



Green Infrastructure Study

Exeter Area and East Devon New Growth Point

April 2009



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Introduction

1.1 Background to the Study

1.1.1 Commissioning the Study

The Green Infrastructure Study for Exeter Area and East Devon New Growth Point has been commissioned jointly by East Devon District Council, Exeter City Council, Teignbridge District Council and Natural England. The study presents a framework for the delivery of Green Infrastructure in the Government recognised New Growth Points of 1: Exeter and East Devon and 2: Teignbridge.

LDA Design has been responsible for project design, development and delivery, with support from the project Advisory Group. Thanks are extended to the Advisory Group and to all stakeholders and consultees involved in the development of the Study. Details of the Advisory Group, Stakeholders and other consultees are presented in Appendix 1.

1.1.2 Scope of the Study

The aim of the project is to establish Green Infrastructure (GI) Networks for the Exeter Study Area for delivery by the relevant local authorities, statutory agencies, developers and other partner organisations in the future. The GI Study also identifies a range of GI Projects capable of being delivered as part of a future programme of work, linked wherever possible to areas of identified growth and development.

The outcomes of the GI Study provide both strategic and physical coordination of current and future green space projects, ensuring a co-ordinated approach to the planning, delivery and management of GI that cuts across local authority boundaries.

Specifically, the study:

- provides a framework to guide sustainable development;
- enhances the accessibility of key assets, leisure facilities, open and semi natural green space, wildlife areas and the countryside;
- identifies new opportunities for walking, cycling and other forms of sustainable transport to enhance the existing network;
- establishes the broad framework required to improve recreation and leisure activities to promote healthier lifestyles;
- identifies opportunities for creating linked habitat networks leading to increased ecological value, biodiversity and species persistence;
- identifies general opportunities for the enhancement of quality, functionality and character of urban fringe landscapes in line with Countryside in and Around Towns (CIAT) guidance;
- draws together existing data on the physical, natural, ecological, landscape and recreational assets; and
- provides supporting information and a steer on the options available to offset/mitigate impacts on national and internationally designated sites in and adjacent to the core study area.

1.1.3 A Commitment to GI

This GI Study is part of an ongoing commitment to GI development and delivery across the Exeter and East Devon and Teignbridge Growth Points that seeks to take a proactive approach to environmental planning, protection and enhancement whilst embracing economic regeneration, growth and sustainable development.

This commitment is set within broader Government initiatives to deliver a bold and exciting environment for existing and planned communities that in the long term will include enhanced biodiversity assets and environmental character, improved access to sustainable modes of transport, enhanced leisure and recreational opportunities, and more sustainable modes of managing land and water resources.

These multiple and often interrelated activities will benefit from an environmentally led and coordinated approach that is inherent in the principles that underpin GI.

1.2 Why is GI Important?

1.2.1 Positive Planning and Delivery

Planning Policy Statement (PPS) 12 - Local Spatial Planning defines GI as a network of green space both new and existing, rural and urban, which supports natural and ecological processes and is integral to the health and quality of life of sustainable communities. A more detailed definition of GI, along with a glossary of other key terms used in this report, is found in Appendix 2.

New development and conservation initiatives, including flood alleviation schemes, are often reactive and focus on specific areas of land rather than considering the wider environment. Even where regional or sub-regional coordination occurs, such as in the South West Nature Map initiative, only a single theme is addressed. GI presents an alternative approach to planning that is proactive, multi-scale and multi-functional.

Major built infrastructure developments such as roads or power distribution schemes succeed because of the long established process of careful planning, design and investment between a number of different disciplines, well in advance of implementation. GI represents a similar co-ordinated interdisciplinary approach to environmental planning and regeneration, comparable to that used in built or 'grey' infrastructure planning.

Notwithstanding the benefits to the environment, GI will contribute to the development of better places in which to live, work and invest. It will help create places with

a distinctive and attractive character that function well, are well connected and appealing. It will help forge a closer relationship between urban and rural areas, with the countryside functioning more successfully as a place that feeds and sustains urban populations. It will create an outdoor classroom for learning and an attractive and characterful environment for exploration and recreation. It will do so by combining the efforts, skills and funding of a wide range of organisations in the public and private sector.

GI places the physical environment at the heart of the development process, and environmental processes at the heart of sustainable development and the economy. To succeed, GI will need coordination, sustained investment and a long-term commitment between a wide range of public and private bodies. This commitment must be shared by national, regional and local government authorities, agencies and organisations; land owners and land managers; businesses; developers; the voluntary sector; and the communities that make up the population of the growth point and wider area. It requires a new and positive way of thinking and working that involves close collaboration between these partners.

GI also addresses a number of the Government's objectives for rural areas as set out in PPS 7 – Sustainable Development in Rural Areas, notably those that relate to ensuring new development respects and enhances local distinctiveness and the intrinsic qualities of the countryside and promoting a range of uses to maximise the potential of urban fringe areas.

In parallel with the holistic approach to GI planning is a move towards landscape scale conservation and enhancement of the biodiversity resource, as promoted in PPS 9 – Biological and Geological Conservation. This important guidance document identifies the role that networks of natural habitats have in linking sites of biodiversity importance and providing routes or stepping stones for the migration, dispersal and genetic exchange of species in the wider environment.

GI is also an opportunity to address the goal of establishing multifunctional landscapes around Exeter. The multifunctional approach to land use planning is

particularly appropriate to urban extensions and new settlements because it serves to underpin sustainable functioning and 'liveability'. The GI Study presents a mechanism for developing and taking forward the ten key functions for the Countryside in and Around Towns identified by the Countryside Agency and its Partners in 'A Vision for Connecting Town and Country in the Pursuit of Sustainable Development'¹.

1.2.2 GI - A Framework for Sustainable Development

The Draft Revised Regional Spatial Strategy (RSS) for the South West Incorporating the Secretary of State's Proposed Changes (2008)² indicates that the Local Development Documents for Exeter and East Devon should make provision for further development of the Exeter area as a centre for business and service sectors, together with specialised science and technology based industries. The draft RSS also states the need for significant new employment land provision and population growth within Exeter city, in the Cranbrook New Community and elsewhere in East Devon and Teignbridge districts.



The GI Study will play an important role in providing a framework for sustainable development, realising the opportunities and potential of the environment in supporting change as well as informing its form and layout and the types of green spaces, habitat improvements and access links that are provided. It

¹ Countryside Agency et.al. The Countryside in and Around Towns – A Vision for Connecting Town and Country in the Pursuit of Sustainable Development. Countryside Agency, January 2005.

² South West Regional Assembly, The Draft Revised Regional Spatial Strategy for the South West Incorporating the Secretary of State's Proposed Changes, July 2008

will also inform the nature and character of mitigation measures that are employed where new development will have an adverse impact on the environment as well as strengthen and enhance the identity of new and existing communities. It will also identify initiatives that will aim to meet recreational objectives of existing and future residents close to home, and through this, protect sensitive habitats and landscapes fringing the core study area such as the Pebblebed Heaths, Haldon Forest Park and in the Exe Estuary.

The GI Study will also help to target Section 106, Community Infrastructure Levy (CIL) and other funding streams that can deliver new GI that is not directly related to areas of new development, but will have tangible benefits to existing and new communities and contribute to sustainability objectives.

1.2.3 Contributing to a Bigger Agenda

The UK and other western nations have witnessed widespread exploitation of the earth's resources to fuel industrial and social progress, with little awareness or consideration to long-term impacts on society and the environment. At a global scale we are seeing the consequences of these activities, such as in the increasing and compelling evidence for climate change and environmental degradation. In this country, the effects are evident in the erosion of our diverse and attractive landscapes through agricultural intensification, the expansion of urban areas which often pay little respect to their surroundings, and the loss and fragmentation of semi natural habitats. Indeed, it is notable that in the core study area, landscape character, habitats and footpath networks have all experienced some degree of degradation and fragmentation in recent decades.

GI, and notably habitat enhancement and creation, will contribute towards meeting several international biodiversity obligations, including a commitment to achieve a significant reduction in the rate of loss of biological diversity by 2010 (under the Convention on Biological Diversity) and a European Union commitment to halt the rate of biodiversity loss by 2010 under the 2001 Gothenburg agreement. GI will also contribute to

several actions that are in place that will move towards meeting these commitments, such as the Site of Scientific Interest (SSSI) Public Service Agreement target to bring 95% of all SSSIs into favourable or recovering condition by 2010.

In addition to this, there is scope for the GI Study to contribute towards meeting the requirements of the European Water Framework Directive (WFD). This came into force in 2000 and was transposed into UK law in 2003. Amongst its aims, the WFD is designed to enhance the status and prevent the further deterioration of inland and coastal aquatic ecosystems, and wetlands by 2015.

The European Landscape Convention (ELC) is also of importance. The aim of the Convention is to promote the protection, management and planning of Europe's landscape, and applies to urban, urban fringe and rural areas. Natural England has published a framework for implementing the ELC³, and will lead its implementation on behalf of Defra. GI meets several key objectives of the ELC, notably through landscape protection, management, planning and common threads of raising awareness of landscape issues. The ELC Implementation Framework also highlights the promotion of a landscape perspective to influence spatial planning and the importance of fostering community engagement. Both of these fundamental principles are integral to guiding the approach to GI planning described later in this document.

1.3 Overview of Planning Policy

The concept of GI has been developing for some time as an important environment led planning tool. GI is now being increasingly and successfully integrated into UK regional and local policies and actions, although the impetus has been largely focused within the urban areas of the South East of England, notably the Thames Gateway and other Growth Areas, such as the East Midlands.

³ http://www.coe.int/t/dg4/cultureheritage/Conventions/Landscape/default_en.asp

1.3.1 A National Regeneration Priority

The former Office of the Deputy Prime Minister (ODPM's) Sustainable Communities Plan⁴ sets out a long-term programme of action for delivering sustainable communities in both urban and rural areas. The Plan includes a significant increase in resources and major reforms of housing and planning, but also signals a new approach to how and what we build, and delivering a better quality of life or 'liveability' for communities.

The Plan consists of several key elements, two of which are directly relevant to GI:

- **Liveability.** The Plan sets out how the Government intends to intensify efforts to improve the local environment of all communities. This includes cleaner streets, improved parks and better public spaces; and
- **Protecting the Countryside.** The Plan outlines how land will be used more effectively.

This focus on 'liveability' and the countryside has provided a platform for the wider promotion and understanding of the principles that underpin GI and its importance in the delivery of a healthy and enhanced environment for everyone.

This GI Study therefore forms an integral part of delivering the Government's aspirations and objectives.

1.3.2 Green Infrastructure in the National Planning Policy Framework

The inclusion of GI in Government planning policy is a significant landmark in strategic and collaborative environmental planning and delivery and represents an essential part of the Government's commitment to meeting sustainable development objectives. Relevant planning policies include:

- **PPS 1** - Delivering Sustainable Development: fundamental driver through which the implicit requirement to take due regard to environmental issues in meeting sustainable development objectives is set out;

- **PPS 7** - Sustainable Development in Rural Areas: sets out the Government's planning policies for rural areas. A key objective of PPS7 is to raise the quality of life and the environment in rural areas through good quality, sustainable development that respects the local distinctiveness and the intrinsic qualities of the countryside;
- **PPS 9** – Biological and Geological Conservation: highlights the role that functioning ecosystems can have in promoting sustainable development, and contributing to rural renewal and urban renaissance;
- **PPS 12** – Local Spatial Planning: establishes the importance of local spatial planning in creating strong safe and prosperous communities and ensures local plans are supported by evidence of what physical, social and GI is needed to deliver sustainable communities;
- **Planning Policy Guidance (PPG) 17** - Sport and Recreation: highlights the requirement to undertake open space audits and strategies, which can inform GI strategies at both the strategic and local scale; and
- **PPS 25** – Development and Flood Risk: refers specifically to making the most of the benefits of GI for flood storage, conveyance and sustainable urban drainage systems (SUDS), and re-creating functional floodplains and setting back flood defences.

1.3.3 GI in the Draft Revised Regional Spatial Strategy for the South West Incorporating the Secretary of State's Proposed Changes

Several references to GI are made in the Draft Revised Regional Spatial Strategy for the South West Incorporating the Secretary of State's Proposed Changes (2008) and it provides the policy background to the development of the GI Study. Specific references to GI in the draft RSS are presented in Appendix 3.

The draft RSS clearly identifies the role and importance of GI in the South West Region, as well as establishing several overarching themes that the Exeter Area

⁴ Sustainable Communities: Building for the Future. ODPM, 2003

and East Devon New Growth Point GI Study will need to follow. In summary, GI is seen as offering a mechanism for contributing to sustainable communities and delivering a high quality of life for existing and new communities, by protecting and maintaining environmental and cultural assets and enhancing the living environment. It also highlights the importance of GI in providing clear objectives and priorities that can be mapped for incorporation into spatial strategies and development proposals.

It is also relevant to note that GI is identified as forming a key part of the definition of Infrastructure in the Regional Infrastructure Funds Prospectus. Further details are provided in Appendix 4.

1.4 Green Infrastructure in Devon

In addition to regional drivers for GI development and delivery, Devon County Council has acknowledged the importance of GI in the planning system. The County Council recognises the need to deliver GI through a number of the Devon Local Area Agreement initiatives currently being progressed, such as LAA2 - improve the quality, quantity and accessibility of public open space and GI and LAA8 - conservation and enhancement of Devon's biodiversity and geology (these are available on the Councils website at <http://www.devonsp.org.uk/sustainablecommunitystrategy/index.html>).

The County Council is also in the process of preparing a Briefing Paper about GI to provide guidance to the District Councils and others about GI matters that should be addressed in Local Development Documents and to establish the GI Study and the policy framework for its delivery (the published LDF Briefing Papers are available on the Councils website at: www.devon.gov.uk/ldf-briefing-papers).



A Vision for Green Infrastructure

2.1 Introduction to the Vision

GI means many things to many people⁵ and various definitions and approaches to GI planning exist throughout the country. Despite this, it is acknowledged that there is a significant amount of common ground within the available approaches, notably that GI involves natural and managed areas in both urban and rural settings, is about the strategic connection of open green areas and that it should provide multiple benefits.

To understand the nature and scope of GI in the Exeter Area and East Devon New Growth Point an important first stage in the project was to clarify the role of GI and establish a vision of what it will deliver in the future.

The Vision for GI has therefore been developed by the Advisory Group. It is based upon a refined definition of GI that takes forward the general principles enshrined in national and regional planning guidance, but also takes into account the specific issues and opportunities presented by the local area. The objectives build on the specific aims for the study and draw on the ten key functions of the countryside in and around towns as set out in the Countryside Agency's vision for the urban rural fringe.

The following chapter presents the Vision for the GI in the Exeter Study Area along with specific aims and objectives. The Vision is also presented as a promotional factsheet, a copy of which is presented in Appendix 5.

⁵ Clive Davies et.al. Green Infrastructure Planning Guide Version 1.2. North East Community Forests. Newcastle University and University of Northumbria, 2005

2.2 The Vision

The Vision is to achieve a GI Strategic Network that:

- protects and enhances current environmental assets and local identity;
- provides a holistic framework for new sustainable development and regeneration; and
- performs a multitude of life support functions for the benefit of people and wildlife.

In summary, GI will help to create high quality, attractive and functional places that will provide a setting for day-to-day living, enhance the character and diversity of the landscape and protect heritage assets that contribute to the area's unique sense of place and cultural identity. It will enrich the area's wildlife value by addressing the negative impact of habitat loss and fragmentation by promoting habitat enhancement and linkage. GI will also help to connect people to places by linking residents and visitors to leisure and work destinations along a network of safe and clearly defined routes.

In taking forward the Vision, the intention is to place the Exeter and East Devon and Teignbridge New Growth Points at the forefront of strategic GI planning and delivery in the UK.

2.3 Strategic Aims and Objectives

The strategic aims of the GI Study either directly or indirectly, take forward and expand on the ten key functions for the Countryside in and Around Towns, supported by a series of objectives. An additional strategic aim has been added concerning life support systems. These eleven strategic aims are described in Table 1.

Table 1: Strategic Aims and Objectives

STRATEGIC AIMS FOR GI	OBJECTIVES
Bridge to the Country	Identify networks of new and improved open spaces and access routes in continuous green corridors linking the city to the wider countryside
Gateway to the Town	Enhance the quality, character and identity of the landscape to promote the quality of the town and act as a gateway into urban and rural areas
Health Centre	Create a more accessible and attractive urban and rural environment close to where people live and work and the framework necessary to improve recreation and leisure facilities necessary to promote healthier lifestyles
Classroom	Provide a diverse range of environments that can act as outdoor classrooms that supports all parts of the national curriculum with particular emphasis on environmental and rural studies
Recycling and Renewable Energy Centre	Recognise the important role of the landscape in sustainable energy management, recycling waste and water and pollution control
Life Support Systems	Recognise the contribution the landscape can make to life support systems, such as adaptation to climate change, micro-climate adjustment, improving air quality and reducing emissions
Productive Landscape	Identify opportunities for farmers close to the city to take advantage of their proximity to urban markets and encourage small scale urban and community farm initiatives
Cultural Legacy	Protect features and patterns that display the evolution of urban and rural areas and improve opportunities to celebrate and understand the past and enrich the areas varied landscape character and sense of place
Place for Sustainable Living	Inform strategic decisions on the location and nature of major new development and infrastructure projects proposed in and around the city
Engine for Regeneration	Provide a mechanism for raising community confidence and skills in creating and managing community spaces and facilities and in bringing about other environmental improvements to enhance the local area
Nature Reserve	Protect, enhance and link existing and future habitats to raise ecological value and species persistence across the area in urban and rural locations

2.4 Methodology and Baseline Review

The GI Study has been undertaken in two phases:

Phase 1: Baseline Review, Analysis and Interpretation, which reviews existing GI assets and opportunities for improvement and Phase 2: GI Planning, which establishes the priority areas for investment. The methodology is presented in Appendix 6.

Phase 1: Baseline Review, Analysis and Interpretation and Phase 2: GI Planning are accompanied by a range of figures and plans. These are referred to in the text where relevant and a list of all figures can be found in Appendix 7.

The baseline review is conducted under a series of key themes. For each theme and sub theme a summary of the key issues is presented, along with opportunities and constraints. The key themes are listed below and the full baseline review, along with supporting figures, can be found in Appendix 8.

Natural Systems

- Geology and Landform
- Hydrology and Flood
- Biodiversity

Land Use and Human Systems

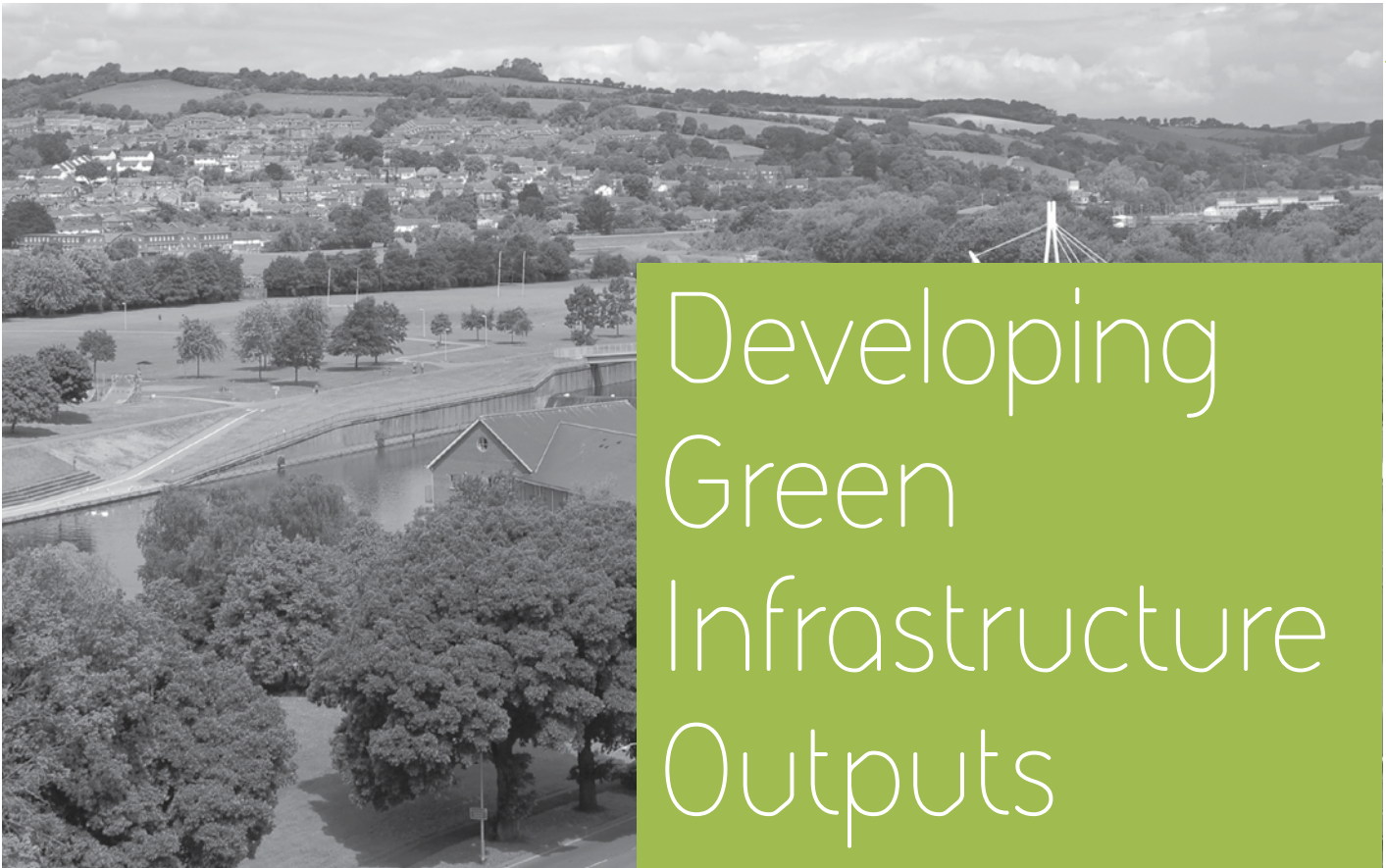
- Land Use and Agriculture
- Heritage and Culture
- Green Space
- Leisure, Recreation and Tourism
- Access and Movement

Landscape and Visual Character

- Landscape Character and Designations
- Visual and Perceptual Character

Landscape Change and Development

- New Built Development
- Land Use Change



Developing Green Infrastructure Outputs

3.1 GI Spatial Framework, GI Networks and GI Projects

GI's primary role is to place the environment at the centre of planning and decision making.

As described as Chapter 2 of this study, the Vision is to achieve a GI Strategic Network that:

- protects and enhances current environmental assets and local identity;
- provides a holistic framework for new sustainable development and regeneration; and
- performs a multitude of life support functions for the benefit of people and wildlife.

The Vision of GI should apply to the entirety of the core study area and contribute to decision making, planning and design at all scales from strategic to local. It is anticipated that the findings of this study will help direct change and also help coordinate and prioritise activity and funding.

The definition of GI in this study recognises the significance of connectivity through the linkage of people and place, the enrichment of the environmental resource through habitat expansion and linkage and through ensuring that all new development is well sited, planned and responsive to its landscape character context. In addition, it also highlights the opportunities presented by projects and initiatives that will

offer site specific GI delivery, or guide positive landscape change across a wide area.

In recognition of this an overarching GI Spatial Framework (Chapter 4) has been identified, along with two principal GI Networks and a series of GI Projects. These four components of the Exeter Fringes GI Study are set out below:

- The GI Spatial Framework builds on the baseline resource to help enhance the physical image and identity of Exeter, and address how the city, surrounding settlements and new developments relate to the landscape;
- The Biodiversity Network is founded principally on the biodiversity resource and opportunities for enhancement and linkage and reversal of habitat fragmentation;
- The Sustainable Movement Network is focused on people and place offering enhanced opportunities for sustainable movement between destinations and assets; and
- GI Projects aim to deliver multifunctional benefit across a number of agendas. They often encompass elements of the spatial networks described above and many will result in new or enhanced open space provision.

The GI Spatial Framework seeks to demonstrate how the city, surrounding settlements and new developments relate to the landscape. It identifies the fundamental landscape elements that can help to shape the legibility of the city, its landscape setting and the quality of life it offers to inhabitants and visitors.

The Biodiversity Network and Sustainable Movement Network are tangible proposals, designed to attract funding for their refinement, design and delivery on the ground. They represent the core of GI delivery in the study area.

GI Projects will vary in scale and scope, although they will aim to deliver multi-functional benefit. For example, an individual project, such as the Clyst Meadows Project can deliver on a number of agendas, combining habitat enhancement, open space and recreation improvements and provision for arts and education.

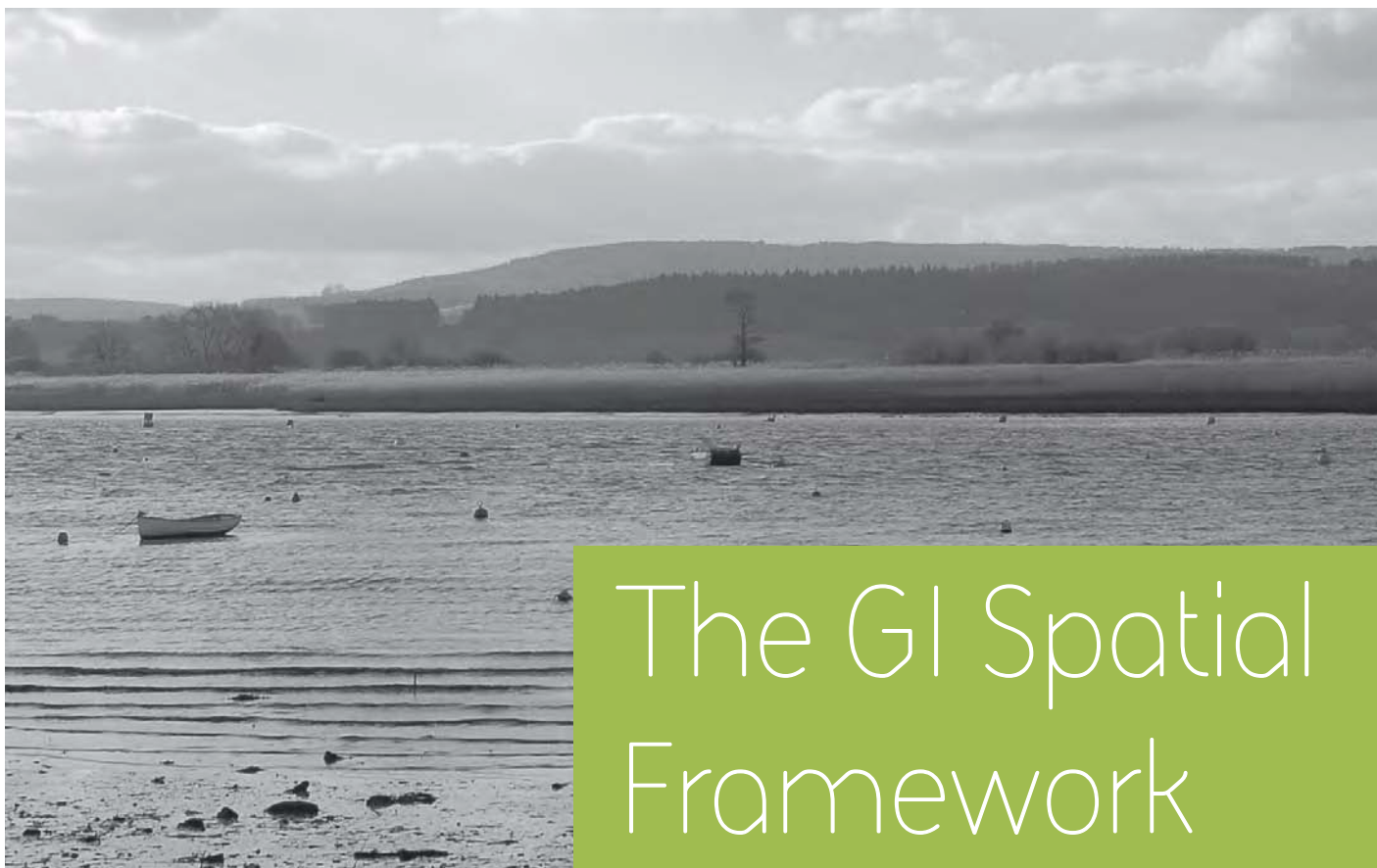
The Biodiversity Network (Chapter 5) and the Sustainable Movement Network (Chapter 6) and the GI Projects (Chapter 7) have been developed in some detail, based on known assets and opportunities (refer to Baseline Review and Supporting Figures in Appendix 8) and through consultation with key stakeholders.

It is acknowledged that these initiatives are closely related and should not be viewed in isolation. Significant refinement of these initiatives will be required at the detailed design and delivery scale in order to respond to the pressures of development, address local priorities and issues such as land ownership and reconcile physical obstacles and barriers. The identification of the networks and projects in this study does not preclude the identification of further initiatives in the future.

3.2 The GI Strategic Network

The GI Spatial Framework, Biodiversity Network, Sustainable Movement Network and GI Projects described above form the main components of a robust evidence base for the future delivery of GI in the core study area.

Although these four components are physically separate and have a different range of functions and thematic objectives, there is a high degree of overlap and interdependence between them, and numerous situations where they occupy the same area of landscape. Where synergy occurs, the greatest opportunities for multi-functional development can be seen to exist. These areas can be regarded as ‘corridors’ forming a part of the GI Strategic Network. This GI Strategic Network, described in more detail in Chapter 8, does not prescribe specific projects or actions. Rather it should be seen as defining target zones for prioritising funding and activity at the strategic planning and allocation scale to help facilitate the growth of Exeter and surrounding settlements. However, given their strategic importance to GI delivery, new development within or adjacent to these zones would also need to be particularly responsive to GI objectives.



Refer to:

- Figure 1: GI Spatial Framework (inserted into text – see page 19)

4.1 Introduction to the GI Spatial Framework

The GI Spatial Framework is broader than the Biodiversity Network, Sustainable Movement Network and GI Projects described in the following chapters. It seeks to enhance the physical identity of Exeter, improve the quality of life for people who live in and around the city, and address how the city, surrounding settlements and new developments relate to the landscape.

It will be necessary for any new developments to support the aims and objectives of GI. Developers should therefore liaise with the LPA and/or the proposed GI delivery body to ensure that their proposals are appropriate to the GI Spatial Framework, and conform to the overall Vision for GI. Delivery and implementation is discussed in more in Chapter 9: GI – Making it Happen.

4.2 Context to the GI Spatial Framework

Many of the most beautiful and economically successful settlements are strongly related to the landscape within which they have evolved. Without the seven rocky hills that punctuate its vibrant fabric Athens would not be the same place and Oxford would be a quite different without the tranquil meadows along the Thames and Cherwell Rivers that create the stunning contrast between the city centre and its rural hinterland.

Exeter is fortunate in that it has a relationship with its setting that, in many ways, is every bit as strong as that enjoyed by these iconic cities. Well defined ridges skirt the city to the north, north west and south west, creating a clearly defined rural setting that is visible from most parts of Exeter. The Exe valley cuts through the centre of the city creating a strong landscape and urban structure that is essential to the image of Exeter as well as providing attractive pedestrian and cyclist routes to the surrounding coast and countryside. Green spaces and valley parks extend into neighbourhoods providing linkage between where people live and their setting. The city's existing GI already helps to define it as a place, contribute to its identity and provide quality of life to its residents. The same applies to the many settlements that surround the city in East Devon and Teignbridge. They sit harmoniously within their landscape setting and have easy access to the countryside.

The landscape of the urban rural fringe to the east of Exeter is, however, potentially a different story. Here the landscape has shallower, less distinct topography and accommodates major highways infrastructure, which seeks to disrupt the physical relationship between Exeter and East Devon. Proposed developments, such as the new community at Cranbrook, the intermodal freight terminal and Science Park have the potential to further alter the balance between urban and rural, further blurring the edge of the city.

GI has the potential to identify those spatial and structural landscape elements that might play a role in shaping the city in the future. In the same way that the surrounding ridges and the Exe valley are important, new GI elements can be identified for the eastern part of Exeter and neighbouring East Devon to shape the area in the future. It is possible to draw out a broad Spatial Framework for the study area, identifying how GI assets shape the fundamental form, image and identity of the city, the surrounding settlements and the wider rural hinterland.

4.3 Approach to Identifying the GI Spatial Framework

There is a substantial body of research and consensus about the elements that are most important in defining the identity of a city or other settlement. Foremost amongst these is 'Image of the City' by Kevin Lynch (1960). Lynch's thinking has stood the test of time and still stands as one of the best approaches to the analysis of urban structures. Lynch suggests that change can be managed by considering the 'image of the environment'. He argues that people find it easier to understand, identify with and navigate 'legible' places with a clearly recognisable structure. Such places are also more likely to be perceived positively and have a strong 'sense of place'. He shows how this structure can be understood and planned for by considering the 'paths' that traverse and subdivide the area and the experience these provide; the nature of the edges within the area and how they are defined; the different districts that make the area; and, the presence of nodes and landmarks that act as focal points and aids to navigation.

Many of these structures can be seen within parts of Exeter's setting. The main linkages, for example the cycle link along the Exe valley, provide structure to the landscape and determines how it is experienced. The surrounding ridges create clearly defined edges to the city; the different character areas define distinctive districts; points where routes come together, such as at Topsham, act as nodes; and, there are numerous landmarks such as the trees on the hill at Redhayes.

The methodology for identifying the GI Spatial Framework therefore involves adapting Lynch's thinking to identify those elements most important in building a clearly defined structure for the city and its surrounding settlements. Table 2 shows how this can be achieved.

Table 2: Methodology for Identifying GI Spatial Framework

Urban structure	Description	Landscape structure	Synergy with objectives for a sustainable place
Paths	The channels along which the observer moves (streets, walkways, transit lines, canals, railroads) and for many people these are the predominant elements in their image	Roads, lanes, footpaths, desire lines, key views	Sustainable accessibility
Edges	The linear elements not used or considered as paths by the observer - they are the boundaries between two phases, linear breaks in continuity; lateral references rather than coordinate axes; edge elements are for many people important organising features, and hold together generalised areas	Edges formed by topography, ridges, rivers, hedges, viewsheds or horizons, watersheds, edges formed by existing settlement	Primary linear elements
Districts	The medium-to-large sections of the city, which the observer mentally enters 'inside of' and which are recognisable as having some common, identifiable character	Landscape character areas and types	Character areas
Nodes	The points, or strategic spots, in a city into which an observer can enter, and which are the intensive foci to and from which he is travelling - or concentrations, which gain their importance from being the condensation of some use of physical character	Places with a strong landscape sense of place because of the confluence of paths, edges, landmarks	Node (or junction or intersection)
Landmarks	Another type of external point reference – these are usually a simply defined physical object	Key features in the landscape – distinctive hills, groups of trees, individual trees, buildings, etc.	Landmarks

4.4 The GI Spatial Framework

The GI Spatial Framework conceives Exeter as a compact city with a clear distinction between the urban area and the countryside within which it sits. It is a city supported by linked, self contained and well-defined communities which are both historic and new.

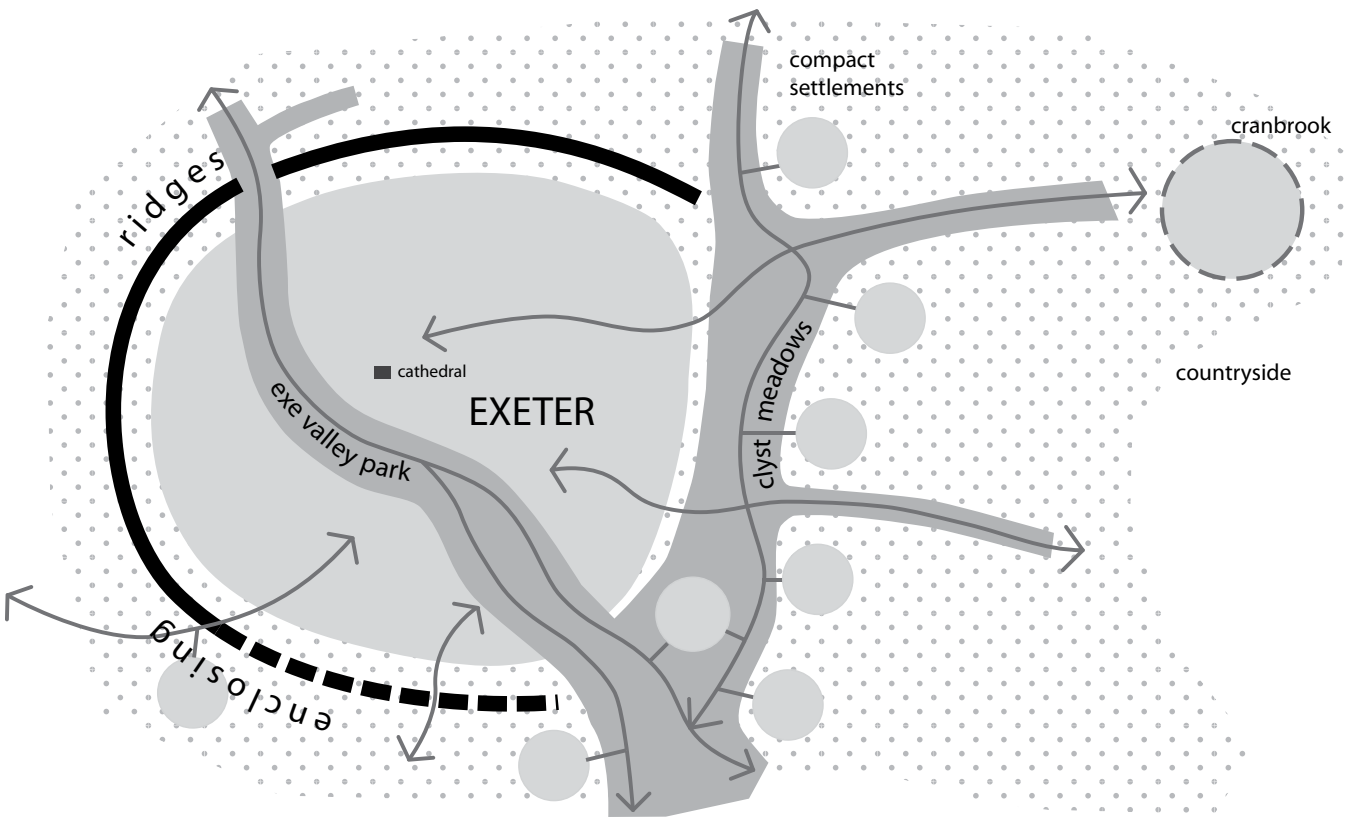
The city is defined by strong landscape ridges to the north and west. To the south containment is provided by an inner ring of hills to the rear of St Thomas and Alphington. More distant visual context and containment is provided by the outer ring of hills of which Haldon Hill is a part. The Exe valley and associated parks creates a major GI element in the heart of the city providing routes to the countryside and creating strong edges between different parts of the city. To the east, the Clyst Valley is a significant GI element which, through landscape management, can become an attractive and rich environment, where particular emphasis is given to biodiversity enhancement, countryside access, environmental education and low-key flood management.

The 'satellite' settlements will be linked into the heart of Exeter by safe, direct, green pedestrian and cyclist links which bridge the barrier created by the M5 and the inner ring road. Linkages from Topsham and Exeter will remain the most important routes, connecting the existing settlements, but a new high quality route will also be created through the new development at Monkerton, crossing the M5 into the Science Park at Redhayes. The route is the key sustainable link from Exeter towards the new community at Cranbrook. The landscape is punctuated by key landmarks, in particular the hill tops and key buildings on them. These include the wooded hilltop of Redhayes and the Science Park; the rugby stadium; and the landscape setting and key buildings around the University.

Key elements of the GI Spatial Framework are described below and illustrated by Figure 1:

1. The ridgelines that define the city to the north, north west and south west;
2. The Exe Valley and the associated valley parks and linkages that help to structure the city and provide routes to the coast and countryside;
3. The Clyst Valley, associated biodiversity reserves and linkages that provide connections between the settlements to the east of Exeter to the city;
4. The network of routes allowing for easy sustainable accessibility between the urban area of Exeter and the surrounding countryside and, in particular the 'satellite' settlements; and
5. Sustainable accessibility between the satellite settlements and the high quality countryside within which they sit.

Figure 1: The GI Spatial Framework (Indicative)



4.5 The Implications of the GI Spatial Framework

This GI Spatial Framework is based on an assessment of how existing and future GI assets might be brought together to help define the form of the city and the nature of its relationship with the surrounding countryside and settlements. Many factors will determine how priorities for development are set and where investment in GI is targeted. Broadly however the GI Spatial Framework has a number of important implications for the future development and management of Exeter and its fringes:

- Protection and management of the key ridgelines that enclose the city and maintenance of a clear distinction between the urban area and the countryside;
- The strengthening of the Exe valley and the valley parks as strong landscape elements with clear urban green space / rural character and continuing enhancement of linkages to the countryside, coast and between the city and surrounding settlements;
- As outlined in the Secretary of State's Proposed Changes to the Draft RSS (2008) allow for consolidation of the urban area up to the M5 and create a positive edge to the east of Exeter.;
- Management and investment of the Clyst Valley to create a well defined network of accessible semi natural green spaces and less accessible biodiversity rich areas, such as along the M5 corridor, defining the edge of Exeter and creating a strong buffer between the city and the countryside;
- Containment of proposed new settlements to the east of Exeter. Proposed new settlements should have well defined edges so that they appear to be physically self-contained urban areas within the countryside rather than as an extension of Exeter; and
- Identification and protection of green routes between the surrounding satellite settlements and Exeter, in particular the creation of a new linkage ('landmark bridge') across the M5 at Redhayes to enhance sustainable accessibility to the east.



The Biodiversity Network

Refer to:

- Figure 2: Biodiversity Network - Woodland and Grassland Assets
- Figure 3: Biodiversity Network - Wetland and Open Water Assets
- Figure 4: Biodiversity Network - Habitat Reservoirs and Links

5.1 Introduction

If a vibrant and robust biodiversity resource is to be achieved, maintaining and enhancing existing habitat networks will be important. Therefore, the Biodiversity Network element of GI plays an important role in the maintenance and improvement of biodiversity assets into the future. By expanding the area of habitat, improving connectivity and enhancing the quality of the existing assets the chances of species becoming extinct will be reduced and there will be a resource more capable of adapting to future changes in climate and other pressures such as land use change and development.

In addition, a functioning and coherent biodiversity resource will provide opportunities for significant landscape enhancement, improved access to areas of high quality countryside and semi-natural green space and a framework for environmental education, active and passive recreation and a fitting setting for historic sites and monuments.

The importance of networks of natural habitats, and the role they have to play in biodiversity conservation, is recognised in the latest government guidance on nature conservation: PPS 9 - Biodiversity and Geological Conservation. An extract follows:

“Networks of natural habitats provide a valuable resource. They can link sites of biodiversity importance and provide routes or stepping stones for the migration, dispersal and genetic exchange of species in the wider environment. Local authorities should aim to maintain networks by avoiding or repairing the fragmentation and isolation of natural habitats through policies in plans. Such networks should be protected from development, and, where possible, strengthened by or integrated within it. This may be done as part of a wider strategy for the protection and extension of open space and access routes such as canals and rivers, including those within urban areas”.

Natural England also recognises the importance of landscape scale habitat creation and restoration as a key part of the overall strategy for maintaining biodiversity in England. Further details can be found in English Nature’s research reports on Landscape Scale Biodiversity Opportunity Mapping (report numbers 687 and 641). Several large areas of contiguous habitat cover occur in the landscape surrounding the core study area. Of particular note are the Pebblebed Heaths, mixed woodlands and open grassland areas at Ashclyst Forest and Haldon Forest and wetlands, mudflats and open water in the Exe Estuary.

However, within the core study area, and most notably in farmland to the east of the M5, a landscape of fragmented terrestrial habitats is displayed. This is largely as a result of widespread agricultural improvement and modern development. Whilst some habitat resources are in evidence, they are generally isolated in areas of agriculture or built development and poorly connected to other areas of habitat.

The current highly fragmented habitat resource leaves many species vulnerable to extinction by virtue of the small size of the available resource and the isolated nature of remaining populations. Habitat creation, improvement and connectivity are therefore an important part of landscape enhancement.

At the regional scale, the South West Nature Map identifies the best areas to maintain and expand wildlife habitats through appropriate management, restoration and/or creation. However, at the local scale, it is acknowledged that its strategic focus may result in a lack of accuracy and that all areas of local importance will not be covered and opportunities fully exploited. The Biodiversity Network element of the GI Study therefore provides a mechanism for providing a more refined and locally responsive plan of habitat enhancement and connectivity.



5.2 Approach to Identifying and Characterising the Biodiversity Network

The starting point of the Biodiversity Network assessment was to identify and map the existing biodiversity resources within and surrounding the core study area. This was achieved by plotting the available spatial data illustrating designated sites including Sites of Special Scientific Interest (SSSI), Nature Reserves and County Wildlife Sites (CWS) as well as non designated sites of biodiversity interest or potential such as Ancient Woodland and grasslands forming part of the Exeter Riverside Valley Park or Exeter Biodiversity Network. Aerial photographs and local knowledge were also used to identify areas with high biodiversity potential, such as areas of semi improved grassland within a strong network of hedgerows and a high occurrence of field trees that is visible in the east of the core study area. The main terrestrial habitat types (and sources) identified are:

- Heathland (Natural England);
- Woodland (National Inventory of Forest Types and Mastermap);
- Lowland meadow (Natural England);
- Remnant historic parkland (derived from the Devon HLC and verified on aerial photographs);
- Agricultural land with habitat potential (rough grassland with thick boundary hedgerows and trees - identified on aerial photographs);
- Grasslands fringing tributary streams (buffering of mastermap data);
- Designated wildlife sites (Local Planning Authorities);
- River Channels (Mastermap);
- Ponds (Mastermap);
- Fens, mudflats and floodplain grazing marsh (Natural England); and
- Peat (derived from geology mapping and confirmed by CWS designation).

Similarly buffer analysis of areas of nature conservation designation, remnant parklands, farmland with habitat potential and smaller areas of trees and woodlands was not undertaken due to their strict geographic limits and proximity to built development.

The analysis of habitat distributions and identification of reservoirs and links is presented on Figures 2 and 3.

Once the mapping of existing habitats was completed, the next stage involved the identification of habitat clusters. The principle behind this approach is that habitat creation or enhancement within these clusters would be of maximum benefit in stabilising and improving the existing habitat resource.

Buffer analysis was undertaken to increase the visibility of key terrestrial habitats in and surrounding the core study area, to aid the identification of habitat clusters. 100m Buffering was therefore applied to woodlands identified on the National Inventory of Woodlands and lowland hay meadows. A 50m buffer was established along tributary stream channels feeding the Clyst and Exe to identify potential semi-improved grassland corridors fringing water courses. Buffering also helped identify zones around existing terrestrial habitat that may offer potential for natural regeneration and consolidation of existing assets through protection.

Buffer analysis was not undertaken for heathland and riparian/open water habitat on account of their increased visibility in the study area and recognition that restoration or creation can only occur within tight geological, pedological or hydrological constraints.

5.3 Description of the Biodiversity Network

The composite Biodiversity Network, as shown on Figure 4, illustrates the distribution of habitat reservoirs and habitat links identified through the analysis stage. Areas of woodland, heathland and river channels are identified for context. Other habitats and designated nature conservation sites (illustrated on Figures 16 and 17 and described in Appendix 8) were considered in the analysis, however are not illustrated.

Larger habitat blocks and groupings of smaller blocks of habitat in close proximity to each other are referred to as habitat reservoirs. These will be the focus of habitat protection, enhancement and creation. A combination of habitat protection and creation, perhaps through new planting or natural regeneration will be encouraged, and protection, for example from pesticide drift will be afforded through the use of landscape buffer strips.

Linear features, such as river corridors or hedgerow networks, or a series of unconnected habitat patches in close proximity to each other that have the potential to link the reservoirs, are referred to as habitat links. Habitat links, in addition to providing additional habitat resources will also have an important role in connecting habitat reservoirs and clusters together.

It should be noted that the habitat links and reservoirs that are identified are not the only areas where habitat protection, enhancement or creation will be encouraged. The protection, conservation and enhancement of areas of existing semi natural habitat will continue to be important, as will the creation of new habitats and habitat links as opportunities arise.

5.4 Habitat Reservoirs

Six habitat reservoirs have been identified from the analysis of habitat distribution, landscape type and designations. A distinction is made between terrestrial and wetland/open water types. These are described below.

5.4.1 Wetland/Open Water Habitat Reservoirs

Clyst Valley

The Clyst Valley habitat reservoir extends along the floodplain of the River Clyst from the weirs upstream of Clyst St Mary northwards to the north west of Broadclyst.

The floodplain landscape is predominantly improved or semi improved pasture, although some arable land uses are evident. Hedgerows within the floodplain are not characteristic, although remnant hedgerows and linear belts of scrub are evident along some field boundaries and fringing the river channel. Parkland at Bishops Court is included in the Habitat Reservoir as a consequence of its close proximity to the Clyst and its floodplain landscape. Semi improved parkland grasslands, bodies of standing open water, parkland trees, woodland copses and tree belts are all characteristic, and make an important contribution to the range of habitat types represented.

The geographical extents of the habitat reservoir is broadly defined by the outer limits of the floodplain, and unlike the area to the south of the weirs at Clyst St Mary, the area is not subject to tidal flooding.

Except for a woodland County Wildlife Site (CWS) to the east of Belfield House at the northern extent of the habitat reservoir, there are currently no biodiversity designations within the area. Despite this the Clyst Valley has been identified as a habitat reservoir because of the combination of grassland, wetland, parkland, woodland and farmland within a connected series of habitats linked by the River Clyst.

Lower Exe and Clyst Valleys and Exe Estuary

The Lower Exe and Clyst Valleys and Exe Estuary habitat reservoir comprises the tidal reaches of the rivers Exe and Clyst and the Exe Estuary. The Exe is tidal up to the quay at Haven Banks, and the Clyst up to the weirs at Clyst St Mary.

