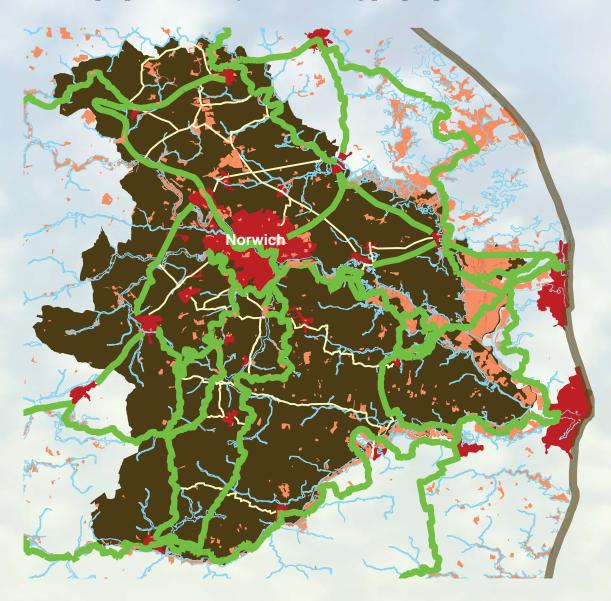


Greater Norwich Development Partnership

GREEN INFRASTRUCTURE STRATEGY

A proposed vision for connecting people places and nature



Executive Summary November 2007

CHRIS BLANDFORD ASSOCIATES

Environment Landscape Planning

GREEN INFRASTRUCTURE STRATEGY

A proposed vision for connecting people, places and nature

Approved By:

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Position:

Signed:

Director

Date: 6th November 2007

Executive Summary

CHRIS BLANDFORD ASSOCIATES

Environment Landscape Planning 11104901R_GNDP GI Strategy Exec Summary_Final_DW_11-07

BACKGROUND

The Greater Norwich Development Partnership is responsible for planning and co-ordinating sustainable growth and related infrastructure in and around Norwich.

The Green Infrastructure Strategy is one of a number of evidence bases commissioned by the Partnership for informing future growth and infrastructure requirements in the Greater Norwich Joint Core Strategy Area for Norwich, South Norfolk and Broadland.

The Green Infrastructure Strategy was prepared by environmental planning consultants Chris Blandford Associates, and informed by consultations with key stakeholders. It brings together the various strands of existing work being progressed at all scales across the Greater Norwich Area that contribute towards green infrastructure provision and management into a single proposed vision, and makes recommendations for investing in the provision of multi-functional green infrastructure.

This is a summary of the consultant's Green Infrastructure Strategy report. The proposals and recommendations have not been formally endorsed by the Partnership at this time.

The Green Infrastructure Concept

At the heart of the concept is the provision of 'multi-functional green infrastructure' that can meet a wide range of social, economic and environmental needs. For example, a greenspace can function as a public open space, water retention/storage facility and as a wildlife corridor.

Green infrastructure is defined as the multi-functional network of 'greenspaces' and inter-connecting green corridors in urban areas, the countryside in and around towns and rural settlements, and in the wider countryside. Green infrastructure is a natural life support system providing benefits for people and wildlife. It encompasses 'natural greenspaces' (colonised by plants and animals and dominated by natural processes) and man-made 'managed greenspaces' (urban parks and designed historic landscapes), as well as their many connections (footpaths, cycleways, green corridors and waterways). The provision of publicly accessible natural greenspace is a vital component in securing benefits for communities where this can be balanced with the needs of private landowners and biodiversity conservation objectives.

There are a wide range of functions that green infrastructure can provide. These include:

- Active recreation, passive recreation and quiet enjoyment
- Sustainable transport and public rights of way
- Network, links and gateways
- Social venue/meeting place
- Cultural/event venue
- Education and training
- Heritage preservation
- Landscape and townscape structure
- Wildlife habitat and biodiversity
- Sustainable water and flood risk management, energy use and production and waste management
- Green produce and food production
- Integration of new and existing communities
- Shared experience of greenspace creation

Green infrastructure has a key role to play in improving the quality of life for communities throughout Greater Norwich. Investment in green infrastructure can provide important social, economic and environmental benefits, such as providing a high quality environment for businesses, addressing social deprivation issues and improving the health of local communities.

Approach to Developing the Strategy

The aim of the project is to create a bold vision for the Greater Norwich Area and to establish a strategy for green infrastructure that will complement and support good quality housing and substantial economic growth by: providing high quality, accessible green infrastructure within a comprehensive landscape structure; promoting ecological networks and continuity and links between habitats; improving quality of life; helping to address climate change; improving access to habitats and greenspace; and encouraging community well being.

