org.uk/publication/35033?- category=49002

Green infrastructure position statement, 2013, Landscape Institute

gives fresh insights into the benefits GI can bring by creating multifunctional landscapes and show how people can collaborate to deliver it. It is also a chance to take stock of significant planning reform across the UK and shows how the landscape profession can lead in this area by the integrated use of GI in a way that will provide effective solutions.

www.landscapeinstitute.org/policy/GreenInfrastructure.php

Green benefits in Victoria business improvement district, 2012, Victoria BID

presents a baseline quantitative assessment of the air pollution, amenity, carbon storage and sequestration benefits of trees as well as the storm water and surface temperature benefits of existing green infrastructure in the Victoria BID.

www.victoriabid.co.uk/downloads/

Delivering biodiversity benefits through green infrastructure (C711), 2011, CIRIA

aims to give clear messages about the goals and objectives of GI for the construction industry. It also seeks to serve as a tool to enable construction professionals to work together with other disciplines to maximise the opportunities presented by civil engineering and building projects, to enhance biodiversity and ecosystem services through GI, while minimising any negative effects on the environment.

http://www.ciria.org/ItemDetail?iProductcode=C711&Category=BOOK

Regional GI strategy

Investing in green places: South east Dorset green infrastructure strategy, 2011

is about making the best use of the assets we already have in a cost effective way, the need for and outlines standards for strategic green space and other aspects of green infrastructure, which are intended to guide new provision of green infrastructure and be reflected in improving and managing existing assets.

www.dorsetforyou.com/greeninfrastructure

Sustainable urban drainage

Model agreements for sustainable drainage systems (C626), 2004, CIRIA

provides basic advice on the use and development of model operation and maintenance agreements for rainwater and grey water use systems together with simple guidance on their incorporation into developments. The guide identifies maintenance considerations and provides an outline of ways in which the long-term responsibilities for the maintenance of the rainwater and grey water use systems can be allocated.

www.ciria.org/serVIce/Home/core/orders/product.aspx?- catid=2&prodid=115

Retrofitting to manage surface water (C713), 2012, CIRIA

sets out a process to achieve the retrofitting of surface water management measures. It integrates the principles of urban design with surface water management.

http://www.ciria.org/ItemDetail?iProductCode=C713&Category=BOOK&WebsiteKey=3f18c87a-d62b-4eca-8ef4-9b09309c1c91

The SuDS Manual, 2015, CIRIA

covers the planning, design, construction and maintenance of Sustainable Drainage Systems (SuDS) to assist with their effective implementation within both new and existing developments. It looks at how to maximise amenity and biodiversity benefits, and deliver the key objectives of managing flood risk and water quality. There is also supporting information covering topics such as materials, landscape design, maintenance, community engagement and costs and benefits.

http://www.ciria.org/ItemDetail?iProductCode=C753&Category=BOOK&WebsiteKey=3f18c87a-d62b-4eca-8ef4-9b09309c1c91

Trees

The benefits of large species trees in urban landscapes: A costing, design and management guide (C712), 2012, CIRIA

encourages the use of large species trees within the urban landscape, dispelling assumptions and myths regarding the whole life costs of planting and maintenance. It highlights social and environmental aspects and offers technical guidance covering planning, design, management and maintenance.

http://www.ciria.org/ItemDetail?iProductcode=C712&Category=BOOK

Air temperature regulation by urban trees and green infrastructure, 2013, Forestry Commission

examines how the type of tree, its planting location, together with the mix of vegetation and paved surfaces in green space all contribute to countering the effects of urban heat islands.
www.forestry.gov.uk/fr/InFD-95ren7

Trees in the townscape: A guide for decision makers, 2012, Trees and Design Action Group

as well as playing a role in climate proofing our neighbourhoods and supporting human health and environmental well-being, trees can also help to create conditions for economic success. This guide takes a 21st century approach to urban trees, providing decision makers with the principles and references they need to fully realise this potential.

www.tdag.org.uk/trees-in-the-townscape.html

Swanage green infrastructure strategy

APPENDIX 1 - GI audit and analysis

June 2018

Item 9, Appendix 1
(PG - 16.05.08)

Contents

Context

Legislation and planning

1. There is a range of established European and national legislation relating to GI and biodiversity. The Government's Natural Environment White Paper 'The Natural Choice: Securing the Value of Nature'[1] refers to the role of planning in protecting and improving the natural environment, and is the most relevant to this strategy. The aims of the White Paper include halting biodiversity loss by 2020, supporting 'healthy functioning ecosystems', and establishing 'coherent ecological networks'. The White Paper refers to the role of urban GI as completing 'the links in our national ecological network' and 'one of the most effective tools available to us in managing environmental risks such as flooding and heat waves'. It advocates that green spaces should be factored into the development of all communities.

EU Green Infrastructure Strategy

2. In May 2011, the European Union adopted a biodiversity strategy to halt biodiversity loss in Europe by 2020. The strategy is built around six mutually supportive targets which address the main drivers of biodiversity loss. Target 2 aims to ensure that 'by 2020, ecosystems and their services are maintained and enhanced by establishing green infrastructure and restoring at least 15% of degraded ecosystems'.

3. Responding to this political ambition, as well as the resource efficiency roadmap, the European Commission published a new strategy in May 2013 to promote the use of GI across Europe. The strategy aims to create a robust enabling framework in order to promote and facilitate GI projects within existing legal, policy and financial instruments.

4. It recognises that GI can make a significant contribution to the effective implementation of a wide range of EU policies where some or all of the desired objectives can be achieved through nature based solutions. It also places the use of GI firmly in the context of the Europe 2020 Growth Strategy which calls for a smart, sustainable and inclusive growth agenda across the EU.

5. In their attempts to revive industry, job markets and competitiveness, European governments are seeking more innovative and sustainable ways of promoting economic activities, whilst tackling environmental challenges. Coherent and effective GI can play an important role in this new approach.

6. The new GI strategy is made up of four main elements:

   - promoting Green Infrastructure in the main EU policy areas;
   - supporting EU-level GI projects;
   - improving access to finance for GI projects;
   - improving information and promoting innovation.

[1] *Natural environment White Paper - The Natural Choice: Securing the Value of Nature, Cm 8082 (June 2011) Defra*

National planning context

7. The National Planning Policy Framework (NPPF) supports the objectives set out in the Natural Environment White Paper by stressing a proactive and strategic approach to planning for the natural environment. One of the 12 core planning principles of the NPPF is that planning should 'promote mixed use developments, and encourage multiple benefits from the use of land in urban and rural areas, recognising that some open land can perform many functions (such as for wildlife, recreation, flood risk mitigation, carbon storage, or food production)' It states that local planning authorities should 'set out a strategic approach in their Local Plans, planning positively for the creation, protection, enhancement and management of networks of biodiversity and green infrastructure '. Local Plans are also required to take account of climate change over the longer term 'including through the planning of green infrastructure'.

8. Section 11 of the NPPF (Conserving and enhancing the natural environment) indicates that the 'planning system should contribute to and enhance the natural and local environment by (amongst other things):

   - recognising the wider benefits of ecosystem services;
   - minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures'.

9. Section 10 (Managing the effects of climate change) identifies that 'Local Plans should take account of climate change over the longer term, including such factors as flood risk, coastal change, water supply, and changes to biodiversity and landscape. New development should be planned to avoid increased vulnerability to the range of impacts arising from climate change. When new development is brought forward in areas which are vulnerable, care should be taken to ensure that risks can be managed through suitable adaptation measures , including through the planning of green infrastructure'.

Local planning context

10. Dorset AONB landscape character assessment - the overall objective for the Corfe Valley is to conserve and restore the intimate patterns of grasslands, woodlands, field boundaries (and nucleated settlements). The planning guidelines that will encourage this are wide ranging, but those that have particular relevance to GI are:

    - encourage small scale broadleaved planting around existing settlements;
    - encourage native planting in any landscape scheme associated with new development.

11. The relevant management guidelines are:

    - restore and enhance the condition of existing small broadleaved woodlands;
    - consider extending wet woodland on the valley floor, particularly around existing settlements and farmsteads;

- enhance management of arable farmland to create a wildlife-rich habitat supporting farmland birds and arable flora. This will include retaining areas of fallow land, maintaining an unploughed margin around fields and the introduction of conservation headlands. Reduce the intensity of farming practices around important sensitive habitats;
- encourage maintenance and restoration of boundaries, particularly dense hedgerows and banks along the valley floors (and stone walls towards the higher ground);
- protect and enhance watercourses and associated wildlife from soil erosion and the effects of diffuse pollution.

12. The current local plan is the Purbeck Local Plan, which was adopted in November 2012. Part of the vision for south east Purbeck (page 63) is that in Swanage:

- new development will be accompanied by areas of new green space that will improve access to the countryside and improve the setting of the town within the AONB;
- the town's role as a visitor destination will be developed through the provision of improved facilities and creation of enhanced public spaces along the seafront.

13. These aspects of the vision are to be realised through:

- Policy SE (page 66), where 'the settlement extensions (approx 200 dwellings) should look for opportunities to enhance the visual appearance of the transition between the urban area and open countryside to the benefit of the AONB. The choice of settlement extension(s) will be judged upon the ability of any potential sites to provide mitigation of European protected sites and have least harm on the AONB';
- Policy DH (page 83), where residential and tourist accommodation development located between 400m and 5km of a heathland will be expected to include mitigation measures which will include (amongst others) the provision of GI.

14. This is reinforced by the proposal (page 69) that GI be provided when development 'comes forward', and that it could include the additional provision of footpaths, allotments, planting of street trees, hedges and woodland, new play areas, management of areas at flood risk and enhancement of areas of biodiversity. Attention is drawn to examples of GI that are of particular relevance to Purbeck:

- allotment provision;
- restoration of minerals sites;
- provision of additional areas of woodland and heathland;
- sustainable drainage opportunities in new development;
- tree planting;

15. The spatial objectives and the Policies that relate to them that are of most relevance to this strategy are:

- support local communities – Policy GI: Green Infrastructure, recreation and sports facilities – specifically 'settlement extensions and major employment sites will be expected to contribute towards the delivery of significant areas of new green infrastructure and the management of a connected, coherent and functional network

of new and enhanced green spaces, corridors and public rights of way' (in accordance with the Green Infrastructure Strategy standards);

- conserve and enhance the landscape, (historic environment and cultural heritage) of the district – Policy LHH: Landscape, historic environment and heritage.

16. The importance of safeguarding and improving open space and sport and recreation facilities, and the provision of informal recreation and an improved working environment by including new elements of GI in employment areas are also identified.

17. Purbeck District Council (PDC) produced the Swanage Local Plan[2] (SLP) in partnership with Swanage Town Council (STC) and the Swanage Town and Community Partnership. The SLP includes thefollowing policies relevant to GI:

- Policy SGI: Swanage green infrastructure;
- Policy OSR: Open space and recreation.

Natural environment

Landscape setting

18. Swanage is the largest settlement in the district of Purbeck. It is set on the edge of the bay between cliffs and downs to the north, and the lower slopes of the limestone plateau to the south, and is of exceptional quality. This quality is reflected in the designation of the surrounding coastline as Heritage Coast, and to the south, the Jurassic Coast World Heritage site. The whole of the town and the surrounding countryside is situated in the South Dorset Area of Outstanding Natural Beauty (AONB).

19. The character of the landscape that Swanage sits in is described in the Dorset AONB Landscape Character Assessment as being clay valley. This landscape is a sweeping landscape with a patchwork of rough pastures and dense hedgerows, enclosed by the imposing Purbeck Ridge to the North, and a limestone escarpment to the south. Small broadleaved woodlands provide visual unity to the valley which has a settled rural character with coastal influences. The influences of Swanage are particularly apparent with pylons and visually intrusive land-uses. The valley is poorly drained with loamy base rich soils, supporting damp grassland habitats and occasional wet woodlands. Fragments of wetland vegetation such as reeds and willow remain in some areas.

20. The stream that drains the clay vale is the principle feature, generally followed by the railway. This creates an area of low and more level ground where the town centre and railway station are situated extending westwards. West of the town a tributary of The Brook runs northwards towards the Purbeck Hills forming a secondary valley. This feature creates, in effect, a local ridge of higher ground in the town and a locally prominent hill on which the Harrow House International College and white sports dome are situated.

2. *Swanage Local Plan*
https://www.dorsetforyou.gov.uk/media/222872/Adopted-Swanage-Local-Plan/pdf/LRes-swanage-local-plan-adopted-28-7-17.pdf

Biodiversity

21. One of the aspects that make Purbeck such a special place, is that the diverse landscapes and the habitats that they represent support a wide range of biodiversity. Purbeck covers a small part of the UK land surface (0.3% of England and Wales), yet some of the habitats in the district represent a considerable proportion of that particular habitat type nationally. For example, Purbeck contains about 5% of both the national heathland and reed bed resource. There is a 10km2 area near Wareham that is identified in the New Atlas of British and Irish Flora as having the highest number of plant species present in one place in the whole of the UK.

22. Purbeck also supports over 200 species of national or local conservation concern. These species are not just confined to protected sites. They are found across the district in areas such as the heathlands and on the limestone ridges. Some of these species are of particular concern, for instance Purbeck has three species (a plant, a moth and a weevil) that are found in the UK and nowhere else in the world. A further 13 species found in Purbeck are of global conservation concern, emphasising Purbeck's worldwide importance for biodiversity

Geodiversity and hydrology

23. Swanage Bay is a sandy east facing bay, which is protected from the major south-westerly storms. In the southern part there are low cliffs and banks of Upper Purbeck limestone and shale, which are largely built over. To the north, there are cliff sections of Wealden strata, which consists of soft yellowish and brownish sands and clay with a coarse quartz grit. Lignite (plant debris) is common and dinosaur remains are found occasionally in these river sediments from the Cretaceous era.

24. At Punfield Cove towards the northern end of this section, there are exposures of Lower Greensand which contain some unusual fossils, followed by Gault and Upper Greensand. Beyond this where the Purbeck Hills reach the sea is the major chalk exposure of Ballard Cliff, beneath Ballard Down. Here the Lower Chalk also contains many fossils.

Illustration of how the softer clay deposits are eroded faster than the other hard rocks.

25. Swanage Bay itself has formed because of the alternating bands of hard and soft rock. The softer Wealden and Gault deposits have eroded more quickly than the harder Upper Purbeck Limestone and Shale to the south, and the chalk of the Purbeck Ridge.

26. The geology and landform of Swanage and the Corfe valley influence how surface water runoff behaves in storm situations. After heavy rainfall the land is saturated and the water is forced down the Swan Brook and through the town. Historically this has meant that anything obstructing the flow would contain the water upstream and flood the surrounding area. A high tide would have also meant the water would not dissipate quickly leaving land and properties awash.

Flooding

27. As can be deduced from the above, Swanage has historically suffered from flooding, with severe flooding occurring as recently as 1990. A flood alleviation scheme to the west of the town was completed in the mid 1990's and has reduced the threat of flooding significantly, though there are still local areas that flood after a severe deluge, or after tidal flooding during high tides in extreme weather conditions. This is due mainly to existing piped surface water drainage system reaching capacity in these locations.

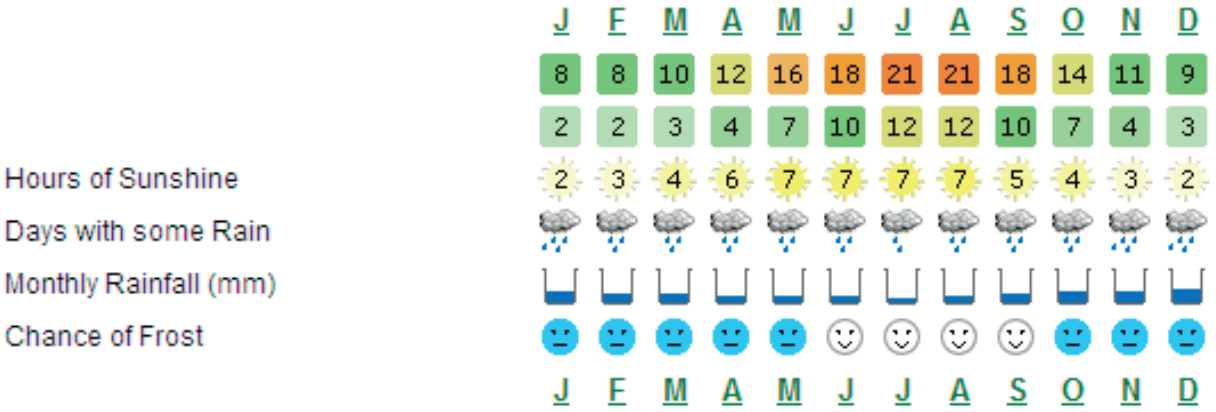
28. More information about flooding is outlined in the Swanage Local Plan Strategic Flood Risk Assessment Level 1 (SFRA) that was undertaken for the PDC in 2015. [3]

29. Although PPS 25 'Development and Flood Risk' has been superseded by the NPPF, it is still used as a reference for good practice. It promotes the use of natural flood management measures based on a holistic approach to the landscape, rather than continued building of physical flood defences. Small-scale naturalistic flood management features such as Sustainable Drainage Systems (SuDS) and rain gardens/swales could feasibly be implemented. Green roofs could also provide a flood alleviation function by slowing the run-off of water from buildings into the storm drains. Rainwater harvesting systems could be installed on roofs to collect rainfall rather than letting it run into drains. These features can be designed to be attractive to people, provide habitats for wildlife and also help to cool the air during hotter months, providing a truly multi-functional addition to the landscape. If appropriately sited, some of these features could also provide a buffer to separate pedestrian areas from the noise and visual intrusion of traffic.

3. *Planning Purbeck's Future: Swanage Local Plan Strategic Flood Risk Assessment Level 1 (September 2015) Purbeck District Council*

Climate

30. Swanage has a maritime climate characterised by warm summers and cool winters. The average high temperature in summer is 20°C with night time lows around 13°C. In winter, the average high temperatures are about 8°C with lows near 3.5°C. Average annual precipitation is 807mm with October through January having the highest levels of rainfall.



Built environment

Townscape designations

31. There are two Conservation Areas in Swanage (see map on page 11) . A Conservation Area is defined as: 'an area of special architectural or historic interest, the character and appearance of which it is desirable to preserve or enhance'. - Planning (Listed Buildings and Conservation Areas) Act 1990. Conservation Areas are designated to cover the most historically and architecturally important and interesting parts of towns and villages.

32. Various factors contribute to the special character of a Conservation Area. These include: the quality of buildings, the historic layout of roads, paths and boundaries, boundary treatments and patterns of enclosure, characteristic building and paving materials, uses and associations, the quality of the public realm and contribution made by trees and green spaces. A strong 'sense of place' is often associated with Conservation Areas.

SWANAGE AND HERSTON CONSERVATION AREAS

© Crown copyright and database rights 2016. Ordnance Survey LA100022058 Not to scale

33. A Conservation Area Appraisal has been produced for each of the Conservation Areas. An assessment of the contribution that these elements make to the Conservation Areas is included in each of the appraisals and are as follows:

- the churchyard of St Mary's Church forms an important, if bland patch of green space on which are planted an attractive group of trees. It is poorly keyed in to the surrounding townscape;
- where houses (in the west of the Swanage Conservation Area) have narrow front gardens these provide an important splash of green colour;
- trees within the grounds of Clarence Cottage provide a prominent spur of vegetation closing the view on approaching the upper stretch of Queen's Road;
- the gardens of Magnolia House (High Street) contain some attractive specimens;
- TPOs cover trees along Gilbert Road (though there is much evidence of felling) and rear of 12 Institute Road. The former plays an important role in defining the boundary between the railway and town. It has topographical prominence and contributes to the setting of the station;
- the recreation ground above Shore Road provides a green space which links with others along the promenade. It retains a rugged aspect at its northern end which serves as a reminder of its historic condition;
- the (Northbrook) cemetery contains a particularly good group of trees planted around the boundary walls;
- the few green spaces along the High Street which help to give the pattern of development a more broken feel than elsewhere. A garden with trees does still exist behind Purbeck House however it has been severely reduced in size;
- with the loss of the gardens laid out in front, The Royal Victoria Hotel (apartments) now lacks significant green space and trees. Splashes of green enliven the closes running south;
- trees, shrubs and open areas of grassland are particularly important (in the Peveril point portion of the Swanage Conservation Area). During the past both these and the rugged nature of the ground helped integrate Swanage with its landscape setting though these qualities have been eroded through over enthusiastic wall, road and car park building;
- The Downs are now publicly accessible for recreation purposes, and have undergone considerable landscaping work. The formerly rugged quality of open green space has however been impaired by the construction of the car park, access routes, roundabouts and many stone walls;
- the landscaping scheme adopted around The Haven (which includes a winding path of orange chippings) adds to the incongruity of the development;
- a TPO covers Cluny House and neighbours, and another 25-27 Park Road;
- trees and plants within garden spaces play an important role in giving a suburban and domestic character, particularly around Manor Road, Cluny Crescent and the top of Park Road. Fewer trees and shrubs occur in streets such as Park Road – which has sporadic pavement planting – than was historically the case, this often due to loss of gardens to hard standing;

- the beech tree located in the garden of 58 Bell Street is particularly prominent, its branches overhanging the road. This tree plays an important role in closing the long view up the street;
- a healthy young oak stands at the side of the east-west section of Jubilee Road. This should play an increasingly important role in the scene as it develops and has a potentially long future ahead of it;
- open spaces (including gardens) around the junction of Jubilee Road and Bell Street moving west are particularly important in maintaining the spacious and informal nature of layout so fundamental to the character of the place. This has been harmed in the past by careless infill and encroachment upon the setting of the Area by more formal residential developments;
- a small, slightly neglected orchard is located to the rear of Victoria terrace. This space forms an important buffer between new development and the Conservation Area though is another location under threat;
- in Herston limited open green space is provided by gardens and a thin grass verge, though much of the High Street faces directly into farmland containing trees and enclosed by hedgerows.

34. The appraisals also contain a brief assessment of ecology and biodiversity:

- open land (The Downs) provides an important summer feeding ground for swallows and house martins whose low swooping flight adds to the amenity of this space. The same space has value as an area of limestone grassland much of which has been 'unimproved'. During the 1990s the Swanage Biodiversity Project sought to vary cutting regimes to establish the extent of wild flower growth. While results were positive there was some reaction against the 'untidy' appearance that resulted. This has much reduced its ecological value limiting many wild plants and the insects and butterflies which feed on them to the coastal fringe;
- open spaces such as the churchyard provide an important refuge for wildflowers while The Brook, though canalised through much of the Conservation Area, apparently provides an important habitat for the nationally endangered water vole.

35. Management guidelines are also provided:

- the management of The Downs could be revaluated in regard to enhancing its biodiversity value. While this currently represents a relatively sterile and uninteresting environment the Swanage Biodiversity Project did establish the potential of improvement through varied cutting regimes. Wildlife-friendly management would be beneficial to the both the Conservation Area and Swanage in general. Consider changing the cutting regimes on the Downs to encourage the growth of wild flowers and the activity of associated wildlife;
- improve the management of verges and trees ensuring replacement of street trees where removed. Improve the degraded landscaping along Gilbert Road.

36. A general duty under Section 72 of the Planning(Listed Buildings and Conservation Areas) Act 1990 to pay special attention to the desirability of preserving or enhancing the character or appearance of conservation areas.

37. Paragraph 126 of the NPPF requires local plans to contain a positive strategy for management of the historic environment. That within the Purbeck Local Plan is contained within the preamble of Policy LHH – Landscape, Historic Environment and Heritage – and provides a basis for proactive work to achieve conservation and enhancement of the District's historic environment:

Townscape character

38. To the north, 19th century cliff-top development and 20th century suburban development slightly inland extend the northern edge of the settlement towards Ballard Down, but it stops short of the hill south of Whitecliff Farm. This space between the downs and development is an important feature of the town's setting. The sweep of the agricultural landscape of the clay vale up to the cliff edge in this small part of the bay does much to strengthen the landscape context of the town, relieve any sense of overcrowded coastal development and provide a buffer of small fields and well planted hedgerows between development and the open downs.

39. The western edge of the settlement, north of the town centre, is somewhat irregular in form and extends up the side of a minor ridge between the sea and a small valley, running north. Development in this area extends onto, and in places slightly across, the ridge. This makes this edge of the settlement widely visible, not only from higher ground to north and south, but also in local views from within the clay vale west of the town.

40. South of the town centre, 19th century, development spreads outwards along the coast and across the lower eastern end of the limestone ridge that ends in Peveril Point. This consists mostly of large detached villas in generous well-planted grounds, and the general feel of this part of the settlement is that of a green leafy suburb. Unmade roads provide an interesting mix of urban and rural locally which is strongly characteristic of this area. The effect of development in such a potentially exposed location is substantially reduced and mitigated by the amount and height of existing tree cover. It is interesting to note however that many of the trees are contemporary with the development, and as such may be entering into decline.

41. This contrasts markedly with the later estate development inland in the Herston area that spreads up the exposed lower slopes of the limestone downs. The effect is hard and rather bleak although some tree planting has been carried out in these areas, which will no doubt soften their impact once mature. The edge of the settlement in this area is often raw and uncompromising with suburban estate development backing directly onto open downland.

Open spaces

42. The main open spaces in the settlement are:

- King George's playing fields near the centre of town in memorial to King George V, which includes large playing fields, as well as skate park facilities and a play area. There is also a pitch and putt course in this location;
- Towards the eastern end of Swanage is Days Park, which includes Swanage and Herston Football Club, and a play area and gardens, which together make a large, well used public open space;

- Prince Albert Gardens is located to the south eastern end of the town, next to the pier. This landscaped public garden has an open-air amphitheatre. The Downs are just behind Prince Albert Gardens;
- the weather station open space, spa beach huts open space, recreation ground and Sandpit Fields run north-south adjacent to the promenade. The Santa Fe children's play park and crazy golf are located at the southern end;
- Beach Gardens, which have tennis courts, bowling green and an 18 hole putting green;
- allotments off Prospect Crescent, of which there are over 140;
- cemeteries at Godlingston and Northbrook (closed);
- churchyards;
- the beach;
- school playing fields.

43. There is relatively little open space in the Herston area, and certainly nothing on a scale represented elsewhere.

44. Durlston Country Park, the Downs and Townsend Nature Reserve are situated outside the settlement boundary of the town, and provide opportunities for informal recreation. The Country Park and Nature Reserve are particularly biodiverse, and also represent an educational resource.

45. In November 2000, the Purbeck Countryside Recreation Study[4] action DRP5 indicated that 'greenways' (multi use corridors) should be promoted and adopted which include opportunities for walking, cycling and horse riding. Other recommendations include:

- social and economic benefits SEB1: Develop recreation gateways/routes at locations that will benefit from increased economic activity and exchange;
- developing recreational provision DRP3: Where appropriate improve/create links to the countryside and investigate opportunities for additional public open space to relieve the pressure on the Country Park (within Swanage, and within easy walking distance and accessible by car).

46. The 2006 Open Space Sport and recreation audit and assessment[5] identified the following issues that are relevant to this strategy:

- there is a lack of public parks and gardens in the district of Purbeck;
- there is a need to achieve greater quality of and accessibility to natural and semi natural open space in the district;
- all categories of open space including play areas and recreation grounds are to be protected and enhanced where required;
- more play areas need to be provided across all age ranges;
- the expansion of allotments should be investigated.

47. The Strategy includes a section on potential funding for projects, which is somewhat out of date, but may still be useful for projects emanating from this strategy.

4. *Purbeck Countryside Recreation Study Final Report (November 2000) Scott Wilson Resource Consultants*
5. *Sport and recreation audit and assessment (for) Purbeck District Council (April 2006) PMP Consultants*

Air quality

48. The air quality in Swanage can reduce significantly during the tourist season due to the increase in traffic.

49. An assessment of air quality at Swanage Railway Station was undertaken in 2009.[6] The assessment identified that the steam trains increase the amount of pollution, especially in the mornings when they are 'steaming up'. Whilst the level of pollution never exceeded the UK Air Quality Standards, the steam trains did contribute to elevated sulphur dioxide levels during the assessment period. The assessment also identified that other potential sources of sulphur dioxide in Swanage include the Ibstock brick works 1500m NW of the station, passenger ferry movements to and from Poole Harbour, and nearby domestic coal use.

50. The 2013 Air Quality Progress Report for Purbeck[7] identified that there was no risk that the air quality objectives for the district would be breached. It is however interesting to note that out of the locations assessed (including Wareham and Upton) Swanage had the lowest air quality.

6. *Detailed Air Quality Assessment Swanage Heritage Railway (April 2009) Purbeck District Council*
7. *2013 Air Quality Progress Report (July 2013) Purbeck District Council*

GI Audit

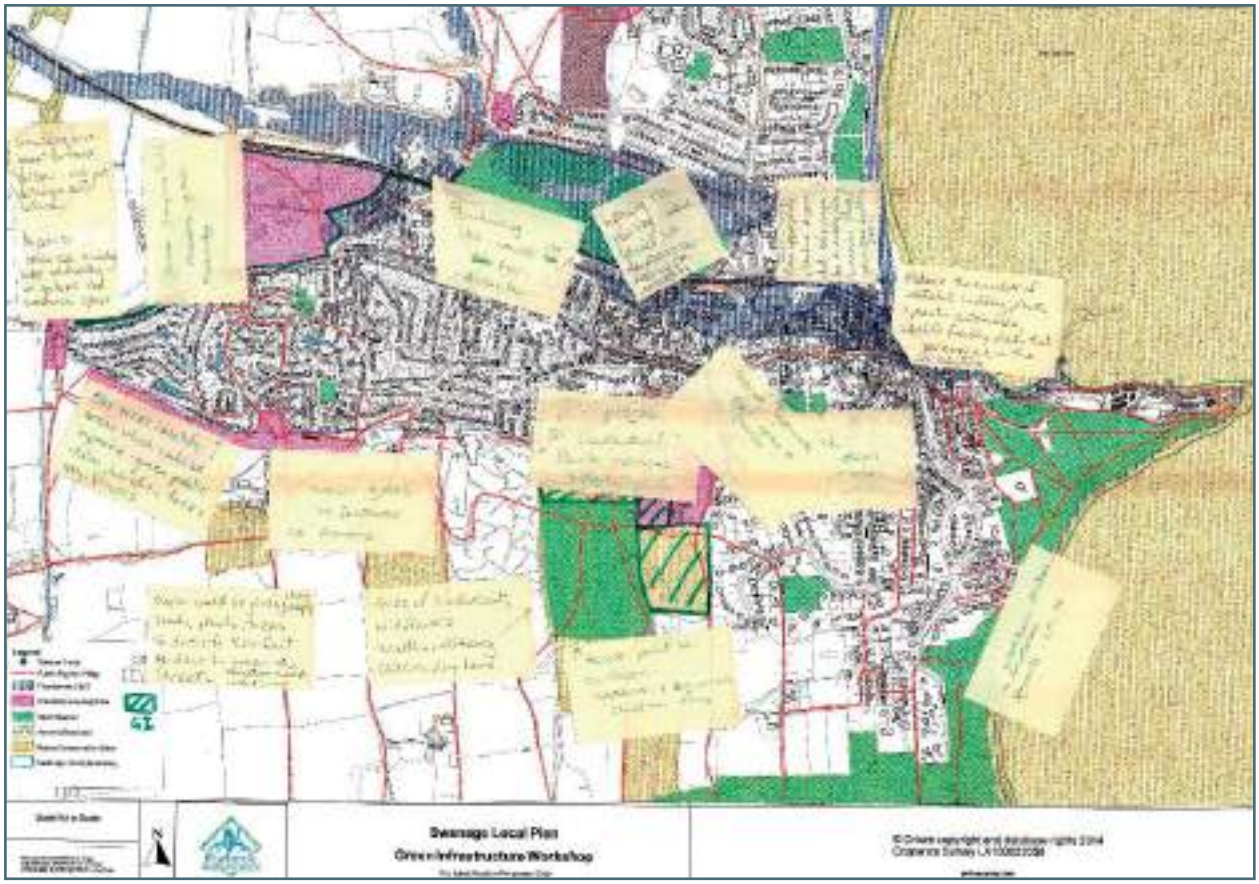
Data collection

Workshop sessions

51. The first part of the audit was undertaken at the GI workshop sessions held in June 2014. At these workshops participants were asked to mark existing GI on a series of maps and aerial photographs of north and south Swanage, and then to list the benefits and functions of each element of the GI. Suggestions for enhancement of these existing assets and for the provision of new GI were also invited. This exercise was designed to raise awareness of GI issues, to engage community involvement, and to make the most of local knowledge.

52. The list of GI sites that was generated at the workshop sessions was not exhaustive as the participants focussed on the more obvious and larger sites due to the complexity of the topic area, and the time constraints of the day.

53. A desk based audit was then undertaken by PDC in order to verify the results of the workshop sessions, and to identify further GI assets that had not been audited at the workshop sessions.



54. An illustration of the information pack that was supplied to each delegate at the workshop is included on the next 6 pages.

Swanage Local Plan - Green Infrastructure Options Workshop

Date: **Friday 6 June 2014**
Time: **9.30 am – 4.00 pm (lunch provided)**
Venue: **The Mowlem, Community Room 2nd Floor (lift access), Institute Road, BH19 1DD**.

Purpose: **To develop options in relation to Green Infrastructure in Swanage**

Programme:

9.30am – 10.30am
Introduction to Swanage Local Plan (Richard Smith - Swanage Local Plan Steering Group)
Introduction to Green Infrastructure and Introduction to Workshops & Aims (Helen Lilley – PDC Senior Landscape Architect)

10.30am – 10.45am
Break

10.45am – 11.30am
Workshop 1 – Identification of Green Spaces and Connections in North Swanage:
- Where are they?
- What do they provide – function and benefits?
- How do they connect into the wider ecosystem and green corridors?

11.30am – 12.15pm
Workshop 2 – Improvements to Green Spaces and Connections in North Swanage:
- Identification of areas with poor levels of Green Infrastructure
- Identification of improvements to existing areas of Green Infrastructure
- Identification of opportunities for Green Infrastructure linkages and alternative / new provision

12.15pm – 12.30pm
North Swanage Feedback

12.30pm – 1.15pm
Lunch

1.15pm – 2.00pm
Workshop 3 – Identification of Green Spaces and Connections in South Swanage:
- Where are they?
- What do they provide – function and benefits?
- How do they connect into the wider ecosystem and green corridors?

2.00pm – 2.45pm
Workshop 4 – Improvements to Green Spaces and Connections in South Swanage:
- Identification of areas with poor levels of Green Infrastructure
- Identification of improvements to existing areas of Green Infrastructure
- Identification of opportunities for Green Infrastructure linkages and alternative / new provision

2.45pm – 3.00pm
South Swanage Feedback

3.00pm – 3.15pm
Break

3.15pm – 4pm
Next Steps / Products / Actions
Questions & Close

Links to related plans, strategies and evidence:

Purbeck Local Plan Part 1
https://www.dorsetforyou.com/local-plan/part-1/purbeck

South East Dorset Green Infrastructure Strategy
https://www.dorsetforyou.com/greeninfrastructure

Microeconomic evidence for the benefits of investment in the environment: Natural England review 2012
Green infrastructure strategies: An introduction for local authorities and their partners Natural England 2011
Green infrastructure and the urban fringe: Learning lessons from the countryside in and around towns programme Natural England 2011

Natural England's green infrastructure guidance 2011
http://publications.naturalengland.org.uk/publication/32031?category=49002

Green asset guidance: Sustainable landscape planning, design and management position statement and guidance Dorset County Council 2013
https://www.dorsetforyou.com/media.jsp?mediaid=193403&filetype=pdf

Victoria business improvement district: Green infrastructure audit best practice guide 2013
http://www.victoriabid.co.uk/wp-content/uploads/2013/10/BestPracticeGuide_A4-10.pdf

Delivering biodiversity benefits through green infrastructure CIRIA 2011
http://www.ciria.org/ItemDetail?iProductcode=C711&Category=BOOK

Planning for a healthy environment: good practice for green infrastructure and biodiversity Town and Country Planning Association and Wildlife Trusts 2012
http://www.tcpa.org.uk/pages/planning-for-a-healthy-environment-good-practice-for-green-infrastructure-and-biodiversity.html

Purbeck District Townscape Character Appraisals 2010
https://www.dorsetforyou.com/397020

Purbeck Heritage Strategy
https://www.dorsetforyou.com/purbeckheritagestrategy

Dorset AONB Management Plan (2009)
http://www.dorsetaonb.org.uk/the-dorset-aonb/dorset-aonb-partnership/33-management-plan

Dorset AONB Landscape Character Assessment
http://www.dorsetaonb.org.uk/our-work/landscapework/landscape-character

Dorset Landscape Change Strategy (January 2010)
https://www.dorsetforyou.com/media.jsp?mediaid=150496&filetype=pdf

Sport and Recreation Audit and Assessment (2006)
https://www.dorsetforyou.com/media.jsp?mediaid=169433&filetype=pdf

Definition of Green Infrastructure: (National Planning Policy Framework)

'A network of multi-functional green space, urban and rural which is capable of delivering a wide range of environmental and quality of life benefits for local communities' (National Planning Policy Framework 2012).

About the Swanage Local Plan

The Swanage Local Plan will allocate the strategic requirements set out in Purbeck Local Plan (Part 1): 2012. The Swanage Local Plan is being produced in partnership with Swanage Town Council, the Swanage Town and Community Partnership and Purbeck District Council. A steering group has been formed to help guide the plan process.

The Swanage Local Plan will provide the detail for PLP1 for Swanage. For example it can:

- determine the location of development such as housing, shops and employment land;
- set policies that restrict development to specific areas, such as specifying where new flats development can/cannot be located; and
- set policies to protect buildings and sites valued by the community, such as green space and houses in large gardens

The plan will also explore issues such as how to:

- attract new businesses to Swanage and create new employment opportunities;
- ensure that Swanage offers the right kind of tourist accommodation and facilities;
- provide appropriate sports, leisure and cultural facilities and activities; and
- meet the current and future health and social care needs of the town

What we have done so far

In May 2013 we held two awareness raising sessions to invite community, voluntary and business groups to be involved in the first stage of the consultation process, the issues and options workshops. In July and September 2013 we held the issues and options workshops which were attended by representatives of community, voluntary and local business groups. The steering group used the feedback from these workshops to prepare the Issues and Options consultation that was held earlier this year.
Some of the earlier workshops identified issues that needed more exploration so we are now holding three further workshops looking at:

- the potential for producing a green infrastructure plan for Swanage;
- Swanage's historic environment and townscape character; and
- flood risk and coastal change management.

Examples of green infrastructure assets

- Natural and semi-natural rural and urban green spaces – including woodland and scrub, grassland, heath, wetland, open and running water, brownfield sites, bare rock habitat (for example cliffs and quarries), coast and beach.
- Parks and gardens – urban parks, country and regional parks, formal and private gardens, and institutional grounds (for example at schools and hospitals)
- Amenity green space – informal recreation spaces, play areas, outdoor sports facilities, housing green spaces, domestic gardens, community gardens, roof gardens, village greens, commons, living roofs and walls, hedges, civic spaces, and highway trees and verges
- Allotments, orchards, and suburban and rural farmland
- Cemeteries and churchyards
- Green corridors – rivers and canals (including their banks), road verges and rail embankments, cycling routes, and rights of way
- Sites of nature conservation value – Sites of Special Scientific Interest and Local Sites (Local Wildlife Sites and Local Geological Sites)
- Nature Reserves
- Designations (selected for historic significance, beauty, recreation, wildlife, or tranquillity)
- Archaeological and historic sites
- Functional green space such as sustainable drainage schemes (SuDS) and flood storage areas
- Built structures – living roofs and walls, bird and bat boxes, and roost sites within existing and new-build developments.

Benefits provided by green infrastructure

Environmental benefits	Provision of clean water Removal of pollutants from air and water Pollination enhancement Protection against soil erosion Rainwater retention Increased pest control Improvement of land quality Mitigation of land take and soil sealing
Social benefits	Better health and human well being Creation of jobs Diversification of local economy More attractive greener cities Higher property values and local distinctiveness More integrated transport and energy solutions Enhanced tourism and recreation facilities
Climate change adaptation and mitigation benefits	Flood alleviation Strengthening ecosystem resilience Carbon storage and sequestration Mitigation of urban heat island effects Disaster prevention – eg landslides
Biodiversity benefits	Improved habitats for wildlife Ecological corridors Landscape permeability

What is the vision for Swanage?

Here is an example of a statement which describes the aim (vision) for a green infrastructure strategy:

"The purpose of the strategy is to create a well designed green infrastructure network of interlinked, multi-purpose open and green spaces with good connections to the places where people live and work, public transport, the countryside, and blue infrastructure. This will provide a richly varied landscape that will benefit both people and wildlife, providing diverse uses to appeal to, and be accessible by all."

Could the same vision work for Swanage? Write your comments and suggestions on a post-it and stick it here:

How could we improve the green infrastructure of Swanage?

- Identify and protect existing core areas of high biodiversity value which act as hubs for green infrastructure
- Create new, or enhance existing core areas to provide large healthy functioning ecosystems
- Restore habitats or enhance existing natural areas, such as reed beds, or wild flower meadows
- Enhance existing, or create new natural features acting as wildlife corridors or stepping stones, like small watercourses, ponds, hedgerows, woodland strips, street trees
- Create artificial features that enhance ecosystem services or assist wildlife movement, such as eco-ducts or eco-bridges, fish ladders, or green roofs

Create buffer zones that are managed sustainably and help improve ecological quality and permeability of the landscape to biodiversity e.g. encourage wildlife-friendly farming in agricultural areas surrounding the town

Item 9, Appendix 1
(PG - 16.05.08)

Field survey

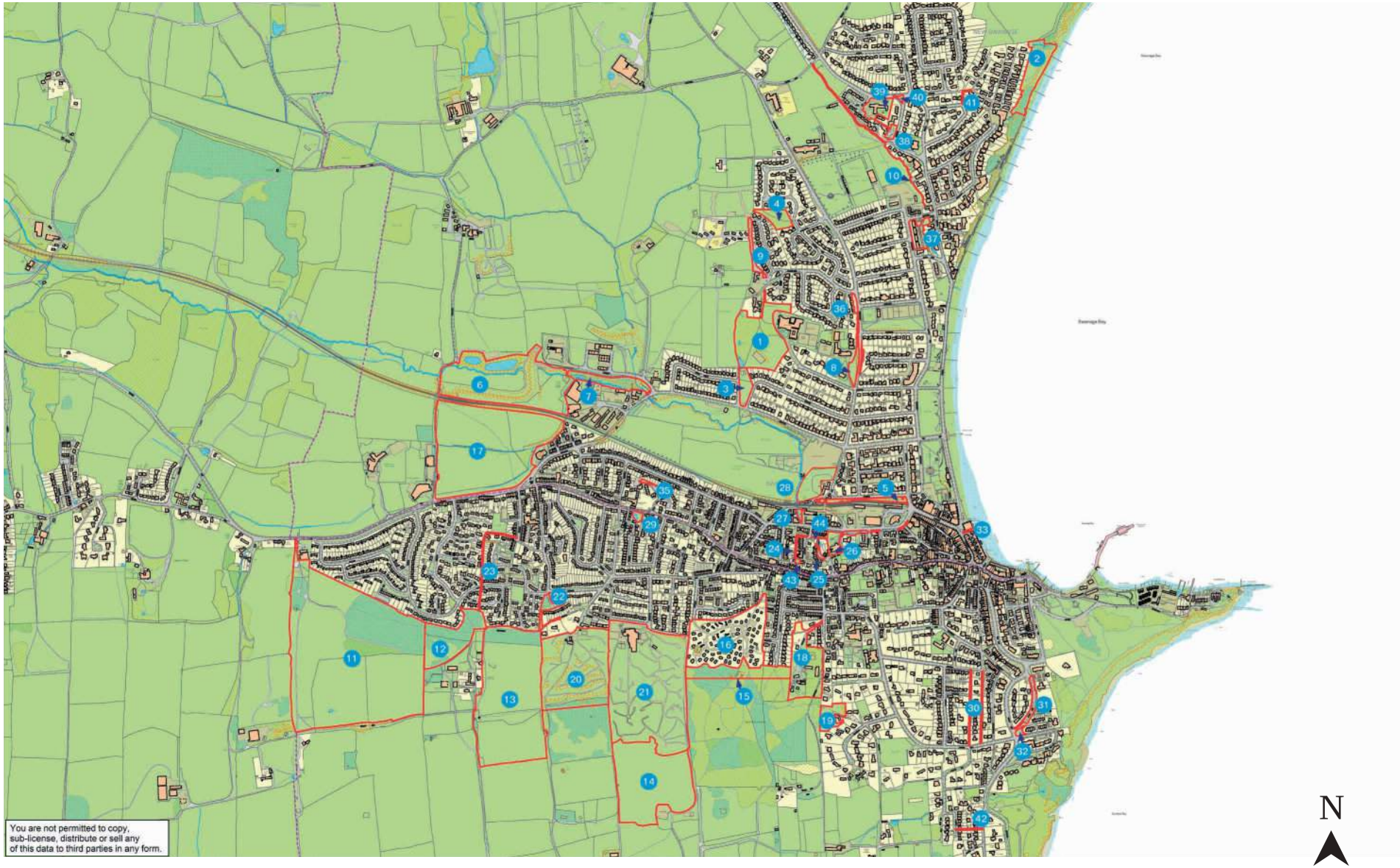
55. The desk based audit revealed that some of the results for sites audited at the workshop sessions needed to be verified through further investigation on the ground. A list of the sites that required this 'ground truthing', along with additional GI sites and assets that were identified as part of the desk based audit was produced. The 44 sites listed were then provided with a site reference name, a survey map and a field survey form.