The valley floors of the Lower Exe and Clyst comprise a rich mosaic of habitat types ranging from riverside

meadows, scrub, tree copses, hedgerows, salt marsh, mudflats and open water. The Exe Estuary south of the M5 is characterised by semi improved and seasonally wet pastures and a multitude of drainage channels and creeks, with fewer trees and hedgerows in evidence. The nature conservation value of the Lower Exe and Exe Estuary is highlighted by the range of nature conservation designations evident. Of particular note is the SSSI, Ramsar site and Special Protection Area (SPA) designations below Countess Weir. The semi-improved marshy grassland, saltmarsh and species-rich ditches of the lower Clyst between Topsham and Clyst St Mary are also recognised as important habitats, with an area of floodplain within East Devon District designated as a CWS.

Above Countess Weir the Exeter Riverside Valley Park contains several areas with local designations, including areas of woodland and grassland fringing the floodplain.

This area has been identified as a habitat reservoir because of the high importance of the estuarine, wetland, riparian and river floodplain habitats it supports and the large continuous nature of this semi-natural open space.

Upper Exe Valley

This habitat reservoir includes the River Exe and its floodplain upstream of Exeter City centre and extends northwards to include the Brampford Speke SSSI. A more limited palette of habitat types is evident when compared to the Lower Exe and Exe Estuary. However, old water courses, open pools, and ditches, semi improved grasslands and riverside meadows contribute local habitat diversity. The Brampford Speke SSSI contains a richer habitat resource, with a number of riverside tree belts and remnant hedge-lines marked by isolated trees and hedge plants. The area is also notable as an example of floodplain development, with examples of lateral meander movement and channel accretion. The course of the dismantled railway line is also significant, displaying intermittent stretches of regenerating scrub and woodland. The Brampford Speke SSSI might be regarded as a model for enhancement of the remainder of the Upper Exe Valley habitat reservoir. Subject to local habitat enhancement potential exists to extend the habitat reservoir

northwards along the floodplains of the River Culm and Creedy, both of which are tributaries of the River Exe.

5.4.2 Terrestrial Habitat Reservoirs

North Exeter Wooded Hills and Meadows

This is the largest and perhaps most complex of the habitat reservoirs on the edges of Exeter. It is characterised by woodlands and an intricate farmland landscape with a patchwork of fields with strong hedgerows connecting the woodland blocks. Much the farmed land is in arable cultivation or managed as improved pasture, and as such is of limited biodiversity interest. However, along the urban fringe there are patches of scattered scrub, small woodlands and unimproved meadows or semi improved grasslands that form a richer habitat mosaic.

The largest area of woodland is Stoke Woods SSSI, which is noted for supporting a rich diversity of trees, breeding birds, fungi and butterflies. Ancient semi-natural oak woods and small streams which traverse the woodland floor are particularly important components of the available habitat resource. There are also notable areas with local landscape or biodiversity designations, including the Duryard Valley Park.

Nadderwater

The steep sided valley of the Nadder Brook contains a rich mosaic of habitats, comprising an intricate patchwork of deciduous woodlands and small semi or un-improved pastures connected by a dense network of wide, mature hedgerows. To the south of Pocombe Bridge, the landscape is more open, and as such hedgerows and riverside trees, in combination with semi improved pastures are the predominant habitat type. However, north of the bridge, the valley becomes steeper and increasingly more wooded. Stretching outwards from the wooded valley is a network of dense hedgerows with numerous hedgerow trees that form the framework for a rich habitat reservoir. The Alphington Whitestone Valley Park, and several local biodiversity designations are located within and neighbouring the valleys. Most notable are unimproved or semi improved neutral grasslands at Old Wheatley Field, Upper Old Wheatley Farm and Culm grassland at Spring Brake.

Cowley Wooded Hills

This habitat reservoir is located to the west of St Andrews Road to the north of Exwick, and comprises an intricate pattern of small and moderately sized woodlands and tree belts, typically on steeply sloping landform. The woodlands are connected by an intricate network of strong hedgerows bordering predominantly pasture fields, some of which contain mature field trees, which further contribute to the areas biodiversity interest. Parts of the reservoir are protected by local landscape or biodiversity designations.

5.4.3 Habitat Links

The Rivers Exe and Clyst are clearly elements of the landscape that create landscape scale habitat corridors through the core study area. However, analysis of habitat resources indicates that further habitat links through the countryside and within the urban envelope are viable, in areas that may be perceived as being of limited biodiversity interest. These links are derived from clusters of habitat and are particularly important in providing connectivity between the habitat reservoirs previously identified, but also mark areas in the landscape with demonstrable potential for biodiversity enhancement. Indeed, where enhancement of larger areas of contiguous or clustered habitat is successful, it may be possible to define several new habitat reservoirs in the future.

A summary of the key habitat links and clusters are presented below:

- The Eastern Tributaries – five tributaries of the Clyst and Exe drain westwards through areas of agricultural landscape that has limited biodiversity interest. Aerial photographs indicate that narrow stretches of streamside pastures, riparian habitat, trees and hedgerows border the tributaries, which have significant potential in providing corridors of continuous terrestrial habitat. These perform an important function in linking the Clyst and Exe Estuary habitat reservoirs to the Pebblebed Heaths and Ashclyst Forest and habitat clusters on the fringes of the core study area characterised by areas of remnant historic farmland, discreet areas of denser hedgerows, small fields and pastures, isolated species rich meadows and deciduous woodland blocks and shelterbelts. Of particular note is the unimproved grasslands CWS at Beautiport Farm. Clusters of habitat also perform a linking function across the watersheds of adjacent streams;
- The A30 road corridor – runs parallel to a tributary of the Clyst, and supports linear stretches of woodland and grassland. There is scope to improve the habitat resource bordering the route and develop a continuous habitat corridor from the cluster of habitats identified around Rockbeare House to the Clyst Valley habitat reservoir and on into the eastern fringes of Exeter, via the Science Park site;
- The dismantled rail line to the north of Alphington – provides an important link between the Nadderwater and the Lower Exe and Estuary habitat reservoirs. A stretch of the stream course is designated as part of the Exeter Biodiversity Network. However, further enhancement of biodiversity interest along this corridor will be necessary to enhance its linking capabilities;
- The A379 corridor (Junction 30 to Ludwell Valley Park) – represents an opportunity to enhance habitat links between the Lower Clyst Valley and the Lower Exe and Estuary, through the built up areas of Exeter. Of particular note are the linear belts of woodland and trees, set within a grassland framework bordering the busy road corridor. Ludwell Valley Park represents a sizable habitat cluster within the city, and a notable ‘stepping stone’ of grassland habitat forming a link between the Lower Clyst and Lower Exe and estuary habitat reservoirs. The importance of this to strategic nature conservation objectives is recognised in the designation of Ludwell Valley Park as a Regionally Important Geological and Geomorphological Site (RIGGS), along with other local landscape or biodiversity designations. Similarly the A379 corridor is also recognised as performing an important function, with notable stretches protected by local landscape or biodiversity designations.
- Whilst not recognised at this strategic scale, it is acknowledged that linear features such as rail lines and roads also present important linking habitat. Several stretches of rail line and roads

within and fringing the built up areas of Exeter have been protected by local landscape or biodiversity designations on account of their existing or potential wildlife value. Habitats bordering roads in the vicinity of Monkerton and the main line railways into the heart of the city are particularly striking; and

- New development within the core study area has a significant role to play in delivering components of the habitat reservoir and links identified. For example, the Science Park site performs an important linking function on a habitat link running from the city eastwards along the A30, and as such continuous belts of woodland or grassland habitat and hedgerows should be maintained or created in this location. For sites that do not lie within or adjacent to the habitat links or corridors, it is not likely that a contribution can be made to delivering the aspirations of the strategic Biodiversity Network. However, the provision of appropriate habitats should continue to be encouraged, with perhaps greater emphasis given to maintaining and enhancing local habitat networks and increasing the gross area of functional habitat in the study area. Future reviews will identify new habitat reservoirs and potential links, incorporating biodiversity gains arising directly or indirectly out of new development.

5.4.4 Links to Major Habitat Reservoirs outside the Core Study Area

Three significant habitat reservoirs are located outside the core study area; Ashclyst Forest, the Pebblebed Heaths and Haldon Forest. They are important considerations in the development of the Biodiversity Network, and where possible habitat links have been identified to provide connectivity to these areas. Again, clusters of available habitat or land with notable biodiversity potential have been used to identify these links.

5.5 Potential for Landscape Scale Habitat Enhancement

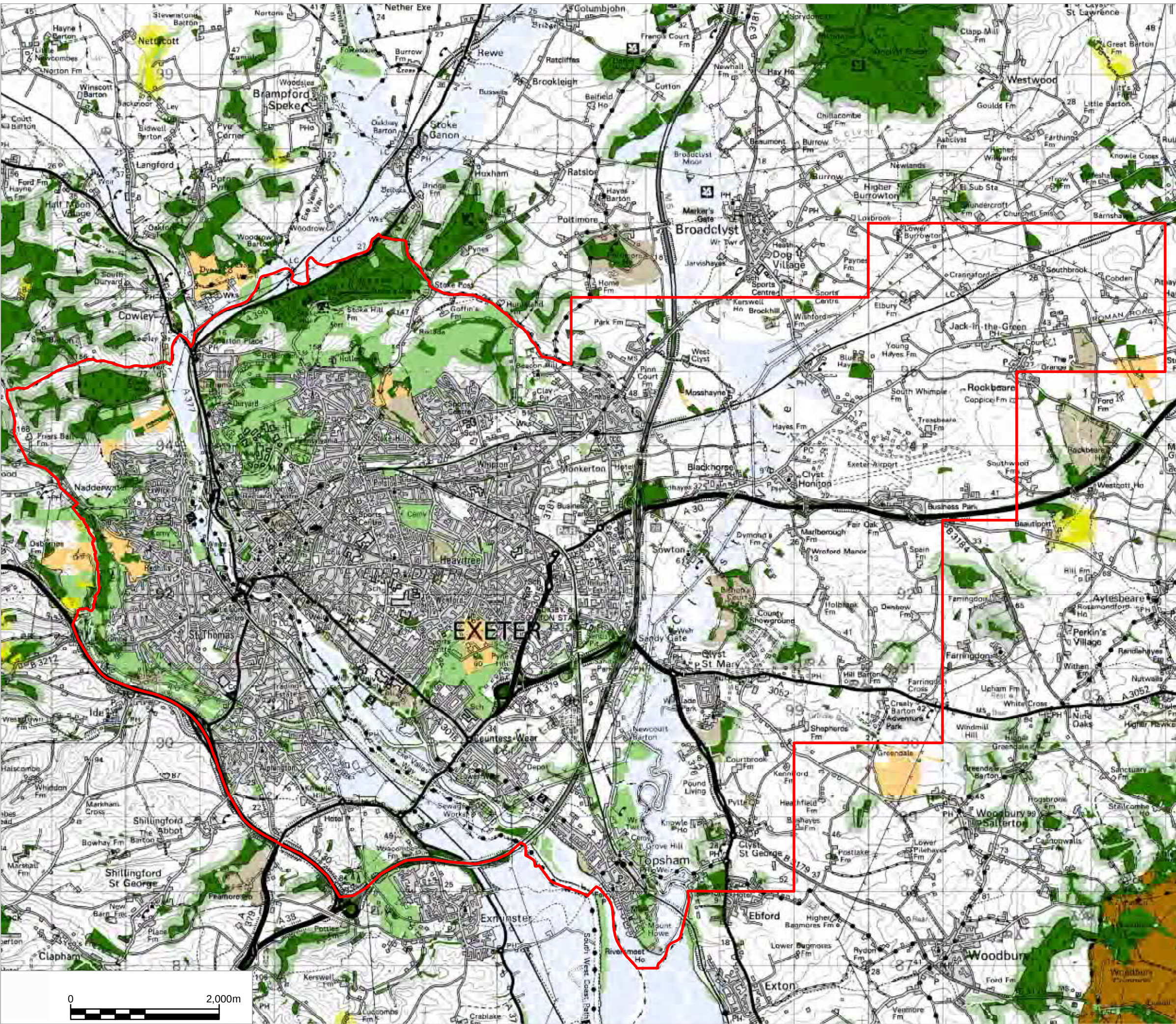
In recent years attention has been given to the potential for the restoration of semi-wilderness areas in the UK (Taylor, 2005). This is more than an aspiration and re-wilding theory is gaining support.

Several significant projects are already underway throughout Europe and the UK including the Cambridgeshire Fenland Project, which is focused on the Wicken Fen National Nature Reserve. This proposes the re-creation of wet fen, open water, wet pasture, scrub and carr habitat across a wide area and land is already being acquired to enable this. In Holland the establishment of the Oostvaardersplassen reserve, covering approximately 5000 hectares, is allowing the natural development of 'wildland' with minimal human interference.

As a consequence of intensive agriculture and land management for many hundreds of years, and the subsequent fragmentation of semi natural habitat within the core study area, re-wilding is not as viable as elsewhere in the sub region.

However, whilst the nature of settlement, complex land ownership and productive land-use may preclude large scale initiatives such as those described in Holland and Cambridgeshire, it may be possible in a number of locations and on a smaller scale, to re-wild areas whilst respecting the requirement to maintain the productivity, aesthetic quality and functionality of the landscape.

Re-wilding should be focussed on the largest areas of continuous high quality habitat. An obvious candidate is the Exe Estuary which is characterised by its semi natural and wilderness state, or perhaps stretches of the Clyst Valley, and any re-wilding opportunities should be undertaken as part of the overall proposals for these sites.



Legend

- Core Study Area
- Floodplains, Fens, Mudflats and Coastal Grazing Marsh
- Woodland*
- 100m Buffer of Woodlands
- Lowland Meadow**
- 100m Buffer of Lowland Meadows
- Remnant Parkland***
- Farmland with dense hedgerows and habitat potential****
- Heathland
- Grassland/arable land nature conservation designations lying outside floodplain

* Forestry Commission National Inventory of Woodland Types (NIWT)
** Natural England Data
*** Identified on Devon HLC and verified on aerial photographs
**** Identified on aerial photographs

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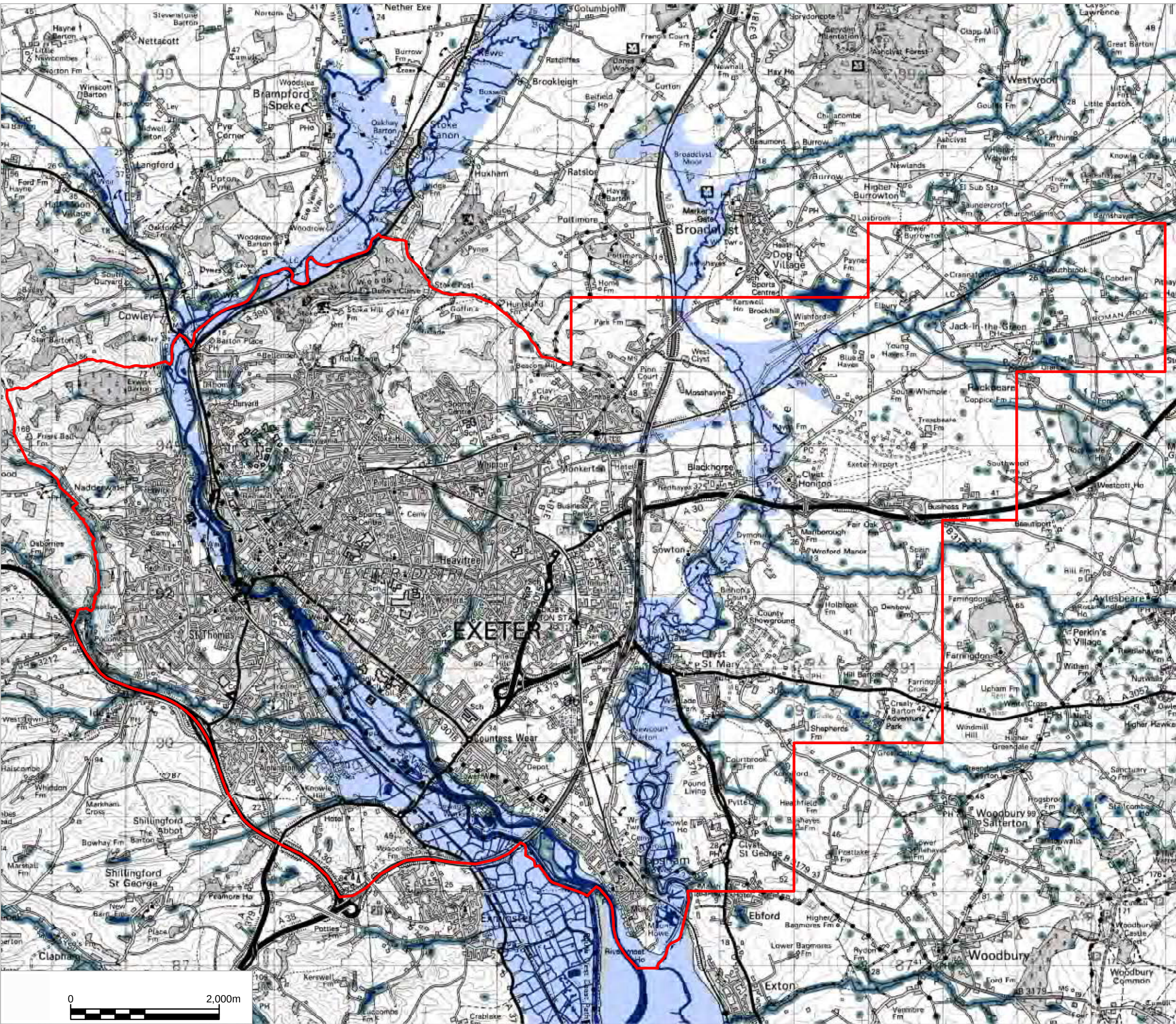
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LANDSCAPE
URBAN
ENVIRONMENT
ECOLOGY

EXETER AREA AND EAST DEVON NEW
GROWTH POINT GREEN
INFRASTRUCTURE STUDY
Figure 2: Biodiversity Network
Woodland and Grassland Assets

DATE	March 2009	DRAWN	RP
SCALE	1:50,000 at A3	CHECKED	PS
STATUS	FINAL	APPROVED	FO
DWG.NO.	2594LE/0002		



Legend

Core Study Area

River Channels and Open Water
(includes peat habitat CWS at Dog Village)

50m Buffer of River Channels, Open Water
and Peat Habitat*

Floodplains, Fens, Mudflats
and Coastal Grazing Marsh

*50m Buffer of River Channels, Open Water
and Peat Habitat illustrated only for areas
outside floodplain grazing marsh, fens and mudflats

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URBAN

ENVIRONMENT

ECOLOGY

EXETER AREA AND EAST DEVON NEW
GROWTH POINT GREEN
INFRASTRUCTURE STUDY

Figure 3: Biodiversity Network
Wetland and Open Water Assets

DATE	March 2009	DRAWN	RP
SCALE	1:50,000 at A3	CHECKED	IH
STATUS	FINAL	APPROVED	FO
DWG.NO.	2594LE/0003		

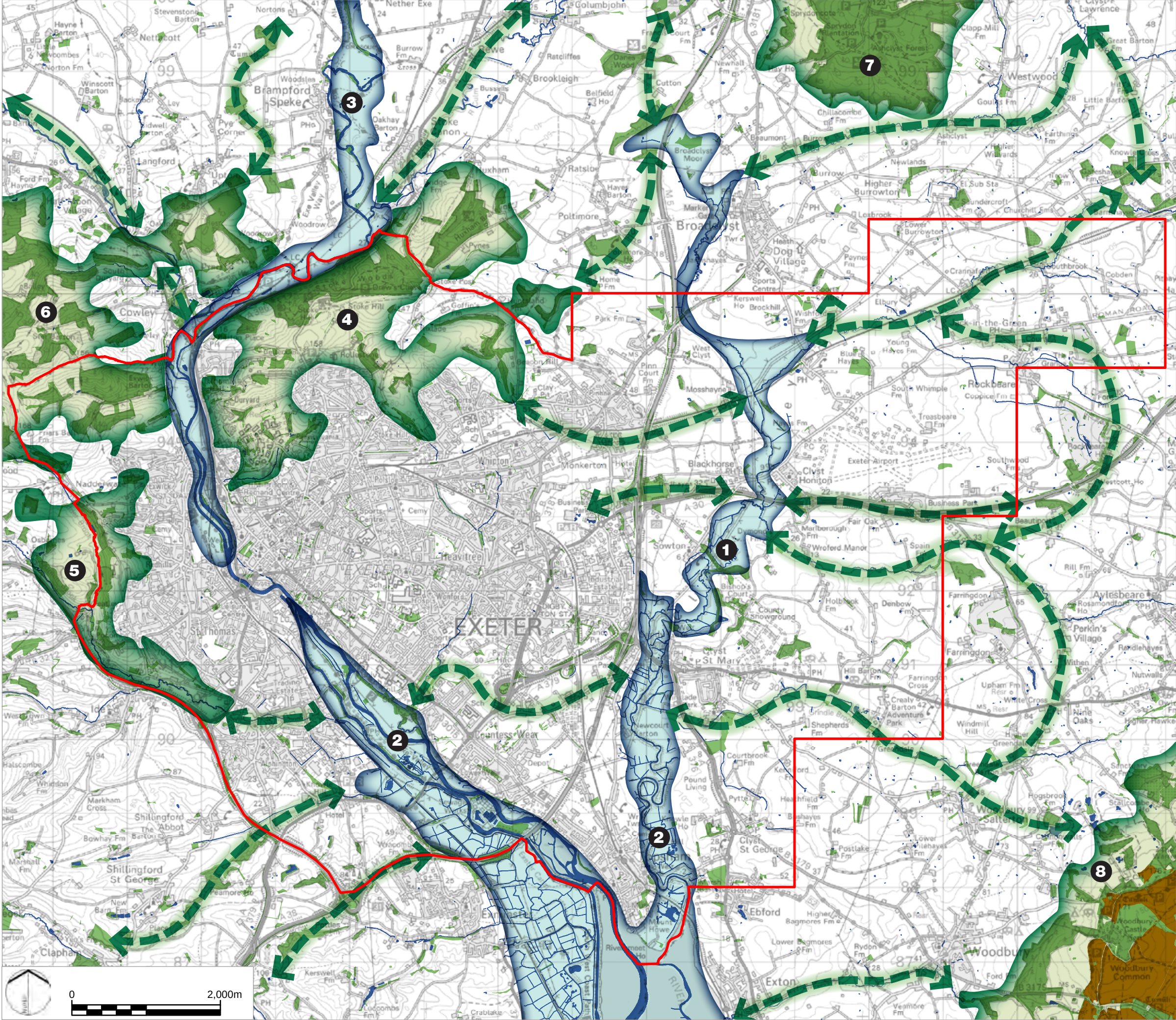
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Legend

Core Study Area

Wetland / Open Water Habitat Reservoirs

1. Clyst Valley

2. Lower Exe and Clyst Valleys and Exe Estuary

3. Upper Exe Valley

Terrestrial Habitat Reservoirs

4. North Exeter Wooded Hills and Meadows

5. Nadderwater

6. Cowley Wooded Hills

7. Ashclyst Forest

8. Pebblebed Heaths and Wooded Fringe

Habitat Links

Principal Habitat Types

Woodland

River Channels

Heath

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EXETER AREA AND EAST DEVON NEW
GROWTH POINT GREEN
INFRASTRUCTURE STUDY

Figure 4: Biodiversity Network
Habitat Reservoirs and Links

DATE	March 2009	DRAWN	SG
SCALE	1:50,000 at A3	CHECKED	IH
STATUS	FINAL	APPROVED	FO
DWG.NO.	2594LE/0004		

Source: Ordnance Survey, Project Advisory Group & Intermap Technologies Inc



Refer to:

- Figure 5: Sustainable Movement Network

6.1 Introduction

Connectivity is a key objective of GI, and in particular connecting people within urban and rural areas to their local landscape and townscape resources. The aspiration is for everyone to have easy access to attractive, exciting urban spaces, public realm and green places within towns, and routes into and through the countryside.

To meet this aspiration, a Sustainable Movement Network has been developed with the purpose of setting out a clearly defined hierarchy of routes that, if delivered, will give communities the confidence and incentive to undertake journeys, whether for recreation, health or practical reasons such as commuting to and from work, without their cars.

The intention is to develop a network that is:

- Clearly defined and well sign posted;
- Clearly coded to give confidence of use and navigation;
- Celebrates local character, highlighting areas or features of interest; and
- Safe to use at all levels.



6.2 The Network Hierarchy

The Sustainable Movement Network presents a hierarchy of routes that provide a means by which journeys can be planned and executed with confidence. The network is described as operating from ‘Doorstep to Countryside’, but in reality it offers a framework for a multitude of route options providing connectivity to and from a wide diversity of destinations such as places of residence, work, open space assets or local features of interest.

Three tiers of the Sustainable Movement Network have been defined using existing promoted routes, public rights of way, cycle routes or parts of established cycling or walking networks. Where gaps in the existing network exist, the approximate location of new routes and route sections have been identified in order to create a continuous and coherent network.

Promoted cycling routes such as the National Cycle Network Route 2, and walking routes such as the Exe Valley Way form a key component of the Sustainable Movement Network, and in many instances their strategic importance is highlighted by their identification as Green Ways. These existing and well known routes will continue to be promoted through this initiative.

The Sustainable Movement Network is indicative at this stage, and would be developed and refined at the site scale in order to respond to local conditions and land ownership issues. It may be possible to establish legal status for new access routes, whereas others might be on a permissive basis. Further development of the initiative should be in tandem with other programmes such as Public Rights of Way Improvement Plans and Local Transport Plans.

It is also important to note that further development will seek to specify the function of different parts of the network proposed, such as if a particular route is solely for pedestrians, or includes provision for cyclists and horse riders.

In developing the network, reference will be made to local urban or rural character through the use of particular materials and design detailing of routes and furniture. Signage and interpretation will highlight points of interest where this is appropriate. The development of themed trails and waymarkers should also be encouraged during detailed route design.

While it is the intention that the Sustainable Movement Network is generally traffic free, where proposals coincide with existing roads, careful consideration will need to be given to the design of the route and/or restricting traffic movements in order to achieve the confidence and incentive for users. It may also be appropriate to make provision for public transport modes on certain sections, such as guided buses or trams. Links to sustainable transport are discussed in more detail later in this chapter.

In order to provide clarity to the structure and function of the Sustainable Movement Network a clear hierarchy of routes has been developed comprising three connected tiers. These tiers are described in more detail in the Table 3 and illustrated on Figure 5.

6.3 The Sustainable Movement Network Hierarchy

Table 3: Sustainable Movement Network Hierarchy

Network Level	Type	Function	Composition
Primary	Green Ways	Strategic links through open countryside and Exeter city	The Shobrook to Chudleigh Green Way The Exe Valley and Estuary Green Way The Clyst-Killerton Green Way The River Otter Green Way The East Exeter, Cranbrook and Feniton Green Way The Topsham to Harpford Green Way The Haldon Forest to Brandy Head Green Way The Coastal Path Green Way Off road cycling route, national cycle network PROW Network
Secondary	Neighbourhood Connectors (Pink)	Link neighbourhoods and destinations through urban streets, public realm, parks and open spaces	Exeter Green Circle Urban Streets Off road cycling route, national cycle network PROW Network Urban green spaces
	Countryside Connectors (Red)	Link villages and hamlets together and to assets in the wider countryside	PROW Network Access land Un-surfaced county road network
Local (Not illustrated)	Community Connectors	Provide Access to neighbourhood facilities and links into the wider network	Urban Streets Urban green spaces

6.4 The Primary Network

The Primary Network forms the backbone of sustainable movement and is composed of Green Ways. The aim of the Primary Network is to link major areas of existing and future population and key assets within and beyond the core study area. Whilst the network is composed of long continuous sections, it also forms part of shorter circular routes with other tiers in the hierarchy.

6.4.1 Green Ways

The Green Way network provides a model for a continuous network of safe, attractive and well sign-posted overland routes through open countryside and the heart of Exeter. The network would be well promoted and accessible and connect attractive, culturally and visually diverse towns, villages, open spaces and other important assets.

Over much of the landscape, Green Ways would comprise footpaths and cycle lanes and be appropriate to their immediate context and designated function. In order to avoid visual clutter in the open countryside, signage and other furniture would be low key and constructed from appropriate materials. In many respects the appearance and function of Green Ways would be similar to Countryside Connectors (see below). However, their strategic importance may be reflected in differentiations in signage, furniture and materials. It may be necessary to articulate the difference through a more detailed and sensitive approach to route design and specification, although this would need to be reconciled against the requirement to respect and enhance local character and identity.

By way of example, the proposed Exe Valley Green Way would formalise the existing strategic cycle and footpath links through the city but extend these northwards along the valley of the Exe. The majority of the route sections are already in existence, although it may be appropriate to enhance some sections in response to variations in the character of the landscapes it passes through. For example, delivery may include an initiative to alter signage and surfacing materials in close proximity to the city centre to respond and reflect historic or urban character. Further to the south, a more 'low key' design response may be appropriate as the route passes

through parks and pasture. Further north, the Green Way traverses open countryside along the valley of the Exe. Here exciting opportunities to reflect the area's rural character may be used as the stimulus for the design of the route and associated signage and route-side furniture.

Such treatment of Green Ways would provide variation in the traveller's experiences and offer significant opportunities to enhance local character. Where possible, local landowners might be encouraged to undertake landscape restoration or enhancement works in proximity to these priority routeways, such as through appropriate hedgerow restoration or tree planting. Where Green Ways are located in proximity to rivers and streams, further opportunities exist to offer enhanced interaction with waterside features, habitats and facilities, as well as access to new or existing jetties and moorings for water based transport or recreation.

6.5 The Secondary Network

The Secondary Network provides a series of connective routes for the city, urban fringe and rural areas and form the link between local and strategic networks. At this level of the movement hierarchy, the network is designed to carry significant numbers of people between neighbourhoods, towns and villages and key destinations, which might range from parks and open spaces, major shopping streets, places of employment or education, or notable recreation sites/facilities. The Secondary Network functions within both urban and rural areas and therefore Pink and Red Connectors have been defined in order to differentiate between Neighbourhood Connectors (Pink), and Countryside Connectors (Red).

6.5.1 Neighbourhood Connectors

Neighbourhood Connectors build upon the local network of urban routes to provide connectivity between different neighbourhoods within urban areas, and connections into the strategic primary network of Green Ways. Neighbourhood Connectors are routed to take advantage of parks and green space assets within the urban envelope, as well as other notable features such as areas of civic space or historic character, to encourage their wider use, interpretation and enjoyment.

They would be designed to respect local distinctiveness and townscape character through the choice of paving materials and design details such as street furniture and signage. In connecting areas of urban green space, long-term possibilities exist for urban greening of these routes to provide a network of green corridors throughout the urban envelope, thus contributing to general enhancement of the fabric of the city.

6.5.2 Countryside Connectors

In rural areas, Countryside Connectors link rural communities together, and to assets within the wider countryside. They also provide connections to the primary network of Green Ways and the heart of the city via the Neighbourhood Connectors. The proposed network comprises an intricate web of routes that provide direct connections between neighbouring villages and destinations. Much of the network is located within open countryside and, as a result, significant sections have been designed to take advantage of existing rights of way.

Countryside Connectors are also designed to provide direct access to areas of open access land such as Ashclyst Forest, as well as free riding areas at Woodbury Common and Haldon Forest. It will be important to ensure that access in these areas continues to be managed to ensure adverse impact on precious and vulnerable habitats and resources will not arise. However, it is also noted that improved access provision to green space destinations in close proximity to people's homes will encourage communities to enjoy their local environment and therefore reduce pressure on sensitive habitats and landscapes, such as the Pebblebed Heaths and Exe Estuary.

Countryside Connectors would comprise footpaths, cycle lanes and bridleways where appropriate. In order to avoid visual clutter in the open countryside, signage and other furniture would be low key and constructed from materials sympathetic to the surrounding area and context.

6.6 The Local Network

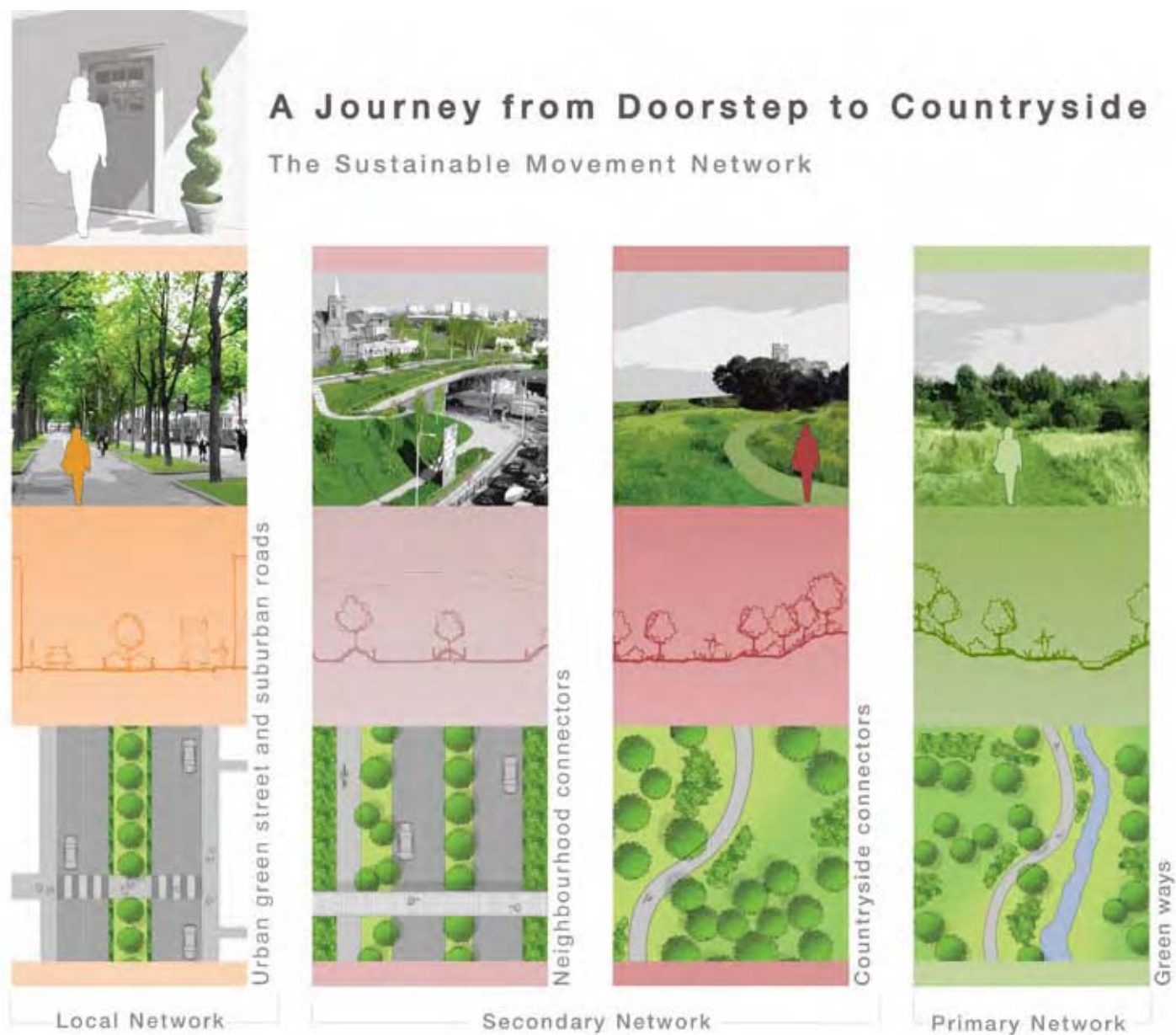
The local network provides access from the doorstep to a multitude of destinations via the wider secondary and primary networks that exist at a more strategic level.

6.6.1 Community Connectors

Community Connectors are the main arteries within a community neighbourhood of a city, town or village. These are the routes that will carry the majority of journeys made, for example between home and local park, shop or school. Essentially these represent the link between private and public spaces; between the individual resident and the community that they inhabit. Due to the scale of this study, these routes have not been identified. They may include the creation of tree lined boulevards, public realm enhancements, or the creation of pocket parks, community gardens and play areas along them, or they may represent the stimulus for the establishment of Home Zones and traffic calmed residential streets.

6.7 A Journey from Doorstep to Countryside

The diagram below illustrates the relationship between the Primary, Secondary and Local Networks, providing a 'journey from doorstep to countryside'.



6.8 Links to Sustainable Transport

The provision of sustainable transport solutions that reduce car use and increase the opportunities for pedestrian and cycle journeys, is fundamental to the successful functioning of the Sustainable Movement Network.

In time, the Sustainable Movement Network would be supported by a revitalised and fully integrated public transport system in both urban and rural areas, as well as a number of other exciting initiatives that have already proven to be successful on the continent and elsewhere in the UK. For example, this might include cycle hire facilities throughout the core study area at key destinations, bus stops and train stations, cycle 'pick up and drop off' initiatives, and public transport that enables return or part journeys to be made by train, bus or mini-bus under a single ticket.

Exeter is already a Cycle Friendly City and a Cycling Demonstration Town, promoting cycle use for recreation and traffic free commuting. Several cycle hire facilities and a map of cycle routes in the city together provide a useful basis on which to plan non-car journeys. The city wide cycle map also illustrates park and ride facilities and cycle crossings and shows that significant progress has already been made in moving towards an area wide sustainable movement plan. The aspiration would be to coordinate similar initiatives across the wider rural landscape to aid recreational and commuting journeys to be planned for residents in surrounding villages and towns and linking new communities and developments outside Exeter to the city.



6.9 The Need for Investment

For the Sustainable Movement Network to function, investment will be required to deliver routes that are of a suitable quality for safe and long term use. A high quality and well promoted network will be essential in giving users the confidence that their chosen journey will be achievable.

Attention would be paid to ensuring that the network is fit for purpose, with special attention paid to design to ensure compatibility with local landscape and townscape character and give due regard to safety and access for all.

Promotional maps and literature would be designed to assist local communities and visitors to plan their journeys using the Sustainable Movement Network and drive a modal shift away from reliance on the car.

6.10 The Green Ways Network

Green Ways in the core study area are described below to convey a better understanding of their character and function. This top tier of the Sustainable Movement Network has been separated into a number of sections, and the character, key features and assets, and principal destinations described. Furthermore, a number of sections of the Green Ways Network provide strategic links between the main settlements, including destinations outside of the core study area.

It is important to note that these sections do not define specific routes or journeys, as the network will be further refined at the local scale and coordinated to facilitate other local initiatives. However, each of these sections has a geographical identity that is further informed by the changing patterns of landscape and townscape character through which they pass.

6.10.1 North - South Routes

The Shobrook to Chudleigh Green Way

The Shobrook to Chudleigh Green Way is the main arterial route running through the hills and woods to the west of Exeter. To the north of Newton Cyres, it occupies the shallow, pastoral valley of the Shobrook, before crossing the River Creedy at Sweetham, and entering to rural and remote hills and valleys that define the western setting of Exeter City. The route winds through wooded hills and valleys largely along existing footpaths and bridleways, before running along the course of a dismantled rail line southwards from Farrants Farm. The route continues along the dismantled rail line to Chudleigh.

The Exe Valley and Estuary Green Way (includes the Creedy Spur)

The Exe Valley and Estuary Green Way follows the course of the River Exe from Thorverton in the north towards Dawlish on the coast. For much of its length, the route follows well established national pathways, notably the Exe Valley Way, Exe Estuary Trail, South West Coast Path and National Cycle Network Route 2. In the centre of Exeter, the route splits in two, with one spur traversing the less developed western bank of the river past Powderham Castle. The alternative route passes along the eastern bank of the river and estuary, providing a link to Topsham. Further planned sections will link to Lypstone and the existing section to Exmouth. A spur of this main arterial route to the north of Exeter provides strategic links to Newton Cyres along the valley of the River Creedy.

The Clyst-Killerton Green Way

The Clyst – Killerton Green Way begins in Silverton in the north, and runs south towards the National Trust property at Killerton Park. South of the parkland, the route traverses rural landscapes, largely along existing footpaths, to Broadclyst. South of the village, the route follows the valley of the Clyst, notably travelling through the attractive village of Sowton. The route ends at Topsham, where the Clyst meets the Exe.

The River Otter Green Way

The River Otter Green Way is the eastern-most route in the Primary Network. It originates to the north of Payhembury and follows existing footpaths to meet the Otter river valley at Ottery St Mary. South of the town, the route follows existing rights of way fringing the river valley floodplain to Newton Poppleford and on to Budleigh Salterton and the coast.

6.10.2 East - West Routes

The East Exeter, Cranbrook and Feniton Green Way

The East Exeter, Cranbrook and Feniton Green Way follows, in part, the course of the Roman Road as it traverses the rural landscape to the east of the city. It provides strategic links between Exeter and a number of key destinations, notably existing settlements at Redhayes, Clyst Honiton, Exeter Airport, Jack-in-the Green/ Rockbeare and the Cranbrook New Community and Science Park. For much of the route, the Green Way does not occupy existing rights of way, and indicates that significant new stretches of rights of way will need to be identified. The route of the Green Way terminates at the north-south orientated River Otter Green Way at Feniton. This route is a critical link between areas of significant new development east of Exeter and the city.

The Topsham to Harpford Green Way

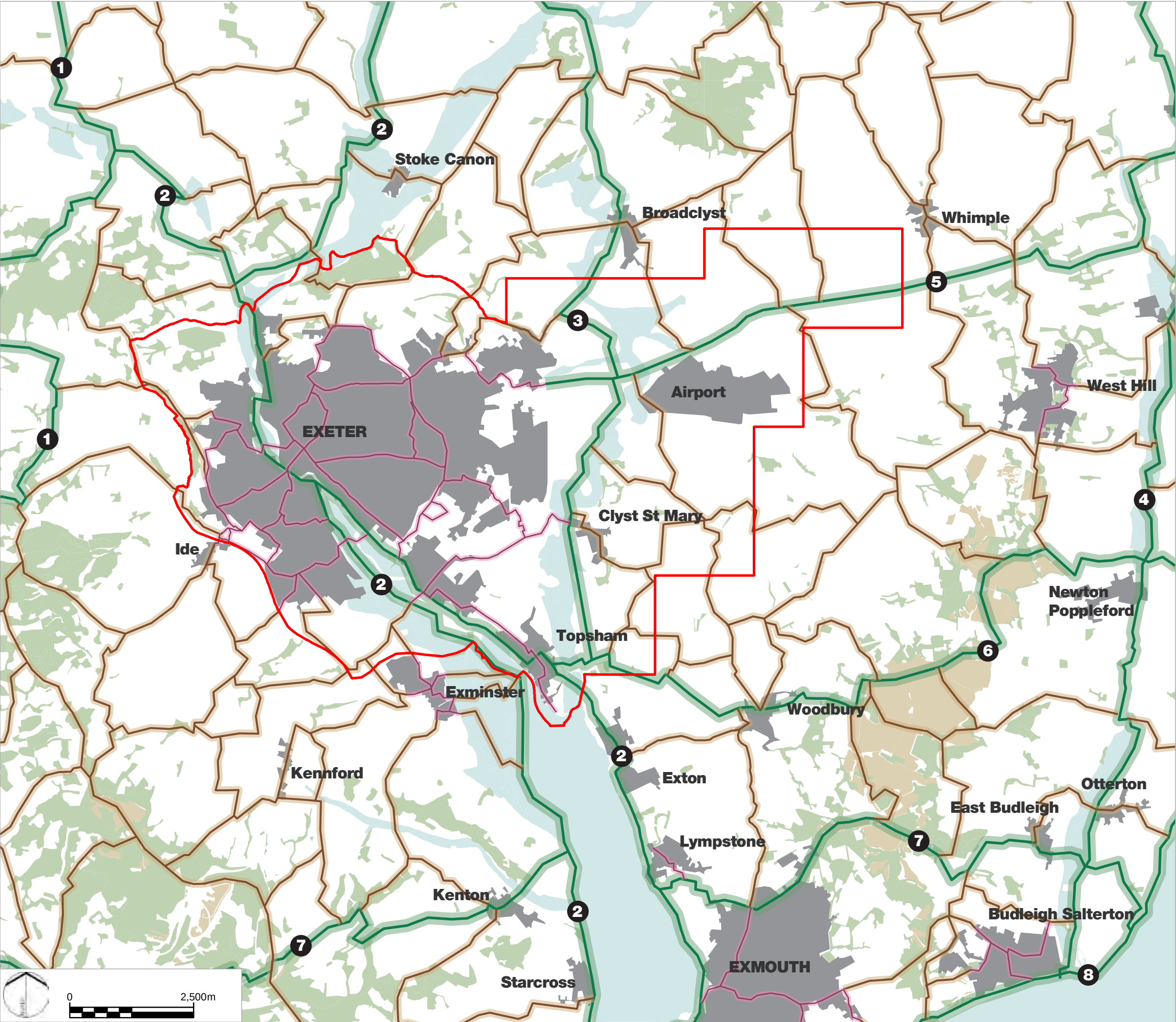
The Topsham to Harpford Green Way links two key North-south orientated Green Ways; the Clyst – Killerton Green Way and the River Otter Green Way. It links Topsham and south Exeter to Ebford and Woodbury. East of Woodbury, the route follows the fringes of the Heaths along the East Devon Way and gives access to the Pebblebed Heaths. The route continues past Harpford along the East Devon Way to Beacon Hill.

The Haldon Forest to Brandy Head Green Way

The Haldon Forest to Brandy Head Green Way is a significant route through rural landscapes to the south of Exeter, following in part the East Devon Way. Whilst it does not provide direct links between large areas of population, it does provide linkage between the three major north-south orientated routes and some of the area's major semi-natural accessible green spaces, notably Haldon Forest, the Exe Estuary, the Pebblebed Heaths and the coastal cliffs east of Otterton. To the south of Powderham Castle, the route meets the Exe Valley and Estuary Green Way to Starcross, where the summer ferry provides access across the estuary to Exmouth. At Exmouth the route again follows a short stretch of the Exe Valley and Estuary Green Way to Lypstone where it turns eastwards to rise onto Lypstone Common where it crosses the Pebblebed Heaths on to East Budleigh. It crosses the River Otter to the north of the aqueduct before heading east to Brandy Head.

The Coastal Path Green Way

The Coastal Path Green Way follows the South west Coast Path from Exmouth eastwards through Budleigh Salterton onwards towards Tortoiseshell Rocks.



Legend

Core Study Area

Sustainable Movement Network
Green Ways

North - South Routes

- 1. The Shobrook to Chudleigh Green Way
- 2. The Exe Valley and Estuary Green Way (includes the Creedy Spur)
- 3. The Clyst-Killerton Green Way
- 4. The River Otter Green Way

East - West Routes

- 5. The East Exeter, Cranbrook and Feniton Green Way
- 6. The Topsham to Harpford Green Way
- 7. The Haldon Forest to Brandy Head Green Way
- 8. The Coastal Path Green Way

Countryside Connectors

Neighbourhood Connectors

Urban Areas and Exeter Airport

Urban areas, woodlands, heathland, river valley floodplain, estuary and coast are illustrated to provide context.

Exeter
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LANDSCAPE
URBAN
ENVIRONMENT
ECOLOGY

EXETER AREA AND EAST DEVON NEW GROWTH POINT GREEN INFRASTRUCTURE STUDY

Figure 5: Sustainable Movement Network

DATE	March 2009	DRAWN	RP
SCALE	1:75,000 at A3	CHECKED	IH
STATUS	FINAL	APPROVED	FO
DWG.NO.	2594LE/0005		

Source: Ordnance Survey & Project Advisory Group



Refer to:

- Figure 6: Site Specific Project Opportunities

7.1 Introduction

The Biodiversity Network and Sustainable Movement Network describe landscape scale initiatives that will help guide and shape new development and change across wide areas as well as address the fragmentation of both pedestrian/cycle routes and habitats that is evident across some parts of the core study area.

In addition to these networks, a number of projects have been identified that seek to deliver multi-functional benefit across a wide range of agendas such as habitat enhancement, community action, education and interpretation. They often encompass elements of the spatial networks described earlier and many will result in new or enhanced open space provision.

All projects were developed through consultation with the project Advisory Group, stakeholders and consultees such as the Environment Agency. A distinction is made between major projects, that will require significant funding and coordination, and supportive projects that can be delivered through a coordinated programme of smaller scale initiatives,

perhaps through individual landowners, community groups, parish councils or the voluntary sector. It is anticipated that major projects will come forward from the local authorities, developers and statutory agencies. Supportive projects will be from the 'bottom up', and as such there will be a need for co-ordination and advice on funding and long term management from a GI Champion or GI Consortium, just as major projects will need coordination and ongoing support.

A number of additional GI Projects were also identified by the project Advisory Group, stakeholders and consultees. A list of these projects is presented in Appendix 9. Only those Projects that were given highest priority or that offered greatest potential for multi-functionality have been taken forward and developed in this study, however, other projects either identified in the workshop or that arise in the future should also be considered for delivery. A Multi-functionality Checklist is presented in Appendix 10 to facilitate the identification of future GI Projects.

It will be necessary to ensure that all proposed or future GI Projects are considerate of the receiving environment. For example, the Landmark Bridge (see below) has been identified as being in an area of high archaeological potential, as its exact location and design will need to reflect this.

7.2 Major Projects

7.2.1 Landmark Bridge



The M5 represents a significant physical barrier between the city and its rural hinterland, existing villages and towns and the new communities and development that are planned for areas to the east, principally along the A30 corridor.

The Sustainable Movement Network recognises the importance of establishing a Primary Green Way link between these areas of new development and the city, as well as a route into the Clyst Valley landscape and wider rural hinterland of Exeter. The exact function and course of The East Exeter, Cranbrook Whimble and Feniton Green Way would need to be developed through consultation with local communities and landowners, as well as other interested parties. However, given its importance as a route between the city and major new developments including the Cranbrook New Community, it would be envisaged that both a cycleway and footpath would be necessary, as well as incorporating sustainable transport modes.