The Strategy has had regard to provision across the three local authority areas (Norwich City, Broadland and South Norfolk), the Broads Authority Area and to the strategic needs of surrounding areas for access to green infrastructure provision – particularly in relation to the Thetford Growth Point Area to the southwest of Norwich.

The overall approach to developing the Strategy was based on published guidance, taking into account emerging best practice demonstrated by recently completed green infrastructure studies in other growth areas around the country. In summary, the key steps involved:

- analysis of key issues and opportunities in the Greater Norwich Area informed by review of available data and consultations with stakeholder organisations and community groups
- identification of a proposed 20-30 year vision and key principles for green infrastructure
- definition of a proposed green infrastructure network, comprising priority corridors and areas for investment in green infrastructure provision
- development of green infrastructure themes and strategy goals
- recommending an approach for delivering the Green Infrastructure Strategy, and outlining a proposed Action Plan that provides a framework for co-ordinated project development, funding and delivery of green infrastructure.

THE PROPOSED STRATEGY

The Strategy for green infrastructure in the Greater Norwich Area seeks to ensure that pressures on important natural and historic aspects of green infrastructure are minimised, and opportunities to enhance green infrastructure to meet the needs of people and biodiversity are maximised. In some cases, measures will be required to manage negative effects on these resources arising from growth proposals for the Greater Norwich Area and the wider area.

The proposed Vision for Green Infrastructure in the Greater Norwich Area is for a multifunctional network of greenspaces and green links, providing an environmental life support system for communities and wildlife. The network should be high quality, bio-diverse and accessible and be widely valued by local residents and businesses, and also by visitors to the Greater Norwich Area. Opportunities to inspire local communities to adopt low carbon and healthy lifestyles based on a greater awareness of their 'environmental footprints' should be encouraged. The green infrastructure network connects Norwich, other settlements and the countryside via green corridors, particularly along the river valleys, providing sustainable opportunities for communities in towns and villages to access, enjoy and appreciate a variety of greenspaces on their doorstep and in the wider countryside. The network also connects a diverse range of wildlife habitats and provides important ecological corridors for species dispersal and migration.

The green infrastructure approach should be regarded as a long-term framework for sustainable development, protecting the natural and historic environment and enhancing the distinctive qualities that give the Greater Norwich Area its special character. Green infrastructure should be delivered, protected and managed through the commitment and involvement of the public, private and voluntary sectors across the Greater Norwich Area working in partnership.

The Vision is supported by six core green infrastructure planning and management principles:

- Safeguard and protect valuable green infrastructure resources;
- Integrate green infrastructure into development schemes and existing developments;
- Secure new and enhanced green infrastructure before development proceeds where there is a clear need for provision;
- Enhance green infrastructure where of low quality, in decline or requiring investment to realise its potential to meet future demands;
- Mitigate potential adverse effects of development, new land uses and climate change;
- Create new green infrastructure where there is an identified deficit, or growth is planned and additional provision or compensatory measures are needed.

The Green Infrastructure Network

The proposed Ecological Network (see Figure 5.1 and Figure 5.2) and the proposed Sustainable Movement Network (see Figure 6.1 and Figure 6.2) form the underlying framework for the proposed Green Infrastructure Network for the Greater Norwich Area illustrated on Figure 7.1.

The purpose of the Green Infrastructure Network is to provide the conceptual perspective or 'bigger picture' for the delivery of large-scale green infrastructure that connects communities and wildlife at the sub-regional and local scales. The proposed Green Infrastructure Network is intended to help focus attention on land that needs to be enhanced or secured to create a green infrastructure network, for which investment can deliver the greatest range of social, economic and environmental benefits. It is not a rigid approach; the strategy is intended to be flexible and responsive to opportunities - such as changing land ownership, community aspirations, access to funding, development opportunities, etc - that may change priorities for investment over time.

The green infrastructure concept applies across the whole of the Greater Norwich Area, and it can occur at any scale. However, the proposed Green Infrastructure Network identifies locations where targeting investment in green infrastructure is most likely to deliver multiple benefits across a range of key environmental, social and economic policy areas.

