



Green Infrastructure Strategy

Buckfastleigh & Buckfast
Neighbourhood Plan
2017 - 2027

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Issue Date	06.07.18
Version	3.0
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Executive Summary

Buckfastleigh Town Council are in the process of producing a Neighbourhood Plan (NP) for the Parish of Buckfastleigh and Buckfast for the period 2017 – 2027. This ambitious document details the aspirations and direction of the community. The Town Council commissioned this Green Infrastructure Strategy (GIS) to support the emerging NP.

Analysis completed during the site appraisal identified that the Parish is an area rich in biodiversity and landscape value, however it lacks in pedestrian access and an interconnected off-road cycle network, the public realm is lacking in cohesion and continuity and flood events are common, negatively impacting on local business and residents.

A range of proposals have been outlined within this strategy to inform future growth, including enhancement of biodiversity networks, creation of a more sustainable and active travel network and improvement of key gateway sites.

This document is intended as an outline document only, providing a direction and proposals to be brought forward in the future by the Community and the Parish. Following the approval of the neighbourhood plan, there are several potential future steps including exploration of funding opportunities for feasibility studies and further community engagement to develop some of the ideas contained within this document.

Potential funding opportunities, and further details of proposals are contained within the report and appendices.

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Round Cross viewed from Church Cross road, Buckfastleigh.

Introduction

“Green infrastructure (GI) is a network of multifunctional green space, urban and rural, which is capable of delivering a wide range of environmental and quality of life benefits for local communities” National Planning Policy Framework, 2016ⁱ.

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”, National Planning Policy Framework, 2016ⁱⁱ.

In February 2018 Buckfastleigh Town Council (BTC) appointed Landsmith Associates and Tor Ecology to produce a Green Infrastructure Strategy (GIS) to accompany the Buckfastleigh & Buckfast Neighbourhood Plan (BBNP). The BBNP is being prepared within the context of the Dartmoor National Park Authority Core Strategy Development Plan Document (June 2008) and the Teignbridge Local Plan (adopted 6th May 2014).

The purpose of this GIS is to produce a series of evidence-based outline proposals to inform and guide BBNP policies and to provide a framework for the future direction of the Parish for the next 15 years. This GIS is intended to contribute to and compliment the Neighbourhood Plan. Detailed

proposals do not fall within the scope of this document.

It should be noted that the development of proposals associated with the Buckfast area are limited within this document. Buckfast Abbey provide support for the management of public realm within the locality of the village (via mowing regimes and management of green space in and around the locality of the Abbey) and are in ownership of much of the land and buildings within the village. As such, emerging proposals within this area should be developed in close association with the Abbey as key stakeholders. This level of consultation did not fall within the scope of this document.

Methodology, Purpose and Status

This aspirational strategy is informed by the proposals and findings as set out in the Neighbourhood Development Plan, site appraisals, desktop studies, local, national and international planning policy and guidance, designated sites and best practice guidance. In addition, site visits were undertaken with Judith Hart, Inga Page and Councillor Simon Rines from Buckfastleigh Town Council. The document was also developed with consideration to past stakeholder and community consultations which highlighted local aspirations and needs.

Liaison and input from the local and county authority officers from Dartmoor National Park Authority have assisted in ensuring that the proposals tie in with local proposals and principles. Teignbridge District Council and Devon County Council had also had opportunities to review and provide comments during the development of this strategy; no formal comments have been issued at date of final publication.

Local guidance policies including the Devon County Council Green Infrastructure Strategy Guiding Principlesⁱⁱⁱ create the framework for this document whilst the proposals developed within it are individually developed and tailored to the area.

There are a variety of proposals which are intended to be implemented in the short-term (6 months), medium-term and long-term. The proposals can be used to inform tangible schemes with funding potential for infrastructure improvements, parks and gardens, streets/public realm, public formal squares and spaces, woodlands and green links (classification of these open space categories is based on PPG17 classification^{iv}). These proposals need to be developed further and supported by local landowners, the community and other stakeholders in the area to ascertain deliverability and suitability. Some of the schemes set out in this strategy could benefit the NDP process however others could be developed in partnerships with the local authority.

Proposals are outlined within this document; however detailed development of these proposals falls outside of the scope of this strategy and should be regarded as a separate scope of works.

The scale of the site appraisals and proposals contained within this document are separated into two types:

1. Wider Rural Area – to include the entire Parish council boundary and approximately 2km beyond to illustrate wider connections and context. The wider area plan shows connections to surrounding GI outside the Parish boundary and beyond. GI stretches from the local micro scale to macro regional and international scale at a broad strategic level. These include, for example, planting strategies, foot and cycle networks, ecological habitats and biodiversity networks.
2. Local Urban Context – This focuses on the more detailed strategies for each of the settlements, Buckfastleigh and Buckfast. These strategies include public realm improvements, expanding local access, increasing biodiversity, flood prevention and food production.

The proposals within this document can also inform tangible schemes with funding potential for future infrastructure improvements; parks and gardens, streets/public realm, public formal squares and spaces, woodlands and green links (typology of open spaces based on PPG17 classification^v).

Aims and Objectives

The key aim of this Green Infrastructure Strategy (GIS) is to create, enhance and renew networks and spaces, connecting the natural and built environment by:

- Developing and supporting the sustainable long-term vision of the Parish
- Improving and creating a more pedestrian-led public realm
- Enhancing biodiversity and natural capital value^{vi}
- Encouraging active travel and enhancing health and wellbeing
- Inspiring community cohesion and increasing social interaction
- Responding to climate change and creating a more resilient landscape
- Providing a framework and structure to inform and guide new development
- Encouraging children to be close to nature, in and out of school
- Encouraging local food production and sustainable foraging
- Reinforcing green links through the town and beyond; from green roofs to woodland

The focus of the BBNP, relevant aims of which have been incorporated into this document, is to shape future development (in particular on brown field sites) and support growth within the Parish. Consultation through the BBNP with the community has laid out a vision for the future of the Parish within the draft BBNP as follows:

“We want to see a Parish that is sustainable, economically vibrant, environmentally beautiful and protected, culturally rich and a socially friendly and caring place to live, work and visit.”

The BBNP refers to several concepts which are relevant to the aims of this GIS. These include:

- To support economic growth that is sustainable and economically vibrant attracting people who can enjoy the combined benefits of living and working in one of the most beautiful parts of the country.
- To encourage active travel and improve Parish infrastructure by creating a network of footpaths and cycle trails leading to greater access to nature, improved health and wellbeing and a reduction in car travel.
- Improving the public realm by enhancing green space and important ‘gateway’ sites used by the community for leisure and recreation.
- Create better vocational training and leisure facilities locally for young people and eradicate social isolation through community support initiatives.
- To showcase the importance of the rich heritage of the Parish and protect and enhance the internationally significant biodiversity and geodiversity of the Parish.
- To recognise the contribution of the rural landscape and farming within the Parish and to support emerging farming policy such as access to the countryside and meadow planting.
- To respond positively to climate change by increasing in local food production, supporting biodiversity and implementing soil care plans.

Guiding Principles

Based on Devon County Council's GIS Guiding principles for Devon^{vii}



The River Dart, Devon, England ©Edwardsian

1. Planning for green infrastructure from the outset

Planning for green infrastructure by providing connections between the built and natural environments is vital for people and society^{viii}. Embedding green infrastructure into the Buckfastleigh and Buckfast (BfIBf) neighbourhood planning process will provide clear proposals that can be written into emerging policy and are supported by the NPPF. Consideration of strategic green infrastructure (within the context of the neighbourhood plan area), national and international policy and best practice guidelines can provide an evidenced-based framework from which to develop and guide future growth in BfIBf and its wider context. A GIS has the potential inform future funding of public services and infrastructure in the local area via central government funding grants and Section 106 and CIL^{ix}. It has the capacity to guide the community and provide ideas to assist grant and fundraising applications.

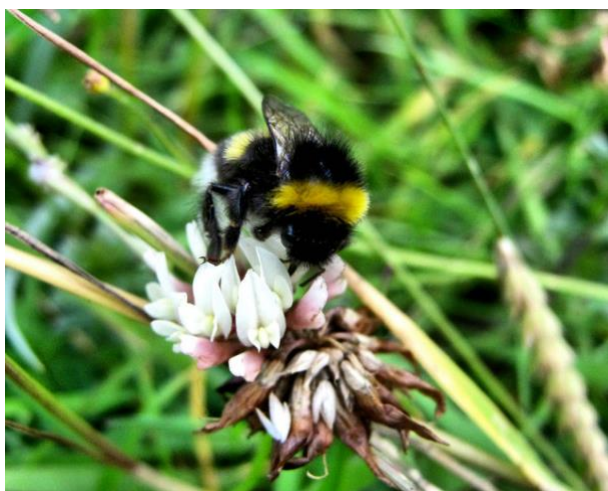


Sheffield's Grey to Green SUD's scheme © Nigel Dunnett

2. Ensuring resilience in water and flood management

Flooding and storm events are impacting on people and property at a local and national scale. Soil erosion further contributes to flooding and poor water quality. Locally, the Devon Green Infrastructure Strategy provides guiding principles to ensure water resilience and flood management including the improvement of water quality in Devon^x. Internationally and nationally, there has been an assessment of the risks of poor water quality^{xi} and policy documents now provide management plans for water quality improvement.