The establishment of this link would offer an opportunity to create a new crossing over the M5, north of Junction 29, in the vicinity of the existing crossing at Tithebarn Lane. Various options exist, but given the significance of the crossing in linking the city to major new development and the airfield, it may be appropriate to consider an iconic landmark structure or 'green bridge' that could signify arrival in Exeter and highlight the Science Park

on the adjacent site. The Green Bridge option would also offer potential for delivering enhanced habitat links across the M5, along the A30 corridor and into the city, via existing green space assets.

7.2.2 Cranbrook Country Park

Proposals for the Cranbrook New Community, to the West of Exeter, include the provision of a new Country Park. This will be the most significant area of accessible green space within the new community, providing recreational opportunities for local residents and enhancement of the local environment.

Specific proposals include the provision of an interconnected network of access links, including footpaths, cyclepaths and bridleways. The potential exists to link the Country Park to assets in the surrounding countryside, including Killerton Estate to the north, East Devon AONB to the south and east, as well as neighbouring villages and Exeter city. Enhanced linkage through the provision of new access routes will deliver components of the proposed Green Ways and Countryside Connectors outlined in the Sustainable Movement Network, although it may be necessary to refine these indicative routes based on the final design of the New Community.

Similarly the proposals will enhance local wildlife, through the provision of new semi-natural habitats such as ponds and native broadleaved woodlands, and new and enhanced wildlife corridors. These rich semi-natural environments will be appropriate for context and will, alongside access routes and other green space assets such as play areas, orchards and wetlands, combine to create a great diversity of multifunctional spaces and experiences.

It is anticipated that the Country Park will have an Interpretation/Education Centre, providing learning facilities for new and existing residents of the area. This will help enhance the local communities understanding of local environmental issues and provide 'signposts' to other environmental and recreational resources in the vicinity such as accessible wildlife sites and countryside walks, as well as details of other ongoing GI or community initiatives, including volunteer schemes. The facilities required for an Interpretation Centre have been outlined in the S106 submission. It will be

necessary for the developers of the New Community to liaise with the Local Planning Authority and/or the proposed GI delivery body to ensure the masterplan for the Cranbrook New Community is appropriate to the GI Spatial Framework, and conforms to the overall Vision for GI, as described in Chapter 2.

7.2.3 The Clyst Meadows and Lower Clyst Projects

It is evident that the Clyst Valley is a key enhancement priority across both of the two main GI spatial initiatives described previously, as well as forming an important component of the setting of Exeter and maintaining the distinction between Exeter City and settlements located in its rural hinterland, as identified in the Spatial Framework. Therefore, given its proximity to Exeter, and the potential it has across a broad range of agendas, there is significant scope to develop exciting GI Projects that address many of the aims and objectives of this study.

In recognition of the differing characteristics of the tidal and non-tidal reaches of the Clyst Valley, two distinct projects have been identified; the Clyst Meadows Project, following the floodplain of the Clyst between Broadclyst and Clyst St Mary and the Lower Clyst Project, located along the tidal reaches of the Clyst from Clyst St Mary to the confluence with the Exe Estuary at Topsham.



Original image courtesy of Mike Williams, Environment Agency

The Clyst Meadows Project

The Clyst Meadows Project will primarily focus on strengthening the landscape character and habitat potential of the Clyst Valley from Broadclyst to Clyst St Mary and will present opportunities for improved access to the countryside and environmental research and education.

The project area is broadly coincident with the Unsettled Farmed Valley Floor Landscape Character Type as illustrated on Figure 27 and derived from the East Devon AONB, Blackdown Hills AONB and East Devon District Council Landscape Management Guidelines⁶. The Guidelines presented in the assessment make several recommendations that will form the basis for practical landscape enhancement, supplemented with other projects that will seek to enhance the legibility enjoyment of the valley landscape. The relevant guidelines presented in the report are as follows:

Boundaries: conserve and restore by:

- Encouraging maintenance of hedges by shorter hedge-laying rotation than elsewhere, to mitigate effect of rapidly growing wetland species and avoid use of flail on over-sized branches.
- Encouraging the appropriate management of ditches by infrequent or rotational management as required to conserve rare plants and insects.
- Discouraging any further enclosure of floodplains, except temporary fencing for biodiversity conservation.

Farming and land use: conserve and restore by:

- Seeking to retain unimproved permanent pasture and wet grassland.
- Promoting the management and restoration of orchards.

Semi-natural habitats: conserve and enhance by:

- Encouraging the retention and management of riparian trees for age and species diversity, promoting locally indigenous wetland species.

Woodland: conserve and enhance by:

- Encouraging woodland management for age and species diversity, promoting locally indigenous wetland species.
- Discouraging any spread of conifer plantations

Settlement and development: conserve by:

- Maintaining the inherent absence of settlement and development.

Recommendations for further action:

- Semi-natural habitats: explore the potential to restore wetland habitats along watercourses.

The Clyst Meadows Project will be a demonstrator of how the Biodiversity Network and Sustainable Movement Network can be delivered, and should be a priority area for the further refinement and delivery of network components. The exact function and course of the Sustainable Movement Network routes and Biodiversity Networks that have been identified for the Project Area would need to be developed in more detail through consultation with landowners and local communities as well as other interested parties. In addition, funding mechanisms will need to be investigated, for capital works and for long term management and maintenance of habitat features, access routes and other facilities.

The Clyst-Killerton Green Way is a key component of the Sustainable Movement Network and delivery of the section between Broadclyst and Clyst St Mary should be given priority through the Clyst Meadows Project. The delivery of improved river and road crossing points should be given priority to facilitate delivery of the local Countryside Connectors to give improved access to the river valley from local villages.

The Clyst Meadows Project should include new initiatives that seek to address learning and research agendas, perhaps through the establishment of a 'station' from which school visits can undertake field studies or other activities. It may also be possible to treat parts of the project area as a 'living laboratory' to observe the local effects of climate change, or test different methods and

⁶ East Devon, Blackdown Hills AONB and East Devon District Council Landscape Management Guidelines. November 2008.

approaches to habitat enhancement or creation, flood management or river bank stabilisation. Given the close proximity of the Weatherworld proposals, it is clear that the Clyst Meadows present a significant opportunity for understanding the impact of climate change and testing methods to ameliorate its effects, including flood water management techniques.

The project area should also be developed as a forum for engendering local support and action for environmental enhancement. A programme of environmental activities and training events could be established based on traditional skills such as coppice management, pollarding, and hedge laying. In doing so, the Clyst Meadows Project area could then be actively managed, in part, by skilled volunteers.

It is clear that a range of exciting opportunities will arise from the Clyst Meadows Project. Whilst coordination and long term management is essential, significant input of labour and skills may be derived from the local community. A 'Friends of the Clyst Meadows' group could be established as a forum for information exchange, research and communication, and also stimulate further ideas and initiatives in the future, perhaps through the establishment of a programme of training courses and events as discussed previously.

It is also apparent that within East Devon the local authority's Countryside Service has proven knowledge and expertise in the management of similar sites as well as engagement with local volunteers. This project could therefore present an exciting challenge for the local authority to adopt some areas of the project area and make the Clyst Meadows Project a regional exemplar of best practice in GI delivery and partnership working.

Within the Clyst Meadows Project Area emphasis will be given to landscape restoration and enhancement, whilst improving access and biodiversity interest as previously indicated. A low key, naturalistic approach is desirable, and all developments should be compatible with its function as a fluvial floodplain. The Environment Agency should be a key partner and advisor in the development of the project, building on their extensive local knowledge and activity in the Clyst Valley. The National Trust will also be a key project partner, the Trust being a significant land owner in the area.

The Lower Clyst Project

The Lower Clyst Project, whilst forming a physical extension of the Clyst Meadows Project, should have a different set of priorities, on account of the character of the landscape and its contrasting hydrological characteristics and patterns of land ownership. The Lower Clyst Project should also be seen as a natural evolution of existing and ongoing activity in the area, currently being led by the Environment Agency.

The Lower Clyst project is centred upon the tidal reaches of the lower Clyst, and as such is prone to sea level rise and inundations that may, in future, become increasingly regular and of greater magnitude. Managed inundation will be an important part of flood management in the locality and will clearly influence how the land can be used.

Managing water levels will allow for the creation of transitional habitats across the length of the project area, ranging from brackish and estuarine habitats around Topsham to riverine habitats further upstream. Creating a range of habitats will present significant benefits to breeding, roosting and feeding waders and wildfowl, invertebrates and a wide range of plant communities. Whilst grazing will be necessary to maintain habitats, it will reduce the number of economically viable options available to farmers. As such the key to the success of the project will be to secure adequate compensation payments for landowners and incentives to manage the land both for habitat enhancement and as part of wider flood defences.

Inundation, and a generally wetter environment will have a further influence on the accessibility of the land. Presently, the project area is largely inaccessible, with no formal rights of way identified in the floodplain. The perceived 'remoteness' of this tract of landscape should be maintained, for practical reasons, to reduce the impact of access on sensitive habitats, and in recognition of the unpredictability of flooding events. Maintaining its remoteness will also reinforce the distinctive character of the locality, which contrasts to other areas upstream.

Despite this, the Sustainable Movement Network presents the Clyst-Killerton Green Way occupying the outer fringes of the floodplain landscape. Importantly this will provide a key link in the network, but will not provide access to the valley floor or river, thus maintaining its remote and inaccessible character. Whilst enhancement of the semi-natural character of the floodplain will be a major objective, land management should also seek to provide opportunities for visitors to have views into and across the valley. The provision of hides and interpretation boards in some locations may also be appropriate.

The choice of materials for the construction of this stretch of the Clyst-Killerton Green Way will be important. Design solutions should use natural materials that are compatible with its location in the floodplain and recognise the potential for regular flooding. It should also be acknowledged that during major flood events, stretches of the Clyst-Killerton Green Way will be inaccessible, and relevant safety information will need to be presented.

Project design and planning through liaison and partnership working between the local planning authority, Environment Agency, Natural England and local landowners will be key to the success of the project. Maintaining the economic viability of the landscape will be critical, especially if sea level rise and increased emphasis on enhancing floodplain habitats locally will take priority.

7.2.4 Science Park

The proposed Science Park development may be one of the first elements of the proposed growth point to be implemented. Whilst the site is a commercial development, it also provides the opportunity to deliver an element of GI, and provide tangible evidence of GI implementation. As such it may be appropriate to regard it as a GI Project.

In conjunction with the proposed 'Landmark Bridge' project the Science Park site offers an opportunity to provide a GI resource on the ridge-top adjacent to the site of new development at Monkerton. In respect of landscape enhancement and delivering other GI aims, the retention of the historic parkland at Junction 29 and

the trees around the site of the Redahyes Country House (now demolished) should be pursued, and provide the framework for new accessible green space and enhanced terrestrial grassland and woodland habitats, forming a key part of the A30 biodiversity corridor.

The development will deliver an important part of the Sustainable Movement Network, being located at the junction of the Green Way linking the city to the new community to the east (the East Exeter, Cranbrook and Feniton Green Way) and the Green Way running north-south along the Clyst (the The Clyst – Killerton Green Way).

It will be necessary for the developers of the Science Park to liaise with the LPA and/or the proposed GI delivery body to ensure the masterplan is appropriate to the GI Spatial Framework, and conforms to the overall Vision for GI in the Exeter Fringes, as described in Chapter 2.

7.2.5 Exeter Riverside Valley Park



The sequence of parks and open spaces that run through the heart of Exeter, from Cowley to Countess Weir, are an important landscape and recreational asset contributing to the image and identity of Exeter. Together, they provide easy access from the city centre and areas of housing and employment to semi natural areas and informal and formal recreation opportunities. They are also a key part of the footpath and cycleway network, with a series of off-road route options available to explore the area and links to destinations in the wider rural landscape.

The parks and open spaces, in combination with grazing land, allotments, sports pitches and semi natural habitat areas along the Exe, combine to create a wealth of experiences, views and recreation opportunities. An ongoing programme is underway, with recent initiatives including parkland enhancement projects, cycle-path improvements and new tree planting (refer to the Riverside Enhancements pages on the Exeter City Council website for details⁷).

Over the coming years, there is an opportunity to create a coherent image of the Exeter Riverside Valley Park that meets the needs of existing and future users, but also raises the profile of the city's foremost green space asset. The aim of the project will be to raise the Exeter Riverside Valley Park to the prestige of other large parks and open spaces in major cities, such as Bos Park in Amsterdam, Central Park in New York, and the Lee Valley Regional Park in London.

In creating a new, stronger identity for the park, attention will be given to the development of a new vision and masterplan, with emphasis placed on the function and connectivity of different elements, and a consistent use of furniture, interpretation, construction materials and signage to contribute to a bold, coherent and accessible identity.

It may include the provision of new assets, such as a major outdoor events area, park café, city play zone, and sculpture area, as well as other areas where emphasis is placed on habitat enhancement and a semi natural river meadow character. Whilst attention will be paid to unifying the scheme into forming a coherent identity, special care will be taken to ensure that the choice of design responses and use of materials is sensitive to its function and the character of its surroundings. In this respect, a starting point may be to establish a series of 'character zones', each attributed with a strong local identity and function, but all guided by a coherent vision for the Exeter Riverside Valley Park.

As part of the masterplan for the Exeter Riverside Valley Park, special attention will be paid to improving access points. These will be important 'gateways' into the park, and present an opportunity to provide interpretation, navigation materials and notice of park events.

In addition to encompassing the parkland and open spaces along the Exe Valley, the initiative will also include improvements to Ludwell Valley Park, further increasing recreational opportunities and enhancing the overall image of Exeter Riverside Valley Park. However, special attention will be given to ensuring their separate identity, character and function is maintained.

7.3 Supportive Projects

7.3.1 Historic Woodland Planting Scheme

In addition to small copses and plantings arising from the Village Enhancement Zones described above, new deciduous woodland could be encouraged on former woodland sites, the locations of which have been derived through analysis of old maps such as 1st Edition Ordnance Survey mapping or older estate documents. Whilst the extent of woodland has remained relatively stable within the core study area, re-establishing lost woodlands will make a significant contribution to the wooded character of the landscape and also offer an opportunity to enhance the overall area of woodland habitat in the core study area and therefore contribute to the establishment of the Biodiversity Network.

It is unlikely that these areas will have retained a viable seed bank, and as such there is not a sound biological argument for woodland creation on these sites. However, arguments based on historic precedent and also expanding the baseline habitat resource are valid. A programme of historic map research, consultation and dialogue with land owners will help identify appropriate locations for the establishment of historic woodlands. As such, locations for new woodlands have not been identified on Figure 6.

Increased woodland areas, may also contribute wood product to a local drive towards fuelling Combined Heat and Power (CHP) plants. Coppice management, in addition to creating rich habitat resources, would also supply a regular crop of wood fuel.

⁷ <http://www.exeter.gov.uk/index.aspx?articleid=1556>

7.3.2 Parish Boundary Enhancement Scheme

Hedged field boundaries and stream courses, woodlands and ancient communications routes are an important part of the rural landscape in the core study area. In particular, parish boundaries are often of great antiquity which gives them significant historical value, not least as a tangible link to very early episodes of settlement and land management. In addition, old hedges tend to have greater wildlife value due to their diversity of component species.

Whilst the Biodiversity Network makes suggestions for the enhancement of hedgerows and other boundary features, consideration should also be given to addressing the repair and visual character of parish boundaries. This could be through the management regimes that create thicker, taller and more species rich hedgerows, or have a greater occurrence of hedgerow trees perhaps, planted at points of particular interest, or in locations where they were illustrated on old Tithe Maps.

Historically, parish boundaries were important in helping bind a community together and reinforce their identity by holding celebrations that confirmed the limits of their land. Many parishes in England, including a number in the core study area, still ‘beat their bounds’, sometimes at intervals of several years. The re-establishment of such an activity in other parishes where it is no longer practiced could help galvanise community identity, but perhaps more importantly help facilitate a greater understanding of and respect for the local environment.

A range of community projects could also be inspired by an understanding of parish boundaries. New boundstones could be commissioned and positioned to celebrate distinctive places or locations in the parish, thereby drawing in local artists and craftsmen. Projects involving school children could include an exploration of the parish boundary and its history. This could be the start of projects to create parish maps.

7.3.3 Historic Parkland Enhancement Scheme

Several historic parks are located within the core study area. Only four; comprising Rockbeare Manor (Grade II), Killerton House (Grade II*), Northernhay and Rougemont Gardens (Grade II) and St Bartholomew Cemetery (Grade II) are on the Register of Parks and Gardens of Special Historic Interest in England, maintained by English Heritage. Several sites within Exeter are listed on the City Council's local register. In the wider landscape, analysis of the Historic Landscape Character Assessment and aerial photographs has identified other surviving remnant parklands that are not listed and formally mapped.

The intrinsic character and quality of surviving areas of parkland varies, although they do contain some or all of the features that are common to English Parklands, such as a designed layout, grazed meadows, avenues of trees, specimen trees, veteran trees and formal gardens. Whilst these are often important as the setting for private residences, hotels or businesses, they are also historic and cultural elements in the landscape that display changing fashions in design and land management over many hundreds of years.

The preservation of features of intrinsic historic value is of prime importance. However, opportunities exist for the implementation of management regimes and formal projects that seek to raise the biodiversity interest and habitat value of the parklands. It might also be possible to develop ideas that make a positive contemporary contribution to the continued evolution of the designed landscape that serve to enhance the character of these parks and gardens. Clearly for any significant works, advice should be sought from English Heritage, in order to examine the appropriateness of proposals from an historic landscape perspective.

It may be appropriate to develop low key conservation ideas that seek to enhance lost or degraded views and vistas or replant ageing avenues or tree groups that are of an inappropriate species or showing serious signs of decline. Designs and ideas will vary for each estate and parkland, and should reflect a respect for the past, with commitment to contribute something from the current

generation. Such approaches should help enhance the legibility of the historic design intentions of a site in the long term. It is also important to note that the influence of parklands often extend beyond the formal parkland boundary, for example in the distribution or species of trees in the wider rural landscape. It is therefore important to ensure that the strategy extends beyond the parkland boundary and look to enhance the wider landscape.

Any works to Registered Parks and Gardens should demonstrate a clear understanding of the heritage asset and be discussed with the English Heritage Territorial Landscape Architect (TLA).

7.3.4 Community Gardens Initiative



In recent years significant emphasis has been placed on the importance of having access to fresh produce, reducing food miles, and taking exercise. Growing food, perhaps in allotments, community gardens or city farms is an ideal way of achieving these aspirations, as well as interacting with other members of the local community. There are 26 allotment sites in Exeter City, and several more are associated with villages in towns in the remainder of the study area. However, the popularity of allotments has meant that there are very few vacancies or long waiting lists. Indeed, several sites in Exeter are closed to new applications.

Opportunities for the establishment of such facilities should be sought throughout the study area, close to existing residential areas or areas of new housing development. Community gardens are often developed by local people in a voluntary capacity, and commonly retain a strong degree of volunteer involvement. Some larger community gardens employ workers whilst others are run solely by small groups of dedicated volunteers.

Most are run by a management committee of local people and some are run as partnerships with local authorities, whilst retaining strong local involvement. Most projects provide food-growing activities, training courses, school visits, community allotments and community businesses. In addition, some provide play facilities and sports facilities, and after school and holiday schemes. Whilst no sites have been identified on Figure 6, in recognition of land ownership and ongoing development issues, opportunities to develop community gardens should be sought as part of new developments and perhaps on areas of land close to existing communities that is perhaps of limited agricultural value.

7.3.5 Exeter Viewpoint Topographs



Particular locations that are accessible on existing public rights of way, or via improvements identified on the Sustainable Movement Network plan (Figure 5), provide dramatic long distance views and panoramas across Exeter and its landscape setting. These locations provide much valued opportunities to look out across large areas of the countryside and appreciate how Exeter sits within its landscape setting and relates to its surroundings, such as the river and estuary, the wooded hills to the north and west, and local infrastructure, such as the M5. Some locations also provide views to landmark features within the historic core of Exeter, and buildings and areas of the city and surrounding villages that may be of personal interest.

However, in the absence of clear interpretive materials in these locations, the relationship between features, distances and points of particular interest may be often difficult to discern.

Eight locations have been identified within the core study area where there are opportunities to enhance viewing opportunities with the establishment of view finder points or topographs. Sited adjacent to a public right of way, such structures would provide ramblers and walkers with an opportunity to understand the wider landscape and their geographic location within it. Elsewhere in the UK, for example Dovers Hill in the Cotswolds, such features act as a destination, either as an event on a long route or as a mid point on a shorter walk.

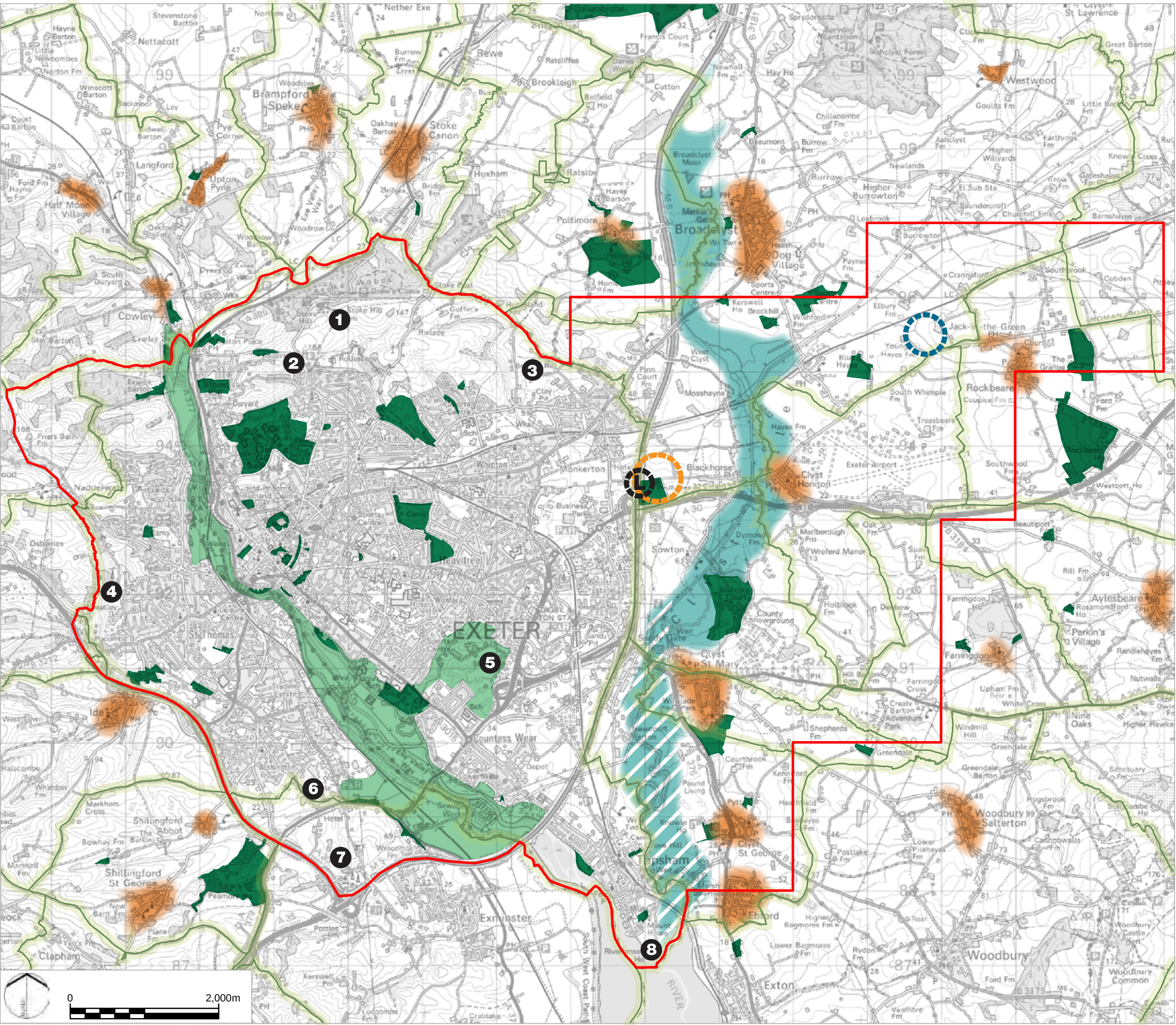
Topographs are likely to be constructed from simple materials such as stone, brick or wood, with a metal plaque into which is etched information about the area such as points of interest or landform features visible on the horizon. The orientation of the items is identified and distance to them is also often illustrated. In addition to topographical information, details of local wildlife or historic features and events could be included to aid interpretation and understanding of landscape features, such as siting interpretation relating to Iron Age settlement and defence on Stoke Hill, or the importance of river trade and communications at Topsham.

7.3.6 Village Enhancement Zones

On the fringes of villages within and immediately surrounding the core study area, consideration should be given to local landscape enhancement schemes, that seek to provide a more sympathetic and attractive setting for settlements. This may involve the planting of tree groups of an appropriate species to mark village gateways, avenues of trees along hedges bordering the main approach roads, or perhaps planting to enhance views to prominent village buildings.

Opportunities for local interest groups to become involved in the design and implementation of individual schemes should be exploited and in particular school groups are ideal as a consequence of the educational benefit the project represents. For example, the involvement of school and youth groups may be through a coordinated programme of seed collection, sponsorship and tree planting. Such plantings might be used to commemorate particular events, community groups or individuals, and as such a small plaque may be appropriate to mark the planting. If sited on a public right of way, a bench in the vicinity may also prove popular and encourage use of existing or enhanced rights of way networks in close proximity to home.

It should be noted that several villages are highlighted on Figure 6. Other villages and hamlets within and surrounding the core study area can be included within this initiative as opportunities arise.



Legend

Core Study Area

Major Projects:

Landmark Bridge

Exe Valley Riverside Park

The Cyst Meadows Project

The Lower Cyst Project

Science Park

Cranbrook Country Park

Supportive Projects:

Village Enhancement Zones

1

Exeter Viewpoint Topographs

1. Stoke Hill

2. Duryard Valley Park

3. Beacon Hill

4. Alington/Whitestone Valley Park

5. Pynes Hill

6. Knowle Hill

7. Pearce's Hill

8. Riversmeet

Parish Boundary Enhancement Scheme

Historic Parkland Enhancement Scheme

Exeter

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ENVIRONMENT

ECOLOGY

EXETER AREA AND EAST DEVON NEW GROWTH POINT GREEN INFRASTRUCTURE STUDY

Figure 6: Site Specific Project Opportunities

DATE	March 2009	DRAWN	SG
SCALE	1:50,000 at A3	CHECKED	IH
STATUS	FINAL	APPROVED	FO
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No dimensions are to be scaled from this drawing. All dimensions are to be checked on site. Area measurements for indicative purposes only.

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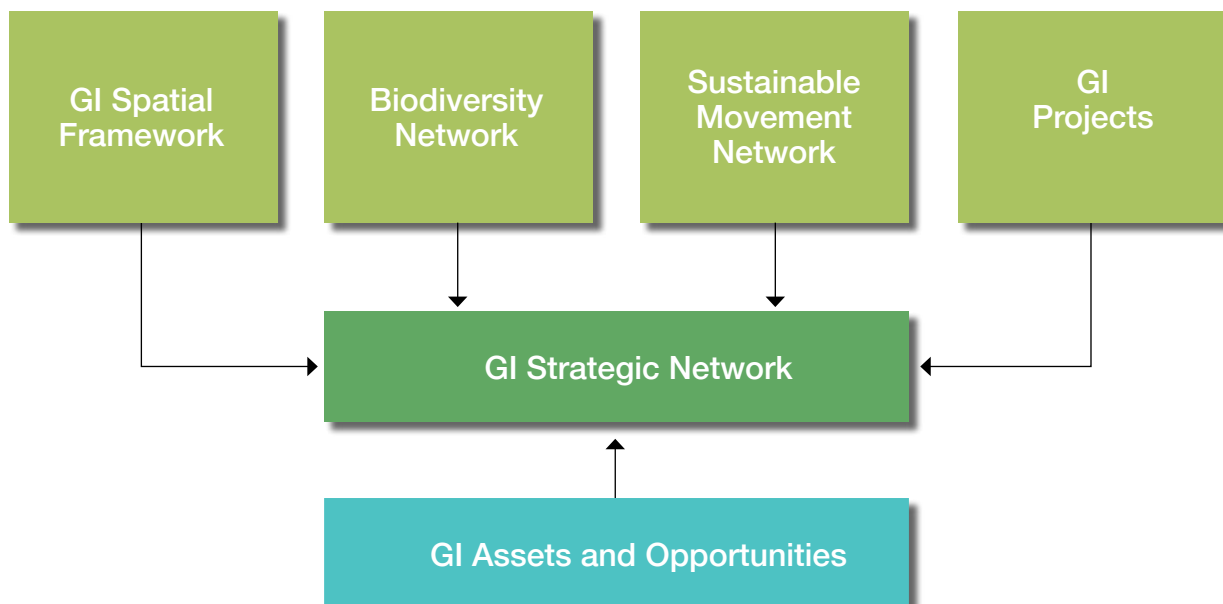
Refer to:

- Figure 7: GI Strategic Network

8.1 Identifying the GI Strategic Network

Through analysis of the resources, known development proposals, and the GI Spatial Framework, Biodiversity Network, Sustainable Movement Network and GI Projects previously described, it is evident that there are locations within and surrounding the core study area where demonstrable concentrations of GI opportunities occur. As illustrated by the diagram over the page and shown on Figure 7, these locations form part of the GI Strategic Network.

It is in these locations that the multi-functional nature of GI is particularly evident and where the interface of multiple benefits and stakeholder interests can provide a focus for prioritising areas for GI investment and delivery. Two levels of the GI Strategic Network are identified; the Sub-regional GI Network, which represents a higher priority for funding, and the Local GI Network, which represents a lower priority for funding, but remains an important focus for GI enhancement and provision.



8.2 The GI Strategic Network Plan

The GI Strategic Network (Figure 7) illustrates the interconnected relationship of Sub-Regional and Local GI. They are not intended to indicate rigid corridors for GI provision but instead identify broad zones within which GI related proposals and investment could be focused. These multi-functional zones will encompass a range of objectives, dependent upon the nature of the assets and opportunities presented.

The GI Strategic Network identified should be regarded as a conceptual framework to aid the decision making process with regards to GI delivery on the ground. It is not intended to be prescriptive or inflexible, and as a consequence the network delivered in the longer term may vary depending on a multitude of strategic and local issues, not least those relating to land ownership, pressure on land for food production and a changing development context.

To ensure the vision of a multi-functional GI Strategic Network is achieved in the long term, development and delivery should be guided by a series of core principles:

- Opportunities to deliver GI should be taken wherever they arise, whether these opportunities occur within or outside the Sub-Regional and Local GI Strategic Network, or indeed the Biodiversity Network and Sustainable Movement Network;
- Preference should be given to GI proposals which complement other GI assets and resources in the locality, enhance local landscape and townscape character and the positive identity of the area;
- Where development or landscape change results in the loss of GI assets, opportunities for reinstatement or enhancement elsewhere in the locality should be taken to ensure that there is no net loss of assets;

- Long term monitoring of GI delivery and management is important. In addition to monitoring delivery against BAP and other targets, regular reviews will ensure enhancements to existing GI assets and the provision of new GI assets are recorded. Reviews will also help identify successful methods of delivery and partnership working. Multi-agency reviews will also help identify new opportunities as they arise; and
- Coordination of activity and promotion of GI to assist support and funding from private and public sector bodies.

8.2.1 Sub-Regional GI Network

Sub-Regional GI Corridors within and immediately surrounding the core study area broadly follow the river valleys of the Exe and Clyst, emphasising their importance as major wildlife corridors, recreational assets and components of the Sustainable Movement Network. It is also notable that these strategic GI corridors contain a significant number of the major GI Projects identified for the core study area and represent the key landscape elements informing the GI Spatial Framework for Exeter, satellite communities and rural hinterland.

A Sub-regional GI corridor has also been identified on the Pebblebed Heaths, in recognition of its significance as a rich habitat resource and major strategic recreational asset. Whilst not described in detail in this study, it is important to emphasise that the Pebblebed Heaths Sub-Regional GI Corridor will be the focus of habitat protection and enhancement, and effort will be placed on ensuring that access and use of the heaths will not compromise sensitive biodiversity assets and the area's tranquil character.

The Exe Valley

The Exe Valley already functions as a GI Corridor, combining important pedestrian and cycling links with areas of outdoor recreation and biodiversity interest. The GI Study therefore seeks to enhance the existing resource through a coordinated programme of landscape, access and biodiversity enhancement, notably through the Exe Riverside Valley Park, and general enhancements to existing habitat resources and sustainable movement links.

Beyond the city, to the north and south, the Exe Valley can again be seen to perform many of the attributes of a Sub-Regional GI Corridor; It carries major pedestrian routes (Exe Valley Way and South West Coast Path), stretches of cycleways, and has a strong identity, underpinned by a rich biodiversity resource and largely intact landscape character. Therefore, emphasis is again placed on maintaining and enhancing the valley landscapes through continued management and maintenance of characteristic landscape features, habitats and routeways.

The Exe Valley also performs an important function in shaping the positive identity of Exeter. The river corridor runs through the heart of the city, and forms a key component of its character defining the limits of built development and an almost continuous ribbon of green space within the urban envelope. South of Exeter, the river also contributes to the setting of the city, and other riverside settlements such as Topsham and Exton.

The Clyst Valley

In contrast to the Exe Valley Sub-Regional Corridor, the Clyst Valley is presently not delivering its full GI potential. The GI Study identifies the valley has an important role in defining the setting of the eastern fringes of Exeter and maintaining the separate identity of several existing and future satellite communities. However, decades of agricultural improvements, hedgerow loss, and development has contributed to the weakening of the area's identity and erosion of its landscape character and biodiversity interest.

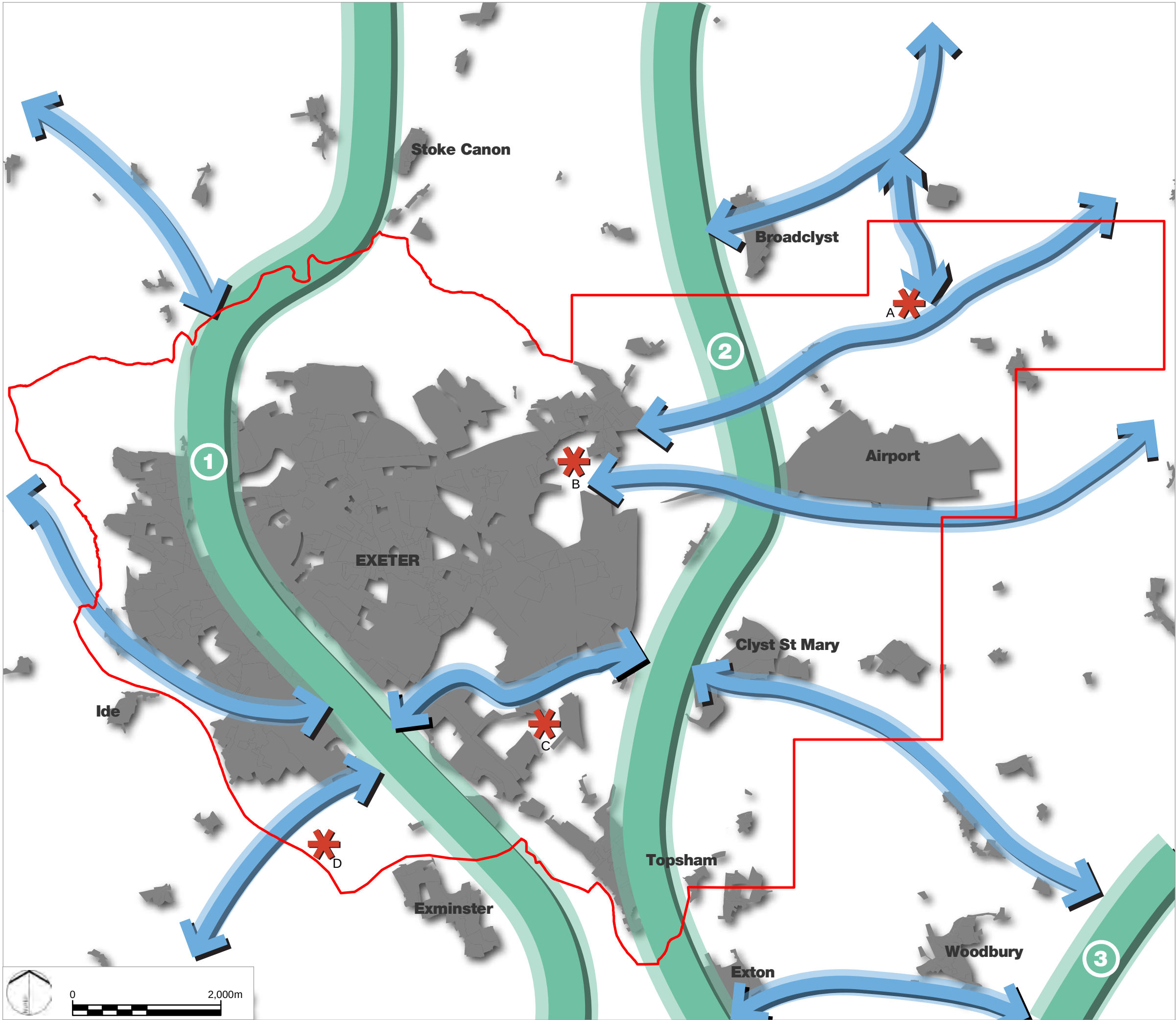
The valley corridor is highlighted as a major habitat reservoir, and key part of a wider habitat enhancement plan that seeks to address the fragmentation of landscapes to the east of the M5.

The area also displays a fragmented pattern of footpaths and cycle networks. The Sustainable Movement Network acknowledges that the river valley has an important role in providing strategic links between several towns and villages on the eastern fringes of the city, including Topsham, Clyst St Mary and Broadclyst and access to the estuary in the south and Killerton Park in the north, as well as areas of new development along the A390 corridor.

The Clyst Valley Projects seek to address these numerous issues and provide a focus for the enhancement of the Clyst Valley's GI assets whilst recognising the areas future role in addressing climate change and increased tidal and fluvial flooding. The Clyst Meadows and Lower Clyst projects identify significant areas fringing the city where habitat and landscape enhancement will be a priority, as well as tackle issues of flood water management, poor connectivity and access to learning facilities. Whilst no large new formal open spaces are proposed, improved access and general environmental enhancement will make an important contribution to drawing visitors away from more sensitive habitats on the Pebblebed Heaths and in the Exe Estuary as well as developing numerous opportunities for volunteering and outdoor/environmental education and research.

8.2.2 Local GI Network

Local GI Corridors represent a lower priority for targeting funding and activity than the Sub-Regional GI Corridors identified and described above, but remain an important focus for GI enhancement and provision. Whilst not having the breadth of opportunities and potential displayed in the Sub-Regional Corridors, they do contain important assets and opportunities that will make an important contribution to meeting the aims of the GI Study. The Local GI Corridors will also form links to other corridors identified as part of future GI studies in Sub region, and will therefore contribute to a regional map of GI priorities.



Legend

Core Study Area

The Strategic GI Framework

Sub-Regional Green Infrastructure Corridors

1. The Exe Valley

2. The Clyst Valley

3. The Pebblebed Heaths

Local Green Infrastructure Corridors

Urban Areas

Regional Spatial Strategy
Housing Growth Areas of Search

A. Cranbrook

B. Monkerton/Hill Barton

C. Newcourt

D. Alphington/South West

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EXETER AREA AND EAST DEVON NEW GROWTH POINT GREEN INFRASTRUCTURE STUDY

Figure 7: Green Infrastructure Strategic Network

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SCALE	1:50,000 at A3	CHECKED	IH
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GI – Making it Happen

9.1 The Next Steps

The Exeter and East Devon New Growth Point area will be the focus of significant change over the coming decades. GI will be one of several initiatives being taken forward to ensure that change will bring about benefits to new and existing residents, visitors to the area and to the wider environment.

It is acknowledged that delivery of GI will be a complex process and need long-term and coordinated commitment from a range of stakeholders and local communities. Therefore, further work is required to identify the best ways to secure the delivery of GI in the core study area.

The following section sets out various ideas that may be considered in taking forward and implementing GI in the core study area. Collectively, these can be regarded as forming a **GI Strategy** that will clearly set out where, when, how and by whom GI will be delivered.

9.2 Developing the GI Strategy

GI will be mainly delivered through the planning and development process, although some elements will be achieved through the actions of local land owners, communities and businesses.

Therefore, there will be a need to develop a range of mechanisms to secure the appropriate level of impetus and guidance. In summary these mechanisms are likely to include:

- Plans and Policy;
- Leadership, Guidance and Governance;
- Monitoring and Review; and
- Communication.

These four key areas are described in greater detail below. Some of the ideas presented are organisational; others are specific studies or areas for further research and development.

9.2.1 Plans and Policy

It will be crucial that GI is seen as an integral part of Sustainable Community Strategies and Local Area Agreements as well as spatial planning and the delivery of Local Development Frameworks (LDFs) and other supporting transport, social and economic infrastructure. This will enable GI to capture its share of private and public sector investment, without which the LDFs are unlikely to deliver their ambitions for new sustainable development.

Integral to the wider principles of spatial planning, the concept of GI should be explicitly defined and embedded in Development Plan Documents (DPDs), Open Space Strategies, Rights of Way Improvement Plans, Flood Management Plans, masterplans, development proposals and projects, and be coordinated across the different local planning authorities.

This GI Study sets out a shared Vision across the area and is a good starting point for refinement and adoption of GI into planning policy documents. **GI Policy** should seek to ensure that new development and regeneration adequately protects and enhances existing GI assets and makes provision for new GI.

LDFs, especially through their Core Strategies, Area Action Plans and other DPDs provide a strong policy rationale and mechanism to deliver GI investment from development schemes through a combination of scheme design, S106 and Community Infrastructure Levy (CIL), including SWRDA's Regional Infrastructure Fund (RIF).

A **GI Supplementary Planning Document (SPD)** should be developed that provides further detail on how to implement GI Policy. New development and regeneration should plan, locate and design new and improved GI as well as protect existing GI assets in ways that are appropriate for the scheme, but that also acknowledge the scheme's position in broader GI networks and projects. For example, where a site is located on strategic GI networks, plans for new development should seek to deliver elements of the Sustainable Movement Network or Biodiversity Network as appropriate. Where development is located beyond these networks, the 'spirit' of GI should be employed and the developer should demonstrate how proposals will contribute to the broad aspirations of GI. The GI SPD will provide guidance on how to achieve these goals.

It will be important that other spatial plans and policies inform and are informed by GI. In particular, existing and forthcoming Open Space Assessments and Strategies in the study area will be able to provide an accurate analysis of deficiency of different types of open space for existing and new communities. It may be appropriate to establish a common set of open space standards across the study area, and in doing so set out clear and consistent guidance to developers, both in what their developments should provide, and what local provision could be funded through commuted sums. However, it is acknowledged that it may be necessary to differentiate between the standards set for urban areas and rural settlements. Similarly, analysis should be undertaken as to the location and accessibility of semi-natural green space, and common standards adopted, such as those set out by English Nature (now Natural England).

9.2.2 Leadership, Guidance and Governance

Successful GI delivery will depend on establishing strong partnerships with many organisations in the commercial, planning, voluntary and community sectors.

Given the large number of stakeholders, it may be necessary to identify or recruit a **GI Champion** and establish a **GI Consortium**. Their role will be to establish a single point of contact for GI issues and ensure that stakeholders have easy access to each other and to up-to-date information. They will also provide support and guidance to anyone developing GI related projects and initiatives. In practice the GI Consortium would closely reflect the membership of the GI Advisory Group responsible for developing this study.

The GI Champion and GI Consortium will need experience in negotiating and implementing major urban design, landscape and biodiversity gains through the planning system and in winning public sector resources, whilst also having the skills to support land owner, voluntary and community initiatives through planning, design, implementation and long term maintenance.

There will also be a need for the GI Champion and GI Consortium to foster an entrepreneurial approach to GI planning and provision that identifies and realises the opportunities presented by new proposals and public sector programmes early on in their development.

Given the extent of new development in the study area, developers and their agents (such as landscape architects, planners and urban designers) are key to the implementation of GI. As such, the GI Champion and GI Consortium will need to deliver appropriate and consistent advice, building on that set out in the GI SPD on how new development should deliver GI gains, whether through the appropriate protection and enhancement of existing assets or the creation of new GI.

Notably, developers should be encouraged to identify opportunities to deliver GI Projects and elements of the Biodiversity Network and Sustainable Movement Network, where applicable, and be creative in their interpretation and role as part of contributing to sustainable and exciting new developments. If these

spatial networks are not immediately relevant for the development site, a design response at a local scale that takes forward the defining principles of GI should be encouraged. This would demonstrate a positive response to on site conditions but also display an awareness of the wider setting of the site. Developers should also be encouraged to consider creating multi-functional spaces and places. Again, the GI Champion and GI Consortium will provide advice on where opportunities may arise through their developments and the relevant parties to contact for further advice and guidance.

At the local scale, the GI Champion will encourage and enable the owners and managers of existing GI assets to align their management and improvement plans with GI enhancement. For example, landowners may be encouraged to enhance hedgerow networks or stream corridors that form part of the Biodiversity Network or open permissive paths in locations that contribute to the Sustainable Movement Network. The GI Champion will also provide advice on sources of funding for capital works and long term management.

The Consortium would take ownership of GI related targets in Local Area Agreements. The GI Consortium might also be identified as a single body to which S106 and CIL funds are passed by the local planning authorities, much in the way that happens with other infrastructure funds such as Primary Care Trusts (PCT), Local Education Authorities (LEA), and Passenger Transport Executives (PTE) in metropolitan areas. The Consortium should have the flexibility to prioritise GI implementation to maximise its impact within the study area and to determine the most effective means of governing and managing the long term use and maintenance of its investments.

It may be attractive to forward fund GI delivery in certain areas, in advance of new development, to create a quality environment that will attract higher levels of investment. The GI Consortium should be able to use its private investments as a lever to obtain public funding from a variety of agencies and to secure debt finance to forward-fund GI where necessary in advance of future private and public revenues.

It will be necessary for the GI Consortium to further investigate economic value of GI and how issues of funding GI will be dealt with, such as developing a common approach to leveraging investment for GI across the study area. A **GI Economic Assessment** will investigate the various direct and indirect economic benefits of GI, and help make the case for substantial investment in GI.

In addition to describing a series of case studies, where investment has successfully delivered GI on the ground, the GI Economic Assessment will also identify the various sources of funding and ways in which GI funding will be obtained, managed and spent across the study area. A brief list of funding sources follows:

Capital

- Section 106 Agreements;
- Regional Infrastructure Fund;
- Community Infrastructure Levy charges;
- New Growth Point Funding;
- Traditional local authority funding;
- Multi-agency public sector funding;
- Small scale grants such as parish grant capital budgets and landfill tax; and
- Commercial investment.

Revenue

- Traditional local authority funding;
- Income generating opportunities, such as franchising, licensing, entry fees and fines;
- Endowments; and
- Voluntary and community sector involvement.

Appendix 4 presents a summary of two key funding mechanisms: the Regional Infrastructure Fund (RIF) and Community Infrastructure Levy (CIL). These and other funding mechanisms should be investigated further in the GI Economic Assessment.

Once established, one of the first tasks of the GI Consortium will be to establish a **GI Portfolio** of projects and initiatives. These might be drawn from the GI Networks and Projects presented in this GI Study but could also be new initiatives that arise in the intervening period. The Multi-functionality Checklist presented in Appendix 10 offers a mechanism to identify future GI Projects and the extent to which they deliver GI aims and objectives.

In developing the GI Portfolio, projects and initiatives would be developed in greater detail. In particular, proposals would be fully quantified and costed (for both capital expenditure and revenue expenditure). In addition sources of capital and revenue funding would be identified, including any revenue generating potential.

It will be necessary to establish a **GI Delivery Plan**. This would build on the GI Portfolio, but would identify and develop key projects and initiatives and set out a phased delivery programme. The Delivery Plan would be developed in tandem with the GI Portfolio by the GI Consortium and be updated periodically, perhaps every two years. The GI Delivery Plan will also identify potential barriers to the successful planning, design, implementation and management of Green Infrastructure as well as a range of strategies to overcome these barriers.

9.2.3 Monitoring and Review

The GI Consortium should be accountable to those providing its funds for its performance in delivering quality GI on time and to budget.

The GI Consortium should therefore establish the mechanisms necessary to monitor and report on GI delivery, and provide a framework for the long term management of any future assets created.

In developing the GI Delivery Plan, the Project Board would agree and establish a robust **GI Review Framework** to monitor and record enhancements to existing GI assets and the provision of new GI assets. This should include the identification of 'indicators' to measure the quantity, quality and functionality of GI provision over the long term, and provide a means to monitor delivery against the programme set out in the

Delivery Plan. Indicators might include the area of new semi natural habitat created, or length of new rights of way developed that contribute to GI networks, over a set period of time.

The GI Consortium will be accountable to it's Partners and as such should publish an [Annual Report](#). The Annual Report will inform Annual Monitoring Reports and Local Area Agreements.

9.2.4 Communication

The GI Champion and GI Consortium will need to establish an appropriate means by which to engage with the many stakeholders and interest groups involved in GI delivery.

Consideration should be given to the establishment of a dedicated [GI Website](#), perhaps developed as a 'microsite' with links to it from the main websites for East Devon, Teignbridge and Exeter City/District Councils.

The GI Website would provide an overview of how GI is being developed across the study area and give easy access to various documents, such as the GI Portfolio and Delivery Plan. As projects are being developed, information would be posted on the website requesting stakeholder input and feedback and provide updates as to progress. A plan of the study area could be hosted on the website, with a traffic light system indicating where projects are being developed (red), being implemented (orange) or are operational (green). This would be maintained and regularly updated to illustrate progress.

The promotion of GI Projects and Networks would highlight the opportunities for recreation and access to nature close to home, and as such assist in taking pressure off sensitive landscapes on the fringes of the study area such as the Pebblebed Heaths and Exe Estuary.