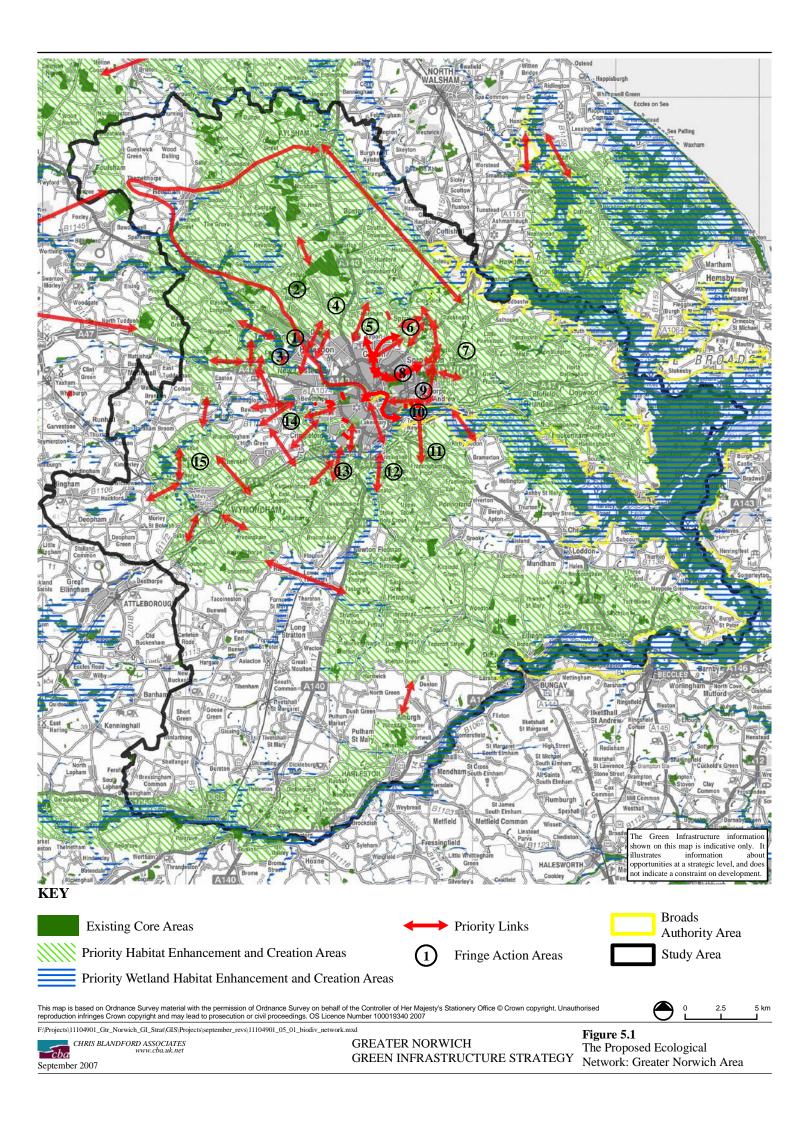
The main priorities are considered to be:

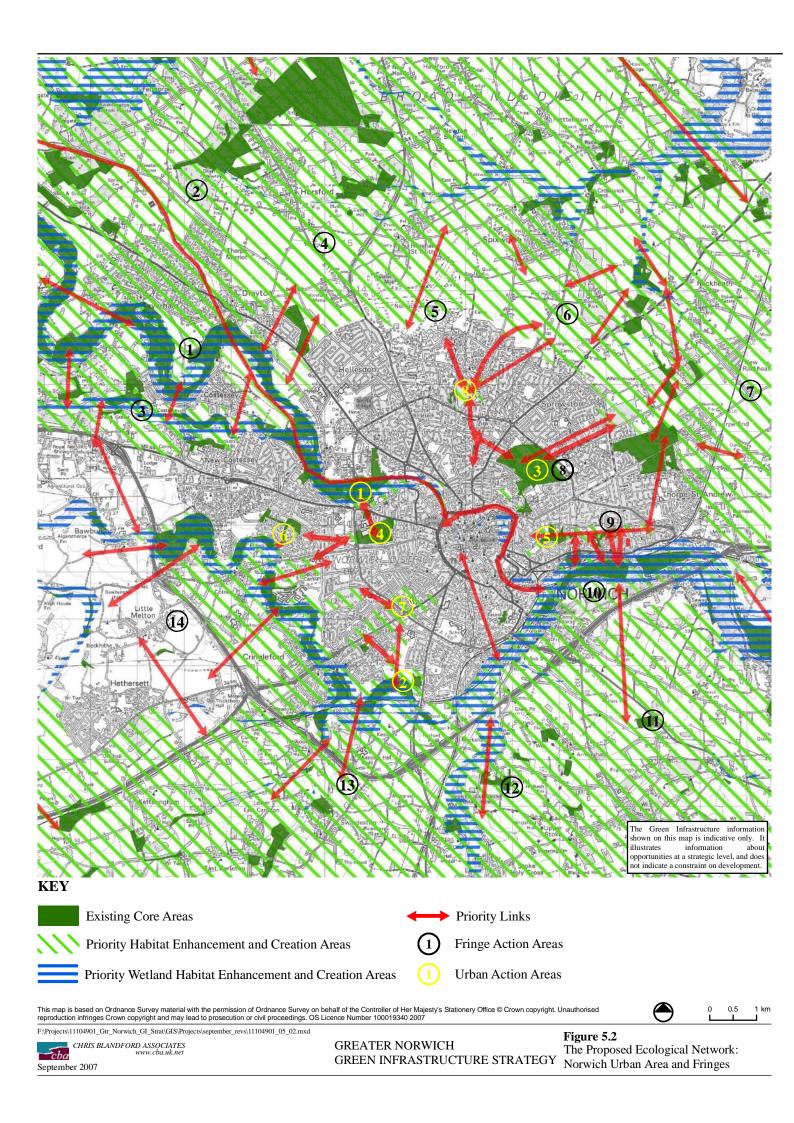
- to focus investment on green infrastructure provision and management to address current deficits of provision/needs identified by this study
- to meet the needs of the communities in and around the Greater Norwich Area who are likely to experience major growth-related pressures over the next 20-30 years
- to conserve and manage existing valuable green infrastructure sites that are under current or future pressure including in particular greenspaces, core biodiversity areas and the river valleys/wetlands.