The water quality of BfIBf River Dart and Mardle tributaries has major implications on ecology, agriculture, economy and the quality of the surrounding landscape^{xii}. GI reduces the risk of flooding^{xiii} by including proposals to increase vegetation cover around blue infrastructure and on uplands areas. Adopting water sensitive design principles^{xiv} also makes existing and proposed areas of development more resilient to flooding and storm events. Sustainable Drainage Systems (SuDS) such as ponds, rain gardens (see image above) and green roofs, can deliver multiple functions aside from flood resilience, such as biodiversity and townscape enhancements. Refer to appendix



Bumble Bee © Copyright Jonathan Kington

3. Protecting and enhancing biodiversity

Increasing the biodiversity network is critical in terms of supporting ecosystem services (benefits provided by the natural environment for humankind)¹. Future growth and development within the Parish will need to respond to the NPPF and should “contribute to and enhance the natural and local environment by minimising impacts on biodiversity and providing net gains in biodiversity where possible”. This will be achieved by linking the existing green corridors within the Parish area through enhancing hedgerows and river corridors, woodland planting, replacing and managing traditional orchards and encouraging biodiverse field margins. New green spaces within the public realm and wildlife sites within the urban context will be created locally whilst agricultural land will be managed for the benefit of wildlife, aligning with the targets in the DEFRA 25 Year Environment Plan.

Strategic GI has many positive impacts on habitats and species, allowing for increased movement between habitats, by reducing inbreeding effects and promoting hybrid vigour. GI creates what is known as ‘connected metapopulations’ ensuring continued biodiversity resilience.

¹ Ecosystem services are the benefits provided by ecosystems that contribute to making human life both possible and worth living. <http://uknea.unep->



Round Cross towards Glebelands, Buckfastleigh

4. Conserving, enhancing and strengthening links with landscape

The landscape is the most important environmental and educational asset to the Parish^{xv}. The diversity of the landscape character of the BfIBf Parish is highly valued by the community and visitors; it attracts tourism, economic investment and offers a positive quality of life for those living and working within the area. The surrounding natural environment has developed from a combination of influences including farming, cultural heritage and natural landform.

GI contributes to health and wellbeing by supporting links to the natural environment^{xvi}. These links can be visual (such as long views to wider countryside) or physical (foot and cycle ways to increase active travel and access to the countryside) and can shape community identity and cohesion. As the population of the BfIBf Parish grows it will be crucial to enhance the quality and function of the public realm and GI to continue to strengthen these links with the countryside.

wcmc.org/EcosystemAssessmentConcepts/EcosystemServices/tabid/103/Default.aspx



Buckfast Abbey, Buckfast

5. Conserving and enhancing the historic environment

The cultural and historical context of BfIBf is an integral part of the socio-economic and physical fabric of the area. Built historic forms have developed within the setting of local greenspace, woodlands, hedgerows and traditional orchards. The area is rich in culture and heritage with a strong sense of identity that attracts people to live, visit and work in the area.

Heritage is a strong asset to the area; an irreplaceable resource. Historic natural features are a contributing element to green infrastructure planning^{xvii} and these can include, historic hedgerows, ancient woodlands and traditional orchards.



Church steps, Buckfastleigh

6. Enabling access, fitness and contact with nature

There are a multitude of links between GI, quality of life and health. Research evidence shows that contact with nature effects people positively, making them healthier and happier, enabling them to work more productively (for instance, recent studies have shown mental health benefits of listening to birdsong^{xviii}).

There may be extensive surrounding natural green space within an area, however access can be limited. Encouraging a diversity of active travel routes and enhancing public spaces has multiple benefits, including a reduction in social isolation, provision of safe routes to schools, managing air pollution by reducing short car journeys, and reducing carbon emissions.

By increasing links to green spaces and nature there will be less need for medical intervention^{xix} and a reduction of the strain on the NHS^{xx}. In addition, there will be a corresponding increase in property and retail value to the local economy^{xxi}.

What is key when designing these links is quality; a diversity of use and type, proximity to the community, ease of access, and a feeling of security.



Community Farm share, Dartington, Permaculture Magazine

7. Securing local food supply

Food security is becoming an issue of increasing concern global, nationally and locally. Between 2007-2013 food prices rose by 12.6% above inflation in the UK. A supply of fresh locally produced food is central to the aims of sustainable development and has a host of economic, social and environmental benefits. More locally grown food produce, and provision of edible community assets contributes to the local economy, strengthens local distinctiveness and adds to a sense of belonging. GI can safeguard and expand the provision of allotment space, community gardens and public spaces for food markets. In addition, providing wildflower meadows and increasing biodiversity planting within the wider area can attract pollinating insects which can assist in creating a more resilient landscape.



River Mardle, Buckfastleigh

8. Responding to climate change

Increasing the sustainability of the Parish supports adaptation to the effects of climate change. Reducing carbon emissions, securing local food supply and enhancing ecosystem services^{xxii} (benefits provided by the natural environment for humankind) can all result in habitat resilience.

Provision of more active travel routes reduces carbon emissions, particularly for short journeys. Attractive travel routes (utilising multi-functional design principals) can entice people into an area whilst helping to reduce, for instance, the impact of flooding by using vegetation to create a comprehensive network of habitats.

9. Generating income and attracting investment

GI is vital for thriving economy, environment and community^{xxiii} For example, developers are willing to pay between 3% to 15% more if land is close to open space (The value of placemaking, 2013). There is also evidence that green space increases retail profits by 16%, and where there are street trees and parks research show an increase between 3% to 34% in property values^{xxiv}



Figure 1 Location plan showing wider context

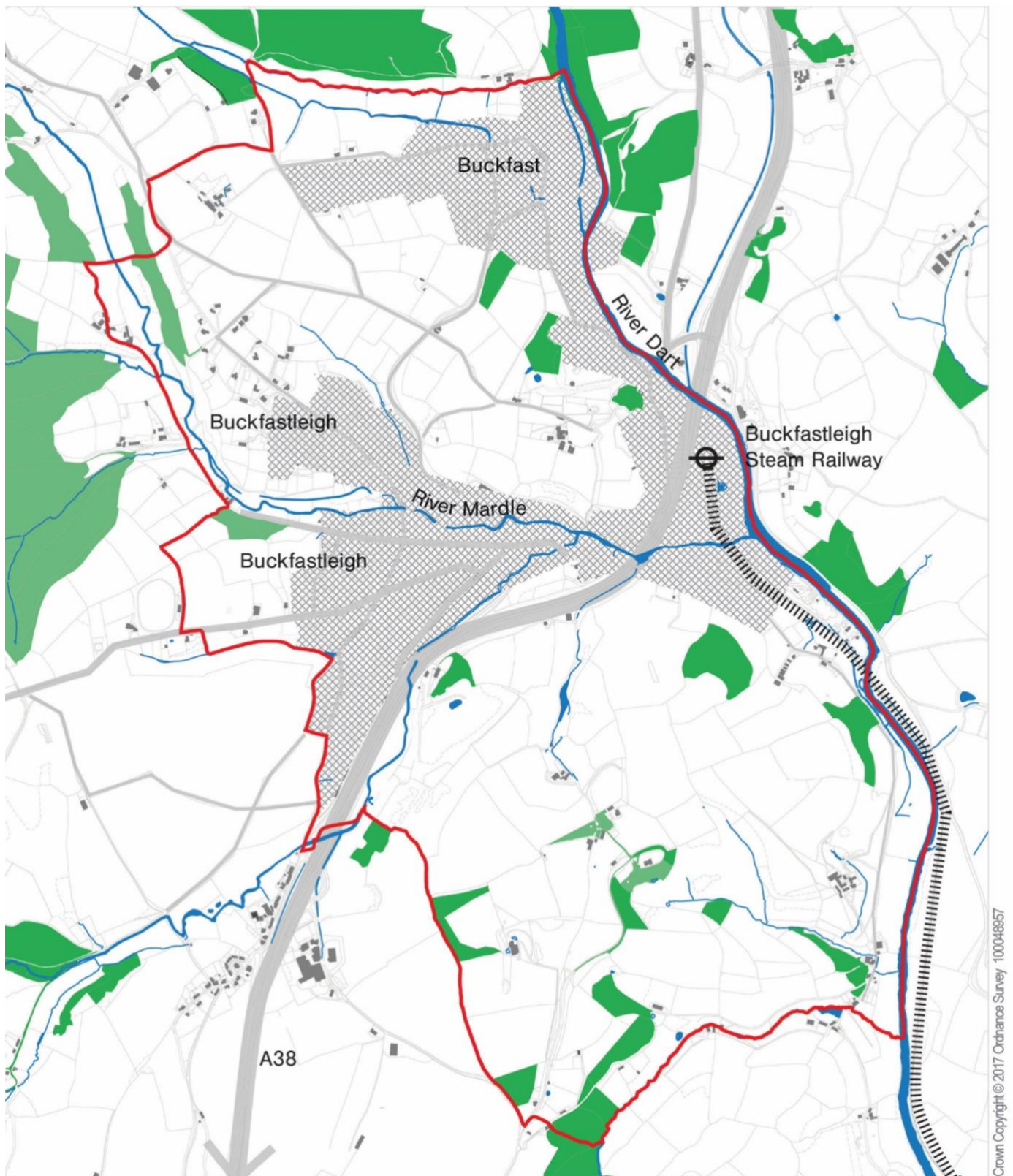
Location

The civil Parish of Buckfastleigh & Buckfast (as shown on figure 1 and 2) falls equally within the authority of both Dartmoor National Park Authority (to the north of the A38) and Teignbridge District Council (to the south). The Parish is bisected by the A38 which runs north-east to south-west and forms the boundary between the two council areas. Buckfastleigh and Buckfast (BfIBf) are the gateway settlements to the south-eastern edge of the Dartmoor National Park.