56. Each of the sites was then surveyed by volunteers from the local community. Photographs of each of the sites were also taken as a record. The volunteers were also asked to identify potential sites that had not been brought to light at the workshop or through the desktop study.

57. In addition to the collection of valuable data, this exercise provided the opportunity for further community involvement in the project, and made good use of local knowledge and expertise.

58. The map on the next page shows the location of the 44 sites that were surveyed by the volunteers, and the instructions provided to the volunteers, and an example of a completed site survey form are included on the next 6 pages.

SWANAGE GI STRATEGY
Location of field survey sites



© Crown copyright and database rights 2016. Ordnance Survey LA100022058 Not to scale

SWANAGE GREEN INFRASTRUCTURE STRATEGY 2015

NOTES ON COMPLETING SITE SURVEY FORM

Introduction

The site survey will provide information about existing green infrastructure (GI) in addition to that which was produced at a GI workshop last year. Some of the sites that are to be surveyed were identified at the workshop, and others have been identified as part of a desktop study.

GI is the network of green spaces and other environmental features such as streams and waterbodies that act as a multifunctional resource capable of delivering a range of benefits for the local community:

- Amenity value and access to nature
- Improved air quality
- Flood attenuation and water resource management
- Habitat provision
- Cooling effects in the face of global warming
- Shelter belts which can in turn reduce energy consumption
- Economic benefits through the provision of a more attractive environment to live and work in

The survey form

The survey form is divided into 7 sections, the first of which has been partially completed already. Please start by entering the date and your name in the boxes provided in this section. Representative photos are also required for this section. These can either be printed out on a separate sheet(s) of A4 paper and attached to the completed form, or e-mailed directly to helenlilley@purbeck-dc.gov.uk The second section of the form has also been completed for you.

Condition

In this section you are required to make a judgement about the current condition of each site. There are three options:

- Good
- Moderate
- Poor

Good management can mean different things for different types of GI. For example there will be more signs of active management in an urban park than in a nature conservation area. This is because intensive maintenance operations are required to keep a park in good condition, whereas those required to keep a nature conservation area in good condition are much less frequent and less invasive.

If the way that the site is managed is appropriate for the use, and maintenance appears to be undertaken at intervals that benefit the function of the resource, then the intensive operations for the park, and lower key operations for the nature conservation area will have a similar score.

A lower score will result if the physical state of the site is poor, individual features or elements are in a poor state of repair or missing, or if the primary function of the site is negatively affected by lack of management or maintenance.

Current management

This section is intended to give an indication of the method(s) of management that are currently employed on the site. The options provided are not exhaustive, and you may need to add others, especially for sites on the edge of town. Tick all boxes that apply, and provide more detail if you think that it would be useful.

Land cover/habitat types

This section should be self explanatory, but you may again feel that you need to add more types, especially if the site is on the edge of town. There is a box where you can indicate the wildlife value of any scrub or shrubs that are present. Native plants will generally have the most wildlife value, though ornamental shrubs may have flowers that attract butterflies and bees, or fruits and seeds that attract birds.

Function

Most sites will have many functions. You are asked here to indicate the primary and secondary functions. If these functions are not described by any of the categories listed, please add further function(s).

Scope for enhancement

Many of the sites will be capable of supporting additional functions, which were not envisaged at the time that they were created. Adding functions to the existing GI will reinforce the network, and/or create new links in the network. New functions can attend to deficiencies in the locality, and help to make the town more resilient to pressures such as flooding or climate change.

For example, Swanage is known to flood in some locations during periods of heavy rain. At these times, the existing piped surface water drainage system may not cope with the volume of water. If the site is close to a location that is known to flood in these circumstances (see attached map), it may be that the site can provide a surface water storage area, or an infiltration system where the water percolates slowly into the soil. This will reduce pressure on the existing piped system, and has the added benefit of replenishing underground water resources.

Completed forms to:

Helen Lilley
Senior Landscape Architect
Purbeck District Council
Westport House
Worgret Road
Wareham BH20 4PP

Any questions:

Please call or e mail Helen Lilley
01929 557257
helenlilley@purbeck-dc.gov.uk

(3)

GI Audit for Swanage – Site Survey Form

Site name/location: LAND BETWEEN RABLING ROAD & PROSPECT CRES.

Site size: 3,0794 sq m E N

Survey date: 20-5-15 Surveyor: R SMITH

Site photograph	Site plan
PLEASE PROVIDE ON SEPARATE SHEET. photo 1, 2, 3 ✓ JPG 789, 790, 791	SEE ATTACHED.

Site category (tick box) Existing ☑ Potential ☐

Local park	☐	Wetland / standing water	☐	Grass verge (large)	☑
Pocket park	☐	Derelict building plot	☐	Hedge	☐
Garden or square	☐	Highway infrastructure eg traffic island	☐	Planter / raised bed	☐
Community garden / allotment	☐	Street tree in pit	☐		
Shrub plantings	☐	Pavement or other hard surface	☐		

Condition of GI (tick box)

Good (signs of active management)	☑	Moderate (signs of limited management)	☐	Poor (low signs of management)	☐

Current management

Mowing/grass cutting (please specify)	☑ grass	Pruning or other tree maintenance	☐
Specify here:		No obvious signs of management	☐
		Appears unmanaged/overgrown	☐
		Productive use for food	☐

Site divided into 2 areas.
larger area is open grass (managed) with flower bed at Victoria Avenue together with large conifer.
smaller area is derelict greenhouse and cold frames and appears unmanaged - seperate access by entrance into allotment.

H:\P&CS\Natural Landscape\Green Infrastructure\Swanage Green Infrastructure Strategy\Field Survey\GI Audit for Swanage - Site Survey Form (HL).docx

Landcover/habitat types present (tick box)

Amenity grassland	✓	Building	
Semi/natural grassland		Pavement/paved area	
Woodland		Highway	
Scrub/shrubs (please indicate wildlife value)		Traffic island	
Value	LOW	Roof	
Other (please specify):		Green space	✓

Function Primary function (insert "1" in box) / Secondary function (insert "2" as appropriate)

Public use: informal recreation	✓	Food growing/productive use	
Public use: formal recreation		Flood management/water storage	
Visual/amenity	✓	Not in active use but managed	
Wildlife		Not in use/derelict	

Scope for enhancement

Enhance existing function (please specify opportunities eg biodiversity, flood storage, visual appearance etc)

Create new function / feature (tick box)

Wildflower meadow / semi-natural grassland	✓	Green wall/climbing plants		Street tree	
Tree planting: woodland		Substantial window box		Shrubs	
Wetland features/rain gardens		~~Hedge~~ planting		Planters	
Water storage feature		Food growing: fruit trees/vegetables			

Additional comments:

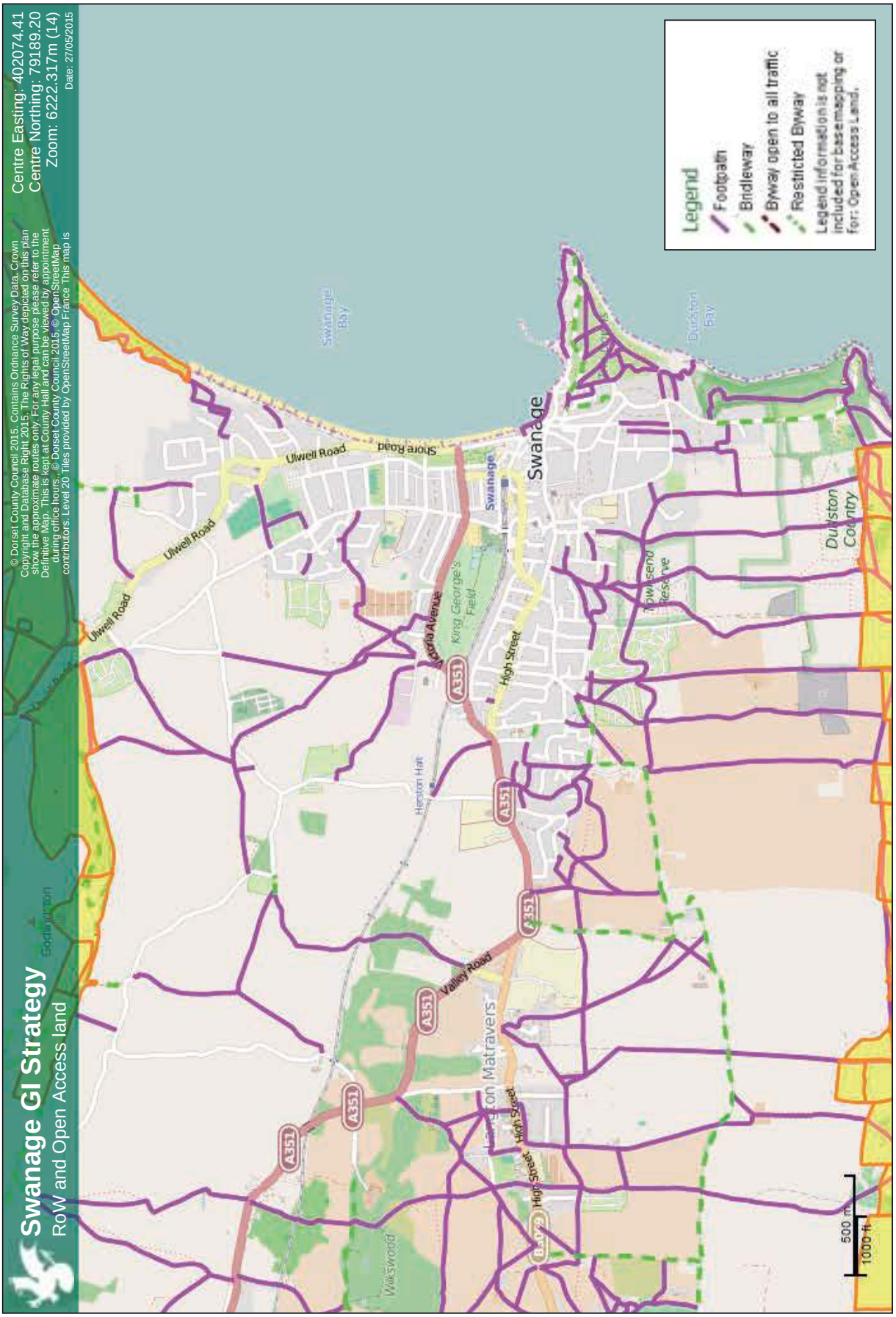
Links King George playfields over Victoria Avenue into allotments and beyond into open countryside

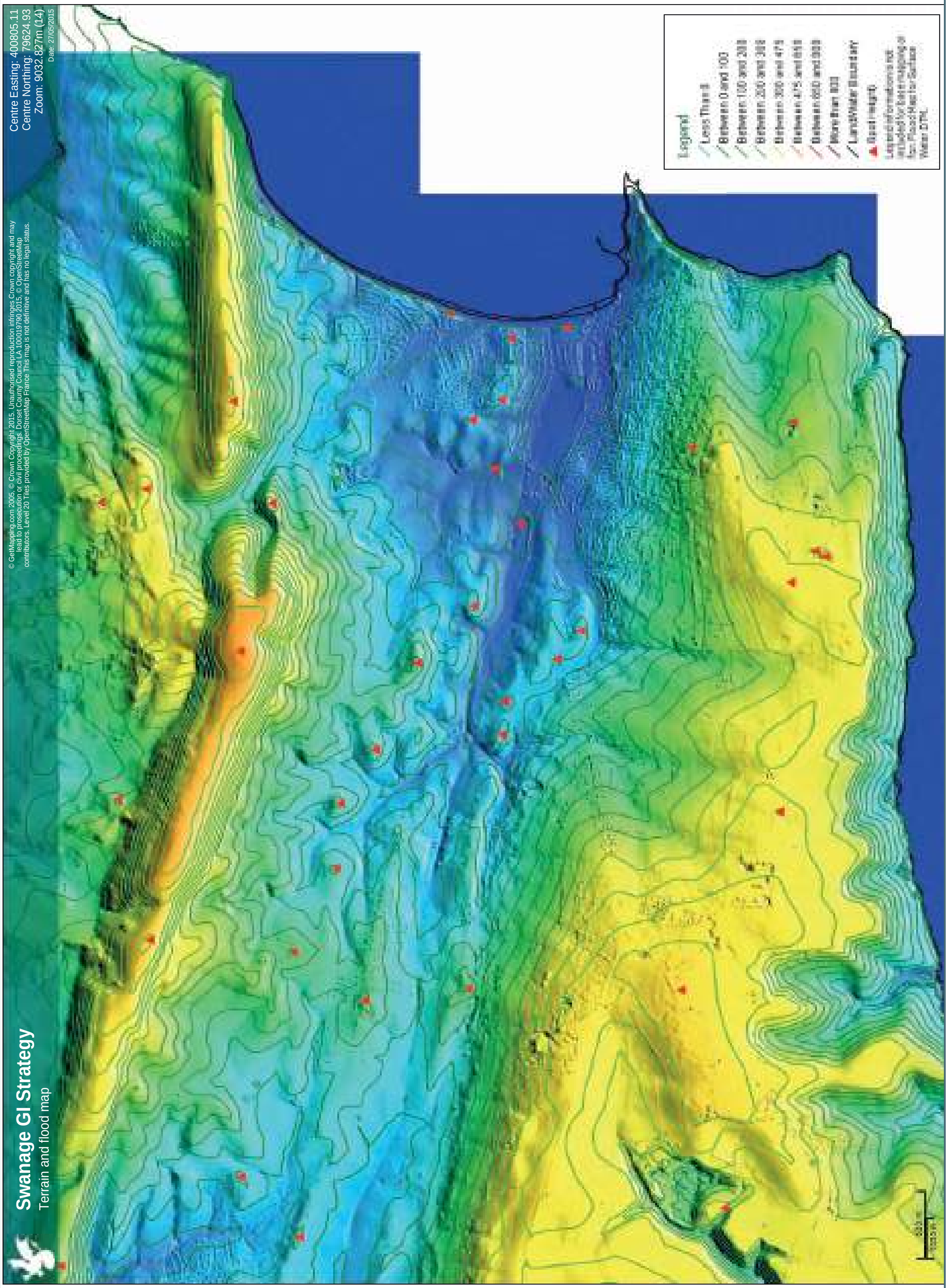

Thriving communities in balance with the natural environment
SWANAGE GI AUDIT
Site number 3
For Identification Purposes Only
© Crown copyright and database rights 2015 Ordnance Survey LA100022058
N
NOT TO SCALE
Track
Pond
El Sub Sta
LB
4.6m
4.3m
2
58
58a
50
19
64
62
You are not permitted to copy, sub-license, distribute or sell any of this data to third parties in any form

Desktop study of baseline information

59. The final set of data was produced by PDC using the following baseline information, and the first hand knowledge of officers who have a working understanding of issues relevant to GI.

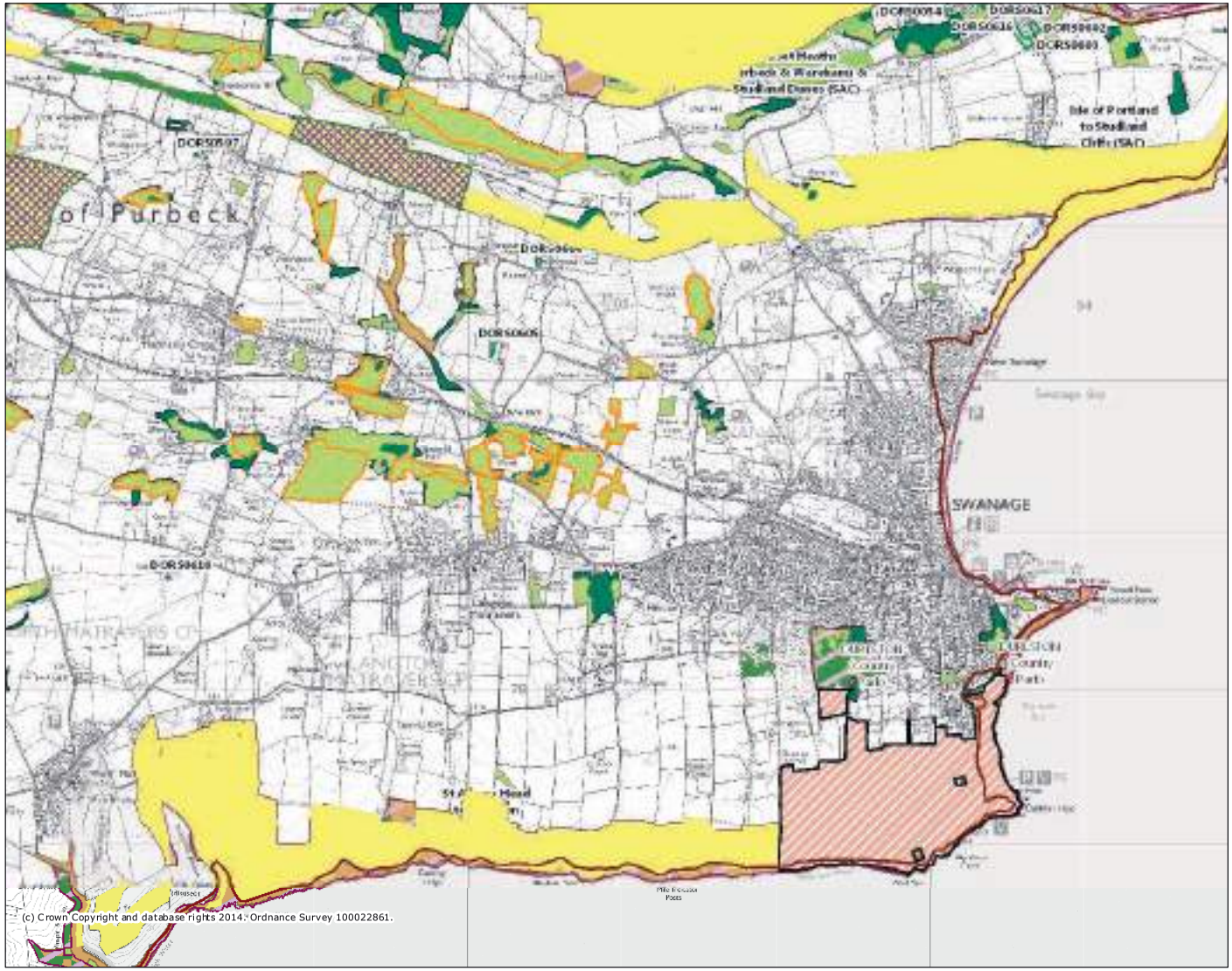
- Landscape and townscape designations
- Terrain and flood map
- Detail of surface water flooding
- Biodiversity
- Trees and woodland
- Rights of way (RoW) and open access land
- National Trust land
- Dorset County Council (DCC) land
- DCC trees
- PDC and Swanage Town Council land
- Historic map – Ulwell 1888
- Historic map – Swanage 1888
- Landscape character


Swanage GI Strategy
RoW and Open Access land
Centre Easting: 402074.41
Centre Northing: 79189.20
Zoom: 6222.317m (14)
Date: 27/05/2015
© Dorset County Council 2015. Contains Ordnance Survey Data. Crown Copyright and Database Right 2015. The Rights of Way depicted on this plan show the approximate routes only. For any legal purpose please refer to the Definitive Map. This is kept at County Hall and can be viewed by appointment during office hours. © Dorset County Council 2015. © OpenStreetMap contributors. Level 20 Tiles provided by OpenStreetMap France This map is
Legend
Footpath
Bridleway
Byway open to all traffic
Restricted Byway
Legend information is not included for basemapping or for: Open Access Land.
Swanage
Swanage Bay
Durlston Bay
Ulwell Road
Shore Road
Victoria Avenue
King George's Field
High Street
Herston Hall
Durlston Country
Townsend Reserve
A351
Valley Road
Langton Matravers
Worth Matravers
Worth
Walkswood
B3069
500 m
1000 ft


Swanage GI Strategy
Terrain and flood map
Centre Easting: 400805.11
Centre Northing: 79624.93
Zoom: 9032.827m (14)
Legend


Swanage Green Infrastructure Strategy
Designated Landscapes
Centre Easting: 402772.77
Centre Northing: 79225.84
Zoom: 9033.512m (14)
Date: 26/11/2014
© Dorset County Council 2014. © Natural England 2014, reproduced with the permission of Natural England. © Crown copyright, 2014. © Natural England. © OpenStreetMap contributors. Level 20 Tiles provided by OpenStreetMap France This map is not definitive and has no legal status.

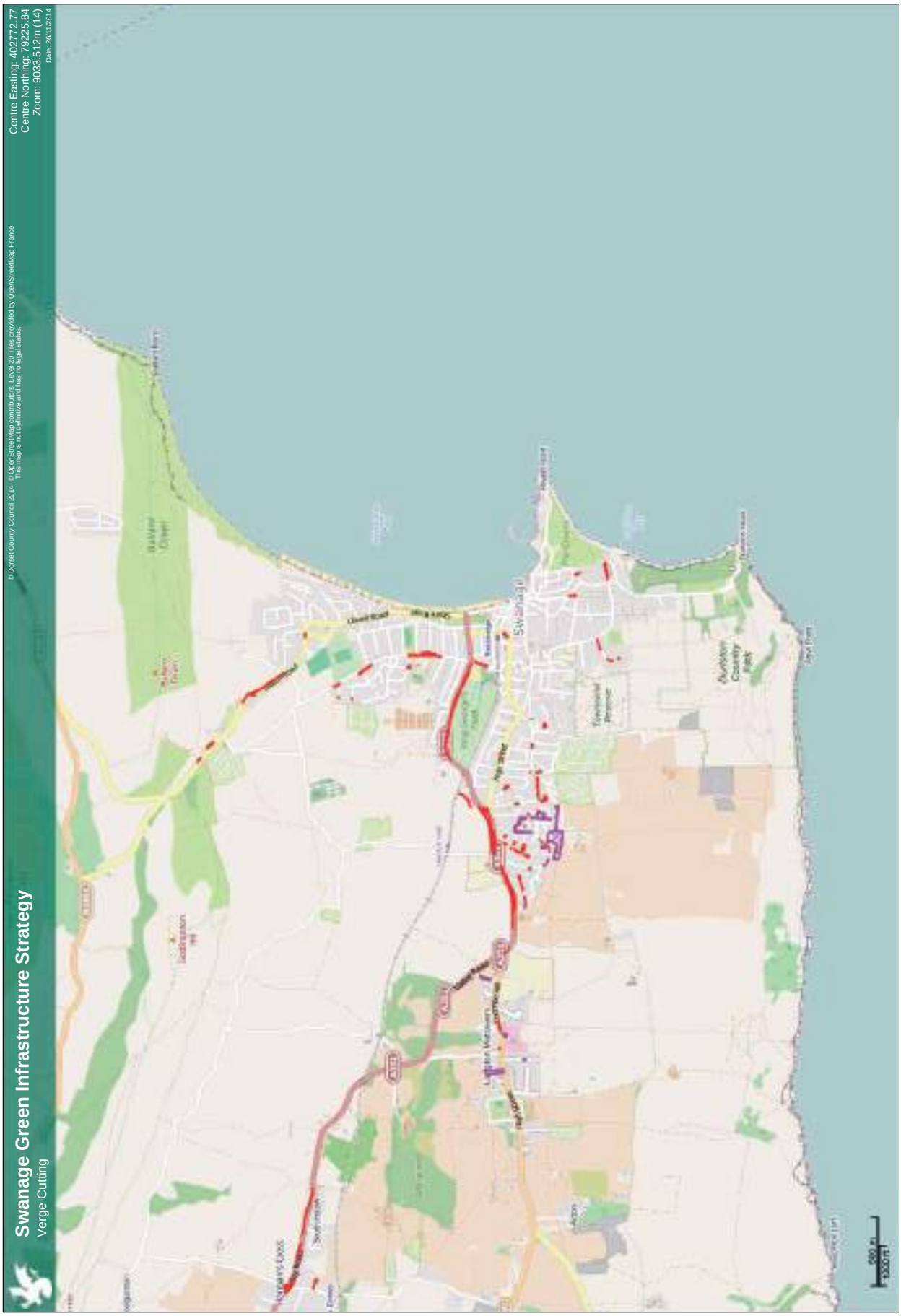
Swanage Local Plan Green Infrastructure Strategy - Baseline information from www.magic.gov.uk

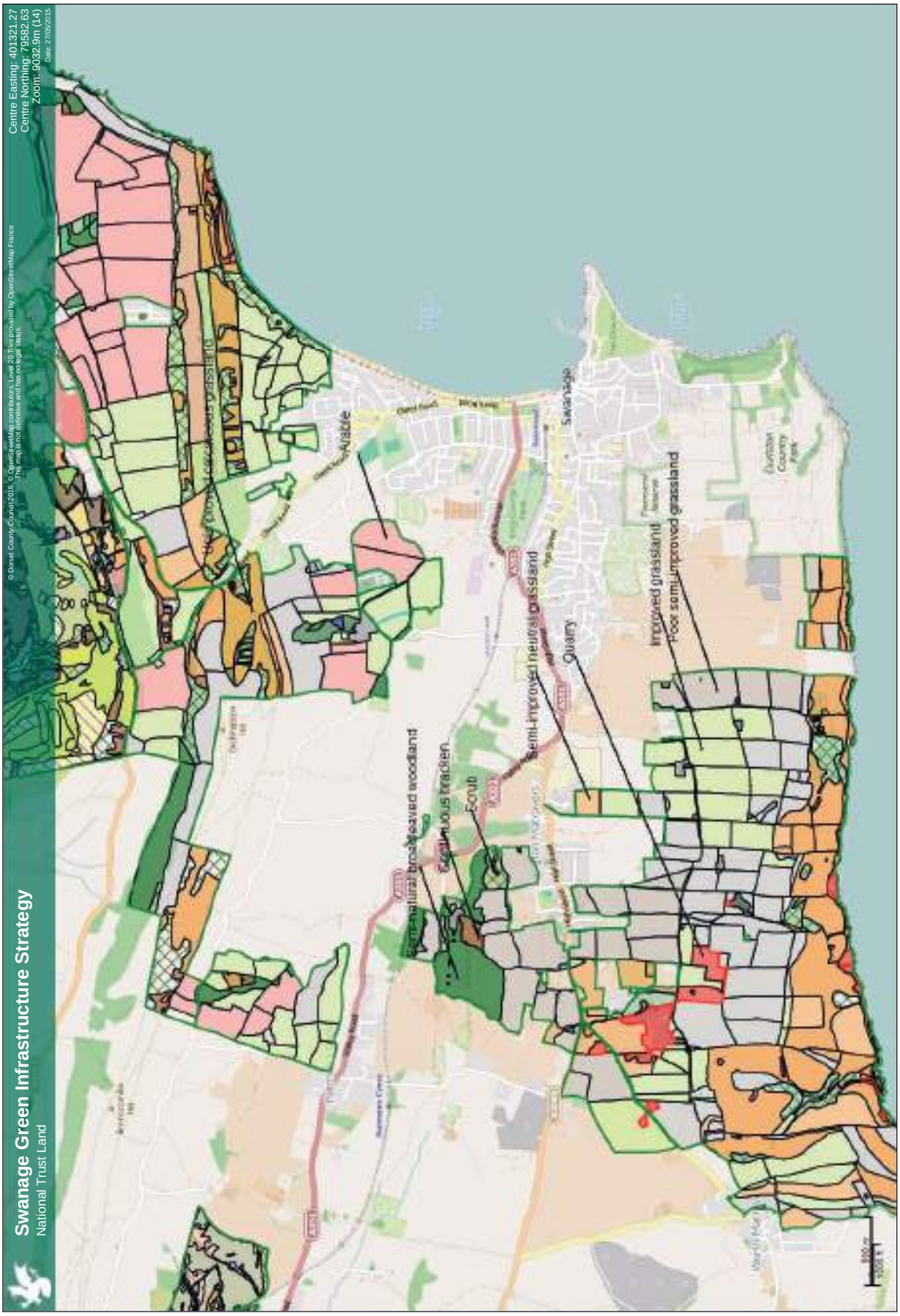


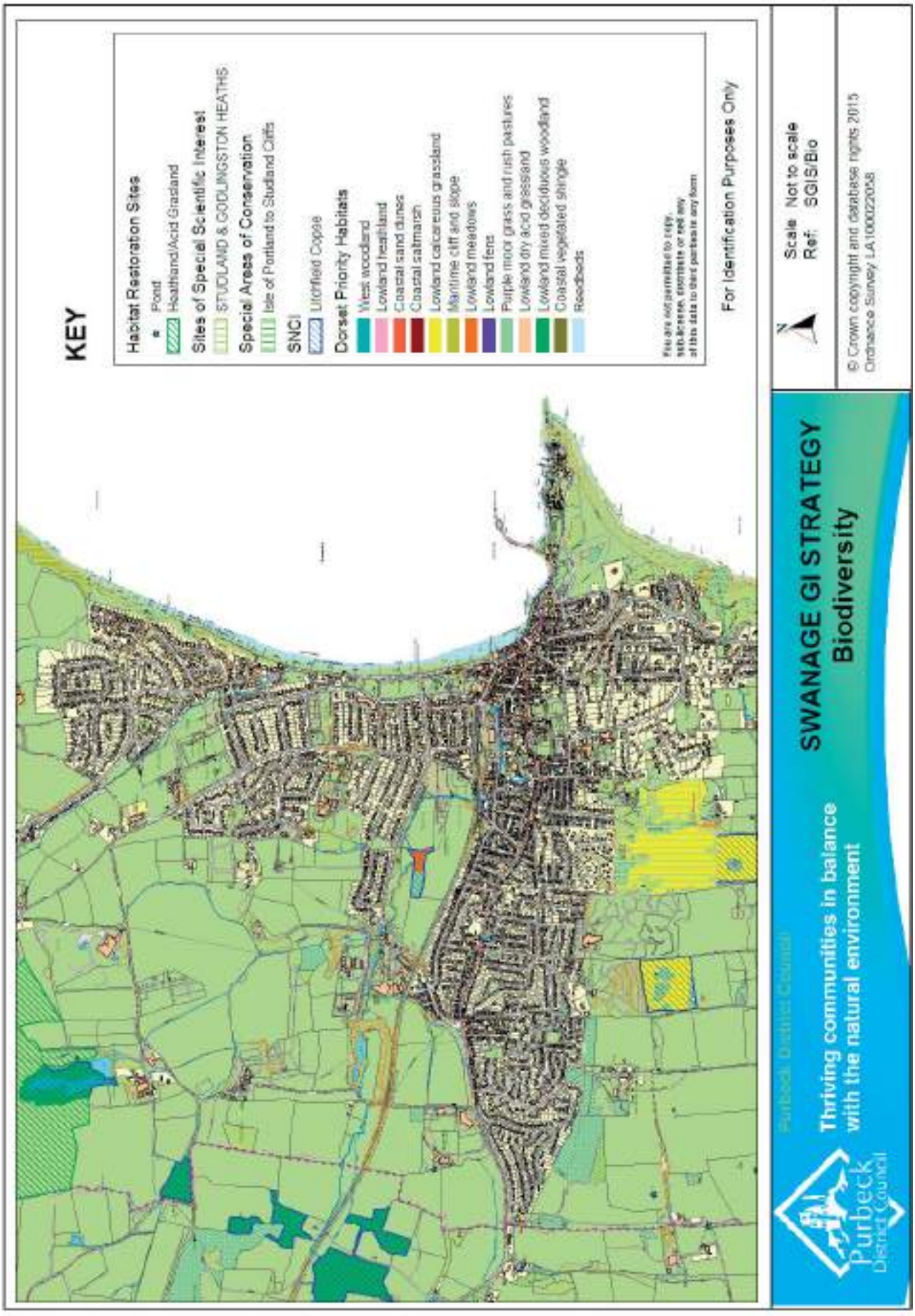
Legend

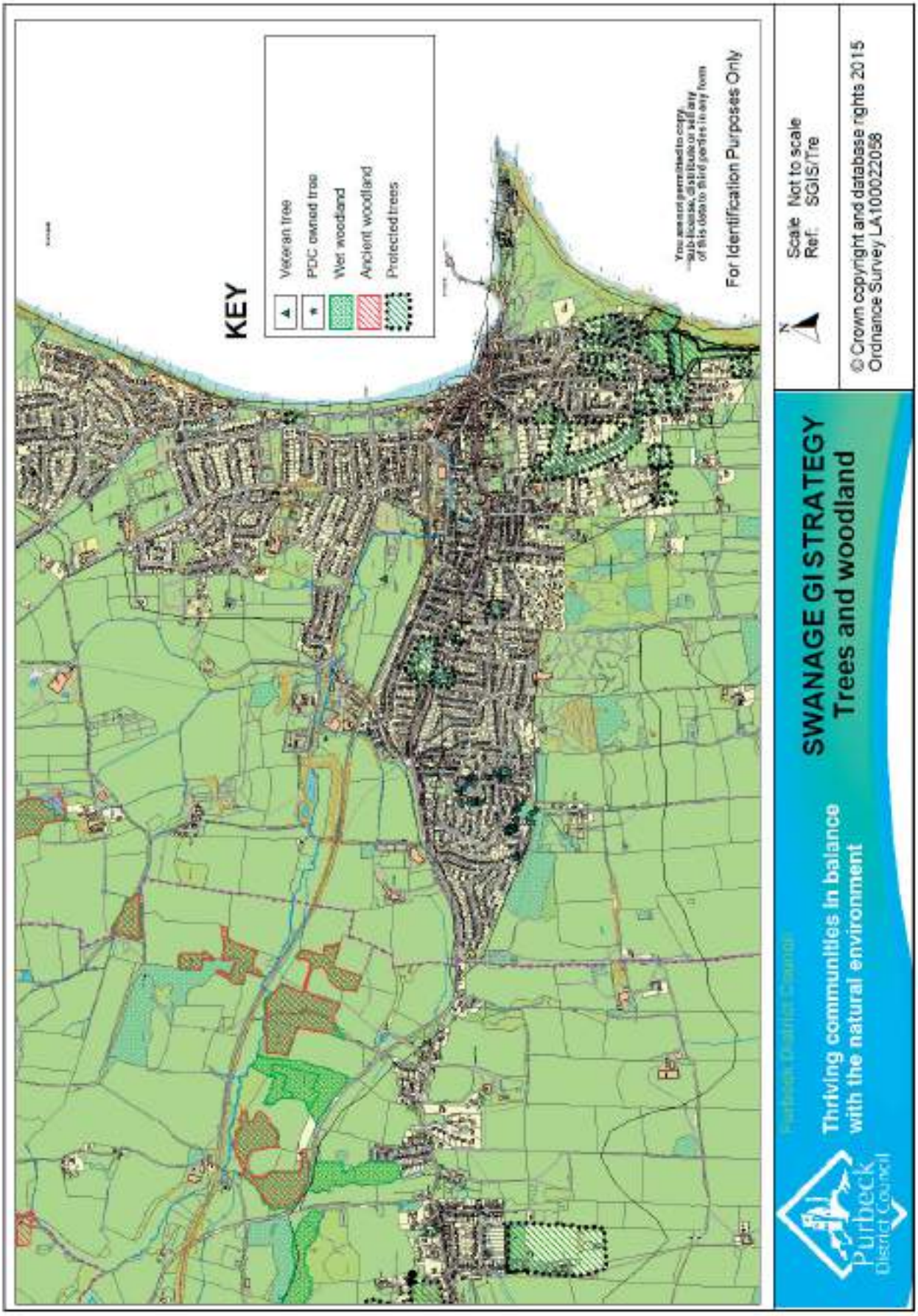
- National Trails (England)
- England Coast Path Route
- Doorstep Greens (England) - points
- Millennium Greens (England) - points
- Country Parks (England)
- Registered Common Land (England)
- Countryside and Rights of Way Act, Section 15 Land (England)
- Countryside and Rights of Way Act 2000 - Access Layer (England)
- Environmentally Sensitive Areas (England)
- Local Nature Reserves (England)
- Special Areas of Conservation (England)
- Special Areas of Conservation (Scotland)
- Special Protection Areas (Scotland)
- Biosphere Reserves (England)

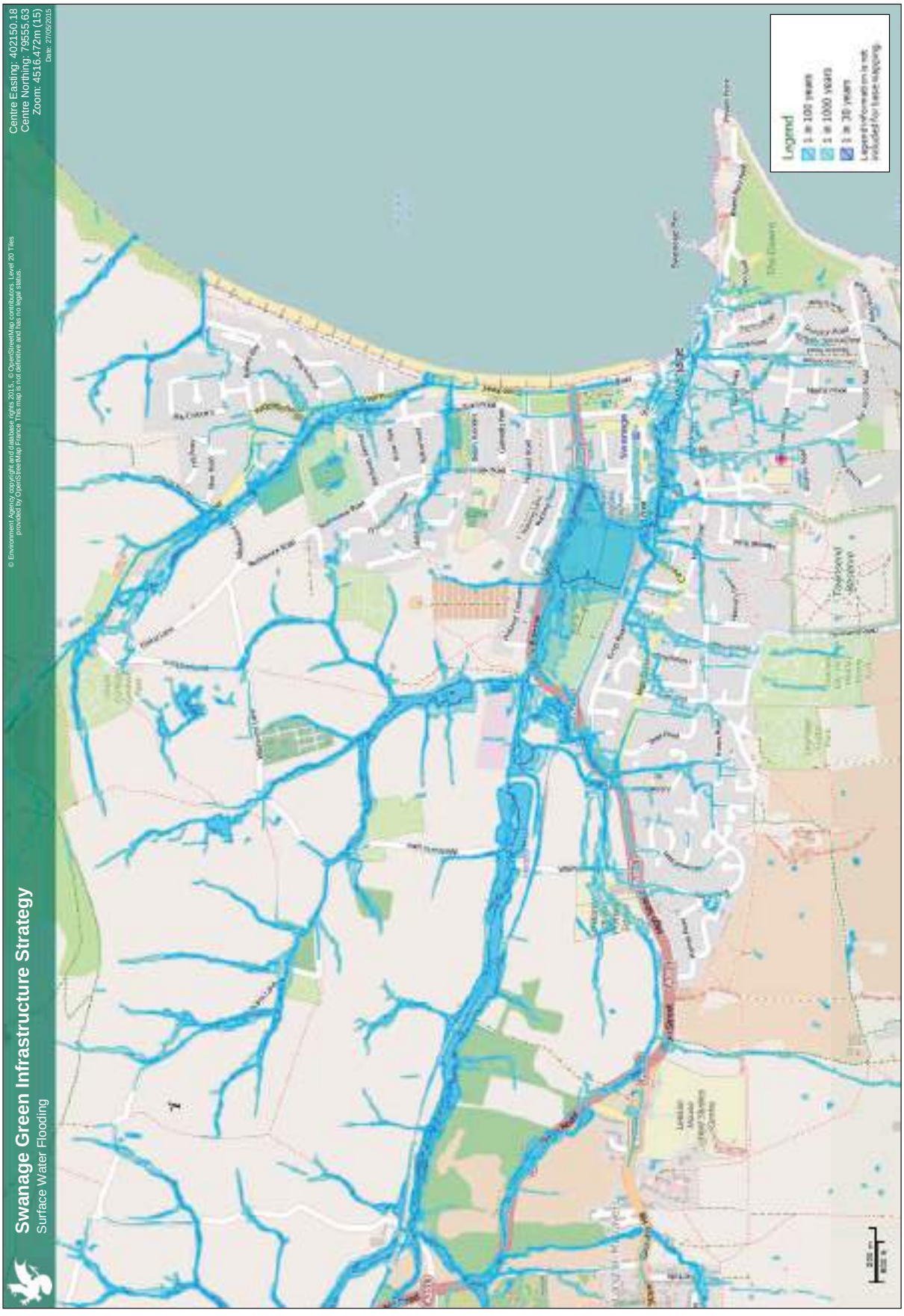
Projection = OSGB36
xmin = 396800
ymin = 76590
xmax = 405100
ymax = 82060
Map produced by MAGIC on 9 October, 2014.
Copyright resides with the data suppliers and the map must not be reproduced without their permission. Some information in MAGIC is a snapshot of the information that is being maintained or continually updated by the originating organisation. Please refer to the metadata for details as information may be illustrative or representative rather than definitive at this stage.