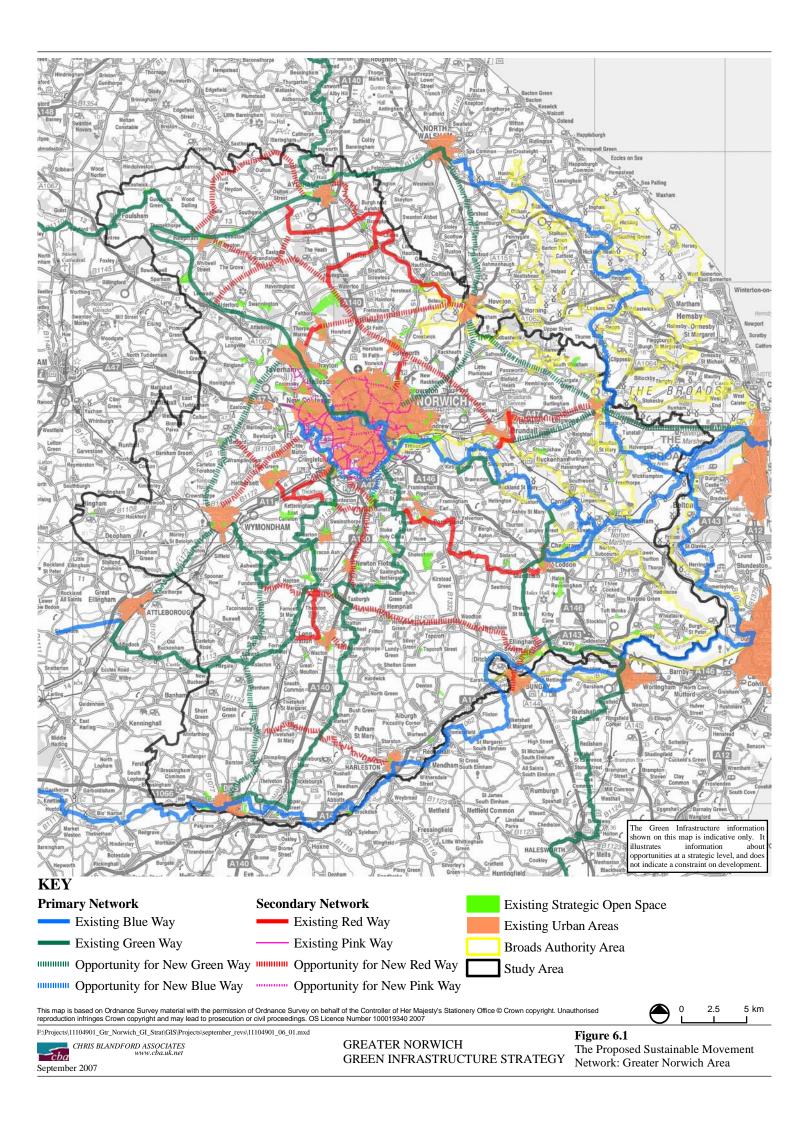
In response to the above, the proposed Green Infrastructure Network defines specific Green Infrastructure Corridors within which it is recommended that investment in new and enhanced green infrastructure provision be prioritised. They provide the context for green infrastructure projects that would address one or more themes and provide, in many cases, multiple functions and benefits to meet a range of social, economic and environmental needs.