Buckfastleigh town centre is clustered in the lower slopes of a river valley adjacent to the Dart and Mardle rivers. The town fans out to the west, aligning against the A38 corridor to the south west and the hills of lowland Dartmoor to the north west (Glebelands).

The market town is medieval in origin, with the rivers historically supporting a number of mills used for processing a variety of materials, including wool, corn and paper. A tannery is also located along the river and is still in use today. A Conservation Area covers around half of the town. In the latter half of the 20th century, significant development took place in Buckfastleigh to both the north and the south of the historic core along the River Mardle.

Buckfast is located on the gentler lower slopes to the north east adjacent to the River Dart. The village is home to the Buckfast Abbey. The hillsides that surround BfIBf restrict long views from the town centre. The undulating and steeply sloping hills are a key characteristic of the area



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Figure 2 Location plan showing Parish Council Boundary

Site Appraisal



Round Cross towards Glebelands, Buckfastleigh

Due to the nature of the landform the Parish retains much of its historic landscape character and is moulded by a history of sheep farming and the physical constraints of the River Dart and its tributaries. It is dominated by a mosaic of undulating lowland meadows, traditional orchards and pockets of woodland.

The northern extents of the Parish mark the gateway to the moors and fall within the Dartmoor NCA 150 and Devon Landscape Character Areas: Ashburton and Dartmoor Foothills.

The area consists of a mosaic of semi-improved neutral grassland, scrub and bracken with broadleaved woodland habitats, and pockets of steep south-facing unimproved lowland meadow. Traditional orchard and ancient and semi-natural woodland exist in numerous pockets throughout the Parish.

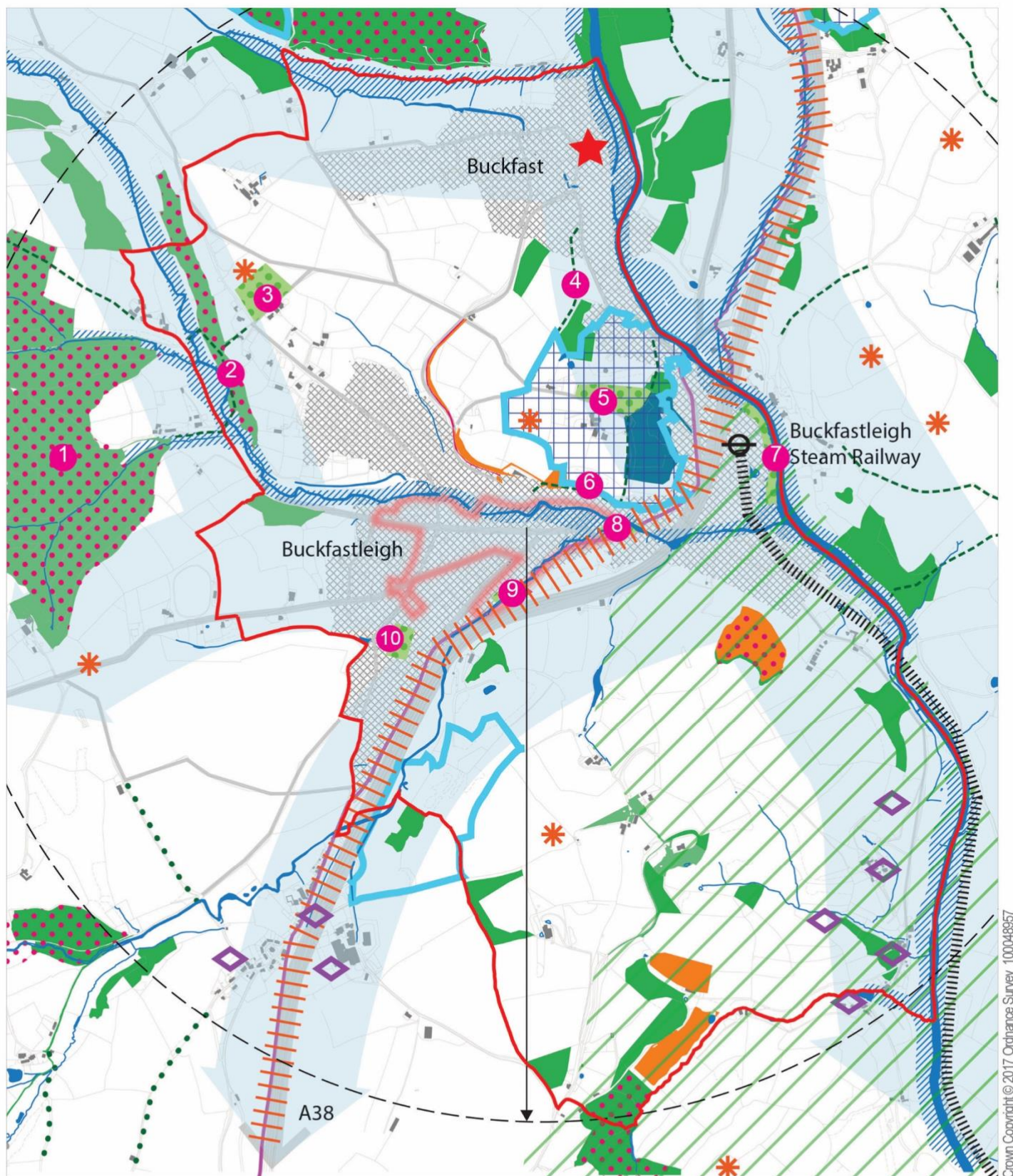
The eastern boundary is defined by the River Dart corridor, a meandering wooded habitat with limited access to pedestrians and vehicles.

To the south of the A38 the Parish falls within the NCA South Devon 152 and the Devon Landscape Character Areas: Mid Dart Valley and Slopes. The landscape is greatly undulating with rolling pasture consisting of small fields with dense hedgerow boundaries interspersed with broadleaved woodland, good quality semi-improved grassland and large pockets of traditional orchard.

The western extents of the Parish support expanses of ancient replanted woodland, pasture and lowland meadows.

The settlements in this area are isolated and dispersed, much of the area consists of mixed farming, with fields flanked by Devon hedge banks and narrow winding lanes.

The majority of woodlands within the Parish are mixed deciduous with some coniferous trees; these are located on lower slopes aligning with the River Dart and Mardle. They are formed in isolated, narrow linear blocks.



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Existing Site Appraisal - Buckfastleigh Parish





View from Higher Mill Lane towards Buckfast Abbey, Buckfast

The higher slopes of the surrounding hilltops and ridgelines have little wooded cover. There is a thin strip of Ancient Woodland that aligns the River Mardle to the north east. The only significant woodland blocks locally are outside of the Parish boundary.

Landscape sensitivity is the degree to which the landscape can accommodate change without adverse impact on its character. There is, to the wider surrounding landscape of BfIBf, a high level of landscape sensitivity^{xxv} to future development, as BfIBf northern boundary overlaps the Dartmoor National Park. However, the immediate fringes of Buckfastleigh has medium to high landscape sensitivity to future development.

The Parish is rich in ecological and landscape value. Much of this value is concentrated around the waterways and woodland blocks and is associated with designated sites (including DNP, SACs, SSSIs and other Wildlife sites). The concentration of these sites reduces on higher land along with the absence of woodland blocks and waterways, although linear features of value (hedgerows and country lanes) are present.

The Parish supports rare and important flora, fauna and habitats. Buckfast Hill Deptford Pink County Wildlife Site (CWS) is designated for Deptford Pink, a rare flowering plant that has undergone huge declines in recent years is only supported on around 15 sites in the UK.

Numerous Unconfirmed Wildlife Sites (UWS) including West Mill Cross, Churchill Farm and Whitecleave Wood are considered likely to support significant wildlife interest.

It is home to one of the largest populations of Greater Horseshoe bat within Western Europe. One of the series of Sites of Special Scientific Interest (SSSI) that form the South Hams Greater Horseshoe Bat Special Area of Conservation (SAC) is located within the town of Buckfastleigh, centred around Buckfastleigh Caves. This is used by the bats as a key roost site for hibernation and breeding and is of international importance with almost the entire Parish being located within a sustenance zone (Sclater, 2010) associated with the SAC and with key linear features (rivers, roads etc) and used as strategic flyways (Sclater, 2010).