Appendix I: Acknowledgements

Project Advisory Group

East Devon District Council

- John Maidment, Policy and Conservation Manager. (Project Manager)
- Charlie Plowden, Countryside Manager

Exeter City Council

- John Thompson, Forward Planning Manager
- Martin Davies, Countryside Projects Officer
- Jill Day, Forward Planning Officer

Teignbridge District Council

- Tony Page, Head of Policy and Heritage

Natural England

- Matt Low, Conservation Officer
- Amanda Newsome, Conservation Officer – East Devon

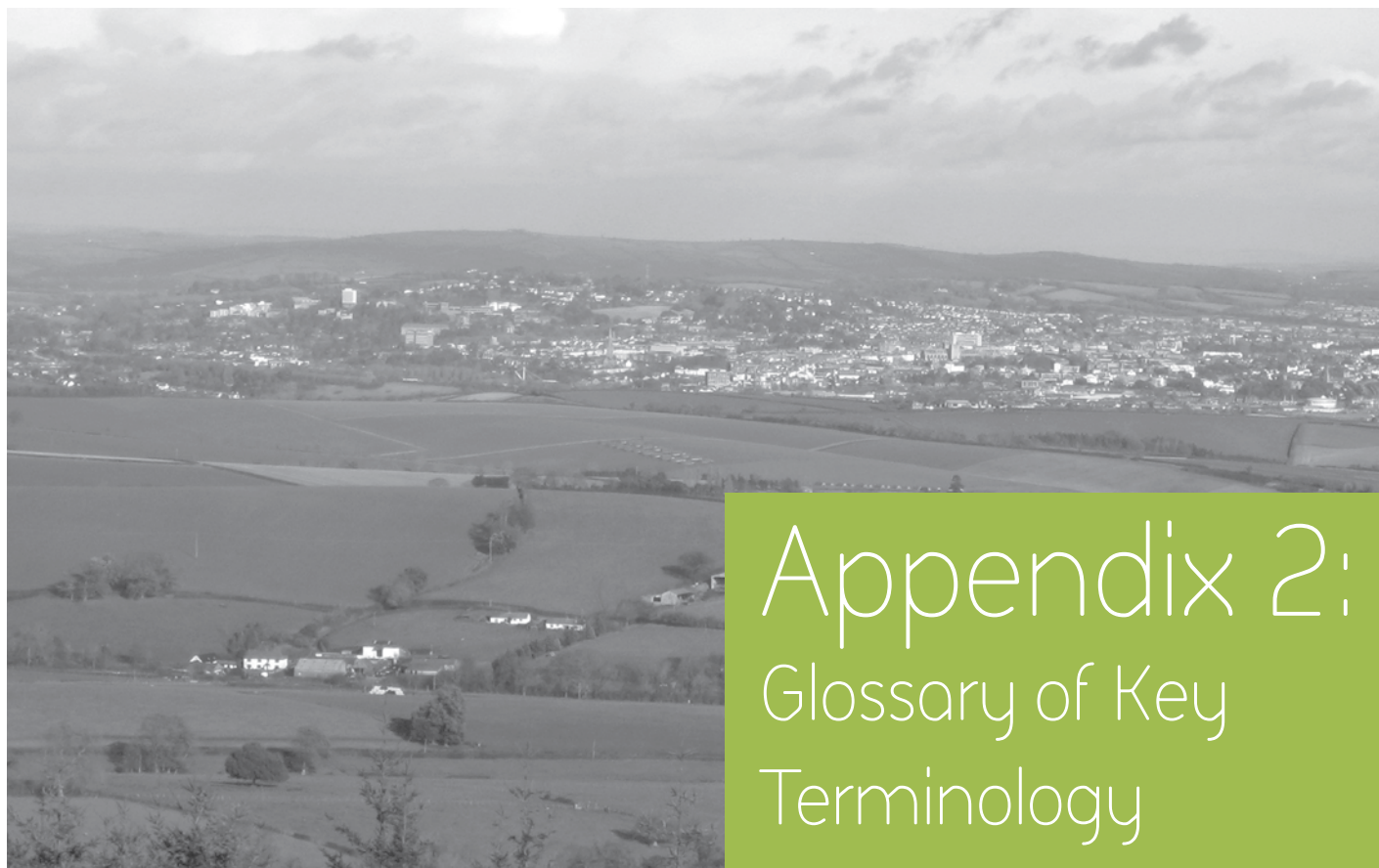
Stakeholders and Consultees

LDA Design also thanks Catherine Jowitt, Adrian Marsden, Julian Lee and David Sercombe for the provision of geographic data.

Thanks are also extended to various other technical experts consulted throughout the project including Neil Blackmore, Mike Williams, Steve Church, Bill Horner, Naomi Brookes, Craig Dixon and other Devon County Council officers, as well as all those who attended a GI stakeholder workshop in February 2008.

Project Development and Delivery

LDA Design Consulting LLP



Appendix 2: Glossary of Key Terminology

Green Infrastructure

PPS 12 defines GI as a network of green space both new and existing, both rural and urban, which supports the natural and ecological processes and is integral to the health and quality of life of sustainable communities.

It is acknowledged that GI means many things to many people and various definitions and approaches to GI planning exist throughout the country. However, there is a significant amount of common ground within the available approaches, notably that GI involves natural and managed areas in both urban and rural settings, is about the strategic connection of open areas, and that it should provide multiple benefits for people and wildlife.

GI Planning is a strategic and collaborative approach to regeneration, conservation and land management that addresses the environmental, social and economic aspects of new development and change in both urban and rural areas.

Core Study Area

The core study area has been defined by the Advisory Group, encompassing Exeter City and the Exeter Fringes. Countryside to east of Exeter has also been included so that the GI Study can take into account proposed development in and around Exeter Airport and the proposed Cranbrook New Community.

Wider Area of Search

The wider area of search extends up to 10km from the Core Study Area within which strategic greenspaces that may contribute to the wider GI Strategic Network are identified.

Green Infrastructure Spatial Framework

Proposed framework that seeks to recognise and enhance the physical identity of Exeter and address how the city, surrounding settlements and new developments relate to the landscape. It is broader than the Biodiversity Network, Sustainable Movement Network and GI Projects, but encompass elements of these proposals.

Biodiversity Network

Broad proposal to protect and enhance areas of existing habitat and create new areas of habitat. The initiative aims to improve habitat connectivity and enhance the quality and quantity of biodiversity within the core study area.

Sustainable Movement Network

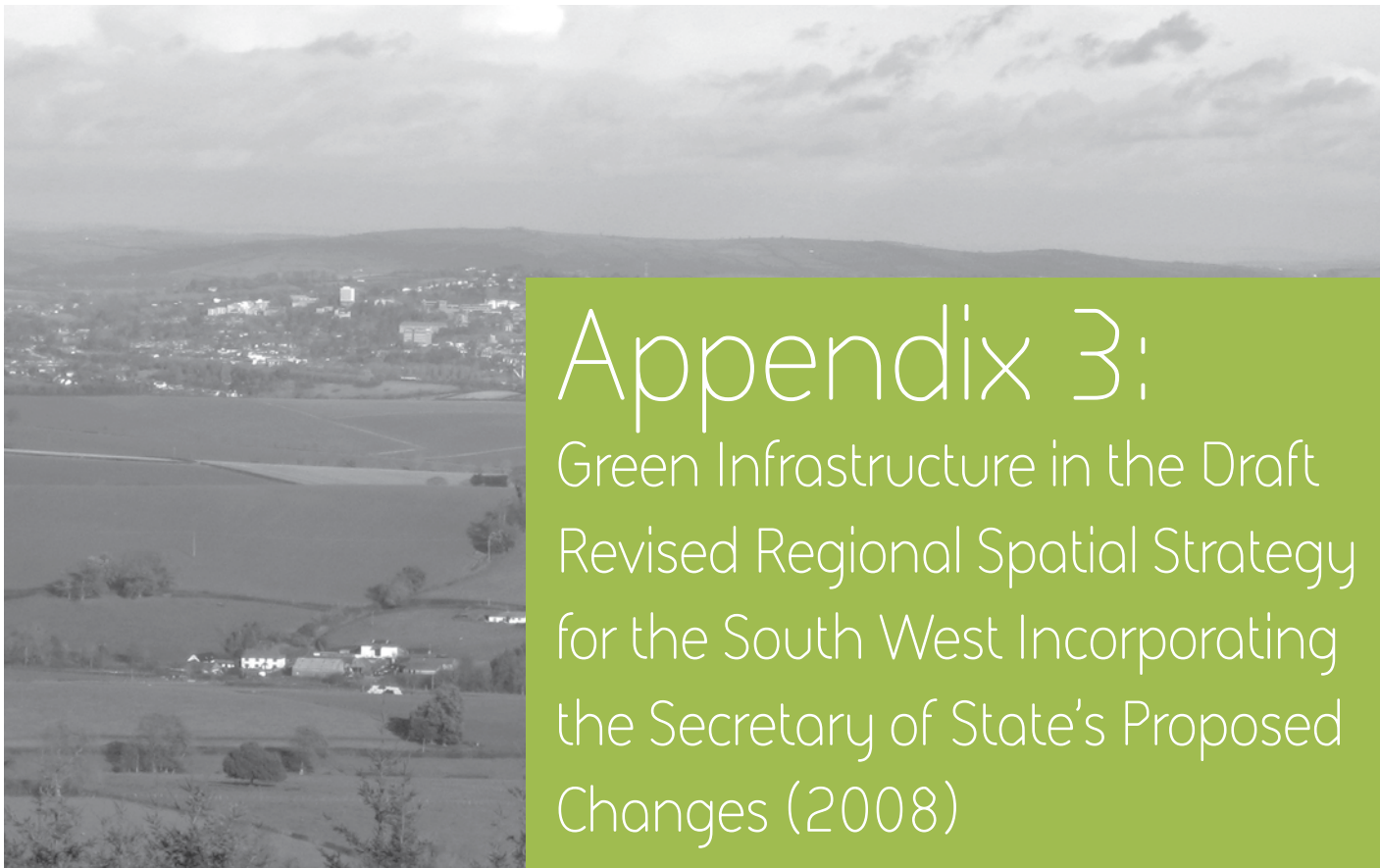
Proposal to create a hierarchy of indicative routes that once developed to a finer resolution and delivered will give communities the confidence and incentive to undertake journeys, whether for recreation, health or practical reasons, without their cars.

Green Infrastructure Projects

Proposed individual projects that seek to deliver multi-functional benefit across a wide range of agendas such as open space improvements, habitat enhancement, community action, education and interpretation. They often encompass elements of the spatial networks described above.

Green Infrastructure Strategic Network

Priority areas for investment and delivery identified as areas with a high concentration of GI assets and opportunities. Two levels of the GI Strategic Network are identified; the Sub-Regional GI Network, which represents a higher priority for funding, and the Local GI Network, which represents a lower priority for funding, but remains an important focus for GI enhancement and provision



Appendix 3:

Green Infrastructure in the Draft Revised Regional Spatial Strategy for the South West Incorporating the Secretary of State's Proposed Changes (2008)

Section 3.6: Delivering Development in Accessible Places, Improving Accessibility and Providing Key Infrastructure to Realise the Spatial Strategy

Development Policy D Infrastructure

"The planning and delivery of development should ensure efficient and effective use of existing infrastructure and should provide for the delivery of new or improved transport, education, health, culture, sport and recreation and green infrastructure in step with development. Central Government, local authorities, regional bodies, service providers and developers will work in partnership to identify regionally and sub-regionally significant infrastructure requirements and solutions, including funding".

Section 3.7: Creating Sustainable High Quality Living and Working Environments

Development Policy F Planning and delivery of major development

"Major developments, including urban extensions and regeneration, should be planned on a comprehensive and integrated basis to ensure that they contribute to the delivery of sustainable communities and a high quality of life by providing for:

- high standards of design and access and the lowest practicable levels of energy and car use;
- public transport, cultural, leisure, retail, health care, education and other services and facilities commensurate with the needs of the

- expected population of the area and delivered in step with growth of that population;
- sustainable transport links between urban extensions and city/town centres, with an emphasis on public transport, cycling and walking;
- amenity space and green infrastructure that meets community needs and supports improved biodiversity; and
- a range of housing types and tenures”.

Section 6.2: Providing Essential Services and Community Infrastructure

A section of the Draft RSS deals specifically with green infrastructure. It states that;

“Careful management will be required to ensure that development contributes to, rather than detracts from the quality of life in urban areas. Green Infrastructure (GI) is an important of ensuring development provides positive benefits for the region. GI consists of strategic networks of accessible, multifunctional sites (including parks, woodland, informal open spaces, nature reserves and historic sites) as well as linkages (such as river corridors and floodplains, wildlife corridors and greenways). These contribute to people’s well being, and together comprise a coherent managed resource responsive to evolving conditions.

In order to achieve a distinctive approach for the South West, it will be important to plan GI around existing environmental and cultural characteristics. GI networks should consist of a series of features (both existing and new), appropriate at various spatial scales, preferably with links connecting smaller, more local sites with larger, more strategic ones. Networks can provide links between town and country, between different parts of an urban area, and between existing and new development. Linear GI (greenways and ‘blue infrastructure’ such as rivers, streams, canals etc) is integral to securing connectivity for wildlife and accessibility for people (though it may not always be appropriate to combine these two roles).

Continual improvement of GI must be based on a sound understanding of existing assets (including location, size, functions, accessibility, user groups and intensity of use). PPG17 requires adequate provision of open space, sport and recreation facilities to be provided and maintained. This may be most effectively understood at a strategic or sub-regional level, and there are significant benefits to partnership working over GI between authorities. Identification of ‘areas of opportunity’ or ‘GI demand’ will be necessary in order to provide clear objectives and priorities. These should then be mapped and disseminated such that they can be proactively incorporated within spatial strategies and development proposals at the earliest possible stage. Considerable work has already been undertaken in the identification of areas of opportunity and targets (for example South West Regional Nature-Map and Rebuilding Biodiversity Initiative, Biodiversity Action Plans, Catchment Flood Management Plans and Forest Plans) should be drawn upon.

The Habitats Regulations Assessment of the RSS identifies a number of international nature conservation sites which are particularly vulnerable to harm from recreational activities as a result of their proximity to urban areas or their attractiveness for recreation to local residents or tourists.

The relevant authorities will need to work jointly and with Natural England to secure and implement appropriate and deliverable measures to avoid or mitigate adverse effects from recreation at these sites, such as the use of planning obligations to secure provision of alternative greenspace or improve habitat management. Providing new areas of appropriate greenspace (as set out in Policy GI1) is likely to mitigate potential adverse effects in many locations. However, management of activities and access on these sites may also be required. If following investigation of mitigation options by local authorities and partners, provision of appropriate greenspace and/or management measures is not possible, restrictions may need to be put in place on the type, scale and/or location of development (e.g. through implementation of ‘no development’ buffer zones) within LDDs in proximity to these sites. Particular sites at risk from recreational pressure are:

-
- Avon Valley SPA and Ramsar site
 - Chesil and the Fleet SPA/Ramsar site
 - Dartmoor SAC
 - East Devon Pebblehead Heath SAC and East Devon Heaths SPA
 - Exe Estuary SPA and Ramsar site
 - Fal and Helford SAC
 - Isle of Portland to Studland Cliffs SAC
 - Poole Harbour SPA and Ramsar
 - Salisbury Plain SAC
 - Severn Estuary pSAC, SPA and Ramsar site
 - The New Forest SAC”.
 - Integrate proposals to improve GI in the delivery of new developments, particularly through area based regeneration initiatives and major development proposals;
 - Ensure that a key aim of green infrastructure is the maintenance and improvement of biodiversity;
 - Protect the integrity of sites of international importance and provide new areas of appropriate greenspace where development would otherwise cause unacceptable recreational pressure on sites of international ecological importance;
 - Maximise the role of GI in mitigating and adapting to climate change; and
 - Deliver a GI Plan with a delivery programme to support GI policies”.

Policy GI 1 Green Infrastructure

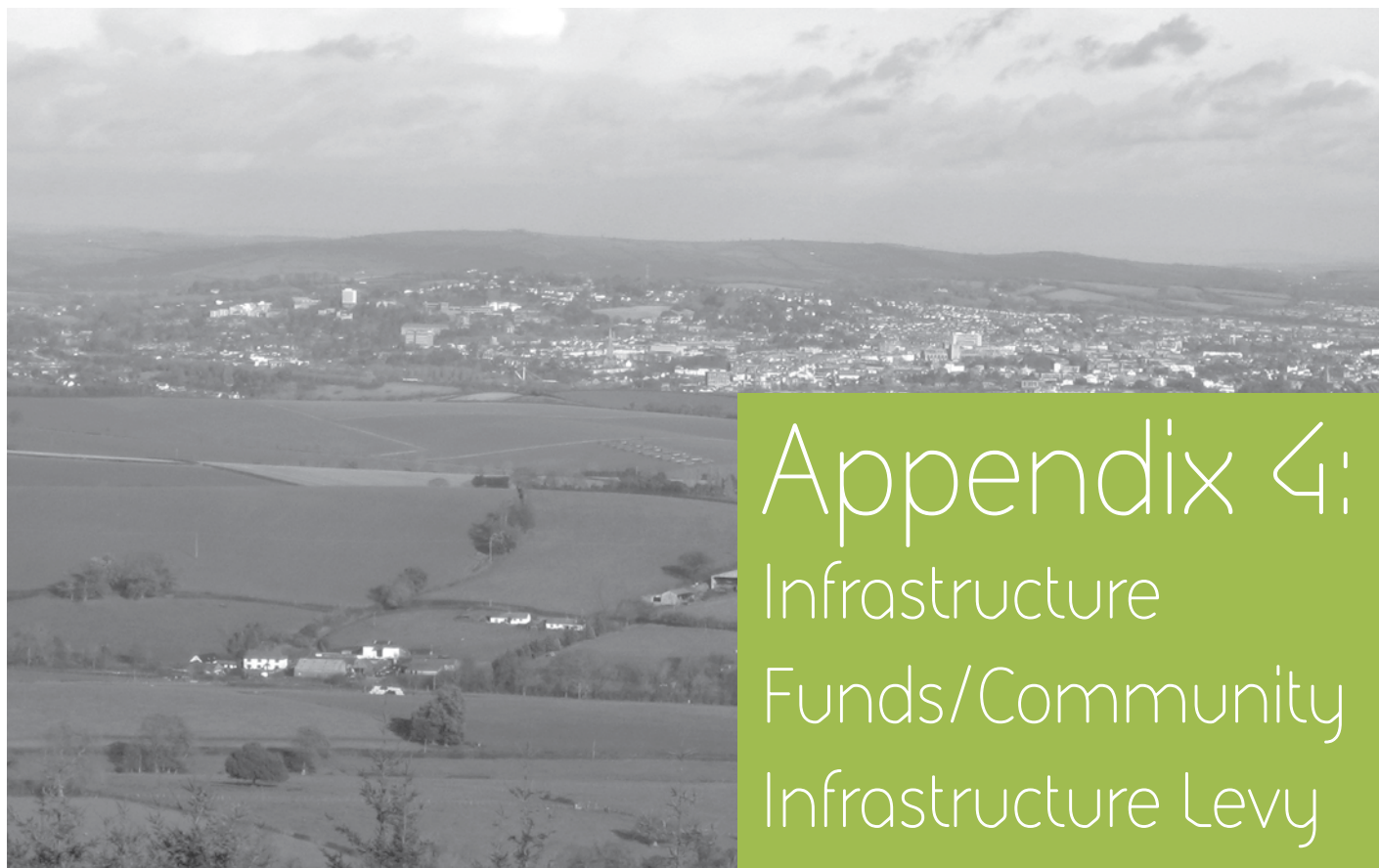
“Development of networks of Green Infrastructure (GI) will be required to enhance quality of life in the region and support the successful accommodation of change. GI networks will comprise multifunctional, accessible, connected assets, planned around existing environmental characteristics.

Plans, strategies, proposals and schemes should aim to deliver wider spatial outcomes that incorporate environmental and socio-economic benefits by;

*Conserving and managing existing GI;
Creating new GI; and
Enhancing its functionality, quality and connectivity.*

GI is required as an integral part of development, and should include the identification, development and management of new areas of open space, not just more intensive use of existing areas of open space. Local Authorities and partners will:

- *Draw upon existing expertise and initiatives to take forward GI planning and identify priorities and partnerships for GI;*
- *Incorporate GI policies setting out broad locations for GI appropriate to the extent and distribution of development proposed, coordinated across administrative boundaries as appropriate;*



Appendix 4: Infrastructure Funds/Community Infrastructure Levy

Refer to:

- Figure 8: Funding Arrangements – Planning Gain Supplement (PGS) and Section 106 (inserted into text – see page 72)

The Regional Development Agencies and Regional Assemblies of South East England and South West England have proposed the establishment of a Regional Infrastructure Fund (RIF) for each region⁸.

A RIF is a rolling fund operated at the regional level and for which regional partners are held accountable. Its primary purpose is to facilitate the timely provision of regionally or sub-regionally significant infrastructure that supports the delivery of planned growth as set out in the Regional Spatial Strategy and/or the Regional Economic Strategy.

The RIF is a mechanism through which the region can forward fund major infrastructure schemes, in situations where the anticipated public or private funding for the scheme will not be available in full at the time when the infrastructure is needed to support planned growth or development. The cost of the capital investment would then be recovered from

⁸ South West Regional Assembly, South West of England Regional Development Agency, South East England Development Agency and South East England Regional Assembly, Regional Infrastructure Funds – A Prospectus. 2006

pre-determined public and/or private funding streams as they become available. The RIF also provides an effective mechanism for progressing projects from outline proposals to regionally prioritised schemes with a robust financial, economic and business case.

It is relevant to note that GI forms a key part of the definition of Infrastructure in the RIF Prospectus. It states that GI comprises outdoor recreation and sports facilities, parks, gardens, allotments, pathways, natural and historic sites, water spaces and accessible countryside, and as such is aligned to the definition of GI established in this strategy.

There is an acknowledged need to improve the funding and delivery of strategic infrastructure, including GI. A forward-funding mechanism operating at the regional scale will provide an effective part of the solution for funding GI Projects and initiatives for the following reasons:

- Some infrastructure is regional in its scope; either in terms of its geographical coverage or the fact that it cannot easily be related to individual development proposals as it serves a wider strategic function;
- Some items of infrastructure will be too expensive to deliver through local funding mechanisms (including developer contributions);
- Some large scale development site related infrastructure (e.g. flood defence or transport) will need to be forward funded and the RIF allows for a greater spread of risk across a number of strategic investments, than similar local area based approaches; and
- There is a need to lever in additional private sector contributions towards infrastructure; these can be maximised at the regional level.

An approach will need to be designed to reflect the particular infrastructure needs and priorities of the growth area, as well as specific governance requirements:

- A business planning approach to the identification of infrastructure need, including a thorough assessment of costs, timing, funding streams and responsibilities for delivery of major schemes;
- The existence of identified revenue streams

through which the RIF would recoup its up front capital investment. This could be a combination of strategic planning contributions (s106 or CIL), user charges, other private investment, for example the sale of concessions or longer term public funding commitments;

- The identification of appropriate 'banker' arrangements through an accountable body; the status of which (public or private) will be dependent upon the sources of finance employed and the nature of contractual relationships with infrastructure providers Robust and transparent governance arrangements to ensure appropriate levels of public accountability and scrutiny;
- Projects to be considered for the application of RIF monies would need to demonstrate a clear evidence of need and a direct contribution to the delivery of regional growth and development targets as set out in the RSS/RES - this will require the adoption of a 'business planning' approach to infrastructure planning by local planning authorities and their partners; and
- To facilitate the process the 'ringmaster' function would allow for the provision of a wider technical assistance or sub-regional brokerage role.

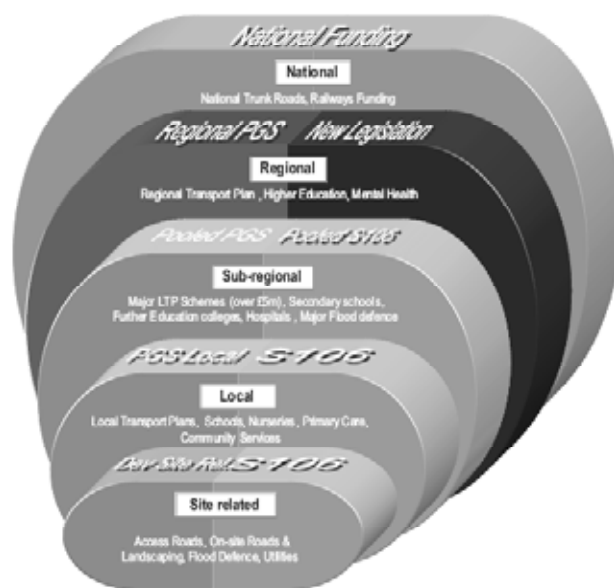


Figure 8: Funding Arrangements – Planning Gain Supplement (PGS) and Section 106.

This diagram sets out how developer contributions would be used for infrastructure funding at local, sub-regional and regional levels under the current arrangements and vis a vis the introduction of PGS (taken from Regional Infrastructure Funds – A Prospectus)

Since the publication of the Prospectus, the Government has confirmed its plans for the Community Infrastructure Levy (CIL) to replace the former Planning Gain Supplement (PGS), the provisions for which are currently part of the Planning Bill.

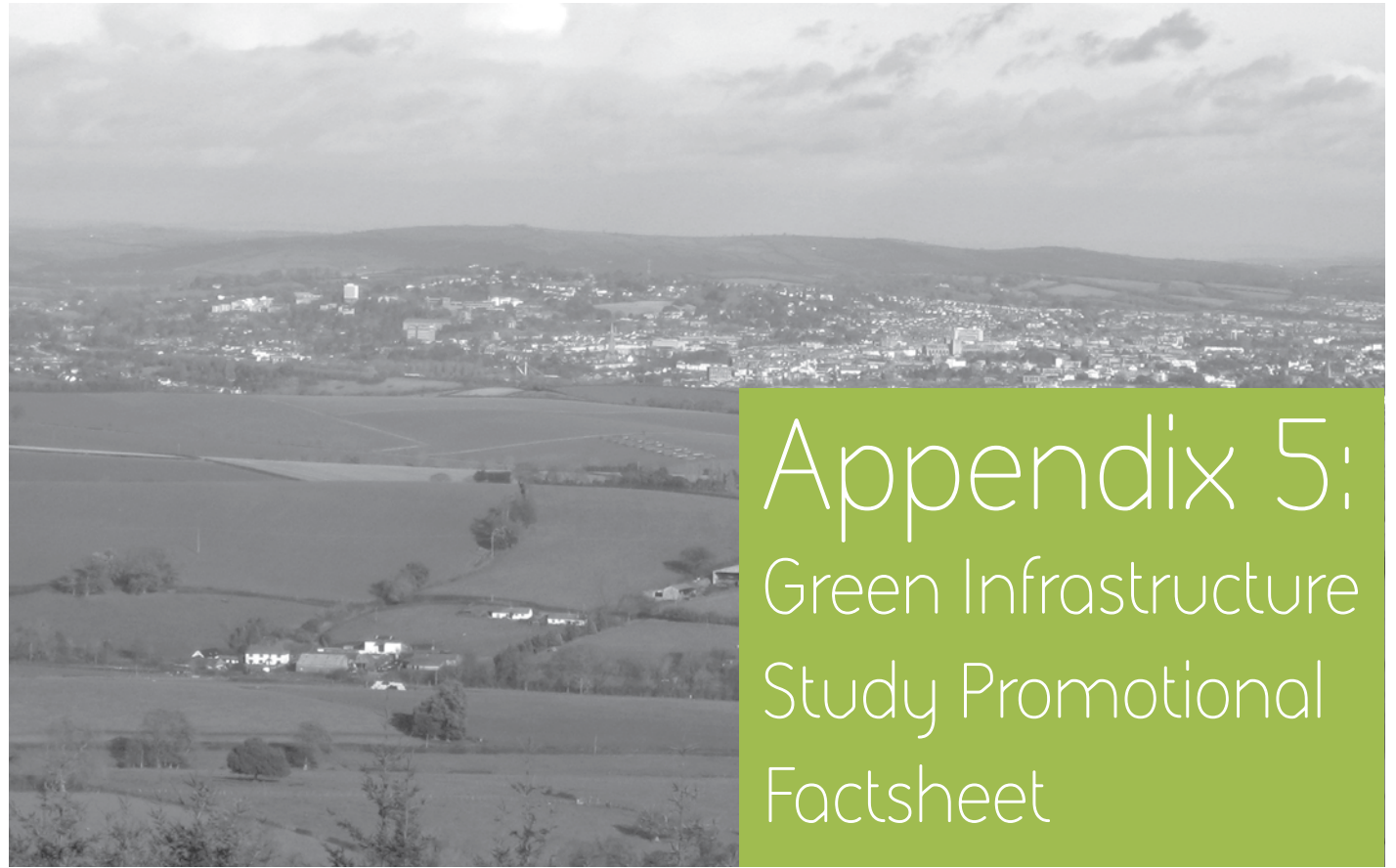
The Government expects the CIL will establish a better way to increase investment in the vital infrastructure that growing communities need. The Bill allows for regulations to empower local councils to apply a Community Infrastructure Levy on new developments in their areas to support infrastructure delivery. CIL forms part of a wider package of funding for infrastructure to support housing and economic growth. CIL cannot be expected to pay for all of the infrastructure required, but it is expected to make a significant contribution.

Generally, when land is granted permission for development two things happen. Firstly, the development has an impact on the local community, which needs to be mitigated if the development is to be sustainable (in the widest sense). And secondly, the value of the land may rise. The overall purpose of the CIL is to ensure that development contributes fairly to the mitigation of the impact it creates: to ensure that development is delivered, and in a more sustainable way. The fact that the value of the land (or property) typically rises as a result of development means that contributions can be required without removing incentives to develop.

Because CIL aims to ensure that development is delivered in a more sustainable way, the effect of the clauses in the Planning Bill is to require CIL to be spent on infrastructure to support the development of an area. CIL will be a standard charge decided by

designated charging authorities and levied by them on new development. For example, the CIL could be levied as a certain amount per dwelling or per square metre of development, following the example of existing ‘tariff’ schemes introduced by some local planning authorities.

The Government wants CIL funds to unlock development. But if the levy is set too high, it might cause some development to become unviable. Because it is the purpose of CIL to ensure that more development is delivered, the level of CIL must be set to ensure it supports and does not prevent development. In setting charges, charging authorities will therefore need to take account of land value uplifts in their area.



Appendix 5:

Green Infrastructure Study Promotional Factsheet

Exeter Area and East Devon New Growth Point Green Infrastructure Study

Creating Special Places

Building on centuries of change Exeter and East Devon and Teignbridge have been identified as Growth Points. As with many other areas in the UK, significant new growth and development is being planned for the city and its rural hinterland.

In recognition of the role that development can have in environmental, social and economic enhancement, East Devon District Council, Exeter City Council, Teignbridge District Council and Natural England have jointly commissioned a Green Infrastructure (GI) Study.

The GI Study will provide a framework to guide sustainable development that will help create places where people will want to live, work, visit and invest, whilst protecting and enhancing those qualities that contribute to the area's local distinctiveness and special identity.

"In developing the Exeter Fringes GI Study, planners and decision makers are making a significant commitment to the environment by taking a proactive approach to its protection and enhancement whilst embracing economic regeneration, growth and sustainable development".

Councillor Pete Edwards, Chairman Exeter and East Devon New Growth Point Steering Board

What is Green Infrastructure?

GI means many things to many people and various definitions and approaches to GI planning exist throughout the country. Despite this, it is acknowledged that there is a significant amount of common ground within the available approaches, notably that GI involves natural and managed areas in both urban and rural settings, is about the strategic connection of open areas, and it should provide multiple benefits for people and wildlife.

The Vision

The Vision is to achieve a GI Strategic Network that:

- protects and enhances current environmental assets and local identity;
- provides a holistic framework for new sustainable development and regeneration; and
- performs a multitude of life support functions for the benefit of people and wildlife.

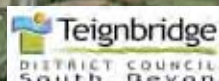
In summary, GI will help to create high quality, attractive and functional places that will provide a setting for day-to-day living, enhance the character and diversity of the landscape and protect heritage assets that contribute to the area's unique sense of place and cultural identity. It will enrich the area's wildlife value by addressing the negative impact of habitat loss and fragmentation by promoting habitat enhancement and linkage. GI will also help to connect people to places by linking residents and visitors to leisure and work destinations along a network of safe and clearly defined routes.

In taking forward the Vision, the intention is to place the Exeter and East Devon and Teignbridge New Growth Points at the forefront of strategic GI planning and delivery in the UK.

East Devon District Council
Exeter City Council
Teignbridge District Council
Natural England

December 2008

LDA Design Consulting LLP





Appendix 6: Methodology

The GI Study has been undertaken in two phases, as described below:

Phase 1: Baseline Review, Analysis and Interpretation

Stage 1 – Project Inception Meeting, Baseline Review and Vision Document

- Inception Meeting with the Advisory Group to agree the project methodology, identify and agree baseline data and develop the Vision;
- Develop and publish Vision document to summarise the purpose of the study;
- Disseminate Vision document amongst project Advisory Group and Stakeholders in advance of Baseline Review Workshop; and
- Undertake themed baseline data review and fieldwork to ascertain visual and perceptual qualities of the core study area and prepare baseline summary report.

Stage 2 – Baseline Review, Advisory Group Meeting and Workshop and Final Draft Baseline Report

- Advisory Group and Stakeholder Workshop to comment on the baseline summary and develop ideas on GI Study and projects.

Stage 3 - Analysis and Interpretation

- Analysis of GI assets and opportunities and stakeholder comments to identify draft GI Spatial Framework, Biodiversity Network, Sustainable Movement Network and GI Projects.

Phase 2: GI Planning

Stage 4 – Draft Green Infrastructure Strategic Network

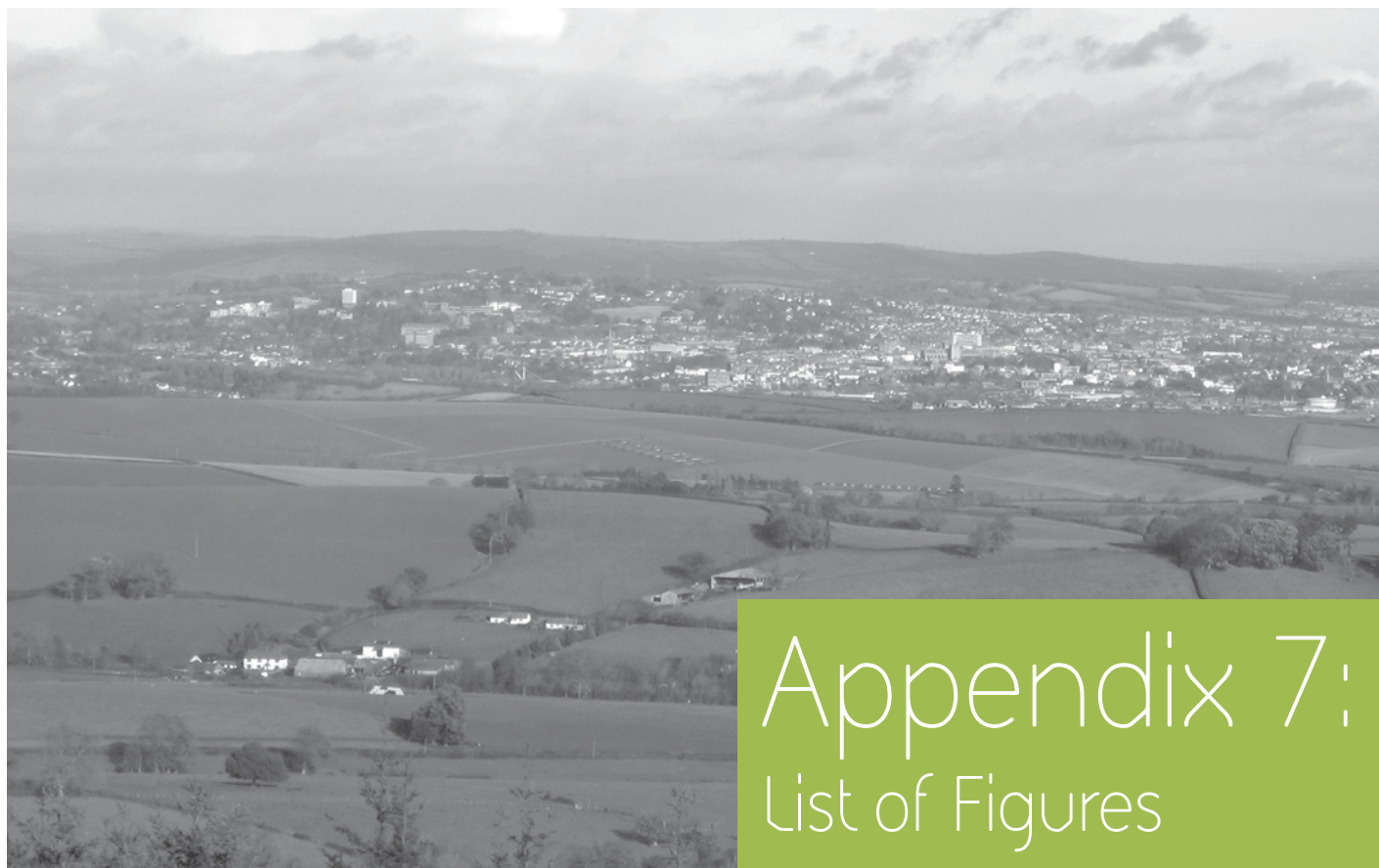
- Establish draft GI Strategic Network by integrating the GI Spatial Framework, Biodiversity Network, Sustainable Movement Network and GI Projects.

Stage 5 – Second Advisory Group Meeting- Review of Proposals

- The second Advisory Group meeting to review the outputs of Stages 3 (Analysis) and Stage 4 (Draft GI Strategic Network); and
- Agree and develop approach to delivery.

Stage 6 – GI Study Final Report

- Final GI Strategic Network plan and report production.



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- Figure 2: Biodiversity Network - Woodland and Grassland Assets
- Figure 3: Biodiversity Network - Wetland and Open Water Assets
- Figure 4: Biodiversity Network - Habitat Reservoirs and Links
- Figure 5: Sustainable Movement Network
- Figure 6: Site Specific Project Opportunities
- Figure 7: GI Strategic Network

Appendix 4: Regional Infrastructure Funds/ Community Infrastructure Levy

Figure 8: Funding Arrangements – Planning Gain Supplement (PGS) and Section 106 (inserted into text)

Appendix 8: Baseline Review

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Figure 24: Tourism and Recreation

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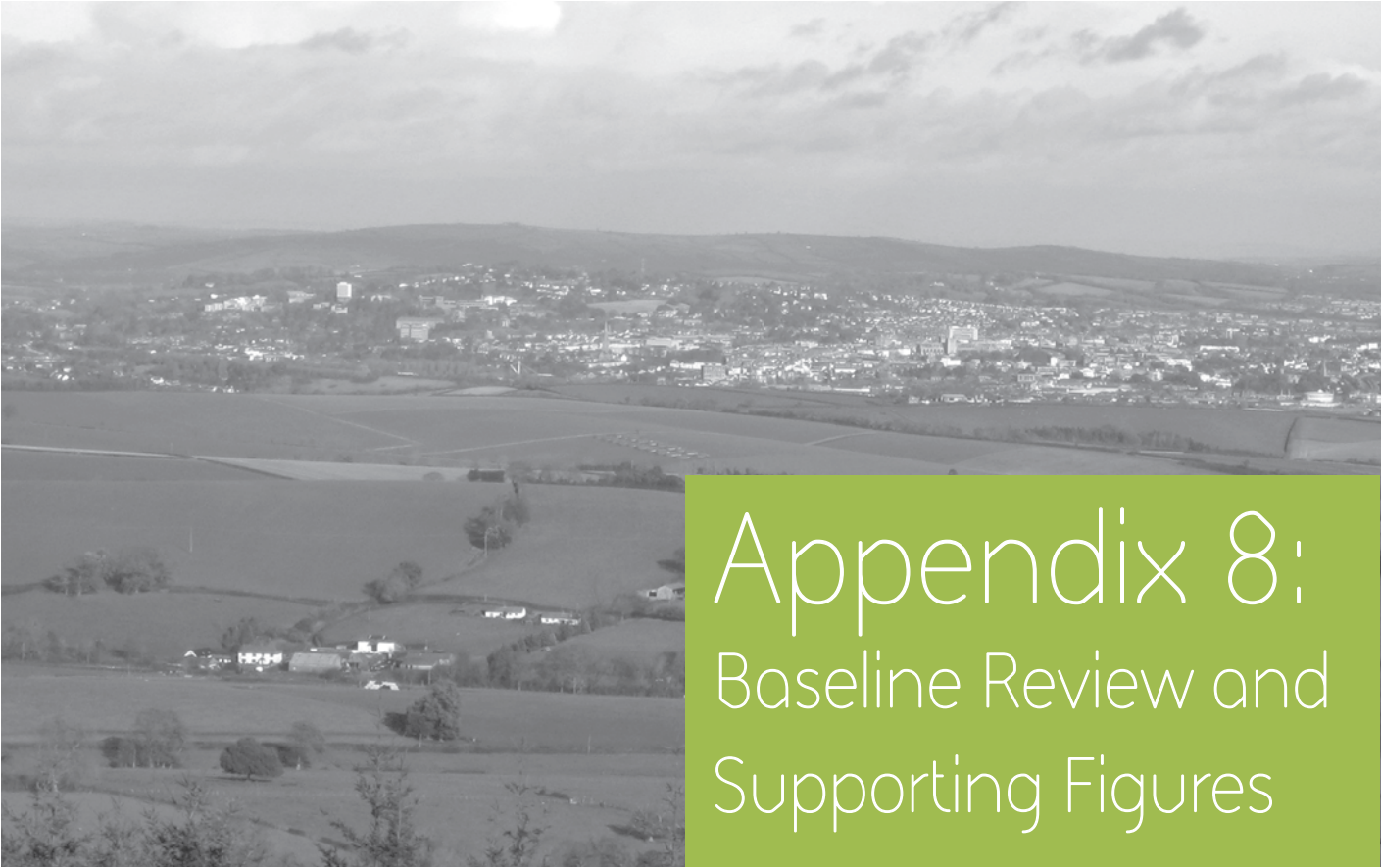
Figure 27: Landscape Character and Designations

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Figure 29: Strategic Landscape Context

Figure 30: Visual and Perceptual Character

Figure 31: Major New Development East of Exeter



Appendix 8: Baseline Review and Supporting Figures

1.0 Study Area

Refer to:

- Figure 9: Core Study Area
- Figure 10: Wider Area of Search
- Figure 11: Local Authority Boundaries and Principal Settlements
- Figure 12: Aerial Photograph

The core study area has been defined by the Advisory Group, encompassing Exeter City and the Exeter Fringes. Countryside to east of Exeter has also been included so that the GI Study can take into account proposed development in and around Exeter Airport and the proposed Cranbrook New Community (see 'Landscape Change and Development').

The wider area of search extends up to 10km from the core study area. This allows areas of strategic greenspaces to be identified that may contribute to the wider GI network.

The core study area includes three local authorities, as shown on Figure 11, and includes both urban and rural areas, as shown on Figure 12.

2.0 Natural Systems

2.1 Geology and Landform

Refer to:

- Figure 13: Simplified Geology
- Figure 14: Landform

The core study area has a varied and ancient geology that is fundamental to understanding the form and structure of the diverse landscapes present. The variations are evident in the different landscapes that exist, both in their form and in the way that they have been used in the past and continue to be exploited.

2.1.1 The Resource

Carboniferous mudstones and sandstones characterise the north of the core study area, extending in a broad wooded ridge and series of hills around the north of Exeter and terminating at Poltimore. The Exe and the Creedy rivers cut through these hills, and their valleys have been exploited as transportation routes through the hills for centuries, carrying major north south road and rail links to Exeter and the coast.

Permian Breccia, sandstones and isolated areas of basalt at the junction with carboniferous deposits characterise the lower and softer landscapes extending across much of the remainder of the study area. Whilst the Exe and Clyst and their tributaries have softened and shaped these underlying rocks, land rises to the west of the study area to form a complex series of valleys and ridges.

Triassic mudstones, sandstones extend across and beyond the eastern portion of the study area towards the hills and commons at Bicton and Colaton Raleigh where conglomerates become increasingly evident. The commons are notable as the underlying geology has influenced land cover and land use; the marginal soils arising from the rocks resulting in species rich lowland heaths and coniferous plantations being the predominant land use.

Superficial deposits cloaking the underlying solid geology are also significant in the core study area. The Exe and Clyst, and their numerous tributaries, have deposited broad belts of river borne alluvium in the valleys, with wide tidal flats being evident to the south of Exeter.

These deposits soften the landscape and create a flat or gently undulating landform. These seasonally wet areas also influence land use and land cover, with more limited settlement and a predominance of pastoral agriculture. Sand and gravel terraces are also evident, most notably on the northern banks of the Exe beneath the southern extents of the city. Small peat deposits are also evident. However, their extent and influence is limited. The most notable area of peat is at Hellings Park Fen where unimproved and semi improved marshy grassland is designated as a County Wildlife Site (CWS).

The major river valleys form well defined topographic features. Whilst the valley profiles vary, valley sides and flat floodplains create locally distinctive landscapes. For example, the Clyst occupies a broad, soft undulating landscape, which contrasts to the Exe as it passes through a narrow steep sided gap in the hills to the south of Cowley. These contrast dramatically to the vast panoramas across wide estuarine mudflats evident to the south of Exeter.

The major valleys through the hills to the north of Exeter have long served as routes for major transport infrastructure, although it is also important to emphasise the role that elevated hills played in early movement networks, with prehistoric routes gravitating to the higher ground and ridges. The hills and ridges to the north and west of Exeter are particularly important as they provide opportunities to gain wide panoramas and long distance views across Exeter or to its wider rural setting. The steepness of some hills has precluded development and the expansion of the city, and as such retain a rural character, despite the proximity of suburban development.

2.1.2 Analysis and Opportunities

- The underlying geology is fundamental to local and regional distinctiveness, as a result of its influence on topography, soils, land use, biodiversity, local

vernacular architecture and landscape character. GI presents an opportunity to celebrate the distinctive and varied geological character of the area, and notably in the types of building materials used. Routes through the landscape, new development and any landscape projects should reinforce the influence of the underlying geology through the choice of building materials or plant types specified;

- Elevated hills and vantage points provide opportunities for the location of landmarks and the celebration of views over Exeter, its urban fringes and its rural landscape setting; and
- Educational benefits arise from the potential for interpretation of geological features and links to the semi-natural, historic and cultural environment. For example, themed trails using appropriate signs and public art would increase awareness whilst also providing recreational benefits.

2.2 Hydrology and Flood

Refer to:

- Figure 14: Landform
- Figure 15: Strategic Flood Map

2.2.1 The Resource

The character of drainage patterns and hydrology in the core study area is a direct result of the underlying geological structure and physical character of the landscape. The entirety of the study area falls within the catchment of the Exe and Clyst. The belt of hills and elevated commons to the south east of Exeter form a watershed between the Clyst and Otter further to the east. As indicated previously, the Exe cuts a course through a belt of high ground to the north of Exeter, from where it flows through increasingly wide alluvial floodplains, and onto the tidal estuary below Topsham and the confluence with the Clyst. To the south of Exeter, the valley floodplains of both rivers are characterised by a multitude of meandering channels and drainage ditches indicating that waterlogging and seasonal flooding occurs.

Significant areas within each of the river valleys have been identified as floodzones by the Environment Agency. Figure 15 illustrates the extent of estimated extents of fluvial (from rivers) and tidal (from the sea) flooding. Areas at risk from ground water and surface water flooding are not illustrated. Flood risk arises from river flooding in the lower reaches of the river catchments and from the sea in tidal influenced areas⁹. It is notable that these floodzones currently contain only very limited settlement.

The effects of climate change on river flows and sea levels, and hence on flooding are difficult to predict. However, in the future it is anticipated that in the southwest there could be increases in the amount of winter rainfall and the intensity of storms. It is also widely predicted that sea levels may rise due to global warming, placing greater pressure on floodplains in coastal areas and areas bordering the tidal reaches of the Clyst and Exe.

2.2.2 Analysis and Opportunities

- Major rivers and their tributaries contribute significantly to the landscape character of the area and landscape features are reflected in topographical form and the pattern of land use, movement and settlement;
- The estuary and floodplain landscapes retain a strong rural and remote character in places with significant wildlife interest and future potential for habitat enhancement;
- Access to rivers valleys for recreation and movement provides the potential for closer association with 'natural systems', building on their educational potential and engendering a greater sense of wellbeing;
- The Exe valley is a major green space asset running through the heart of the city. By contrast, the Clyst defines the outer edge of the city and marks a buffer zone and transitional landscape from urban to rural. Both are key elements in defining the identity of Exeter, the core study area and wider area of search; and

⁹Exeter City Council, Exeter City Council Strategic Flood Risk Assessment. 2008

- Flood risk management and the requirement to implement sustainable approaches to future environmental management and development is an important consideration, particularly at the urban/ riverside interface. Sustainable Urban Drainage System (SUDS) should be employed in new developments and consideration given to enhancing the semi natural character and biodiversity interest of valley systems whenever possible through new development and in the future management of riverside spaces. Creative approaches to fluvial and tidal flood water management should be encouraged whilst recognising the need to ensure flood risk is not increased. The GI Study should inform new strategic water management initiatives to take advantage of opportunities to develop multi functional solutions.

2.3 Biodiversity

Refer to:

- Figure 16: Biodiversity – Principal Habitat Types
- Figure 17: Biodiversity - Designations
- Figure 18: South West Region Nature Map

2.3.1 The Resource

The core study area, like much of rural Devon possesses a rich semi-natural habitat resource. The most notable assets are the Exe Estuary, traditional rolling agricultural landscapes with meadows, woods and hedgerows and lowland heaths on hills to the east of the core study area. These and other habitat types support a great diversity of plants and animals, and contribute to the areas character and identity.