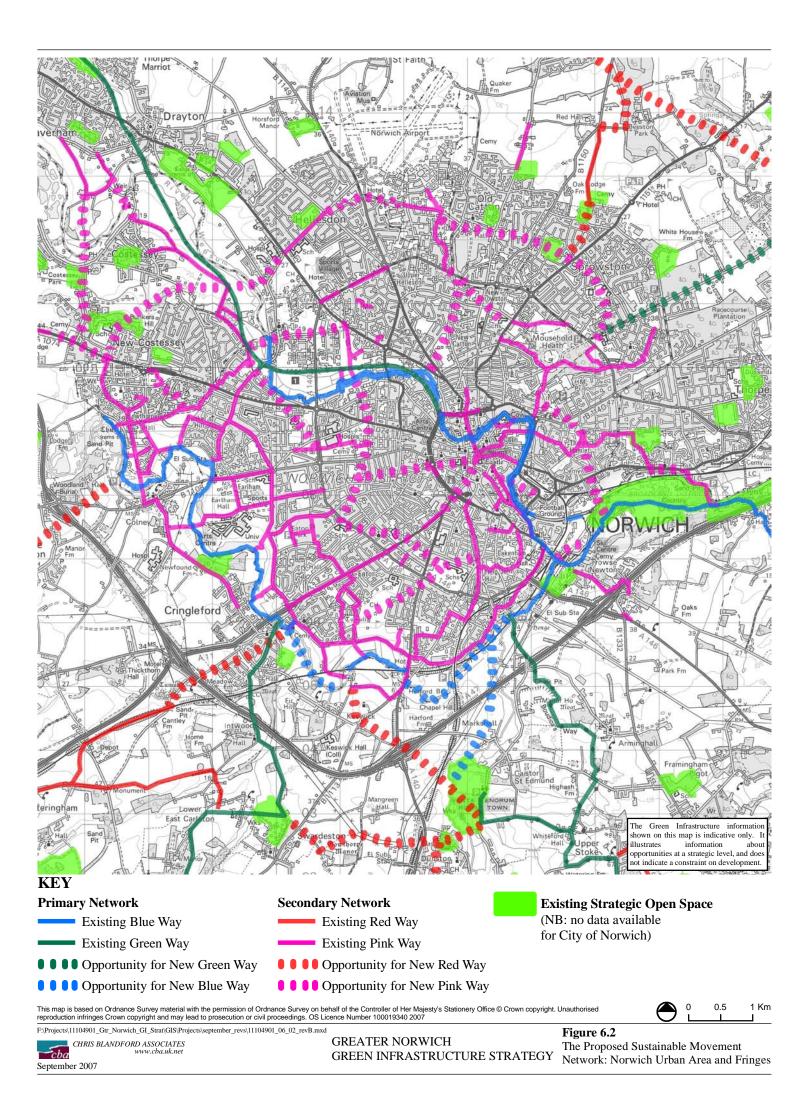
A network of *Sub-Regional Green Infrastructure Corridors* is proposed. These include the following Corridors:

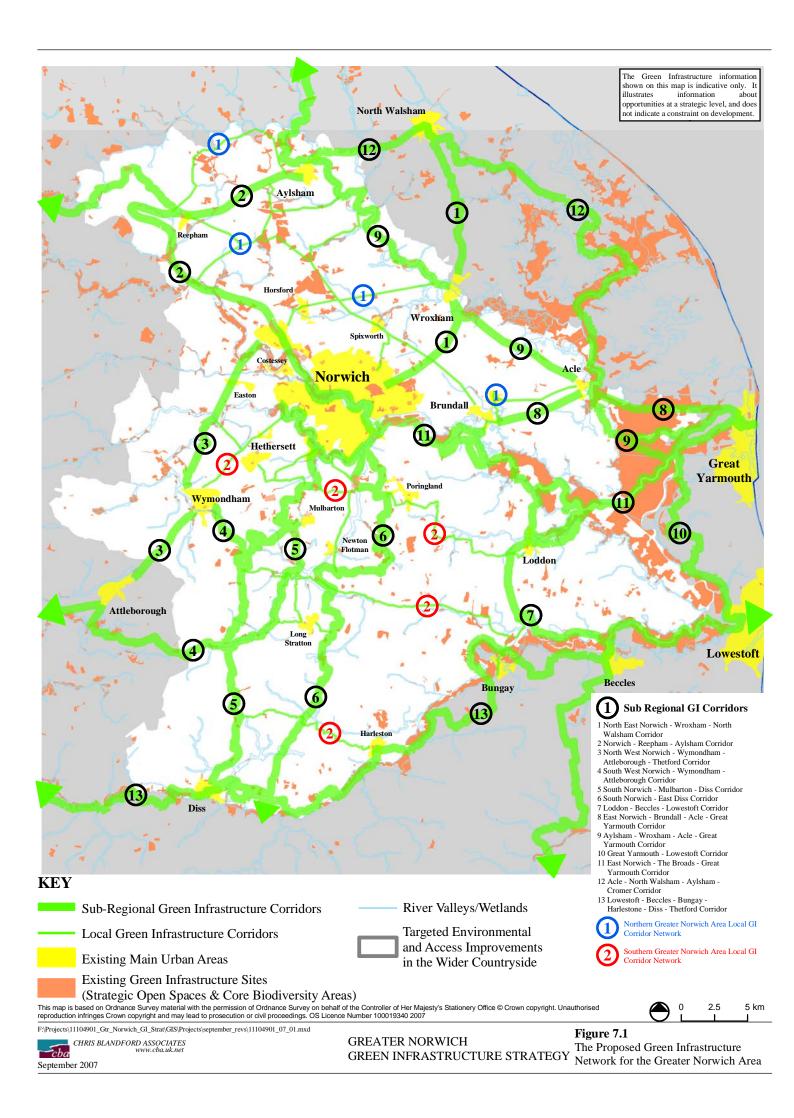
- 1. North East Norwich Wroxham North Walsham Corridor
- 2. Norwich Reepham Aylsham Corridor
- 3. North West Norwich Wymondham Attleborough Thetford Corridor
- 4. South West Norwich Wymondham Attleborough Corridor











- 5. South Norwich Mulbarton Diss Corridor
- 6. South Norwich East of Diss Corridor
- 7. Loddon Beccles Lowestoft Corridor
- 8. East Norwich Brundall Acle Great Yarmouth Corridor
- 9. Aylsham Wroxham Acle Great Yarmouth Corridor
- 10. Great Yarmouth Lowestoft Corridor
- 11. East Norwich The Broads Great Yarmouth Corridor
- 12. Acle North Walsham Aylsham Cromer Corridor
- 13. Lowestoft Beccles Bungay Harleston Diss Thetford Corridor

These strategic level corridors provide the core of the proposed Green Infrastructure Network for the Greater Norwich Area. The corridors also link with strategic green infrastructure in surrounding areas at the sub-regional level. Comprising a mosaic of land uses, natural and built heritage resources and settlements, these Sub-Regional Corridors are intended to become fully multi-functional zones with the ability or potential to deliver all of the following 'functions':

- Access and Movement linking settlements to their hinterland, destinations and the wider strategic Green Infrastructure Sustainable Movement Network. The corridors provide sustainable links through attractive green routes with clear way marking and other relevant facilities;
- Biodiversity providing a focus for the enhancement and linkage of the biodiversity resource;
- Enhancement of flood risk, water management and other natural process roles;
- Enhancement and promotion of countryside and urban character to celebrate the distinctiveness of these different corridors;
- Enhancement and promotion of heritage and cultural assets;
- Enhancement and promotion of recreation and leisure, providing connections between communities, accessible greenspace and other destinations.

Green infrastructure related proposals within the Sub-Regional Corridors would focus on the enhancement and restoration of existing green infrastructure, as well as the creation of new resources.

A network of *Local Green Infrastructure Corridors* is proposed to link up with the Sub-Regional Corridors to create the overall Green Infrastructure Network. They are zones with a mosaic of land uses, natural and built heritage resources and settlements, but with more limited existing multi-functionality than the Sub-Regional Corridors. The Local Corridors provide linkages between Sub-Regional Green Infrastructure Corridors, and between a Sub-Regional Corridor and settlements; they are therefore key to enabling doorstep to countryside connections within the network. These Local Corridors. However, they are essential in delivering green infrastructure related functions and benefits at the local level. With investment, these Local Corridors are intended to deliver one or more of the 'functions' of a Sub-Regional Corridor described above.