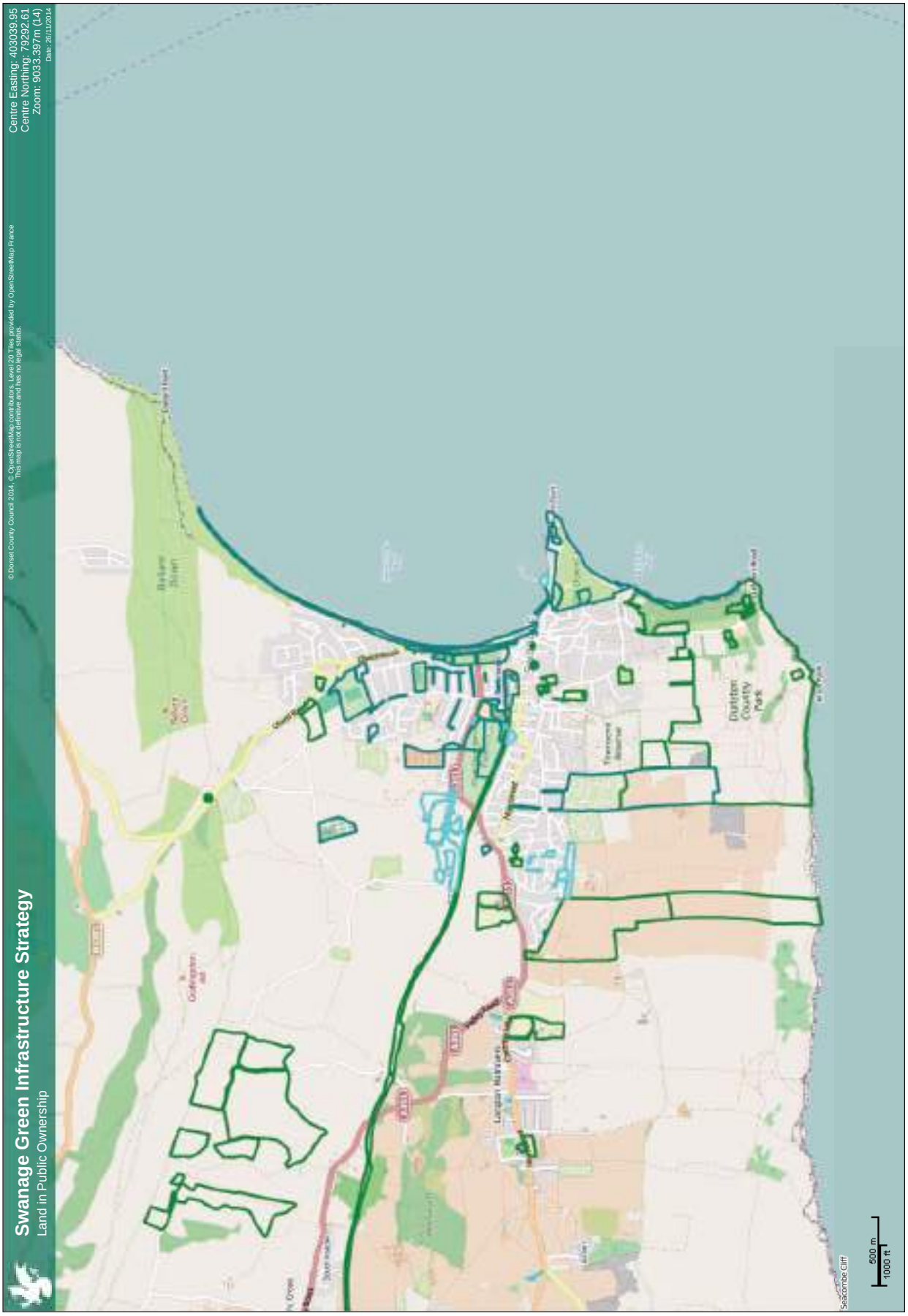

Swanage Green Infrastructure Strategy
Verge Cutting
Centre Easting: 402772.77
Centre Northing: 79225.84
Zoom: 9033.512m (14)
Date: 26/11/2014
© Dorset County Council 2014. © OpenStreetMap contributors. Level 20 Tiles provided by OpenStreetMap France
This map is not definitive and has no legal status.
Swanage
Durlston Country Park
Jetty Point
500 m
1000 ft

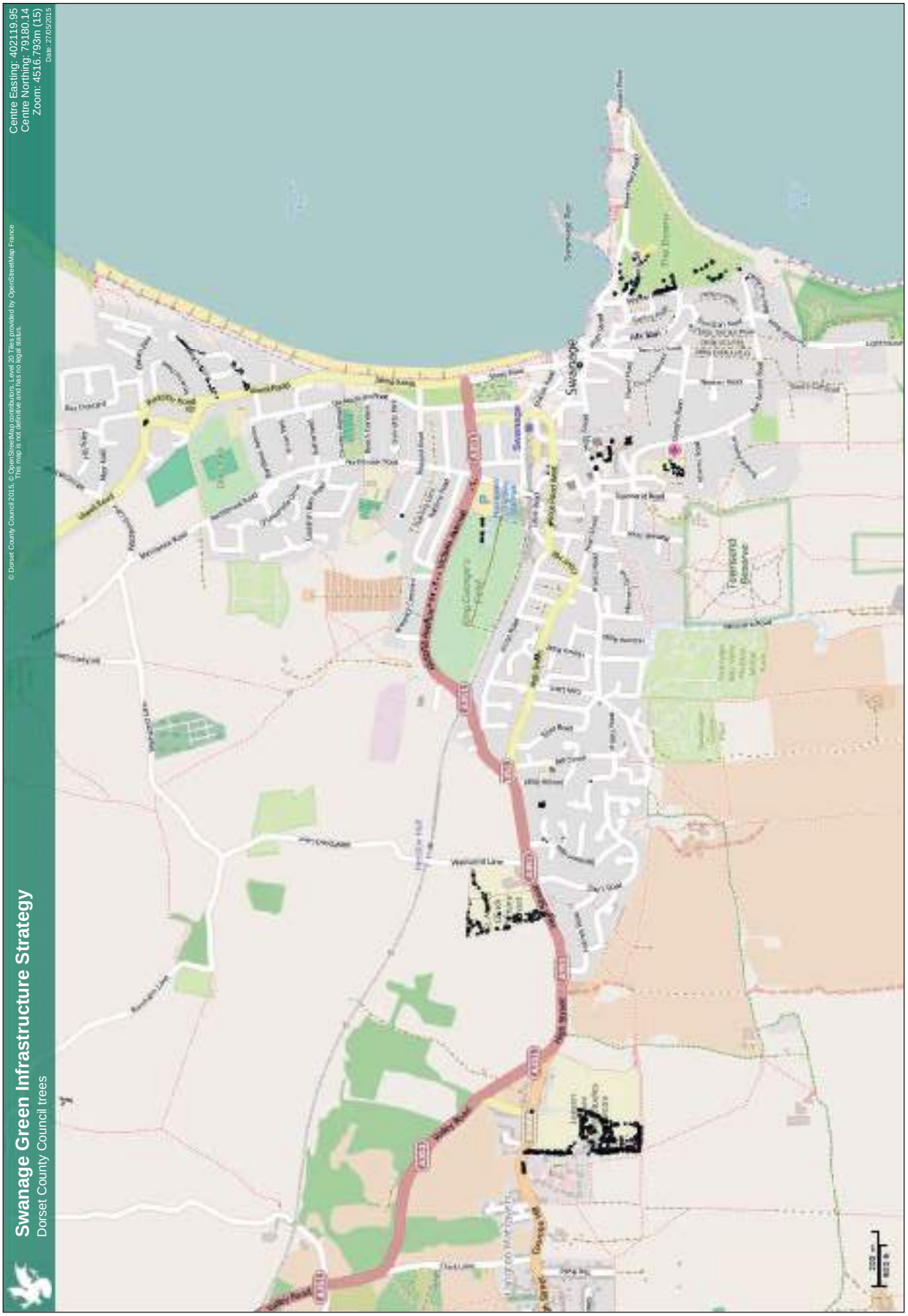

Swanage Green Infrastructure Strategy
National Trust Land
Centre Easting: 401321.27
Centre Northing: 79582.63
Zoom: 9032.9m (14)
Date: 27/05/2015
© Dorset County Council 2015, © OpenStreetMap contributors, Land-20 Tiles provided by OpenStreetMap France
This map is not definitive and has no legal status
Arable
Swanage
Quarry
Improved grassland
Poor semi-improved grassland
Semi-improved neutral grassland
Scrub
Coniferous plantation
Semi-natural broadleaved woodland

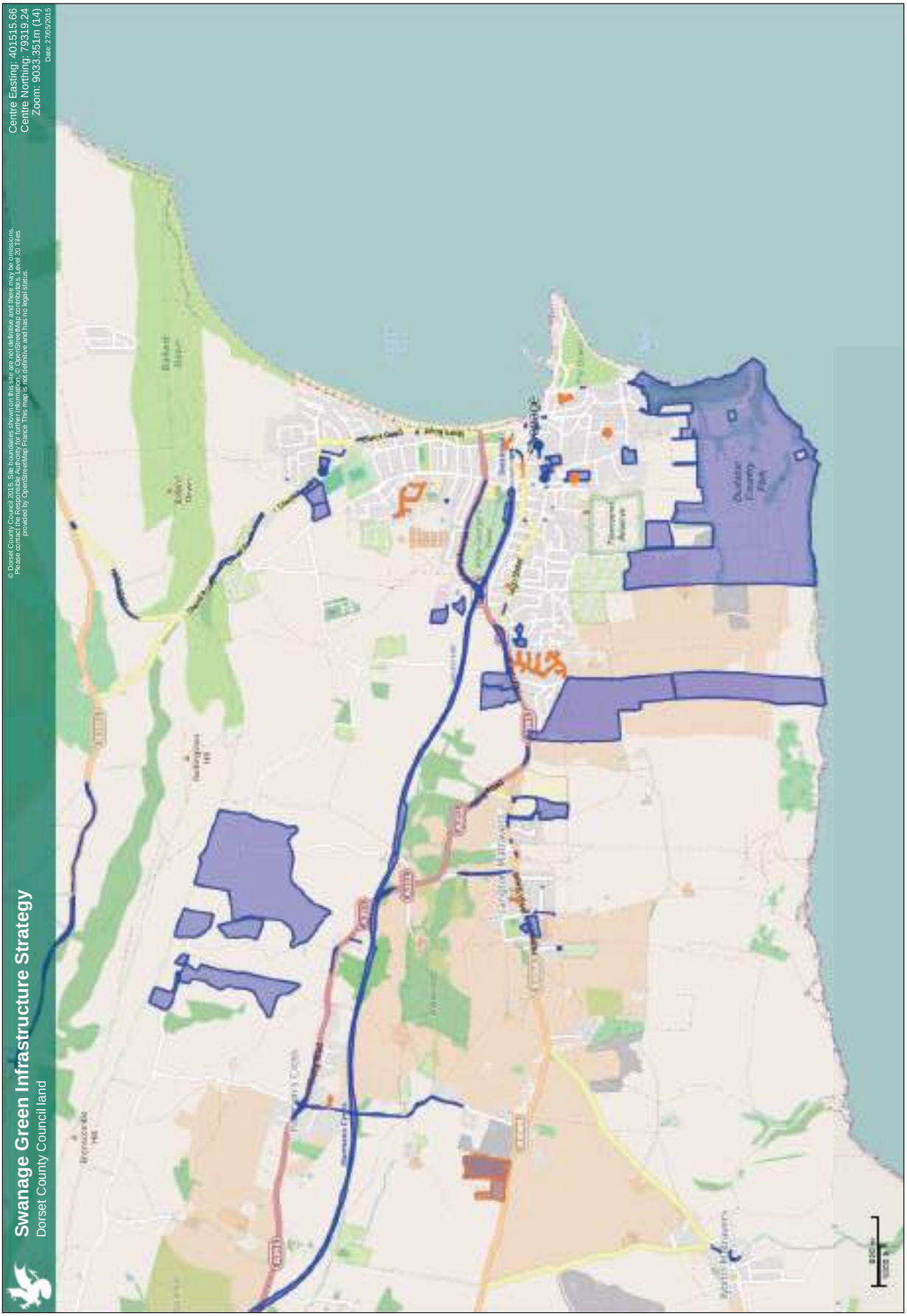

KEY
Habitat Restoration Sites
Pond
Heathland/Acid Grassland
Sites of Special Scientific Interest
STUDLAND & GODLINGSTON HEATHS
Special Areas of Conservation
Isle of Portland to Studland Cliffs
SNCI
Litchfield Copse
Dorset Priority Habitats
Yew woodland
Lowland heathland
Coastal sand dunes
Coastal saltmarsh
Lowland calcareous grassland
Maritime cliff and slope
Lowland meadows
Lowland fens
Purple moor grass and rush pastures
Lowland dry acid grassland
Lowland mixed deciduous woodland
Coastal vegetated shingle
Reedbeds
For Identification Purposes Only
Scale Not to scale
Ref: SGIS/Bio
© Crown copyright and database rights 2015
Ordnance Survey LA100022048
SWANAGE GI STRATEGY
Biodiversity
Thriving communities in balance with the natural environment
Purbeck District Council

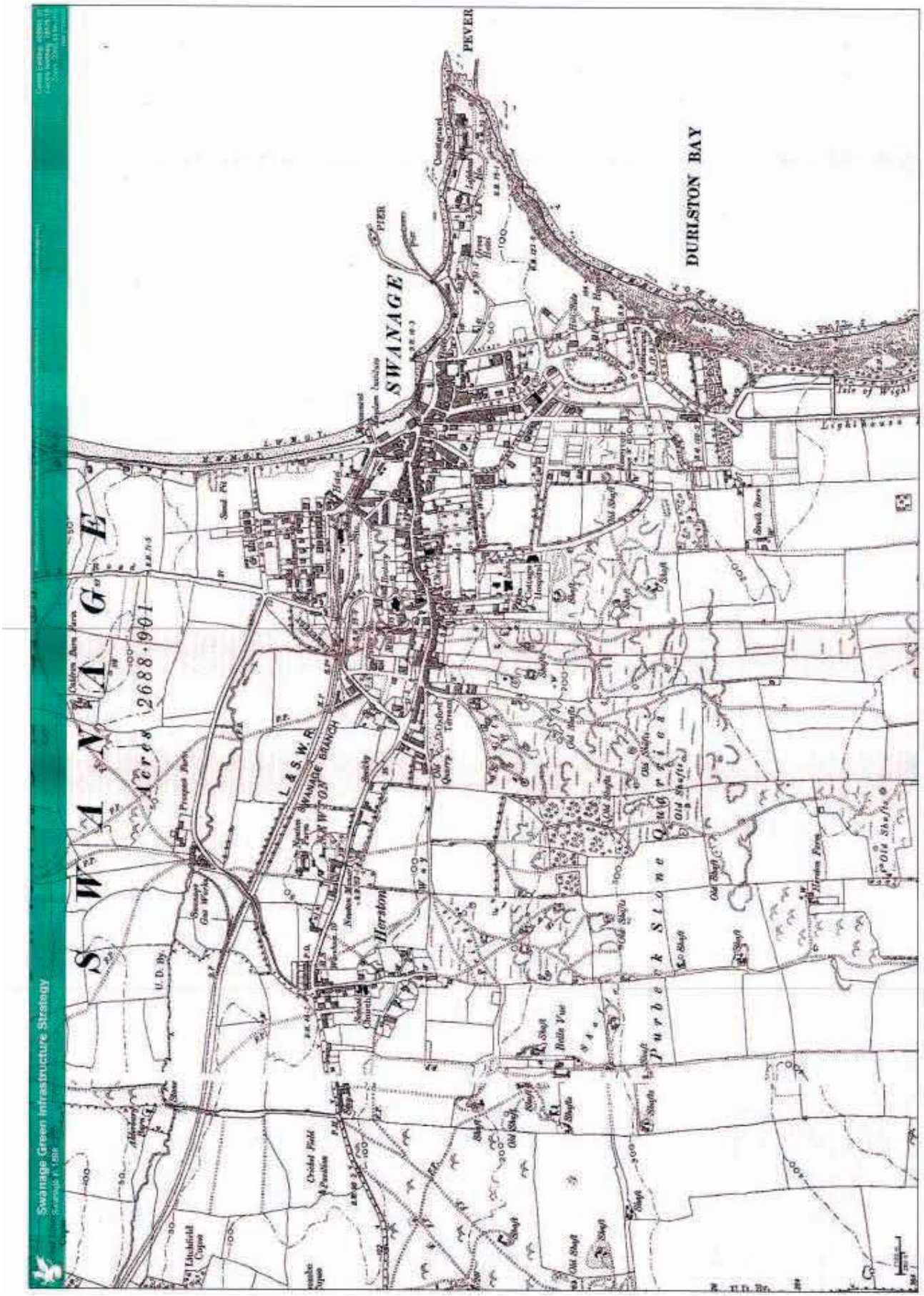

KEY
Veteran tree
PDC owned tree
Wet woodland
Ancient woodland
Protected trees
For Identification Purposes Only
Scale Not to scale
Ref: SGIS/Tre
© Crown copyright and database rights 2015
Ordnance Survey LA100022058
SWANAGE GI STRATEGY
Trees and woodland
Thriving communities in balance
with the natural environment
Purbeck
District Council

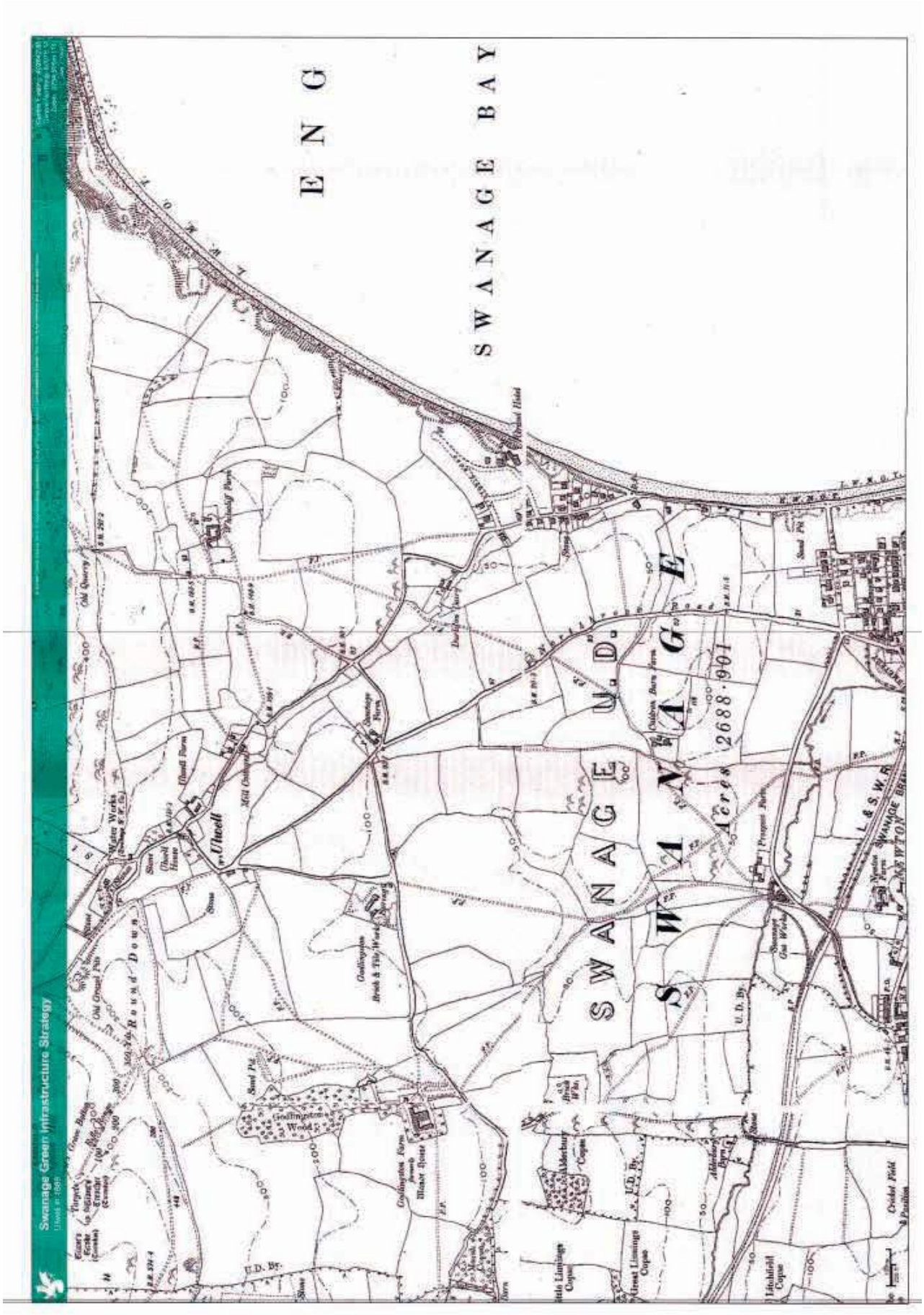

Swanage Green Infrastructure Strategy
Surface Water Flooding
Centre Easting: 402150.18
Centre Northing: 79555.63
Zoom: 4516.472m (15)
Date: 27/05/2015
© Environment Agency copyright and database rights 2015. © OpenStreetMap contributors. Level 20 Tiles provided by OpenStreetMap France This map is not definitive and has no legal status.
Legend
1 in 100 years
1 in 1000 years
1 in 30 years


Swanage Green Infrastructure Strategy
Land in Public Ownership
Centre Easting: 403039.95
Centre Northing: 79292.61
Zoom: 9033.397m (14)
Date: 26/11/2014
© Dorset County Council 2014 © OpenStreetMap contributors, Land-ID Tiles provided by OpenStreetMap France
This map is not definitive and has no legal status
Durlston County Park
Seacombe Cliff
500 m
1000 ft


Swanage Green Infrastructure Strategy
Dorset County Council trees
Centre Easting: 402119.95
Centre Northing: 79180.14
Zoom: 4516.793m (15)
Date: 27/05/2015
© Dorset County Council 2015. © OpenStreetMap contributors. Level 20 Tiles provided by OpenStreetMap France
This map is not definitive and has no legal status.
Swanage
Townsend Reserve


Swanage Green Infrastructure Strategy
Dorset County Council land
Centre Easting: 401515.66
Centre Northing: 79319.24
Zoom: 9033.351m (14)
Date: 27/05/2015
© Dorset County Council 2015. Site boundaries shown in this app are not definitive and there may be omissions.
Please contact the Responsible Authority for further information. © OpenStreetMap contributors, CC-BY-SA 2.0 Tiles
provided by OpenStreetMap France This map is not definitive and has no legal status.


SWANAGE
DURLSTON BAY
PEVER
PIER
Herston
Swanage Green Infrastructure Strategy


Swanage Green Infrastructure Strategy
ENG
SWANAGE BAY
SWANAGE
Ulwell
Round Down
Godlingston Heath
Godlingston Wood
Godlingston Farm
Aldermoor Farm
Queens Barn Farm
Prospect Farm
Swanage Gas Works
Water Works
Old Quarry
Old Orchid Pub
Sand Pit
Tumps
Cross Roads
Stone
Limekiln
Copse
Pond
Pavilion
Cricket Field
L.D. Br.
U.D. Br.
L. & S.W.R.
Swanage Br.
Swanage Station
Aerodrome
2688·901

Landscape type: Clay valley

Character areas:
- Corfe Valley
- Kimmeridge Coast
- Bride Valley

The sweeping landscapes of the Kimmeridge Coast, Corfe, and Bride valleys each have a unique identity. Enclosed by surrounding escarpments and ridges, they generally have a settled rural character with coastal influences. A patchwork of rolling pastures and scattered woodlands have been shaped by centuries of woodland clearance and agricultural improvement. Small farmsteads and nucleated villages with landmark churches are dotted throughout the landscape.

Landscape change

- Some historical loss of damp pastures and medieval field patterns as a result of intensive arable agricultural practices has been one of the most significant changes to the area. The large arable fields with geometric boundaries detract from the textured pastoral character.
- Policy driven farming changes over the last sixty years have resulted in concentration of stock levels. This limits the availability of livestock to graze land of low agricultural, but high environmental value such as wet meadows.
- The condition of some hedges has declined resulting in gaps and replacement with post and wire.
- Woodland management and replanting has been neglected in the past.
- Some recent residential, tourist and industrial developments have weakened the rural character and condition of the landscape with associated visual impact.
- Agriculture is becoming more market driven with intensification of production and farm diversification. This may result in short term changes in agricultural patterns in the landscape with diversification into other crops such as biomass crops, shooting and provision of tourism accommodation, altering the sense of enclosure in the valley bottoms.
- There will be continued urban and tourism based development pressures in relation to fringes of existing settlements and the coast with increasing traffic levels. This may increase the proliferation of signage and associated traffic calming schemes.
- Continued pressure for wind farms and communication structures on surrounding ridges could further threaten important open skylines.
- Future small scale development pressures on the edges of existing settlements may threaten the rural character of villages, with intrusion into the open countryside.
- Climate change may alter crops types and patterns in the landscape with changes to characteristic habitats and coastal erosion.

Landscape Guidelines

The overall objective should be to conserve and restore the intimate patterns of grasslands, woodlands, field boundaries and nucleated settlements.

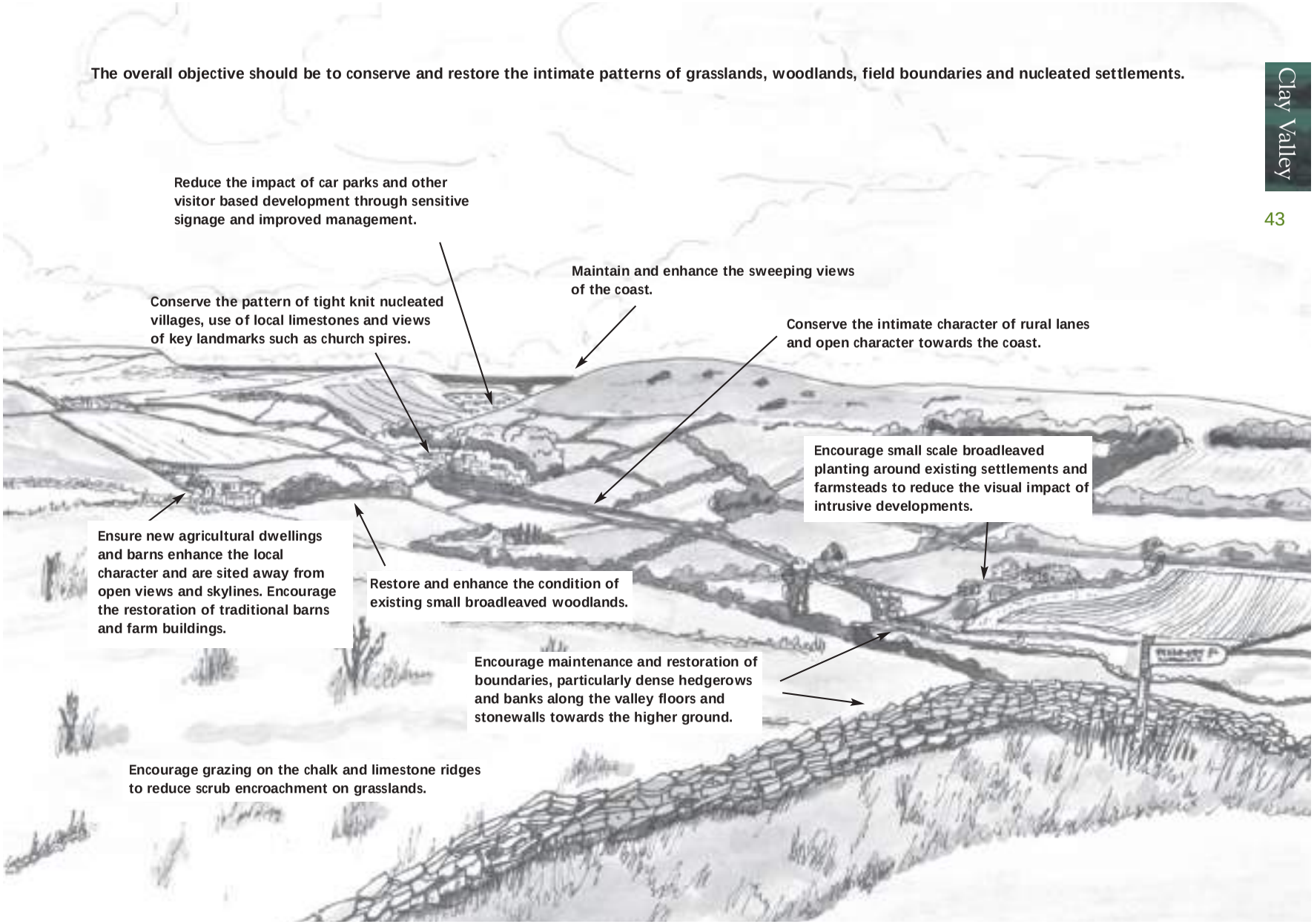
Planning guidelines

- Encourage small scale broadleaved planting around existing settlements and farmsteads to reduce the visual impact of intrusive developments.
- Conserve the pattern of tight knit nucleated villages, use of local limestones and views of key landmarks such as church spires.
- Ensure farm diversification projects do not have a negative impact of local character.
- Ensure pylons, masts and other vertical elements are carefully sited and the number restricted to avoid visual clutter and interruption of important skylines.
- Promote the under-grounding of small powerlines in open, sensitive locations.
- Ensure new agricultural dwellings and barns enhance the local character and are sited away from open views and skylines. Encourage the restoration of traditional barns and farm buildings.
- Encourage the use of native planting in any landscape scheme associated with new development and consider removal of unsympathetic species, such as the leylandii screening hedges that stand out in the landscape.
- Conserve the intimate character of rural lanes and open character towards the coast. Remove excessive signage and seek alternatives to infrastructure associated with urban development and out of scale traffic management schemes.
- Reduce the impact of car parks and other visitor based development through sensitive signage and improved management.

Management guidelines

- Restore and enhance the condition of existing small broadleaved woodlands.
- Consider extending wet woodland on the valley floor, particularly around existing settlements and farmsteads.
- Encourage low impact grazing and conservation of permanent pastures including calcareous grassland and wet grasslands to protect wildlife and historic features.
- Enhance management of arable farmland to create a wildlife-rich habitat supporting farmland birds and arable flora. This will include retaining areas of fallow land, maintaining an unploughed margin around fields and the introduction of conservation headlands. Reduce the intensity of farming practices around important sensitive habitats.
- Encourage maintenance and restoration of boundaries, particularly dense hedgerows and banks along the valley floors and stonewalls towards the higher ground.
- Protect and enhance watercourses and associated wildlife from soil erosion and the effects of diffuse pollution.
- Encourage grazing on the chalk and limestone ridges to reduce scrub encroachment on important grasslands.
- Maintain and enhance the sweeping views of the coast.

The overall objective should be to conserve and restore the intimate patterns of grasslands, woodlands, field boundaries and nucleated settlements.



Character Area:

Corfe Valley

The Corfe Valley is a broad sweeping clay valley with a patchwork of rough pastures and dense hedgerows, set along the Corfe River. Enclosed by the imposing Purbeck Ridge to the north and a limestone ridge to the south, small broadleaved woodlands provide visual unity to the structure of the valley. Discrete picturesque villages are set within small woodlands on the valley bottom particularly towards the west, with a peaceful and unspoilt character. The fields particularly around Tyneham are small narrow strips that, along with other historic landuse patterns, convey a strong sense of historical significance. Where the chalk and limestone ridges form the upper slopes of the valley, the fields become larger with gappy hedgerows and scrub encroachment on rough grasslands. Towards the east, the landscape becomes broader in scale and more complex in nature. The influences of Swanage are particularly apparent with pylons and visually intrusive landuse. The focal point of Corfe Castle and Corfe Common adds to the historic character.

Key characteristics

- Sweeping and secluded clay valley enclosed by the dramatic chalk escarpment to the north and undulating limestone ridge to the south
- Continuous patchwork of small regular intimate pastures with dense hedgerows and small broadleaved woodlands of oak and hazel
- Small scattered nucleated villages and farmsteads of limestone on the valley floor with adjacent paddocks and piecemeal enclosures and dense small broadleaved woodlands
- Occasional springs, flushes and wet woodlands on the valley floor with damp rush pasture and meadows
- Dramatic views of the coast towards the west and east
- Network of stone walls towards the Purbeck Plateau
- Winding rural lanes with dense hedgerows and hedge banks

Description

Land shape & structure

The Corfe Valley is a broad, sweeping and gently undulating valley on soft heavy clays, rising from the east to the west with a small ridge at Harman's Cross. The Corfe River flows into the valley at Corfe, flowing towards Swanage. The upper valley sides are formed by the Purbeck Ridge to the north with an undulating limestone ridge to the south.

Soils and vegetation

The valley is poorly drained with loamy base rich soils, supporting damp grassland habitats and occasional wet woodlands. Fragments of wetland vegetation such as reeds and willow remain in some areas. There is also a large area of acid grassland and ancient woodland at Corfe. Fragments of downland occur on the upper slopes of the valley sides.

Settlement and land cover

It is a largely settled landscape characterised by scattered farmsteads and small nucleated settlements of local limestone with church spires dotted along the valley floor and sides. Frequent loose clusters of dwellings occur along roads and lanes to the east where settlement patterns become more intensive towards Swanage. Land cover includes ancient and secondary trees and woods in a settled pastoral landscape where dairy farming predominates. Towards the west, the Ministry of Defence (MoD) operate with associated infrastructure and pastoral landcover.

Historic character

The valley has a prevailing historic character of planned enclosure of open fields with fragments of piecemeal enclosure and paddocks adjacent to settlements. There are large areas of common land next to Corfe Castle with associated barrows. There is a string of substantial farmsteads, hamlets and villages. Some survive as villages and hamlets today, others in the form of earthworks or deserted settlements. There is evidence of prehistoric settlement and industrial activity from the earliest periods, but particularly in the later Iron Age and Romano-British periods. There is evidence of shale working from a number of sites. Evidence of later industrial activity relates mostly to stone extraction, with particular significance given to the remains of Medieval quarries at Downshay.

Visual character & perceptions

The Corfe Valley is a diverse colourful patchwork of structured fields and winding lanes. In the west it is more intimate and peaceful opening out to stunning coastal views. Corfe Common has a wild feel dominated by views of the imposing Corfe Castle. Towards Swanage, urban influences dominate the landscape.

Evaluation

Strength of character

The landscape is judged to have a **strong** rural character enforced by the distinctive valley landform and sense of visual unity. The distinct pattern of nucleated villages, patchwork of dense hedges, regular pastures and small woodlands is apparent throughout most of the area, despite some change to arable. There are relatively few detracting features that weaken the overall character, except for occasional unsympathetic leylandii planting and signage that occur along the lanes. However, a host of urban fringe land uses around the edges of Swanage detract from the combination of landscape features. This includes equine development and a host of industrial, recreational and tourism based land uses. Here the landscape is judged to have a **weak** character.

Condition

Due to historical intensive farming practices and urban fringe land uses, the management of some landscape features has been neglected. Some boundaries have been lost or have become gappy with the straightening of most field patterns. Woodlands are generally in need of enhanced management. Towards the chalk ridge, rough grasslands are subject to some scrub encroachment and a lack of management with dry stone walls in a state of disrepair towards the limestone ridge. The large area of acid grassland enhances the condition of the landscape around Corfe. Further west where development pressures are less apparent (as much of the land is owned by the MoD), the landscape is in good condition, with species rich dense hedgerows and well managed pastures. The landscape around Swanage is judged to be in poor condition. Overall landscape condition is judged as **moderate** and **stable**.

Item 9, Appendix 1
(PG - 16.05.08)

Data organisation

60. The tables on the following pages is populated with the data collected from the workshops (in black), field survey (in blue) and baseline study (in green).

61. The raw data on the tables is not in any particular order, and can therefore be difficult to digest. It is useful to sort the data into categories that broadly relate to the typologies used in the 2006 PMP audit of open spaces. This is a useful way of grouping assets of a similar type and function and represents the first stage in the analysis of the data. The number of assets under each heading shows which type of asset is the most common in the town:

• Amenity green space	26
• Farmland	18
• Private gardens and roads	17*
• Public RoW	11 existing 11 proposed
• Civic spaces/public realm	7
• Sports and recreation	7
• Water bodies and watercourses	7
• Natural and semi-natural green spaces	6
• Formal parks and gardens	4
• Caravan parks	4
• Cemeteries and churchyards	5
• School grounds	5
• Allotments	1
• Derelict land	1

* It should be noted that a limited number of private gardens were actually assessed as part of the audit, so this number is artificially low.

Existing GI audit – data from workshop sessions and field survey and baseline information

Key for proposals column:

Swanage GI Strategy proposals

Proposals to be written into a development brief

Proposal to form part of a separate RoW project

Site	Ownership	Existing function	Existing benefits	Current condition	Current wildlife and GI value	Proposed function	Proposed benefits	Proposals plus cost estimate £
Natural and semi-natural green spaces								
Durlston Country Park	DCC	Public open space/country park	Amenity, biodiversity, tourism	Good	High	-	-	-
Purbeck Ridge	NT	Recreation	Visual/amenity, biodiversity, tourism	Good	High	-	-	-
Townsend	DWT (managed by)	Nature reserve, green corridor	Recreation (good for dog walking and children's play), biodiversity, health and wellbeing, amenity, education	Good	High	-	-	-
Townsend residential centre and approaches	Private – Wide Horizons Townsend Centre	Grassed with small woodland	Health and wellbeing, informal recreation, education, biodiversity	Good	Good Grass and wildflowers on verges	Was a potential housing site however now omitted as too environmentally sensitive	-	-
Peveril Point and The Downs	STC (Downs)	Public open/green space	Health and wellbeing, biodiversity	Moderate	Medium	Care for and protect natural features by declaring as a Local Nature Reserve	-	Relax mowing regime to encourage wildflower meadows to establish – no additional cost. Application for Local Nature Reserve status to Natural England from STC/PDC/DCC
Field to the south of caravan park off Panorama Road	Private But management recently transferred to Durlston Country Park (DCC)	Private open space Was previously a landfill site, now grassland	Food production (?) biodiversity	Moderate	Good	Wildflower meadow	Increased biodiversity	Changes to management regime?

Site	Ownership	Existing function	Existing benefits	Current condition	Current wildlife and GI value	Proposed function	Proposed benefits	Proposals plus cost estimate £
Formal parks and gardens								
Prince Albert Gardens	STC	Public green space + stage	Informal recreation, visual/amenity, health and wellbeing, local distinctiveness, biodiversity cultural, social	Good	Low - medium	No overall change, but reintroduce some of original designed planting, including wildflower meadow	Increased amenity, biodiversity and adaptability to climate change	Changes to management and planting of shrubs as original planting plans ££1,500.00
Day's Park	STC	Public green space	Health and wellbeing	Good	Low - medium	No overall change, but plant replacements for over-mature trees	Continued amenity, biodiversity, reduce air pollution and increase adaptability to climate change	Tree planting £1,000.00
Beach Gardens	STC	Public green/recreational space	Health and wellbeing, amenity and landscape value	Good	Low	No overall change, but replace bedding plants with tree and shrub planting designed to adapt to climate change, and introduce wildflower meadow where appropriate	Increased amenity, biodiversity, reduced air pollution and increase adaptability to climate change	Changes to management of grassed areas + tree and shrub planting £5,000.00
Shore Gardens/Sandpit Field	STC	Public green/recreational space	Health and wellbeing, amenity and landscape value	Good	Low	No overall change, but replace bedding plants with tree and shrub planting designed to adapt to climate change, and introduce wildflower meadow where appropriate	Increased amenity, biodiversity, reduced air pollution and increase adaptability to climate change	Changes to management of grassed areas + tree and shrub planting £8,000.00
Open space off Newton Grange Close	Management company	Pocket park, with pond, newly planted trees, wild flower meadow	Biodiversity, visual amenity, passive recreation (health and wellbeing)	Good – managed for wildlife	High	-	-	-
Sport and recreation								
King Georges Recreation ground/Forres Field	STC	Public open space, green-lung, flood zone	Recreation, health and wellbeing, social, biodiversity	Good, though deteriorates during periods of flooding	Medium	Possible SuDs to enhance flooding control/capacity, green cycle link to town, tree planting and wildflower meadow creation.	Increased amenity, biodiversity and adaptability to climate change, reduced air pollution	Changes to management of grassed areas + tree planting £2,000.00 Discuss project to direct flood water to SuDs scheme

Item 9, Appendix 1
(PG - 16.05.08)

Site	Ownership	Existing function	Existing benefits	Current condition	Current wildlife and GI value	Proposed function	Proposed benefits	Proposals plus cost estimate £
								with District Engineer at PDC – as may not be workable. Investigate possibility of creating cycle link with DCC.
Rec/Sandpit Field/weather station open space/beach huts open space	STC	Public green space	Health and wellbeing,, social	Good	Low	Resilience in face of climate change	Increased amenity, biodiversity and adaptability to climate change, reduced air pollution	Changes to management of grassed areas + tree planting £2,000.00
Victoria Avenue putting green/camping (Kirkwood Park)	Private	Private green space	Health and wellbeing, visual/amenity, social	Good	Good	-	Improve biodiversity and encourage wildlife	Negotiate with owner
Cricket Club	Private	Private green space	Health and wellbeing	Good	Low	-	-	-
Football Club	STC	Private green space	Health and wellbeing	Good	Low	-	-	-
Tennis courts at Harrow House	Grassland and tennis court owned by Harrow House	Private formal and informal recreation	Health and wellbeing	Moderate	Good	Low	-	-
Herston recreation ground	STC	Football pitch, play area, grassed area, small trees	Visual/amenity and recreation (health and wellbeing)	Good	Low	No scope – too small	-	-
Civic spaces/public realm								
Swanage pier (above and below water)	Pier Trust	Recreation	Health and wellbeing, marine biodiversity, links to wider 'countryside/sea, visual/amenity, social	Moderate	High (below water)	-	-	-
The Stone Quay	STC	Recreation	Health and wellbeing, links to wider 'countryside/sea, visual/amenity, social	Moderate	-	-	-	-
Seafront/beach	DCC/STC	Recreation, blue/green corridor	Health and wellbeing, biodiversity, links to wider	Moderate	Seafront low, beach high	-	-	-

Site	Ownership	Existing function	Existing benefits	Current condition	Current wildlife and GI value	Proposed function	Proposed benefits	Proposals plus cost estimate £
			'countryside/sea, visual/amenity, social					
Town centre and other public realm areas	Managed by Swanage Town Council Mixed ownership	Public open space	Connecting places, social, visual/amenity	Moderate	Low	Consider changing to use of sustainable planting instead of bedding plants. Include wildlife friendly plants, perennials. Plant new street trees	Biodiversity, cooling effect in face of climate change, absorb pollution, less watering required	Replace bedding plants with trees and shrubs where appropriate. Plant street trees £20,000.00
Coach and car park (Victoria Avenue)	STC	Coach and car park	Parking, market	Poor surfacing, eyesore, floods	None	Drainage value or potential for enhancement Permeable surfaces SuDs and tree planting	New green infrastructure Improved surface water drainage	Major project to enhance the car park by providing new surfacing, and tree planting in tree pits designed to be individual 'rain gardens' £100,000.00
Car park to Coastguard station	STC	Car park	Parking	Poor surfacing, surface water drainage issues	None	Drainage value or potential for enhancement SuDs and tree planting	New green infrastructure Improved surface water drainage and flood alleviation upstream of Purbeck Court and environs	Major project to enhance the car park by providing new surfacing, and tree planting in tree pits designed to be individual 'rain gardens' £30,000.00
Street trees	DCC	Existing trees	Visual/amenity	Varies	Low (depends on species, state of health and location)	Replant avenue of trees on Victoria Avenue and Park Road	Increased amenity, biodiversity and adaptability to climate change, reduced air pollution	Plant new trees in original tree pits where possible Victoria Ave £10,000.00 Park Road £2,500.00
Amenity green space								
King Georges Field to the petrol station at Herston and beyond past Prospect Business Park and recycling centre to Wessex Water/Environment Agency Land)	Mixed	Green corridor, public and private open space	Biodiversity, health and wellbeing		Low - average	Local nature reserve	Biodiversity, health and wellbeing	Undertake a full survey to identify potential. If suitable make an application for Local Nature Reserve status to Natural England from

Item 9, Appendix 1
(PG - 16.05.08)

Site	Ownership	Existing function	Existing benefits	Current condition	Current wildlife and GI value	Proposed function	Proposed benefits	Proposals plus cost estimate £
								STC/PDC/DCC
Parking to Corvegate and footpath link to James Day Mead Memorial Home	Private	Garden area, amenity grassland – embankment rises from Ulwell Road by approx. 1m, and contains fruit trees, spring bulbs and other wildflowers	Visual/amenity	Moderate	Low	Little scope for improvement	-	-
Open space round old barn and track to Russell Avenue	Private land with public footpath running through	Private garden with grassland, scrub/small trees and a public right of way	Health and wellbeing, informal recreation, biodiversity	Moderate	Good Birds, flora insects etc.	-	-	-
Planted verge at bend in Ulwell Road	DCC	Highway infrastructure. Woodland. Green space. The site is a heavily wooded traffic island with many mature trees.	Visual/amenity, biodiversity	Poor – no obvious signs of management	Medium to high	Tree planting	Reduce pollution and heat island effect, increase biodiversity. Increase adaptation to climate change	Tree planting to supplement existing mature. Engage with DCC to negotiate £500.00
Land between St Mary's School and Ulwell Road	DCC	Paddock, with gappy hedge on one side, and tree/scrub line stream on other	Visual/amenity, biodiversity	Grazed, but otherwise in poor condition due to lack of maintenance of boundaries	Low - medium	This was a potential housing site but is no longer being considered	-	-
Open area between Ballard Estate and cliff	Under management of Ballard Estate	Private green space with public access, pocket park, informal open space, wildflower meadow/semi-natural grassland, wooded ravine with stream	Green corridor, recreation, access to the beach and Ballard down, biodiversity, ravine provides land drainage	Moderate	High	Create footpath links and steps down to Shep's Hollow Wildflower meadow	Access, health and wellbeing Increase biodiversity	Negotiate with DCC RoW team and landowners. Cost of steps depends on design Ballard Estate residents group already has this in hand
Embankment adjacent to Northbrook Road	Private – Cambian Education. Part possibly highway verge East side is in private ownership, and has been repaired and terraced	Planted bank/space alongside road Recently re-graded and planted with trees shrubs and wildflowers East side is slope down from houses at higher level than road	Amenity, biodiversity	Good	Medium	-	-	-

Site	Ownership	Existing function	Existing benefits	Current condition	Current wildlife and GI value	Proposed function	Proposed benefits	Proposals plus cost estimate £
Northbrook Copse	Swanage Town Council	Pocket park, woodland, buffer between housing developments (visual/amenity)	Biodiversity, cooling,, absorbs pollution	Good	Medium - high	Not required	-	-
Open space between Chestnut and Swanbrook Mews	EA/private	Stream with garden area and mown amenity grassland. Open space for adjacent flats. Swan brook is in a deep culvert with reeds and other aquatic plants	Visual/amenity, biodiversity	Good	Medium - high	-	-	-
Open space, Newton Manor Close	Private	Tree and shrub planting bed and amenity grass areas in car parking/residential access area	Green space, biodiversity, visual/amenity,	Grass area well maintained. Gravel and pavings less well maintained	Low - medium	-	-	-
Open space and footpath at end of Priests Road	?	Open space with communal verges, leading to section of Priests way with hedges	Green corridor from densely populated housing area to open countryside Hedges have some biodiversity value	Grassed areas in good condition Path in moderate condition	Average	Little potential for change Although improved management and tree planting could enhance the space.	Amenity, connections to countryside, connections to new GI?	Tree planting scheme £1,500.00
Open space south of Holburne Road park home site	PDC?	Woodland – good buffer between nature reserve and park home site	Biodiversity, visual and amenity	Contains mature trees and scrub – no obvious signs of management.	Good	-	-	-
Verges and trees either side of Peveril Road	Unadopted road	Access, verges with some trees	Biodiversity, green corridors visual/amenity, cooling, reduction in pollution levels,	Good – verges are managed by each individual resident whose home fronts onto the unmade road	Good	-	-	-
Open space at junction of Durlston Road and Belle Vue	?	Grass verge with a clump of trees connects to green corridor on Peveril Road	Biodiversity, visual/amenity, cooling, reduction in pollution levels,	Good	Medium – some bird activity	Structure of planting could be enhanced to increase habitat	Biodiversity	Enhance planting £500.00
Open space to west of Victoria Avenue Industrial Estate and Prospect Business Park	Flood alleviation scheme – currently in PDC ownership, but to be transferred to Environment	Open space, grazing, (fishing, but not since ponds fenced off), amenity grassland, open water	Flood management, informal recreation, food production, biodiversity	Moderate	High	Tree planting	Enhancement of approaches to Swanage through screening industrial estate – visual/amenity	Plant a copse of native trees (subject to consent of landowner) £3,000.00 (less if planting done by

Item 9, Appendix 1
(PG - 16.05.08)