Whilst the city, fringing wooded hills and Exe are notable for the surviving tracts of large habitat areas, or smaller areas of linked habitat resource, there is a general pattern of habitat fragmentation across the eastern portion of the study area, resulting from a long period of agricultural improvement, and intensification.

Natural Area Profiles¹⁰, locate the majority of the core study area within the Devon Redlands (Natural Area 90) which is noted for outstanding areas of lowland heath, small areas of dry neutral grassland and floodplain grazing marshes along the Exe Estuary and other river valleys. The western limits of the core study area coincide with The Culm (Natural Area 93). The Culm is one of the largest Natural Areas in the south west region, extending northwards and westwards to the Devon coast. Notable relevant characteristic habitats include upland oak woodlands, small wet woodlands and conifer plantations.

A brief description of the main habitat types are presented below:

Woodlands, Trees and Hedgerows

Significant concentrations of woodland are evident across the hills to the north and west of Exeter, particularly on steeply sloping hillsides and along valleys. Here they make a contribution to the character of the landscape. Ancient woodlands are notable and vary in size and configuration. However, there is a concentration at the confluence of the Exe and Creedy, with Stoke Wood and Exwick Wood forming large continuous tracts of woodland cover. Beyond the study area, extensive mixed amenity woodlands are evident at Ashclyst Forest and Haldon Forest. To the south of the core study area, further ancient broadleaved woodlands and plantations fringe the lowland heaths.

In addition to woodlands, plantations and copses, parkland and hedgerow trees contribute to the available habitat resource, particularly in agricultural and urban landscapes where there is limited other habitat evident. Hedgerows are also notable as, in addition to providing habitat for a range of species, they can also contribute to local habitat networks and movement corridors through the agricultural landscape.

The South West Regional Woodland and Forestry Framework and Implementation Plan^{11,12}, identify woodlands as amongst the most valuable of terrestrial habitats, providing economic, social and environmental

¹⁰ Exeter City Council, Exeter City Council Strategic Flood Risk Assessment. 2008

¹¹ Woodland and Forestry Framework Steering Group, SW Regional Woodland and Forestry Framework, 2005

¹² Woodland and Forestry Framework Steering Group, SW Regional Woodland and Forestry Framework Implementation Plan, 2005

benefits. It states that in woodland, these three pillars of sustainability are inextricably linked and inter-related, contributing multiple benefits; notably as a source of renewable energy, biodiversity, construction materials, places for recreation, sport and healthy living and providing structure and beauty to the landscape.

Floodplain Grazing Marshes, Fens, Reedbeds and Swamps

There are no notable lowland meadows within the core study area, although several isolated examples can be identified in the surrounding landscape, such as along the Alphin Brook to the west of Exeter.

However, extensive tracts of floodplain grazing marsh, the most extensive habitat type in the study area, can be found bordering the Exe and Clyst. South of Exeter, wet meadows require increasing levels of drainage, and a network of channels can be seen to divide up the flat floodplain pastures. Further to the south again, shifting tidal waters and deposition has created extensive mudflats, a valued feeding ground for waders.

The Exe Estuary is internationally important and represents one of the most productive ecosystems in the area. The estuary and the agricultural areas that fringe it are important for overwintering wildfowl and waders and as 'refuelling' areas for passage migrants in spring and autumn. The estuary is popular as a recreational asset, and attracts large numbers of visitors. Some visitors use the estuary for wind surfing, jet skiing boating and dog walking which can all have a detrimental effect on wintering waders and wildfowl.

Together, these riverine and estuarine habitats provide important roosting, breeding and feeding areas for a great many bird species, including waders and wildfowl and support a great diversity of plants, insects and other animals.

Lowland Heath

There is no lowland heath within the core study area. However, to the south east of Exeter are the East Devon Pebblebed Heaths. These are a notable biodiversity

resource and constitute the largest area of lowland heath in Devon. The areas varied soils and structure result in a rich diversity of habitats with both wet and dry areas of heath occurring together where small springs and flushes are evident. As well as heather (ling) plants such as dog violet and heath spotted orchid can be found, with bog asphodel and sundew evident in wetter areas. There are important breeding populations of Dartford Warblers and Nightjars on the heaths. Similar to the Exe Estuary, increased visitor use threatens habitats and the areas remote, tranquil and unspoilt character.

Biodiversity Designations

Nature conservation and the protection and creation of a healthy natural environment is beneficial in many ways, notably in protecting rare or threatened habitats and species; meeting national or local biodiversity targets; contributing to the quality of life and the well-being of the community; and supporting research and education. In response to this, the Government and local planning authorities designate those sites that are of substantive nature conservation value. A summary of the principal designations within and surrounding the study area is presented below.

The Exe Estuary is designated as an internationally important wetland area under the Ramsar convention on wetlands and also as a Special Protection Area (SPA) under the EC Birds Directive. The Pebblebed Heaths to the east of the core study area are designated as a SPA and also as a Special Area of Conservation (SAC). SACs, SPAs and Ramsar sites are all also Sites of Special Scientific Interest (SSSI). However in addition to these internationally designated areas there are two further designated Sites of Special Scientific Interest in the core study area; Stoke Woods and Bonhay Road Cutting.

A great variety of local designations can also be found within and surrounding the core study area. Local Nature Reserves (LNRs) are places with wildlife or geological features that are of special interest locally. Two are located in the core study area at Belvidere Meadows and Barley Valley.

Outside Exeter and across the rural landscape of Teignbridge and East Devon Districts, several County Wildlife Sites have been designated in and around the core study area. These are non-statutory designations for sites of county significance for wildlife or geology. Of particular note is the area of floodplain bordering the River Clyst between Clyst St Mary and Topsham; the only CWS fully within the core study area. Several additional CWS have been identified within Teignbridge District however these have yet to be formally approved. These are identified as 'Pending' on Figure 17.

In addition to these designations a range of other biodiversity areas have been identified. In Teignbridge District, a Biodiversity Enhancement Area has been identified around Exminster, bordering the sensitive habitats along the Exe Estuary. This consists of the Strategic Nature Areas from the South west Nature Map and the Gull bunting enhancement zone identified by the RSPB. The Biodiversity Enhancement Zone has been designed to address 'islandisation' – where fragmentation further reduces the ability of an area to support a range of species, by providing opportunities for development to maintain and enhance the biodiversity of the area, to reconnect fragmented habitats, and to provide areas for species to move into and to adapt to climate change. Within Exeter, a similar aspiration is achieved through the identification of the Exeter Biodiversity Network. This comprises sites of national, county and local significance that, together, form a coherent biodiversity network throughout the city. This network has strong links to the Exe Estuary and to countryside to the north of the city.

South West Nature Map^{13,14}

At the regional scale of planning, Biodiversity South West, a partnership of Government, local authority, statutory agency, non government and business representatives, has prepared the 'Nature Map' to provide a clear strategic picture of the region's biodiversity. This provides a broad scale vision for change which offers a spatial tool for identifying where

biodiversity enhancement should be delivered in the future and will help identify areas that can contribute towards meeting regional targets for the restoration and creation of priority habitats and inform the formulation and use of policies in Local Development Frameworks (LDFs).

The South West Nature Map identifies landscape scale 'Strategic Nature Areas' (SNAs) that represent the best areas to maintain and expand wildlife habitats through appropriate management, restoration and/or creation:

- The Clyst and the Exe valleys have been identified as floodplain grazing marsh SNAs;
- To the north of Exeter the hills are also noted as woodland SNA;
- To the south of the city the Exe Estuary is identified as of importance as a coastal habitat SNA; and
- Beyond the core study area, the Pebblebed

Heaths are identified as a Lowland Heath SNA. The initiative also acknowledges that at existing priority habitats, together with landscape features which provide wildlife corridors, links or stepping stones from one site to another help to inform important networks of habitats when viewed at the landscape scale. The concept of habitat networks is gaining widespread support and is seen as a crucial part of addressing problems of habitat fragmentation and enabling habitats and species to adapt to the effects of climate change by facilitating the migration, dispersal and genetic exchange of species in the wider¹⁵ environment. Further advice and guidance has been prepared by English Nature (now Natural England)^{16,17}.

It should be acknowledged that the South West Nature Map presents broad areas in which to maintain and extend habitat resources, and therefore is not of a sufficient detail to inform local planning and design initiatives. The Biodiversity Network is an important resolution of this regional strategy at the local scale,

¹³ Mike Oxford, South West Nature Map – A Planners Guide. Biodiversity South West, 2007

¹⁴ The South West Wildlife Trusts, Rebuilding Biodiversity in the South West Technical Manual. November 2005

¹⁵ Office of the Deputy Prime Minister, Planning Policy Statement 9: Biodiversity and Geological Conservation

¹⁶ English Nature, Research Report 641 Opportunity Maps for Landscape Scale Conservation of Biodiversity: A Good Practice Study, 2005

¹⁷ English Nature, Research Report 687 Planning for Biodiversity – Opportunity Mapping and Habitat Networks in Practice: A Technical Guide5

although again, further refinement will be necessary at the site planning scale to address local constraints and opportunities including issues such as land ownership and barriers to habitat connectivity.

Development of the South West Nature Map is ongoing, and future development of GI strategies should continue to make reference to this important initiative.

Biodiversity Action Plans

Biodiversity Action Plans (BAPs) set conservation objectives and targets and propose actions to achieve these. They represent a major step forward from previous reactive and conservation led approaches to biodiversity planning and development control.

The UK BAP (1994) provides the framework for more localised studies as well as a list of priority species and habitats. In 1998 the Devon Biodiversity Partnership prepared the 'Nature of Devon', a BAP with detailed Action plans for thirty seven species and habitats found across the county. The plan was revised in 2005. Since this time several local BAPs and Biodiversity Strategies have been prepared to focus on locally important issues.

The Exeter City¹⁸, Teignbridge¹⁹ and East Devon²⁰ Local BAPs each identify priority habitats and species and the actions that are needed to conserve and enhance key biodiversity. The priorities vary for each administrative area. However, the following are regarded as important across the core study area and its wider setting:

- Broadleaved woodland and trees;
- Estuaries;
- Coastal grazing marsh and salt marsh;
- Unimproved grasslands and meadows;
- Ancient and species rich hedgerows;
- Rivers, streams and open water;
- Agricultural land and field margins;
- Towns and Villages (gardens and green spaces); and
- Lowland Heath.

2.3.2 Analysis and Opportunities

- Protection of key wildlife sites must be a priority. These encompass all statutory and non-statutory designated sites including all existing and pending sites;
- Assemblages of similar habitat type within close proximity to each other have been identified in the South West Nature Map at the strategic scale. These should be developed and refined to identify key habitat reservoirs and links between core areas or key groupings of target habitats. These areas support the highest levels of biodiversity and should be protected and enhanced in their own right and through the different key habitat strategies. Priority should be given to areas that will provide the most benefit in terms of connectivity combined with the highest chance of achieving a high standard of restoration as determined by technical issues, such as past and current land-use, land ownership, soils and planned development;
- Contribute to the delivery of objectives in the South West Region Woodland and Forestry Framework Implementation Plan;
- Seek opportunities associated with new development and planning gain to help deliver nature conservation enhancement including the setting up of financial endowments (money invested, with the principal remaining intact) for management;
- In addition to the effects of mineral extraction on the biodiversity resource, there are opportunities for biodiversity creation and enhancement associated with site restoration and long term management;
- Development of Defra's Higher and Entry Level Environmental Stewardship Scheme and integrated funding co-ordinating both agri-environment and forestry grants may bring new opportunities and priorities. In addition to woodland management, restoration and creation, Stewardship grants should be particularly targeted at key habitat types such as species rich grassland, woodlands, heath and estuarine;
- Biodiversity influences local and regional distinctiveness in respect of landscape, townscape

¹⁸ Exeter Biodiversity Action Plan

¹⁹ Nature's Future – Teignbridge Biodiversity Action Plan. Teignbridge District Council, 2006

²⁰ East Devon District Biodiversity Action Plan. East Devon District Council, 2005

and riverscape character. Therefore proposals for creation or enhancement must be sensitive to local landscape character;

- Where core areas of habitat are located close to each other, priority links for habitat restoration and creation will be identified to enhance the habitat network and reduce the effects of habitat fragmentation. The technical constraints on habitat creation links or corridors will influence the prioritisation of action. Linear features such as water courses and hedgerows will be an important component in habitat connectivity;
- Habitat reservoirs and links will be identified and form an integral part of the emerging new ‘Biodiversity Network’;
- The health, well being and education benefits from semi natural habitats is an important potential dual functionality, particularly within urban areas and at the urban/rural interface. Opportunities to enhance these aspects should be explored further; and
- The Exe Estuary is internationally important and should form the focus of large scale habitat enhancement, whilst encouraging appropriate levels of visitors to exploit its recreational and educational potential in ways that are not damaging to the resource.

2.3.3 Potential Constraints

- There is potential conflict arising from the inappropriate use or increased access to sensitive habitats;
- New development may threaten habitats and habitat connectivity;
- There are technical limitations to the feasibility of habitat creation; and
- Land ownership constraints are a significant limiting factor to the enhancement or creation of habitats at the landscape scale.

3.0 Land Use and Human Systems

3.1 Land Use and Agriculture

Refer to:

- Figure 11: Local Authority Boundaries and Principal Settlements
- Figure 12: Aerial Photograph
- Figure 16: Biodiversity – Principal Habitat Types
- Figure 19: Agricultural Land Classification

3.1.1 The Resource

The core study area contains a great diversity of land uses, ranging from deeply rural areas characterised by mixed arable and pastoral farming, interspersed with farms and hamlets to urban and urban fringe areas associated with Exeter city.

Rural Landscape

Agricultural land use across the area is mixed, with a range of social, economic and environmental factors influencing the types of agricultural regimes employed. Of particular relevance is the quality of agricultural land, which is a major factor influencing the versatility of the land to accommodate different types of agriculture.

The Strategic Agricultural Land Classification for the area indicates that the highest quality and most versatile agricultural land is located across the areas of Permian New Red Sandstone along the eastern fringes of Exeter and in a broad arc to the north of the city from Broadclyst to Sweetham, located a short distance to the north of Newton St Cyres. Grade 2 agricultural land is less well represented within the core study area, although it can be seen to extend across the gentler hills and valley slopes on Breccia bedrock to the south and south west of Exeter.

Grade 3 land is the most extensive classification identified within the core study area, occupying both the deeply incised hills and valleys on mudstone and Breccia bedrock to the north and west of the city and the gently rolling landscapes to the east of Exeter where superficial

deposits clay, silt, sand and gravel exert an influence on soils and land quality. Typically, the lower grades of agricultural land can be seen to extend along the floodplains and valley floors of the Exe, Clyst and their numerous tributary streams.

Broadleaved woodland and coniferous plantations are a notable feature of the landscape to the north and west of Exeter, particularly on steeper sloping land and more intimate, small scale pastoral landscapes where there is a high occurrence of hedgerows, hedgerow and field trees. Ancient woodland, (thought to have been in existence since before 1600AD) is restricted to a small number of sites albeit large in area when compared to other woodlands in the core study area.

The rural landscape also displays a range of land uses other than agriculture and forestry, such as transport infrastructure, notably the Exeter Airport site and recreation, such as the County Showground and Crealy Adventure Park which both exert a localised urbanising influence.

Urban Areas

Within the city, a typical range of urban land uses is evident, with the historic centre surrounded by commercial, residential and industrial areas, which also contain the historic cores of satellite villages and settlements that have been subsumed into the urban area. These land uses are interspersed with areas of green space such as parks, playing fields and cemeteries, and semi natural landscapes, such as the Exe Valley which forms a green corridor through the heart of the built up area. Exeter is also notable for the amount of rural landscape that can be seen to extend into the urban envelope. Notable examples include Pynes Hill and 'fingers' of countryside around the eastern and northern fringes of the built up area.

Outside of the city, significant urban areas include Topsham, a town on the Exe Estuary, and Clyst St Mary, a village along the A376 between Exeter and Exmouth. Exeter Airport is also important components of the urban landscape. The M5 corridor which defines the eastern edge of Exeter represents a significant barrier between the city and surrounding settlements, especially Topsham which is accessed along minor routes.

3.1.2 Analysis and Opportunities

- Land use within the rural areas principally comprises agricultural land. Variations in land use and agricultural practices have a strong influence on landscape character, appreciation of landscape evolution and habitat persistence. Defra's Environmental Stewardship Scheme will enable the principles that underlie the Countryside Stewardship process to continue, either through the more widely available Entry Level Scheme, or with potential for more enhanced improvements through the Higher Level Scheme, subject to a comprehensive farm audit and justification of benefit and offer significant opportunities for coordinated enhancement of landscape, habitats and the historic environment;
- The proximity of Exeter to productive rural landscapes would suggest that local food initiatives will be a viable option for many landowners, particularly in the rural urban fringe;
- The main areas of woodland are located to the north and west of Exeter, although there is a significant spread of smaller woodlands throughout the study area. Opportunities exist for woodland management of existing and future woodland areas to deliver wood products to renewable energy initiatives, such as community Combined Heat and Power (CHP) schemes in existing and proposed communities. Enhancement of the biodiversity value and recreational potential of woodland sites is also encouraged through appropriate management and the restoration of coniferised ancient woodland sites;
- The diversity and rich urban fabric should be enhanced, in particular positive aspects of the city, such as its historic centre and historic cores of former villages and settlements, and the contribution made by urban green spaces and areas of rural landscape within the urban envelope and around the fringes of the town. The Exe valley is a significant green space running through the town, and this should continue to form a major component of GI within the core study area; and
- Links should be created both between the urban and rural landscape, promoting opportunities for recreation and enjoyment of the countryside, and between settlements, promoting sustainable modes of travel.

3.2 Heritage and Culture

Refer to:

- Figure 20A: Cultural Heritage (Core Study Area)
- Figure 20B: Cultural Heritage (Local Historic Centres)
- Figure 28: Simplified Historic Landscape Character

3.2.1 The Resource:

Numerous sites and features in the landscapes and townscapes of the core study area contribute to local identity and historic character and inspire an awareness of the great period of time that the area has been settled and exploited. Most historians and archaeologists agree that the character of Devon's historic landscape is different to that of most other parts of England²¹ and as such the everyday rural landscape should be managed to protect valuable or rare elements and features and enhance our understanding of social, political and technological progress. This chapter presents some of the main features of interest in the area that are relevant to the GI Study.

Exeter City

The vast majority of heritage designations, notably Listed Buildings and Conservation Areas, Scheduled Monuments and Registered Parks and Gardens within the core study area are located within Exeter. This is remarkable, as significant destruction occurred during the Second World War when a quarter of the city centre was levelled.

The core of the city can trace its origins back to the Iron Age, with settlement evidence recently being found under the new Courts building. However, it is of later phases of occupation that above ground evidence survives. Roman military and civilian planning, and re-planning by King Alfred in the 9th century, underpin the framework of roads and streets that have persisted into the modern period and influenced successive waves of expansion and development in the city and its surrounding landscape. Within this framework, added to and adapted by successive generations, much of the

surviving historic fabric and townscape character dates to later periods, notably the 16th, 17th and early 18th centuries which saw periods of prosperity for the city.

The city centre and its suburbs contain several Conservation Areas, with the Central and Riverside areas being of greatest significance as they contain many important monuments, buildings and spaces. The Riverside area contains the canal, canal basin and quay area and was once Exeter's maritime trading centre. Beyond the centre, other conservation areas mark early suburbs or earlier villages consumed by the growing city. In addition to the historic structures, the historic street pattern is important to understanding the growth of the city. As indicated previously, this pattern has evolved over many centuries, and the main elements are probably based on the Roman street system. For example, the A3015 Topsham Road follows the course of the Roman Road heading south east out of the city. The layout of roads and streets often creates views and vistas of considerable character and provides a context for understanding surviving structures and open spaces and contribute to townscape character.

In addition to built heritage, several parks and open spaces contribute to the historic character of the city. There are two sites on the English Heritage Register of Historic Parks and Gardens of Special Historic Interest; Bartholomew Street Cemetery and Northernhay and Rougemont Gardens. A local register for Exeter also exists, and sites on this list include Reed Hall, Higher Cemetery, Pines Gardens and Pennsylvania Park.

There are also several archaeological sites and structures that have been identified of national significance and scheduled as Ancient Monuments. There are also many significant remains that are not currently scheduled, and these are recorded in the city's and county's historic and environment records.

Exeter Fringe and the Countryside

Topsham is a notable area of built development which is rich in historic townscape character. The town probably originated as a Roman port settlement, and was protected by a small military base. From the medieval period it developed into a significant port

²¹ Sam Turner, *Ancient Country: The Historic Character of Rural Devon*. Devon Archaeological Society Occasional Paper 20. 2007

and shipbuilding centre. The town had close trading connections with the Netherlands and there are several houses that display a Dutch influence, in addition to fine examples of Georgian and Edwardian architecture. Beyond the city, there is a less dense spread of heritage designations. However, it is the rural landscape itself that forms an important record of past land uses and cultural evolution, both in the buried remains it contains and what is visible on the surface. The patterns created by fields, hedges woodlands and other land uses have been subject to extensive study, and the findings published in a comprehensive Historic Landscape Characterisation²².

The process of characterisation involves research by historians and archaeologists and enables us to identify, amongst other things, when certain fields and settlement patterns were established and how they developed. Parish boundaries are also an important component of the historic landscape. The age of many parish boundaries is astonishing; the Christian church adopting some prehistoric estates for which the boundaries were visible and known in the landscape, such as on Dartmoor where several incorporate 'reaves' which are low banks of stone and earth constructed as territorial boundaries in about 1500 BC (Fleming 1978;1983).

Elsewhere boundaries commonly include ancient earthworks or distinctive points along the boundary, reflecting the continuity of human involvement in the landscape and the continuing importance of 'landmarks' in creating a sense of place. Boundstones were frequently set up at special points, and in open country they were sometimes the only visible indication of the course a boundary took. Some were inscribed with the initial letters of the parishes (each having a distinctive style)²³.

Given their ancient origins and long history of maintenance as a boundary feature, hedgerows along parish boundaries are often very old, and of notable biodiversity value. Indeed, the number of shrub species can actually give a clue to the age of a hedge - as a general rule the number of shrubs increases by one species for every 100 years of its age. Some parish hedges were also once part of woodland, since cleared.

It is evident that some rural areas display strong influences from their past. The core area of study contains infield patterns that in some instances can be traced back to the medieval period.

Interspersed amongst the fields and woodlands are several farms, hamlets and rural villages. These make a further contribution to historic character. Only one rural village (Sowton) in the core study area is designated as a Conservation Area. However, others retain a strong historic character, particularly where several older structures are clustered together. Scheduled Monuments and other historic sites surviving as above ground features are also notable in the rural and urban landscape and provide a direct and tangible link to how the landscape has developed through time. The Iron Age forts at Stoke Hill Camp (overlooking Exeter from the north) and at Woodbury Fort (visible on the skyline to the east from most of the study area) are two of the most visible and significant examples.

Transport infrastructure, such as roads, railways, bridges, canals, and airports are a tangible, if sometimes undervalued link to the past, with some routes in and around Exeter dating back many centuries. For example Exeter Canal, work on which began in the 16th century, is one of the oldest artificial waterways in the UK. Exeter Airport also has a rich, albeit more recent history. Established in the 1930's, the airport had an outstanding record during the war years becoming an R.A.F. Sector Station with an important role in the Battle of Britain.

3.2.2 Analysis and Opportunities

- Historic and cultural resources, in urban and rural locations make an important contribution to sense of place, sense of time, and landscape and townscape character. Patterns in the landscape, created by roads, tracks, hedges and field banks, as well as sites and features of historic interest should be protected and enhanced;
- The broadening of the knowledge and perceptions of the resource will improve the identity and image of the area, attracting visitors and business. Increased and improved interpretation and opportunities for education should be exploited;

²² http://www.devon.gov.uk/index/environment/historic_environment/landscapes/landscape-characterisation.htm

²³ <http://www.england-in-particular.info/parishmaps/m-boundary.html>

- Opportunities to improve access to heritage assets should be explored where this is appropriate to the resource and its setting and will not adversely affect the site. Exeter has a series of promoted walks and guides that take in some of the city's major historic sites and features. These could be extended to encompass features in the wider suburban and rural landscape;
- There are opportunities to widen the understanding and interpretation of townscape character and historic parks located within the urban area of Exeter and in the wider rural landscape such as Bishops Court and Rockbeare House;
- There are linked opportunities to improve interpretation, recreation and heritage tourism focused on the maritime heritage of Exeter, Topsham and the Exe Estuary;
- There is considerable potential for the restoration and re-use of historic farm buildings, for example as camping barns on long distance footpaths, together with a wider understanding of the historic significance of these buildings; and
- Defra's Environmental Stewardship agri-environment incentive scheme operates at two levels through the more widely available Entry Level Scheme, or the Higher Level Scheme. The overall objective of both schemes is to encourage environmentally friendly farming. However, at a more detailed level a number of objectives are set out which include the protection of the historic environment. There will be many opportunities to address this objective, for example, the restoration of redundant rural buildings, as discussed above, and the cessation of inappropriate farming methods to protect archaeological and historic structures and buried remains.

3.3 Green Space

Refer to:

- Figure 21: Open Space
- Figure 22: Open Space Deficiency Analysis
- Figure 23: Open Space Deficiency Analysis Incorporating the Cranbrook New Community

3.3.1 The Resource

There is a network of strategic and local open spaces throughout Exeter²⁴ and the core study area that serve a range of functions from sport and recreation to food production. The wider area of search contains limited open space, due to a smaller, dispersed population.

The Wider Area of Search

There are limited recreational sites or other accessible open spaces outside the city. However, formal recreation areas and informal open spaces are located within or immediately adjacent to several villages, such as Clyst St Mary, Rockbeare and Clyst St George. At the eastern fringe of the core study is Percy Wakley Wood Woodland Trust Site. This quiet, rural secondary woodland consists of woodland and open habitat that is popular among residents in Rockbeare.

To the north of the city, Forestry Commission woodland at Stoke Wood situated on the steep slopes of Stoke Hill has been dedicated under Section 16 of the Countryside and Rights of Way Countryside and Rights of Way (CROW) Act 2000 and provides access to a picnic area and place to view the wider countryside.

Beyond the core study area, significant areas of accessible green space are also evident. Danes Wood and Cross and Ashclyst Forest, both part of the National Trust's Killerton Estate, are designated by the National Trust as land permanently open for public access. To the south east, the open areas of common land on the Pebblebed Heaths have been designated as Open Country and Common Land and as such visitors benefit

²⁴ Sam Turner, *Ancient Country: The Historic Character of Rural Devon*. Devon Archaeological Society Occasional Paper 20. 2007

from open access under the CROW Act. Haldon Forest Park is also a notable asset. It covers an area of almost 1500 hectares and contains several kilometres of cycle, horse and walking trails and a picnic area.

Urban Green Space

Within Exeter, open spaces including playing fields, allotments, public parks, informal open space are evident across the city. There is also a significant area, comprising a range of functions, identified as the seven 'Valley Parks'. These are regarded as 'green lungs' within the city and provide access for the purpose of walking, cycling, riding, picnicking and landscape and wildlife enjoyment as well as formal recreation, play and sports. The aim is to manage the parks to protect and enhance the landscape and wildlife habitats, improve access, both physical and visual, and develop environmental education initiatives.

Several open spaces have a dual function as a wildlife habitat. Most notable are Local Nature reserves at Belvidere Meadows on the northern fringes of the city and Barley Valley which lies adjacent to Redhills woodland, a linear Woodland Trust wood with recreational access along the steep slopes of the Nadder Brook.

Open Space Deficiency Analysis

Deficiency analysis, using criteria established by the Mayor of London²⁵, identifies that Exeter and to a lesser degree settlements in the rural landscape around it, are well served by parks and open spaces at a range of scales. Whilst the approach set out in the guidance is designed to set the strategic context for open space planning in the capital city, it provides a helpful method of determining deficiency based on established criteria. The deficiency analysis undertaken seeks to assess those parks, open spaces and woodlands and open access land that have public access and excludes farmland and woodlands without formal public access.

It should be noted that as PPG17 Open Space Assessments are completed for the wider study area, a more accurate analysis of deficiency will be possible.

This may also be able to incorporate a detailed review of access to open spaces resources, factoring in severance and barriers to access. Further assessments at a local scale could also identify areas of semi natural greenspace, allowing analysis of deficiency based on Natural England's Accessible Natural Greenspace Standards (ANGSt).

Local Parks and Open Spaces

Local parks and accessible green spaces i.e. those that are less than 20ha, are widely distributed in the core study area and as such meet the demands of the majority of residents in the core study area when applying a 400m catchment area.

Strategic Parks and Open Spaces

Open Spaces between 20ha and 60 ha are less evenly distributed than local parks and open spaces leaving significant areas in the central and southern Exeter and the eastern and western portions of the core study area outside their 1.2km catchment areas.

Larger areas of open space, notably between 60ha and 400ha, are more widely distributed. The Exeter Valley Parks are particularly important in meeting the Mayor of London Criteria, with their 3.2km catchment areas covering the majority of the built up area of Exeter.

Haldon Forest, Harpford Common on the Pebblebed Heaths and Ashclyst Forest are also significant as their catchments include much of the rural landscape in the east of the core study area. However, an area of deficiency is noted in the vicinity of Exeter Airport. Open spaces in excess of 400ha are less common. Commons on the Pebblebed Heaths to the south of Hawkerland include within the 8km catchment much of the southern and eastern portion of the core study area. However, it is evident that the city of Exeter and the northern fringes of the core study area lie outside the catchment of an open space of this scale.

²⁵ Mayor of London, Guide to Preparing Open Space Strategies Best Practice Guidance of the London Plan. Greater London Authority, 2004.

Planned Green Space Provision

Using Mayor of London criteria, the master plan for the Cranbrook New Community has been analysed in the same way as existing open space provision. The analysis reveals that the planned development has no deficiency in smaller areas of open space (i.e. less than 20ha).

The proposed Country Park also serves the new community in providing access to open space of between 20ha and 60ha. The catchment of the park under the criteria encompasses Rockbeare that was identified as being deficient in access to open space between 20 and 60ha.

3.3.2 Analysis and Opportunities

- The value of a park or open space increases exponentially when it is connected to a larger strategic green space network. Opportunities exist to link some open spaces through a strategic network of green routes or streetscapes in the urban environment;
- Improvement in environmental quality, planning and design of open spaces should be encouraged to ensure they meet their full potential;
- Parks and more formally managed areas such as cemeteries and sports pitches should be seen as a significant opportunity for improving biodiversity assets through new management regimes (albeit respectful of the areas primary function). This is particularly important where they fall within areas identified as part of habitat networks;
- The educational benefits of the parks and open spaces should be recognised and exploited. Simple, low key interpretation facilities, may be appropriate in many cases, and cover topics such as local wildlife, cultural heritage, or health; and
- New residential and mixed use development presents an important opportunity for the provision of new open spaces and parks. Coordination of development master plans will ensure that the provision of new green spaces will deliver maximum benefit through their siting and design. For

example, new parks may be of greater benefit when located along strategic pedestrian routes, perhaps identified on the Sustainable Movement Network as well as deliver elements of the Biodiversity Network. Further consideration should be given to the routing of communications infrastructure in new urban green spaces, and inclusion of SUDs as part of their design development.

3.4 Leisure, Recreation and Tourism

Refer to:

- Figure 21: Open Space
- Figure 24: Tourism and Recreation
- Figure 29: Strategic Landscape Context

3.4.1 The Resource

Tourism and recreation makes a significant contribution to the Devon economy, generating employment and income. Exeter is a tourist hub, containing several sites and features of interest, many of which are of historic and cultural significance, such as the catacombs, cathedral, city wall, Guildhall, castle, museums and theatres. Various walking routes have been designed to take in key sites and areas of interest, such as the City Wall Trail and the Green Circle, a 12 mile route around the perimeter of the city. Several dedicated trails are also provided to give access to wildlife sites in the Exe Estuary.

The core study area is located between several areas designated for their scenic beauty and recreational value; notably the East Devon AONB and Heritage coast to the south and Dartmoor National Park to the west. Other key tourist and recreation destinations in the wider area of search include the town of Topsham, which is a historic estuary port and contains many fine Georgian and Edwardian buildings and Dutch trader's houses. North east of Clyst St Mary is the Westpoint Arena, which hosts regular events, including the County Show, and attracts 90,000 visitors annually. Further to the east is the Crealy Adventure Park which attracts in the region of half a million visitors per annum, 63% of

whom are local residents. Other notable destinations are Haldon Forest Park, Killerton House and gardens and Powderham Castle as well as the Exe Estuary and the Pebblebed Heaths, where access to remote, tranquil and semi natural landscapes are a key attraction.

As discussed in the 'Biodiversity' section the Exe Estuary is designated as an internationally important wetland area under the Ramsar convention and as a SPA under the EC Birds Directive. The Pebblebed Heaths are designated as a SPA and SAC.

The growing interest in outdoor recreation places pressure on sensitive landscapes such as the Exe Estuary and Pebblebed Heaths through increased visitor numbers. This pressure is likely to increase through the establishment of sizeable new communities throughout local area. It is therefore important to ensure that visitor pressure in these locations, and at other sensitive sites, is carefully managed to ensure that enjoyment and use of these areas does not diminish or threaten their remoteness, tranquillity and biodiversity value.

The M5 is the main route into Devon from the east. It terminates at Exeter, from where a network of trunk roads provides access to popular holiday and tourist destinations in Devon and further west into Cornwall. Exeter Airport and the mainline rail line are also significant. These pieces of major transport infrastructure, both located to the east of the core study area, along with the M5, provide tourists and visitors access to the area.

3.4.2 Analysis and Opportunities

- Accessible woodlands, other semi-natural environments and the rural landscape such as the Exeter Riverside Valley Park and Exe Estuary are valued informal recreational resources within the area, providing opportunities for the interaction between people and the landscape. Enhancement and improved legibility and connectivity would increase public use of these resources;

- The rural landscape of the core study area, east of Exeter, acts as a gateway landscape, overlooked by travellers heading towards Exeter and beyond, and its enhancement would improve visitor experience and perception;
- The River Exe, Exe Estuary and Exeter Canal provide a major recreational resource that can act as the focus for new tourist and visitor attractions. The Historic Quay is also a notable focal feature. However, opportunities exist to create a range of visitor experiences along the course of the river and canal through the city to the estuary linked by a legible and accessible network of footpaths and cycle routes. The Environment Agency highlights the use of rivers for enjoyment, communities and business, as a part of their 'Your Rivers for Life' campaign²⁶, a strategy for the restoration, conservation and development of navigable rivers. Cycle and canoe hire are already available for use along the Exe and canal. Cruises also operate on the Exe providing a unique perspective on the city and its setting and opportunities to view the estuarine habitats. Within the rural landscapes there is the potential for farm diversification to contribute more widely to leisure and tourism opportunities; and
- Areas that are noted for their tranquil character and sensitive semi natural habitats are under increasing pressure from greater numbers of recreational visitors and tourists. Access will remain important, however, it is acknowledged that the provision of enhanced green spaces within and surrounding the core study area will help to take pressure off sensitive landscapes elsewhere such as the Exe Estuary and Pebblebed Heaths.

²⁶ Environment Agency, Your Rivers For Life - A strategy for the development of navigable rivers 2004-2007.

3.5 Access and Movement

Refer to:

- Figure 25: Strategic Infrastructure
- Figure 26: Rights of Way

3.5.1 The Resource

The major access and movement network incorporates the M5 Motorway, main railway lines, Exeter Airport and major roads. Minor rural roads, local railways, bridleways, byways, footpaths and cycleways form important components of local transport infrastructure.

Road, Rail and Bus Routes

A strong underlying pattern of strategic movement (road and rail) exists within the study area. In the western portion of the core study area, rail and major roads (A396 and A377) follow the valleys of the River Exe and Creedy. At the confluence of these two rivers, these arterial routes meet at Cowley and follow the outer edge of the Exe floodplain southwards. The A30 follows a similar pattern, albeit following the bottom of the significantly narrower and steep valley of the Alphin Brook.

By contrast, in the east of the study area, the main routes into Exeter, the mainline railway, A30 and A3052 cut across the valley of the Clyst and as such take a more undulating course.

The M5 generally follows the outer, western edge of the Clyst valley, and wraps around the eastern fringes of the city and crosses the Exe and Exeter Canal to the north of Topsham on a viaduct. Broad undulations occur along this route as it traverses the watersheds between tributaries of the Clyst. This provides elevated viewpoints across the airport and rural landscape of the core study area from some locations on the southbound carriageway.

The M5 is critical to the economic prosperity of the area and in addition carries holiday traffic from the Midlands and the north of England, and London via the M4, to Devon and Cornwall. Junction 31 marks the end of the

M5 and traffic is split between the A30 to Cornwall and the A38 and A380 to south Devon. The north Devon coast can also be accessed along the A377.

Beneath the framework of the arterial routes is a much finer network of minor, rural roads linking villages and farms. These vary in character across the study area, with narrow routes in deep cuttings and bordered by hedge banks being common in the steeply sloping hills in the north and west of the study area, and gently winding lanes flanked by hedgerows and drainage ditches east of the M5.

Significant areas, notably on the hills to the north and west of Exeter, and along the main river valleys and tributaries of the Exe and Clyst are inaccessible to vehicular traffic. As a consequence, bridges over watercourses are important places from where to experience the floodplain landscape, and roads over the hills provide some impressive panoramic views of the city and the wider landscape setting of the city.

Topsham is accessed along minor routes, and bypassed by the A376. This has helped maintain the separate and historic character of the town, with larger out of town developments, such as retail and garden centres, being located on the main routes.

Exeter is well served in terms of rail links, marking a hub in the local and regional network. Exeter Central Station and Exeter St David's are located in the heart of the city with links to and from destinations in the south, on either bank of the Exe Estuary, east along the main lines to London Paddington and Waterloo, north to Barnstaple and south west to Plymouth.

Bus routes and bus stops mirror the distribution of rail stations, with the central bus station at the heart of the city representing a transport hub, with stops serving the main residential, commercial and industrial parts of the city. Several Park and Ride schemes operate in the city to alleviate congestion. Park and Ride sites are located at Matford, Sowton, Honiton Road and Digby.

In the wider rural landscape, bus routes and stops provide connections to rural villages and destinations such as the Westpoint Arena, Crealy Adventure Park, Haldon Forest Park and Exeter Airport. Some rural

areas, with lower demand, are not served on bus routes. As a consequence, some areas of interest and rural destinations are only accessible by car, by bike or on foot, notably Stoke Woods and fort, Duryard Valley Park picnic area, and in the wider area of search, the Woodbury Common on the Pebblebed Heaths and Ashclyst Forest.

Walking, Cycling and Horse Riding

The principal recreational walking route in the core study area is the Exe Valley Way. It is almost 45 miles long, stretching from the South West Coast Path on the Exe Estuary to the village of Exford on Exmoor, with a link to the Exe Head, the source of the River Exe. Within the core study area the route follows the southern flank of the Exe Valley through the Exeter Riverside Valley Park. In the wider landscape, the East Devon Way follows the eastern edge of the common land at Woodbury. The commons are Designated Access Land under the CROW Act. National Trust land at Ashclyst Forest is also identified as being accessible.

Higher Level Stewardship Agreements, under the Environmental Stewardship Scheme, are entered into by several land owners in and around the core study area, for example land at Woodbury Common. One of the objectives of the Higher Level Stewardship Scheme is to improve access to the countryside through the maintenance of existing de facto routes and the development of new routes where this is appropriate and beneficial to the public.

Within the city, the 20km Exeter Green Circle is a popular walking route made up of five sections, each providing access to areas of contrasting character in and around the city, from the rural Alphin Valley to sections in Exeter Riverside Valley Parks and city centre. Whilst limited stretches of definitive rights of way are identified within the city, many non definitive walking routes exist, providing access and connectivity throughout the built up area.

Beyond these promoted routes, the rights of way network has a large number of instances of 'cul-de-sac' paths that do not link together or provide circular or joined up routes between neighbouring villages or

villages to nearby areas of interest. This may have an adverse effect on the confidence of users to enjoy the rights of way the network. For example, several villages in the rural landscape in the east of the study area have short stretches of footpath radiating out from them. However, these are often truncated and provide limited connectivity. The river valleys and floodplains are particularly inaccessible to walkers, as is much of the eastern portion of the core study area²⁷.

There is limited connectivity for walkers between the city and its rural hinterland. Whilst routes along the Exe are actively promoted, those on to the hills to the north and west of the city are less well publicised.

The M5 corridor represents a significant barrier to pedestrian and cycle routes eastwards from the city. However, some routes across it are evident; a footpath crosses the motorway at West Clyst and to the south of Exeter and several footpaths and cycle routes give access under the motorway on the northern and southern banks of the River Exe. On the northern side of river, a footpath and cycle route pass beneath the M5 to provide links between Topsham and the Countess Wear area of Exeter. On the southern side of the river, a cycle route and three footpaths, including the Exe Valley Way provide various route options southwards towards Powderham. Other roads such as the A30 and A38 also impede movement with relatively few crossing points.

There is also a limited bridleway network. The rural landscape to the east of Exeter contains no bridleways, however, horse riders can access Stoke Hill to the north city and free riding areas are promoted at Haldon Forest Park and Woodbury Common, both a short distance outside the core study area.

Cycling is a popular recreational activity and means of transport. National and regional cycle routes are located in and around the study area. The main cycle route (National Cycle Network Route 2) runs through the city along the edge of the Exeter Riverside Valley Park southwards to Topsham and Exminster. These form part of a comprehensive cycle network that seeks to provide access throughout the city and traffic free commuter and recreational routes to the city from Exmouth and Dawlish. The Exe Estuary Trail, currently being developed by

²⁷ Devon County Council, Horse Riding in Devon. Promotional Leaflet.

Devon County Council as part of the National Cycle Route programme, will provide cycle paths on both sides of the Estuary. The Exeter to Topsham, Lympstone to Exmouth and Exeter to Exminster sections have already been completed. The Exe Explorer leaflet, produced by the Exe Estuary Management Partnership, covers all the footpath and cycle routes around the Estuary and up to Exeter, as well as public transport options.

Cycle Exeter, due to end in April 2009, is a project to encourage more cycling in the city and utilise the range of off and on road cycle routes that are within Exeter and the wider rural landscape of the core study area. Several maps and leaflets have been published to assist cyclist in the city, demarcating local routes and the location of bike hire shops and cycle parking stands. In the wider area of search, dedicated cycling routes are limited. The hills to the east and west of the city have no formal cycle routes to or through them, and no routes exist to the east of the M5 corridor. Beyond the core study area, a single regional cycle network route links Topsham to Woodbury and Aylesbeare. This route follows the lower slopes of the hills occupied by the Pebblebed Heaths and crosses the hills to the south of West Hill before running along the Otter Valley to Ottery St Mary.

3.5.2 Analysis and Opportunities

- Opportunities exist for the development of a coordinated environmentally sustainable transport network linking rural communities the city and destinations in the wider landscape. Initiatives should seek to improve access to workplaces, education, health, shopping and other facilities for existing and future residents in the core study area, encouraging healthier travel choices and minimising the effect of traffic and transport on the built and natural environment;
- Opportunities for improving, enhancing and plugging gaps within the footpath, bridleway and cycling network, to fulfil sustainable recreation movement and access objectives, through new projects and initiatives should be explored. The rural landscape around Exeter should be a priority with new routes designed to bridge the severance caused by the M5 corridor and other major roads.

Priorities might include new access routes to hills to the north and west of the city, linking rural villages and rural destinations and improving the footpath link to Topsham along the foreshore;

- Seasonal public transport provision could be explored, with new stops at rural destinations and picnic sites such as Stoke Hill, Duryard Valley Park, Ashclyst Forest, Woodbury Common/ Pebblebed Heaths. Similar seasonal provision could be provided along key rural walking or cycling routes for an integrated network, facilitating access to the wider countryside;
- Opportunities for improvements to the rural PROW network should be expanded, principally through the reconnection of obstructed and disjointed paths, restoring the public's confidence in the network. In addition, improved access for the disabled, improved site interpretation and opportunities for education, and an increase in travel choices;
- Opportunities exist for the provision of footpath and cycle links from the Cranbrook new community to Ashclyst Forest and the rural PROW network; and
- Increase the provision of bridleways in the rural landscape and explore the potential for the provision of promoted circular hacking routes and trails.

4.0 Landscape and Visual Character

4.1 Landscape Character, Sensitivity and Designations

Refer to:

- Figure 27: Landscape Character and Designations
- Figure 28: Simplified Historic Landscape Character
- Figure 29. Strategic Landscape Context

4.1.1 The Resource

The assessment of landscape character is an objective process that provides factual information about a particular locality. It does not attribute a place with a subjective account of its relative quality, sensitivity or capacity and nor does it prescribe whether particular

forms of development or landscape change are appropriate or inappropriate.

National Scale Assessment and Landscape Change

In England, a hierarchy exists from the broad scale national character assessment at the top tier, through regional and county scale assessments to those at the district scale. The National Joint Character Areas (JCAs) are subject to a programme of review; the Countryside Quality Counts (CQC) Initiative²⁸. This provides a systematic assessment of how the countryside is changing and helps us to understand where change is occurring to inform decision-making and policies for achieving sustainable development and to help enhance and maintain the character and quality of the countryside. A summary follows:

The Devon Redlands (JCA 148) is an extensive tract of landscape that extends across much of south Devon and is centred on the Exe valley. It is described as a hilly landscape with steep valleys and red soils that opens out to floodplains and salt marshes at the coast.

The CQC assessment identifies that several key characteristics in the landscape are under threat as a result of 'neglect':

- Trees and Woodland, notably small woodlands and steep valley side oak woods;
- Boundary Features, notably trees in hedgerows and along boundary features and boundary hedges and hedge banks, in particular in the urban fringe around Exeter; and
- Historic Features, notably traditional buildings in vulnerable areas such as the urban fringe and along road corridors.

Several key characteristic features are identified as being 'maintained' and as such continue to make a contribution to the intrinsic character of the area. Whilst being in a 'maintained state' the CQC assessment identifies some actions to further enhance character:

- Agricultural land is assessed as being 'maintained', notably through the maintenance of traditional

mixed farming and the management of permanent grassland to protect wildlife features;

- Semi natural habitat is also assessed as being 'maintained', notably through strengthening of heathland landscapes and the restructuring of conifer plantations and the restoration of mosaics of heath, scrub and pasture. The CQC assessment also highlights opportunities for habitat creation and public access through the re-creation of heathland habitat on areas of conifer plantation; and
- Rivers and Coastal features are also regarded as being 'maintained' although the need for continued protection of water catchments from soil erosion and diffuse pollution is highlighted.

Settlement and development is identified as currently 'diverging' from the intrinsic character of the area. The rate of change is highlighted as being moderately high with evidence of the expansion of urban and urban fringe areas into the rural landscapes surrounding Exeter. The assessment also identifies evidence of scattered development in the open countryside, particularly south of Exeter. Particular pressure is identified from new roads, holiday-park, retirement and commuter settlement around the coast adjacent to the main routes into Exeter, with the historic character of villages and small towns being identified as of particular sensitivity to change.

County Scale Landscape Character Assessment

Devon County Council has completed a county-wide assessment of landscape character which is in the process of being refined at the local planning authority scale, with the ultimate aim of bringing each of the more detailed studies together into a more detailed county typology.

In advance of this work, a simplified character assessment has been prepared for use in this project. A brief summary of the Landscape Character Types in and around the core study area have been identified^{29,30}. Wooded Hilltops and Ridges are limited in extent within the core study area to the hills and valleys to the north and west of Exeter. The landscape is characterised by visually distinct hills and ridges that rise out of the

²⁸ <http://www.cqc.org.uk>

²⁹ East Devon AONB, Blackdown Hills AONB and East Devon District Council Landscape Management Guidelines (Draft) 2007

³⁰ Teignbridge District Landscape Assessment (excluding Dartmoor National Park) 2001

surrounding lowlands. Land use is typically a mix of woodlands interspersed amongst irregular fields of pasture, occasionally with large arable open fields on the summit. Fields are generally small to medium scale and are delineated by earth banks and hedges, tree rows and frequent hedgerow trees. Significant areas of ancient woodland are characteristic, which, along with spring-line mires and unimproved pasture, provide great species diversity. Settlement is limited, and roads are narrow winding lanes. This along with a limited rights of way network imparts a remote, unspoilt character.

Lower Rolling Farmed and Settled Slopes are characteristic of much of the core study area, occupying a transitional zone between the flat river valleys and lowland plains and neighbouring hills and uplands. However, only limited areas are evident, as significant areas have been built on through the expansion of Exeter. Loamy brown soils are characteristic, with pastoral land uses predominant. Tree rows along many streams and ditches, along with the many hedgerow oaks and small copses contribute to its wooded appearance. This is a small to medium scale landscape, with variable field sizes in an irregular pattern, delineated by wide, low hedges and distinctive tall earth banks. The road pattern is winding with occasional sunken lanes in deep cuttings through sandstone banks. Urban fringe land uses, such as parks, sports pitches and garden centres are characteristic beyond the main built up part of the City notably on areas of open land west of the M5 corridor.

Lowland Plains occupy low lying areas to the east of the Clyst valley within the core study area and are distinguished by the absence of wetland habitat or river valley character. They are generally flat and in mixed cultivation, with a variety of field sizes and patterning. Arable cultivation is frequently locally dominant. Wide hedges and hedge banks are distinctive, often with prominent hedgerow oaks. Tall sandstone banks to either side of highways are a local feature on the settlement edges. Settlement patterns in the wider landscape are variable and often dense. However, there is only limited settlement evident in the landscape of the core study area, where there is often a strong presence of Victorian architecture. Commercial development is often also evident, notably along key transportation routes and at key junctions. Elsewhere the highway network consists generally of narrow winding lanes, with wider, straighter modern roads in some parts.

Unsettled Farmed Valley Floors landscapes follow the Exe and Clyst and their tributaries and are characterised by flat, open landform with vegetation typically located at the edge of the floodplain. Characteristic features include shallow streams and major river channels bordered by mixed farmland and some small areas of woodland. Winding lanes along the edge of the floodplain are edged with bushy hedgerows with bridges or fords located at crossing points. Some areas are accessible only along the rights of way network and as such many areas retain a tranquil character, albeit influenced by settlement and roads at their edge.