The network of both Sub-Regional and Local Green Infrastructure Corridors connect with the *Urban Area Green Infrastructure* of Norwich and the surrounding settlements within the Greater Norwich Area. While these routes are indicative at the sub-regional level, they demonstrate the priority given to achieving a connected network of green links within and between urban areas. Together, a proposed Ecological Network for the Norwich Urban Area and Fringes and the Sustainable Movement Network for Norwich provide an indicative framework for identifying a more detailed 'Urban Green Grid' network for Norwich. This Green Grid would comprise a network of green/blue links and spaces designed and managed to provide a range of functions and benefits for the City, such as:

- Reinforcing local identity and enhancing the physical character of an area, so shaping existing and future development
- Maintaining the visual amenity and increasing the attractiveness of a locality to create a sense of civic pride
- Raising property values and aiding urban regeneration and neighbourhood renewal

- Boosting the economic potential of tourism, leisure and cultural activities
- Securing external funding and focusing capital and revenue expenditure cost-effectively
- Providing a wide variety of cultural, social and community facilities, including seasonal activities such as fairs, festivals and concerts
- Protecting the historical, cultural and archaeological heritage
- Illustrating the contribution to health agendas e.g. reducing stress levels by providing formal and informal recreational facilities
- Providing popular outdoor educational facilities for schools and academic institutions
- Improving physical and social inclusion including accessibility, particularly for young, disabled and older people
- Offering alternative routes for circulation, including networks for walking and cycling and safer routes to school
- Raising air quality and moderating extremes of temperature
- Protecting and enhancing levels of biodiversity and ecological habitats
- Providing environmental infrastructure to improve water quality and flood control.

Beyond the Sub-Regional and Local Green Infrastructure Corridors, the proposed objective is for *Targeted Environmental and Access Improvements in the Wider Countryside*. These improvements would complement and support the priority areas for investment within the overall Green Infrastructure Network, by focussing environmental land management schemes on addressing needs and opportunities for conserving and enhancing the open countryside. These include for example:

- Conservation and enhancement of landscape, townscape and riverscape character
- Enhanced management, protection, accessibility and interpretation of the historic environment and geodiversity resource
- Habitat enhancement, linkage and creation particularly farmland BAP habitats and species
- Enhanced connectivity of the local rights of way network to the strategic access route network, and to accessible greenspaces of strategic significance

Green Infrastructure Themes and Strategy Goals

Four complementary green infrastructure themes have been identified:

- Theme 1 Sustaining and Enhancing the Character and Local Distinctiveness of Riverscapes, Landscapes and Townscapes
- Theme 2 Making Space for Wildlife
- Theme 3 Providing a High Quality, Multi-functional and Connected Network of Accessible Greenspaces for People
- Theme 4 Adapting to Climate Change through Sustainable Planning and Design

These broad themes provide the basis for the identification of Strategy Goals designed to address the identified key issues, opportunities and needs, which in turn are supported by the range of potential projects developed in consultation with stakeholders. The key factors in determining the Strategy Goals included the need to:

- Emphasise a strong commitment to delivering real benefits for the quality of life for local people;
- Promote a strategic approach to the packaging of projects and funding;
- Maximise the community benefits of green infrastructure provision and minimising negative effects;
- Balance the dual role of greenspaces as major attractions for tourists and as key facilities for local people;
- Address the need for improved links between Norwich, the surrounding settlements and the wider Greater Norwich Area;

• Provide tangible landscape, biodiversity, heritage and access/recreation management improvements.

THE PROPOSED ACTION PLAN

Delivering the Strategy

The establishment of a dedicated *Green Infrastructure Delivery Team* is recommended, which would be accountable to the wider Greater Norwich Growth Partnership and capable of co-ordinating and delivering the Green Infrastructure Strategy.

The Partnership has prepared and submitted a Growth Delivery Programme to the Government, which includes a bid for substantial funding for green infrastructure provision and for the establishment of the proposed Green Infrastructure Delivery Team. Reflecting the multi-dimensional nature of green infrastructure, and the potential for multiple social, economic and environmental benefits, a wide range of other funding sources that could support investment in green infrastructure are highlighted.

The planning system provides an important framework within which different components of green infrastructure can be safeguarded and enhanced. The Local Planning Authorities in the Greater Norwich Area will need to set a clear and robust planning framework for the creation, management and maintenance of greenspaces. This framework should include general policies for greenspaces, as well as policies and proposals for specific greenspaces.