Site	Ownership	Existing function	Existing benefits	Current condition	Current wildlife and GI value	Proposed function	Proposed benefits	Proposals plus cost estimate £
	Agency						Biodiversity	volunteers)
Land between Rabling Road and Prospect Crescent	STC	Green space – (amenity grassland, bedding plants) links King George Field into allotments and beyond into countryside	Informal recreation, visual/amenity	Good, though small area with derelict greenhouse and cold frames unmanaged	Low	Pocket park (Wildflower meadow, tree and shrub planting)	Decrease air pollution and heat island effect, increase biodiversity, amenity and landscape permeability	Remove derelict greenhouses and enhance area as a pocket park £10,000.00
Railway embankments	Dorset County Council – leased to Swanage Railway	Green space Embankment south of Gilbert Road is maintained as garden open to public, other areas are grassed (section west of Northbrook Road is coal depot and staff car park)	Green corridor Public areas – informal recreation, visual/amenity	Moderate	Medium	Wildlife corridor. Green bridge over railway near St Georges cemetery so that wildlife can pass between north and south Swanage	Biodiversity/link	Sow wildflower meadow grass seed along embankments £1,500.00 Create green bridge over railway in consultation with Swanage Railway Company, DCC as landowner, and DCC engineers Likely cost depends on design – unknown at this stage
Raised verges between Greyseeds Estate and A 351 High Street	PDC mow, DCC own?	Strip of grassed open space with small pockets of planting	Visual/amenity	Fair	Low	Avenue of trees Enhance main entrance to Swanage/create gateway feature	Biodiversity, visual/amenity, climate change adaptation	Plant trees in avenue £10,000.00
Triangular verge half way along Days Road	DCC?	Grassed highway verge	Visual/amenity	Fair	Low	Green stepping stone	Biodiversity, visual/amenity, climate change adaptation	Plant 3 trees £300.00
Triangular grassed area on bend of Holmes Road	DCC	Grassed area	Visual/amenity	Fair	Low	Green stepping stone	Biodiversity, visual/amenity, climate change adaptation	Plant 6 trees £600.00
Site of old Sydenham Road play area	Housing trust?	Grassed area with some small trees	Visual/amenity	Fair	Low	Green node at access to countryside	Biodiversity, visual/amenity, climate change adaptation	Waymark, define path, tree planting £1,500.00
Wide grassed verge on Sydenham Road	Housing trust?	Grassed area with some small trees and shrubs	Visual/amenity	Fair	Low	Wildflower area with trees – green stepping stone	Biodiversity, visual/amenity, climate change adaptation	Plant 4 trees and create wildflower meadow £2,000.00
Triangular grassed area Steer Road	DCC	Grassed area	Visual/amenity	Fair	Low	Wildflower area with trees – green	Biodiversity, visual/amenity,	Plant 4 trees and create wildflower

Site	Ownership	Existing function	Existing benefits	Current condition	Current wildlife and GI value	Proposed function	Proposed benefits	Proposals plus cost estimate £
						stepping stone	climate change adaptation	meadow £2,000.00
Green space near Victoria Terrace	PDC	Amenity open space which used to be a play area	Visual/amenity	Poor	Low	Wildlife area	Biodiversity, visual/amenity, climate change adaptation	Plant 3 trees, change management, and create wildflower meadow £900.00
Green space at Marsh Way	PDC	Amenity open space with trees and shrubs	Visual/amenity and recreation (health and wellbeing)	Poor - much of original planting died off	Low	Wildlife area	Biodiversity, visual/amenity, climate change adaptation	Plant 3 trees, change management, and create wildflower meadow £900.00
Traffic islands opposite Baptist Church	DCC	Grassed verge with shrubs and bedding plants	Visual/amenity	Good	Low	Tree planting	Biodiversity, visual/amenity, climate change adaptation	Plant 2 large trees £400.00
School grounds								
Swanage School grounds	Swanage School (leased from DCC?)	Private green space	Health and wellbeing, visual/amenity,	Good	Low	Nature areas round perimeter and elsewhere if possible	Increased amenity, biodiversity and adaptability to climate change, reduced air pollution	Changes to management of grassed areas + plant wildflowers. Tree planting. School project using students to design and plant areas. £700.00 for plants.
St Mark's School grounds	Diocese of Salisbury (leased from DCC?)	Private green space	Health and wellbeing, visual/amenity,	Good	Low	Nature areas round perimeter and elsewhere if possible	Increased amenity, biodiversity and adaptability to climate change, reduced air pollution	Changes to management of grassed areas + plant wildflowers. Tree planting. School project using students to design and plant areas. £700.00 for
St Mary's School grounds	Diocese of Plymouth (leased from DCC?)	Private green space	Health and wellbeing, visual/amenity,	Good	Low	Nature areas round perimeter and elsewhere if possible	Increased amenity, biodiversity and adaptability to climate change, reduced air pollution	Changes to management of grassed areas + plant wildflowers. Tree planting. School project using students to

Site	Ownership	Existing function	Existing benefits	Current condition	Current wildlife and GI value	Proposed function	Proposed benefits	Proposals plus cost estimate £
								design and plant areas. £700.00 for
Cemeteries and churchyards								
St Mary's churchyard and graveyard	Private	Churchyard and graveyard with several large trees	Green space, informal recreation, biodiversity, visual/amenity	Good – grass on both sites appears to be managed	High in treed graveyard, medium in church grounds (6 very mature trees)	Nature area with new trees	Reduce pollution, provide shade, reduce heat island effect, and increase visual/amenity value and biodiversity. Tree planting will reinforce local distinctiveness, especially when existing trees come to end of life.	Living churchyards project. Create areas for wildflowers, and plant 6 new trees £1,000.00
Northbrook Cemetery	STC	Public open space/burials	Visual/amenity, informal recreation (health and wellbeing) biodiversity, green space, forms a link with other nearby green spaces	Moderate – occasional mowing of amenity grassland. Areas around gravestones largely unkempt. Pathways show signs of occasional maintenance	As site adjoins open land and swan brook there is probably much wildlife activity	Nature area	Wildlife link to Swanage Brook Reduce pollution, provide shade, reduce heat island effect, and increase visual/amenity value and biodiversity	Living churchyards project. Native planting plus ornamental planting to attract birds, butterflies and bees £1,000.00
Godlingston cemetery and area		Cemetery (public open space) farmland,	Biodiversity	Moderate	Medium	Nature area	Biodiversity	Living churchyards project. Manage margins for wildflowers. Wildflower seed/plants £400.00
Private gardens and roads								
All private gardens (see below)		Private green space	Amenity				-	-
Frontage of Dolphin Court and 29-33 Northbrook Rd	Private	Green space – Shrub planting on embankment to 3 houses above it	Visual/amenity, some biodiversity	Poor – no obvious signs of management	Medium	Hedges and shrubs exist, but very little opportunity to enhance	-	-
Front and rear of Purbeck Court, De	Private	Communal garden Area between Swan	Visual/amenity	Mixed	Low. Possibly some wildlife uses	No scope for improvement	-	-

Site	Ownership	Existing function	Existing benefits	Current condition	Current wildlife and GI value	Proposed function	Proposed benefits	Proposals plus cost estimate £
Moulham Road		Brook and garages has some open (amenity)grass but also a tree/shrub belt. North east part is pub garden Area in front of flats is well maintained lawns, shrubs and flower beds			the route to get into Days Park			
Grounds of James Day Mead Memorial Home	Private	Garden with amenity grassland	Informal recreation (health and wellbeing)	Good – grounds maintained by care home	Low – medium	The site is well maintained and there is little scope for improvement other than parts of the grassed areas could become wildflower meadow	-	-
Junction of gardens to 12, 24, 26 and 34 Cauldron Barn Road; 23 and 25 Durberville Drive and 11-13 Anglebury Avenue	Private	Green corridor	Biodiversity, visual/amenity, ecological corridor, adaptation to climate change	Good	Low-medium	-	-	-
Rear gardens/boundaries of 57 – 87 Durberville Drive (odds only) and north and west boundaries of Northbrook Cottage	Private	Green corridor	Biodiversity, visual/amenity, ecological corridor, adaptation to climate change	Good	Low-medium	-	-	-
Gardens between properties and cliff edge between Ocean Bay Restaurant and 18a Ballard Lee	Private	Green corridor	Biodiversity, visual/amenity, ecological corridor, adaptation to climate change	Good	Low-medium	-	-	-
Rear gardens of 1-4 and 7 Ballard Lee, and 95-101 Bay Crescent	Private	Green corridor	Biodiversity, visual/amenity, ecological corridor, adaptation to climate change	Good	Low-medium	-	-	-
Rear gardens of 1-6 Cauldron Meadows and 39-53 Cauldron Crescent	Private	Green corridor	Biodiversity, visual/amenity, ecological corridor, adaptation to	Good	Low-medium	-	-	-

Item 9, Appendix 1
(PG - 16.05.08)

Site	Ownership	Existing function	Existing benefits	Current condition	Current wildlife and GI value	Proposed function	Proposed benefits	Proposals plus cost estimate £
			climate change					
Back gardens running parallel to Rabling road (north and south), Beach Gardens (south), Battlemead (north and south) and Bonfields Avenue.	Private	Green corridor	Biodiversity, visual/amenity, ecological corridor, adaptation to climate change	Good	Low-medium	-	-	-
Side gardens to east of 1, Walrond Road and 2 Rabling Road	Private	Green corridor	Biodiversity, visual/amenity, ecological corridor, adaptation to climate change	Good	Low-medium	-	-	-
Rabling Lane adjacent to 42 Rabling Road	STC	Green corridor	Biodiversity, visual/amenity, ecological corridor, adaptation to climate change	?	Low	-	-	-
Garden and woodland Cauldron Barn Farm	Privately owned	Grassland and woodland	Informal recreation (health, wellbeing) and biodiversity, adaptation to climate change	Woodland and edges of stream unmanaged. Remainder in moderate condition	High	-	-	-
Alley west of Locarno Road	Private?	Access Green corridor - There is valuable vegetation on either side in parts, and the surface is grassed to varying degrees along the length of the alley	Connects other nearby elements of GI leading to landscape permeability	In use as access, but not managed	Some of the weeds will have wildlife value Low	Enhanced green corridor	Biodiversity, Strengthen connections to other GI	Negotiate with residents
Access to rear of 43-57 Kings Road West	Private	Access Green corridor - There is valuable vegetation on either side in parts, and the surface is grassed to varying degrees along the length of the alley	Connects other nearby elements of GI leading to landscape permeability, visual and amenity	Moderate – One owner responsible for maintaining pathway	Some in weeds and grass at side of path Low	Enhanced green corridor	Biodiversity, Strengthen connections to other GI	Negotiate with residents
Footpath corridor from Jubilee Road to open space by Belle View	Private, though DCC rights of way will have some responsibility for maintenance	Public right of way	Narrow verges are flower rich biodiversity Green corridor linking open space (Herston playing	Moderate Sign at south end, not at north. Maintenance varies with north end being better	Medium	-	-	-

Site	Ownership	Existing function	Existing benefits	Current condition	Current wildlife and GI value	Proposed function	Proposed benefits	Proposals plus cost estimate £
			fields) to open countryside beyond	maintained than south. Some boundary walls in need of repair				
Durlston, High Street, Steer Road, Priests Road, Mid High St/Townsend, Herston Days Rd area	Mainly private	private gardens + wooded + habitat	Biodiversity, nearby elements of GI leading to landscape permeability, visual and amenity, adaptation to climate change	Good	Medium	-		--
Durlston housing area (see also below)	Mainly private	general good tree cover	Biodiversity, nearby elements of GI leading to landscape permeability, visual and amenity, adaptation to climate change	Good	Medium	-	-	-
Allotments								
Prospect Allotments	STC	Public green space	Food production	Moderate	Medium	Provide a community orchard on part of site and or create a nursery area for trees to be planted in public realm. This is a potential housing site which is being considered by STC for affordable housing. If housing does go ahead here, the loss of current GI will need to be offset and allotments provided elsewhere	Food production, health and wellbeing, cost savings on implementation of GI Strategy projects	Fruit and native tree propagation and growing on. Cost could ne negligible if grown from seed, and cared for by allotment tenants If land is to be developed for housing, PDC to write a brief which is to include: The requirement for high functioning GI, including an innovative SuDs scheme; green corridors across the site; substantial tree and shrub planting throughout to help integrate the development

Site	Ownership	Existing function	Existing benefits	Current condition	Current wildlife and GI value	Proposed function	Proposed benefits	Proposals plus cost estimate £
								into the edge of town location.
Derelict land								
Crabtree Cottage site, off Locarno Road	?	Derelict building plot. Green space, with scrub and shrubs		Poor – unmanaged and overgrown	Not of great value, though wildflowers and weeds do have some wildlife value Medium	Could be landscaped and terraced Check planning history of site for details of ownership and past proposals	Amenity/visual, biodiversity,	Pocket park £10,000.00
Caravan parks								
Caravan parks See below also	Mixed	Private green spaces Short mown grass, minimal planting	Social, visual and amenity	Good	Low	Wildflower meadows and tree planting where suitable	Biodiversity Adaptation to climate change, visual and amenity	Encourage owners to create wildflower meadow areas and plant native trees and shrubs. Also encourage to paint vans/chalets/park homes in colours that blend with the landscape
Swanage Coastal Park	Swanage Town Council	Mown grass, shrub and small grass planting	Social, visual and amenity	Good	Low	Wildflower meadows and tree planting where suitable	Increase biodiversity, and strengthen links between town and open countryside. Adaptation to climate change	Alter management of grassed areas, sow wildflower grass seed, tree planting scheme. £2,000.00
Swanage Bay View Caravan Park	Private	Mown grass and managed gardens	Social, visual and amenity	Good	Low	Wildflower meadows and tree planting where suitable	Increase biodiversity, and strengthen links between town and open countryside. Adaptation to climate change	Negotiate with owners
Holburne Road park home site	Private	Private gardens and open space	Social, visual and amenity, health and wellbeing	Good grass mown and trees pruned – gardens managed and landscaped by owners	Low	Increase potential for use by wildlife by informing residents, and getting them to plant native species/bird and butterfly attracting species, wildflower meadow. Rain	Increase biodiversity, and strengthen links between town and open countryside. Adaptation to climate change	Negotiate with owners

Site	Ownership	Existing function	Existing benefits	Current condition	Current wildlife and GI value	Proposed function	Proposed benefits	Proposals plus cost estimate £
						gardens? Plant trees		
Lane leading north from access to Cauldron Barn Farm to caravan park	Owned by caravan park	Green corridor Grassed edges and hedges	Visual/amenity, biodiversity	Good	Low	No scope for enhancement	-	-
Public rights of way								
Durlston footpaths	Public right of way, so DCC responsible for maintenance of surface	Footpaths/rights of way	Health and wellbeing	Varies	Low			Include in stand alone footpaths project
Footpaths between south Swanage and the coast	Public right of way, so DCC responsible for maintenance of surface	Footpaths/rights of way	Health and wellbeing	Varies	Low	Most of paths run north south – so create some running east to west as well to make a better network	Health and wellbeing, robust network interconnected paths	Include in stand alone footpaths project
Footpath corridors between Queens Road and Bon Accord Road and Drummond Road	Public right of way, so DCC responsible for maintenance of surface	Public access, verge, woodland edge	Informal recreation (health and wellbeing), biodiversity, green corridors, visual/amenity	Moderate – some grass cutting in Drummond Road and tree pruning in Taunton Road	Moderate	-	-	Include in stand alone footpaths project
Footpath corridor from Osmay Road to Durlston Road	Public right of way, so DCC responsible for maintenance of surface	Public footpath. This is a public footpath which is on private land at the east end which is the drive for number 16 Lighthouse Road. The square marked in green on the map also belongs to number 16 and is hardstanding and garage. The west end in narrower, with grass verge/wildflowers. The boundaries are managed by adjoining property owners.	Footpath is regularly used by residents of Osmay road and Southcliffe Road to access Lighthouse Road. However it does not really access directly onto any open space	Good	Low	-	-	Include in stand alone footpaths project
Footpath corridor between Ballard Road and Ballard Way	Public right of way, so DCC responsible for maintenance of surface	Hard paved public right of way. Approx 1m wide and bounded by 2m	Pedestrian access	Poor	Low	No scope to improve	-	Include in stand alone footpaths project

Site	Ownership	Existing function	Existing benefits	Current condition	Current wildlife and GI value	Proposed function	Proposed benefits	Proposals plus cost estimate £
		close boarded fence an a 2m stretch of hedge at Ballard Way end						
-Ulwell Road	?	Access	-	-	Low	footpaths/ROW/cycle paths	Health and wellbeing	Include in stand alone footpaths project
Washpond Lane	?	Access	-	-	Low	footpaths/ROW/cycle paths	Health and wellbeing	Include in stand alone footpaths project
Victoria Ave to Washpond Lane	?	Various	-	-	Low	footpaths/ROW/cycle paths	Health and wellbeing	Include in stand alone footpaths project
Start grid ref SZ020792, along northern edge of pitch and putt and Forres Field, turn south past public toilets, cross over railway, turn east down Court Road and turn east onto Kings Road West	?	Farmland	Access	N/A	Low	Make paths wider with more of a greenway feel	Health and wellbeing, access to the countryside	Include in stand alone footpaths project
Public right of way start grid ref. SZ 022792 end Washpond Lane. Continue north on Brickyard Lane, turn right at Ulwell Caravan Park, end Ulwell Cottage	?	Farmland	Access	N/A	Low	**New access routes:** Cycleway to Ulwell 4 off road	Public access link, green transport	Include in stand alone footpaths project
Stream running south from grid ref. SZ 021802 to grid ref. 019797	?	Farmland	Access	N/A	Low	**New access routes:** Streamside walk	Public access link, green transport	Include in stand alone footpaths project
Grid reference SZ 017795 north to SZ 016798and then east to SZ 018798	?	Farmland	Access	N/A	Low	New access routes: New footpath > circular link(s) > the missing link(s)	Public access link, green transport, biodiversity link	Include in stand alone footpaths project
Grid ref. SZ 024799 west to 022799 then west north west to SZ 020800	?	Farmland	Access	N/A	Low	New access routes: New footpath > circular link(s) > the missing link(s)	Public access link, green transport	Include in stand alone footpaths project
Grid ref. SZ 020800 then north east to field with centre	?	Farmland	Access	N/A	Low	New access route	Public access link, green transport	Include in stand alone footpaths project

Site	Ownership	Existing function	Existing benefits	Current condition	Current wildlife and GI value	Proposed function	Proposed benefits	Proposals plus cost estimate £
point of SZ 023802								
Grid ref. SZ 028806 and then following a logical route south east through fields to SZ 033804	?	Farmland	Access	N/A	Low	New access routes: New footpath > circular link(s) > the missing link(s)	Public access link, green transport	Include in stand alone footpaths project
Grid ref. SZ 027806 south west along Whitecliff Road to SZ 027804 then turning east and connecting into Hill Road	?	Farmland	Access	N/A	Low	New access routes: New footpath > circular link(s) > the missing link(s)	Public access link, green transport	Include in stand alone footpaths project
North Beach car park to Washpond Lane	?	Farmland	Access	N/A	Low	New access routes: Cycle/footpath from North Beach car park to Ulwell	Public access link, green transport, biodiversity link	Include in stand alone footpaths project
Footpath corridor along cliff edge from New Swanage to Ballard Down	?	Farmland	Access	N/A	Low	New green infrastructure: Wider set back for path to Ballard Down	Biodiversity	Include in stand alone footpaths project
East of allotments, between Cauldron Barn Farm and Prospect Crescent	?	Farmland	Access	N/A	Low	New access routes: Footpath/cyclepath link	Public access link, green transport	Include in stand alone footpaths project
Footpath between Victoria Road and Ballard Estate	?	Existing permissive route				New access routes: Protect this route	Public access link, green transport	Include in stand alone footpaths project
Between brickworks and promoted housing to north and west of D'Urberville drive	?	Farmland	Access	N/A	Low	New footpath	Public access link, green transport	Include in stand alone footpaths project
Create footpath link: Between 44 and 46 Days Road to western boundary of Belle Vue Farm, continuing south along field boundaries to SZ 026779, then eastwards to SZ 028779 a). Along southern boundary of refuse tip to connect public rights of way.	?	Farmland	Access	N/A	Low	New footpaths	Public access link, green transport	Include in stand alone footpaths project

Item 9, Appendix 1
(PG - 16.05.08)

Site	Ownership	Existing function	Existing benefits	Current condition	Current wildlife and GI value	Proposed function	Proposed benefits	Proposals plus cost estimate £
b). Along northern boundary of refuse tip. c). Between easternmost Public Right of Way running through Townsend Reserve and RoW to east of SouthernFarmhouse – running immediately south of the farmhouse, and along track leading to it.								
Waterbodies and watercourses								
The sea	Crown Estates?	Marine resource	Recreation, health and wellbeing, tourism, travel, biodiversity	Average	Good	Improve water quality	Retain blue flag status of beach	Water quality badly affected by influx of contaminants from dog faeces during 'first flush' after heavy rainfall. Run awareness campaign locally to reinforce importance of picking up and disposing of dog waste
Swanage flood alleviation scheme	EA	Flood management	Biodiversity, flood management, visual/amenity, blue/green corridor	Average	High	Possible SANG	Recreation, health and wellbeing	This area could be promoted as 'suitable alternative green space (SANG) for promoted housing sites. Contributions from developers could be used to provide footpath infrastructure, and implement improvements to support biodiversity
Upper Swan Brook	EA?	Green link, wildlife corridor	Biodiversity, blue/green corridor	Average	High	-	-	-

Site	Ownership	Existing function	Existing benefits	Current condition	Current wildlife and GI value	Proposed function	Proposed benefits	Proposals plus cost estimate £
Swan Brook south side Kings Road West	EA?	Stream – Comprises the open stretches of the Swan Brook 90% stream, 2% garden (private), 8% overgrown woods/shrubs	Biodiversity, flood management, visual/amenity, blue/green corridor	Poor – no obvious signs of management. OK where forms garden of Old Rectory - very overgrown beyond Tithe Barn garden	Medium – high. Resident ducks alongside St Mary's Church	Little or no opportunity to enhance - stream lies in deep sided culvert	-	-
Swan Brook adjacent to the Mowlem	EA?	Stream - Flood management/water storage. Tidal stretch of Swan Brook – below street level and discharging onto beach/into sea. Concrete culvert with pedestrian bridge over	Biodiversity, flood management, visual/amenity, blue/green corridor,	Poor	Low	Little or no scope for enhancement. Could be improved through proper maintenance	Visual/amenity	Volunteer labour
Stream to south of Prospect Business Park	EA?	Green/blue corridor, floodplain, amenity grassland, woodland edge	Flood management, biodiversity	Poor	Medium	-	-	-
Old Mill Pond	?	Openspace/garden area with standing water	Blue/green GI Visitor attraction (passive recreation – health and well being, visual/amenity, biodiversity Close to other elements of GI	Moderate – signs of limited management	High. Home to a family of ducks	Enhance native planting?	Enhanced biodiversity	Negotiate with owner
Stream to east of Days Park and cricket ground	? Flow controlled from a storage tank at the rear of the vet's clinic on Ulwell Road	Stream corridor/woodland	Biodiversity, flood management, visual/amenity, blue/green corridor, land drainage	Poor – no signs of management	High	Could be improved through proper maintenance	Visual/amenity	Complete a proper assessment and tailor management to requirements. Cost implications not known at this stage.
Farmland								
Flood zone 2 and 3 and Swanage flood alleviation scheme located between water works and Prospect Business Park	EA/private	Farmland/flood alleviation scheme	Food production, biodiversity, flood management, visual/amenity, blue/green corridor, land drainage	Moderate	High	New green infrastructure: P. SANG - existing EA use, so lower capacity	Visual/amenity, recreation (Health and wellbeing), biodiversity	If suitable for a SANG, include requirements in development brief

Site	Ownership	Existing function	Existing benefits	Current condition	Current wildlife and GI value	Proposed function	Proposed benefits	Proposals plus cost estimate £
Three fields with centre points of grid refs. SZ 021795, 022796 and 021796	Private	Farmland	Food production, biodiversity,, visual/amenity, blue/green corridor, land drainage	Moderate	High	New green infrastructure: Potential SANGs (suitable alternative natural green spaces) for Ulwell development if takes place	Visual/amenity, recreation (Health and wellbeing), biodiversity	If suitable for a SANG, include requirements in development brief
Top section of field, with centre point of grid ref. SZ 026805 and field with centre point of SZ 028805	Private	Farmland	Food production, biodiversity,, visual/amenity, blue/green corridor, land drainage	Moderate	High	New green infrastructure: P. SANG for additional dwellings at west Northbrook Road	Visual/amenity, recreation (Health and wellbeing), biodiversity	If suitable for a SANG, include requirements in development brief
Top section of field, with centre point of grid ref. SZ 024801 and field with centre point of SZ 023802	Private	Farmland	Food production, biodiversity,, visual/amenity, blue/green corridor, land drainage	Moderate	High	New green infrastructure: P. SANG for additional dwellings at west Northbrook Road	Visual/amenity, recreation (Health and wellbeing), biodiversity	If suitable for a SANG, include requirements in development brief
South of Swanage to the coast	Mixed	Farmland - woodland - grazing	Biodiversity Food production	Moderate - good	Medium to high	Improve habitat	Biodiversity	Could be improved where there are gaps in the hedgerows, and managing grazing to benefit wildflowers
Herston fields	Private	Farmland,woodland, grazing, open space, public rights of way Semi-natural grassland	Food production, amenity, health and wellbeing Visual/amenity, biodiversity	North field down to grass and wildflowers. South field fenced and planted with barley or wheat, which is not growing well. East corner with footpath is either very dry or boggy, very weedy. Verge mowed.	High value in parts At one time there used to be a pond somewhere at the east end or in the church site. This could be recreated.	Designated as town/ village green Opportunity to use new GI to enhance this entrance to the town.	Visual/amenity, recreation, health and wellbeing	Provision of paths and planting of trees and shrubs.

Site	Ownership	Existing function	Existing benefits	Current condition	Current wildlife and GI value	Proposed function	Proposed benefits	Proposals plus cost estimate £
Green space to east and west of Northbrook Road Farmland	Private	Private green space, farmland	Food production, some biodiversity	Good	Low - medium	Potential housing sites Suitable alternative green space will be provided.		If land is to be developed for housing, PDC to write a brief which is to include: The requirement for a SANG off-site, and GI including an innovative SuDs scheme; green corridors across the site; substantial tree and shrub planting throughout to help integrate the development into the edge of town location.
Fields abutting development to north and north west of Swanage	Mixed	Private green space, farmland	Food production, biodiversity	Good	Low - medium	-	-	-
Prospect smallholding behind allotments	Private	Private green space Farmland,	Food production, biodiversity	Moderate - good	Low - medium	Was a potential housing site however since the workshop has been dropped	-	
Greyseeds Farm and Fields bound by Priests Way, Belle View Farm, and Track to Verney Farm from Grayseeds Farm	DCC	Farmland, open space Semi-natural grassland and scrub – used as grazing, green space	Food production, amenity, informal recreation (2 DCC footpaths) Health and wellbeing	Good A number of footpaths cross this land but are very hard to find as the signage is poor.	Good – birds, butterflies, insects	Wildflower meadow/semi-natural grassland Promote as good link to Priest's Way from Herston has potential for enhancement for wildlife. This was a potential housing site however it is no longer being considered for environmental reasons	Biodiversity, recreation (health and wellbeing)	The site could be improved where there are gaps in the existing hedgerow, and by managing grazing to benefit wildflowers. Signage of the RoW could be improved.
Wedge of land to north west of Belle View Farm/ Priests	Private	Private open space Open field with some footpaths, woodland	Food and wool production, informal recreation	Moderate/good (grazing to field)	Good – birds, butterflies, insects	Enhance value for wildlife This was a potential	Biodiversity	The site could be improved where there are gaps in

Site	Ownership	Existing function	Existing benefits	Current condition	Current wildlife and GI value	Proposed function	Proposed benefits	Proposals plus cost estimate £
Barn and The Cottage, and proposed housing site to the north.		and scrub. Field, used as grazing, green space Farmland	(footpath along northern edge), Biodiversity (scrub) Health and wellbeing			housing site however it is no longer being considered for environmental reasons		the existing hedgerow, and by managing grazing to benefit wildflowers
South of Priest Barn and Coastal Caravan Park	?	Nature reserve	Recreation (good for children's play) biodiversity, health and wellbeing.	Moderate	High	-	-	-
Field bound by Priests Lane to the south, Swanage Coastal Caravan Park, potential housing site, and The Cottage and Belle View Farm House, and the field immediately to the south of Priests Way	Mixed	Private open space potential housing site Open field with some footpaths, small trees and scrub. Field, used as grazing, green space Farmland	Food and wool production, informal recreation (footpath along northern edge), Biodiversity (scrub) Health and wellbeing	Mainly grazed farmland, small area of scrub to north. Bridleways along north and west edge well signposted. Main access to Priests Way from Swanage. Needs some maintenance to keep wide enough and use as a bridleway, not just a footpath	Good – birds, butterflies, insects	This was a potential housing/SANG site however it is no longer being considered for environmental reasons. Now propose to improve habitat and improve footpaths by maintaining regularly	Biodiversity, recreation (health and wellbeing)	The site could be improved where there are gaps in the existing hedgerow, by managing grazing to benefit wildflowers, and by regularly maintaining the footpaths
Fields between allotments, Cauldron Barn Farm, Harrow House and houses on Rabling Road (see Garden and woodland Cauldron Barn Farm Tennis courts at Harrow House)	Mixed	Green gap Farmland	Biodiversity, food production	Good	-	-	-	-
Ulwell Farm Caravan Park and the fields across the road to the south	Mixed	Important gap Farmland	Biodiversity, food production	Good	Low - medium	-	-	-
Fields surrounded by cliffs, foot of Purbeck Ridge, Ulwell Farm Caravan Park. Ulwell Road and New Swanage	Mixed	Private open fields, hedgerows etc. Farmland	Biodiversity, food production	Good	Low - medium	-	-	-
North of Washpond	Mixed	Farmland -	Biodiversity, food	Good	Low - medium	-	-	-

Site	Ownership	Existing function	Existing benefits	Current condition	Current wildlife and GI value	Proposed function	Proposed benefits	Proposals plus cost estimate £
Lane		woodland - pasture land	production					
Wedge of farmland between Ulwell Road and Whitecliff Road	Private	Farmland	Food production, some biodiversity	Good	Low - medium	This was a potential housing site however it is no longer being considered for environmental reasons. Now propose to improve habitat	-	The site could be improved where there are gaps in the existing hedgerow, by managing grazing to benefit wildflowers

Item 9, Appendix 1
(PG - 16.05.08)

Item 9, Appendix 1
(PG - 16.05.08)

Initial appraisal of data

62. Being the most common GI asset does not automatically mean that this type of asset contributes the most to the health the GI network in the town however. It is the level of function, the degree of connectivity and the combined benefits that dictate the level of contribution. These are the aspects of the existing GI that are analysed in the Analysis.

63. The impression that the audit provides at first glance is that the most numerous and therefore commonly occurring GI assets are amenity green spaces, which make up approximately one quarter of the sites audited. The second most common type of GI appears to be farmland, and then come private gardens and roads in third position. This result does not however reflect the true picture, as for practical reasons not every private garden was audited. The recognition that all private gardens contribute to the GI network was however noted at the workshop sessions.

64. The map on the next page shows that the majority of residential properties in Swanage have both front and back gardens, and research shows that the proportion of gardens is high compared with many towns and cities in the UK.

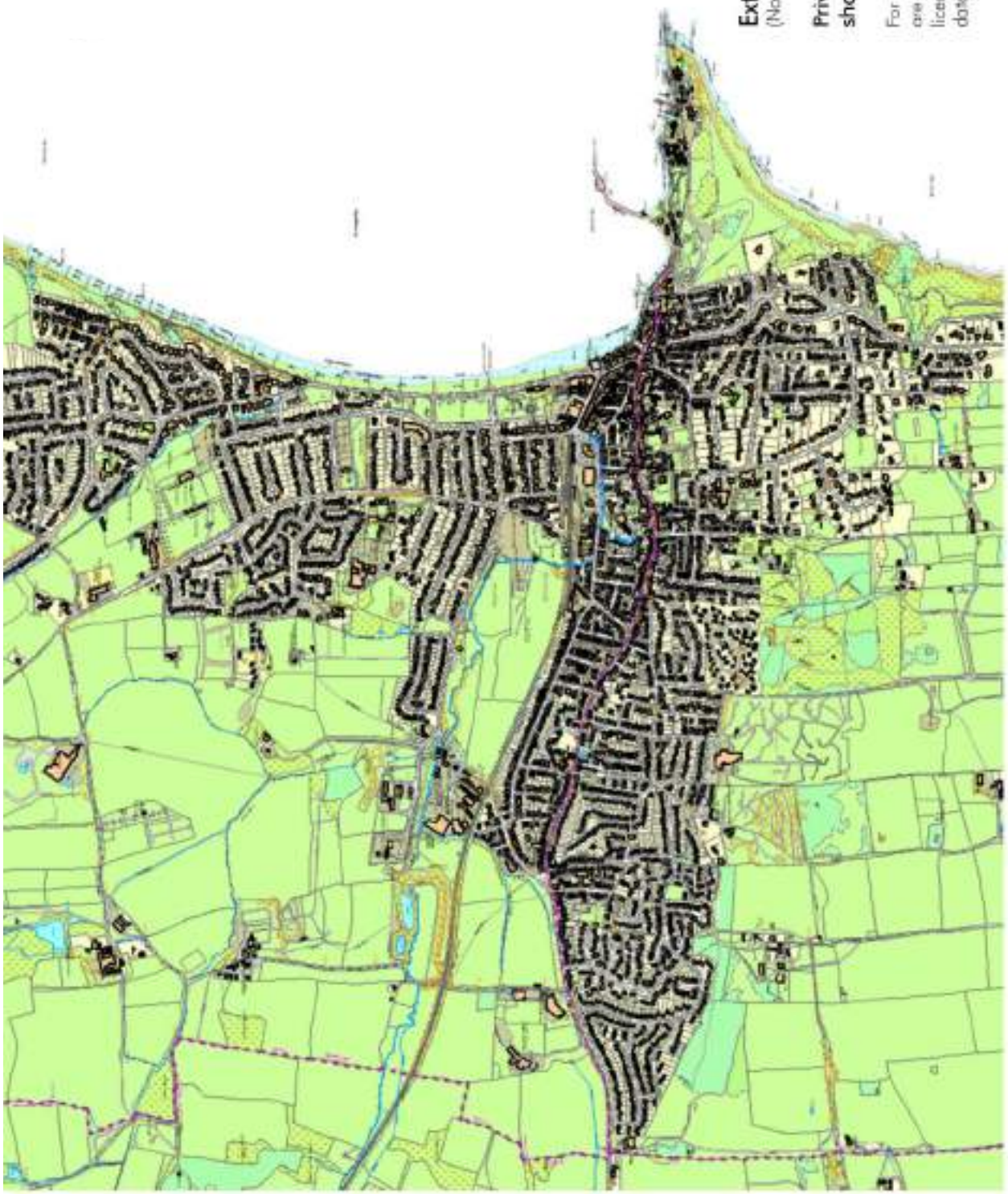
65. The number of farmland sites represented in the audit is perhaps higher than would be expected. This along with the high number of rural RoW that are represented shows the importance of the countryside setting of the town, with strong links to the countryside being important both historically (connections with the stone industry) and in present day (for recreational purposes, education and health and wellbeing). However, although the farmland surrounding the town is an important GI asset in its own right, it is likely that this category is so well represented because the housing sites that were being promoted at the time of the audit were predominantly located outside the settlement boundary on areas of farmland.

66. The parks and gardens along with the sport and recreation category are well represented, as are natural and semi-natural green spaces. However as indicated it is the quality of function and the quantity of benefits and connections between the assets not just the number of assets that are the important factors in terms of overall GI provision.

67. 'Blue-green' infrastructure in the form of water bodies and watercourses is similarly well represented, though it is interesting to note that no-one at the workshop sessions identified the sea as being blue-green infrastructure, although it was referred to indirectly under the civic spaces/public realm category in the evaluation of the pier (over and under water).

68. The 11 RoW that are identified as GI in the audit were selected for differing reasons. Some were selected because they represent an important connection between the town and the countryside, and others because they are, or have the potential to be green corridors. There are also a number of routes that were selected for their potential as future RoW. In reality all RoW form part of the GI of a place, and a clearer picture of the level of provision can be gained by referring to the RoW and open access map which is included in the baseline information maps. Generally speaking, Swanage is well served by RoW, many of which extend some distance into the open countryside. Provision is however markedly different between the north and the south of the town, with many RoW being present in the south.

PRIVATE GARDENS



© Crown copyright and database rights 2016. Ordnance Survey LA100022058 Not to scale

69. The three caravan parks to the south of the town were identified specifically in the audit because they are particularly visible in the approaches to Swanage from the north and the west. Participants at the workshop sessions felt that more could be done by way of provision of GI (planting) in the grounds of the caravan parks, which would then provide the additional benefit of screening to the caravans in important views. The participants also felt that the existing GI in the caravan parks was of poor quality, and that there is great potential to develop further GI here that would be more appropriate to the edge of town setting. It could also be that these caravan sites drew more attention than the two to the north of Swanage because of their visual impact and number of RoW in and around them.

70. The incidental GI that is provided by cemeteries, churchyards and allotments is often overlooked as these spaces are created with specific functions not related to GI in mind. The two cemeteries included in the audit were however identified by the workshop participants as containing potentially important GI. Analysis of the baseline information also revealed that the churchyard and graveyard at St Mary's church were also likely to provide valuable GI in what is a relatively built up area of the town. This site was therefore included in the 'ground truthing' exercise.

71. One derelict site was identified from a study of the baseline information, and this was included in the 'ground truthing' exercise as a potential site for new GI in what is again a relatively built up part of the town.

72. One important asset that has not been included in the audit is that of street trees. There are too many street trees for them to be audited individually, but they are shown on the DCC/STC street tree plan included in baseline information maps.

Item 9, Appendix 1
(PG - 16.05.08)

Analysis

73. To understand how the existing GI assets work together, how efficient they are, and how the network functions as a whole, it is necessary to analyse the coverage of the assets, the number and strength of the connections between them, areas of low function and of no function. This then provides an indication of the overall state of health of the network, and indicates whether, where, and what type of new GI is needed. The projects and proposals that are provided in the audit tables can then be assessed to see if they are needed and appropriate, or whether additional or more focussed improvements are required.

74. The first part of the process of analysis therefore looks in more detail at the overall function of each of the GI categories that have been identified. The spatial analysis that follows can then look at the frequency and dispersion of the assets across Swanage.

Functional analysis

Amenity green spaces

75. The amenity areas range from grassed road verges, to railway embankment, and areas of open space that appear to have been left over when planning development (commonly known as SLOPE, or space left over after planning). Many of these areas consist of no more than incidental grassed areas which were not designed to be attractive places in their own right, or to provide any particular contribution to the environment. The benefits that these assets provide are minimal, often being no more than that of amenity. As a result, although these assets are amongst the most numerous, they contribute little to the functionality and therefore overall health of the GI network in Swanage.

76. A study of the baseline information shows that most of the amenity green spaces are owned and maintained by either DCC or PDC. The exception is the railway embankment to either side of the track. This land is owned by DCC, but is maintained by The Swanage Railway Company.

77. The majority of the amenity green space is located to the west of south Swanage, and to the west of Northbrook Road where both housing association (ex-council) and recent private housing developments are centred. Housing association estates are notorious for the lack of GI provision and the lack of investment in that infrastructure. More recent development has been subject to planning agreements which have required the provision of amenity open space, but developers have had a tendency to provide this in the spaces that are left over after as much housing as possible is put onto the site, and the required access delivered. There are also sometimes issues with regard to future responsibility for the maintenance of these areas, which have suffered as a result.

The embankment at Swanage railway station although not accessible is classified as amenity green space because it is in the public domain

78. These sites do however have the potential to be improved, and on the Greyseeds Estate specifically, verges and triangular spaces that are presently only laid to grass could be planted up to great effect.
It should however be noted that verges and other amenity areas can be affected by buried or overhead services, which may affect the type of planting that can be achieved.

Farmland

79. The farmland surrounding Swanage is a mixture of pasture and arable land which falls within a number of ownerships. All of the farmland is in the AONB, and provides the scenic and peaceful rural setting for Swanage. It is criss-crossed by many popular public RoW, including footpaths and bridleways.

80. In amongst the fields to the south of Swanage, there are abandoned quarry workings which have gradually been reclaimed by nature, and are now biodiversity 'hotspots' which are connected to the patchwork of fields by hedgerows. Durlston Country Park to the south east is another 'hotspot' for biodiversity, and has recently taken over the management of some of the fields between the park and the edge of Swanage town with a view to managing them for nature conservation.

81. The main function of the farmland that remains in active production is that of food and or wool production, but the contribution to visual amenity and the setting of Swanage is also important, as is the contribution to biodiversity and health and wellbeing.

82. As identified earlier, there is the possibility that there was some skewing of the results and therefore the data that was produced for farmland in the audit, mainly because much of the housing promoted through the Purbeck Local Plan was shown to be located on farmland and the maps supplied at the workshop. The situation regarding this housing has since changed, and reference should be made to the SLP for the current proposals A number of Suitable Alternative Green Spaces (SANGS)[8] were identified during the workshop sessions, mostly again on farmland.

83. Overall the farmland surrounding Swanage is an important GI asset due to the number of ecosystem services that it provides. It has a strong influence on the character and identity of the town, and feedback from the workshop sessions and from the ground truthing exercise is that its influence and importance should be respected and enhanced where possible through the implementation of improved management, including the 'gapping up' of hedgerows. Increasing and improving access, biodiversity, and the condition of the resource are the main priorities that emerge, and will all help to improve the health and resilience of this important GI asset.

Private gardens

84. Private gardens are numerous, though in the more densely populated parts of town such as around Princes, Gordon, Richmond and Osborne Road, they are small, and confined mainly to the rear of each property. In other parts of town though, private gardens are large, and contribute greatly to the GI network.

85. In north Swanage, there are a number of locations such as between Bonfields Avenue, Vivian Park, Battlemead and Cauldron Avenue, where the rear gardens of the properties back onto one another and function as a green corridor or green finger, meaning that wildlife can penetrate into, or easily travel through the urban area. The combined effect of the vegetation in these gardens also creates an oasis of benefits which include the absorption of airborne pollutants, cooling during hot dry weather, and visual and amenity benefits. The GI here functions well, though in order to continue to function effectively in the future in the face of climate change, it will be necessary for residents to consider planting different more resilient types of plant that will be able to survive the warmer, wetter winters, and hotter, drier summers.

86. The planting of some of the plant species listed in appendix 3 (Plants to attract birds, butterflies and bees) will create an even stronger 'super highway' for wildlife, and will increase biodiversity as a result.

87. The highest functioning GI out of all of the categories is found in south Swanage in the residential area on the approaches to Durlston. The aerial photograph below shows the high proportion of tree cover here, which is made up of a combination of garden and street trees (the trees in this location collectively form part of the 'urban forest' and are covered in more detail in the section on natural and semi-natural green space below). The private gardens are on the whole well planted, and the benefits of the GI here are wide ranging, top of the list being visual and amenity benefits along with biodiversity. There is also a very high level of connectivity between GI assets both within the residential area, and between the residential area and the surrounding countryside. The abundant vegetation makes it easy for wildlife from the countryside to move into the built environment, further adding to the character and diversity of the location.

8. *SANGs provide alternative green space to divert people away from heathland Special Protection Areas (SPAs). They are intended to provide mitigation for the potential impact of residential development on the SPA by preventing an increase in visitor pressure.*

Aerial photo of the residential area in the approaches to Durlston, showing the high percentage of tree cover. Trees in towns and cities are collectively termed the 'urban forest. This photo also illustrates the concept of green fingers and green corridors

88. The private roads here are not predominantly surfaced with tarmac. The crushed stone surfacing that is used instead is permeable, meaning that surface water can drain through it. There are some locations where the stone is compacted or rutted where surface water will collect and cause minor problems locally, but on the whole surface water drains away quickly without the need for a piped disposal system. The benefit of this is that the surface water can then replenish the ground water, which is a much more sustainable and environmentally sensitive method than piping the water away to be for example disposed of into the sea as it is in many other locations in Swanage. If the ground water is replenished in this way, as it is in nature, the resource is respected and will be more able to support vegetation during times of drought. If there are any areas where surface water runoff is an issue, there is much potential for the problem to be dealt with through the provision of rainwater gardens, which will be entirely within keeping with the location.

89. Interestingly, although a relatively high number of gardens are provided for housing in the part of Swanage sometimes referred to as the Greyseeds Estate (between Greyseeds Farm and Days Road), there could not be a greater contrast between the level of function and benefits between this location and the housing on the approaches to Durlston. This is because there is sparse tree cover in comparison, and all of the verges are consistently mown short.

90. Many of the streets here are apparently green, the boundaries of front gardens being defined by hedges. The hedges are however a monoculture of evergreen species, which do not provide the same benefits as a hedge made up of a range of deciduous and especially native species would. Non- native ornamental evergreen species do not support the same number of species of birds and insects as native deciduous species as they are not food plants. In addition to this, evergreen plants do not transpire at the same rate as deciduous plants, so do not contribute as much towards the absorption of air pollution and cooling during hot weather. Their visual and amenity value is also lower, because they are in leaf throughout the year, and do not change in outline or colour according to the seasons.

91. As these hedges do not provide a good habitat for wildlife and are not found naturally occurring in this country, the connection to the open countryside is not respected, and the Greyseeds estate represents a virtual 'island' on the western end of south Swanage, where the landscape within the estate is sterile in both its visual attractiveness, and in terms of its attractiveness to wildlife. The result is that the Greyseeds Estate is the least biodiverse location in the town, and also the least adaptable in terms of resilience to climate change. The GI here is low grade, and the connections between what assets there are is poor.

Public rights of way

92. The importance of RoW of way has partially been identified under the above heading of farmland. However the audit also identified that creating new RoW and strengthening the links in the existing network is as important as maintaining and improving the existing RoW.

93. The creation of new footpath links and walks to the north of the town is seen to be important, although some of these links were put forwards specifically to connect potential housing to the open countryside and SANGS. Difficulties recently experienced in negotiating with landowners over new footpath routes may mean that not all of the proposals coming out of the audit are now suitable or possible here.