A38 and Buckfastleigh viewed from A384

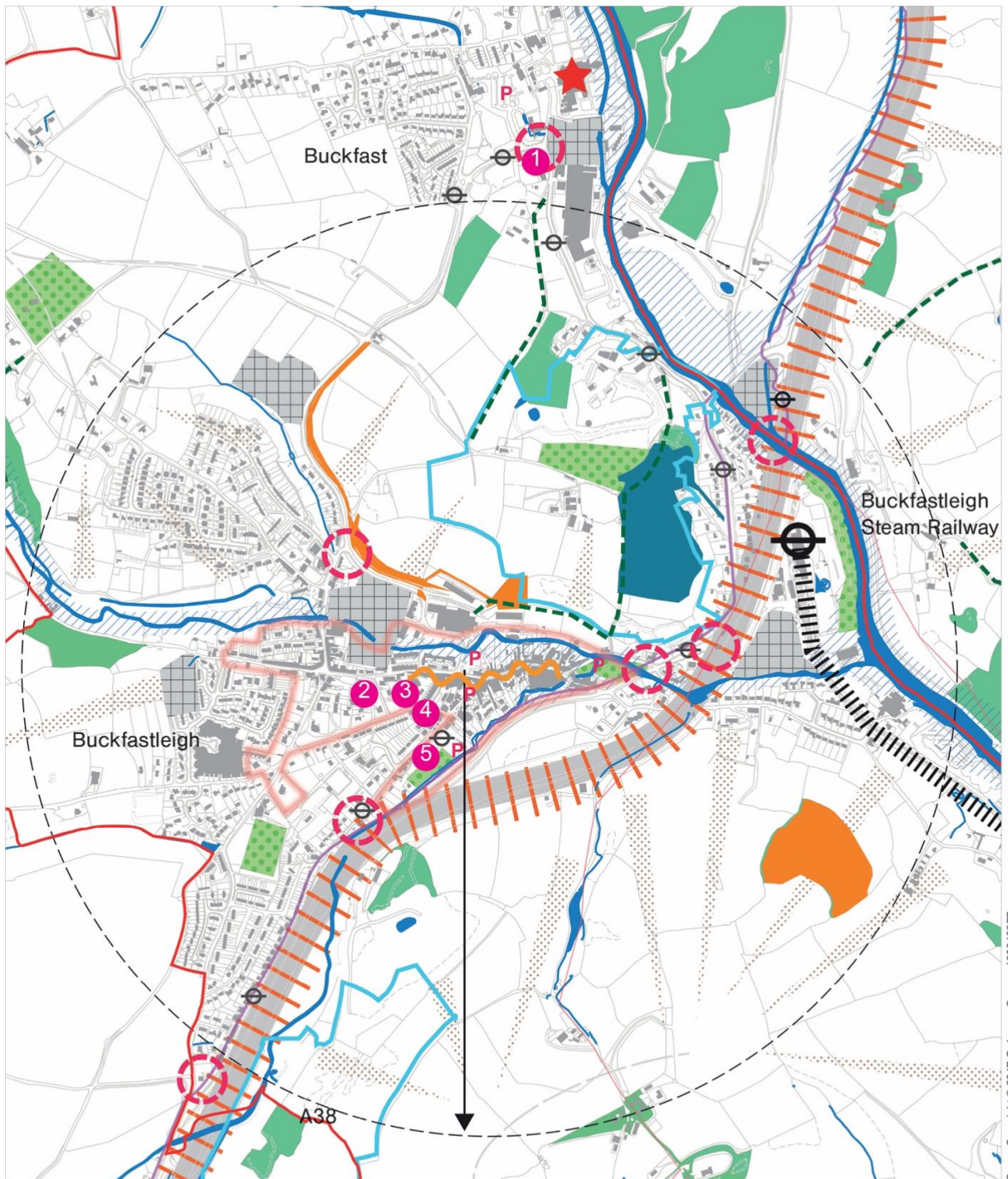
The River Dart and the A38 act as sub-regional green corridors bisecting the site, following the contours of the landform and linking north to south and east to west.

The settlements of Buckfastleigh and Buckfast form the heart of the Parish with tributaries of the River Dart and contours of the land prescribing where the settlement has developed over time.

Landform is also dictated by the rich geological history with features of interest including Buckfastleigh Caves and Potters Wood caves (designated geological SSSI (SSSI)). The caves were formed during the Pleistocene period and Buckfastleigh Caves are one of Britain's outstanding locations for Pleistocene mammals. The cave waters are also important for aquatic

crustaceans. Holne Road Regionally Important Geological Site (RIGS) is of importance for its upper Devonian grey Kate Brook Slate intruded by Permian Lamprophyre, and purple and green Gurrington Slate intruded by Devonian basic rock.

Several springs, tributaries and rivers are present within the Parish with the River Mardle (running west to east through Buckfastleigh town joining the River Dart running north to south through the Parish. Flooding is a key issue in lower areas of the landform with a flood zone extending through the town of Buckfastleigh and extending into the eastern end of Buckfast. Flooding may be linked with lack of significant vegetation on the upper slopes of surrounding hillsides.



Existing Site Appraisal - Buckfastleigh and Buckfast Local Area

	SSSI		Noise pollution		Public Right of Way		1 St Mary's Catholic Primary School
	Devon Wildlife Trust Reserve		Deciduous woodland		Cycleways		2 Buckfastleigh Medical Centre
	County Wildlife Site		Blue infrastructure		Flood Zone		3 Buckfastleigh Primary School
	Existing open space		Ridgeline		Retail (High Street)/active frontages		4 Buckfastleigh Town Hall and Library
	Scheduled Ancient Monument		Steep slopes		Gateway to settlements		5 Buckfastleigh Open Air Pool and Skatepark
	Conservation Area		Railway line with steam train		Car Park		
	Dartmoor National Park Boundary		Bus stop		Proposed Development Plots (From Neighbourhood Plan)		



Fore Street, Buckfastleigh

Buckfastleigh is an old market town with amenities including shops, local and national businesses, tourist attractions including a steam railway, school, a library, community spaces, a swimming pool and several places of worship. There is a compact historical core at the centre of Buckfastleigh town with a distinctive character, combining a history of light industry and residential settlement. The rural farm and industry are glued together by the local community. Thriving businesses have been founded here and continue to grow.

The historic town centre of Buckfastleigh consists of two storey terraced housing, hidden Devon Okes, for example Dial Court, independent shops defined by a narrow one-way road network. Historic and modern industry units in the town are visually apparent from the town centre and the outskirts of the town and are up to 4/6 storeys high.

Buckfast is steeped in history and the location of Buckfast Abbey, an active Benedictine monastery, a village hall, school and village shop. Buckfast also includes features of historic importance, including a Scheduled Ancient Monument (The North Gate) and part of the precinct area of

Buckfast Abbey. Buckfast has its own unique historic centre associated with the Abbey.

The A38, although a viable car-based asset, also creates a linear physical barrier dividing the Parish into two parts. The A38 flyover is audially present and visually dominant outside the town centre. The flyover creates a 'deadzone' and is disorienting for visitors to the area from the Steam Railway station. Noise and air pollution from the A38 degrades the quality and experience of the landscape locally and impacts on health and well-being^{xxvi}. However, there are also strong rural qualities within the Parish, with high levels of tranquillity further afield from the A38 corridor.

The population of Buckfastleigh is predicted to decrease between 2011 and 2026^{xxvii}. There is an aging population, a higher prevalence of poor health within Neighbourhood Plan area than district averages and significantly higher deprivation levels in parts of Buckfastleigh than other parts of South Devon^{xxviii}.

Buckfastleigh and Buckfast lie in the river valley of the Mardle and Dart although access is extremely limited to the riverside. Buckfastleigh hides much of the River Mardle as is set in a more urban context behind buildings. The River Dart is a little

more visible by the steam railway however inaccessible for the majority of visitors and the community.

Although there is extensive surrounding rolling countryside, there are a significant lack of local footpaths from the town centre to the wider countryside. The limited range of footpaths in the town of Buckfastleigh and Buckfast, in particularly connecting the two settlements, offers very limited access to the river and surrounding countryside. There are no clear circular walks or linking cycle paths.

Busy roads and junctions at key gateway points lack safe and attractive crossing points for pedestrians. These gateway points are a missed opportunity as they do not encourage visitors to explore Buckfastleigh.



A38 fly-over leading to Steam Railway, Buckfastleigh



Dial Court Oke, Buckfastleigh



View of Station Road junction, Buckfastleigh



Buckfast Road and Higher Mill Lane roundabout junction, Buckfast



Fore Street, looking towards Chapel Street, Buckfastleigh



Junction of Plymouth Road and Bossell Road, Buckfastleigh

Summary of Site Appraisals

In summary,

- There is a lack of pedestrian access within the town of Buckfastleigh and village of Buckfast, and throughout the wider area;
- The Parish lacks an interconnected off-road cycle network to provide access from the town of Buckfastleigh and village of Buckfast to tourist attractions, and long distance to Totnes, isolating the rich landscape, rural communities and farmland within the BBNP area;
- There is a lack of diversity of landscape within the local townscape environs;
- There is a rapid change of landscape character from riverside meadows, woodland blocks, farmland and orchards to industrial units and residential settlement;
- Flood events are common in the town of Buckfastleigh and village of Buckfast, negatively impacting on local business and residents
- The steep slopes of the hilltop farmland that surround Buckfastleigh and Buckfast offers little woodland cover or prevention to flood in the lower areas and town.
- There is a lack of continuity and cohesion between the settlements of Buckfastleigh and Buckfast in terms of public realm and access;
- The Parish supports a wide and diverse range of biodiversity, habitats and species.