Pebblebed Heaths are situated to the east of the core study area, but are described here as they form a distinctive area of landscape character in close proximity. The heaths form a high, level to gently undulating plateau to the north of Budleigh Salterton, extending in a northwards orientation as far as Whimble. The poor soils support extensive areas of open, dry lowland heath with gorse and silver birch interspersed with scattered groupings of pine, fir or beech and conifer plantations. The area is used for forestry, nature conservation and recreation with some military use. Much of the area retains a remote character, with a sparse road network and limited settlement. The Heaths mark the south western extent of the East Devon AONB.

Upper Undulating Farmed and Wooded Slopes landscapes are limited in extent in the core study area to the hills to the north of Exeter, but are evident further to the north and east between Sidmouth Wellington and Chard. Key characteristics include undulating sloping land with deciduous woodlands and copses on upper valley slopes with mixed farming on lower slopes arranged in small to medium size irregular fields. Wide earth banks and species-rich hedgerows are also notable along with regular hedgerow trees, predominantly oak and ash, imparting an intimate and well-treed character. Upper stream valleys are often 'V' shaped without a distinct valley floor although patches of wetland are evident. Settlement is characteristically isolated farms, occasional large houses and small villages linked by narrow winding lanes. Little 20th century development is evident. A sense of remoteness is characteristic strengthened by the absence of settlement and the screening effects of vegetation limiting views out of the area.

Historic Settlement, derived from the Devon County Council Historic Landscape Characterisation (HLC) is characterised by core area of a historic settlements, based on the late 19th century 1st edition (25inch) Ordnance Survey maps. Within the core study area, the centre of Exeter and its Victorian and Edwardian suburbs, as well as older villages that fell within the expanding city are identified. In the wider rural landscape the core of several small villages and towns have historic cores.

Modern settlement, again derived from the Devon County HLC, is an area of modern settlement that was developed during the 20th Century. It is extensive around the core of historic Exeter and throughout the rural landscape around historic village cores.

Landscape Designations

The core study area and immediate surroundings contain significant areas of land that are designated on account of their distinctive landscape character or function. Of particular significance is the designation of Areas of Great Landscape Value (AGLV) to the west and north of Exeter that are largely coincident with areas of wooded hills and ridges and rural farmland extending southwards to the coast.

Areas of undeveloped coast and estuary in Teignbridge are also designated, as a Coastal Preservation Area. This designation lies immediately to the south of the core study area, extending southwards along the Exe Estuary to the coast.

Within Exeter City Council's administrative area, several areas of undeveloped land in the urban fringe landscape have been designated based on the need to protect it from development because of its intrinsic merit and its contribution to the distinctive landscape setting of the city. These are particularly extensive across the hills to the north of the city, and in an arc to the east and north of Topsham.

In the East Devon administrative area tracts of landscape have also been designated as 'Green Wedge'. These areas are designated to ensure that new development is avoided that would add to existing sporadic or isolated development, damage the individual identity of a settlement or lead to the coalescence of settlements. In the wider landscape, the western extent of the East

Devon AONB extends in a north westerly direction from the Pebble Bed Heaths to West Hill. The designated area is characterised by intimate wooded combs, areas of heathland, fertile river valleys and dramatic cliffs and hills. It includes the East Devon section of the Jurassic Coast which is England's first natural World Heritage Site.

Approximately 7km to the west of the core study area is the eastern edge of the Dartmoor National Park. Dartmoor is a largely cultural landscape shaped by management of its distinctive and often harsh environment over 8,000 years. It has a rich diversity of habitats that has developed in response to traditional forms of land management and is a popular tourist destination.

Landscape Sensitivity and Capacity

In 2006 Exeter City Council commissioned an assessment of the capacity of greenfield areas around the fringes of the city in order to help identify areas to accommodate development and areas that should be protected from development in response to the findings of the South West Regional Spatial Strategy³¹.

In summary, the study found that there is only limited landscape capacity for additional housing and employment in and around Exeter. It highlighted the need to protect the sensitive landscapes of the valley bottoms and the hillsides to the north and west and to maintain green fingers of open space penetrating into the city. It also notes that many areas which form an important visual setting also act as recreational and wildlife corridors and reservoirs. Other areas of constraint include the landscapes around Topsham.

The study also notes that in areas of higher capacity for development there is a need for careful design and consideration of how individual sites can contribute to the open space and wildlife network of the city and its surroundings. It proposes that this can be achieved through design or development briefs that include landscape, nature conservation and urban design/settlement edge objectives. Clearly the GI Study is a key mechanism for providing the vision and spatial framework for future development proposals in rural and urban areas.

³¹ Diacono Associates and White Consultants, Exeter Fringes Landscape Sensitivity and Capacity Study. 2007

4.1.2 Analysis and Opportunities

- There is a great diversity of landscape and historic character across the core study area. GI initiatives and developments will provide the opportunity to strengthen and enhance landscape and townscape character through coordinating, guiding and managing change and development;
- Proposals should consider local character and context at all times, including the historic landscape context, in order to contribute to positive landscape change, and to enable opportunities for landscape enhancement and creation to be considered as an integral part of scheme development;
- Defra's Environmental Stewardship scheme encourages a positive response to landscape character and has released broad guidance to farmers and landowners on the management options and potential enhancement works. The guidance relates to the Joint Character Area within which farmholdings are located. There are opportunities for farmers to enter into Environmental Stewardship schemes and contribute to the wider network of GI and also respond to the principles of working in accordance with and enhancing the inherent landscape character at the local scale;
- Changing land uses in urban and rural contexts can threaten to erode or homogenise landscape character at both the micro and macro scale. The growth of Exeter, together with associated infrastructure and developments in the wider landscape such as the Cranbrook New Community will offer significant opportunities for the strengthening of local landscape and townscape character and also to create new character if appropriate;
- At the micro scale, the local effects of land management change and detailing of features such as access route improvements and footpaths would need to be sensitively handled;
- Use development and change to respond to CQC and local initiatives to enhance strength of local landscape character; and

- Emerging and recently completed local landscape character assessments, such as the East Devon and Blackdown Hills AONB, East Devon District Council's 'Landscape Management Guidelines' and Teignbridge District Council's 'Landscape Character Assessment' should guide all landscape restoration and enhancement.

4.2 Visual and Perceptual Character

Refer to:

- Figure 27: Landscape Character and Designations
- Figure 30: Visual and Perceptual Character

4.2.1 The Resource

The core study area has a rich and varied character, influencing how the rural landscape and urban and urban fringe areas are perceived. Of particular significance is the nature of landform, and in particular the hills that define the setting of Exeter, the valley that runs through it, the expansive estuary, and rolling rural landscapes east of the M5.

Landform, Principal Viewpoints and Urban Fringe

The most dramatic landform features are the steep sided hills to the north of Exeter, where they flank the confluence of the Exe and Clyst and to the west of the city where they form a wooded ridge running along the western side of the estuary.

To the west of the Exe the hills and ridges are steeply incised, with several streams draining the uplands creating a folded landscape of valley slopes, often cloaked in woodlands. By contrast, Stoke Hill and Beacon Hill to the east form a broad convex hillside. Here valleys and slopes tend to be gentler and broader which has been more conducive to accommodating the growth of Exeter, and as such the lower sections of the south facing slopes are cloaked in the suburbs of Pinhoe and Stoke Hill. The valleys have been left open and represent important 'green fingers' of land penetrating the city.

These hills provide dramatic and varying viewing opportunities, both across the city and to its wider rural setting. For example elevated areas on the southern flanks of Stoke Hill and Beacon Hill provide wide panoramas of the city. The southern backdrop is formed by distant hills, notably the wooded slopes that fringe the western banks of the Exe Estuary. By contrast views northwards and westwards are of a deeply rural landscape of interlocking hills, punctuated by deciduous copses and coniferous plantations on steep slopes. The hills to the west of Exeter, that define the western edge of the core study area, again provide dramatic views across the city although they are generally inaccessible except along narrow lanes. The hills to the south of the study area are also significant. Whilst lower than hills to the west and north of the city panoramic views to Exeter can again be obtained across the floodplains and parks bordering the Exe with the city occupying the middle distance. Again, distant hills provide a backdrop to the urban form. Views southwards are also possible, with the M5 viaduct and estuary dominating the scene.

Locations within the estuary and lower Exe valley provide a contrasting perception of the city and its landscape setting. Within the valley, views are generally more limited in extent, with landform, vegetation and structures flanking the floodplain screening and filtering middle and long distance views.

To the south of Cowley, the valley floodplain is narrow and flanked by recent suburban expansion on the lower slopes of the valley, giving way to productive farmland rising to Stoke Hill. To the west, the scene is of a rural landscape of pasture, interspersed with arable land and woodlands on steep slopes. The valley floor is characterised by drained pasture with riverside alders and willows. The valley also carries the main road and rail routes into the city from the north, albeit contained in a narrow corridor on the eastern side of the valley. Further to the south, the character of the valley becomes increasingly influenced by the city. Pastureland gives way to sports pitches and mown amenity grassland, allotments, railway sidings and riverside residential and employment areas.

Below the historic Quay, the valley floodplain becomes wider and accommodates a variety of urban land uses including a range of industrial and commercial developments and a series of visually prominent pylons. However, despite the close proximity of these urban land uses, a semi-rural character generally prevails. To the south of the M5 flyover wide panoramas across the estuarine mudflats are possible and views to the city are generally obscured. Particularly fine views are possible from Riversmeet House at Topsham at the confluence of the Exe and Clyst. Long views southwards are possible along the Exe whilst views towards the east are limited by the wooded ridge.

To the east of the city, there is a complex and varying visual character ranging from typical urban fringe to deeply rural. Many views are dominated by direct or filtered views of the city edge or typical urban fringe land uses such as parks, recreation areas, garden centres and trading estates. In many locations a permeable urban edge is experienced, with a subtle transition from urban to rural evident. By contrast, between Junctions 30 and 29 of the M5, the motorway creates an abrupt urban rural interface.

Whilst the visual influence of the city diminishes with distance eastwards from the urban fringe, it is notable that in otherwise rural areas, the proximity of Exeter can have an urbanising influence. This is most notable along the main arterial routes; the A376, A3052 and A30, and in particular in close proximity to Exeter Airport, and business park. The series of high voltage pylons running through the Clyst valley also exert an urbanising influence.

Focal Points and Landmarks

There are a number of prominent and distinctive landmarks within the core study area. Major landform features, notably Stoke Hill, Beacon Hill and the Exe Estuary are particularly important and make a significant contribution to the setting of the city.

Groups of hill top pine trees and telecommunications masts such as those close to the Church Patch Plantation on Old Matford Lane to the south of the city, act as locally prominent features, the latter presenting

an urbanising influence, often on otherwise rural hills. Within the city the cathedral and several church towers punctuate the skyline and provide key focal features and orientation points in panoramas from elevated viewpoints. Beyond the core study area the Belvederes at Haldon and Powderham are visible and form prominent features set amongst woodland to the west and southwest of the city.

In the core study area to the east of the city, the undulating rural landscape contains few memorable or prominent landmarks. Bishops Court is however a notable feature. Set amongst its parkland, the house is a fine example of Neo Gothic architecture, although its wider setting is influenced by views to industrial estates on the eastern fringe of the city. Whilst not visually prominent, the village of Sowton, and the collection of Georgian and Dutch inspired town houses in Topsham form memorable architectural features in the wider landscape to the east and south of the city.

4.2.2 Analysis and Opportunities

- Topography, hydrology and settlement patterns combine with a distinctive distribution of woodland cover to create a diverse range of views within the core study area. GI initiatives and developments will provide an opportunity to enhance the existing variety of views within and across the city as well as strengthening the visual relationship between Exeter and the landscape surrounding the city;
- Proposals and future landscape management initiatives should consider the function of wooded copses and groups of pine trees on hill tops as distinctive local landmarks and the role of woodland vegetation in the wider landscape in containing and channelling views;
- Future proposals and GI initiatives can play a role in filtering views and fragmenting the existing abrupt rural/urban interface between the eastern edge of Exeter and the wider landscape of the countryside beyond; and
- There may be opportunities for strategic vantage points within and around the city to be formalised as official ‘viewpoints’ as part of a series of visitor attractions. These could be used to emphasise

the visual relationships between topographic, hydrological and historic features in the wider landscape. Development of vantage points would need to be considered in conjunction with improved recreational access and movement strategies in the core study area.

4.3 Landscape Change and Development

Refer to:

- Figure 31: Major New Development East of Exeter

The core study area is characterised by both urban and rural areas and as such various pressures for change can be anticipated over the coming decades.

4.3.1 New Built Development

Opportunities for substantial growth and expansion within the Exeter city boundary are constrained by various factors. As a result, whilst significant new development will be located within the city, important elements of housing and employment growth will be accommodated to the east of the city in East Devon District and to the south west of the city in Teignbridge District. This has been supported at the national level by the allocation of funding to support delivery through the Growth Point Initiative.

The Draft Regional Spatial Strategy for the South West, published in 2006, identifies the amount of dwellings and areas of employment land that will be required in the plan period, however, these targets have since been updated by the Draft Revised Regional Spatial Strategy for the South West Incorporating the Secretary of State's Proposed Changes (2008) which increases both the housing and employment provision.

The Secretary of State's recommendations on housing growth are of particular significance. Within Exeter 15,000 dwellings are proposed during the plan period (2006 and 2026). This requirement will be met by locating 12,000 new homes in the existing urban area, locating 2,500 new homes immediately east of Exeter (known as Area of Search 4A), and locating 500 new homes immediately south west of Exeter.

The 500 new homes south west of Exeter will form part of larger development that also includes 2,000 within Teignbridge District. This is known as Area of Search 4C. Within East Devon District, the most significant new development will be the Cranbrook New Community, which includes 7,500 dwellings. Further proposals include 4,000 dwellings east and north east of Exeter (known as Area of Search 4B).

Other new development is to be located in the area of land to the east of Junction 29 in the vicinity of Exeter Airport. Here, in a broad belt of land defined to the north by the mainline railway and south by the busy A30, proposals for six major new developments are emerging:

- University of Exeter Science Park;
- Intermodal freight terminal;
- Clyst Honiton Bypass;
- Skypark;
- Exeter Airport New Terminal; and
- Cranbrook New Community.

Another proposal on the fringe of Exeter is the Weatherworld project. The scheme is to construct a new visitor centre at Westpoint that has a primary focus on explaining the world's weather patterns and increase public awareness about climate change.

Considering the evidence above it is evident that Exeter and the urban fringe landscape will see significant change in the coming years, and that the area to the east of Junction 29 will be a particularly important focus for development.

4.3.2 Analysis and Opportunities

- The growth identified in the Regional Spatial Strategy presents opportunities for the establishment of sustainable communities in rural and urban fringe locations, as well as bringing forward ideas and potential sources of funding for enhancement of townscape and rural character and delivery of GI projects and initiatives, either directly through the development scheme or through off site contributions; and

- The Cranbrook New Community and other emerging initiatives present a significant opportunity to plan, design and deliver a major development that makes a positive contribution to the locality and realises several GI Projects and aspirations.

4.3.3 Land Use Change

The rural landscape displays a range of agricultural management regimes. Typically improved and semi improved pasture is located on the steeper sloping land, punctuated by broadleaved copses and coniferous plantations. Elsewhere, arable farming is evident, along with relatively new introductions such as maize to provide winter fodder as well as cover for game birds. The UK farming industry is subject to numerous pressures and agents of change, both at the global and local scale. It is not clear how land holders and farmers in the core study area will respond to increasing demands for energy crops, or the increased popularity of local food initiatives. The range of crops and amount of productive agricultural land may also change as a consequence of climate change, either through changes in temperature, rainfall or ground water. Again, these impacts are difficult to appreciate at this time. However, it is likely that the range of influences will alter the character of the rural landscape in the coming years.

The proximity of a large urban market would indicate that the rural hinterland of Exeter may, at least in part be subject to changes influenced by the immediate demands of the urban populous for food and energy.

Many farms and land holdings have entered the new Environmental Stewardship Scheme³², which provides funding to farmers and other land managers who deliver environmental management on their land. The majority of holdings in the scheme within the core study area are in the Entry Level Stewardship (ELS) scheme, which encourages simple and effective land management. However, significant areas in the vicinity of Clyst Honiton and Topsham have entered the Organic Entry Level Stewardship (OELS) scheme, and as discussed in relation to Walking, Cycling and Horseriding, several land owners in and around the core study area have entered into the Higher Level Stewardship (HLS) scheme.

³² www.magic.gov.uk

4.3.4 Analysis and Opportunities

- GI may present an appropriate mechanism for liaison with farmers and land owners to enhance rural landscape character through particular farm management or activities, improve access and enhance biodiversity, as well as meet other objectives such as local food or energy crop production, perhaps for local community Combined Heat and Power (CHP) schemes; and
- There is potential to coordinate the activities of farmers to contribute to Biodiversity Network and Sustainable Movement Network as well as develop new educational or recreational activities.



Legend



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EXETER AREA AND EAST DEVON NEW GROWTH POINT GREEN INFRASTRUCTURE STUDY Figure 9: Core Study Area

DATE	March 2009	DRAWN	RP
SCALE	1:50,000 at A3	CHECKED	IH
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Refer to Figure 21: Open Space Deficiency Analysis and Figure 22: Open Space Deficiency Analysis Incorporating the Cranbrook New Community

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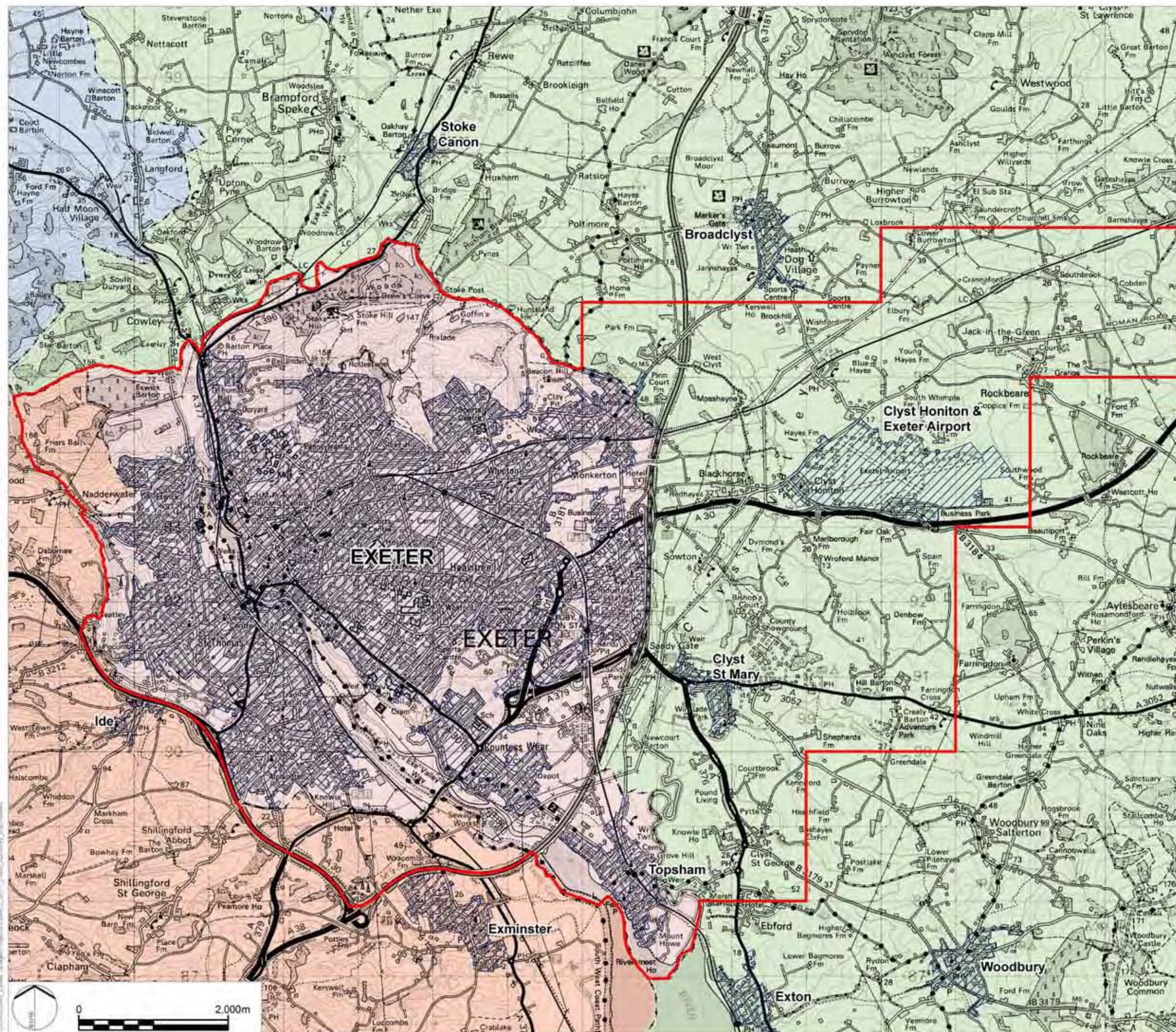
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EXETER AREA AND EAST DEVON NEW GROWTH POINT GREEN INFRASTRUCTURE STUDY

Figure 10: Wider Area of Search

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SCALE	1:125,000 at A3	CHECKED	IH
STATUS	FINAL	APPROVED	FO
DWG.NO.	2594LE/0010		



Legend

- Core Study Area
- Principal Settlements and Exeter Airport (named)
- Exeter City Council
- East Devon District Council
- Teignbridge District Council
- Mid Devon District Council

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EXETER AREA AND EAST DEVON NEW GROWTH POINT GREEN INFRASTRUCTURE STUDY Figure 11: Local Authority Boundaries and Principal Settlements

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DWG.NO.	2594LE/0011		



Legend



Core Study Area



Aerial Photograph

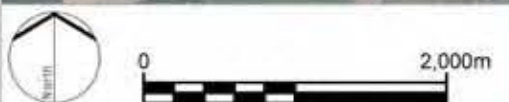
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**EXETER AREA AND EAST DEVON NEW
GROWTH POINT GREEN
INFRASTRUCTURE STUDY**
Figure 12: Aerial Photograph

DATE	March 2009	DRAWN	RP
SCALE	1:50,000 at A3	CHECKED	IH
STATUS	FINAL	APPROVED	FO
DWG.NO.	2594LE/0012		



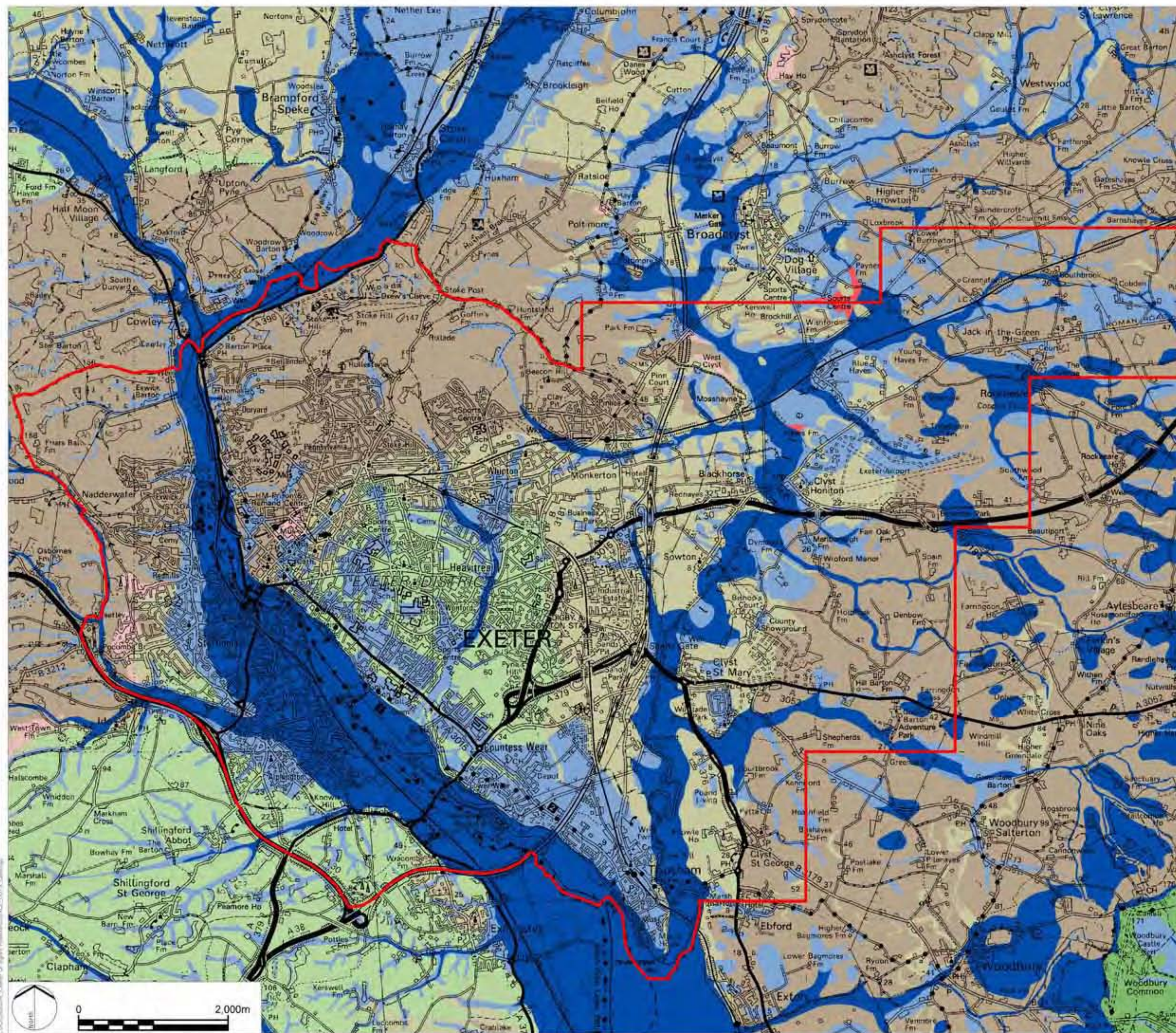
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Source: Ordnance Survey, Project Authority Group & Collaborative Engineering



Legend

- Core Study Area
- Drift Geology**
 - Clay and Silt
 - Sand and Gravel
 - Peat
- Solid Geology**
 - Sandstones
 - Mudstones
 - Breccia
 - Basalt
 - Conglomerate

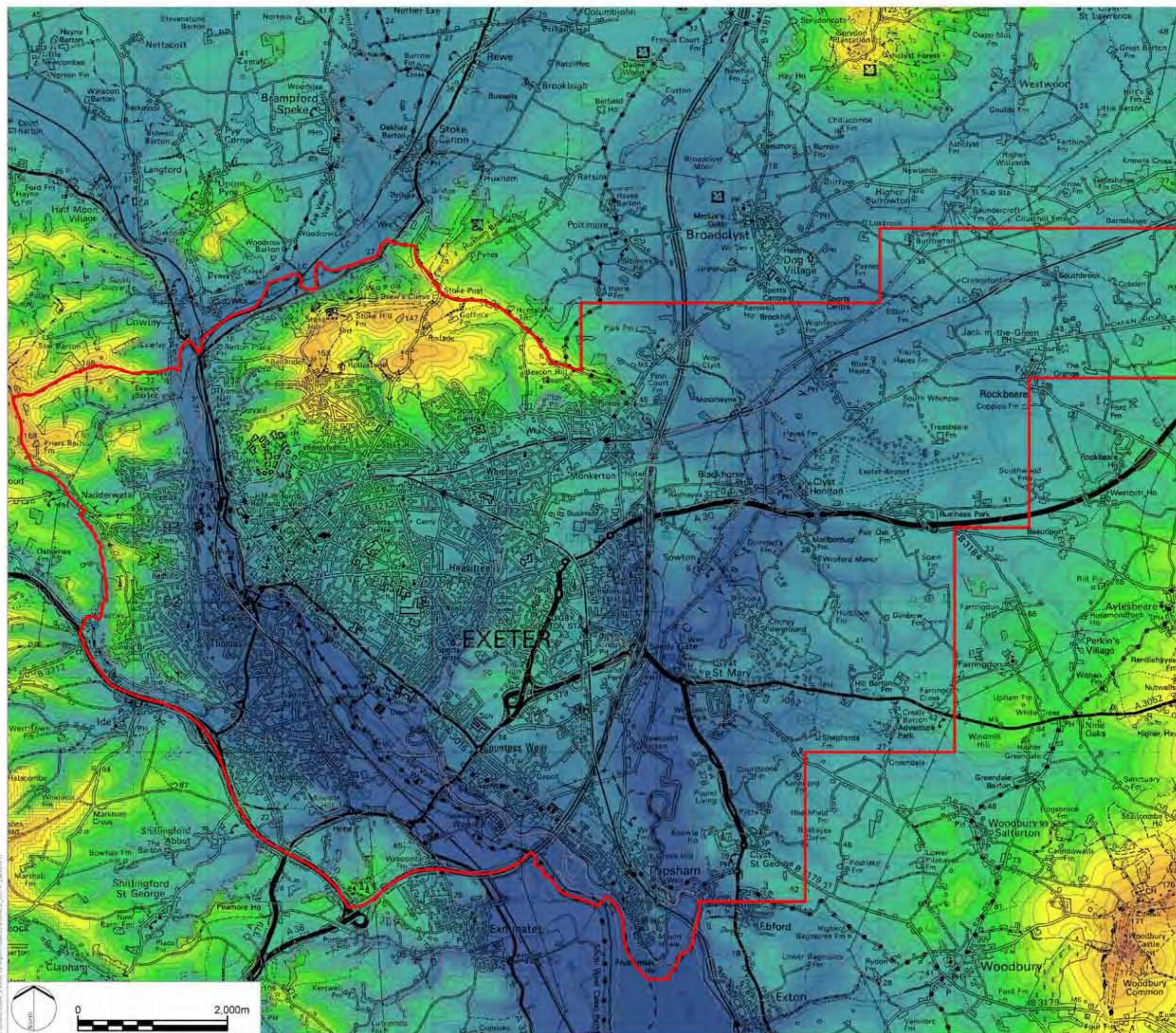
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EXETER AREA AND EAST DEVON NEW GROWTH POINT GREEN INFRASTRUCTURE STUDY Figure 13: Simplified Geology

DATE	March 2009	DRAWN	RP
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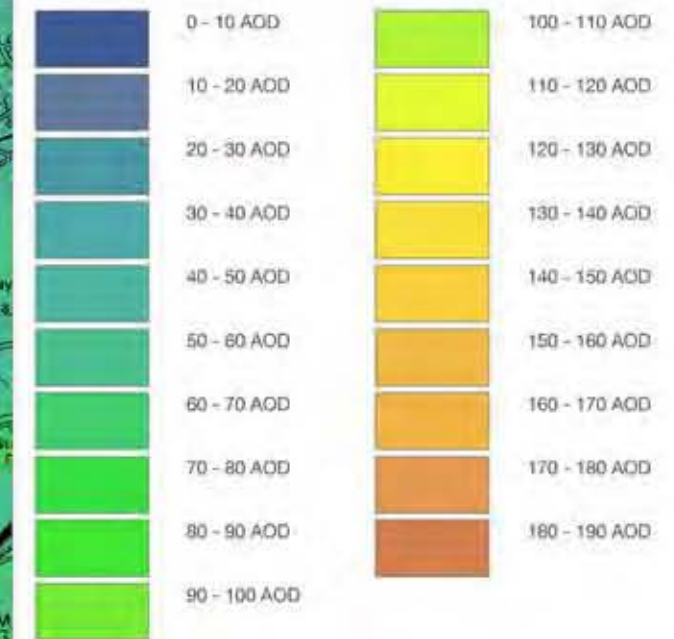
Legend



Core Study Area

10m Contour

Landform



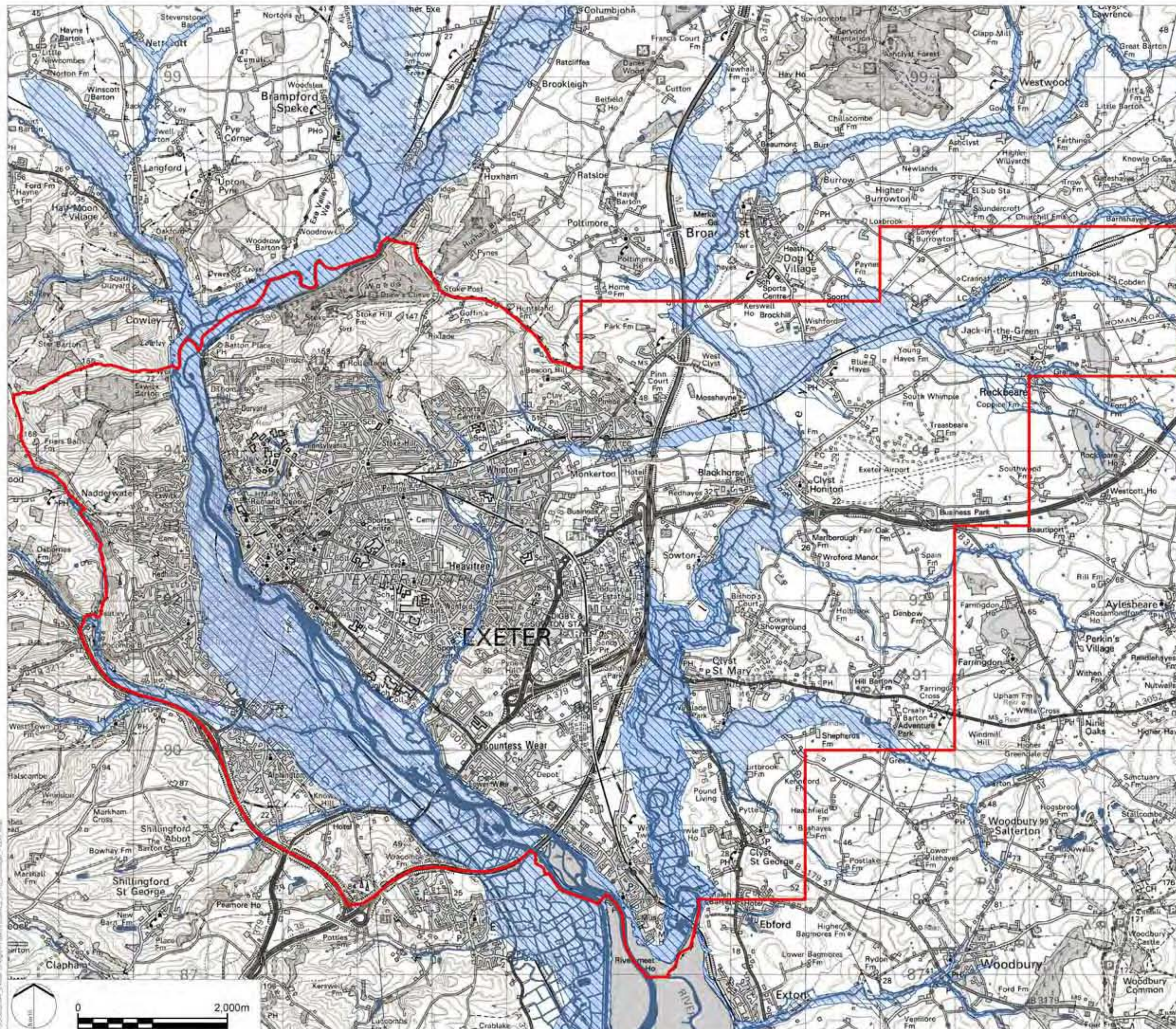
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EXETER AREA AND EAST DEVON NEW GROWTH POINT GREEN INFRASTRUCTURE STUDY Figure 14: Landform

DATE	March 2009	DRAWN	RP
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STATUS	FINAL	APPROVED	FO
DWG.NO.	2594LE/0014		



Legend

- Core Study Area
- River/ Open Water
- Flood Zone 3 (high risk with annual probability of flooding of 1% or greater)
- Flood Zone 2 (low to medium risk with annual probability of flooding of 0.1-1%)
- Contours at 10m intervals

Strategic Flood Map (Draft)
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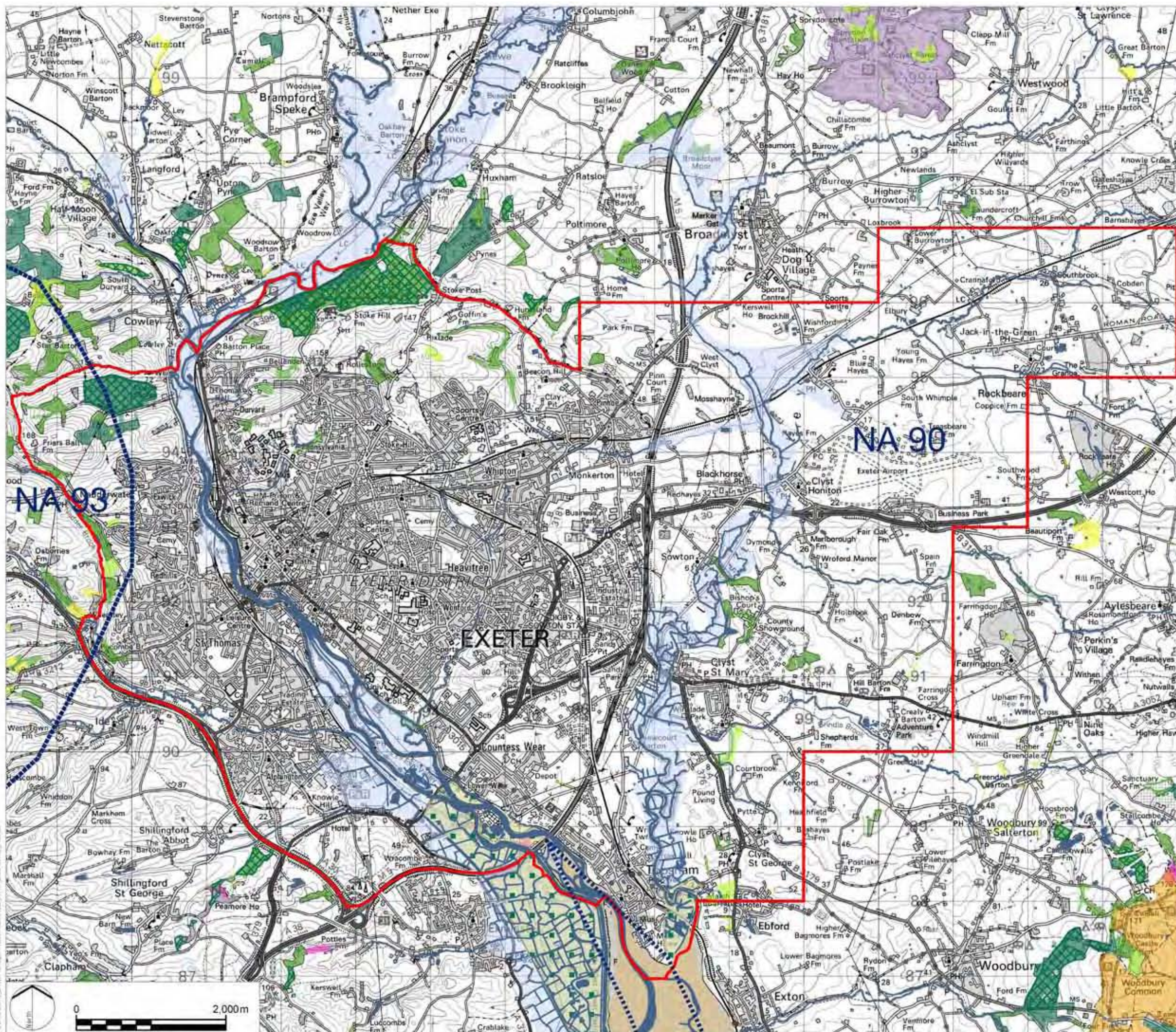
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EXETER AREA AND EAST DEVON NEW GROWTH POINT GREEN INFRASTRUCTURE STUDY Figure 15: Strategic Flood Map

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STATUS	FINAL	APPROVED	FO
DWG.NO.	2594LE/0015		



Legend

- Core Study Area
- Natural Area Boundary
NA 90 - Devon Redlands
NA 93 - The Culm
- Woodland Habitat
 - Broadleaved Woodland*
 - Coniferous Woodland*
 - Mixed Woodland*
 - Shrub*
 - Young Trees*
 - Ancient Woodland
- Terrestrial Non-Woodland Habitat
 - Lowland Meadow**
 - Lowland Heathland**
- Wetland/Open Water Habitat
 - River/ Open Water*
 - Fen**
 - Mudflat**
 - Floodplain Grazing Marsh**
 - Reedbed**

* Forestry Commission National Inventory of Woodland Types (NIWT)
** Natural England Data

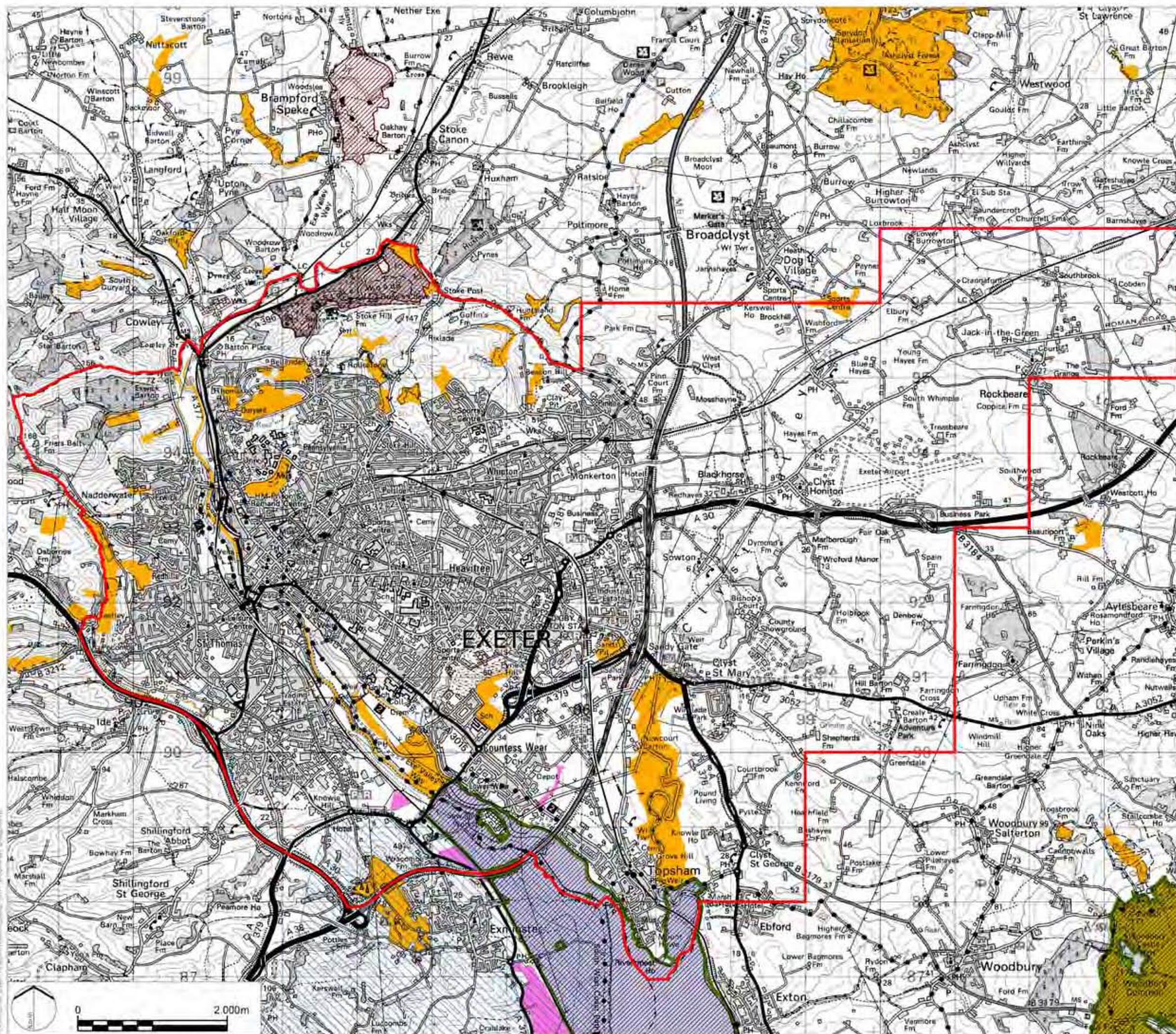
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EXETER AREA AND EAST DEVON NEW GROWTH POINT GREEN INFRASTRUCTURE STUDY
Figure 16: Biodiversity - Principal Habitat Types

DATE	March 2009	DRAWN	RP
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STATUS	FINAL	APPROVED	FO
DWG. NO.	2594LE/0016		



Legend

- Core Study Area
- International/European Designations
 - RAMSAR Site
 - Special Areas of Conservation (SAC)
 - Special Protection Area (SPA)
- National Designations
 - Site of Special Scientific Interest (SSSI)
 - Regionally Important Geological and Geomorphological Sites (RIGGS)
- Local Designations
 - County Wildlife Site (CWS)
 - County Wildlife Site Pending (CWSP)
 - Biodiversity Enhancement Area Teignbridge District only

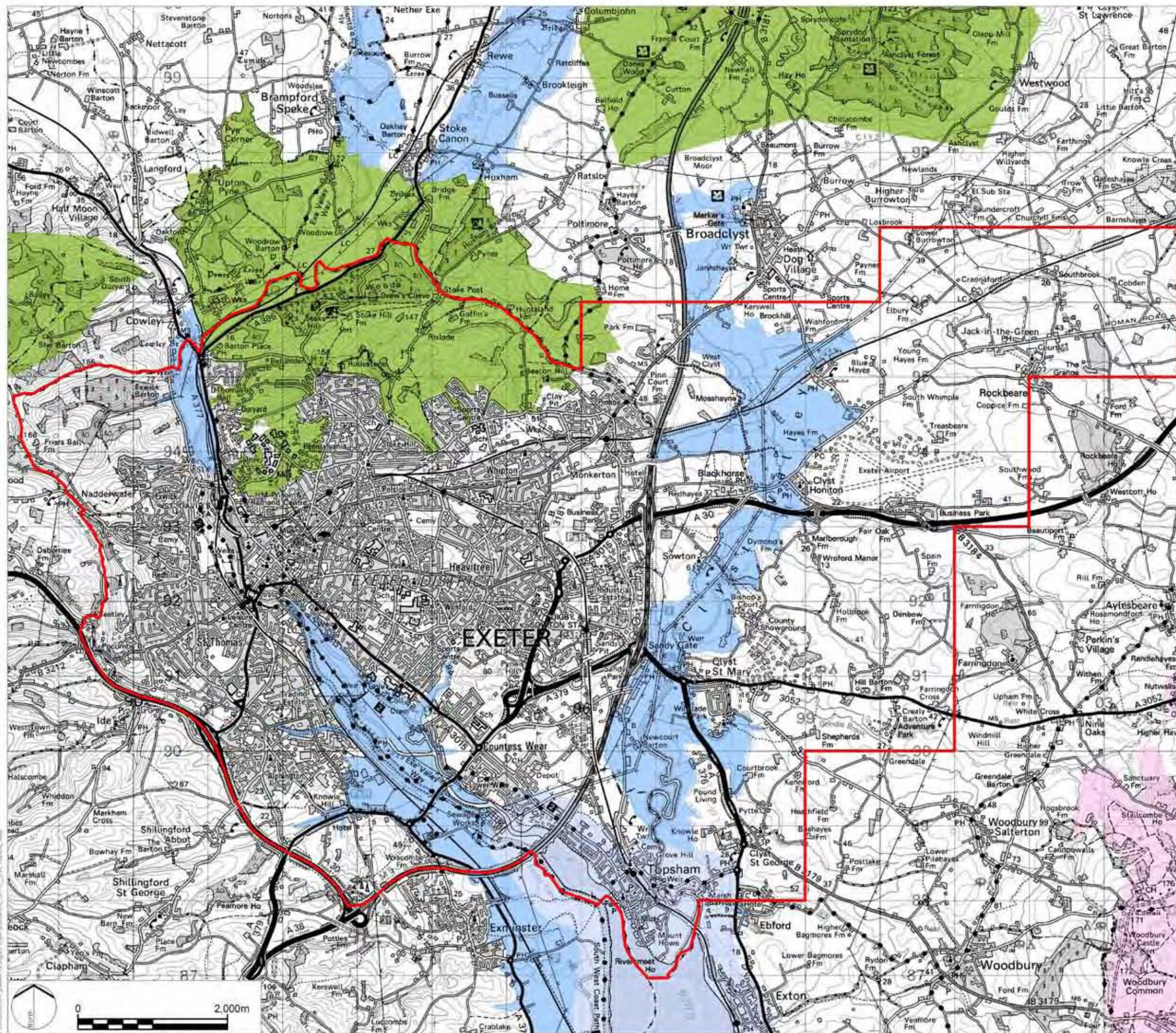
Note: Data correct as of Autumn 2007.
Data illustrated is for illustrative purposes.
Reference should be made to the relevant Local Planning Authority or Natural England for up-to-date information.