94. To the south of the town, the audit noted that some of the RoW are in poor condition or badly signposted. The lack of provision of east to west links between the existing predominantly north to south RoW is identified as being an issue that needs to be attended to.

95. The audit also identified that there are a number of important routes that start in the town and then connect out into the countryside that could be upgraded in some way, or enhanced so that they form a 'greenway'. The creation of 'greenways' was also proposed in the 2006 Sport and Recreation Audit and Assessment, however none of these have been created so far.

Item 9, Appendix 1
(PG - 16.05.08)

96. It is clear from the number of comments that were received at the workshop sessions and during the 'ground truthing' that the RoW network in and around Swanage needs attention, whether that be because of lack of maintenance, lack of connectivity, poor signage, or the need for the creation of new RoW. Although RoW do constitute an important part of GI, this strategy is not the best vehicle to review the RoW network. It is suggested that the issues regarding the RoW network are pulled together and treated as one project to provide a Swanage RoW Strategy.

Civic spaces and public realm

97. The civic spaces and public realm that were identified during the workshop sessions include:

- The seafront (including The Pier and The Stone Quay);
- Streets in the retail area;
- Victoria Avenue car park.

The promenade and seafront along Shore Road showing a large expanse of hard surfacing

98. There is generally little or no GI in these locations, although the seafront along Shore Road is set against the backdrop of Shore Gardens and Sandpit Field recreation ground, and the seafront approaching The Pier is adjacent to Prince Albert Gardens, which have all separately been identified as requiring improvements to GI.

99. All of the identified civic spaces and the public realm are areas of hard paving that are located in the most highly trafficked parts of the town in terms of both vehicular and foot traffic. The vehicular traffic produces air pollution, which although not reaching high levels, does affect the air quality in all of the locations. The region of the retail area that is closest to the station is also affected by air pollution created by the steam and diesel trains arriving at and departing from the station.

100. Victoria Avenue car park is centrally located on the main route into Swanage from Corfe Castle and beyond. It is the location of the weekly market, and is also promoted as a coach parking area. It is a large expanse of tarmac, with occasional planters created out of concrete sewer pipe sections which have been in place for at least the last 20 years. The car park is not well drained, and floods at times of heavy rainfall. It is in a prominent position next to King George/Forres Field, and detracts from these green open spaces as well as from the approach to the seafront from the west. It would benefit greatly from being enhanced through the provision of a new surface, with a grid of street trees planted in tree pits which are designed to also act as surface water storage cells. This would greatly improve the visual amenity of the car park, improve drainage, and introduce new green infrastructure which will utilise the stored surface water.

There is also a high percentage of hard surfacing around the fire station and the main retail area

101. The retail area and the proposed improvement area around the station would benefit greatly from the implementation of a scheme to improve GI. This could include the provision of street tree planting, green roofs and green walls. The benefits of such a scheme would include the absorption of air pollution, reduction of the 'heat island' effect, improvement of the visual amenity and character of the area, and the creation of a pleasant environment for shoppers.

102. Street trees also form an element of the public realm in parts of Swanage. There are existing street trees on Burlington Road and Victoria Road in north Swanage. There used to be a number of street trees in Park Road, that were removed once they became over-mature. Some of these trees were replaced in the 1990's. There are approximately 22 horse chestnut trees along Victoria Avenue. These trees, many of which are in poor health and badly pruned, are all that remains of an avenue of trees that was probably planted in Victorian times.

103. The overall level of existing GI in the public realm is therefore low, and what there is in poor condition. The town would benefit greatly from the replacement of and the provision of new GI in the public realm. This would go a long way to improving the overall health of the GI network in Swanage.

Sports and recreation

104. The main outdoor sports and recreation grounds are located north of the railway line. As green infrastructure, their benefits include health and wellbeing, visual/amenity, with some benefit to wildlife. King George's recreation ground and to a greater extent Forres Field also provide a flood storage area downstream of the main Swanage Flood alleviation scheme. This function means that parts of the playing fields are 'sacrificial' in that at times of flood they will not be useable, and will take time to recover after a prolonged flood event. Kirkwood Park is also in the flood zone, Swan Brook flowing through the northern part of the site.

105. There is a tract of SNCI lying at the junction of Kirkwood Park and King Georges/Forres Field. This site is called Victoria Meadows, and considered to be locally significant because of the assemblage of plants described as marshy grassland. Generally however, the majority of the vegetation in the sports and recreation grounds is a mixture of native and ornamental tree species, and tends to be located around the boundaries of each site. Kirkwood Park is the main exception, where the ground between holes has been planted up with native vegetation, and areas of wildflower meadow created.

106. The vegetation in the sports/recreation grounds will contribute towards combatting the effects of climate change. However, because out of necessity it is located around the perimeter will not create shady areas which will become increasingly important in the future. There are opportunities to plant copses of trees on various locations, which will help to improve the overall functioning and benefits of these assets, as will the creation of areas of wildflower meadow in parts of the grassed area that are not actively used for sport.

107. Herston Recreation Ground is a very small open space located in one of the most densely populated parts of Herston. It is an important facility in that it provides green space in the location in Swanage that was identified at the workshop session as being an area of deprivation, where there is also a low level of poor GI. There is a play area here next to a small copse of trees, and there is an area of short mown grass that is marked out for ball games. Most of the vegetation around the edges of the site belongs to neighbouring properties, but to the south there is a substantial hedge along a green corridor with a public footpath running through it.

108. The adequacy of the current level of provision of open space for sport and recreation was looked at in the PMP Sport and Recreation Audit which was produced for PDC in 2006. This is the most up to date evidence base for this category of GI assets, and identifies that Swanage has proportionally less provision than most of the other large towns in the district. The standards that the provision was tested against are however flawed, as they are based on provision per 1000 population, which is not the most useful indicator. This is because the type of provision is as, if not more important than the number of facilities provided, especially for Swanage which has a higher than average proportion of people over the age of retirement. This is illustrated by the following statistics taken from the www.dorsetforyou.co.uk website:

Population

Latest population figure (2012 Mid Year Estimates) for the town is 9,556

Age Group	Swanage (persons)	Swanage (%)	Dorset(DCC Area)(%)	England and Wales(%)
0 to4	360	3.8	4.7	6.3
5 to 9	374	3.9	4.9	5.7
10 to 14	443	4.6	5.4	5.6
15 to 19	487	5.1	5.8	6.2
20 to 24	489	5.1	4.6	6.8
25 to 29	387	4.0	4.2	6.8
30 to 34	367	3.8	4.4	6.7
35 to 39	390	4.1	4.9	6.4
40 to 44	528	5.5	6.5	7.2
45 to 49	622	6.5	7.3	7.3
50 to 54	687	7.2	7.1	6.6
55 to 59	639	6.7	6.6	5.7
60 to 64	776	8.1	7.5	5.7
65 to 69	854	8.9	7.7	5.3
70 to 74	645	6.7	5.7	3.9
75 to 79	551	5.8	4.9	3.2
80 to 84	452	4.7	3.9	2.4
85+	505	5.3	4.0	2.3
All ages	9,556	100	100	100

Selected age groups

Age	Swanage (number)	Swanage (%)	Dorset - DCC area (%)	England & Wales (%)
Young people 0 to 17	1,484	15.5	18.6	21.3
Young adults 18 to 29	1,056	11.1	11.0	16.1
Older people 65 +	3,007	31.5	26.3	17.0

Source: Office for National Statistics (ONS), 2012 Mid Year Estimates

109. The number of people over 65 is more than twice the national average in Swanage. These statistics also show that the age groups that are most likely to take part in sports that take place a pitch are less well represented in Swanage. If the current standards are applied, the data produced will therefore give a false representation of the adequacy of provision of this category of GI asset.

110. DCC is due to produce a county wide sport and recreation strategy, which will take the demographic of the population into account, but until this time, there remains no reliable method of addressing this issue. For this reason, the only recommendation that this GI audit can put forwards is that the production of a Dorset wide sport and recreation strategy with standards based on actual demographics be supported.

111. There is however a lot of scope to improve GI and therefore increase the contribution that these assets make to the overall health of the GI network in Swanage. The site that could do with most attention is Herston recreation ground, however the scope is limited due to lack of space.

Water bodies and watercourses

112. The watercourses in the town are all natural, whereas the land based water bodies have been created to serve a specific use. The watercourses generally follow a natural course where they run through a green space or the open countryside, but in the built environment they are controlled, either being confined to a lined channel, or culverted. The watercourses act as a blue-green corridor, bringing wildlife into the built environment. They also bring a cooling effect, natural movement and interest into the town. The disadvantage is that they flood, and can bring damage and disruption as a result.

The Swan Brook outside the main Post Office is contained in channel and is culverted under Station Road re-emerging adjacent to the Mowlem

113. The Swanage Flood Alleviation scheme to the west of the town has done much to relieve flooding problems associated with the Swan Brook, but there are still occasions when flooding is an issue where the brook runs through the town. The Ulwell Stream also floods, and has also caused damage and disruption in the north of the town.

114. All of the water bodies consist of ponds, the largest associated with the flood alleviation scheme. The hard edged Old Mill Pond located on Church Hill is in an attractive setting, as is the smaller soft edged pond just off Newton Grange Close. This pond was originally in the grounds of a large house that has since been demolished and the grounds developed as housing. The area around this pond has been sensitively landscaped, the whole of the area now performing the role of a 'pocket park'. All of the ponds support much wildlife, including fish, dragonflies and damselflies though The Old Mill Pond less so because of its location and the presence of hard edges and no shallow areas. The ponds in town have benefits with regard to climate change as they have a cooling effect on their surroundings and help to relieve the heat island effect.

115. All of the waterbodies and watercourses are attractive to differing degrees, and although not strictly accessible to the public, people do fish in the ponds associated with the flood alleviation scheme.

116. There are a few opportunities to enhance the function of the water bodies and watercourses, mainly through the addition of suitable planting. It is important however that any new planting does not cause problems by impeding the flow of floodwater to the ponds of the flood alleviation scheme. There are in fact some locations where the removal of vegetation would be beneficial because it impedes the flow of water and actually helps to cause localised flooding. The main purpose of enhancing the water bodies and watercourses in this way is to improve visual amenity and biodiversity, along with additional climate change adaptation being provided.

117. The sea is of course the main water body associated with Swanage, and is also the main attraction along with the beach. There are a number of local businesses that are associated with the sea, and the sea under the pier is one of the best places in the country for scuba diving because of the range of sea life that is present. The sea has a range of benefits associated with its function as a GI asset, amongst the most important being visual/amenity, health and wellbeing, food production and recreation (health and wellbeing). It also acts as a cooling body during the summer and warming body during the winter. With regard to climate change, the sea will of course be affected in its own right, with both sea temperature and level rising.

118. There is one additional blue/green asset that was not identified at the workshop sessions. This is the spring that is piped from its source under the Prince Albert Gardens and exits on to Monkey Beach. An attempt was made to bring the water from this spring to the surface when Prince Albert Gardens were developed. The source of the spring is however too deep under the ground, and would have had to be pumped to the surface for this to work.

Natural and semi-natural green spaces

119. Green space is defined as natural when it is predominantly covered by either one, or a mix of the following[9]:

- woodlands and woodlots, trees and tree clumps with freely growing shrubbery or managed grassland underneath;
- freely growing scrub and dwarf shrubs (e.g. heathland);
- rough grassland, semi-improved grassland, wild herbs and native tall herbaceous plants;
- rocks and bare soil where natural succession is allowed to freely occur (including mudflats, dunes, etc.);
- open water and wetlands with reeds and other tall native herbaceous plants etc.

[9] *Providing Accessible Natural Greenspace in Towns and Cities - A Practical Guide to Assessing the Resource and Implementing Local Standards for Provision. A study undertaken for English Nature (now Natural England) by the Centre for Urban and Regional Ecology at the University of Manchester 2006*

Item 9, Appendix 1
(PG - 16.05.08)

120. The vegetation can be either 'self-seeded', or planted but have the character of being natural.

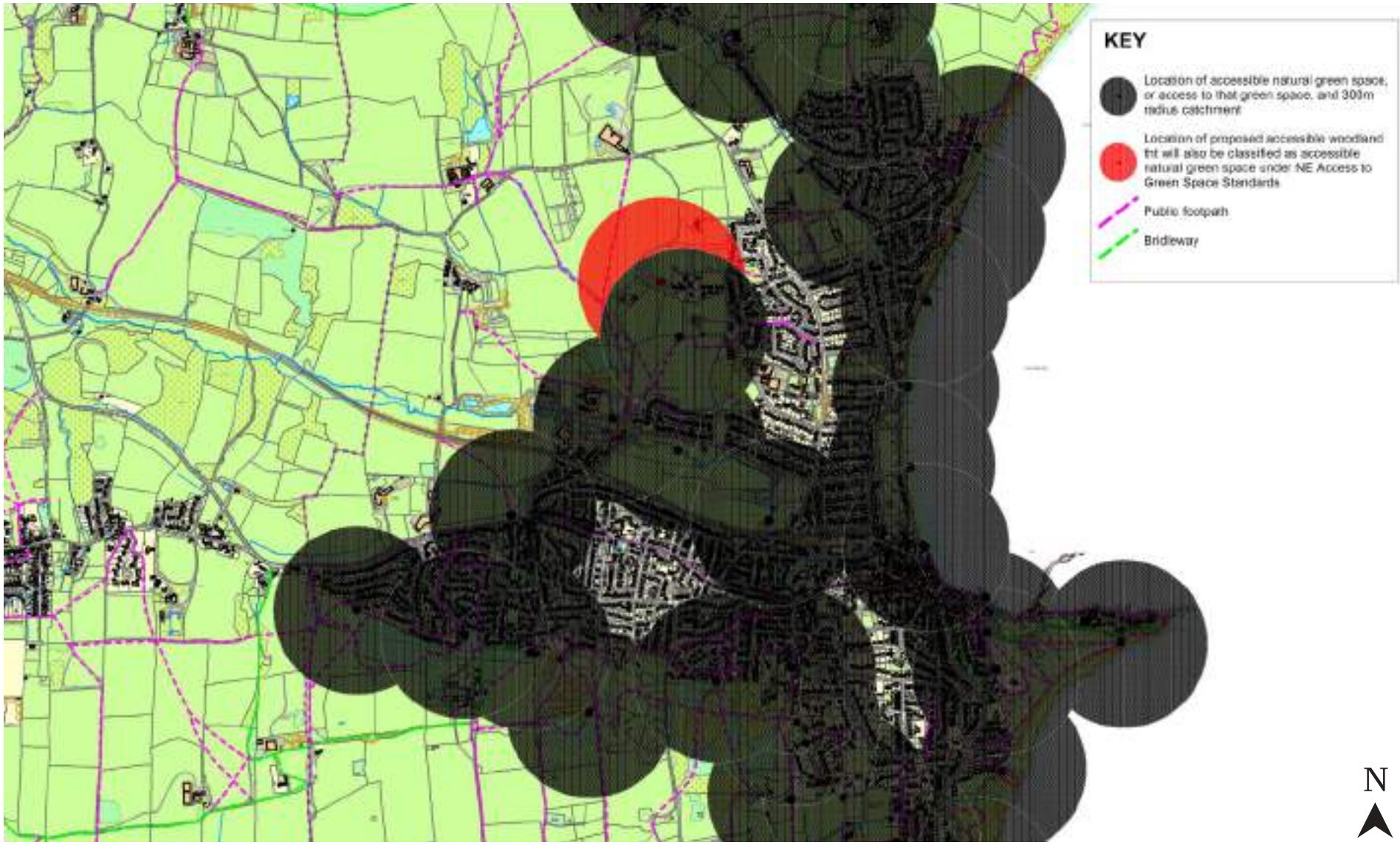
121. In their Accessible Natural Green Space Standards (ANGSt) Natural England states that:

- no person should live more than 300m from their nearest area of accessible natural green space of at least 2ha in size;
- there should be a least one 20ha accessible natural green space within 2km from home;
- there should be one accessible natural green space 100ha site within 5km;
- there should be one accessible natural green space 500 hectare within 10km;
- at least 1ha of statutory Local Nature Reserve (LNR) should be provided per 1000 population

122. These standards should be used as a benchmark for the provision of access to nature, though Natural England do make it clear that it is appropriate to adapt the standards to reflect local need.

123. The following map illustrates the gaps in provision of the 2ha standard for accessible natural green space, with approximately 15% of Swanage not complying.

SWANAGE GI STRATEGY
Accessible natural greenspace, 300m catchment category



© Crown copyright and database rights 2016. Ordnance Survey LA100022058 Not to scale

Item 9, Appendix 1
(PG - 16.05.08)

124. All of the other categories of the standards are however satisfied. For example the 20ha standard is satisfied by the beach and cliffs, the 100ha standard by Durlston Country Park, and the 500ha standard by the open access land at Ballard Down.

125. The gap in provision is minimally closed by the accessible woodland that is proposed to the west of the Cauldron Barn Park Homes site (see below), but there are no further opportunities to create more accessible natural green space in the locations that it is needed to enable full compliance. It is considered however that there are opportunities to improve and create new GI in some of the other categories, which may compensate for the gap in provision of natural green space.

126. The Woodland Trust's Woodland Access Standard (WASt) recommends that no person should live more than 500m from at least one area of accessible woodland of no less than 2 hectares (ha) in size, and that there should also be at least one area of accessible woodland of no less than 20ha within 4km of people's homes.[10]

127. The Forestry Commission defines woodland as 'land under stands of trees with a canopy cover of at least 20% (or having the potential to achieve this) including integral open space…….' and includes areas of woodland scrub, but not areas of gorse, rhododendron etc outside woodland.[11] Map sheet 1 (following) shows an assessment of the existing accessible woodland in and around Swanage.

128. The woodland consisting of Langton West Woodland, and Talbot's Wood to the east is accessed by a number of public RoW. This woodland is greater than 20ha in area, and less than 4km from Swanage, meaning that the standard for larger woodland is reached satisfactorily. In contrast however the assessment shows that only 50% (approx) of the town has access to woods in the smaller wood category.

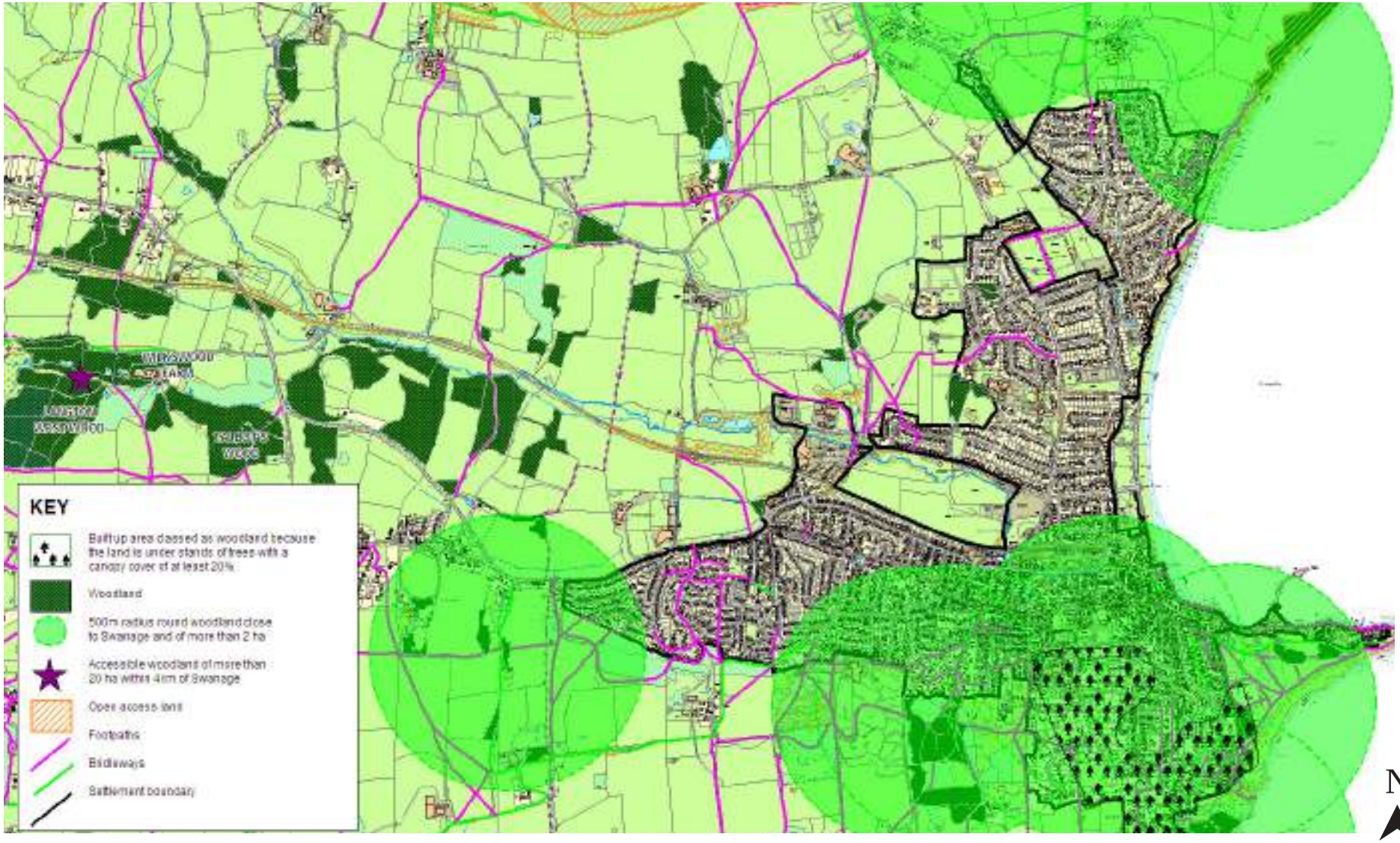
129. Map sheet 2 is an analysis of the potential to comply with the standard for small woods. This analysis shows that it would only be possible to achieve somewhere near full compliance if public open space and recreational facilities were planted with woodland as shown. However, it is clearly not acceptable to plant up valuable recreational and sports facilities with woodland. Along with this, land availability issues, levels of accessibility, townscape character and landscape character also need to be taken into consideration when identifying potential sites for accessible woodland. Other considerations relate to the GI benefits that the woodland could provide. For example woodland could be utilised to screen existing development, and to contribute to flood water management.

10. *Woodland Trust 'Space for people – targeting action for woodland access' 2010 www.woodlandtrust.org.uk/publications*

11 *http://www.forestry.gov.uk/website/foreststats.nsf/byunique/sources.html*

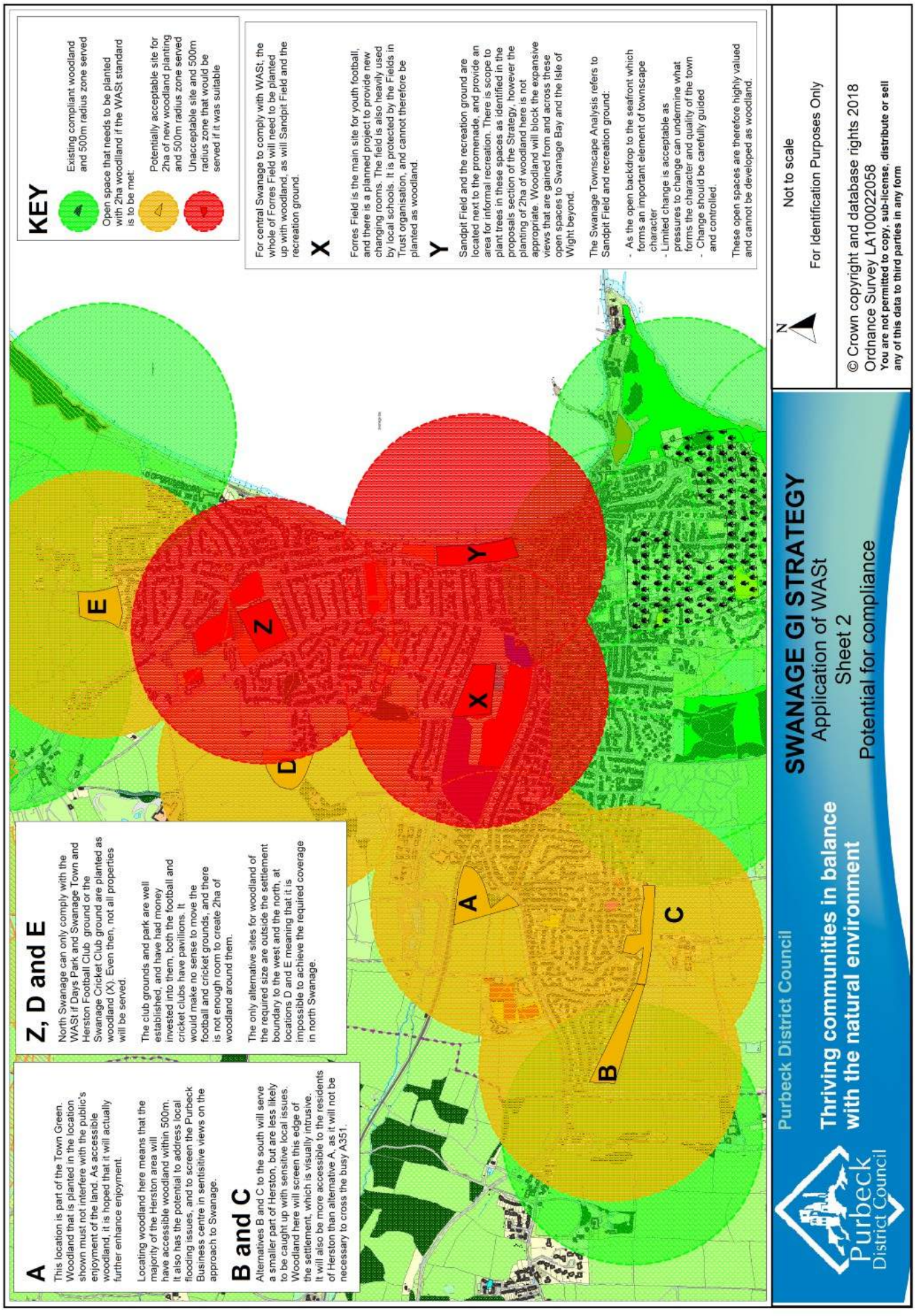
SWANAGE GI STRATEGY
Application of WASt for small accessible woodland Sheet 1

Not to scale



© Crown copyright and database rights 2016. Ordnance Survey LA100022058 Not to scale

Item 9, Appendix 1
(PG - 16.05.08)


KEY
Existing compliant woodland and 500m radius zone served
Open space that needs to be planted with 2ha woodland if the WASt standard is to be met:
Potentially acceptable site for 2ha of new woodland planting and 500m radius zone served
Unacceptable site and 500m radius zone that would be served if it was suitable
X
For central Swanage to comply with WASt, the whole of Forres Field will need to be planted up with woodland, as will Sandpit Field and the recreation ground.
Forres Field is the main site for youth football, and there is a planned project to provide new changing rooms. The field is also heavily used by local schools. It is protected by the Fields in Trust organisation, and cannot therefore be planted as woodland.
Y
Sandpit Field and the recreation ground are located next to the promenade, and provide an area for informal recreation. There is scope to plant trees in these spaces as identified in the proposals section of the Strategy, however the planting of 2ha of woodland here is not appropriate. Woodland will block the expansive views that are gained from and across these open spaces to Swanage Bay and the Isle of Wight beyond.
The Swanage Townscape Analysis refers to Sandpit Field and recreation ground:
- As the open backdrop to the seafront which forms an important element of townscape character
- Limited change is acceptable as pressures to change can undermine what forms the character and quality of the town
- Change should be carefully guided and controlled.
These open spaces are therefore highly valued and cannot be developed as woodland.
Z, D and E
North Swanage can only comply with the WASt if Days Park and Swanage Town and Herston Football Club ground or the Swanage Cricket Club ground are planted as woodland (X). Even then, not all properties will be served.
The club grounds and park are well established, and have had money invested into them, both the football and cricket clubs have pavillions. It would make no sense to move the football and cricket grounds, and there is not enough room to create 2ha of woodland around them.
The only alternative sites for woodland of the required size are outside the settlement boundary to the west and the north, at locations D and E meaning that it is impossible to achieve the required coverage in north Swanage.
A
This location is part of the Town Green. Woodland that is planted in the location shown must not interfere with the public's enjoyment of the land. As accessible woodland, it is hoped that it will actually further enhance enjoyment.
Locating woodland here means that the majority of the Herston area will have accessible woodland within 500m. It also has the potential to address local flooding issues, and to screen the Purbeck Business centre in sentisitive views on the approach to Swanage.
B and C
Alternatives B and C to the south will serve a smaller part of Herston, but are less likely to be caught up with sensitive local issues. Woodland here will screen this edge of the settlement, which is visually intrusive. It will also be more accessible to the residents of Herston than alternative A, as it will not be necessary to cross the busy A351.
A
B
C
D
E
Z
X
Y
Purbeck District Council
Thriving communities in balance with the natural environment
SWANAGE GI STRATEGY
Application of WASt
Sheet 2
Potential for compliance
Purbeck District Council
N
Not to scale
For Identification Purposes Only
© Crown copyright and database rights 2018 Ordnance Survey LA100022058
You are not permitted to copy, sub-license, distribute or sell any of this data to third parties in any form

130. Analysis of the issues, and options for siting new woodland produces the proposals illustrated on map sheet 3. There are 4 main contenders for the creation of new small woodlands. Planting of all 4 areas of woodland would mean that approximately 80% of the town will be within 500m, or walking distance of 2ha of accessible woodland.

131. Grants are provided for woodland planning, creation and management. Details are provided on the GOV.UK website on the Countryside Stewardship: Woodland Support page[12] and in the Countryside Stewardship Manual.[13] Priority is given to schemes that protect and enhance the natural environment, and it will be particularly useful to highlight that the proposed woodlands will protect and enhance:

- biodiversity;
- flood management;
- landscape character;
- educational access.

132. Help with the application process is available from both Natural England and the Forestry Commission.

133. It is important that the new woodlands that are created are connected to the existing network and local woodlands so that they form a more resilient resource which supports the green infrastructure of the rural and built environment in and around Swanage. The connections will on the whole be provided by the existing network of hedgerows that form boundaries to fields and property (the hedgerows contain some of the same species of trees and shrubs that are present in the woodlands, and can act as conduits which provide cover, food sources and nesting places for, and allow wildlife to travel between woods without becoming vulnerable when crossing open ground).

134. The GI audit did however identify that some of these hedgerows are in poor condition, and need to be restored or 'gapped up'. The restoration of hedgerows will also help to improve the condition of the countryside immediately adjacent to Swanage, which the landscape character assessment supporting the AONB Management Plan[14] has identified as being in poor condition. The Countryside Stewardship scheme also provides funding for the small scale restoration of boundary features such as hedgerows.

135. In order to perpetuate the provision of accessible woodland, developers should explore opportunities to ensuring that the new housing is within 500m of accessible woodland. If there is no existing or proposed (by this Strategy) accessible woodland within this distance, it may be necessary for suitablewoodland to be provided as part of any Suitable Alternative Natural Greenspace (SANG) or GI that may be required under Policy DH of the Local Plan.

12 *https://www.gov.uk/government/collections/countryside-stewardship-woodland-support*

13. *Countryside Stewardship Manual published by the Forestry Commission, the European Agricultural Fund for Rural Development and Natural England: Nov 2015*

14. *Conserving Character - Landscape Character Assessment and Management Guidance for the Dorset AONB: Dorset AONB Team:2008*

136. All of the natural and semi-natural green spaces are located either outside or on the edge of Swanage, and provide benefits including biodiversity, visual/amenity, recreation (health and wellbeing) and education. The vegetation will also provide a level of resilience in the face of climate change, but this will be beneficial only locally at the interface between the green space and the built environment.

137. Not all of these green spaces are managed. Of those that are, some of those are managed with a light touch with the rest being left up to nature, some are managed specifically for nature conservation purposes, and some, such as The Downs are managed mainly for amenity. It is not appropriate to make many changes to these sites because they are managed appropriately for their primary function. There are some opportunities however to improve habitat, and to create more woodland.

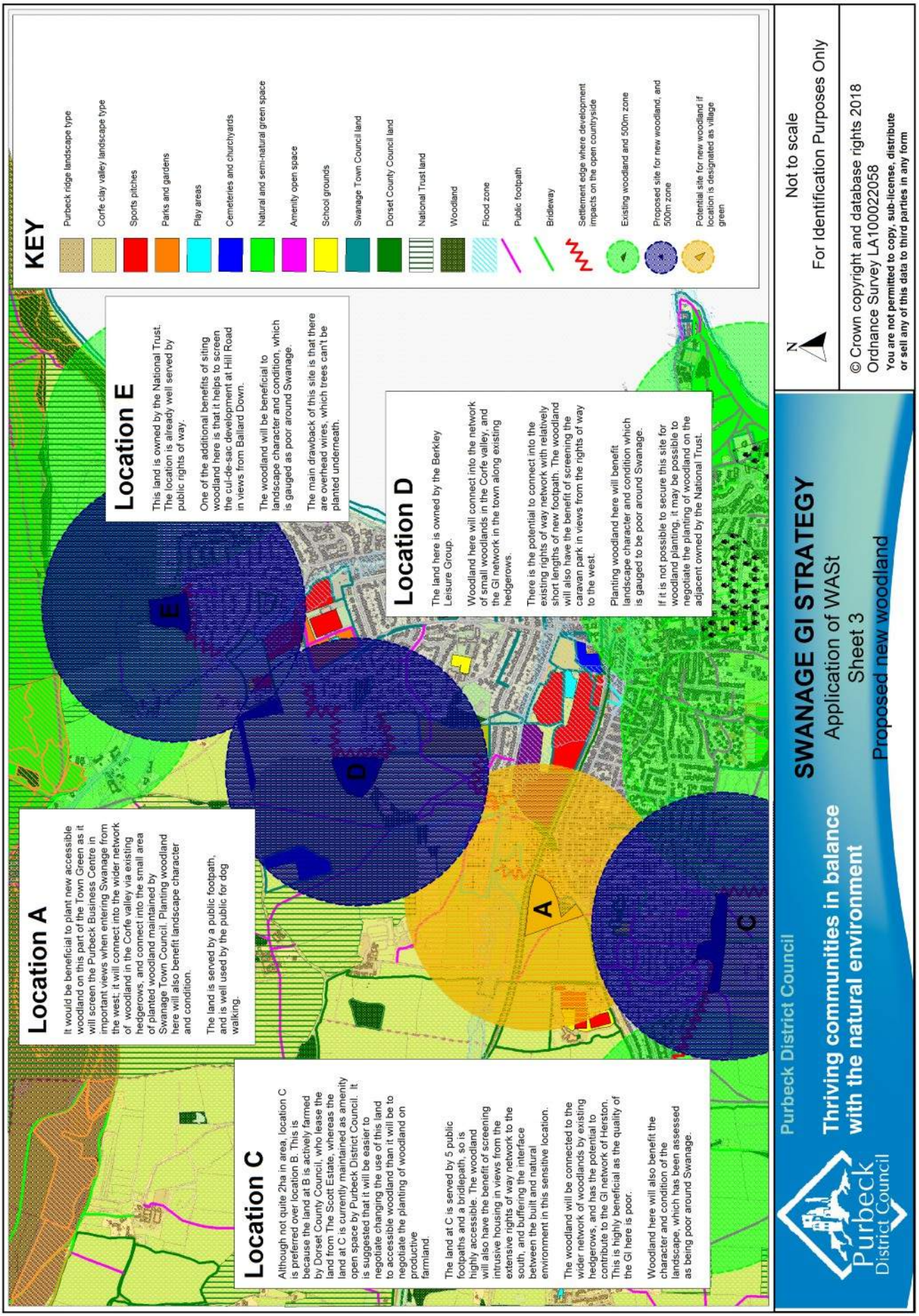
Formal parks and gardens

138. The formal parks and gardens benefit both the local community and visitors, and are a great asset to the town. Most of them have been in place for a long time, but Prince Albert Gardens is a relatively new park that was provided at the same time that the seafront between the pier and the Square were enhanced.

139. There is a range of mainly ornamental planting in the parks and gardens, and it is noticeable that much of this planting is over-mature. Many of the larger trees were planted during Victorian times, and are coming to the end of their useful life.

140. Traditional bedding plants are still planted in some locations, most notably in Shore Gardens/Sandpit Field. Although attractive, this is labour intensive and expensive. A number of workshop participants agreed that this practice is not sustainable, especially as the plants need watering during hot dry periods, which will become more common as climate change progresses.

141. The beach and seafront are the main attraction in Swanage, and bring thousands of tourists into the town every year. As climate change advances it is likely that people visiting the seafront and beach will need to retire to a cooler, shadier environment during the heat of a summer day. It is noticeable that there is not much shade available close by. In fact Sandpit Field, the weather station open space, spa beach huts open space and the recreation ground have few trees, and the trees in nearby Beach Gardens are becoming over mature. There was a shady treed area in Prince Albert Gardens, but this was partially removed when the new boat house was built. In addition to this, the cherry trees along the northern boundary of this park have a fungal disease which has been responsible for a number of these trees dying in recent years. This disease will ultimately kill all of these trees.


KEY
Purbeck ridge landscape type
Corfe clay valley landscape type
Sports pitches
Parks and gardens
Play areas
Cemeteries and churchyards
Natural and semi-natural green space
Amenity open space
School grounds
Swanage Town Council land
Dorset County Council land
National Trust land
Woodland
Flood zone
Public footpath
Bridleway
Settlement edge where development impacts on the open countryside
Existing woodland and 500m zone
Proposed site for new woodland, and 500m zone
Potential site for new woodland if location is designated as village green
Location A
It would be beneficial to plant new accessible woodland on this part of the Town Green as it will screen the Purbeck Business Centre in important views when entering Swanage from the west; it will connect into the wider network of woodland in the Corfe valley via existing hedgerows, and connect into the small area of planted woodland maintained by Swanage Town Council. Planting woodland here will also benefit landscape character and condition.
The land is served by a public footpath, and is well used by the public for dog walking.
Location C
Although not quite 2ha in area, location C is preferred over location B. This is because the land at B is actively farmed by Dorset County Council, who lease the land from The Scott Estate, whereas the land at C is currently maintained as amenity open space by Purbeck District Council. It is suggested that it will be easier to negotiate changing the use of this land to accessible woodland than it will be to negotiate the planting of woodland on productive farmland.
The land at C is served by 5 public footpaths and a bridlepath, so is highly accessible. The woodland will also have the benefit of screening intrusive housing in views from the extensive rights of way network to the south, and buffering the interface between the built and natural environment in this sensitive location.
The woodland will be connected to the wider network of woodlands by existing hedgerows, and has the potential to contribute to the GI network of Herston. This is highly beneficial as the quality of the GI here is poor.
Woodland here will also benefit the character and condition of the landscape, which has been assessed as being poor around Swanage.
Location D
The land here is owned by the Berkley Leisure Group.
Woodland here will connect into the network of small woodlands in the Corfe valley, and the GI network in the town along existing hedgerows.
There is the potential to connect into the existing rights of way network with relatively short lengths of new footpath. The woodland will also have the benefit of screening the caravan park in views from the rights of way to the west.
Planting woodland here will benefit landscape character and condition which is gauged to be poor around Swanage.
If it is not possible to secure this site for woodland planting, it may be possible to negotiate the planting of woodland on the adjacent owned by the National Trust.
Location E
This land is owned by the National Trust. The location is already well served by public rights of way.
One of the additional benefits of siting woodland here is that it helps to screen the cul-de-sac development at Hill Road in views from Ballard Down.
The woodland will be beneficial to landscape character and condition, which is gauged as poor around Swanage.
The main drawback of this site is that there are overhead wires, which trees can't be planted underneath.
A
C
D
E
Not to scale
For Identification Purposes Only
© Crown copyright and database rights 2018 Ordnance Survey LA100022058
You are not permitted to copy, sub-license, distribute or sell any of this data to third parties in any form
Purbeck District Council
Thriving communities in balance with the natural environment
SWANAGE GI STRATEGY
Application of WASt
Sheet 3
Proposed new woodland
Purbeck District Council

Beach gardens has formal recreation facilities including tennis courts and a bowling green

142. On balance, Swanage is well provided for with parks and gardens which provide benefits for the community and for visitors. As GI however, their function is either in decline or could be much improved so that they bring more benefits to the local environment and the town as a whole.

143. One GI asset that was not identified at the workshop is the green roof of the sewage treatment plant adjacent to the pier entrance. This site has been laid out as an informal park with public access.

144. There are 5 caravan sites around the perimeter of the town. There are issues relating to all of these caravan parks as they are very visible in the approaches to the town, and in views from elevated viewpoints in the surrounding countryside. These caravan parks are also in key locations at the interface between the built and the natural environment, where the open spaces around the vans, chalets or park homes could contribute to encouraging wildlife into and therefore increasing biodiversity in the town.

145. Each site is different in terms of the amount of GI present, but all of them could be improved through the planting of native trees and shrubs and the creation of areas of wildflower meadow. This would create habitat that would help to support wildlife and improve biodiversity, provide screening to the vans/chalets/park homes that would help to assimilate them into the landscape and screen them in views, improve visual amenity in the sites themselves, and also help to create a more resilient GI network which will provide benefits in response to climate change.

Cemeteries and churchyards

146. An area next to the formal cemetery at Godlingston has been set aside by STC for a meadowland burial ground as a 'green' alternative to traditional interment, and will see the development of an area rich in native meadow plants and wildlife. The meadowland will be maintained in a way that encourages and protects the trees, wildlife and natural wildflower seeds. The traditional 'neat and tidy' appearance of cemeteries will not apply to this area and the grass will be cut infrequently to encourage wildflowers to flourish. The Garden of Remembrance will also be managed as a wildflower area.

Cemetery near Main Beach car park (Northbrook)

147. The Town Council also owns the closed cemetery beside the railway line at Northbrook, which was opened in 1856. It is also managed to support wildlife, and between May and September each year in some areas the grass is allowed to grow to encourage an impressive array of butterflies and wild flowers.

148. The cemeteries and churchyards in and around Swanage are valuable GI assets, which are generally in average or good condition. The cemeteries in particular already contribute to the GI network through increasing biodiversity. There are national initiatives to enhance cemeteries and churchyards to benefit wildlife, and encouraging further enhancement especially at St Mary's churchyard would lead to a valuable contribution to the health of the GI network of the town centrally.

School grounds

149. Many of the schools in Swanage are now situated in locations on the edge of the town, where the grounds surrounding these schools represent the interface between the built and the natural environment. There is therefore an opportunity for these school grounds (except for the areas in them that are reserved for formal recreation) to represent a gradation between the natural environment and the built environment, benefitting the GI network at the same time.

Item 9, Appendix 1
(PG - 16.05.08)

150. The grounds of the schools have not been surveyed as they are sensitive private property, so they have been categorised in the GI audit as open green space or recreational space only. Where there have been recent improvements to the school and grounds, or the school is newly built, new planting will have been provided. There will however be opportunities to further improve the contribution that the grounds make to the GI network by creating areas of wildflower meadow or undertaking additional native planting. Rather than identifying specific projects to achieve this, it is suggested that the schools be approached to investigate the possibility of instigating such improvements as part of an educational programme, designed and implemented by the students with the aid of external funding.

Allotments

151. Whether or not the allotments remain on this site, they represent a GI asset, where the main benefit is food production and side benefits include health and wellbeing, biodiversity and visual/amenity. The suggestion was made at the workshop sessions that the GI could be improved by planting a community orchard. This could be investigated by STC if there is sufficient space available.

152. If the affordable housing does progress, it is important that GI be considered alongside development of the site, and that a suitable replacement site for the allotments be found.

The allotments are owned and managed by STC, which is currently considering the possibility of locating affordable housing here.

Derelict land

153. One plot of derelict land exists which may or may not be suitable for redevelopment. It is located off a private lane at the end of Locarno Road, and is currently overgrown. This site could be developed as a pocket park, though due to its location is not likely to be well used. This would mean that the cost of purchasing the land along with the cost of laying it out as a pocket park might not be justifiable. Subject to agreement this site may therefore be suited to other development.

154. Another alternative may be to contact the landowner to see if they would agree to the sowing of wildflower grass seed

155. 'Guerrilla gardening' was suggested at one of the workshop sessions, and has been employed in towns and cities where underused or derelict sites have been 'greened up' by scattering wildflower seed, or cultivating the site and planting bedding plants, shrubs, or crops.

Spatial analysis

156. To understand how the existing GI assets work together, how efficient they are, and how the network functions as a whole, it is necessary to analyse the coverage of the assets, the number and strength of the connections between them, areas of low function and of no function. This then provides an indication of the overall state of health of the network, and indicates whether, where, and what type of new GI is needed. The projects and proposals that are provided in the last column of the audit table can then be assessed to see if they are needed and appropriate, or whether additional or more focussed improvements are required.

157. There are areas of high, average and low quality GI in the town. As already indicated in the chapter describing GI, quality is not just dictated by the presence of individual assets and their level of function, it is also affected by the number of connections between those assets. These connections consist of blue/green fingers, corridors, and stepping stones, and those that exist are shown on the analysis drawing.

158. Even the benefits experienced by having a high level of good quality GI can be reduced if there is low or no connectivity. For example, wildlife potential will not be fully realised if there is not a level of free passage to and from the natural environment.