The primary principles for improvement of the Parish through GI are:

- Reinforcing local identity and distinctiveness;
- Promoting health and wellbeing;
- Strengthening community and cohesion;
- Creating a more pedestrian-led town centre and new town market square;
- Encouraging sustainable active travel with a variety of routes and spaces;
- Enhancing biodiversity & managing the environment;
- Introducing and reinforcing vegetation to help mitigate against climate change and flooding;
- Promoting sustainable water sensitive design principles.

Proposals



View of River Dart from Dartbridge Road, Buckfastleigh

Ensuring resilience in water and flood management

- Introduce vegetation in the form of hedgerows, woodland blocks and buffer planting laterally, following contours along the hilltops to act as a 'sponge' and baffle to retain water on the upper slopes to mitigate against future flooding; Refer to appendix 2 for more details
- Provide raingardens and soft landscape approach to sustainable urban design including retrofitting existing streets, car parks and extensive hard landscape areas;
- Consider introducing more street trees on 'build out' road corners and wider roads;
- Consider planting along the banks of the River Dart and Mardle where appropriate, to stabilise slopes and increase absorbency of water runoff;
- New developments could include permeable hard landscapes and green roofs where possible to reduce run-off;
- Retrofit existing car parks with permeable paving.

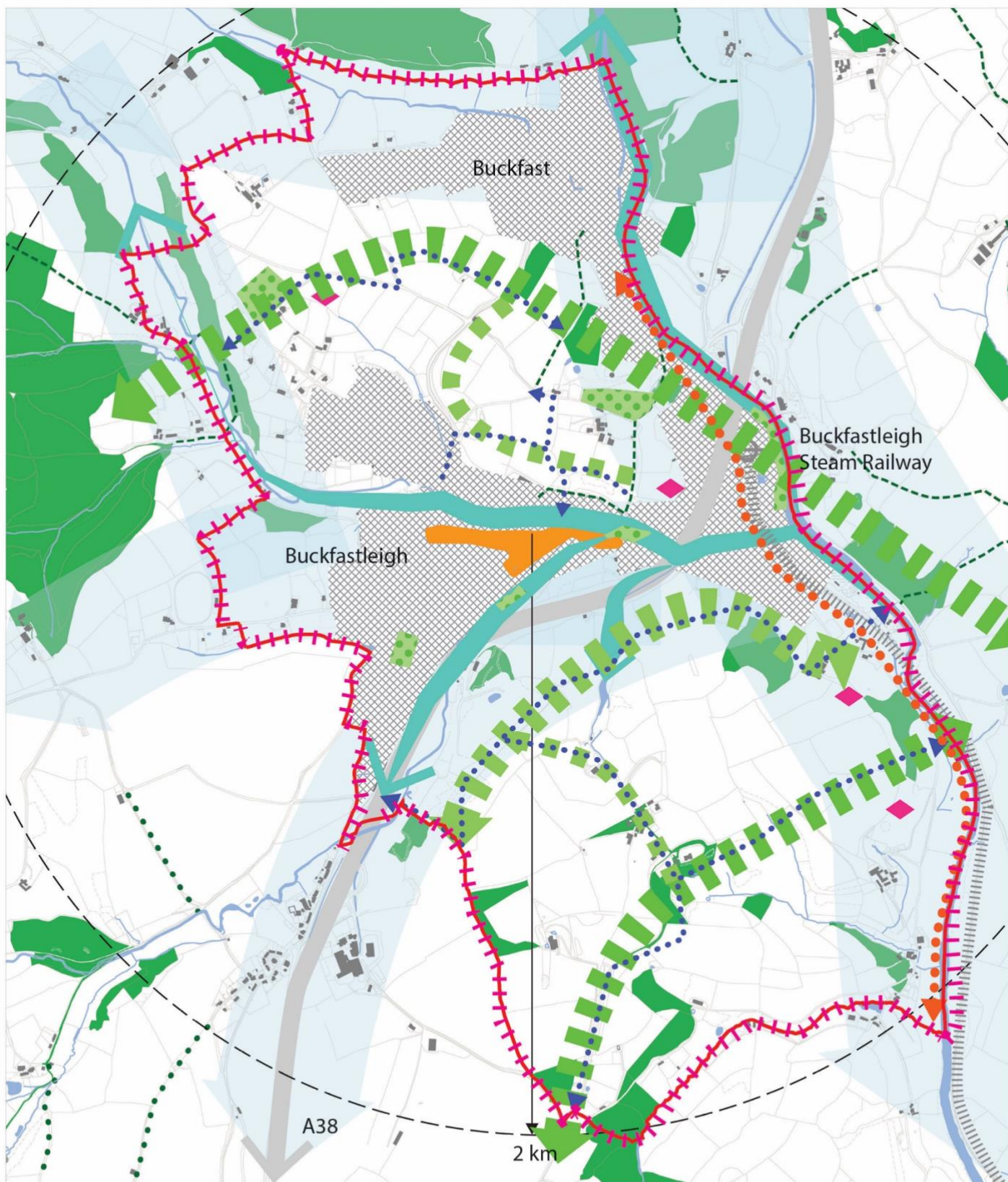
Protecting and enhancing biodiversity

- Support improvements to key biodiversity network sites which will support habitats and species of significance in the area, including the 'greening' of public realm and reconnecting strategic GI. Refer to Appendix 3 for more details;
- Champion community engagement for management of roadside wildlife verges and community space for biodiversity



Footpath, Buckfastleigh

- Create a community bee apiary in collaboration with Buckfast Abbey to inspire community cohesion and provide for cottage industries;
- Installation of enhancements for biodiversity within any development proposals including the creation of "habitat walls" and "living walls" for invertebrates, integrated bat and bird boxes and landscape planting using native species of local provenance;
- Provision of habitat for bird, bat and invertebrates at key gateway sites. Refer to Appendix 3 for more details on habitat enhancements;
- Provide safe passage for Otters on watercourses under bridges and through culverts;
- Planting of hedgerows with a minimum of 7 native species along Parish boundaries, strengthen and diversify existing field hedgerows Refer to Appendix 3 for more details;
- New edible hedge planting including Wild Plum, Blackthorn, Crab Apple, Wild Pear, and Wild Gooseberry;
- Review of local land management practices in line with the DEFRA 25 Year Environment Plan;
- Parish wide soil care plan to replenish soil nutrients, add more carbon to the soil, create good soil structure, increase soil and above ground diversity, increase depth of topsoil and improve livestock health.



Green Infrastructure Proposals -Parish





View towards junction of Dartbridge Road and Buckfast Road

Conserving, enhancing and strengthening links with landscape

- Actively support the Sustrans proposal for a new A38 corridor cycle route which would connect Plymouth to Ashburton;
- Provide increased accessibility to the wider landscape with a variety of types and lengths of new footpaths and cycleways for all, 8 to 80 years old;
- Create a more sustainable and active travel network by considering a new cycle/footpath to Totnes for the future, in part following the Steam railway line where possible;
- Enhance the blue infrastructure 'Riverside Links' by enhancing biodiversity and pedestrian links along the River Dart and Mardle, where feasible. Including within the Devon development to provide new connections to the wider green infrastructure networks

Conserving and enhancing the historic environment

- Reinforce hedgerows along historic boundaries;
- Introduce heritage fruit trees for proposed orchards;
- Planting and soft landscape to be sensitively designed and implemented to enhance setting of SAM's, historic building and within the conservation area.