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EXETER AREA AND EAST DEVON NEW GROWTH POINT GREEN INFRASTRUCTURE STUDY Figure 17: Biodiversity - Designations

DATE	March 2009	DRAWN	RP
SCALE	1:50,000 at A3	CHECKED	IH
STATUS	FINAL	APPROVED	FO
DWG. NO.	2594LE/0017		



Legend

- Core Study Area
- South West Region Nature-Map: Strategic Nature Areas
 - Woodland
 - Coastal and Floodplain Grazing Marsh
 - Coastal Habitats
 - Lowland Heath

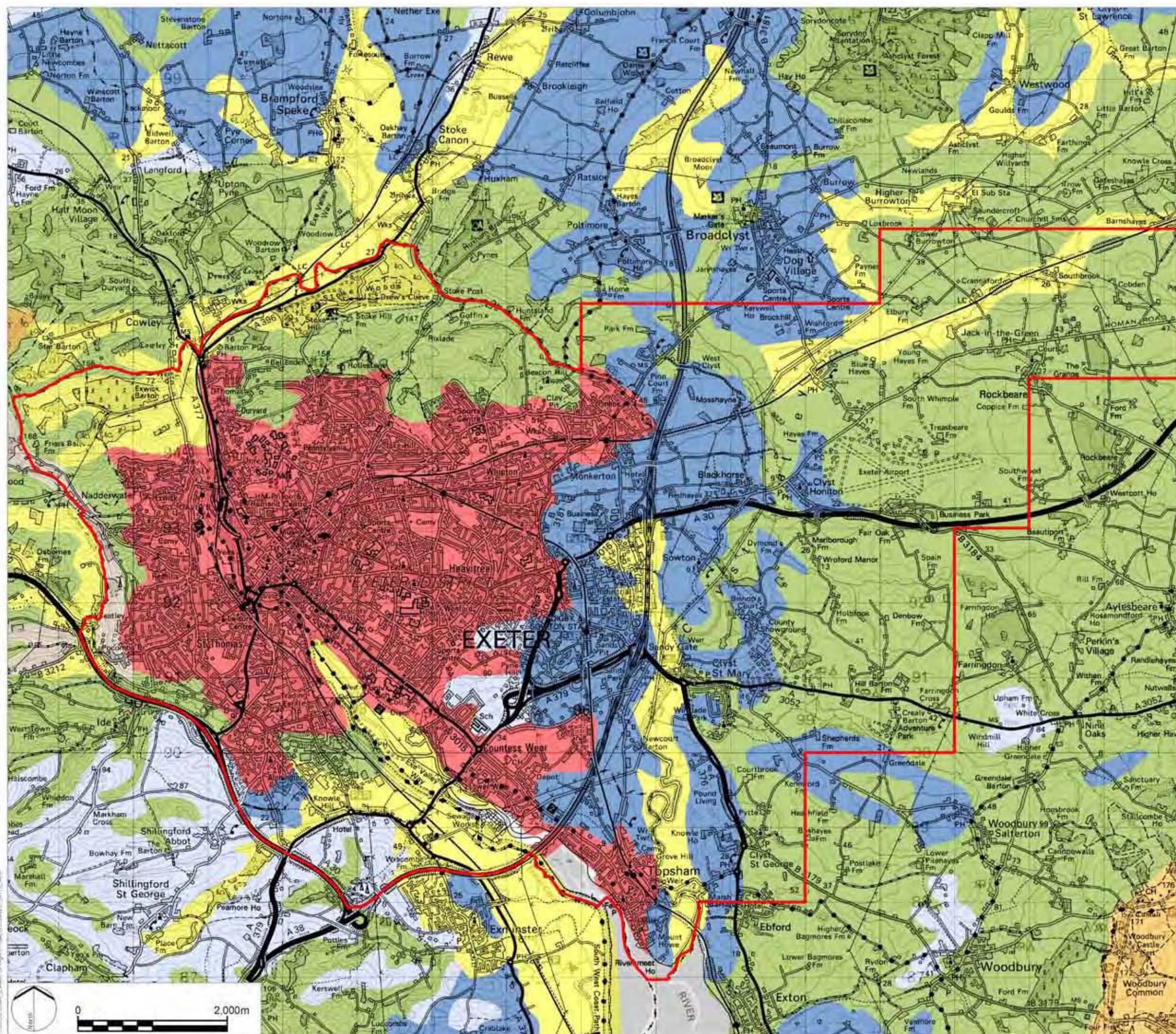
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EXETER AREA AND EAST DEVON NEW GROWTH POINT GREEN INFRASTRUCTURE STUDY Figure 18: South West Region Nature-Map

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STATUS	FINAL	APPROVED	FO
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Legend

- Core Study Area
- Grade 1
- Grade 2
- Grade 3
- Grade 4
- Grade 5
- Non Agricultural
- Urban

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WOODLAND

EXETER AREA AND EAST DEVON NEW GROWTH POINT GREEN INFRASTRUCTURE STUDY Figure 19: Agricultural Land Classification

DATE	March 2009	DRAWN	RP
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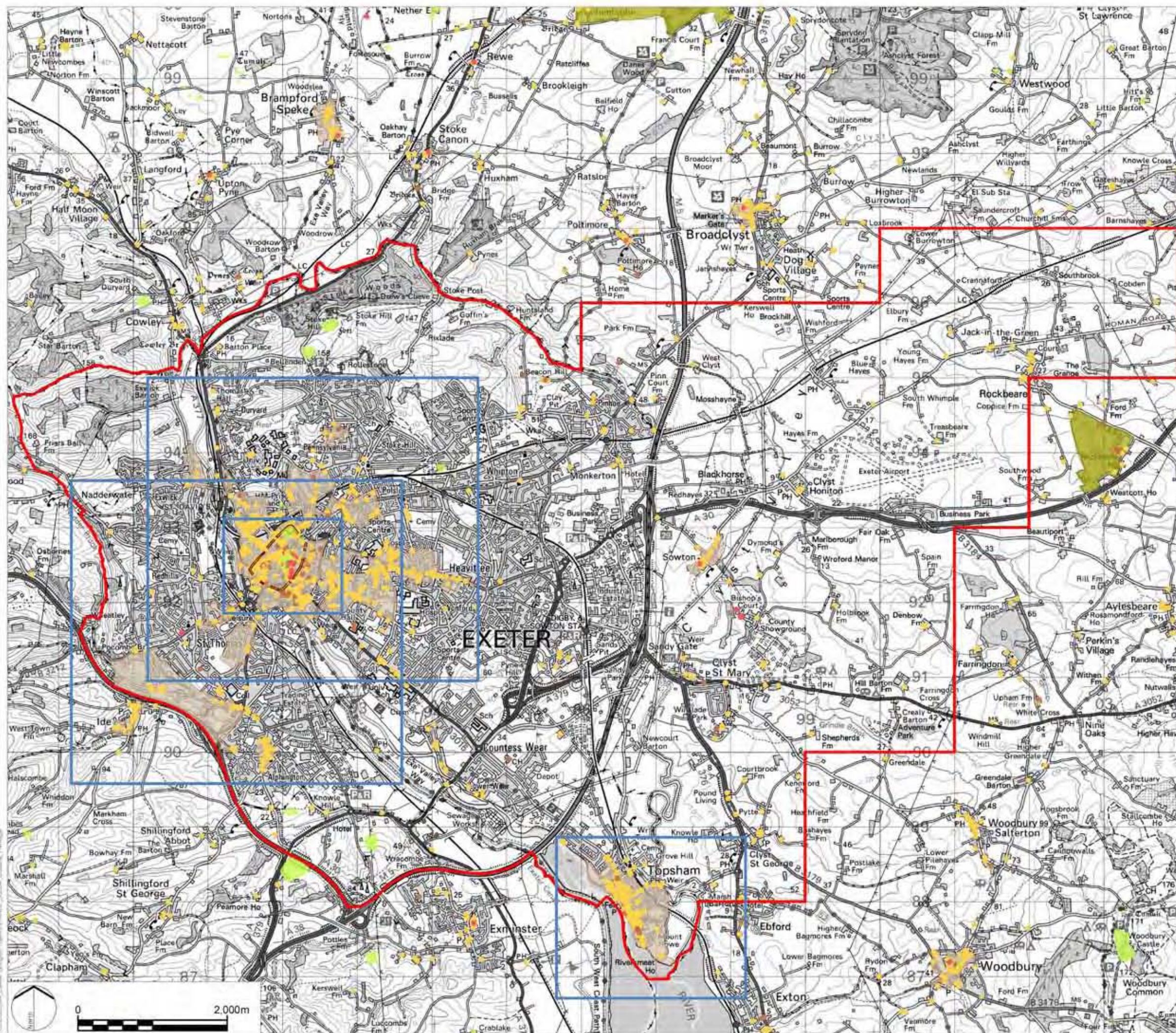
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Exeter Urban Regeneration Project Advisory Group & Natural England



Legend

- Core Study Area
- Scheduled Monument
- Listed Building (Grade Indicated)
- Registered Historic Park/ Garden
- Conservation Area
- City Wall (Exeter)
- Approximate areas covered in greater detail on Figure 20B

Note: Data correct as of Autumn 2007.
Data illustrated is not definitive and reference should be made to the relevant Local Planning Authority or English Heritage for up-to-date information.

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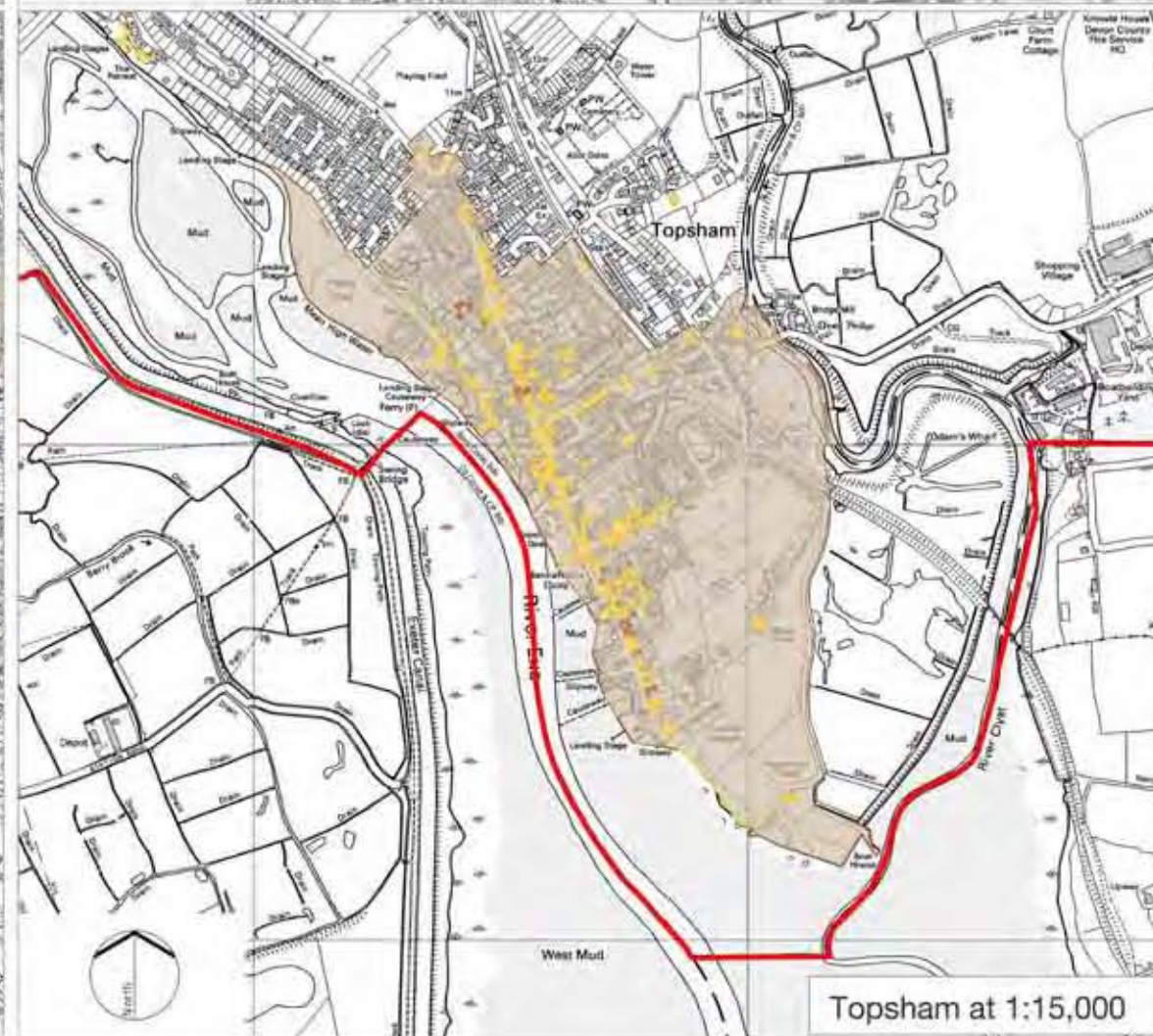
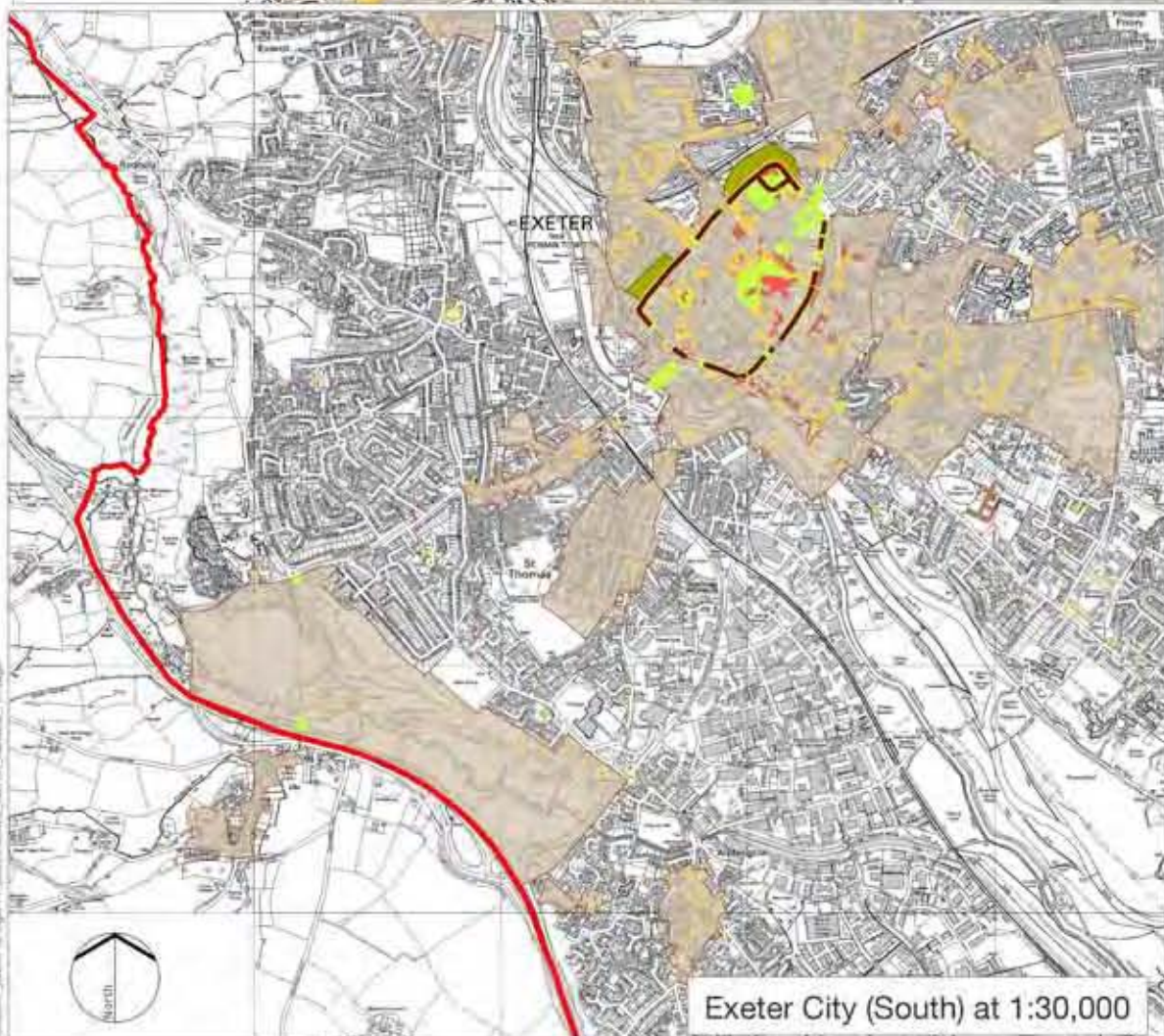
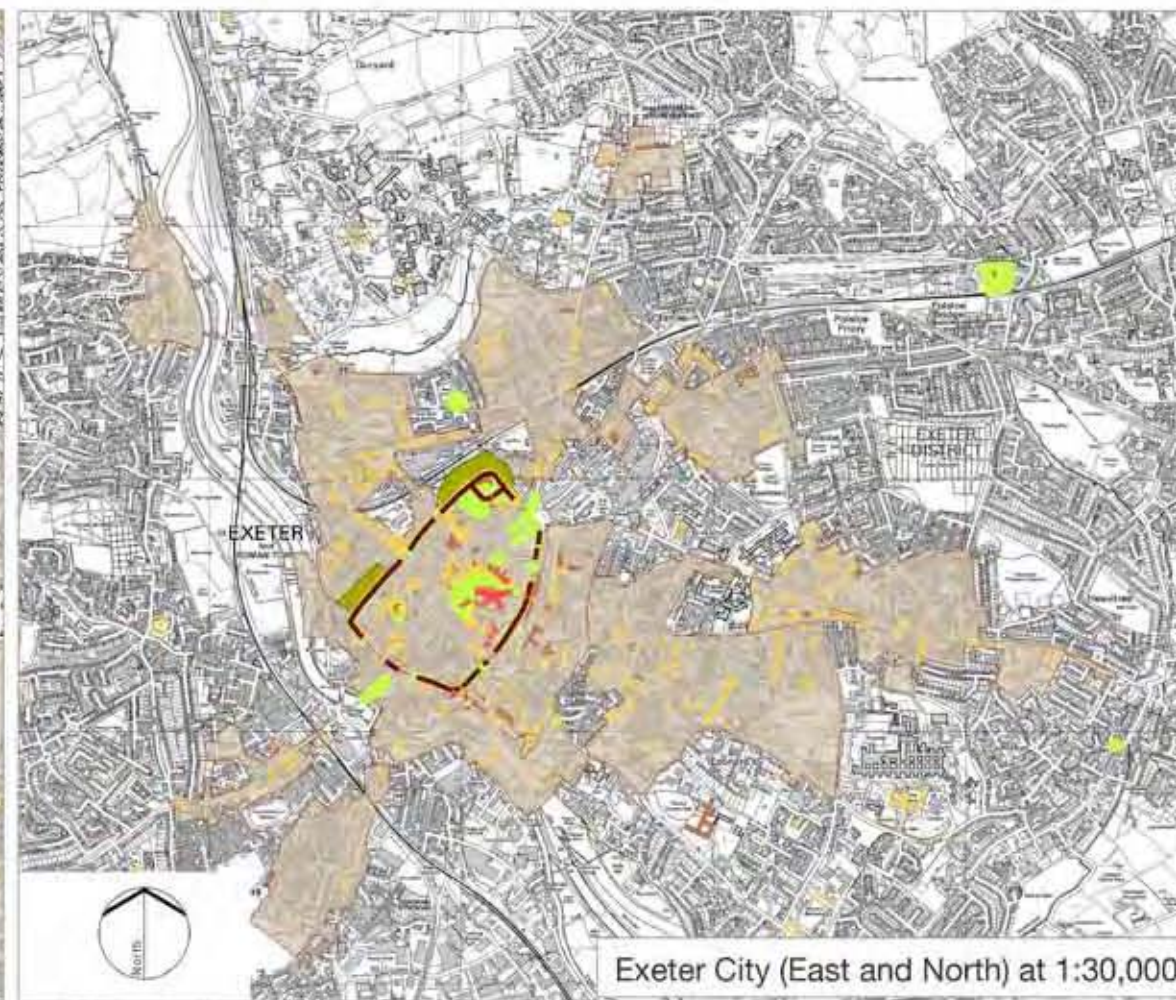
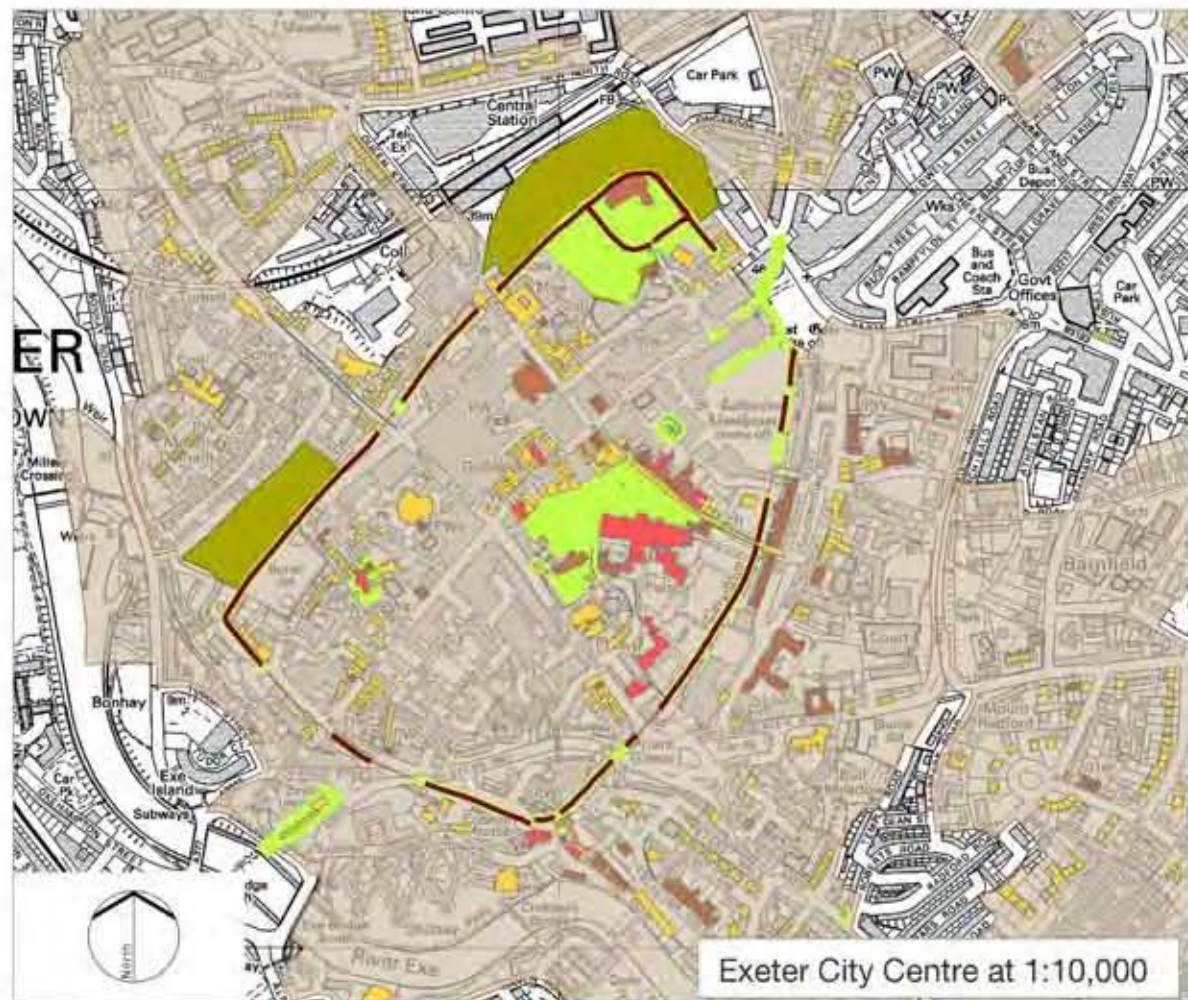
EXETER AREA AND EAST DEVON NEW GROWTH POINT GREEN INFRASTRUCTURE STUDY Figure 20A: Cultural Heritage (Core Study Area)

DATE	March 2009	DRAWN	RP
SCALE	1:50,000 at A3	CHECKED	IH
STATUS	FINAL	APPROVED	FO
DWG.NO.	2594LE/0020A		

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Source: Ordnance Survey, Historic England, English Heritage



Legend

- Core Study Area
- Scheduled Monument
- Listed Building (Grade Indicated)
- Registered Historic Park/ Garden
- Conservation Area
- City Wall (Exeter)

Note: Data correct as of Autumn 2007.
Data illustrated is not definitive and reference should be made to the relevant Local Planning Authority or English Heritage for up-to-date information.

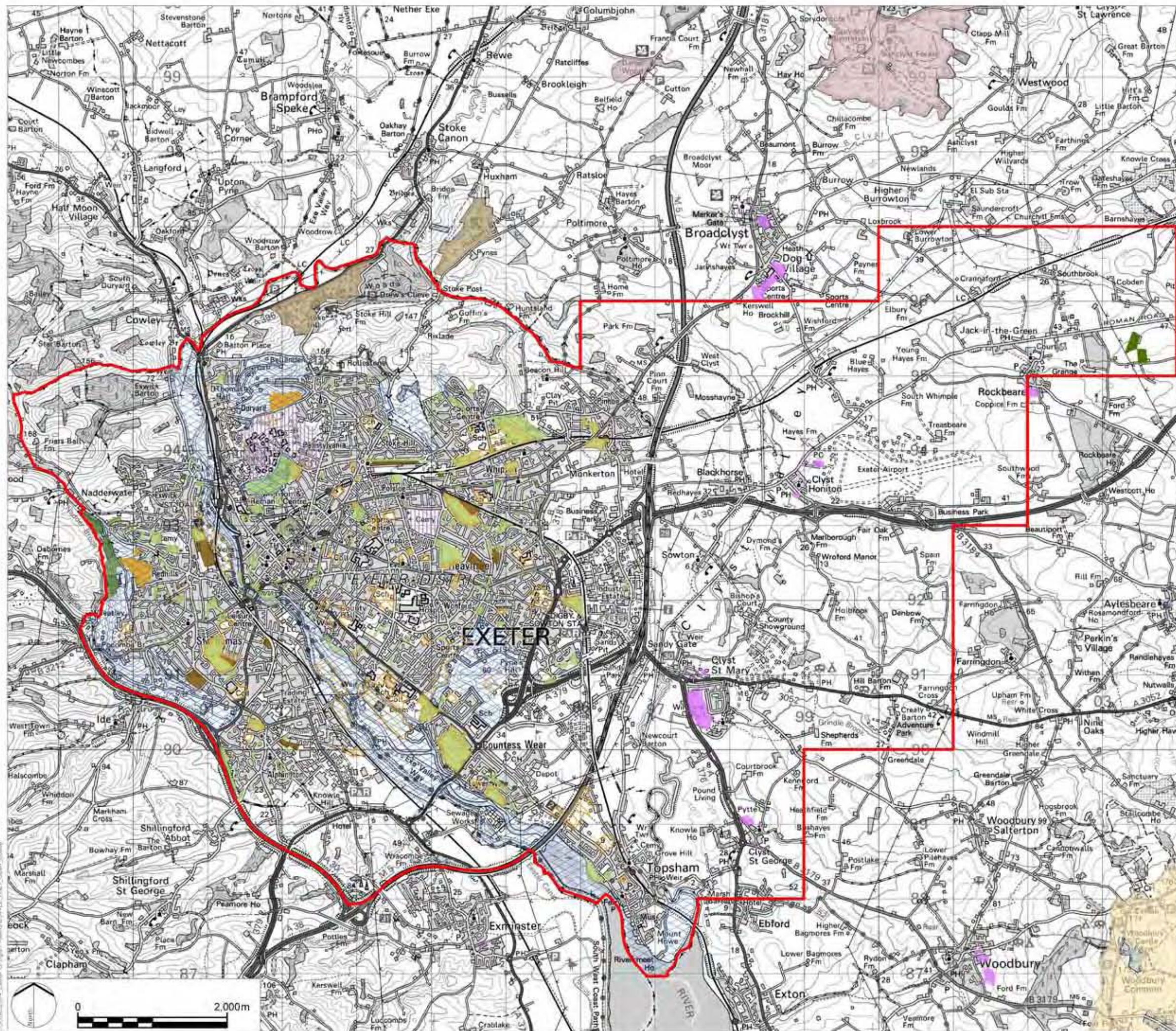
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EXETER AREA AND EAST DEVON NEW GROWTH POINT GREEN INFRASTRUCTURE STUDY Figure 20B: Cultural Heritage (Local historic centres)

DATE	March 2009	DRAWN	RP
SCALE	Varies	CHECKED	IH
STATUS	FINAL	APPROVED	FO
DWG.NO.	2594LE/0020B		



Legend

- Core Study Area
- Historic Park and Garden (Exeter local register)
- Playing Field (Exeter)
- Valley Park (Exeter)
- Allotments (Exeter)
- Open Space (Exeter)
- Recreation Areas/Open Space and Allotments (East Devon and Teignbridge)
- Local Nature Reserve
- Woodland Grant Scheme/ Woodland Trust Sites (with access or recreation function)
- GROW Act Section 16 Dedicated Land*
- CROW Act Designated Access Land**
- 24 hr Accessible National Trust Land

Note: For the purpose of this assessment, open space is identified as areas of accessible green space including parks, access land, allotments and woodlands with an access and/or recreation function.

*CROW Section 16 Dedicated Land - This dataset contains polygons showing areas of land that have been dedicated as Access Land under the CROW Act 2000 by landowners.

**CROW Designated Access Land-This dataset has been created to show areas of 'access land' designated under the Countryside and Rights of Way Act 2000. It shows both Open Country and Registered Common Land combined into a single layer with areas of Section 28 restrictions, military byelaw, race courses and aerodromes removed.

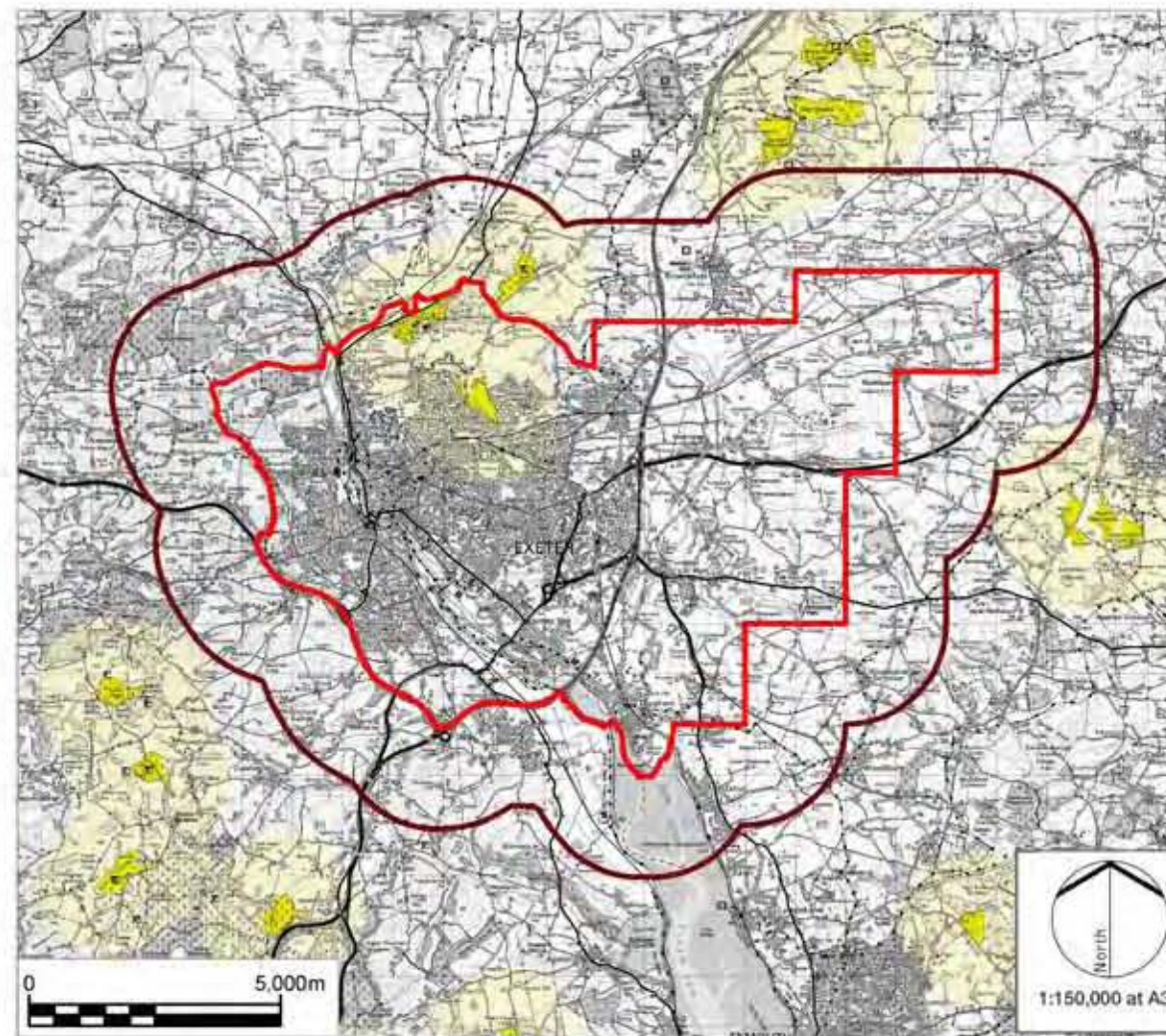
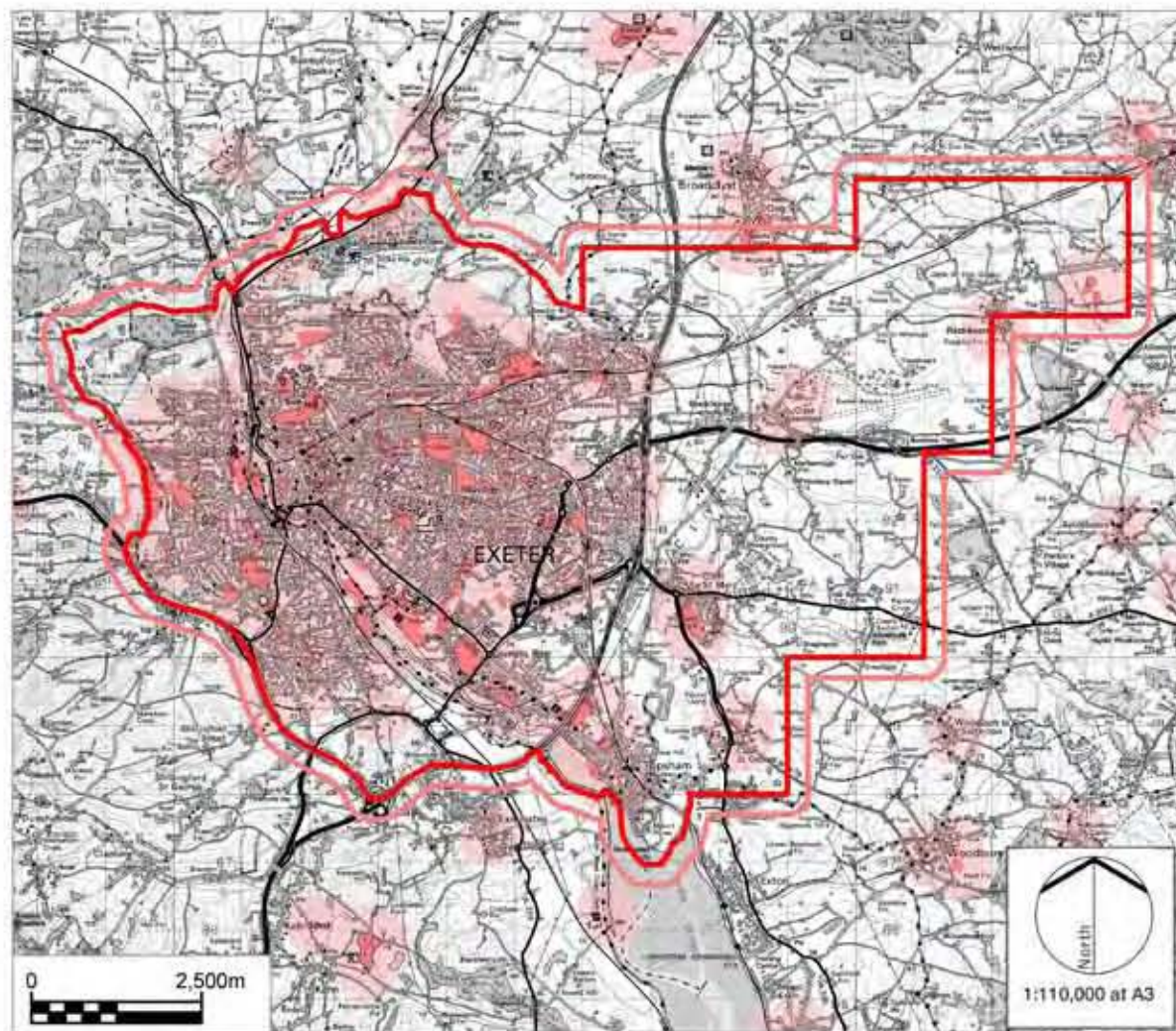
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EXETER AREA AND EAST DEVON NEW GROWTH POINT GREEN INFRASTRUCTURE STUDY Figure 21: Open Space

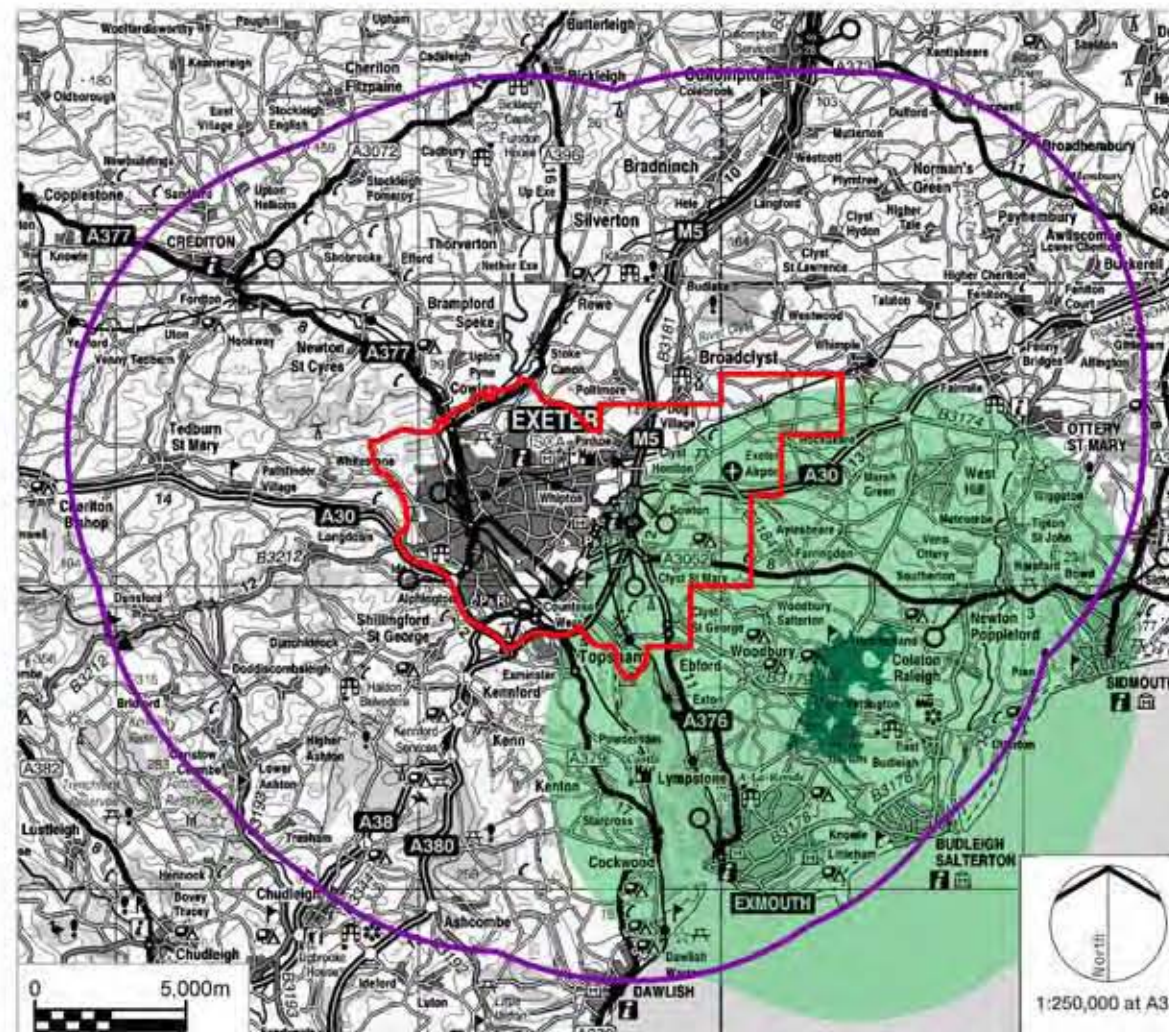
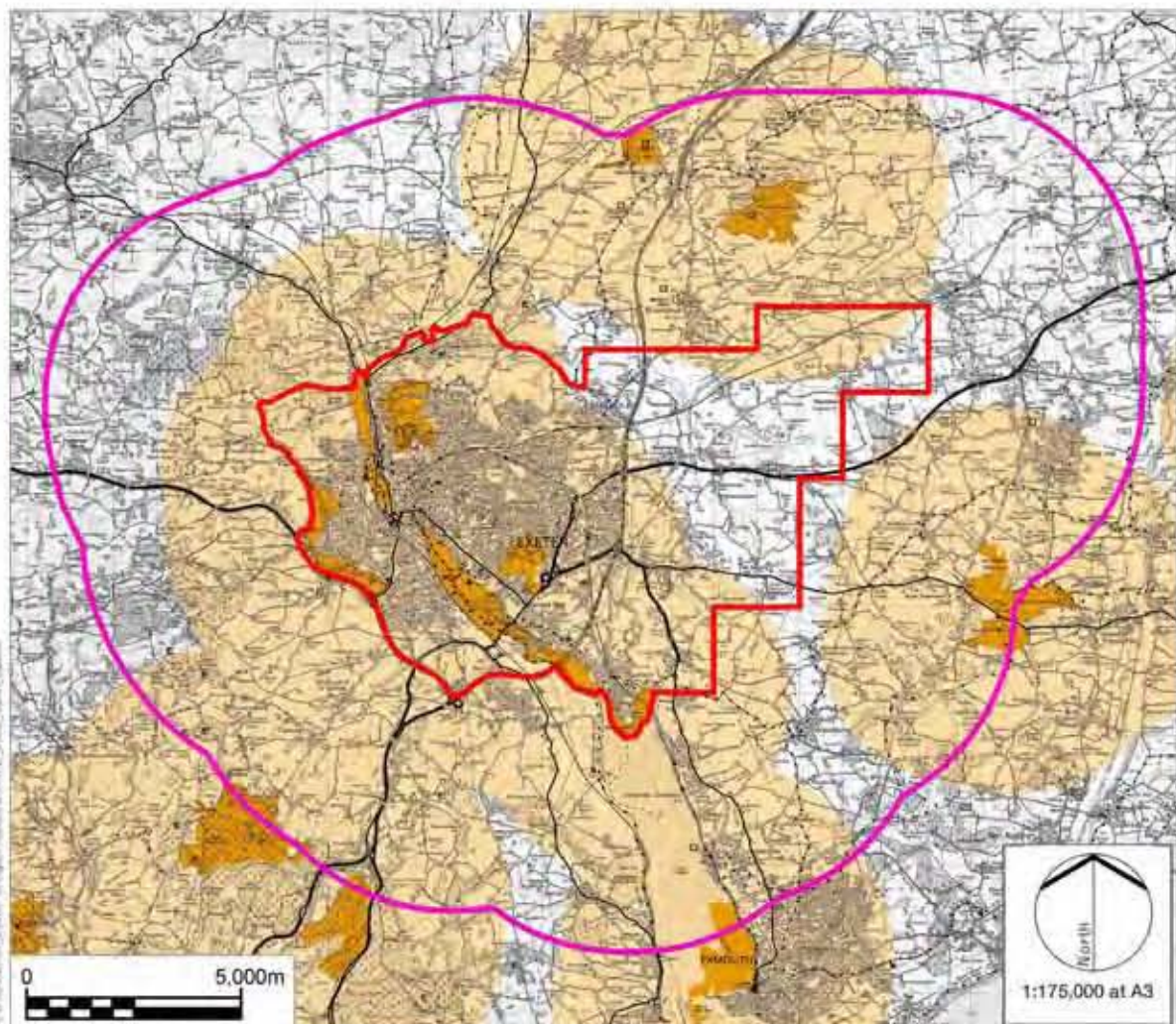
DATE	March 2009	DRAWN	RP
SCALE	1:50,000 at A3	CHECKED	IH
STATUS	FINAL	APPROVED	FO
DWG.NO	2594LE/0021		



Legend

- Core Study Area
- 300m Buffer of Core Study Area
- 2km Buffer of Core Study Area
- 5km Buffer of Core Study Area
- 10km Buffer of Core Study Area
- Pocket Park or Local Park (Open Space of less than 20 ha)
- 400m Buffer of Open Space of less than 20 ha
- District Park (Open Space between 20 ha - 60 ha)
- 1.2km Buffer of Open Space of between 20 ha - 60 ha
- Metropolitan Park (Open Space between 60 ha - 400 ha)
- 3.2km Buffer of Open Space of between 60 ha - 400 ha
- Regional Park (Open Space Over 400 ha)
- 8km Buffer of Open Space over 400 ha

Note: For the purpose of this assessment, open space is identified as areas of accessible green space including parks, access land, allotments and woodlands with an access and/or recreation function. Catchment Analysis follows guidance set out in the Mayor of London Guide to Preparing Open Space Strategies (June 2003). Areas identified as deficient in each category should be regarded as indicative only. Catchment Analysis has not factored in issues such as severance and inaccessibility.



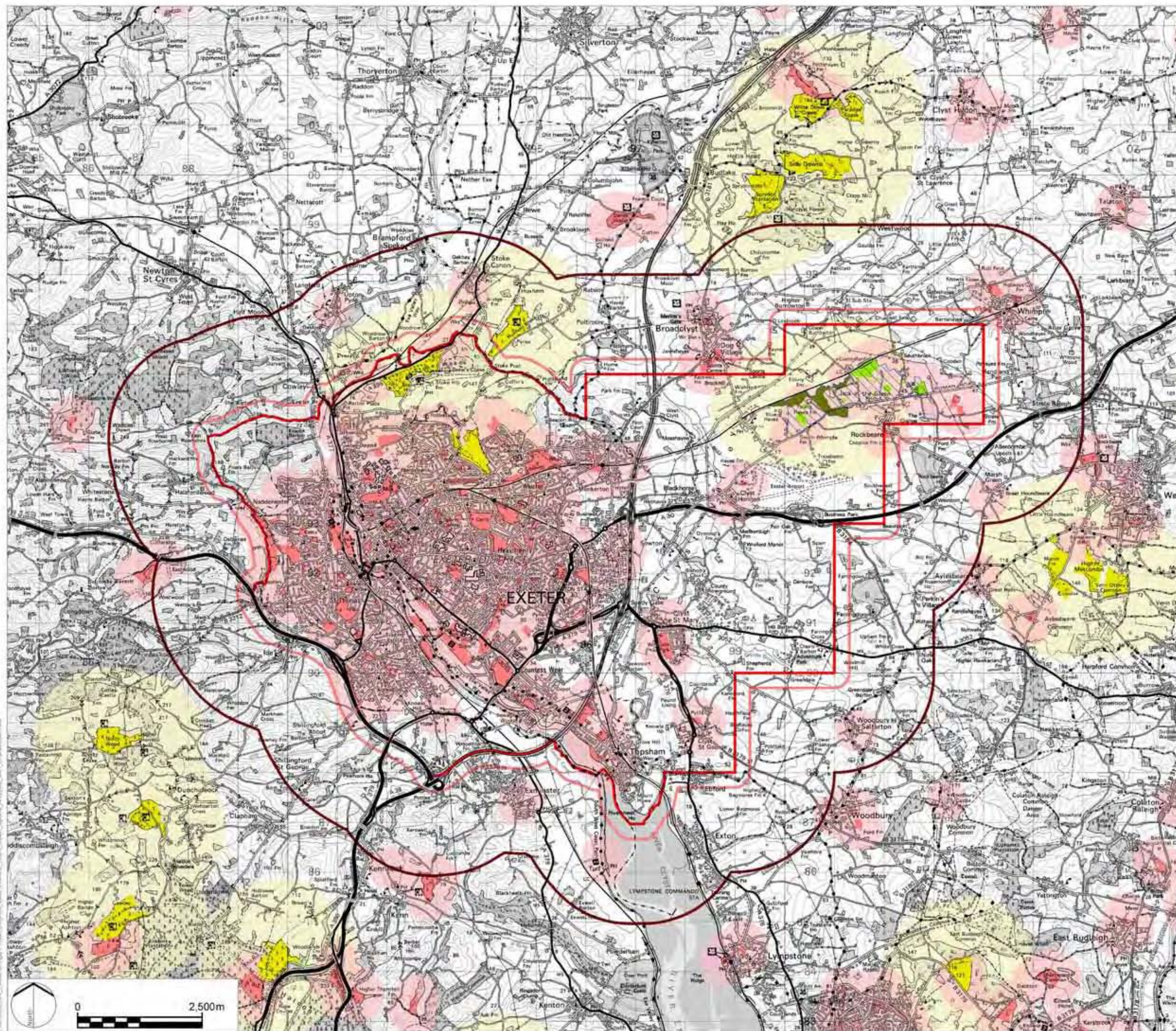
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EXETER AREA AND EAST DEVON NEW GROWTH POINT GREEN INFRASTRUCTURE STUDY Figure 22: Open Space Deficiency Analysis

DATE	March 2009	DRAWN	RP
SCALE	Varies. Refer to individual maps	CHECKED	IH
STATUS	FINAL	APPROVED	FO
DWG. NO.	2594LE/0022		



Legend

- Core Study Area
- Cranbrook New Community
- Cranbrook New Community Site Area*
- Proposed Country Park (32ha)*
- Proposed Open Space* (Informal Open Space, Outdoor Sports and School Fields all under 20ha in extent)
- Deficiency Analysis**
- 300m Buffer of Core Study Area
- 2km Buffer of Core Study Area
- Pocket Park or Local Park (Open Space of less than 20 ha)
- 400m Buffer of Open Space of less than 20 ha
- District Park (Open Space between 20 ha - 60 ha)
- 1.2km Buffer of Open Space of between 20 ha - 60 ha

Note: For the purpose of this assessment, open space is identified as areas of accessible green space including parks, access land, allotments and woodlands with an access and/or recreation function.