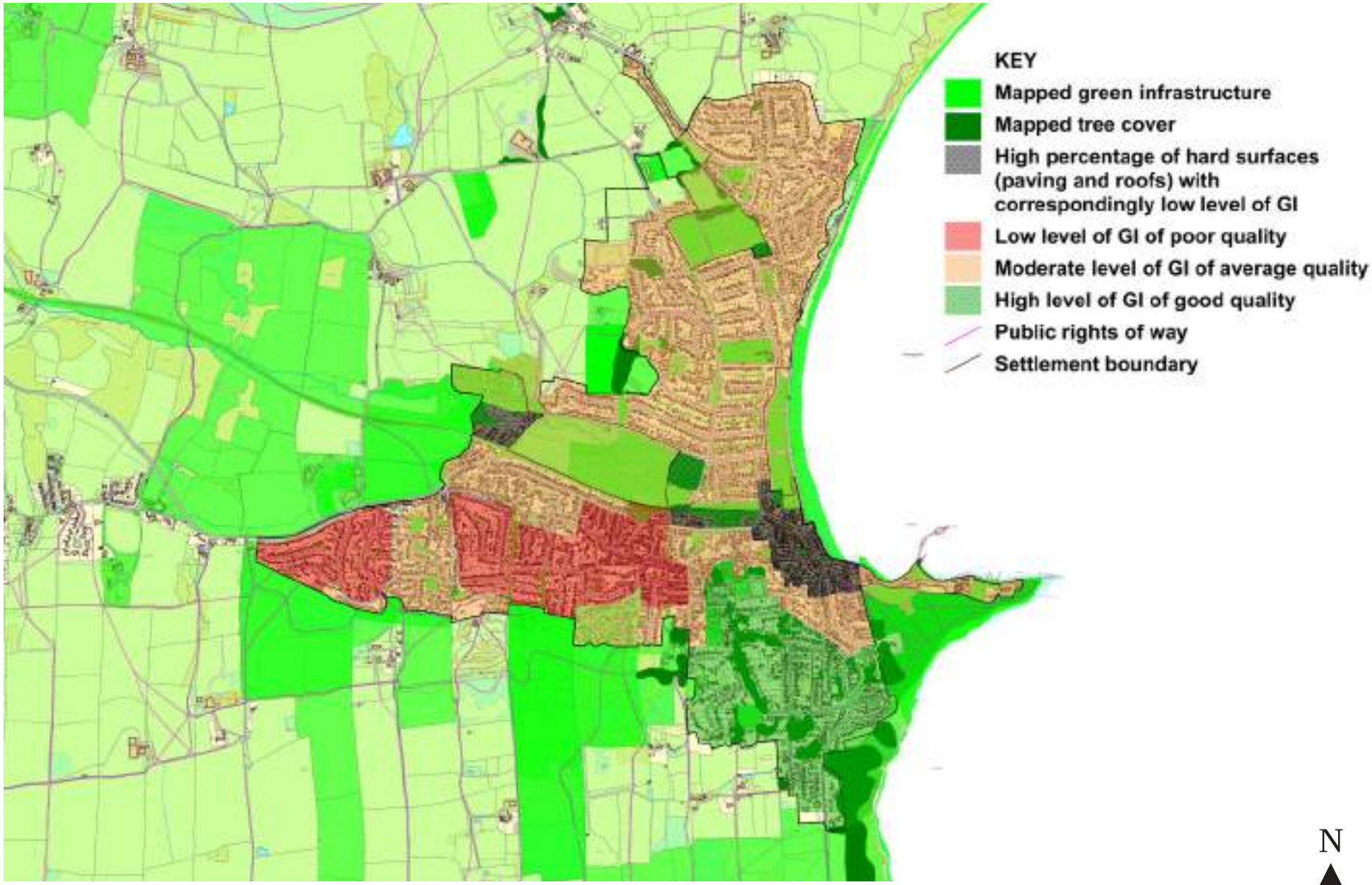
159. Of more importance however is the level of connectivity between areas of high, average or poor GI. This results in each area acting in isolation as an individual 'organism'. Experience shows that 'there is power in numbers'. A group can achieve much more than any individual can achieve on their own, but this depends on each member working together. This is equally true of GI: individual assets are the 'cells', which if they are well connected can form and 'organism'. In the right conditions, and with the right level of connection, these 'organisms' can interact and support each other to create an even stronger unit – the 'ecosystem', and a healthy, well functioning ecosystem is what we are looking for in Swanage.

160. Analysis of the existing GI shows that the level of connectivity is low – there are gaps in the network. These gaps in the network need to be bridged by the creation of new links. The following map identifies where there are gaps in the GI network of Swanage.

Item 9, Appendix 1
(PG - 16.05.08)

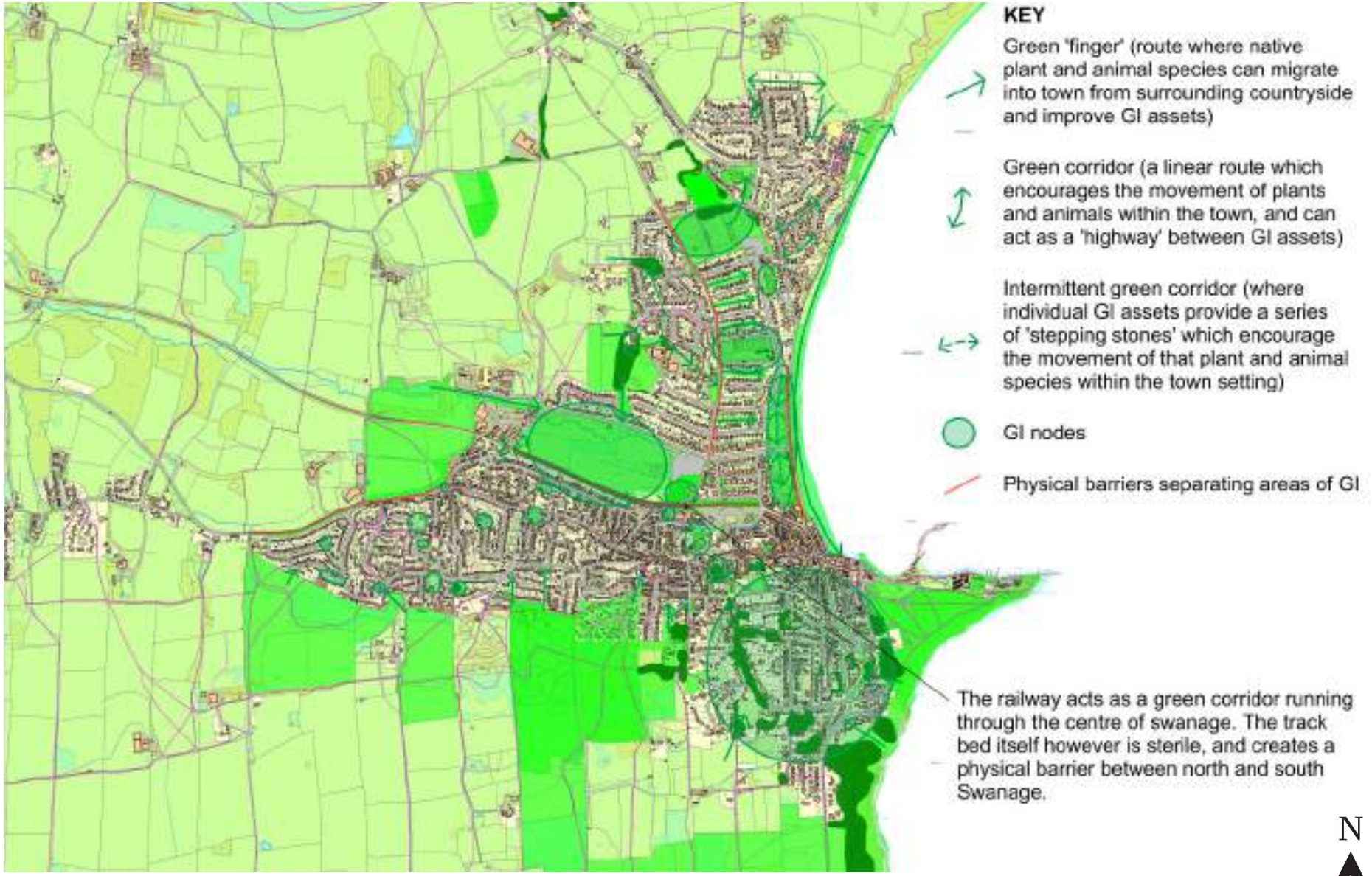
161. The maps on the next pages illustrate the combination of baseline information with audit information. The first two maps show where each category of GI identified in the audit is located, with baseline information showing the extent of the land supporting each category. These maps highlight where there are areas of deficiency which is interpreted clearly in the next two maps entitled Level of existing provision.

SWANAGE GI STRATEGY
Coverage and quality of exisiting GI



© Crown copyright and database rights 2016. Ordnance Survey LA100022058 Not to scale

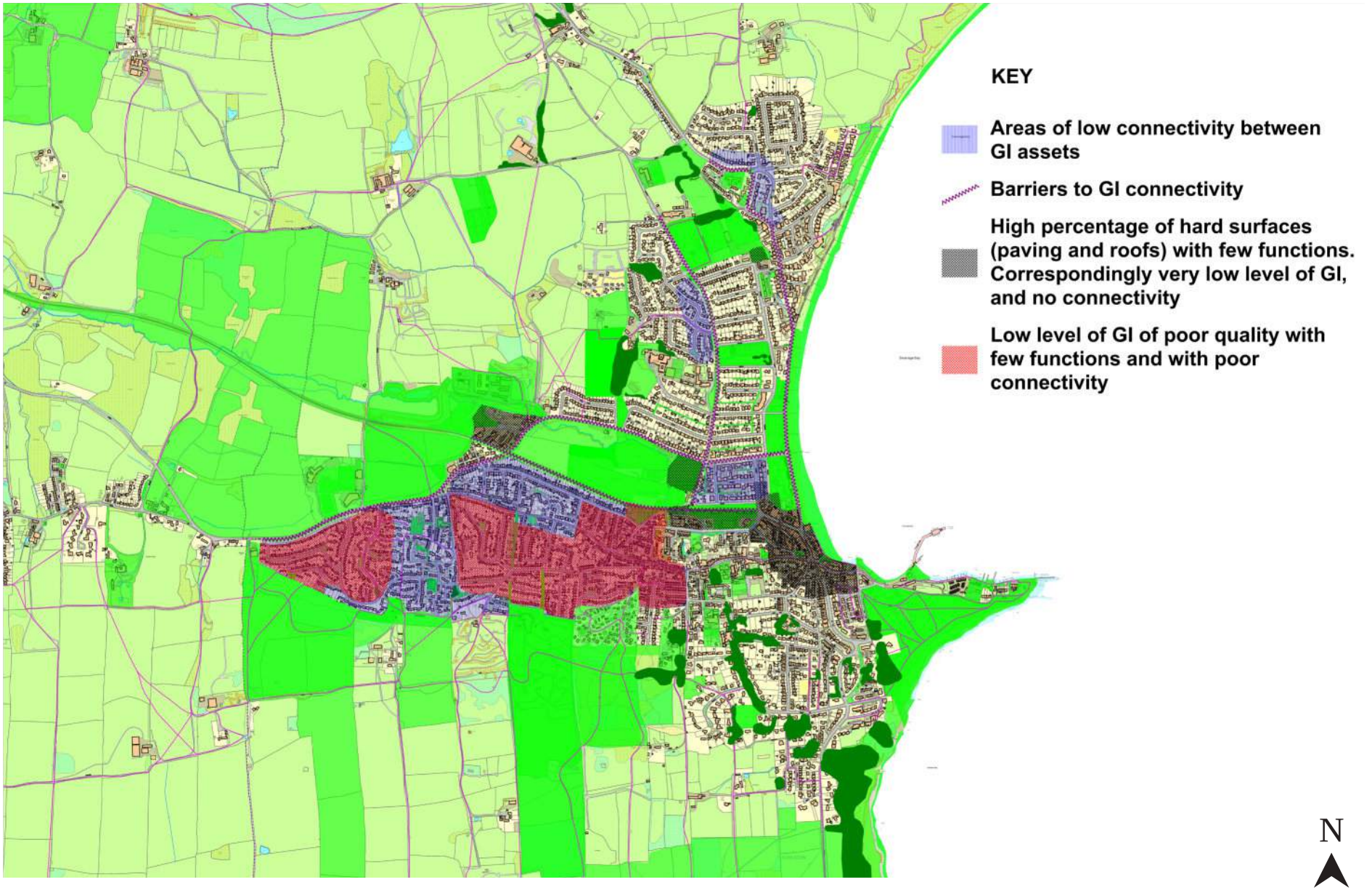
SWANAGE GI STRATEGY
Connections between existing GI assets



© Crown copyright and database rights 2016. Ordnance Survey LA100022058 Not to scale

Item 9, Appendix 1
(PG - 16.05.08)

SWANAGE GI STRATEGY
Gaps in current provision



© Crown copyright and database rights 2016. Ordnance Survey LA100022058 Not to scale

162. On these maps areas of high, average and low provision of GI are presented graphically, together with information on the quality of that provision indicated by the audit. These two maps also show where there is a relatively high proportion of impermeable hard surfacing and or roof-scape, where existing GI is absent. The areas of Swanage where the existing provision of quality GI is low or absent are the locations where the provision of new GI is important.

163. Where the levels of existing GI are low, there are likely to be opportunities to improve the existing GI in order the increase the quality and therefore benefits of that GI. The locations where existing GI is absent are also the locations where it will be most difficult to provide new GI due to the site constraints that are present. As is often the case however, the more complicated the site constraints, the more innovative the response is likely to be.

164. There are a number of important strategic issues that emerge from analysis of the GI network.

Herston

165. The level of existing GI in the Herston area is low, and what GI is present is of poor quality. There is little connectivity between the existing assets, and the number of functions and benefits are limited:

- there is little biodiversity;
- the character of Herston suffers due to the lack of visual amenity;
- there are few 'breathing spaces' in this relatively densely populated area;
- there are few recreational facilities/areas;
- connections to the countryside are not clearly 'signposted' or responded to;
- the area detracts from the experience of approaching Swanage from the West.

166. As a result, Herston needs to be designated a priority area for the implementation of GI projects, and where possible, strong GI connections need to be made between Herston, the rest of town, and the open countryside.

Main shopping area

167. There is also a low level of GI around the main shopping area, where the street scene is dominated by hard paving and tall buildings. The lack of GI here means that:

- air pollution from traffic can be a problem in the summer, when there is more, slower moving traffic;
- the character of this part of town suffers due to the lack of visual amenity;
- shoppers are not encouraged to linger and take time in the shopping area as it is not an attractive environment to spend time in;
- there is low resilience to the impact of climate change - the 'heat island' effect is more likely to be experienced here.

168. This location would certainly benefit from the provision of new GI, though the level than can be provided is likely to be limited due to the configuration of the streets and pavements here. The shopping area is however close to the sea, and will benefit greatly from this as the effects of climate change become more apparent.

The main shopping area where there is little or no GI.

Main beach car park

169. The third area of low GI is the Main Beach car park on Victoria Avenue. A range of problems that affect this location:

- the car park detracts from the character of the location, and from the experience of using the main approach to the seafront;
- the surface is poorly drained and floods during times of heavy rainfall;
- there is a large expanse of hard paving which becomes hot in the summer This will get worse as climate change progresses;
- it looks tired and uncared for – there have been no major improvements to this car park for over 25 years;
- the only GI that exists is poor quality planting in painted concrete ring sewer pipes and contributes little towards the appearance of this space of the problems that exist.

Item 9, Appendix 1
(PG - 16.05.08)

170. This car park contributes massively to the lack of function of the existing GI network of the town. It is a large area of hard surfacing which was designed around the vehicles. The function of other nearby GI is decreased because the deficiencies of the car park are a drain their resource. Improvements to these areas alone (King George's Recreation Ground and Forres Field) will not make up for the negative impact of the car park. Improvements to this car park must be implemented as priority project if the GI network of Swanage is to function as a healthy ecosystem.

The North Beach car park

171. The car park next to Days Park shares some of the same issues as the Main Beach car park and requires similar attention.

Item 9, Appendix 1
(PG - 16.05.08)

Strategic issues

172. The proposals included in the audit respond to the recorded deficiencies in function of individual audited GI assets. The table under the heading Problem areas below represents an assessment of the ability of these attend to the strategic issues highlighted in the previous section. Needs identified in the Swanage Community Strategic Plan, the Swanage Local Plan, and the UK Biodiversity Strategy must also be addressed where possible, and these are detailed under Additional needs.

Problem areas

Strategic problem area	Issues	Audit proposals	Gaps in resolution	Possible additional measures
Herston	Little biodiversity, character suffers due to the lack of visual amenity, few 'breathing spaces' / recreational facilities/areas, connections to the open countryside are not clearly 'signposted', character of area detracts western approach to town	Tree planting to Priests Road open space, raised verges between Greyseeds Estate and A351, Days Road and Holmes Road triangular open spaces. Plant trees and create wildflower meadow Sydenham Road verges, Steer Road triangular open space. Waymarking, tree planting and wildflower meadow site of old Sydenham Road play area	Additional connectivity and functions.	Green roofs to garages, community initiative to improve biodiversity in gardens and replace existing evergreen monoculture hedges with mixed species deciduous when become over-mature
Main shopping area	Air pollution, lack of visual amenity, not an attractive environment for shoppers, 'heat island' effect	Plant street trees	Main issues not attended to as may not be sufficient locations where street trees can be planted due to underground services or access requirements	Green roofs/walls, new GI for town centre improvement area, rainwater gardens on traffic islands

Strategic problem area	Issues	Audit proposals	Gaps in resolution	Possible additional measures
Main Beach car park	Detracts from the character of location/main approach to seafront, poorly drained, hot in the summer and will get worse as climate change progresses, looks tired and uncared for, only GI that exists is poor quality	Resurfacing, tree planting in tree pits designed to act as 'rain gardens'	Unattractive toilet block	Green roofs/walls – is the toilet block suitable for this treatment?
Ulwell Stream corridor	Flooding	Maintain/ manage woodland vegetation in region of Days Park/cricket ground	Flooding still an issue	Flood alleviation facility on DCC land. SuDs/tree planting in Days Park car park
Connectivity	Poor	Create 'greenways', replant avenue of street trees Victoria Avenue and Park Road, pocket park on land between Rabling Road and Prospect Crescent, create wildflower meadow along railway embankments, 'green' bridge over railway, tree planting and wildflower meadow creation in caravan parks, 'gap up' field hedges	Areas of poor connectivity remain	Street tree planting along from Victoria Road car park along Northbrook Road to Days Park and beyond to St Mary's RC Primary School. Ensure potential housing sites incorporate green corridors, continue theme of avenue planting, and include planting along the interface with open countryside. Campaign for DCC's 'living verges' initiative to be implemented in Swanage

Strategic problem area	Issues	Audit proposals	Gaps in resolution	Possible additional measures
Accessible woodland	Not enough 2ha woodland to satisfy WASt	None directly applicable	Not enough accessible woodland	Plant 3 2ha tracts of woodland – ne to the south of the Greyseeds Estate, one to the west of Cauldron Barn Caravan Park and one to the North of Hill Road. A fourth possible site for new woodland at Herston Fields

173. The audit proposals respond to some of the strategic issues, but it is clear that most of them will attend only to local situations. The third column in the table therefore details the remaining gaps in resolution that need to be addressed if the GI network is to become more robust and have greater potential to deliver a full range of benefits and ecosystem services.

174. The final column of table therefore contains additional opportunities identified through the analysis the existing GI baseline that could fill the gaps in the resolution of the strategic issues by the audit proposals.

Additional needs

175. It is important to identify additional needs that can be addressed at the same time as addressing the physical gaps in the network, a lack of connections between assets, and low numbers of benefits for individual assets.

176. In GI planning terms, needs relate to both the needs of people and of the natural world, and are provided through what are termed ecosystem services.

177. The needs that are outlined below are those that have been identified in the Swanage Community Strategic Plan (SCSP)[15] , the Swanage Local Plan (SLP)[16] , and the UK Biodiversity Strategy (UKBS) 2020.[17]

15. *Swanage Community Strategic Plan – Swanage: Looking to the future 2007-2027 Swanage Market and Coastal Towns Initiative Working Group 2007*

16. *Swanage Local Plan Pre-Submission Document - prepared in partnership by PDC, Swanage Town Council and Swanage Town and Community Partnership Sept 2016*

17. *Biodiversity 2020: A strategy for England's wildlife and ecosystem services Defra 2011*

Economic

178. The SCSP vision for the economy of Swanage is that of 'an environment for encouraging a diverse, thriving and prosperous local economy', and in the Project Matrix under the theme of economy, an urban design project is identified, which is to include a review of shrub and tree planting schemes to enhance the natural environment.

179. GI can improve the prospects of inward investment into an area through creating a more attractive environment for people to live and work in, and for people to visit. Increased tourism can result, and the value of property and productivity can be enhanced too.

180. There are a number of locations in Swanage that could benefit in this way, amongst these being the main vehicular approach from the west (A351). This is the route that most visitors and tourists take when visiting for the first time, and therefore gives a first impression of Swanage. It is currently uninspiring being dominated by ex-council housing and school buildings. A large amount of vegetation has also been lost from the northern side of the road in recent years.

181. Another location is the main beach car park on Victoria Road. This car park has a neglected and run down appearance, but is a key initial destination for visitors. In addition to this, there are flooding issues which require attention.

182. Another key arrival point for visitors is the station, which is located at the top end of the main retail area. The environment around the station is not welcoming, being dominated by fences, cars, a traffic roundabout and highway paraphernalia. There is an identified need to improve this location which is referred to in the Summary of Key Issues and Challenges in the SLP. The Draft Swanage Town Centre Redevelopment Site Development Brief which forms part of the SLP, identifies the requirement for new shopping space, a replacement health centre facility and new car parking, a new focal point for the town centre with good connections to the town centre and beyond. New GI will be important to the success of this scheme.

Social

183. Cultural Objective C3 of the SCSP is 'to encourage informal leisure pursuits'. The Plan indicates that this should partly be achieved through the development and promotion of 'new means of informal leisure pursuit such as walking routes and cycle paths'. In addition to this, Social Objective S2 is 'to improve the quality of and access to public amenities and open spaces within the town and its environs'.

184. This confirms that the social needs that GI can respond to are partly centred on the requirement to assess the RoW system with a view to improving connectivity to the wider countryside, and potential improvements to recreational facilities so that they better serve the demographic in Swanage.

185. There is also a requirement to provide access to natural and attractive green spaces including woodland in order to encourage wider engagement with nature in order to improve physical and mental health. Increasing access to natural and attractive green spaces does not necessarily mean the wholesale creation of new spaces. Improving and enhancing existing green spaces to provide a richer experience, and attracting people to underused spaces by making them safer and more attractive places to linger may be just as effective.

186. For example Sandpit Field is an underutilised green space which has the potential to be much more attractive, and therefore better used. This would usefully form part of the objectives identified in the SLP, which is to implement 'seafront enhancement and improvements to traffic management and walking and cycling links'.

187. The SCSP identifies that Herston is the most deprived part of Swanage. Low levels of poor quality GI in areas of social housing here mean that residents do not benefit from their immediate environment in the same way as people do elsewhere in Swanage. In fact the majority of the amenity open space in Herston is just short mown grass which should not really be classed as GI. Statistics show that people in more deprived areas are more likely to suffer more physical and mental heath related issues.

188. Improvements to GI here would be extremely beneficial, especially if residents are involved in implementing the work. The environment will look more cared for, contribute more towards health and wellbeing, and residents will feel more of a sense of ownership and therefore a deeper connection with their environment.

Environmental

189. Other key issues and challenges that are identified in the SLP include climate change, flood risk, and protecting and enhancing the natural environment. In response to these, the SLP includes a spatial objective aimed at 'protecting and enhancing existing green spaces, and providing open spaces and links to the countryside that fit with the historic character and setting within the AONB', and an additional key objective of making Swanage 'a more sustainable town, with improved resilience to climate change and flooding'.

190. Much work has been done in the past to attend to flooding and drainage issues in and around Swanage, there is still more that needs to be done, especially as the winter months will become warmer and wetter in the face of climate change. Many of the surface water drainage issues can be eased through the introduction of sustainable urban drainage schemes on open land, which can also be designed to be features to support ecological systems in their own right.

191. With regard to protecting and enhancing the natural environment, along with the protection of existing green spaces and the creation of new, there is a general country-wide need to connect fragmented habitats and ecosystems so that they function together as a network. Some species of plant and animals are classed as 'at risk' because of destruction of their natural habitat, and others hang on precariously in small populations that are cut off from one another. Purbeck is a hotspot for biodiversity, and much needs to be done to maintain healthy populations of wildlife.

192. The creation of new habitat and wildlife corridors and stepping stones is one way of achieving this. Research into the benefits and potential risks to biodiversity of increasing connectivity has examined the effect of corridors. Existing corridors generally promote species movement in fragmented landscapes. This has been shown for butterflies and birds. Corridors increase plant biodiversity both in main habitat patches and also in neighbouring habitats, and also promote pollination across habitat by assisting the movement of pollinating insects. Stepping stones can provide habitats in themselves in addition to promoting the movement of species between habitat patches, though they are more likely to be species specific. This 'functional connectivity' is an important aspect of ecological networks.

193. Functional connectivity also includes the 'softening' of existing structure of GI assets such as hedgerows, parks, wetlands and field margins. This can be done by changes in management aimed at restoring or improving ecological and landscape value, or by adding new elements with a similar structure to habitats, for example planting copses in the corner of fields adjacent to hedgerows, linking woodlands, or providing small ponds to act as stepping stones between larger ones.

194. Improving functional connectivity will also support once common species such as house sparrows and honeybees which have declined dramatically in numbers over recent years to the point where they are now 'at risk'. These species are important in their own right, but also because they help to spread seeds and to pollinate crops and other plants, which is in turn vital for farming and the economy, and for nature conservation.

195. With regard to the provision of new open space, there are few locations where this can be achieved within the current settlement boundary of the town. It is most likely therefore that this will be provided within new development. Developers must therefore be made aware of the requirement to provide adequate open space/GI, and must also ensure that it is designed well.

196. The function of existing GI assets can however be increased, and although this may not overcome the need for more open space on location grounds, it can transform land so that it provides many more benefits and on many different levels.

197. Objective EN 1 of the SCSP is 'to minimise all forms of pollution to the local environment'. One of the actions under this objective is 'to identify ways and encourage the development of reducing pollution through pilot projects'. This clearly illustrates that there is a general concern about pollution in Swanage, and that something needs to be done about it.

198. GI can help reduce the levels of pollutants both in the air, and in water. The main water pollution issue that is highlighted in the GI Audit is that of the pollution of surface water runoff with dog waste during periods of flash flooding. This in turn affects the quality of the sea water in Swanage Bay as surface water enters the sea at these times. It is possible to resolve aspects of this issue through the installation of SuDs schemes where surface water is collected by a system that allows it to percolate through the soil and into the ground. Microbes in the soil break down organic waste and render it inert. There are however some zones close to the cliffs in Swanage, where SuDs must not be implemented because increasing the amount of water in the ground may give rise to stability issues.

Item 9, Appendix 1
(PG - 16.05.08)

199. There are however a couple of locations where new SuDs would help to alleviate pollution by dog faeces in surface water. More could be done by raising awareness, and developing an even stronger ethos of dealing with the problem at source by encouraging more people to pick up after their dog, which is an action point within the SCSP.

200. The GI Audit and Assessment shows that levels of air pollution are worse in the summer months because of all of the holiday traffic, and in the mornings around the station when the steam train is powering up whilst stationary. The previous chapter about the benefits of GI provides evidence of the way that vegetation, especially trees, can absorb pollution from the air and replenish oxygen. Planting trees along main routes to and from Swanage, and around the station and the town centre generally will therefore do much to ease air pollution caused by transport.

201. With regard to climate change, the UKBS states that 'We do know that managing our biodiversity is important to both 'mitigation' (addressing the causes of climate change by removing greenhouse gases from the atmosphere) and 'adaptation' (helping to reduce the impacts of climate change)'. The strategy also includes initiatives that will help to achieve the changes that are needed to enable mitigation of and adaptation to climate change. Two of the initiatives that are relevant to GI are to:

- bring a greater proportion of woodlands into sustainable management and expand the area of woodland in England;
- establish more coherent and resilient ecological networks on land that safeguard ecosystem services for the benefit of wildlife and people.

Opportunities to mitigate the effects of, and adapt to climate change in Swanage must therefore be responded to where possible.

Deliverability of audit proposals

202. The majority of the proposals emanating from the audit are located on publicly owned land. This automatically makes them more deliverable as there will be no requirement for lengthy negotiations with private landowners. Some of the proposals involve planting on land belonging to DCC Highways Department, so it will be important that visibility splays are respected and that future maintenance responsibility is discussed. Other sites are owned by STC and PDC, and similarly, future maintenance will need to be resolved. On the whole though, all of the proposals involving public land are achievable in principle providing that suitable funding is identified.

203. A small number of the proposals coming from the audit are on private land. These include the green bridge over the railway, and the planting of the railway embankments with wildflowers. It will be necessary to discuss these proposals with the Swanage Railway Company to assess whether they are viable propositions. The construction of a green bridge would also be a huge investment, which is unlikely to be seen as viable unless the provision of a new pedestrian access over the railway is a priority. For this reason the deliverability of this proposal is questionable.

204. Proposals for tree planting and the creation of wildflower meadows in caravan parks may be achievable as long as a suitable source of funding is identified. It will be necessary to plan where any trees are planted very carefully however so that the trees do not create issues for the owners and users of the caravan parks, but still enhance the GI of the location.

205. The gapping up of field hedges is the responsibility of the landowner or tenant. There are however grants available specifically for hedge restoration and creation, so this proposal is achievable in negotiation with the landowner/tenant.

206. Way-marking, the creation of greenways and other RoW issues are all topics that need to be assessed in more detail and specific proposals can put together. It is suggested that a separate RoW task group with the necessary expertise is set up to take the proposals and initiatives forwards.

207. Of the possible additional measures identified to attend to gaps in resolution of the strategic issues, the most difficult to deliver are the green roofs to garages and the replacement of evergreen hedges in the location sometimes referred to as 'The Greyseeds Estate' in Herston. This is because the properties here are owned by a housing association, and the replacement of garage roofs with green roofs, and evergreen hedges with deciduous may not be something that the housing association would wish to invest scare resources in. It is however suggested that these initiatives be discussed with the housing association to see if there is any way that they can be taken forwards, as this part of Herston is where the lowest levels of GI are and the GI that is present has a low number of functions compared to the rest of the town.

Summary

208. There are no up to date guidelines that can be used to assess the provision of sports and recreation facilities in Swanage. The GI assets providing this function are included in the study, but recommendations regarding the adequacy of provision for sport and recreation cannot be provided. It is therefore recommended that pressure to produce an up to date sport and recreation strategy is be applied on the responsible authority.

209. Analysis of the data that was collected at the workshop sessions, from the GI audit, and from the study of baseline information indicates that the existing network of GI in Swanage consists of a wide range of assets which provide a good number of functions. The condition of the assets varies across the town, with those that are owned by the individual local authorities and housing associations being average, or in some cases poor. This affects the number of benefits that these assets contribute to the overall functioning of the GI network.

210. The most notable benefits that are poorly represented in the town itself are resilience to climate change, biodiversity, flood alleviation and surface water drainage, and in some locations visual amenity. Issues with regard to the level of provision and maintenance of the RoW network and connections to the countryside have are an issue, and need to be looked at in more detail.

211. There specific zones of poor GI, where the projects identified in the audit will do much to improve the situation, however connectivity both within and into these zones also needs to be attended to. At a strategic level there are problem areas that analysis of the GI network has identified that proposals emanating from the audit alone will not fully address. The further solutions identified above will go towards the creation of a healthy GI network providing a wide range of ecosystem services.

212. It is also clear that new development needs to incorporate GI that is designed to connect into the existing GI network, help to assimilate the development into the wider landscape setting, and continue the themes contained in the proposals chapter of the Strategy.

213. The audit proposals and additional measures identified through the analysis process are not all deliverable. Those that are, are packaged into individual projects, initiatives and actions in the **Recommended improvements** chapter of the Strategy.

Swanage green infrastructure strategy

APPENDIX 2 - Plants to Attract Birds, Butterflies and Bees

June 2018

Plants to Attract Birds, Butterflies and Bees

Birds

To attract a variety of different species it is also important to take into account their different eating habits. Some birds feed in the lower parts of shrubs, others in the canopy of trees, while others prefer to feed on the ground. Therefore the greater the range of different shapes and sizes of plants the more successful the scheme will be at bringing a number of different birds in. Proper application of this principle is a more important factor in attracting birds than the size of the space you are working with.

Trees that produce berries and/or seeds, or that attract insects will also attract birds. Berry or fruit bearing trees and shrubs will attract members of the thrush family, blackbird, fieldfare, mistle and song thrush, redwing and robin. Also starlings and, in some winters, waxwing and even some warblers, e.g., blackcaps who eat berries in

the early autumn before they migrate. Unless mentioned, the berries attract all the above birds plus others as specified.

The following lists are not exhaustive, but do give an indication of the main types of trees and shrubs that will provide the food sources and shelter necessary to attract birds into a space. It is always best to plant native trees where possible, but this is especially true on rural development sites, as native planting will help to supplement native vegetation that may have been lost through the development of the site.

Trees

Alder *Alnus* spp. Medium sized trees usually found on damp ground. The seeds are attractive to many birds. *A. glutinosa* common (native) alder. *A. incana* grey alder. Flourishes on infertile soil which it soon enriches. *A. cordata* Italian alder. Tolerates dust laden atmospheres. Suitable for planting as a street tree.

Beech *Fagus* spp. Large tree producing nutlets that are attractive to birds and mammals. *F. sylvatica* native, common beech. *F. Sylvatica* 'Dawyck' upright form suitable for avenues and as street trees. *F. sylvatica* 'Purpurea' copper beech.

Birch *Betula* spp. Medium sized tree that produces seeds which many birds feed on. *B. pendula* native silver birch. *B. jacquemontii* white barked Himalayan birch. Stunning white bark makes this a useful feature tree.

Cherry *Prunus* spp. Bright red fruits attract birds in July. Medium trees, with white blossom in spring. *P. avium* Gean, mazzard or wild cherry – native tree. *P. avium* 'Plena' beautiful double flowered version of the wild cherry. *P. padus* bird cherry – native tree, usually smaller than the wild cherry. Often planted as an ornamental tree.

Cotoneaster spp. *C.* 'Afterglow' small weeping tree. White flowers late spring and redberries in autumn. *C. franchetii* white flowers in spring. Red foliage and red berries. *C. frigidus* Himalayan tree cotoneaster *C.* 'Hybridus Pendulus' small tree with arching branches,pink flowers in late spring and red berries.

Ornamental crabs *Malus* spp. Fruit in the Autumn. Small tree. *M. sylvestris* native crab apple. *M. floribunda* crimson buds open white in spring, small red/yellow fruit. *M.* 'Golden Gem' white blossom, and small yellow fruit. *M.* 'Gorgeous' pure white blossom in spring, glossy red fruit. *M.* 'Pink Cloud' single white blossom in spring and bright pink fruit. *M.* 'Red Sentinel' white spring blossom, and large clusters of deep red fruit. *M.* 'Royal Beauty' weeping. Copper red young foliage, turns dark green. Deep pink blossom in spring and dark red fruit. *M.* 'Rudolph' large single pink blossom in spring, fresh purple/green foliage. *M.* 'Sun Rival' semi weeping. Spring blossom, pink turning white. Bright red fruit.

Hawthorn *Crataegus* spp. *C. monogyna* native may or quickthorn. White flowers in May and red berries in autumn. *C.* 'Crimson Cloud' crimson red flowers with white centres in spring. Small red fruit. *C. orientalis* grey foliage, creamy white flowers in spring. Red/yellow haws. *C.* 'Paul's Scarlet' dark green foliage with double pinky red flowers in spring. Red haws. *C.* 'Rosea Flore Pleno' double pink flowers in spring and red haws.

Holly *Ilex* spp. Red, orange or yellow berries - red berries preferred. Need one male and one female plant in order to fruit. Note berries are poisonous to humans. Caterpillars of the holly blue butterfly feed on the leaves, and in turn attract insect eating birds. If allowed to grow to maturity holly can grow into a medium sized pyramidal tree. Not all varieties bear berries. Variegated varieties not suited to rural locations. *I. aquifolium* native. Grows everywhere except on wet soils. Good for hedging.

Juniper *Juniperus communis* the common juniper is a native large bush/small tree. Dark purple berries ripen in the second year and attract many species of bird.

Larch *Larix* spp. A large tree that requires plenty of light and space. The seeds born in cones are attractive to birds and small mammals. *L. decidua* European larch. *L. x europlepsis* hybrid larch, which is less susceptible to disease than the European larch, and can be planted in poorer soils.

Lime *Tilia* spp. Large tree with fruits that are attractive to birds. The flowers are full of nectar and are highly attractive to bees. See above under trees useful to bees for a species list.

Mountain ash or rowan *Sorbus aucuparia* also known as the mountain ash the rowan has an abundance of cream coloured flowers in May-June that attract insects and insect feeders. Red berries begin to ripen in August and are irresistible to birds like thrushes and blackbirds. Small tree. *S. aucuparia* 'Asplenifolia' has deeply toothed and lobed fern like leaves. S. *aucuparia* 'Beissneri' is upright, with deeply divided yellow-green leaves. S. *aucuparia* 'Edulis'. Larger leaves and fruit. *S. aucuparia* 'Chinese Lace'. Red/ purple foliage in autumn with dark red fruits.

Oak *Quercus* spp. An Oak tree is an ecosystem in its own right, supporting more insects an other creatures than any other plant. The insects attract insect feeders such as birds and bats. Even in the winter the oak supports many forms of life. Insect larvae hibernate in the bark. Large tree. *Q. patrea* sessile oak. Native to the wetter and less fertile upland regions of northern and western Britain *Q. robur* English or common oak, native. *Q. ilex* holm oak. Suitable for planting in coastal environments.

Scots pine *Pinus sylvestris*. Large tree. Cones contain seeds that are attractive to birds and mammals.

Whitebeam *Sorbus* spp. Small to medium sized trees bearing berries that attract birds in the autumn. S. aria 'Lutescens'. Russet/gold autumn foliage, orange-red berries, young foliage creamy white, small white spring blossom *S.* 'Eastern Promise'. Excellent autumn colours, deep pink berries. *S. huphensis* 'Obtusa' bright red autumn foliage and contrasting dark pink berries. *S.* 'Pink Pagoda' green/ blue leaves turn excellent autumn colours. Clusters of pink berries in winter.

Yew *Taxus baccata* common or English yew. Red waxy fruits attract birds. Large shrub or small tree. Excellent for hedging, but clippings must be disposed of carefully as are toxic to animals. Seeds in fruit are poisonous to humans.

Shrubs

Chokeberry *Aronia arbutifolia* bright red fruits.

Barberry *Berberis* spp. Most forms have black/purple berries, especially loved by blackbirds.

Callicarpa 'Profusion'. Bright violet coloured berries.

Dogwoods *Cornus* spp. Blue tinted white berries but not *C.mas*.

Cotoneaster spp. Prolific red, orange or yellow berries - birds often choose red first, through orange to yellow last. Note berries are poisonous to humans.

Firethorn *Pyracantha* spp. Red, orange or yellow berries. Select red for the birds to eat before Christmas usually with orange or yellow to follow in a hard winter.

Elder *Sambucus* spp. Red or black berries - over 32 species reported eating them, especially blackcap and occasionally collared doves.

Fruit bushes – blueberry, raspberry etc.

Guelder rose *Viburnum opulus* native. Translucent berries.

Japonica or flowering quince *Chaenomeles* spp. Autumn quinces.

Spindle E*uonymous europaeus* native large shrub or small tree. Large bright red fruits which open to emit orange red seeds. Note berries are poisonous to humans.

Holly *Ilex* spp.

Honeysuckle *Lonicera* spp. Climbing varieties have red or black berries that attract thrushes, bullfinches and marsh and willow tits. Note berries are poisonous to humans.

Ivy *Hedera helix* spp. Climber or groundcover. Produce shiny black berries on older growth.

Old man's beard *Clematis vitalba* climber. Seed heads are enjoyed by many birds

Oregon grape *Mahonia* spp. Decorative black berries. See under shrubs useful to bees for varieties.

Rose *Rosa rugosa* has large red hips, particularly attractive to greenfinches which pick outthe seeds.

Perennials

Betony *Stachys officinalis* native. See front cover for picture.

Bird's foot trefoil *Lotus corniculatus* native.

Common poppy *Papaver rhoeas* seeds are favourite food of finches.

Crocus *Crocus* spp. yellow and orange flowers are attractive to sparrows because they contain yellow pigment carotene to brighten up their plumage for the breeding season.

Field scabious *Knautia arvensis* native.

Globe thistle *Echinops ritro* seedheads are eaten by goldfinches and flower heads attract insects.

Greater knapweed *Centaurea scabiosa* native.

Lavender *Lavandula* spp. Flowers going to seed are attractive to goldfinches.

Meadow cranesbill *Geranium pretense* native.

Mistletoe *Viscum album* native parasite that grows intrees, especially apple. White berries are a good food source for blackbirds. Can be propagated from shop bought mistletoe by rubbing berries and seeds into the branch unions of established trees.

Musk mallow *Malva moschata* native.

Ox eye daisy *Chrysanthemum leucanthemum* native.

Primrose *Primula* spp. Including Oxlip and Cowslip. Yellow and orange flowers are attractive to sparrows.

Rough hawkbit *Leontodon hispidus* native

Self heal *Prunella vulgaris* native.

Sunflower *Helianthus* spp. Seed heads are eaten by greenfinches. The nectar attracts a wide range of insects.

Teasel *Dipsacus fullonium* native. Seed heads are a favourite food of goldfinches.

Wild strawberry *Fragaria vesca* native.

Bees

Common trees

A number of trees are useful for providing pollen and/or nectar for bees and other pollinating insects. This list includes plants suitable for a range of habitats, including gardens and open spaces in urban and rural developments. As a rule however, native species should be planted as far as is possible across Purbeck on rural development sites.

Possible sizes are not given as these can vary dramatically according to the situation, soil, altitude, exposure to wind, etc. All of these trees will normally flower in the UK, although some will need a good summer to flower well.

Alder *Alnus glutinosa* native tree. Good very early source of pollen. Flowers Jan–Mar.

Blackthorn *Prunus spinosa* common native hedge plant/small tree. Flowers Mar–May. Masses of white flowers. Valuable source of early pollen.

Cherry *Prunus* spp. Huge group, mainly decorative trees. Avoid double flowered varieties if wanting to attract bees. Medium sized trees. *P. avium* native gean, mazzard or wild cherry. Flowers Apr. *P. cerasus* sour cherry, small shrubby tree. Flowers profusely in May. *P. cerasifera* myrobalan plum. Flowers Mar–Apr. Wide range of cultivars, some with purple foliage. *P. padus* native Bird cherry. Usually smaller than the wild cherry. Often planted as an ornamental tree. Long racemes of white almond scented flowers in May. *P. subhirtella* autumnalis. Attractive small tree. Winter flowering. *P. x yedoensis* Yoshino cherry. Small tree that flowers Mar–Apr.

Chestnut *Aesculus* spp. Large trees. A. hippocastanum horse chestnut. White flowers Apr–May. *A. carnea*. Red flowers in May. *A. indica* Indian horse chestnut. Pink flowers in May–Jun. *A. californica* buckeye. White/pink flowers in Jul–Aug.

Chestnut, sweet or Spanish *Castanea sativa*. Flowers in Jul. Large tree.

Crab apple *Malus* spp & hybrids. Beautiful small sized trees. Spring flowering. Many named varieties eg. 'John Downie', 'Profusion', 'Golden Hornet' (see more below under trees to attract birds).

Eucalyptus spp. Evergreen, aromatic foliage. Flower late summer. *E. gunnii*, *E. niphophila*, *E. parviflora*.

Hawthorn *Crataegus* spp. Large shrubs/small trees flowering in May. Erratic, but can be profuse producers of nectar. *C. oxycantha*, *C. monogyna* both native. *C. prunifolia*, *C. crus-galli*. See under trees to attract birds for more varieties.

Hazel *Corylus* spp. Small tree/large shrub. Catkins valuable source of pollen Mar–Apr. *Corylus avellana* native species, often coppiced. *C. maxim* filbert.

Holly *Ilex* spp. evergreen, tiny flowers, attractive to bees. Flowers May - Jun. *Ilex aquifolium* native. *I. opaca* and spp.

Honey locust *Gleditsia tricanthos*. Long branched spines on trunk, flowers in July.

Indian bean tree *Catalpa* spp. Magnificent, spreading trees with panicles of scented, foxglove-like, speckled flowers in Jul–Aug. *Catalpa bignonioides*, *C. fargesii*, *C. ovata*.

Judas tree *Cercis siliquastrum*. Pretty small tree, purple pea-flowers on bare stems in Apr–May.

June berry, snowy mespilus Amelanchier lamarckii. Beautiful tree, masses of white flowers in spring.

Lime *Tilia* spp. Large tree with large quantities of nectar. *T. cordata* small leaved lime. Late July flowering. *T. x euchlora* Crimea lime. No honeydew. Flowers Jul–Aug. *T. x europaea*

common lime, native. Flowers Jun–Jul. *T. maximowicziana* Japanese lime. Flowers Jun. *T. x orbicularis* hybrid lime. Flowers Jul–Aug. *T. petiolaris* weeping silver lime. Flowers Jul–Aug. *T. platyphyllos* broad leaved lime. Flowers Jun–Jul. *T. tomentosa* silver lime, flowers Jul.