Grand Canal Cycleway, Devon © Traveldevon.info

Enabling access, fitness and contact with nature

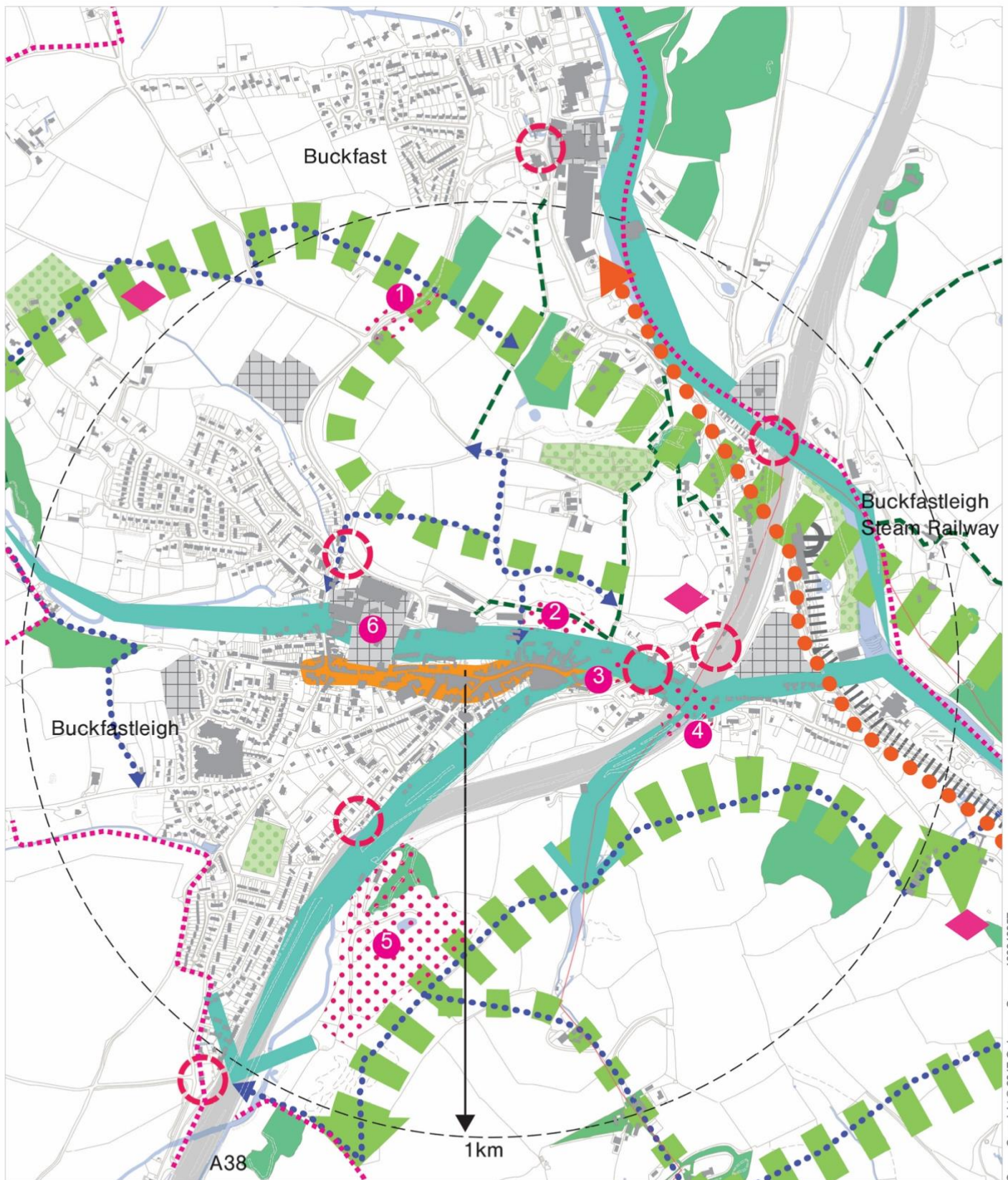
- Enhance the pedestrian crossings at key junctions to attract people to the area and encourage pedestrian exploration of the Parish;
- Link the steam railway to the town centre via development and enhancement of the A38 flyover;
- Enhance the area below the A38 fly-over to create an attractive habitat with benefits to biodiversity (i.e. invertebrate features, climbing plants, bat and bird boxes).
- Refer to appendices for more detail

Securing local food supply

- Support and encourage cottage industry and home-grown products such as honey, nuts, fruit trees and organic foods;
- Provide new orchards and enhance existing orchards linking-in with the GI network of the surrounding area.

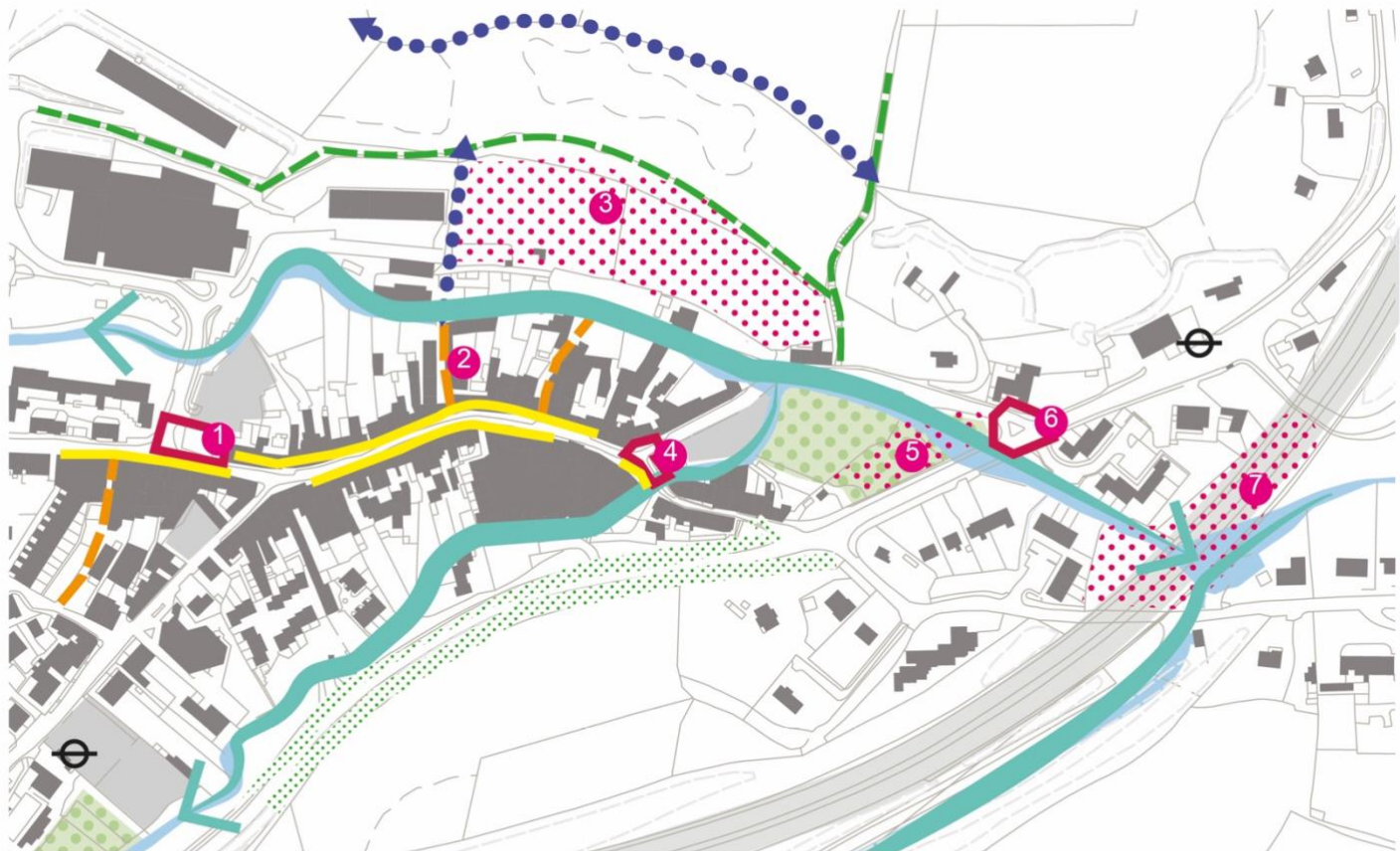
Responding to climate change

- Look at upstream run off issues and work to combat this. Vegetating the upper slopes of the surrounding hills and soil care plans would assist in reducing the impact of flooding to the local area;
- Create a more sustainable and active travel network in order to reduce pollution.



Proposals- Buckfastleigh and Buckfast Local Area





Proposed Public Realm and Biodiversity Enhancements - Buckfastleigh



Community cohesion

- Provide and regenerate areas to aid education programmes, schools and youth activities;
- Create accessible local community gardens and 'green' streets on a micro scale^{xxix} such as benches at key points, planters in front gardens (linked with Britain in Bloom);
- Upgrade and develop greater access to recreation areas and sport facilities;
- Green space and community assets – Initial feedback from a recent consultation event to gauge public interest regarding the possible transfer of all Teignbridge DC owned green space and assets is that there is a need/demand for community growing, composting and orchards etc;
- Creation of a town square sited where there is already high pedestrian footfall and visibility to host outdoor community activities. For example, a larger weekly farmers market. This would result in the reallocation of a few car parking spaces, however it would provide a valuable community asset that attracts people to the area, provides a meeting space for the community, supports business and economic uplift; Refer to Appendix 4 for more details on public realm enhancements of the town square
- Improve and enhance the pedestrian 'gateways' into Buckfast and Buckfastleigh with raised table junctions, widening and resurfacing footpaths, benches, planters and potential public art features to emphasis gateway to Dartmoor and the town.
- Explore the potential regeneration of Dial Court as a makerspace/workshop space

Generating income and attracting investment

- Enhance the key 'gateway' entrances to the town with planting e.g. spring bulbs and wildflowers, building on the work already done (crocuses for spring 2018);
- Improve pedestrian and cycle linkages between Buckfastleigh and Buckfast;
- Improve signage and street furniture to guide visitors.
- New market square would attract visitors and local visitors to the area



Higher Mill, Buckfast



Dial Court, Oke, Buckfastleigh



Dial Court, Buckfastleigh

Next Steps...