Catchment Analysis follows guidance set out in the Mayor of London Guide to Preparing Open Space Strategies (June 2003). Areas identified as deficient in each category should be regarded as indicative only. Catchment Analysis has not factored in issues such as severance and inaccessibility.

*Cranbrook New Community open space and site boundary digitised from East Devon New Community Sport and Recreation Provision Drawing (David Lock Associates, November 2006) and Draft Principles - Country Park Drawing 1679/305 A (Cooper Partnership June 2006). Existing Strategic Landscape not included.

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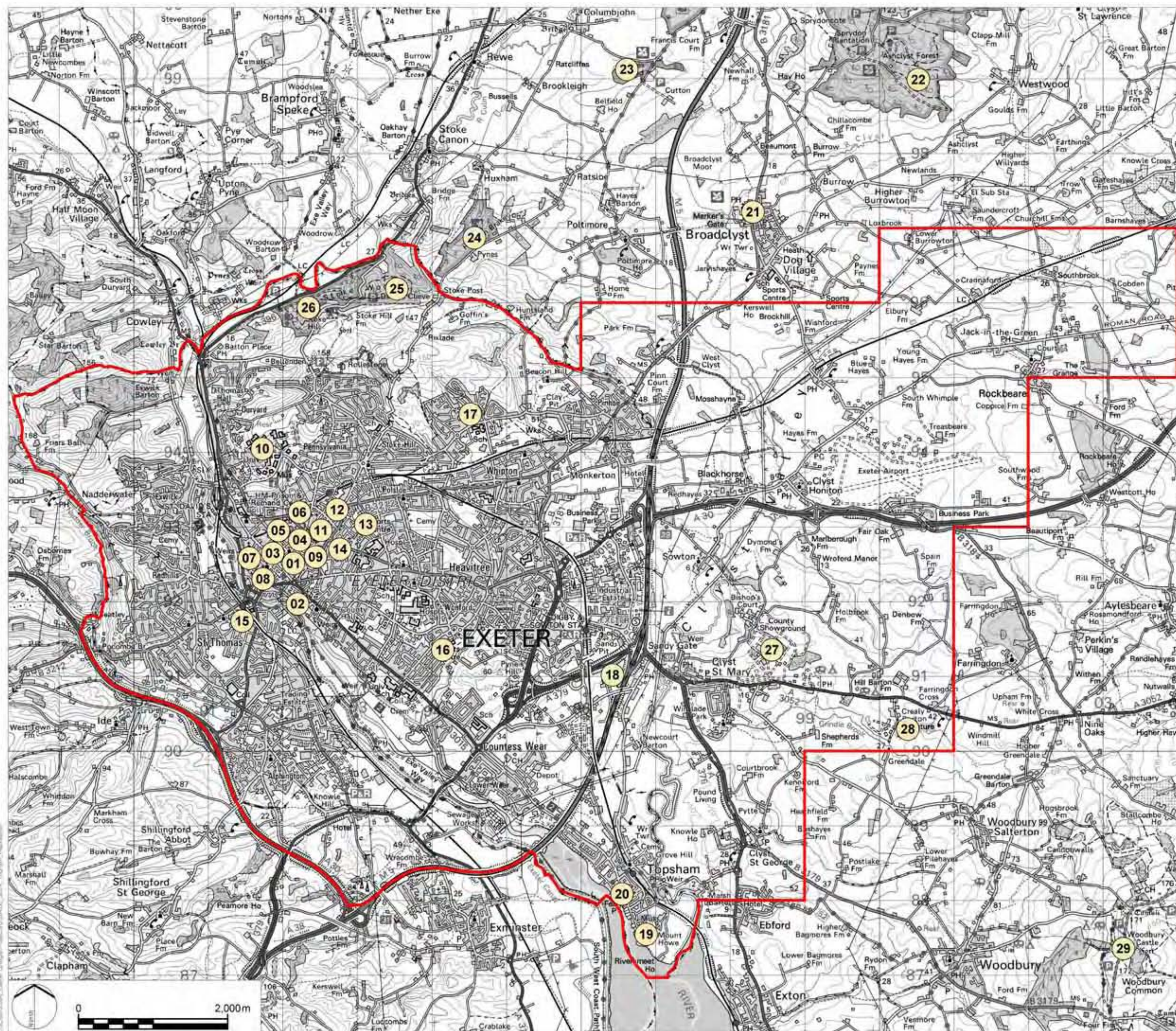
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EXETER AREA AND EAST DEVON NEW GROWTH POINT GREEN INFRASTRUCTURE STUDY

Figure 23: Open Space Deficiency Analysis Incorporating the Cranbrook New Community

DATE	March 2009	DRAWN	RP
SCALE	1:75,000 at A3	CHECKED	IH
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DWG. NO.	2594LE/023		

Source: Ordnance Survey & Project Reference Group



Legend



Core Study Area

Major Destinations



- | | |
|-------------------------|-------------------------------------|
| 01 Exeter Cathedral | 16 Sport Centre |
| 02 Exeter Historic Quay | 17 Sport Centre |
| 03 Guildhall | 18 Sport Centre |
| 04 Museum | 19 Topsham Museum |
| 05 Museum | 20 Sport Centre |
| 06 Exeter Castle | 21 Markers Gate (National Trust) |
| 07 Catacombs | 22 Ashclyst Forest (National Trust) |
| 08 Theatre | 23 Danes Wood (National Trust) |
| 09 Theatre | 24 Huxham Brakes |
| 10 Theatre | 25 Drews Clieve |
| 11 Sport Centre | 26 Stoke Woods |
| 12 Sport Centre | 27 County Showground |
| 13 Sport Centre | 28 Crealy Adventure Park |
| 14 Sport Centre | 29 Woodbury Castle and Common |
| 15 Sport Centre | |

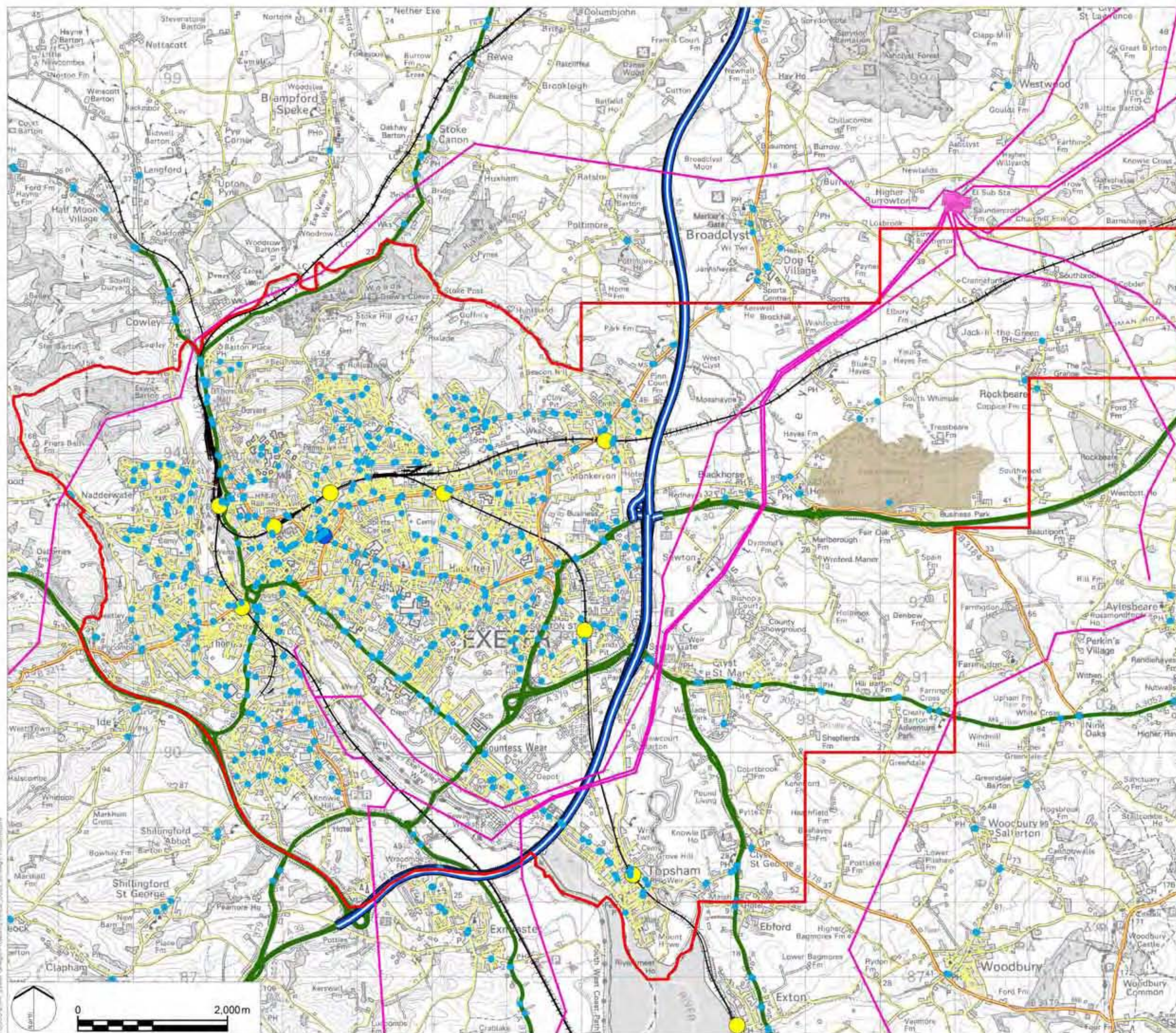
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EXETER AREA AND EAST DEVON NEW GROWTH POINT GREEN INFRASTRUCTURE STUDY Figure 24: Tourism and Recreation

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Legend

- Core Study Area
- Motorway
- 'A' Class Road and Trunk Road
- 'B' Class Road
- Other Road
- Railway Line
- Rail Station
- Bus Interchange
- Bus Stop
- Exeter Airport
- Electricity Sub Station
- Major Electricity Pylons

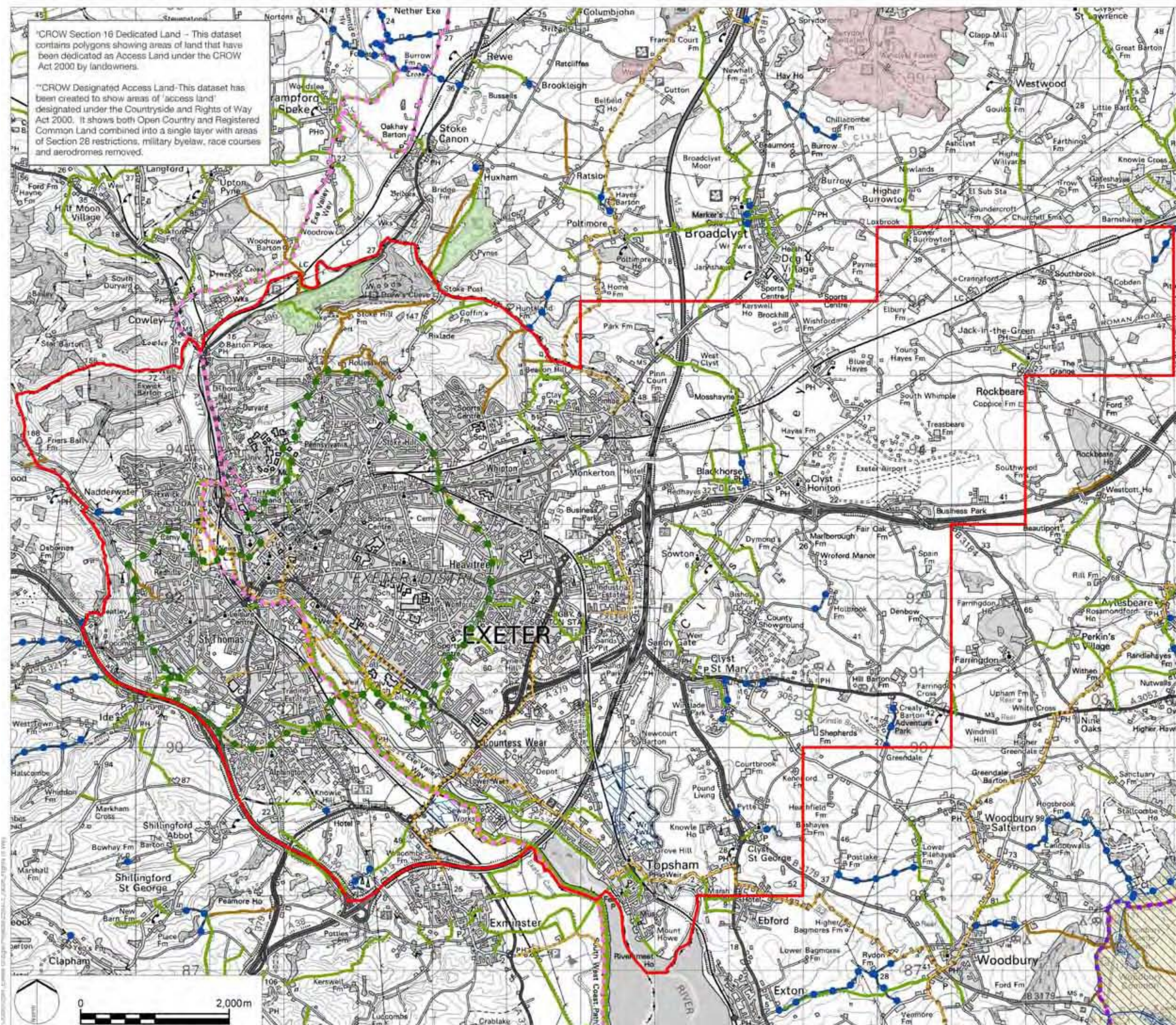
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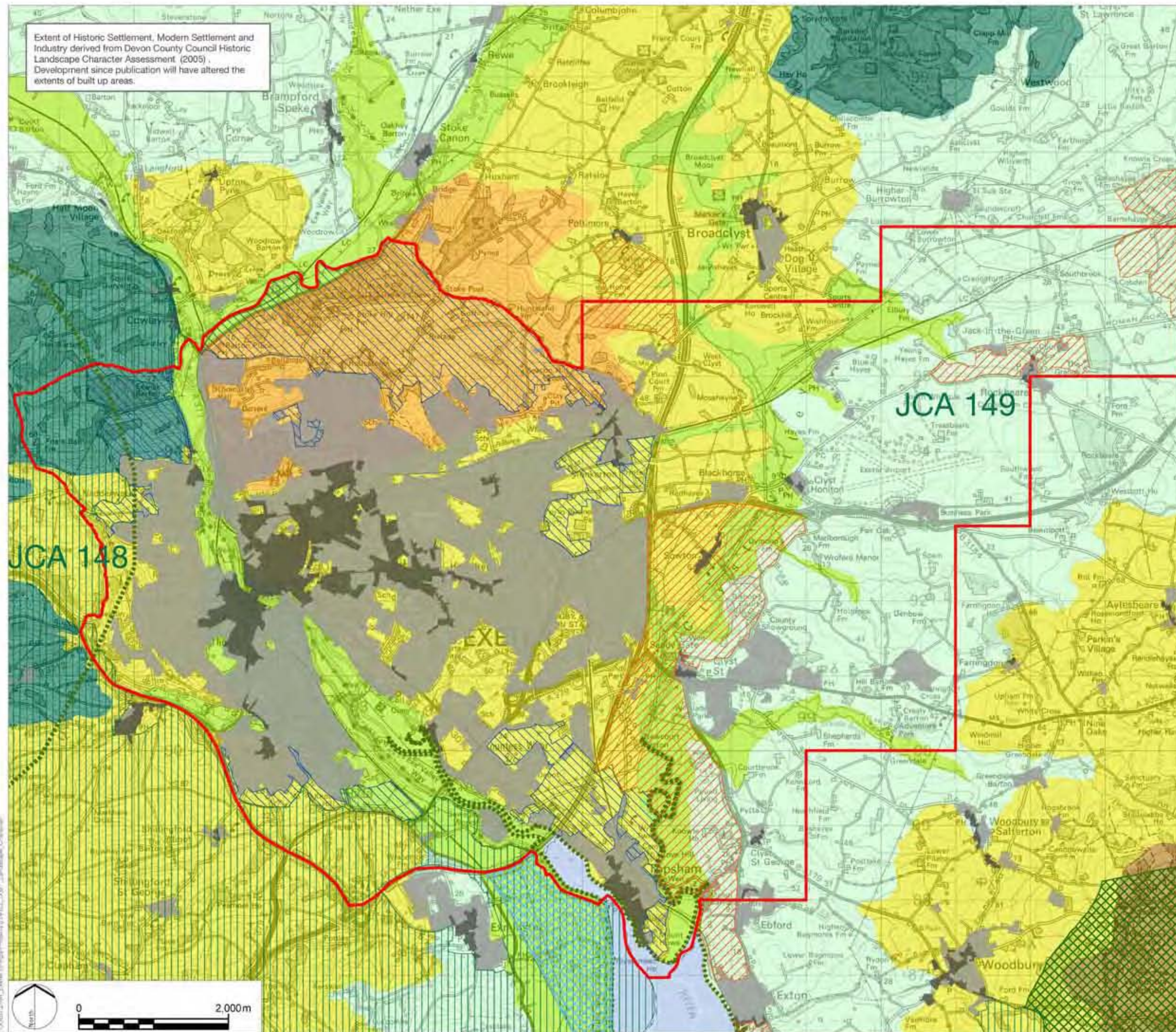
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EXETER AREA AND EAST DEVON NEW GROWTH POINT GREEN INFRASTRUCTURE STUDY Figure 25: Strategic Infrastructure

DATE	March 2009	DRAWN	RP
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STATUS	FINAL	APPROVED	FO
DWG.NO.	2594LE/0025		





Legend

Core Study Area

Landscape Designations

Area of Outstanding Natural Beauty (AONB)

Area of Great Landscape Value (AGLV) East Devon and Teignbridge Districts

Green Wedge East Devon District

Coastal Preservation Area Teignbridge District

Landscape Setting Exeter City Council

National Landscape Character

Countryside Character Area Boundary
JCA 148 - The Culm
JCA 149 - Devon Redlands

Local Landscape Character (Based on ongoing programme of character assessment in Devon)

Wooded Hilltops and Ridges

Lower Rolling Farmed and Settled Slopes

Lowland Plains

Unsettled Farmed Valley Floors

Pebble Bed Heathis

Upper Farmed and Wooded Slopes

Unsettled Marine Levels

Historic Settlement
(Derived from Devon County Council HLC, 2005)

Modern Settlement and Industry
(Derived from Devon County Council HLC, 2005)

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EXETER AREA AND EAST DEVON NEW
GROWTH POINT GREEN
INFRASTRUCTURE STUDY
Figure 27: Simplified Landscape Character
and Designations

DATE March 2009

DRAWN RP

SCALE 1:50,000 at A3

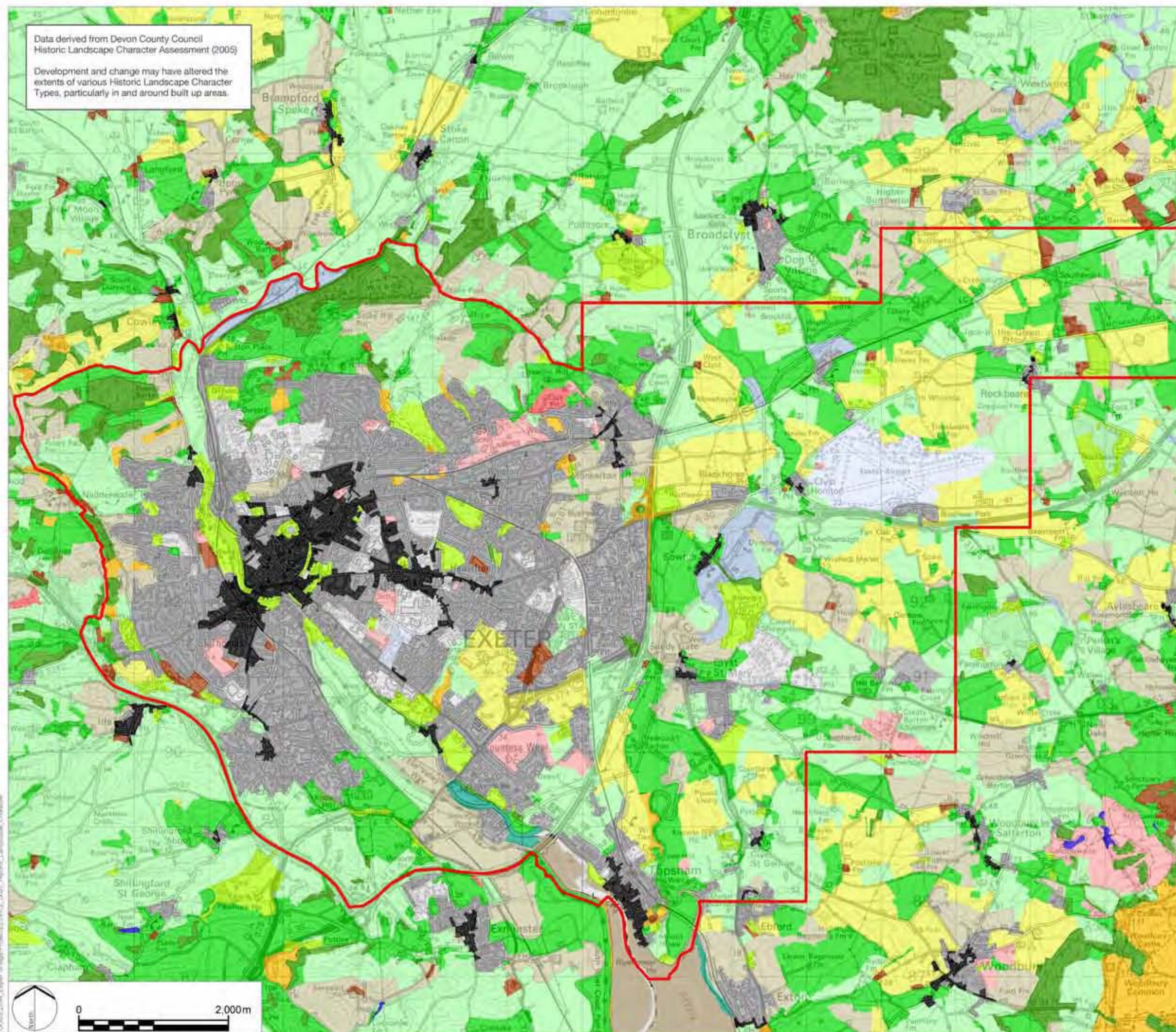
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STATUS FINAL

APPROVED FO

DWG NO. 2594LE/0027

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Data derived from Devon County Council
Historic Landscape Character Assessment (2005)

Development and change may have altered the
extents of various Historic Landscape Character
Types, particularly in and around built up areas.

Legend

	Core Study Area		
Settlement		Field Patterns	
	Historic Settlement		Modern Enclosures
	Modern Settlement and Industry		Post Medieval Enclosures
	Public Complex		Barton Fields
Land Use/ Land Cover			Medieval Enclosures and Strip Fields
	Mining/ Quarrying		
	Military Complex and Airfield		
	Park/ Garden		
	Recreation		
	Woodland (includes Coniferous Plantations and Ancient Woodland)		
	Mud, Sand and Rock		
	Water		
	Water Meadows		
	Orchards and Horticulture		
	Rough Ground		
	Marsh		

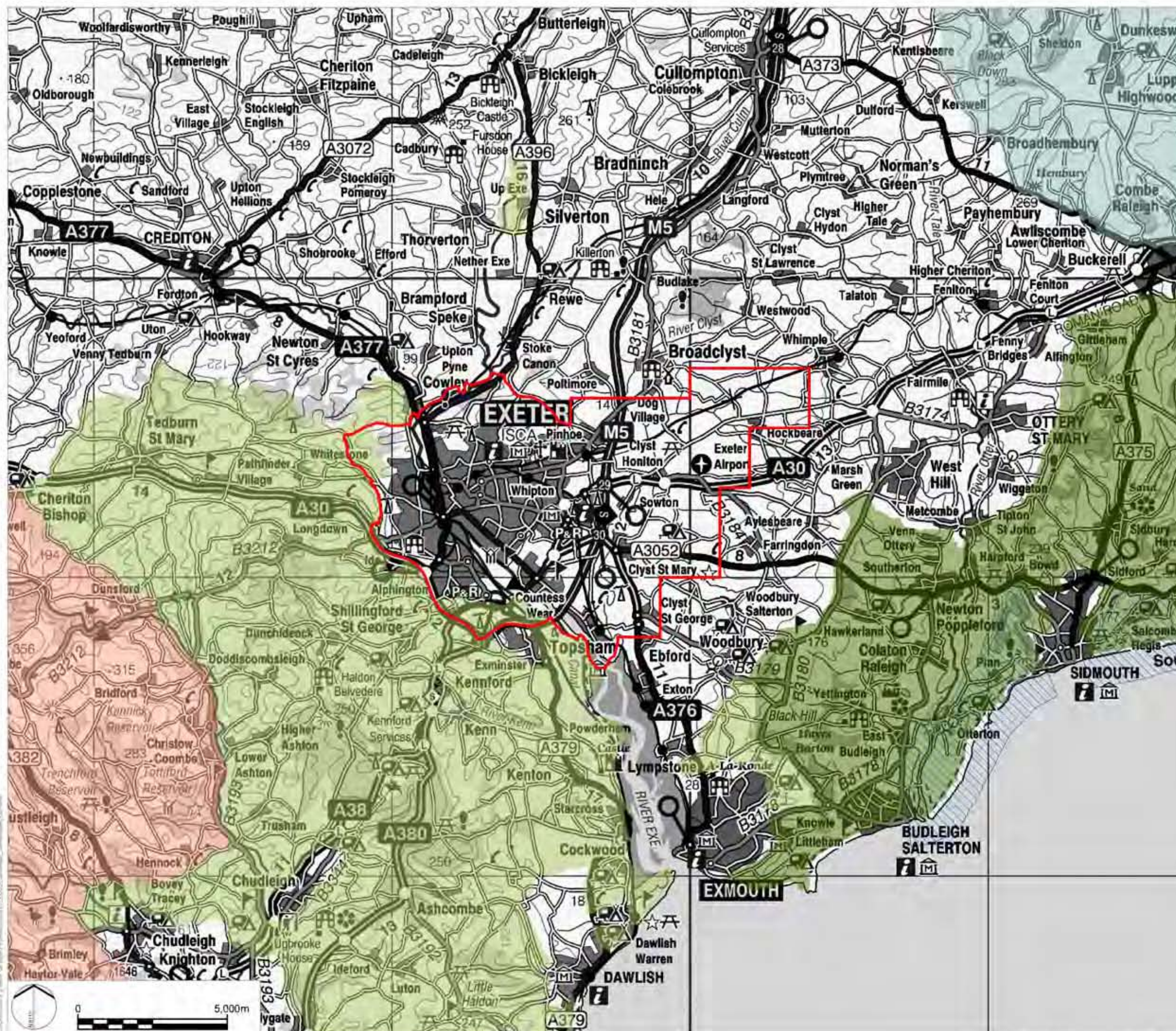
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EXETER AREA AND EAST DEVON NEW GROWTH POINT GREEN INFRASTRUCTURE STUDY Figure 28: Simplified Historic Landscape Character (Modern HLC Layer)

DATE	March 2009	DRAWN	RP
SCALE	1:50,000 at A3	CHECKED	IH
STATUS	FINAL	APPROVED	FO
DWG.NO.	2594LE/0028		



Legend

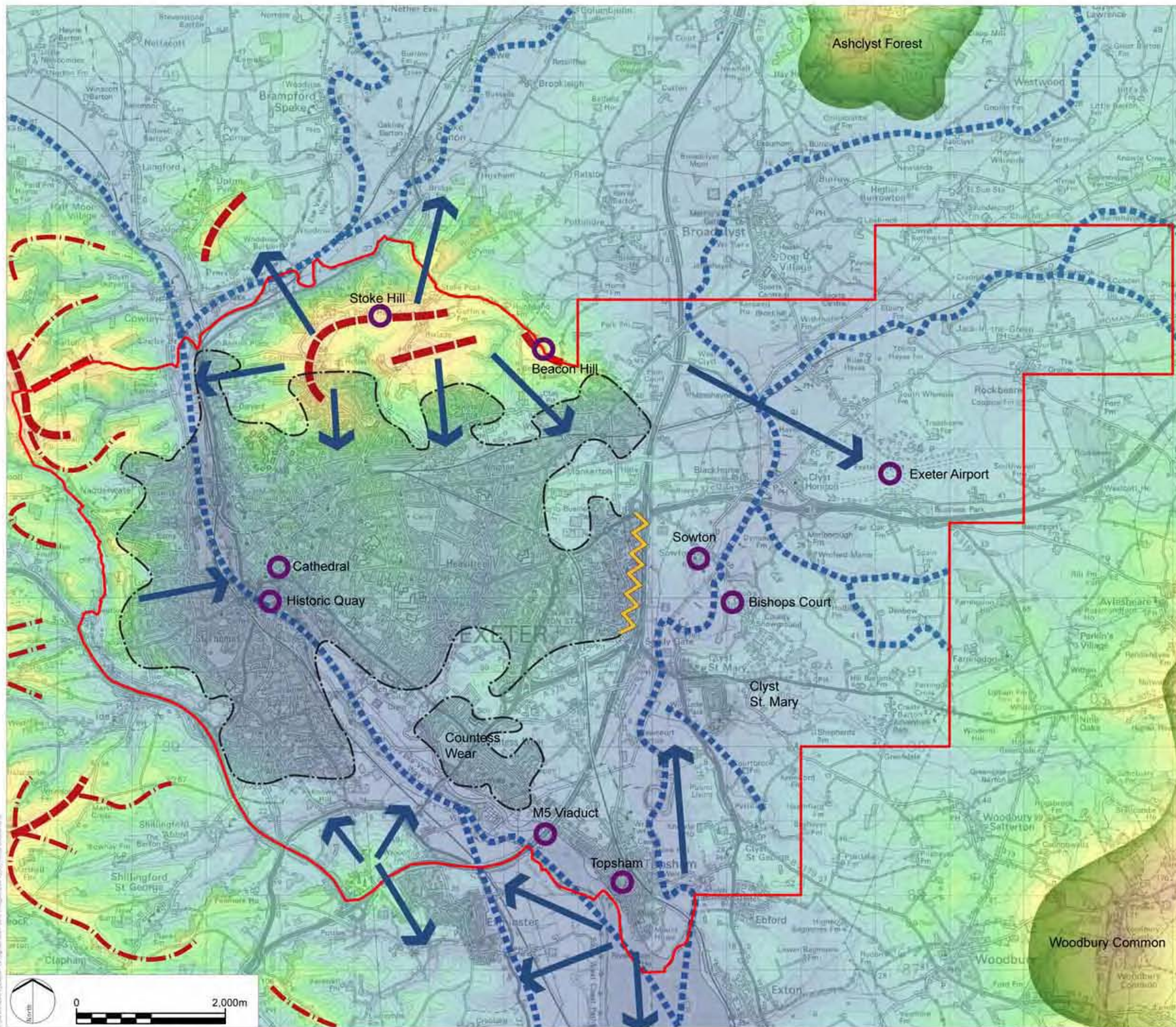
- Core Study Area
- Blackdown Hills AONB
- East Devon AONB
- Dartmoor National Park
- Area of Great Landscape Value (AGLV) East Devon and Teignbridge Districts Illustrated
- East Devon Heritage Coast

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EXETER AREA AND EAST DEVON NEW GROWTH POINT GREEN INFRASTRUCTURE STUDY Figure 29: Strategic Landscape Context

DATE	March 2009	DRAWN	RP
SCALE	1:125,000 at A3	CHECKED	IH
STATUS	FINAL	APPROVED	FO
DWG NO	2594LE/0029		



Legend

- Core Study Area
- Permeable urban edge
- Hard edge to urban area
- Principal river corridors
- Significant ridgelines/landform features
- Memorable landscape features/landmarks
- ➔ Key middle and long distance views

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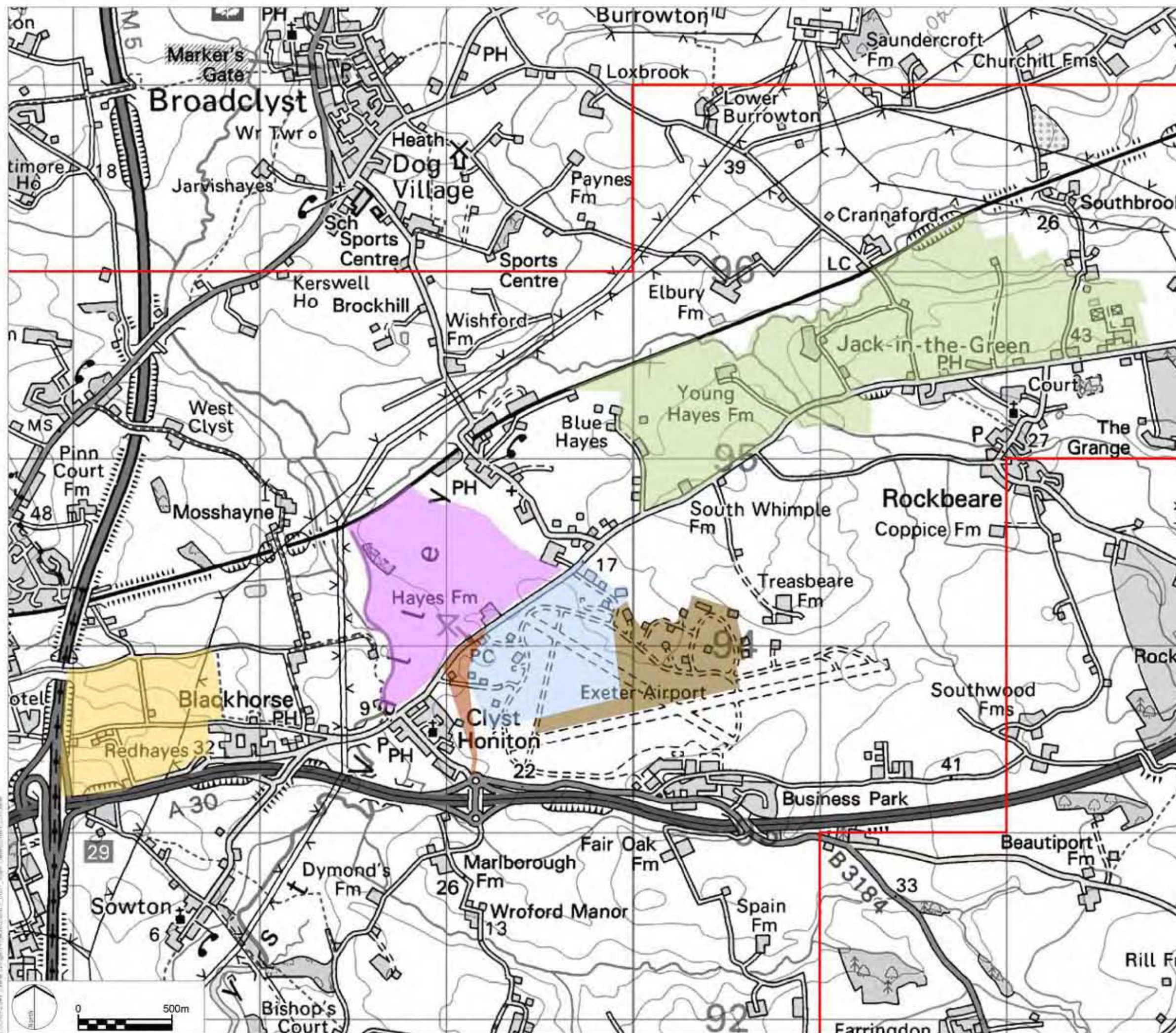
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EXETER AREA AND EAST DEVON NEW GROWTH POINT GREEN INFRASTRUCTURE STUDY

Figure 30: Visual and Perceptual Character

DATE	March 2009	DRAWN	SMC
SCALE	1:50,000 at A3	CHECKED	IH
STATUS	FINAL	APPROVED	FO
DWG.NO.	2594LE/0030		

Sources: Ordnance Survey, Project Advisory Group & Intermap Technologies Inc



Legend

- Core Study Area
- Science Park
- Inter-modal Rail Freight Facility and Distribution Centre
- Cyst Honiton Bypass
- Skypark
- Exeter Airport New Terminal
- Cranbrook New Community

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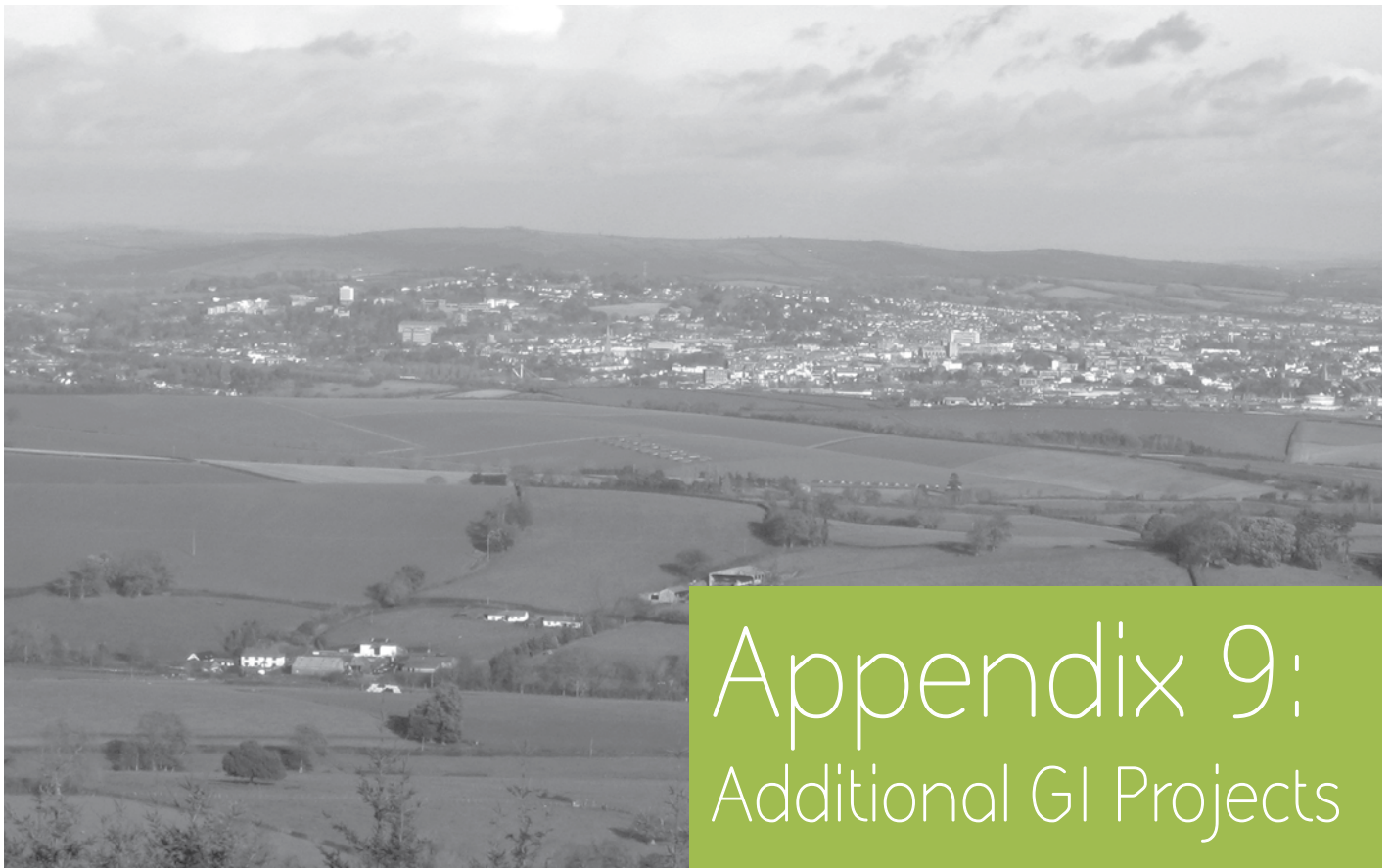
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EXETER AREA AND EAST DEVON NEW
GROWTH POINT GREEN
INFRASTRUCTURE STUDY
Figure 31: Major Development East of Exeter

DATE	March 2009	DRAWN	RP
SCALE	1:20,000 at A3	CHECKED	IH
STATUS	FINAL	APPROVED	FO
DWG.NO.	2594LE/0031		

Source: Ordnance Survey & Project Advisory Group



Appendix 9: Additional GI Projects

Several GI Projects were identified in consultation with the project Advisory Group, stakeholders and consultees at a workshop held in February 2008. Only those projects that were given highest priority or that offered greatest potential for multi-functionality have been taken forward and developed in this study. However, other projects identified in the workshop, or that may arise in the future, should also be considered for delivery.

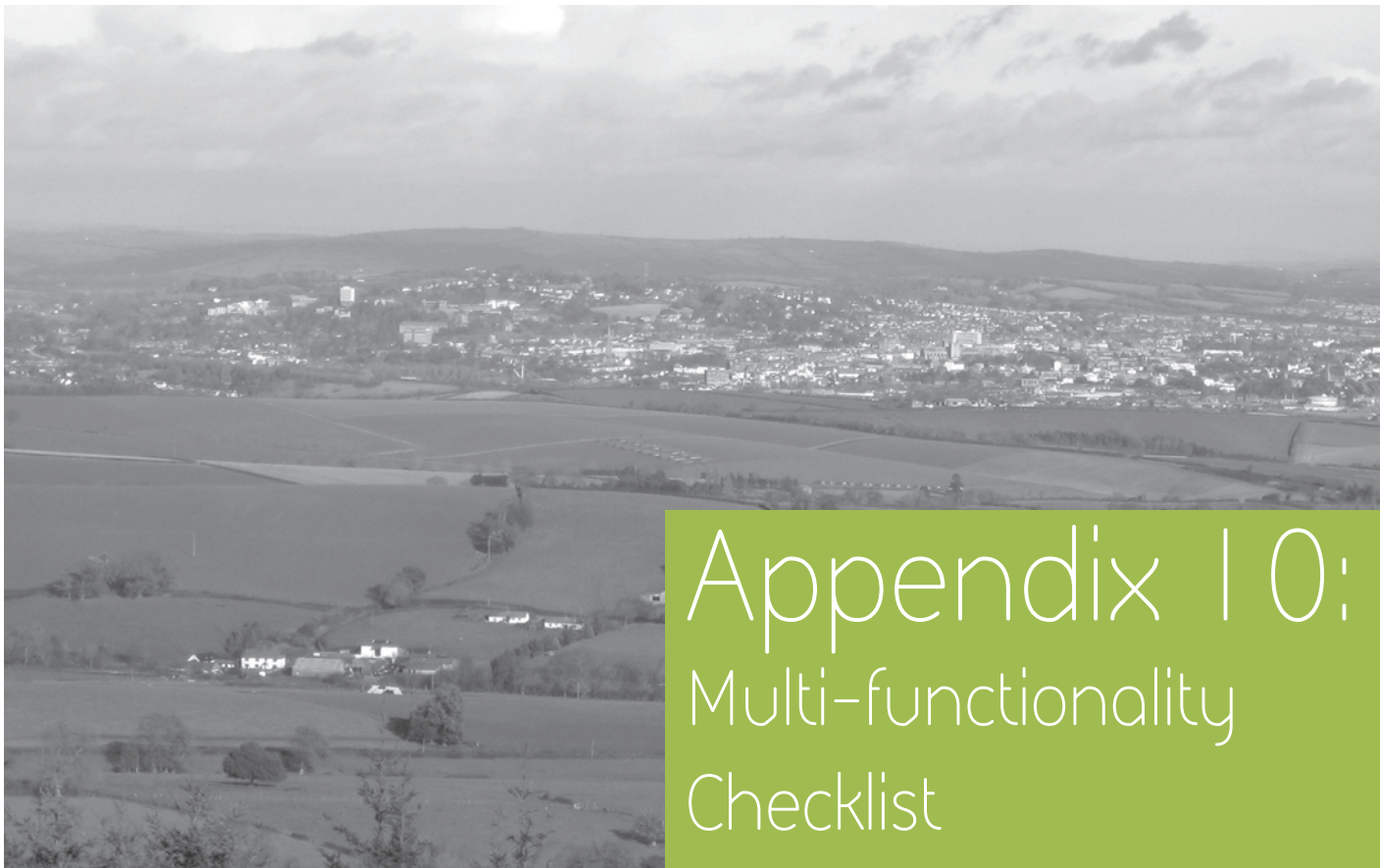
The list below, extracted from the February 2008 Workshop Report, outlines the range of projects initially identified:

- Community Forest to the north of Exeter.
- *Enhancement of the Clyst valley.
- *Connecting the new communities to surrounding countryside.
- Country pub routes.
- *Viewpoints / topographs incorporated into movement networks/ parks.
- *Extending links through the Clyst valley further northwards.
- *Looking at destinations beyond the core study area boundary for GI to link with.
- *Clyst valley – major opportunity – blank canvass – lots of scope for improving access and

biodiversity & a building block for a primary route north-south to link in with national networks. A flat area – good local opportunity for cycling & walking.

- Early wins – Topsham – iconic wetland area – tourist destination – local resource.
- Meteorological station.
- *Landmark gateway to the north – arrival gateway to Exeter – locally distinctive & innovative.
- *M5 – significant barrier which will require a range of crossing points.
- Importance of creating local destinations
- Importance of linking in with existing green space provision & improving quality of existing green spaces.
- *Importance of creating ‘honey pots’ to draw people away from more sensitive/pressurised areas such as the estuary and the Pebblebed Heaths.
- Old Rydon Lane over the M5 into the Clyst Valley (links Ludwell Valley Park out of the city).
- Pinhoe – ridge line route (cycle/footpath) over the M5 via Pinn Court Farm Access route, south of old A30.
- *Lower Clyst (floodplain enhancement associated with the Freight Terminal) with link to Ashclyst Forest.
- Re-development of city centre would be an opportunity to promote GI to a wide audience.

Note: items marked (*) have been taken forward and developed directly or indirectly as part of this study either as the Biodiversity Network (Chapter 5), Sustainable Movement Network (Chapter 6) or GI Projects (Chapter 7).



Appendix I 0: Multi-functionality Checklist

An effective delivery process needs to demonstrate early progress and deliver benefits to the community and stakeholders. Some of the aspirations set out in this document will take some time to deliver whilst others will be able to happen relatively quickly. In addition to those GI Project ideas set out previously, the identification of new GI Projects should be encouraged. A checklist is presented below to help identify projects that deliver GI aims and objectives.

House Keeping	
Project Name:	
Project Location:	
Short Description of the Project Proposal	
Capital Cost:	
Funding Required:	
Projected Annual Maintenance Budget:	

Strategic GI Delivery Criteria	Score
1. Does the proposed project lie within or immediately adjacent to a Sub-Regional Green Infrastructure Corridor? (score 20 for yes)	
2. Does the proposed project lie within or immediately adjacent to a Local Green Infrastructure Corridor? (score 15 for yes)	
Strategic GI Criteria Sub Total	

Sustainable Movement Network Delivery Criteria	Score
3. Does the proposed project deliver a portion of the Primary Movement Network? (score 20 for yes)	
4. Does the proposed project deliver a portion of the Secondary Movement Network? (score 15 for yes)	
5. Does the proposed project deliver a portion of the Local Movement Network? (score 10 for yes)	
Movement Network Delivery Criteria Sub Total	

Biodiversity Network Delivery Criteria	Score
6. Does the proposed project deliver a portion of the Biodiversity Network Habitat Reservoirs? (score 15 for yes)	
7. Does the proposed project deliver a portion of the Biodiversity Network Habitat Links? (score 15 for yes)	
Biodiversity Network Delivery Criteria Sub Total	

Criteria for Delivery of GI Strategic Aims	Score
8. Bridge to the Country. Does the project deliver new and improved open spaces and access routes in continuous green corridors linking Exeter to its surrounding rural landscape? (score 10 for yes)	
9. Gateway to the Town. Does the project enhance the character and identity of urban fringe landscape and promote the quality of Exeter, and act as a gateway into the city? (score 10 for yes)	
10. Health Centre. Does the project create more accessible and attractive urban and rural environments close to where people live and work and the framework necessary to improve recreation and leisure facilities and promote healthier lifestyles? (score 10 for yes)	
11. Classroom. Does the project deliver the facilities and/or diversity of experiences necessary to act as an outdoor classroom, with an emphasis on environmental and rural studies? (score 10 for yes)	
12. Recycling and Renewable Energy Centre. Does the project have a role in the sustainable management and recycling of waste, water and pollution? (score 10 for yes)	
13. Productive Landscape. Does the project facilitate and encourage small scale urban and community farm initiatives, and access to locally produced food and fuel? (score 10 for yes)	
14. Cultural Legacy. Does the project protect and enhance features and patterns that display the evolution of urban and rural areas and improve opportunities to celebrate and understand the past, local cultural identity and historic figures and events. (score 10 for yes)	
15. Place for Sustainable Living. Does the project contribute to the creation of sustainable communities? (score 10 for yes)	
16. Engine for Regeneration. Does the project provide a mechanism for raising community confidence and skills in managing community spaces and facilities and bring about environmental improvements in the locality? (score 10 for yes)	
17. Nature Reserve. Does the project protect, enhance, create and link habitats to raise ecological value of the area and species persistence in urban and rural locations? (score 10 for yes)	
GI Strategic Aims Sub Total	

Summary	Score
Strategic GI Criteria Sub Total	
Movement Network Delivery Criteria Sub Total	
Biodiversity Network Delivery Criteria Sub Total	
GI Strategic Aims Sub Total	
Total GI Multi-functionality Checklist Score	



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April 2009