Maples *Acer* spp. The decorative Japanese maples rarely flower in the UK, but the larger species are all excellent bee plants. Spring flowering. Also *A. campestre* native field maple, *A. macrophyllum* Oregon maple, *A. negundo* box elder, *A. opalus* Italian maple and *A. platanoides* Norway maple.

Mountain ash or rowan *Sorbus aucuparia*. Spring flowering native tree. Many other cultivated species, some detailed below under trees to attract birds.

Sweet gum *Liquidambar styraciflua* and hybrids. Spring flowering.

Sycamore *Acer pseudoplatanus*. Valuable nectar source. Flowers May.

Tree of heaven *Ailanthus altissima*. Large town tree. Flowers Jul–Aug.

Tulip tree *Liriodendron tulipifera*. Large tulip-like flowers in Jun–Jul.

Whitebeam *Sorbus* spp. Small to medium sized trees. Many cultivated species. *S. aria* common whitebeam. Flowers May–Jun. *S. intermedia* Swedish whitebeam. Flowers Jun. More species detailed below under trees to attract birds.

Fruit trees

All are good sources of pollen and many are also excellent nectar producers.

Almond *Prunus dulcis*. Earliest to flower. Profuse nectar producer.

Apple *Malus pumila*. Can be grown as cordons and 'bush' forms suitable for small gardens. Range of varieties, flowering from early April to late May. Good nectar producers.

Cherry *Prunus cerasus*. Large trees, good nectar producers.

Medlar *Mespilus germanica*. Large white flowers in May.

Pear *Prunus communis*. Flowers Mar–Apr. Weak nectar, rarely collected.

Plum *Prunus domestica*. Flowers early Apr. Good nectar source.

Quince *Cydonia oblonga*. Flowers in spring. Good nectar source.

Less common trees

These are less widely grown but are not difficult and are good bee trees. Some flower when there is little other nectar available.

Snowdrop tree *Halesia carolina*. Pretty, small tree. Bunches of flowers along branches in May.

Golden rain tree *Koelreuteria paniculata*. Small to medium sized tree. Large, loose paniclesyellow flowers in Jul–Aug.

Pagoda tree *Sophora japonica* medium to large tree for south facing locations. Creamy flowers Sep. *S. tetraptera* smaller, needs shelter. Deep yellow bunches of flowers in spring.

Chinese bee tree *Tetrodium (Euodia) danielli, (hupehensis)*. Medium tree with strongly scented small white flowers Aug–Oct.

Shrubs

A number of shrubs are useful for providing pollen and/or nectar for bees and other pollinating insects. This list includes plants suitable for a range of habitats, including gardens and open spaces in urban and rural developments. Native species should be planted as far as is possible on rural development sites.

Abutilon vitifolium climber. Flowers May–Jul. Soft grey/green vine shaped downy leaves, large saucer-shaped flowers, various colours.

Barberry *Berberis* spp. Flowers Apr–Jul. Wide range of species, all attractive to bees.

Brooms *Cytisus* spp. Wide range of species and hybrids, mostly early flowering.

Butterfly bush *Buddleia*, *B. alternifolia*. Long lilac spikes of flowers in June. *B. globosa* globular orange flowers in May. *B. x weyeriana* orange panicles of flowers in Jun–Oct.

Calico bush *Kalmia* spp. Flowers June. Evergreen, acid soils. Also *K. angustifolia*, *K.* latifolia.

Californian lilac *Ceanothus* spp. Wide range of species, all attractive to bees. Range from spring to late summer flowering.

Californian poppy *Eschscholzia* spp. Late summer–autumn flowering.

Cherry laurel *Prunus laurocerasus*. Flowers April. Evergreen. Very attractive to bees in summer.

Clematis spp. Climbers. Most large flowered hybrids only produce pollen. *C. armandii*. evergreen, strongly scented. Flowers Apr–May. *C. cirrhosa* evergreen, small bell-like flowers in Dec–Feb. *C. montana* flowers Apr–May. *C. vitalba* 'Traveller's Joy' native. Flowers Jun–Jul.

Clethra alnifolia on acid soils only. Flowers Aug–Oct.

Cotoneaster spp. Flowers June. Wide range of good garden plants.

Currant *Ribes* spp. *R. sanguineum* flowering currant. Flowers Apr. Pink, red or whiteflowers. *R. odoratum* buffalo currant, yellow flowers in Apr. *R. speciosum* red flowers in Apr–May.

Daisy bush *Olearia* spp. *O. haastii* has white flowers Jul–Aug. *O. macrodonta* flowers Jun.

Deutzia spp. Summer flowering.

Escallonia spp. and hybrids. Wide range of good garden plants. Evergreen.

Eucryphia spp. evergreen. Large, beautiful, single white flowers in Aug–Sep. Also *E glutinosa*, *E. nyamansensis.*

Firethorn *Pyracantha* spp. Flowers May–Jun. Also *P. angustifolia*, *P coccinea*.

Fuchsia magellanica late summer flowering.

Genista spp. Early flowering.

Gorse or furze *Ulex* spp. Long flowering periods. Also *U. europaeus* and *U. minor* both native.

Honeysuckles *Lonicera* spp. Shrubby honeysuckles have smaller more open flowers, with more available nectar than the climbing varieties. Some flower late winter *L. angustifolia*, *L. standishii*, *L. purpusii*.

Hydrangea spp. *H. petiolaris* climber, flowers Jun. *H. paniculata* and *H. villosa* flower late summer.

Ivy *Hedera helix* native. Climber, evergreen. Good source of late nectar.

Japonica or ornamental quince *Chaenomeles* spp. Flower Feb–Apr.

Kolkwitzia amabilis flowers May–Jun.

Lilacs *Syringa* spp. and hybrids. Spring flowering. Wide range of medium and large shrubs, all strongly scented.

Mexican orange blossom *Choisya ternata*. Flowers Apr–Jun. Evergreen.

Mock orange *Philadelphus* spp. Flowers Jun–Jul. Large number of species and varieties, most strongly scented.

Myrtle *Myrtus communis*. Late summer flowering. Evergreen, fragrant flowers.

Oregon grape *Mahonia* spp. Winter/spring flowering. Evergreen shrubs with yellow flowers.Valuable pollen source early in the year. M. aquifolium, M. bealei, M. japonica, M. lomariifolia.

Portugal laurel *Prunus lusitanica*. June Flowering. Evergreen.

Potentilla fruticosa. Many varieties and hybrids. Small shrubs, white or yellow flowers. Long flowering period.

Rhododendron spp. Small varieties of rhododendron & azaleas can be worked by honey bees. *R. ponticum* should not be planted in Purbeck as it is an invasive species.

Rock roses *Cistus* spp. Evergreen. Range of colours. Flower May–Jul.

Rose *Rosa* spp. Only single flowered types. Wild roses - *R. canina* dog rose, *R. pimpinellifolia* burnet rose, *R. rubiginosa* sweet briar. Also *R. rugosa* Japanese rose.

Rosemary *Rosmarinus officinalis*. Flowers Apr–May. Evergreen, aromatic.

Russian sage *Perovskia atriplicifolia*. Flowers Aug–Sep. Aromatic grey foliage & purple/blue flowers. Excellent bee plant.

Shrubby veronica *Hebe* spp. Wide range of sizes from dwarf to large, evergreen, flowering periods vary from early summer to late. Some very tender species.

Snowberries *Symphoricarpos* spp. Flower Jun–Aug. Most produce large amounts of nectar *S. alba*, *S. occidentalis*, *S. orbiculatus*, *S. rivularis*.

Sun roses *Helianthemum* spp. and hybrids. Evergreen dwarf shrubs, many colours.

Tamarisk *Tamarix* spp. Flowers May–late summer. Feathery foliage, masses of tiny pink flowers.

Viburnum spp. Wide range of evergreen and deciduous shrubs. Good species include *V. bodnatense*, *V. fragrans*. Deciduous, winter flowering, scented. *V. burkwoodii* is evergreen, scented and flowers Apr. *V. carlesii* has scented flowers in Apr. *V. juddii* has scented flowers in Apr–May. *V. opulus* is the native guelder rose, which flowers Jun–Jul. *V. tinus*, and *V. laurustinus* are both evergreen and flower Oct– Mar.

Virginia creeper *Parthenocissus quinquefolia*. Flowers Aug.

Weigela florida and hybrids. Flower May–Jun. Pink, red or white flowers.

Willows *Salix* spp. There are numerous small shrubby willows. Flower early spring. Good species include *S. apoda*, *S. boydii*, *S. hastata*, *S. lanata*, *S. melanostachys*, *S. uva-ursi.*

Wisteria spp. Climbers. Flower Apr–May. *W. floribunda* & *W. sinensis.*

Birds

To attract a variety of different species it is also important to take into account their different eating habits. Some birds feed in the lower parts of shrubs, others in the canopy of trees, while others prefer to feed on the ground. Therefore the greater the range of different shapes and sizes of plants the more successful the scheme will be at bringing a number of different birds in. Proper application of this principle is a more important factor in attracting birds than the size of the space you are working with.

Trees that produce berries and/or seeds, or that attract insects will also attract birds. Berry or fruit bearing trees and shrubs will attract members of the thrush family, blackbird, fieldfare, mistle and song thrush, redwing and robin. Also starlings and, in some winters, waxwing and even some warblers, e.g., blackcaps who eat berries in the early autumn before they migrate. Unless mentioned, the berries attract all the above birds plus others as specified.

The following lists are not exhaustive, but do give an indication of the main types of

trees and shrubs that will provide the food sources and shelter necessary to attract birds into a space. It is always best to plant native trees where possible, but this is especially true on rural development sites, as native planting will help to supplement native vegetation that may have been lost through the development of the site.

Trees

Alder Alnus spp. Medium sized trees usually found on damp ground. The seeds are attractive to many birds. A. glutinosa. Common (native) Alder. A. incana. Grey Alder. Flourishes on infertile soil which it soon enriches. A. cordata. Italian Alder. Tolerates dust laden atmospheres. Suitable for planting as a street tree.

Beech Fagus spp. Large tree producing nutlets that are attractive to birds and mammals. F. sylvatica. Native, common beech. F. Sylvatica 'Dawyck'. Upright form suitable for avenues and as street trees. F. sylvatica 'Purpurea'. Copper Beech.

Birch *Betula* spp. Medium sized tree that produces seeds which many birds feed on. *B. pendula* native silver birch. *B. jacquemontii* white barked himalayan birch, stunningwhite bark makes this a useful feature tree.

Cherry *Prunus* spp. bright red fruits attract birds in July. Medium trees, with white blossom in spring. *P. avium* gean, mazzard or wild cherry. Native tree. *P. avium* 'Plena' the beautiful double flowered version of the wild cherry. *P. padus* bird cherry, native tree, usually smaller than the wild cherry. Often planted as an ornamental tree.

Cotoneaster spp. C. 'Afterglow'. Small weeping tree. White flowers late spring and red berries in autumn. *C. franchetii* white flowers in spring. Red foliage and red berries. *C, frigidus* himalayan tree-cotoneaster. *C. hybridus* pendulus. Small tree with archingbranches, pink flowers in late spring and red berries.

Ornamental crabs *Malus* spp. Fruit in the Autumn. Small tree. *M. sylvestris* native crab apple. *M. floribunda* crimson buds open white in spring, small red/yellow fruit. *M.* 'Golden Gem' white blossom, and small yellow fruit. *M.* 'Gorgeous' pure white blossom in spring, glossy red fruit. *M.* 'Pink Cloud' single white blossom in spring and bright pink fruit. *M.* 'Red Sentinel' white spring blossom, and large clusters of deep red fruit. *M.* 'Royal Beauty' weeping, copper red young foliage, turns dark green. Deep pink blossom in spring and dark red fruit. *M.* 'Rudolph' large single pink blossom in spring, fresh purple/green foliage. *M.* 'Sun Rival' semi-weeping. Spring blossom, pink turning white. Bright red fruit.

Hawthorn *Crataegus* spp. *C. monogyna* native may or quickthorn. White flowers in May and red berries in autumn. *C.* 'Crimson Cloud' crimson red flowers with white centres in spring. Small red fruit. *C. orientalis* grey foliage, creamy white flowers in spring. Red/yellow haws. *C.* 'Paul's Scarlet' dark green foliage with double pinky red flowers in spring. Red haws. *C. rosea* 'Flore Pleno' double pink flowers in spring and red haws.

Holly *Ilex* spp. red, orange or yellow berries - red berries preferred. Need one male and one female plant in order to fruit. Note berries are poisonous to humans. Caterpillars of the holly blue butterfly feed on the leaves, and in turn attract insect eating birds. If allowed to grow to maturity holly can grow into a medium sized pyramidal tree. Not all varieties bear berries. Variegated varieties not suited to rural locations. *I. aquifolium* native, grows everywhere except on wet soils. Good for hedging.

Juniper *Juniperus communis* common juniper is a native large bush/small tree. Dark purple berries ripen in the second year and attract many species of bird.

Larch *Larix* spp. large tree that requires plenty of light and space. The seeds born in cones are attractive to birds and small mammals. *L. decidua* european larch. L*. x europlepsis* hybrid larch, which is less susceptible to disease than the european larch, and can be planted in poorer soils.

Lime *Tilia* spp. large tree with fruits that are attractive to birds. The flowers are full of nectar and are highly attractive to bees. See under trees useful to bees for a species list.

Mountain ash or rowan *Sorbus aucuparia* hasan abundance of cream coloured flowers in May-June that attract insects and insect feeders. Red berries begin to ripen in August and are irresistible to birds like thrushes and blackbirds. Small tree. *S. aucuparia* 'Asplenifolia' has deeply toothed and lobed fern like leaves. *S. aucuparia* 'Beissneri' is upright, with deeply divided yellow-green leaves. *S. aucuparia* 'Edulis'. Larger leaves and fruit. S. aucuparia 'Chinese Lace' Red/ purple foliage in autumnwith dark red fruits.

Oak *Quercus* spp. an oak tree is an ecosystem in its own right, supporting more insects and other creatures than any other plant. The insects attract insect feeders such as birds and bats. Even in the winter the oak supports many forms of life. Insect larvae hibernate in the bark. Large tree. *Q. patrea* sessile oak, native to the wetter and less fertileupland regions of northern and western Britain. *Q. robur* English or common oak, native. *Q.ilex* holm oak. Suitable for planting in coastal environments.

Scots pine *Pinus sylvestris* large tree. Cones contain seeds that are attractive to birds and mammals.

Whitebeam *Sorbus* spp. small to medium sized trees bearing berries that attract birds in the autumn. *S. aria* 'Lutescens' russet/gold autumn foliage, orange-red berries, young foliage creamy white, small white spring blossom *S.* 'Eastern Promise' excellent autumn colours,deep pink berries. *S. huphensis* 'Obtusa' bright red autumn foliage and contrasting dark pink berries. *S.* 'Pink Pagoda' green/ blue leaves turn excellent autumn colours. Clusters of pink berries in winter.

Yew *Taxus baccata* common or English yew. Red waxy fruits attract birds. Large shrub or small tree. Excellent for hedging, but clippings must be disposed of carefully as are toxic to animals. Seeds in fruit are poisonous to humans.

Shrubs

Chokeberry *Aronia arbutifolia* Bright red fruits.

Barberry *Berberis* spp. most forms have black/purple berries, especially loved by blackbirds.

Callicarpa 'Profusion' bright violet coloured berries.

Dogwoods *Cornus* spp. blue tinted white berries but not *C.Mas*.

Cotoneaster spp. prolific red, orange or yellow berries - birds often choose red first, through orange to yellow last. Note berries are poisonous to humans.

Firethorn *Pyracantha* spp. red, orange or yellow berries. Select red for the birds to eat before Christmas usually with orange or yellow to follow in a hard winter.

Elder *Sambucus* spp. red or black berries - over 32 species reported eating them, especially blackcap and occasionally collared doves.

Guelder rose *Viburnum opulus* native. Translucent berries.

Japonica or flowering quince *Chaenomeles* spp. autumn quinces.

Holly *Ilex* spp.

Honysuckle *Lonicera* spp. Climbing varieties have red or black berries that attract thrushes,

bullfinches and marsh and willow tits. Note berries are poisonous to humans.

Ivy *Hedera helix* spp. Climber or groundcover. Produce shiny black berries on older growth.

Old man's beard *Clematis vitalba*. Climber. Seed heads are enjoyed by many birds.

Oregon grape *Mahonia* spp. Decorative black berries. See under shrubs useful to bees for varieties.

Rose *Rosa rugosa*. Has large red hips, particularly attractive to greenfinches which pick out the seeds.

Spindle *Euonymous europaeus*. Native large shrub or small tree. Large bright red fruits which open to emit orange red seeds. Note berries are poisonous to humans.

Fruit bushes

Blueberry, Raspberry etc.

Perennials

Betony *Stachys officinalis*. Native.

Bird's-foot-trefoil *Lotus corniculatus*. Native.

Common poppy *Papaver rhoeas*. Seeds are favourite food of Finches.

Crocus *Crocus* spp. Yellow and orange flowers are attractive to sparrows because they contain yellow pigment carotene to brighten up their plumage for the breeding season.

Field scabious *Knautia arvensis*. Native.

Globe thistle *Echinops ritro*. Seedheads are eaten by goldfinches and flower heads attract insects.

Greater knapweed *Centaurea scabiosa*. Native.

Lavender *Lavandula* spp. Flowers going to seed are attractive to goldfinches.

Meadow cranesbill *Geranium pretense*. Native.

Mistletoe *Viscum album*. Native. Familiar white globular berries of this parasite that grows in trees, especially apple, are a good food source for blackbirds. Can be propagated from shop bought mistletoe by rubbing berries and seeds into the branch unions of established trees.

Musk mallow *Malva moschata*. Native.

Ox eye daisy Chrysanthemum leucanthemum. Native.

Primrose *Primula* spp. including oxlip and cowslip. Yellow and orange flowers are attractive to sparrows.

Rough hawkbit *Leontodon hispidus*. Native.

Self heal *Prunella vulgaris* native.

Sunflower *Helianthus spp*. Seed heads are eaten by greenfinches. The nectar attracts a wide range of insects.

Teasel *Dipsacus fullonium*. Native. Seed heads are a favourite food of goldfinches.

Wild strawberry *Fragaria vesca*. Native.

Plants to attract butterflies and moths

Spring nectar

Aubretia *Cruciferae* spp.

Bluebell *Endymion nonscriptus*. Native.

Clover *Trifolium* spp. Native.

Cuckooflower or lady's smock *Cardamine pratensis*. Native.

Forget-me-not *Myosotis* spp. Native.

Honesty *Lunaria* spp.

Pansy *Viola* spp.

Primrose *Primula vulgaris*. Native.

Sweet rocket *Hesperis matronalis*.

Wallflower *Cheiranthus* spp.

Late summer / autumn nectar

Buddleia spp.

Evening primrose *Oenothera biennis.*

French marigold *Tagetes patula*.

Honeysuckle *Lonicera* (native) and species.

Ice plant *Sedum spectabile*.

Ivy *Hedera helix*. Native.

Jasmine *Jasminum* spp.

Knapweed *Centaurea scabiosa*. Native.

Lavender *Lavandula* spp.

Marjoram *Origanum* spp.

Michaelmas daisy *Aster divaricatus*.

Mint *Mentha* spp.

Red valerian *Centranthus ruber.*

Scabious *Knautia arvensis*. Native.

Thyme *Thymus* spp.

Plants for caterpillars

Holly *Ilex aquifolium* and ivy *Hedera helix*. Both native plants required to complete the life cycle of the holly blue butterfly.

Buckthorn *Rhamnus cathartica* and alder buckthorn *Frangula alnus*. Both of these native plants attract the brimstone butterfly.

Cuckooflower or lady's smock *Cardamine pratensis* and garlic mustard *Allaria petiolata*. Both of these native plants attact orange-tip and green-veined white butterflies.

Hop *Humulus lupulus.* Native. Attracts comma butterfly and moths such as buttoned snout, angle shades and dark spectacle.

Common bird's-foot-trefoil *Lotus corniculatus*. Native. Attracts the common blue butterfly.

Stinging nettles *Urtica dioica*. Native. Attracts comma and red admiral butterflies and moths such as scarlet tiger, spectacle, small magpie and snout.

Further information can be obtained from the Butterfly Conservation Trust website www.butterfly-conservation.org

Trees in our towns: The role of trees and woodland in managing urban water quality and quantity, 2013, Woodland Trust

looks at how planting trees in urban areas can help address surface water flooding and improve river health.

www.woodlandtrust.org.uk/en/planting-woodland/making-themost-of-land/trees-and-water/pages/default.aspx

SWANAGE GREEN INFRASTRUCTURE STRATEGY

Written representations received during the consultation on Swanage Local Plan.

As the Swanage Green Infrastructure Strategy is to be SPD supporting the Swanage Local Plan, it was subject to the same consultation as the Local Plan itself. This document contains the representations that were made specifically in relation to the Green Infrastructure Strategy, and also the suggested responses to those representations.

The following is a brief outline of the representations received and the responses provided:

	Representation	**Response**
Swanage Town Council	Identified inaccuracies and text which require clarification. The document was praised as being a thorough, wide ranging and ambitious strategy to which the Town Council gave general approval.	Comments gratefully received and support welcomed. All inaccuracies amended and text clarified in the Strategy.
Environment Agency	Support for principle of the strategy. Ulwell Stream flood management scheme may require Flood Defence Consent.	Support welcomed, and requirement for Flood Defence Consent included in the Strategy.
Natural England	Policy SGI of the Swanage Local Plan welcomed, and support the extensive work carried out to support it (including the Swanage GI Strategy).	Support welcomed.
Sport England	An up to date playing pitch/outdoor sport and recreation evidence base is required to influence the final draft Green Infrastructure Strategy.	The production of a playing pitch strategy and needs and opportunities study for Swanage is ongoing, but completion will not coincide with the programmed publication of the GI Strategy. A statement responding to this, and an action point to apply pressure for the completion of a new Sport and

		Recreation Strategy are now included in the GI Strategy.
The Woodland Trust	The following need to be considered in more detail: • Development considerations • Options for potential large housing sites • Flood amelioration • Monitoring and review	The Strategy now includes a developers guide. The natural and semi-natural green spaces section of the Strategy has been re-written so that it responds to relevant standards, and the creation of new accessible woodland is proposed where there is to be new housing. The potential for woodland to provide flood amelioration and the provisions for the monitoring and review of the Swanage Local Plan and the Swanage GI Strategy were reviewed and found to be satisfactorily robust.
T M Wiggins	Include tree planting within development, and formal tree planting along the Kings Road East side of the development and newly created square (town centre improvements).	The requirement for tree planting is now further reinforced in the Strategy and an action to ensure that tree planting is included in the brief for the town centre improvements is also included.

The structure of the Strategy document has also been revised so that the GI audit and analysis form appendix 1. The proposals contained in the Strategy include the provision of a developers guide to GI, which is now included as appendix 2. Appendix 3 lists plants to attract birds, butterflies and bees.

Swanage Green Infrastructure Strategy (draft) – Proposed modifications

	Rep 1 – Swanage Town Council				Officer Comments
	Document	**Policy / paragraph / page / map**	**Summary of main issues raised**	**Proposed changes** New text in green, deleted text in red	
1.	Swanage Green Infrastructure Strategy	Strategy	The Swanage Green Infrastructure Strategy draft is an impressive document. It examines positive and negative features of existing GI throughout the town, identifies what is lacking and presents a wide-ranging and ambitious plan for improvement. Though there are a few inaccuracies in the research and information, it appears a thorough document which offers positive benefits to the town and the Town Council gives general approval to the Strategy.		Positive comments about the Strategy most welcome and gratefully received.
2.	Swanage Green Infrastructure Strategy	8.1 Swanage GI Trust	It is felt that such a vehicle already exists which could possibly take projects forward, namely Swanage 2027 and the Swanage and Purbeck Development Trust – for further information please see: www.sandpdt.org.uk and http://www.swanage.gov.uk/community-partnership-downloads-publications.aspx	Omit sub-section 53. Amend the wording in the first paragraph of the section titled 'The next steps' to read: ~~There are numerous and wide-ranging opportunities to deliver green infrastructure enhancements across Swanage. The Swanage GI Trust will need to adopt a~~ A coordinated approach to delivering the~~se opportunities~~ proposals and	

	Rep 1 – Swanage Town Council				Officer Comments
	Document	**Policy / paragraph / page / map**	**Summary of main issues raised**	**Proposed changes** New text in green, deleted text in red	
				initiatives is needed, and it is suggested that Swanage 2027 and the Swanage and Purbeck Development Trust are ideally placed to be able to provide this. The following paragraphs provide some recommendations on next steps. In the first sentence under sub-section 62 (Delivery), omit Swanage GI Trust and replace with Swanage and Purbeck Development Trust or Swanage 2027. In the second sentence under 63 (New developments), delete The Trust should work with and add with developers after negotiate, and Larger developments will require a development brief which should be produced by PDC in consultation with the Town Council. The development brief should contain a GI framework after the last sentence. Under 64 (Maintenance) delete the reference to the Trust in the 2nd sentence, and replace the Trust	

	Rep 1 – Swanage Town Council				Officer Comments
	Document	**Policy / paragraph / page / map**	**Summary of main issues raised**	**Proposed changes** New text in green, deleted text in red	
				with Swanage and Purbeck Development Trust or Swanage 2027 in the 5th sentence.	
3.	Swanage Green Infrastructure Strategy		Would it be possible for land in private ownership to be included in the plan?		Land in private ownership has been included in the baseline audit, which provides an indication of the overall quantity, function and benefits of GI. This is enough to provide the basis for analysis of the overall level of function and therefore the state of health of the GI network of Swanage. There are proposals for private land where it is thought that landowners may be amenable to implementing new GI, for example the caravan parks biodiversity and tree planting project, farmland hedge gapping up and wildflower meadow project, the private garden biodiversity campaign, and the green alley project. It is difficult to say exactly what the outcomes will be, as it is up to individual

	Rep 1 – Swanage Town Council				Officer Comments
	Document	**Policy / paragraph / page / map**	**Summary of main issues raised**	**Proposed changes** New text in green, deleted text in red	
					landowners as to what they do on their own land. Overall, it is felt that private land is included in the Strategy as far as it can be.
4.	Swanage Green Infrastructure Strategy		There is a large amount of evergreen hedging seen around the town, which is not considered good for wildlife. What could be done about this?	Re-word proposals 18 on page 55 to read: **Proposal** Private/housing association garden biodiversity initiative **Mechanism** Publicity material required. Liaise with Dorset Wildlife Trust to see if have similar initiative that could be relevant. Include a 'Hedges for Hedgehogs' campaign. Work with local housing associations to increase biodiversity on their land especially by replacing evergreen hedges with deciduous species.	The Strategy does draw reference to the evergreen hedging (pages 35 and 48) The proposals identified in the table starting on page 52 do not however specifically identify what should be done to respond to the issues they present. Many of the evergreen hedges in the Herston area are front boundaries to housing association properties so they should be included in the initiative to increase biodiversity in gardens. A hedges for hedgehogs campaign could be included as part of the garden biodiversity initiative to gain support for the replacement of evergreen hedges with native/ deciduous hedges

	Rep 1 – Swanage Town Council				Officer Comments
	Document	**Policy / paragraph / page / map**	**Summary of main issues raised**	**Proposed changes** New text in green, deleted text in red	
					which will attract the hedgehog's food sources, and provide the fallen leaves that hedgehogs use for their nests.
5.	Swanage Green Infrastructure Strategy		**Victoria Avenue/Main Beach car park** is identified as the first priority of the proposals. The poor drainage would be improved by tree planting, as would visual amenity, and there would be a lessening of the "hot spot" effect of the tarmac. Funding might be available.		Agree. No amendments required.
6.	Swanage Green Infrastructure Strategy		**Greyseeds Estate** is identified as "the least biodiverse location in the town" and also the least adaptable in terms of resilience to climate change. **Question:** Was the housing association (Synergy or Aster) involved at all in the research?		No, but the strategy recommends opening up a dialogue with the housing association as detailed in issue 4 above.
7.	Swanage Green Infrastructure Strategy		**Herston Recreation Ground** is identified as a site that could do with most attention, though limited		Agree. No amendments required.

	Rep 1 – Swanage Town Council				Officer Comments
	Document	**Policy / paragraph / page / map**	**Summary of main issues raised**	**Proposed changes** New text in green, deleted text in red	
			due to lack of space.		
8.	Swanage Green Infrastructure Strategy	Page 9 item 1 paragraph 3	It would be helpful to specify the Swanage town boundary; although it can be seen in the maps, due to their scale it is not always clear where the boundary lies.		Noted, but it is unclear what benefits would be gained from this. GI crosses boundaries, and the Strategy intentionally covers both the built up areas and the surrounding countryside because of this.
9.	Swanage Green Infrastructure Strategy	Page 10 Section 3 bullet point 2	What is meant by "the town"? Day's Park open space includes the adjacent ground and Swanage Town & Herston Football Club ground, which together make a large, open well-used public space (the largest in Swanage?). Not mentioned – St Mark's Primary School and The Swanage School sites with sports fields, Swanage Primary School sports field (off Bon Accord Road), the grounds of All Saints' Church and St Mary's Churchyard and others. Are the	Omit town and replace with settlement where this will help with comprehension. After Days Park, add Swanage Town and Herston Football Club in place of a playing field and add which together make a large, well used public open space at the end of the sentence Add: • churchyards • the beach • school playing fields and omit These open spaces are concentrated in the centre of the town.	Reference to 'the town' may be ambiguous. Agree clarification is useful here. Agree.

	Rep 1 – Swanage Town Council				Officer Comments
	Document	**Policy / paragraph / page / map**	**Summary of main issues raised**	**Proposed changes** New text in green, deleted text in red	
			town centre beaches open spaces? Clarify the "district" referred to in the 2006 audit?	 Add of Purbeck to the end of the sentence	 Agree.
10.	Swanage Green Infrastructure Strategy	Page 27	Air quality - is the data used in the 2013 Air Quality Assessment from 2010 readings, i.e. 5 years old? Has it changed? Queens Road is long and varied.		Purbeck District Council produces an Updating and Screening Assessment each year as a requirement of the Environment Act 1995: Part IV Local Air Quality Management. These assessments have not identified the requirement for re-testing of air quality around the station. This is because the 2010 readings showed that the air quality objectives were not being breached, and there have been no significant operational changes since this time. Re-testing is only necessary if there is risk that the air quality objectives have been breeched and there is potential for prosecution.
11.	Swanage Green Infrastructure Strategy	Page 28	Data analysis - it should be borne in mind that the data collected from this type of workshop is subject to participants' bias.		This is acknowledged in the Strategy, and accounted for in the conclusions and therefore the proposals.

	Rep 1 – Swanage Town Council				Officer Comments
	Document	**Policy / paragraph / page / map**	**Summary of main issues raised**	**Proposed changes** New text in green, deleted text in red	
12.	Swanage Green Infrastructure Strategy	Page 29	List continued from previous page - there are 5, not 3, cemeteries and churchyards in Swanage: • Godlingston Cemetery (STC, referred to previously) • Northbrook Cemetery (STC, closed) • St Mary's Churchyard (closed churchyard around the church managed by the church) • St Mary's Upper Churchyard (closed churchyard in Church Hill, managed by STC) • Non-conformist burial ground (Queen's Road, by entrance to Queen's Mead)	Change the number of cemeteries an churchyards from 3 to 5	Agree.
			There are 5 not 3, local school grounds in Swanage: • St Mark's C of E Primary School • The Swanage School • Purbeck View School • St Mary's RC Primary School • Swanage Primary School	Change the number of school grounds from 3 to 5	Agree.

	Rep 1 – Swanage Town Council				Officer Comments
	Document	**Policy / paragraph / page / map**	**Summary of main issues raised**	**Proposed changes** New text in green, deleted text in red	
			(often referred to locally as "Mount Scar School") Harrow House International College, a language and sports school for foreign students, could also be included as a school.		
13.	Swanage Green Infrastructure Strategy	Page 31	Regarding street trees, STC commissioned an arboricultural audit of the trees on STC land in recent years, the trees were managed as advised in that report and another audit is due in the fairly near future.		Include the audit in the baseline information (request a copy from Swanage Town Council)
14.	Swanage Green Infrastructure Strategy	Page 34	First sentence – could this be re-worded so that it is not confusing? • Replace "council housing" with "housing association housing".	• Merge the first two sentences to read The majority of the amenity green space is located to the west of south Swanage, and to the west of Northbrook Road, where both housing association (ex council) and recent private housing estates are centred.	• Agree

	Rep 1 – Swanage Town Council				Officer Comments
	Document	**Policy / paragraph / page / map**	**Summary of main issues raised**	**Proposed changes** New text in green, deleted text in red	
			• Second paragraph - planting on Greyseeds Estate and elsewhere would need to be "owned" by residents, especially youth.	• Under mechanism for implementation for item 2 of the proposals table, and add the following sentence before last sentence: Engage with the community (especially young people) to encourage a sense of ownership	• Agree. The document would flow better if this was included in the Proposals section
15.	Swanage Green Infrastructure Strategy	Page 40	Second paragraph – the vegetation is around the perimeter because the land is for football pitches.	Replace , but generally being with However, because out of necessity it is	Agree would benefit from re-wording.
16.	Swanage Green Infrastructure Strategy	Page 42	The penultimate paragraph states Swanage is well provided for with parks and gardens, though their function as GI area is in decline; conversely, the strategy earlier cites the 2006 Purbeck Countryside Recreation Audit and Assessment as identifying a lack of public parks and gardens "in the district".		The provision of parks and gardens per head of population is greater in Swanage than other settlements in Purbeck. The 2006 Audit identifies a lack of public parks and gardens as a whole across the district.
17.	Swanage Green Infrastructure Strategy	Page 43	School grounds - Swanage Primary School and Purbeck View School do not have grounds "interfacing" with the natural environment.	At the beginning of the paragraph replace All of the with Many, and delete now and where. In the second sentence add se on to the end of 'the' to read these, and do the same for the second 'the' in the next sentence.	Agree.
18.	Swanage Green	Page 54	• Proposal 9 does not	• Add and upper churchyard	Agree. This will have an

	Rep 1 – Swanage Town Council				Officer Comments
	Document	**Policy / paragraph / page / map**	**Summary of main issues raised**	**Proposed changes** New text in green, deleted text in red	
	Infrastructure Strategy		mention all the churchyards. • St George's Cemetery is not in Swanage, it is in Langton Matravers (or is this the name they've wrongly given to Northbrook as it is near King George's?).	to the first bullet point • Change St Georges to Northbrook • Add Queen's Road non-conformist burial ground at the beginning of the list Increase the cost estimate from £2,400.00 to £4,000.00	impact on the cost estimate.

Swanage Green Infrastructure Strategy (draft) – Proposed modifications

Rep 2 – Environment Agency				Officer Comments
Document	**Policy / paragraph / page / map**	**Summary of main issues raised**	**Proposed changes**	
Swanage Green Infrastructure Strategy	The Strategy	Support the principle of the document and that the green spaces become multifunctional spaces for both wildlife and people		Support welcomed.
Swanage Green Infrastructure Strategy	Proposal 6, page 54 – Ulwell stream flood management scheme	Ulwell Stream flood management scheme. As a reminder, under the terms of the Water Resources Act 1991 and the Land Drainage Byelaws the prior written consent (Flood Defence Consent) of the Environment Agency is required for any proposed works (permanent or temporary) or structures in, under, over or within 8 metres of the top of the bank of the Ulwell Stream, designated a 'main' river. The need for this consent is over and above the need for planning consent. The applicant is advised to contact the Environment Agency to discuss the scope of our controls.	Add Flood Defence Consent may be required from the Environment Agency under mechanism for implementation.	Useful advice

Swanage Green Infrastructure Strategy (draft) – Proposed modifications

Rep 3 – Natural England				Officer Comments
Document	**Policy / paragraph / page / map**	**Summary of main issues raised**	**Proposed changes**	
Swanage Local Plan	**Policy SGI: Swanage Green Infrastructure**	Natural England welcomes this policy and support the extensive work that has been carried out to support the policy.		Support welcomed
Swanage Green Infrastructure Strategy		The background detail and data contained in Appendices to Draft Swanage Green Infrastructure Strategy and Swanage Natural Environment Green Infrastructure And Open Space Background Paper reflect a great deal of work having been undertaken.		Support welcomed

Rep 4 – Sport England				Officer Comments
Document	**Policy / paragraph / page / map**	**Summary of main issues raised**	**Proposed changes**	
Swanage Local Plan Swanage Green Infrastructure Strategy	Policy SGI Proposals	There does not appear to be a robust and up to date evidence base for sport and recreation in Swanage. Sport England highly recommend that the council undertake a playing pitch strategy as well as assessing the needs and opportunitie	Omit the last paragraph of the sports and recreation section on page 39 and replace with: 1. The adequacy of the current level of provision of open space for sport and recreation was looked at in the PMP Sport and Recreation Audit which was produced for Purbeck District Council in 2006. This is the most up to date evidence base for this category of GI assets, and identifies that Swanage has proportionally less provision than most of the other large towns in the district. The standards that the provision was tested against are however flawed, as they are based on provision per 1000 population, which is not the most useful indicator. This is because the type of provision is as, if not more important than the number of facilities provided, especially for Swanage which has a higher than average proportion of people over the age of retirement. This is illustrated by the following statistics taken from the www.dorsetforyou.co.uk website:	The production of a Playing Pitch Strategy and needs and opportunities study for Swanage is ongoing, but completion will not coincide with the programmed publication of the GI Strategy. The Strategy therefore needs to contain a

Rep 4 – Sport England				Officer Comments
Document	**Policy / paragraph / page / map**	**Summary of main issues raised**	**Proposed changes**	
		s for sporting provision. The evidence base for sport and recreation should directly link into the developme nt of an infrastructur e delivery plan for CIL. Action – complete the playing pitch/outdo or sport and recreation evidence	**Population** Latest population figure (2012 Mid Year Estimates) for the town is 9,556	statement that responding to this, and an action point to apply pressure for the completion of a new Sport and Recreation Strategy, which will contain guidance in the level of provision required

Age Group	Swanage (persons)	Swanage (%)	Dorset(DCC Area)(%)	England and Wales
0 to4	360	3.8	4.7	
5 to 9	374	3.9	4.9	
10 to 14	443	4.6	5.4	
15 to 19	487	5.1	5.8	
20 to 24	489	5.1	4.6	
25 to 29	387	4.0	4.2	
30 to 34	367	3.8	4.4	
35 to 39	390	4.1	4.9	
40 to 44	528	5.5	6.5	
45 to 49	622	6.5	7.3	
50 to 54	687	7.2	7.1	
55 to 59	639	6.7	6.6	
60 to 64	776	8.1	7.5	
65 to 69	854	8.9	7.7	
70 to 74	645	6.7	5.7	
75 to 79	551	5.8	4.9	
80 to 84	452	4.7	3.9	
85+	505	5.3	4.0	
All ages	9,556	100	100	

Selected age groups

Age	Swanage (number)	Swanage (%)	Dorset - DCC area (%)	England & Wales
Young people 0 to 17	1,484	15.5	18.6	
Young adults 18 to 29	1,056	11.1	11.0	
Older people 65 +	3,007	31.5	26.3	

Source: Office for National Statistics (ONS), 2012 Mid Year Estimates

2. The number of people over 65 is more than twice the national average in Swanage. These statistics also show that the age groups that are most likely to take part in sports that take place a pitch are less well represented in Swanage. If the

Rep 4 – Sport England				Officer Comments
Document	**Policy / paragraph / page / map**	**Summary of main issues raised**	**Proposed changes**	
		base as per the NPPF to influence the final draft Green Infrastructure Strategy.	current standards are applied, the data produced will therefore give a false representation of the adequacy of provision of this category of GI asset. 3. DCC is due to produce a county wide sport and recreation strategy, which will take the demographic of the population into account, but until this time, there remains no reliable method of addressing this issue. For this reason, the only recommendation that this GI audit can put forwards is that the production of a Dorset wide sport and recreation strategy with standards based on actual demographics be supported. 4. There is however a lot of scope to improve GI and therefore increase the contribution that these assets make to the overall health of the GI network in Swanage. The site that could do with most attention is Herston recreation ground, however the scope is limited due to lack of space. Add the following at the beginning of conclusions page 51, and change title to Summary: 5. There are no up to date guidelines that can be used to assess the provision of sports and recreation facilities in Swanage. The GI assets providing this function are included in the study, but recommendations regarding the adequacy of provision for sport and recreation cannot be provided. It is therefore recommended that pressure to produce an up to date sport and recreation strategy is be applied on the responsible authority. Add new action into proposals table on page 54:	

Swanage Green Infrastructure Strategy (draft) – Proposed modifications

Rep 4 – Sport England				Officer Comments
Document	**Policy / paragraph / page / map**	**Summary of main issues raised**	**Proposed changes**	
			25. Support the provision of a Dorset sport and recreation strategy – Liaise with DCC and PDC	

Swanage Green Infrastructure Strategy (draft) – Proposed modifications

Rep 6 – T M Wiggins				Officer Comments
Document	**Policy / paragraph / page / map**	**Summary of main issues raised**	**Proposed changes**	
Swanage Green Infrastructure Strategy	The comments relate mainly to the town centre redevelopment proposed in the Swanage Local Plan. Some of the comments do however have relevance to the GI Strategy	Growing up in and around Swanage, I have seen the once tree lined Victoria Avenue and Rempstone Road lose their trees. It reduces the character and leafy quality of an area and it has been proven to reduce the value of property too. Surely a sign that trees have value in a town. Trees have health benefits; they create shade in the summer and air circulation. They help tackle pollution; they have beauty and attract wildlife. We know this stuff. So my request is for trees within the development. I think the time for the planting of cheap ornamental shrubberies within town planning is over. It actually looks depressing. I also think there won't be space for such areas of green, so I propose a formal pattern of tree planting along the King road East side of the development and within the newly created square.	Under proposal 7 in table on page 54, include: Ensure that tree planting is included where possible, especially in the brief for the town centre improvements.	The loss of avenues of trees has been highlighted in the Strategy, as have the benefits having trees in towns. The Strategy identifies various projects to address this, amongst these the requirement for a GI brief for the town centre development. It would be useful to clarify however that this should specifically include for tree planting.

Swanage Green Infrastructure Strategy – Proposed modifications

Rep 5 – The Woodland Trust				Officer Comments
Document	**Policy / paragraph / page / map**	**Summary of main issues raised**	**Proposed changes**	
Swanage Local Plan/Swanage Green Infrastructure Strategy		**Development considerations** The case for protecting woodland should be acknowledged more effectively with your consideration of all new housing development being put forward given the need to protect and enhance ancient woodland both in and around Swanage, whilst also seeking woodland creation because of the unique ability of woodland to deliver across a wide range of benefits, such as adapting to climate change and for the local economy.	See response in written reps for Swanage local plan. Inclusion of a developers guide as appendix 2.	The protection of ancient woodland is to be included in the Swanage Local Plan. The ability of GI (including trees) to deliver a wide range of benefits including adaptation to climate change and contribution to the local economy is dealt with in detail in the 'Benefits of GI:why invest?' chapter of the GI Strategy. The proposals

Rep 5 – The Woodland Trust				Officer Comments
Document	**Policy / paragraph / page / map**	**Summary of main issues raised**	**Proposed changes**	
				contained in the Strategy include for the production of a developers guide.
Swanage Local Plan/Swanage Green Infrastructure Strategy		The Woodland Trust would like to bring to your attention the Draft Regulation 123 list currently being put forward by East Hampshire District Council, and how woodland creation is also being acknowledged as a project which must be taken into account.	None.	The GI Strategy identifies that CIL could be a potential source of funding. The current focus of CIL projects is the delivery of SANGS to mitigate the impact of development on protected heathlands. SANGS could potentially include woodland, and will be delivered

Rep 5 – The Woodland Trust				Officer Comments
Document	**Policy / paragraph / page / map**	**Summary of main issues raised**	**Proposed changes**	
				through the development process where appropriate.
		Options for potential large housing sites The WASt is complimentary to Natural England's ANGST+ and is endorsed by Natural England. The Woodland Trust Woodland Access Standard recommends: **- that no person should live more than 500m from at least one area of accessible woodland of no less than 2ha in size** **- that there should <u>also</u> be at least one area of accessible woodland of no**	Include the Clay Valley section of the Dorset AONB Landscape Character Assessment with the baseline information. Omit text in the section on natural and semi-natural green spaces on page 42 and replace with: Green space is defined as natural when it is predominantly covered by either one, or a mix of the following[1]: ▪ woodlands and woodlots, trees and tree clumps with freely	Agree that the category of woodland has not been covered in enough depth in the GI Strategy. Agree that analysis of the existing provision of woodland and natural open spaces using the WASt and ANGST standards is required, and new

[1] Providing Accessible Natural Greenspace in Towns and Cities - A Practical Guide to Assessing the Resource and Implementing Local Standards for Provision. A study undertaken for English Nature (now Natural England) by the Centre for Urban and Regional Ecology at the University of Manchester 2006

Rep 5 – The Woodland Trust				Officer Comments
Document	**Policy / paragraph / page / map**	**Summary of main issues raised**	**Proposed changes**	
		less than 20ha within 4km (8km round-trip) of people's homes. Applying this standard in Purbeck, with a comparison against Christchurch and the South West as a whole …… **shows that Purbeck Council exhibits below average access to the smaller wood category**.	growing shrubbery or managed grassland underneath; ▪ freely growing scrub and dwarf shrubs (e.g. heathland); ▪ rough grassland, semi-improved grassland, wild herbs and native tall herbaceous plants; ▪ rocks and bare soil where natural succession is allowed to freely occur (including mudflats, dunes, etc.); ▪ open water and wetlands with reeds and other tall native herbaceous plants etc. The vegetation can be either 'self-seeded', or planted but have the character of being natural. In their Accessible Natural Green Space Standards (ANGSt) Natural England states that:	provision made where this is possible.