Following the approval of the neighbourhood plan, these are several potential future steps:

- Further public consultation on which ideas to develop further leading to feasibility studies for key project for example the new town square;
- Explore possibility of temporary road closures, events and street parties to engage the community more and change perception about streets i.e. to consider them as public spaces rather than for just allowing vehicular access into an area;
- Research funding opportunities from the National Park and central government for improving towns in areas of poor health;
- Gain public art grants for gateway features and public realm improvement;
- Investigate grants for planting of woodland and small-scale planting schemes;
- Stewardship schemes for farming land to allow access and improve biodiversity value of field margins in line with the 25 Year Environment Plan;
- Explore development of liaison between Town Council and Buckfast Abbey for collaboration in public realm improvements of gateway sites;
- Work with Steam Railway to develop Riverside Links and gateway sites;
- Explore funding opportunity to develop a feasibility study for a new town square and public realm improvements.

Conclusions

The Parish is steeped in history, with a strong sense of community and positivity from the people that live here. However, there is also a sense that Buckfastleigh, in particular has been neglected and overlooked. The Parish's population is in decline with an ever increasing aging community. The Parish also suffers from the pressures of climate change with flood events common. The area needs a more resilient and biodiverse landscape, attractive and accessible public realm and countryside to safeguard future growth of the area. This GIS strengthens, supports and informs the Town Council's Neighbourhood Plan, generating proposals and funding opportunities to progress change.

The proposals within the GIS have been developed to support growth within the Parish for the period 2017 – 2027 and beyond. Improvements to public realm and access between Buckfastleigh and Buckfast. and into the wider area. will provide attractive gateways and support the health and wellbeing of the community. Enhancement of green corridors and the use of sustainable land management practices will encourage and support biodiversity. Production of local food supplies, creating a more sustainable travel network and managing flood risk will safeguard for the future.

This report is limited; a greater depth of understanding and evaluation can only occur with the utilisation of other resources and wider consultations, for example further consultations and feasibility studies exploring public realm proposals.

In conclusion, the proposals developed within the NP and this accompanying GIS will help to support the development of a place which is sustainable, economically vibrant, environmentally beautiful and protected, culturally rich and a socially friendly and caring place to live, work and visit for all.

Appendices

Appendix 1

Evidence and Policy

The provision of green infrastructure in and around urban areas is now widely recognised as contributing towards creating places where people want to live and work. The concept of green infrastructure is embodied in the Government's Planning Policy Statements (PPS) 1 and 12. It is an essential component of good planning for urban and rural areas, particularly in the face of climate change..... Its design and management should also respect and enhance the character and distinctiveness of an area with regard to habitats and landscape types.

The NPPF states that the planning system should "contribute to and enhance the natural and local environment by ...minimising impacts on biodiversity and providing net gains in biodiversity where possible".

The 2011 UK National Ecosystem Assessment (UK NEA) June 2011 provides a comprehensive account of how the natural world, including its biodiversity, provides us with services that are critical to our well-being and economic prosperity. It concluded that the natural world and its ecosystems are important to our well-being and economic prosperity. However, the NEA also showed that 'nature is consistently undervalued in decision-making and that many of the services we get from nature are in decline'.

The Convention on Biological Diversity in October 2010 where over 190 countries signed an historic global agreement in Nagoya, Japan to take urgent and effective action to halt the alarming global declines in biodiversity.

In June 2011, the UK Government published The Natural Choice – the first Natural Environment White Paper for 20 years. This responded to the

global commitments made at Nagoya. It outlined the Government's vision for the natural environment, shifting the emphasis from piecemeal conservation action towards a more integrated landscape scale approach. It also set out how we can better value the natural environment in

decision-making and thereby unlock growth in the green economy and reconnect people with nature.

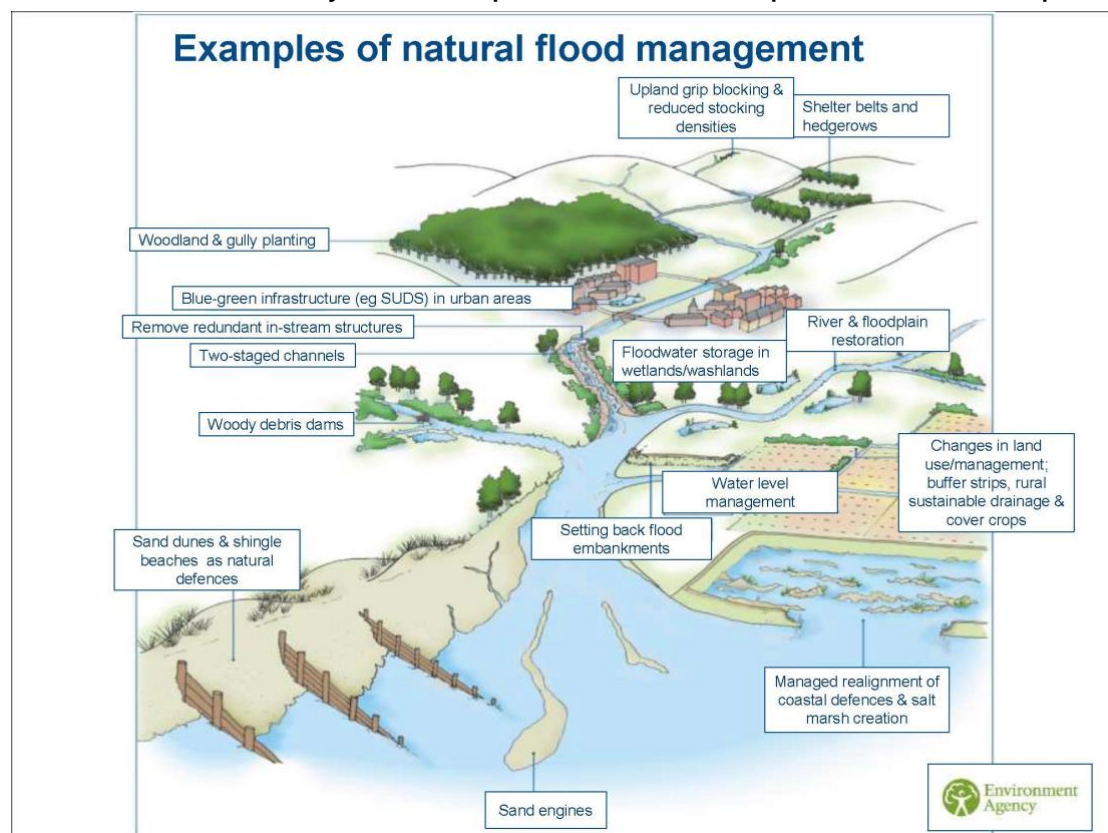
Biodiversity 2020: A strategy for England's wildlife and ecosystem services builds on the Natural Environment White Paper and provides a comprehensive picture of how we are implementing our international and EU commitments. The mission is: to halt overall biodiversity loss, support healthy well-functioning ecosystems and establish coherent ecological networks, with more and better places for nature for the benefit of wildlife and people.

Statements of Environmental Opportunity within the National Character Area profiles for ecosystem goods and services within the Parish promote the management, enhancement and where necessary protection of the diversity of land use and activity which gives the Devon Redlands its distinctive character. Increase the connectivity of key habitats for the benefit of landscape, biodiversity and ecosystem services

Other agreements that UK has significant commitments to - The Ramsar Convention on Wetlands of International Importance and the European Union (EU) Marine Strategy Framework Directive (MSFD).

Appendix 2

Evidence and Policy – Flood prevention and upland woodland planting



In the last 15 years there has been an increase in research, guidance and policy on more natural flood prevention interventions. For example, rain gardens, river bank planting and swales. In rural areas, in particular with steep slopes with many low land tributaries, upland woodland planting has major impact on flood prevention:

“planting tree belts across the slopes led to increased infiltration of water into the soil - more than 60 times that of neighbouring sheep grazed pasture without tree belts.....the result was a potential reduction in peak stream flows of as much as 40%.

There are also additional benefits to woodland planting on upland areas:

- Create wind shelter for livestock and reduce wet/muddy field structure
- Enhance biodiversity
- Connecting isolated habitats and creating stronger ecosystem (links to diversity and genetics)
- Positive links with flood prevention measures on mental health²
- Opportunities for funding via Woodland Trust³ and Payment for Ecosystem Services⁴
- Very cost-effective compared to heavily-engineered, highly expensive flood defences.
- Improve water quality and prevents soil erosion
- Can be linked with increased recreational access

² Flooding and mental health - Gov.uk
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/348903/Flooding_and_mental_health_essential_information_for_frontline_responders.pdf

³ Woodland Planting and flood prevention
<https://www.woodlandtrust.org.uk/blog/2016/12/flood-prevention/>

⁴ Payment for Ecosystem Services
<https://www.gov.uk/government/publications/payments-for-ecosystem-services-pes-best-practice-guide>

Appendix 3

Biodiversity Enhancement sites

Roadside verges

- Expand the County Wildlife Site and Special Verges already located in Buckfastleigh on the wide roadside verges along Higher Mill lane leading down towards Buckfast;
- DNPA with Plantlife have coordinated recent surveys and small-scale habitat management. Further funding is being sought to continue and expand this. Contact James Rogers, Farming and community wildlife officer jrogers@dartmoor.gov.uk

Allotments

- The privately-owned allotments to the north of Fore Street could offer a suitable location (sheltered, close to water and surrounding vegetation and undisturbed) for a Community Bee apiary;
- The creation of a bee apiary could be undertaken in collaboration with Buckfast Abbey. The Buckfast Beekeeping Group is specifically aimed at supporting people who would like to keep and breed Buckfast type bees
<http://www.buckfastbeekeepersgroup.co.uk/>

Millennium Green

- Community orchards perfectly encapsulate the traditional notion of a village coming together to share in a common interest and most attractively, benefiting from the results (www.ptes.org). Community orchard grants are available to support the creation of orchards in publically accessible location such as the Orchard Millennium Green;
- Enhancement of the orchard in this location could support the community work already being provided by the Orchard Millennium Green Trust.

Planting hedgebanks along Parish boundaries.

- The Devon Hedge Group draws together a wide range of organisations and individuals interested in conserving Devon's hedges. Funding opportunities can be found on their

website

<http://devonhedges.org/resources/grants/>

A38 fly-over and gateway to Steam Railway

- This location currently has very little in the way of habitat for biodiversity. It is very shaded, and vegetation does not thrive here naturally;
- Features such as free-standing habitat walls could be provided for a range of species (in particular bats and birds);
- Habitat walls could have an added interest for the passing public as art installations.



Animal Wall © by Gitta Gschwendtner

Whitecleave Quarry

- The restoration of Whitecleave Quarry presents an opportunity for wildlife and social amenities. Advice and guidance can be found at the Nature After Minerals (NAM) is a partnership programme
<http://www.afterminerals.com/>

Devonia site

- Enhancement of strategic flyway along Mardle with hedgerow planting and creation of a dark corridor along this feature.

Riverside links and land management

- Management of Himalayan Balsam along the River Dart and associated tributaries, funding opportunities via Countryside Stewardship schemes;
- Management of riverside habitats for the benefit of wildlife. Advice notes can be found via the Devon Wildlife Trust and funding opportunities are available via Countryside Stewardship schemes;

- Clean water supplies are important for everyone and for every farm business. How farmland is managed can have a huge impact on our water supplies. Management of farmland within the River Dart catchment including soil, fertiliser, manure and livestock management and farm infrastructure can achieve clean water and a healthy environment. Payments for Ecosystem Services (PES) schemes involve payments to the managers of land or other natural resources in exchange for the provision of specified ecosystem services (i.e. PES for farmland). Upstream Thinking is South West Water's multi-award-winning approach to keeping drinking and bathing water clean and affordable by stopping pollutants entering our rivers and streams. Working Wetlands Advisers are working with landowners to address potential sources of pollution on farm with the aim of protecting water quality and restoring important wildlife habitats
<http://www.upstreamthinking.org/>



Soil management

- (A) Cultivate and drill across the slope
- (B) Avoid over-winter tramlines
- (C) Establish in-field grass buffer strips
- (D) Adopt minimal cultivation systems
- (E) Avoid high risk crops next to river

Livestock management

- (A) Reduce overall stocking rates on livestock farms
- (B) Reduce field stocking rates when soils are wet
- (C) Move feeders and water troughs at regular intervals
- (D) Construct troughs with a firm but permeable base
- Reduce dietary N and P intakes

Fertiliser management

- (A) Do not apply fertiliser to high-risk areas
- (A) Avoid spreading fertiliser to fields at high risk time
- (B) Use clover in place of grass

Farm infrastructure

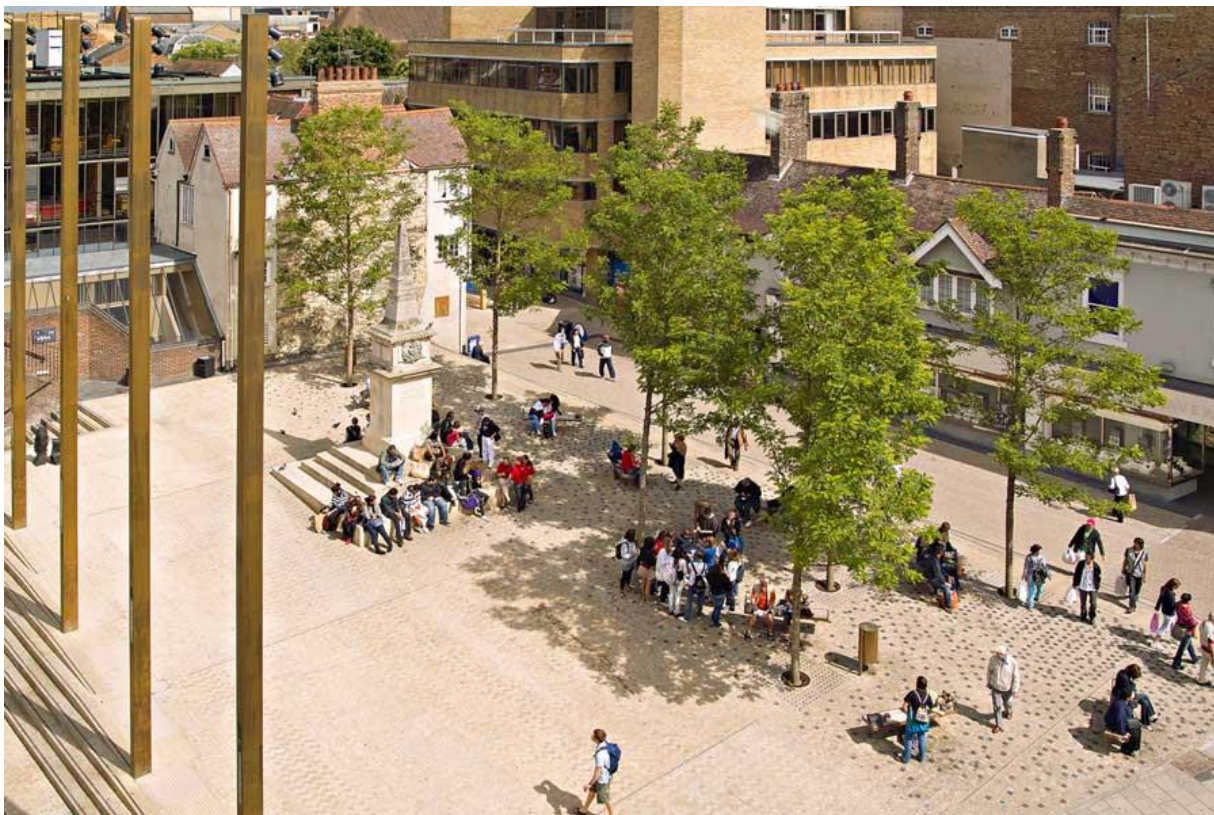
- (A) Fence off rivers & streams from livestock
- (B) Construct bridges for livestock crossing streams
- (C) Re-site gateways away from high-risk areas
- (D) Farm track management
- (E) Establish new hedges
- (F) Establish riparian buffer strips
- Establish & maintain artificial wetlands

Manure management

- (A) Increase the capacity of farm manure (slurry) storage
- Install covers on slurry stores
- (B) Site manure heaps away from watercourses
- Site manure heaps on concrete and collect effluent
- (C) Minimise volume of dirty water and slurry produced

Appendix 4

New Town Square



Bonn Square, Oxford © Graeme Massie

Buckfastleigh lacks a central square and focus point for events and markets. The road network dominates the town and infringes access. A new square would draw people into the town, facilitate local events, fetes and markets, increase social interaction and community focus, provide a meeting point.

- It would be located near the established retail/commercial core and adjacent to high footfall routes with clear lines of visibility to attract passers-by
- To encourage positive social interaction with well overlooked bench sitting, attractive lighting and plantings to soften the hard landscape.
- Will require the removal or relocation of the existing stone wall to increase visibility and natural surveillance, and reduce traffic speeds. If the wall was to remain, the square would be much less successful and potentially attract anti-social behaviour.
- Would require the relocation of three car parking spaces at Mardle Way Car Park.
- The extent of the square is to include creating a small raised area on Chapel Street, unifying the new square with the town and slowing traffic to create a more pedestrian friendly place.
- The new square would include facilities to enable market stalls and small scale events for example, electrical and water points, with the potential of spilling out on to adjacent streets to enable expansion.

Appendix 5

Foot and cycle path design guide

A crucial part of creating a sustainable neighbourhood is to create a long term pedestrian and cycle network.

Provide a future extensive network connection to Totnes and Dartmoor National Park

Creating and enhancing green corridors throughout the parish a journey from doorstep to countryside and beyond.

A dedicated and segregated footpath and cycle route that will vary in character depending on location, minimum of 4.5m wide (2m wide footpath and 2m wide cycle path with 500mm wide a grass central strip). All year round access; flood prevention required. A nominal 10m wide strip is preferred, where feasible, to include possible banking and planting.

Strategic footpath forming part of a wide multi-functional green corridor min. 2m wide where possible.

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