Rep 5 – The Woodland Trust				Officer Comments
Document	**Policy / paragraph / page / map**	**Summary of main issues raised**	**Proposed changes**	
			▪ no person should live more than 300m from their nearest area of accessible natural green space of at least 2ha in size; ▪ there should be a least one 20ha accessible natural green space within 2km from home; ▪ there should be one accessible natural green space 100ha site within 5km; ▪ there should be one accessible natural green space 500 hectare within 10km; ▪ at least 1ha of statutory Local Nature Reserve (LNR) should be provided per 1000 population These standards should be used as a benchmark for the provision of access to nature, though Natural England do make it clear that it is appropriate to	

Rep 5 – The Woodland Trust				Officer Comments
Document	**Policy / paragraph / page / map**	**Summary of main issues raised**	**Proposed changes**	
			adapt the standards to reflect local need. The following map illustrates the gaps in provision of the 2ha standard for accessible natural green space, with approximately 15% of Swanage not complying. Angst map ..\..\..\..\..\..\LANDSC~1\GREEN-~1\SWANAG~1\DRAFT-~1\WORKIN~1\APPEND~1\MAPS-A~1\final\angst-map-2016-06-29.jpg All of the other categories of the standards are however satisfied. For example the 20ha standard is satisfied by the beach and cliffs, the 100ha standard by Durlston Country Park, and the 500ha standard by the open access land at Ballard Down.	

Rep 5 – The Woodland Trust				Officer Comments
Document	**Policy / paragraph / page / map**	**Summary of main issues raised**	**Proposed changes**	
			The gap in provision is minimally closed by the accessible woodland that is proposed to the west of the Cauldron Barn Park Homes site (see below), but there are no further opportunities to create more accessible natural green space in the locations that it is needed to enable full compliance. It is considered however that there are opportunities to improve and create new GI in some of the other categories, which may compensate for the gap in provision of natural green space. The Woodland Trust's Woodland Access Standard (WASt) recommends that no person should live more than 500m from at least one area of accessible woodland of no less than 2 hectares (ha) in size, and that there should also be at least one area of	

Rep 5 – The Woodland Trust				Officer Comments
Document	**Policy / paragraph / page / map**	**Summary of main issues raised**	**Proposed changes**	
			accessible woodland of no less than 20ha within 4km of people's homes[2]. The Forestry Commission defines woodland as 'land under stands of trees with a canopy cover of at least 20% (or having the potential to achieve this) including integral open space…….' and includes areas of woodland scrub, but not areas of gorse, rhododendron etc outside woodland[3]. Map sheet 1 (following) shows an assessment of the existing accessible woodland in and around Swanage. The woodland consisting of Langton West Woodland, and Talbot's Wood to the east is accessed by a number of public RoW. This woodland is greater than 20ha in area, and less than 4km	

2 Woodland Trust 'Space for people – targeting action for woodland access' 2010 www.woodlandtrust.org.uk/publications

3 http://www.forestry.gov.uk/website/foreststats.nsf/byunique/sources.html

Rep 5 – The Woodland Trust				Officer Comments
Document	**Policy / paragraph / page / map**	**Summary of main issues raised**	**Proposed changes**	
			from Swanage, meaning that the standard for larger woodland is reached satisfactorily. In contrast however the assessment shows that only 50% (approx) of the town has access to woods in the smaller wood category. Map sheet 2 is an analysis of the potential to comply with the standard for small woods. This analysis shows that it would only be possible to achieve somewhere near full compliance if public open space and recreational facilities were planted with woodland as shown. However, it is clearly not acceptable to plant up valuable recreational and sports facilities with woodland. Along with this, land availability issues, levels of accessibility, townscape character and landscape character also need to be taken into consideration when identifying potential sites for accessible woodland. Other	

Rep 5 – The Woodland Trust				Officer Comments
Document	**Policy / paragraph / page / map**	**Summary of main issues raised**	**Proposed changes**	
			considerations relate to the GI benefits that the woodland could provide. For example woodland could be utilised to screen existing development, and to contribute to flood water management. WAST sheets 1 and 2 ..\..\..\..\..\..\LANDSC~1\GREEN-~1\SWANAG~1\DRAFT-~1\WORKIN~1\APPEND~1\MAPS-A~1\final\wast-sheets-1-and-2.pdf Analysis of the issues, and options for siting new woodland produces the proposals illustrated on map sheet 3. There are 3 main contenders for the creation of new small woodlands, with a 4th possibility should village green status be achieved for Herston Fields. Planting of all 4 areas of woodland would mean that approximately 80% of the town will be within 500m, or walking distance of 2ha of accessible woodland.	

Rep 5 – The Woodland Trust				Officer Comments
Document	**Policy / paragraph / page / map**	**Summary of main issues raised**	**Proposed changes**	
			Grants are provided for woodland planning, creation and management. Details are provided on the GOV.UK website on the Countryside Stewardship: Woodland Support page[4] and in the Countryside Stewardship Manual[5]. Priority is given to schemes that protect and enhance the natural environment, and it will be particularly useful to highlight that the proposed woodlands will protect and enhance: ▪ biodiversity; ▪ flood management; ▪ landscape character; ▪ educational access. Help with the application process is available from both Natural England and the Forestry Commission.	

4 https://www.gov.uk/government/collections/countryside-stewardship-woodland-support

5 Countryside Stewardship Manual published by the Forestry Commission, the European Agricultural Fund for Rural Development and Natural England: Nov 2015

Rep 5 – The Woodland Trust				Officer Comments
Document	**Policy / paragraph / page / map**	**Summary of main issues raised**	**Proposed changes**	
			It is important that the new woodlands that are created are connected to the existing network and local woodlands so that they form a more resilient resource which supports the green infrastructure of the rural and built environment in and around Swanage. The connections will on the whole be provided by the existing network of hedgerows that form boundaries to fields and property (the hedgerows contain some of the same species of trees and shrubs that are present in the woodlands, and can act as conduits which provide cover, food sources and nesting places for, and allow wildlife to travel between woods without becoming vulnerable when crossing open ground). The GI audit did however identify that some of these hedgerows are in poor condition, and need to be restored or	

Rep 5 – The Woodland Trust				Officer Comments
Document	**Policy / paragraph / page / map**	**Summary of main issues raised**	**Proposed changes**	
			'gapped up'. The restoration of hedgerows will also help to improve the condition of the countryside immediately adjacent to Swanage, which the landscape character assessment supporting the AONB Management Plan[6] has identified as being in poor condition. The Countryside Stewardship scheme also provides funding for the small scale restoration of boundary features such as hedgerows. In order to perpetuate the provision of accessible woodland, new major housing developments will be expected to respond to WASt by ensuring that the new housing is within 500m of accessible woodland. If there is no existing or proposed (by this Strategy) accessible woodland within this distance, it will be necessary for suitable	

6 Conserving Character - Landscape Character Assessment and Management Guidance for the Dorset AONB: Dorset AONB Team:2008

Rep 5 – The Woodland Trust				Officer Comments
Document	**Policy / paragraph / page / map**	**Summary of main issues raised**	**Proposed changes**	
			woodland to be provided as part of any Suitable Alternative Natural Greenspace (SANG) or GI that may be required under Policy DH of the Local Plan. All of the natural and semi-natural green spaces are located either outside or on the edge of Swanage, and provide benefits including biodiversity, visual/amenity, recreation (health and wellbeing) and education. The vegetation will also provide a level of resilience in the face of climate change, but this will be beneficial only locally at the interface between the green space and the built environment. Not all of these green spaces are managed. Of those that are, some of those are managed with a light touch with the rest being left up to nature, some are managed specifically for nature conservation purposes, and	

Rep 5 – The Woodland Trust				Officer Comments
Document	**Policy / paragraph / page / map**	**Summary of main issues raised**	**Proposed changes**	
			some, such as The Downs are managed mainly for amenity. It is not appropriate to make many changes to these sites because they are managed appropriately for their primary function. There are some opportunities however to improve habitat, and to create more woodland. In the last column of the table on page 51, omit and after 'green corridors', and add a comma. Then omit the full stop at the end of 'planting' and add and include planting along the interface with open countryside. Add a new projects in the proposals table: Greyseeds Wood – creation of 2ha of accessible woodland on open land to the south of the 'Greyseeds Estate'	

Rep 5 – The Woodland Trust				Officer Comments
Document	**Policy / paragraph / page / map**	**Summary of main issues raised**	**Proposed changes**	
			Cauldron Barn Wood – creation of 2ha of accessible woodland on open land to the west of Cauldron Barn caravan park Whitecliff Wood – creation of 2ha accessible woodland on open land to the west of Whitecliff Road Add in £5,500.00 under estimate of cost for each location, and add the following under mechanism for implementation: Engage with landowner – Dorset County Council. Engage consultant to design scheme. Funding application. Planning application may be required – consult Forestry Commission Engage with landowner – Cauldron Barn caravan park. Engage consultant to design scheme. Funding application.	

Rep 5 – The Woodland Trust				Officer Comments
Document	**Policy / paragraph / page / map**	**Summary of main issues raised**	**Proposed changes**	
			Planning application may be required - consult Forestry Commission Engage with landowner – National Trust. Engage consultant to design scheme. Funding application. Planning application may be required - consult Forestry Commission Add new penultimate para page 52 (Conclusions – renamed Summary): It is also clear that new development needs to incorporate GI that is designed to connect into the existing GI network, help to assimilate the development into the wider landscape setting, and continue the themes contained in the proposals chapter of the Strategy.	
		Flood amelioration	None.	Flood attenuation and water

Rep 5 – The Woodland Trust				Officer Comments
Document	**Policy / paragraph / page / map**	**Summary of main issues raised**	**Proposed changes**	
		We would (therefore) like to see this Green Infrastructure Strategy incorporate text to reflect the role of trees and woodland in delivering water flow and quality benefits for green infrastructure, therefore we are asking for this to also to be taken into account.		resource management is referred to specifically on page 21 of the Strategy. The proposals incorporate tree planting in flood attenuation projects. This aspect is therefore covered satisfactorily.
		Monitoring and review ……. whilst monitoring is being taken into account with your Draft Swanage Local Plan, effective monitoring needs to be put in place so as to highlight any effective delivery. Maintaining a high quality natural environment should be	None.	Appendix 3 of the Swanage Local Plan identifies two targets for Policy SGR that are to be monitored: No significant loss to existing GI

Rep 5 – The Woodland Trust				Officer Comments
Document	**Policy / paragraph / page / map**	**Summary of main issues raised**	**Proposed changes**	
		defined as a measurable objective of your strategy, and currently there is no indicator of biodiversity proposed, or any other environmental targets such as woods and trees and canopy cover. Local Planning Authorities should identify suitable indicators for monitoring the plan, and 'net gain' should be identified as something that should be measured.		network unless such damage is outweighed by the other benefits of the development. and Improve and enhance the GI network in line with the GI Strategy. The key indicator of required outcomes is to be the implementation of the projects as set out in the GI strategy.

Rep 5 – The Woodland Trust				Officer Comments
Document	**Policy / paragraph / page / map**	**Summary of main issues raised**	**Proposed changes**	
				Item 65 of the Strategy goes further to state that the quality of the projects and of their maintenance should also be monitored. This all with the aim of providing quantified information to enable the success and outputs of the investment to be measured. Tree canopy cover is not thought to be a

Rep 5 – The Woodland Trust				Officer Comments
Document	**Policy / paragraph / page / map**	**Summary of main issues raised**	**Proposed changes**	
				reliable indicator in Swanage as many of the trees forming the existing canopy were planted during the Victorian era, and are coming to the end of their lives. There is therefore likely to be a notable reduction in the amount of canopy cover in future years even though the proposals in the GI Strategy include for the planting of many new trees. This is because the

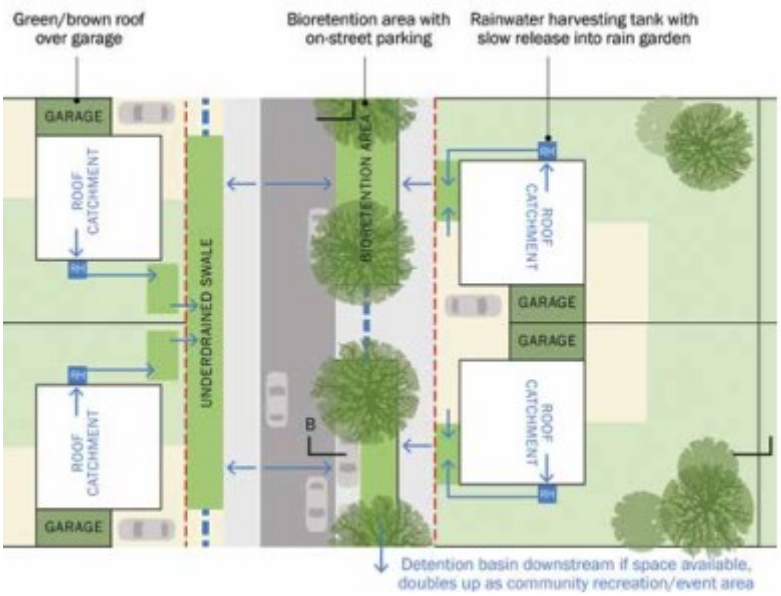
Rep 5 – The Woodland Trust				Officer Comments
Document	**Policy / paragraph / page / map**	**Summary of main issues raised**	**Proposed changes**	
				canopy spread of newly planted trees is miniscule compared to that of the many over-mature trees that will need to be removed. It will take many years for the newly planted trees to recoup the reduction in canopy cover that will result. Targets to increase canopy cover would therefore be doomed to failure at this time.

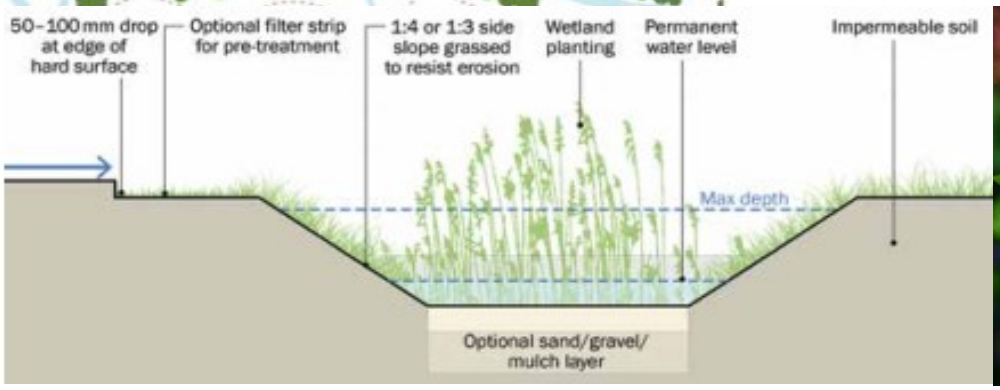
Rep 5 – The Woodland Trust				Officer Comments
Document	**Policy / paragraph / page / map**	**Summary of main issues raised**	**Proposed changes**	
				Fluctuations to biodiversity are also notoriously difficult to monitor. This is because biodiversity is made up of a combination species diversity, ecosystem/habitat diversity and genetic diversity. Overall it is considered that monitoring of the Strategy and its implementation is satisfactorily covered.

Item 9, Appendix 3
(PG - 16.05.18)

Swanage Green Infrastructure Design Guidance

June 2018





Purbeck District Council

Thriving communities in balance with the natural environment

Illustrations on front cover courtesy of CIRIA: The SuDS Manual C753 https://www.ciria.org/Resources/Free_publications/SuDS_manual_C753.aspx

Introduction

The green infrastructure policy (SGI) in the Swanage Local Plan requires development proposals to take account of the Swanage Green Infrastructure Strategy. Planning applications for major development should also be accompanied by a statement setting out how the development will contribute to enhancing/improving the existing GI network. The National Planning Policy Framework and the Purbeck Local Plan also require GI to be considered. This guidance has been produced to help you to comply with Policy SGI, and to give you an indication of how the Council will assess your GI statement and proposals.

Considering GI from the outset can ensure that new development is more acceptable to existing communities.

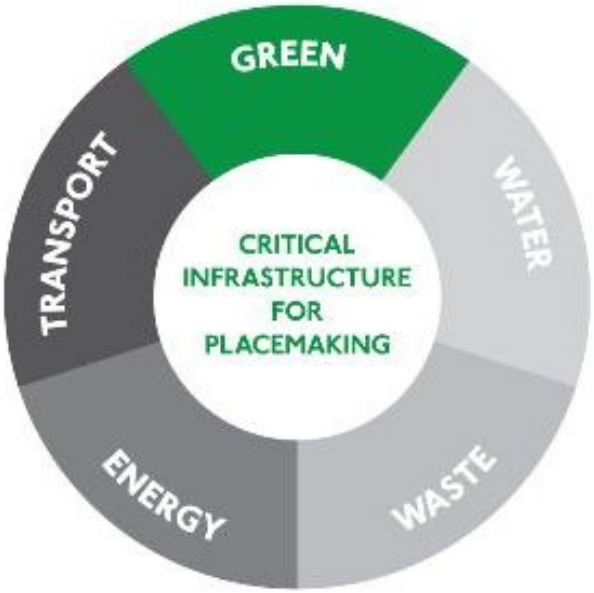
Well planned and well designed GI creates spaces that deliver more efficient land use.

Investing in the provision of high standard GI will pay dividends as customers are willing to pay more for it.

(from 'Profitable Places' published by the Landscape Institute).

What is green infrastructure (GI)?

In simple terms, GI refers to the network of 'natural' features (GI assets) such as green spaces, street trees, 'greenways' and waterways (which are termed blue/green infrastructure) that are found in and around villages, towns and cities. It is a service-providing infrastructure like any other, but unlike traditional grey infrastructure (eg roads, power grids, piped water and sewer systems) can be planned and designed to deliver multiple benefits. Refer to the main Swanage GI Strategy document for further information.



The checklist at the end of this guidance provides examples of GI that can be included in new development.

Why is it important?

The setting of new development is as important as the development itself. GI is a fundamental aspect of this setting and should form part of the basic infrastructure serving the development. It is important that you plan for it right from the outset - this will ensure that GI will contribute to the creation of the framework around which the remainder of the development is designed. Well designed GI:

- makes development more sustainable;
- helps to integrate development into the townscape/landscape;
- creates a sense of 'place';
- supports easy navigation in, through and around development;
- contributes to community health and wellbeing;
- addresses flooding issues;
- re-uses surface water instead of disposing of it ;
- replenishes drinking water sources;
- replaces lost habitat and supports wildlife;
- enhances resilience to climate change;
- contributes to the reduction of air pollution;
- makes a place more attractive;
- supports food production, and can provide sustainable sources of fuel.

It can deliver multiple benefits at one time, for example a public amenity space is capable of providing natural drainage, cleaner air, and urban cooling. Because of this flexibility GI often represents a more efficient use of land, and delivers better value for money than infrastructure that requires expensive technology and is difficult to maintain.

Because GI provides so many important benefits to us and to the environment, it is vital that new development respects existing GI wherever possible, and provides new multi-functional GI that connects into and reinforces the wider GI network. This requirement is supported by planning policy at a national and local level.

National Planning Policy Framework

'When new development is brought forward in areas which are vulnerable, care needs to be taken to ensure that risks can be managed through suitable adaptation measures, including through the planning of green infrastructure' (policy 99).

Purbeck Local Plan Policy GI: Green Infrastructure, Recreation and Sports Facilities

New residential development will be required to make provision for:

- recreation, sport and/or open space facilities; and
- green infrastructure.

Where possible, facilities should be provided on site, as an integral part of the development. However, where on-site provision is not appropriate, off-site provision or a financial contribution will be sought. The level of contributions will be set out in the Community Infrastructure Levy (CIL) Charging Schedule.

Settlement extensions and major employment sites will be expected to contribute towards the delivery of significant areas of new green infrastructure and the management of a connected, coherent and functional network of new and enhanced green spaces corridors and public rights of way in accordance with the Green Infrastructure Strategy standards.

(The Green Infrastructure Standards that are referred to in the above Policy in the draft South East Dorset Green Infrastructure

Swanage Local Plan Policy SGI: Swanage Green Infrastructure

All development proposals in Swanage should take account of the Swanage Green Infrastructure Strategy. Applications for major development should be accompanied by a statement setting out how the proposals:

- will avoid damage or loss to the existing green infrastructure network (as defined in the Swanage Green Infrastructure Strategy) unless such damage or loss is outweighed by other benefits of the development; and
- will maximise any opportunities to improve and enhance the green infrastructure network, in line with the Swanage Green Infrastructure Strategy.

(The Swanage GI Strategy referred to in this Policy is a Supplementary Planning Document which contains a number of proposals intended to improve the GI network of Swanage. The provision of this GI design guidance was one of the proposals.)

Because Swanage is in the Dorset Area of Outstanding Natural Beauty (AONB) you also need to take account of policies included in the AONB management plan:

Dorset AONB management plan 2014-19

PH1c: retain, restore, manage and/or create characteristic features:

- promote mitigation and enhancements for landscape character and ecosystem services through development management.

Ecosystem Services are the products of natural systems from which people derive benefits, including goods and services, some of which can be valued economically, and others which have a noneconomic value – see Swanage GI Strategy for further information. The provision of ecosystem services is one of the defining characteristics of GI.

GI and your development

The planning authority for Swanage is Purbeck District Council. When considering your planning application, where necessary the Council will expect your proposals to:

- use landform, layout, building orientation, massing, and landscaping to ensure a net gain for GI and biodiversity;
- provide public and/or private GI so that an accessible choice of shade and shelter is offered, recognising the opportunities for people, biodiversity, flood storage and carbon management that multi-functional GI can provide; and
- reflect the priorities of the Natural Environment White Paper[1] in relation to the value of GI in supporting ecosystem services;
- connect into, and reinforce the existing GI network;
- complement/and or contribute to the GI projects and initiatives identified in the Swanage GI Strategy.

Getting started

When preparing your development proposals it is a good idea to consult the planning authority for pre-application advice on planning issues. There is a charge for this service[2], but there are many benefits to getting pre-application advice, including a possible reduction in professional costs and time for drawing up the final design and layout plus a better chance that your proposals will be supported by officers.

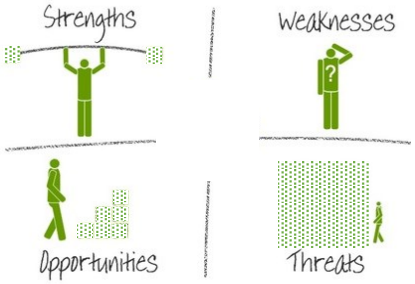
The best way to plan the GI for your development is to use a structured design process. This helps you to think creatively about the issues and produce an appropriate response. The illustration on the next page shows the stages of the design process, and how they follow on from each other.

If you don't have the right skills to design the GI yourself, the best person to design it for you is a Landscape Architect. The Landscape Institute has a list of local registered Landscape Architects https://members.landscapeinstitute.org/li-registered-practice-directory/ You may also want to consult a water management engineer, ecologist, the local Wildlife Trust and others with relevant technical expertise. The advice provided can then be fed into the design process.

[1] See 2.35, 2.43, 2.78 – 2.83 of *The Natural Choice: securing the value of nature* published by H M Government June 2011

[2] Details of the fees charged for pre-application advice are provided on the pre-application advice form on the Dorset for You website https://www.dorsetforyou.gov.uk/preapplicationadvice/purbeck

THE DESIGN PROCESS



Survey

- Physical
- Landscape and Townscape character
- Green and blue infrastructure
- Designations
- Historical
- Ecological
- Flooding
- Hydrology
- Geology and soils
- Views
- Climate
- Services etc.

Analysis

- Appraisal and analysis of context including function of existing green and blue infrastructure
- Identify contextual and site constraints and opportunities
- Produce and analyse options to address constraints and opportunities
- Identify guiding principles
- Concept and GI strategy development

Design

- Masterplan including GI framework
- Detailed proposals including
- Specification
- Maintenance schedule
- Management plan

CONTEXT

CONCEPT

IMPLEMENTATION

Why is context important?

Masterplans translate policy into detailed proposals. How you apply this to your proposals is guided by the context of the development and its setting, and by the type of development you want to build.

To gain a thorough understanding of the context of your development it is important that you have the site and its surroundings surveyed. This should include a physical survey of the site conditions and vegetation, and a study of available background information including supplementary guidance. You will find that a lot of this information is available in the Swanage GI Strategy.

Analysis of the context and constraints of the site, and of the design objectives for the GI for your development will inform the design process, and result in GI that:

- responds to need and opportunities;
- provides many benefits;
- connects into the existing network in a positive way;
- functions well as part of the wider GI network;
- provides net gains in biodiversity.

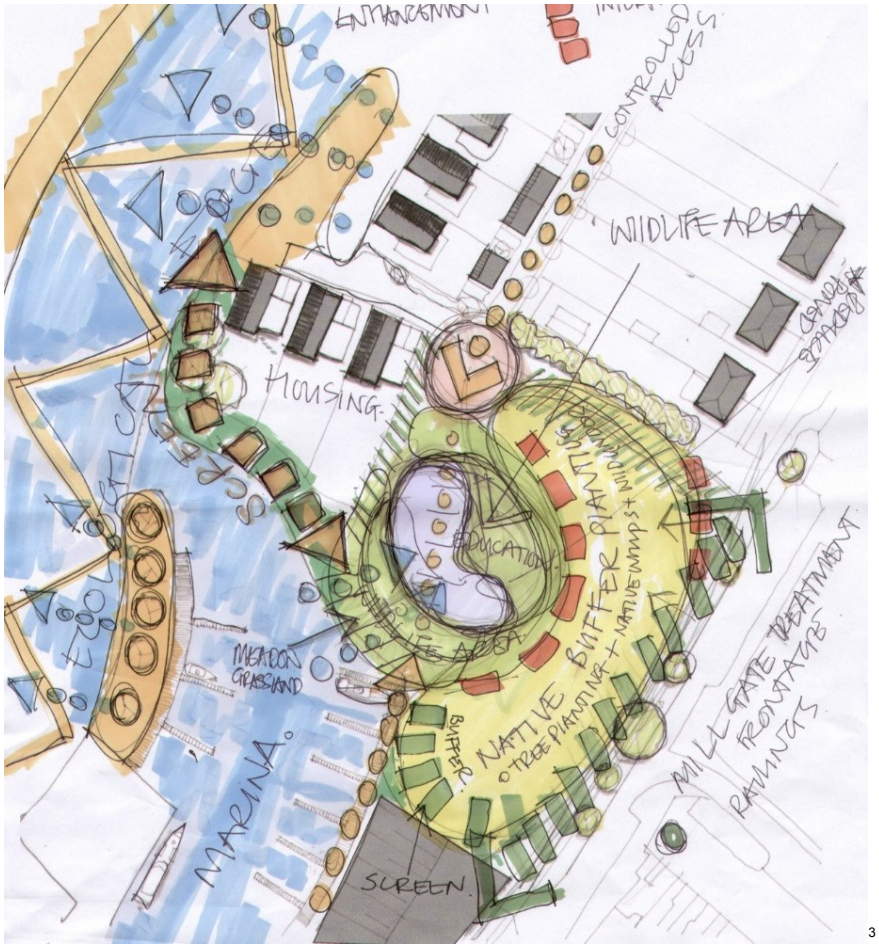
The concept

By the end of the analysis process, you will have started to form initial design ideas which can then be developed into a concept plan.

Once the initial design ideas and functional relationships have been explored, the concept for your proposals can be generated. The concept defines the principles that will guide the overall design of your development. A concept plan conveys these general principles, and is a useful way of presenting ideas to other designers, to the client for early feedback, and may form the basis of pre-application discussions with the planning authority. It can be a rough freehand drawing or a series of sketches or diagrams that illustrate the decision-making/idea-development/conflict resolution process.

The concept plan will illustrate how the infrastructure serving your development, including the GI, will connect into and provide benefits to the surrounding area. It should show that the principles behind the design of your development have not been generated in isolation, and that they respond to the setting and context of the site and to relevant issues. The concept plan should also illustrate that GI has been considered from the outset and will form an integral part of the final layout. The main function of and connections between GI assets should be shown on the plan, and will form the basis of the GI strategy for the site.

Example of a concept plan:



[3]

For more information on the production of a GI strategy, refer to 'The essential role of green infrastructure: eco-towns green infrastructure worksheet (2008) produced by the Town and Country Planning Association, Communities and Local Government, and Natural England.

At this stage GI is described in generic terms for example:

Greenway traffic-free routes which are vegetated, generally well separated from traffic and continuous over obstacles and through road junctions.

Green corridor an undeveloped corridor of green or blue/green open space that penetrates and therefore allows the free movement of wildlife into and through urban areas.

GI node a green open space where a number of GI functions are concentrated or GI connections converge.

[3] For illustrative purposes only. Based on Ordnance Survey map © Crown copyright and database rights 2018 O.S. LA 100022058

GI stepping stones small areas of GI that may not be large enough to support wildlife on their own, but that provide a way to move through the development.

Blue/green infrastructure GI that includes water for example streams, ponds.

It can also be useful to add a description of the principal function of each element of the landscape/land use for example:

- buffer
- screen
- wildlife area
- public open space
- parking
- housing

The concept can then be translated into a written strategy (the statement), which should be included in your Design and Access Statement to be submitted with your planning application. This will help to explain the principles which guide the overall GI design for your development.

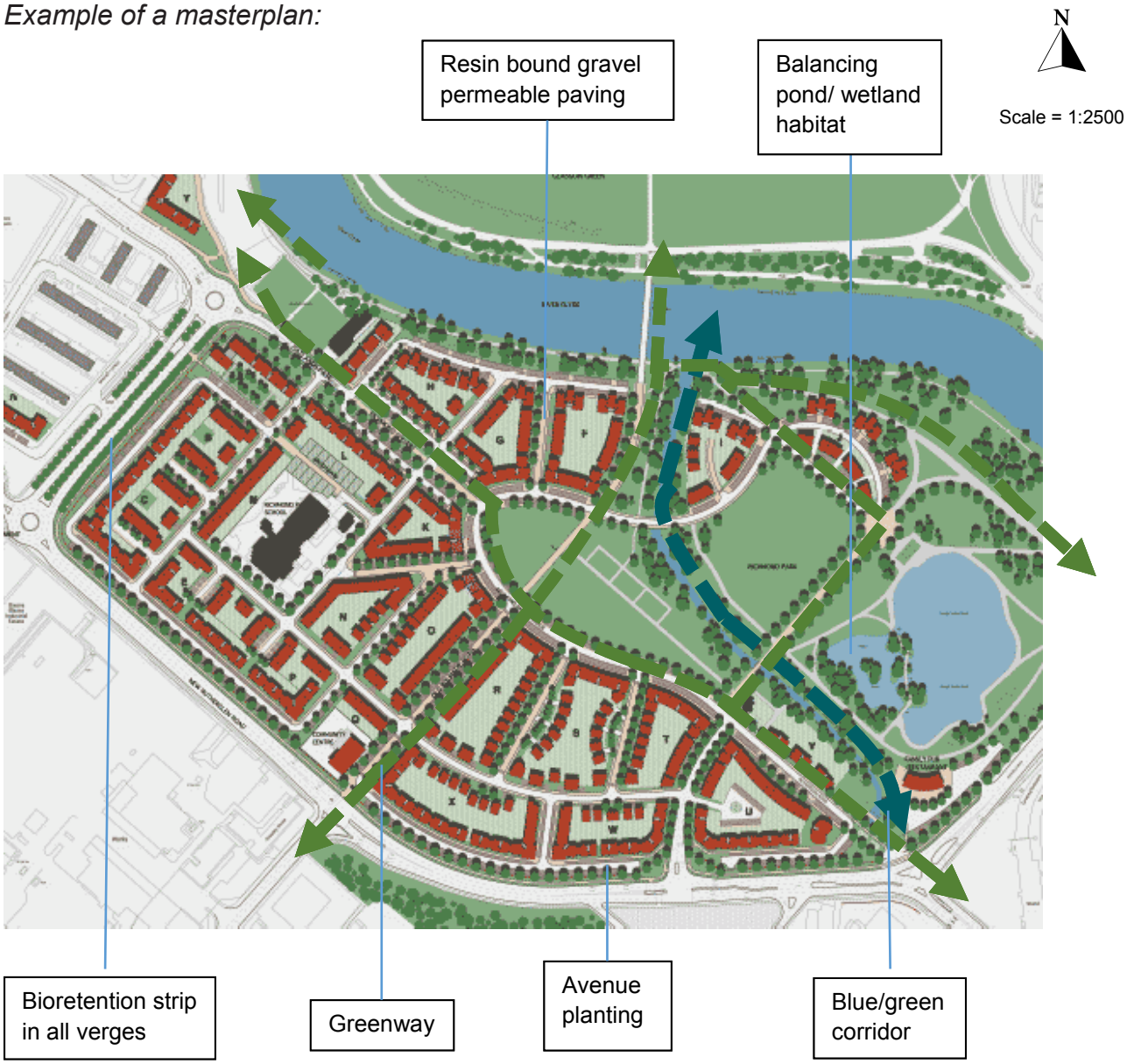
The masterplan

The masterplanning process further develops the functional and aesthetic aspects proposed at the concept/strategy stage into the framework that your development will sit in. The layout, siting and orientation of the buildings will respond to this framework, which should be GI led. The masterplan is an illustration of the spatial organisation of the GI, the hierarchy of routes through the development for vehicles, pedestrians and cyclists, and connections to the surrounding area, along with an indication of the location and density of the buildings in block form. The masterplan may also provide information about the type of building materials and surface treatments.

It is a good idea to include the immediate area surrounding the development site on your masterplan, as this will help to show how your development will integrate into the local context. Ensure that a north pointer and the scale of the plan are also included.

A masterplan is a useful way to present your development proposals for public consultation, though it is important to bear in mind that not everyone can relate to plans. For this reason, it is also useful to produce artists impressions of how the development will look when moving around and within it.

Example of a masterplan:



[4]

The masterplan detailing the GI framework should form part of your planning application. This is so that the planning authority can make an assessment of how the proposed GI will contribute to aesthetics and function as part of the wider GI network. The amount, type, and number of functions of the GI that you provide as part of the development will also be assessed. As a guide, you should look to achieve a 'very good' rating using the GI checklist which is included at the end of this guidance.

As you will see from the GI checklist, you will increase the rating of the GI that you provide if you ensure that each asset provides as many functions as possible, and if it connects into, and enhances the existing GI network. Retaining as much of the existing vegetation as is

[4] For illustrative purposes only. Based on Ordnance Survey map © Crown copyright and database rights 2018 O.S. LA 100022058

possible will also raise the GI rating for your development, especially if this vegetation is trees or hedgerows, which provide valuable habitat for a whole range of wildlife and support biodiversity.

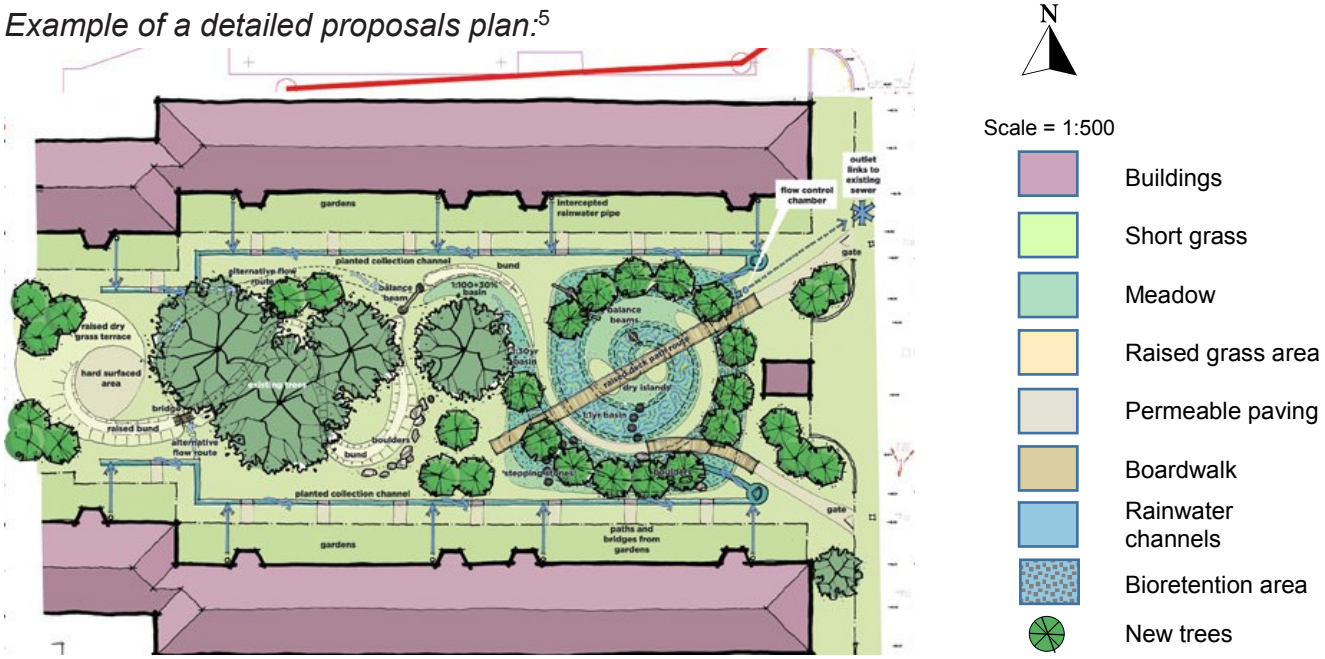
Detailed proposals

The next stage in the design process is to produce the detailed information that is required to build the development. This information, also referred to as production information, includes plans, sections, detail drawings, and the specification.

You may wish to provide the drawings showing the detailed proposals along with the masterplan to support your planning application. If you choose not to do this, the Council may require you to provide this information at a later date, and attach conditions to your planning permission. Each submission of information to satisfy planning conditions will entail additional cost and delay as detailed on the Dorset for You website https://www.dorsetforyou.gov.uk/planning/applications/fees

It is at this stage that the GI framework produced for the masterplan is broken up into its constituent parts, which are then designed up in detail. It is important to ensure that no element is designed in isolation, and that the overall aim remains to provide GI that is multifunctional. The plan below is an example of an integrated approach, where the designs for the sustainable urban drainage scheme (SuDs) and the hard and soft landscaping for a courtyard have informed one another, resulting in a well designed multifunctional GI.

Example of a detailed proposals plan:[5]



[5] For illustrative purposes only. Based on Ordnance Survey map © Crown copyright and database rights 2018 O.S. LA 100022058

With reference to GI (including blue/green infrastructure), the Council needs to see the detailed proposals to ensure that the design of the planting and SuDs of the proposed GI is appropriate for the location, and that the SuDs will function as required. The Council will also be looking to see that the SuDs structures are integrated into the landscape as part its overall design, and not designed as stand-alone drainage features. This is an important aspect of multifunctional GI which should be demonstrated by your proposals.

You will also be required to demonstrate how GI including any existing vegetation will be managed so that it contributes aesthetically and maintains its level of function throughout the lifespan of the development. This will involve the provision of a management plan detailing who will be responsible for managing and maintaining the GI, a management 'prescription' for each element which is designed to achieve/maintain the original design objectives, and detail of individual maintenance operations required. The maintenance of SuDs on private land needs to be included, but the maintenance of private gardens does not.

Submission to the planning authority

To re-cap, the GI proposals for your development should be planned, designed and managed in a way that is sensitive to, and includes provision for natural systems and ecosystem services. Each GI asset may have an obvious primary function, but should also perform simultaneous additional functions. As part of your planning application you should provide:

- a GI strategy statement in your Design and Access statement;
- a GI led masterplan, which illustrates the GI framework for your development;
- representative sections through the site as necessary to show how changes in level are responded to;
- detailed plans and sections and a specification for each element of the proposed GI, which may be provided up-front, or in response to planning conditions at a later date;
- where planting is proposed, you should include planting plans with a planting schedule and a specification to explain how the ground is to be prepared and cultivated;
- details of all SuDs must be submitted, along with the results of a percolation test to determine the infiltration rate, and calculations showing the capacity of the system to deal with a 1 in 100 year flooding event, including an appropriate allowance to cater for climate change. This would be 40% for residential development and would be lower for commercial development;
- a maintenance schedule and management plan for all GI including existing and proposed, which should incorporate measures to conserve and enhance biodiversity.

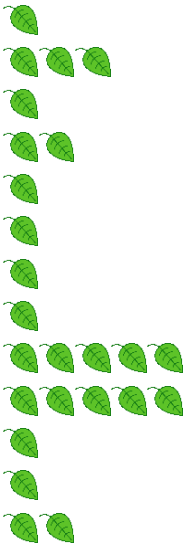
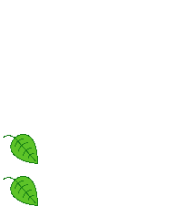
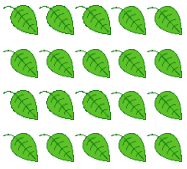
GI checklist

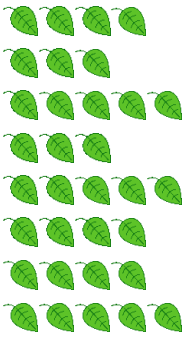
The following checklist is intended to help in planning for existing and new GI on your development site. It is not an exhaustive list, but includes some of the more common GI elements that you may want to consider including. The GI elements have been rated according to the value that they contribute to the overall GI network. You should aim to include GI from as many sections as you can, and to achieve a 'very good' standard for the delivery of GI.

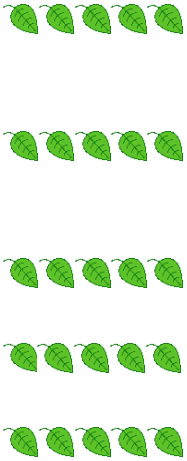
GI rating for development

Poor	30 – 39
Average	40 – 49
Good	50 – 59
Very good	60 – 69
Excellent	70 and above

Existing GI elements	GI points	Tick if included
A Existing GI If there is existing GI on the site, retain it where possible particularly if it contributes to biodiversity: ▪ stream/pond; ▪ trees with stem girth of more than 30cm; ▪ single species evergreen hedgerow; ▪ mixed species hedgerow. Additional green points are available if: ▪ an existing culverted stream is brought back to an open state; ▪ an existing stream has 'hard' engineered banks replaced with 'soft' engineering solutions.		

New GI	GI points	Tick if included
B Sustainable urban drainage systems: ▪ rainwater harvesting; ▪ green roofs; ▪ bioretention scheme; ▪ rain gardens; ▪ swales; ▪ filter strips; ▪ detention basin; ▪ infiltration basin; ▪ pond; ▪ wetland; ▪ geocellular system; ▪ permeable paving; ▪ gravel surfacing. Additional green points are available if: ▪ all of the hard surfaces are permeable; ▪ all of the roofs are green roofs;	 	
C Tree planting: ▪ street trees; ▪ individual trees in gardens; ▪ groups of trees in amenity areas; ▪ woodland or copse. Additional green points are available if the trees are: ▪ woodland or coppice for biofuel or timber; ▪ to drain land; ▪ an orchard; ▪ all selected to provide food for birds, insects and other wildlife (nectar, berries, fruit, nuts); ▪ all native species;	  	

▪ resilient to climate change. ▪ planted in every back garden; ▪ planted in every front garden.		
D Climber/shrub/herbaceous planting and grass: ▪ green wall construction; ▪ vegetation on trellis or wall; ▪ shrub planting; ▪ single species evergreen hedge; ▪ mixed species hedge; ▪ herbaceous planting; ▪ short mown grass; ▪ Wildflower meadow. Additional green points are available if planting is: ▪ selected to provide food sources for birds, insects and other wildlife (nectar, berries, fruit, nuts); ▪ all native species; ▪ Walls including building walls are covered with climbing plants; ▪ Hedges are planted instead of constructing free-standing walls; ▪ Hedges are planted to replace existing close-boarded and other fencing; ▪ Hedges are planted instead of erecting close-boarded and other fences.	     	
Multifunctional GI	GI points	Tick if included
E Cover, connections and services: ▪ the canopy cover of the existing and proposed trees will total more than 40% of the site area (including buildings) when the trees are mature;		

▪ the total area of the existing and proposed GI on the site is more than 40% of the site area (including buildings); ▪ all of the green amenity areas including road verges in the new development have more than one GI function; ▪ footpaths across the site connect into the existing rights of way network, and are well signposted; ▪ a green corridor or corridors are provided on the site as part of the open space provision; ▪ a communal garden, or a community area that is suitable for the cultivation of fruit and vegetables is provided.		
Total number of GI points		
GI rating of development		

Include the completed GI checklist with your Design and Access Statement when you submit your planning application.