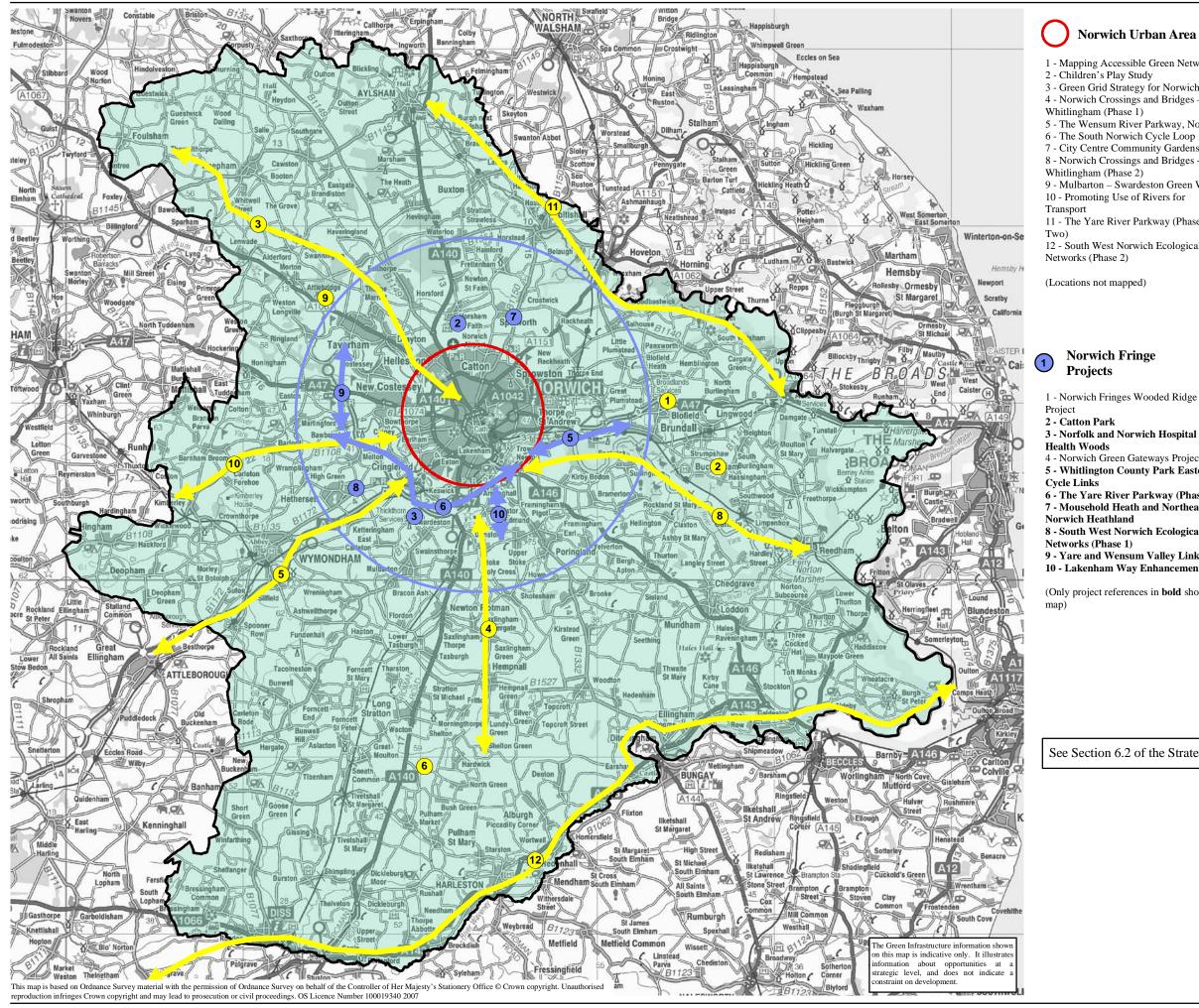
'Traditional' approaches to the long-term management and maintenance of greenspace are no longer sufficient on their own, and new thinking is required to identify and develop alternative models and mechanisms which provide more reliable or more permanent solutions. A number of options that may be relevant for the delivery and future management of greenspace in the Greater Norwich Area are considered. Each of the options has advantages and disadvantages, and the option that is the most appropriate for the management of a particular greenspace will vary depending on the circumstances. The greatest scope for providing ongoing revenue for long-term greenspace management are considered to be those mechanisms that, either alone or in combination, best capture and articulate the wider outcomes achieved through maintaining high quality and accessible green infrastructure.

Proposed criteria for selecting projects to go forward for green infrastructure funding are provided based on identifying the level of potential multi-functional public and environmental benefits that would be delivered. It is recommended that priority should be afforded to multi-functional projects that are located within the proposed Green Infrastructure Network's Sub-Regional and Local Green Infrastructure Corridors.

The potential green infrastructure projects recommended in the proposed Action Plan provide a starting point for consideration and appraisal by the proposed Green Infrastructure Delivery Team. However, other projects of a more local nature, both within and beyond these Corridors, should also be considered where significant multi-functional benefits across a wide range of green infrastructure functions can be demonstrated. Projects that are intended to deliver only limited or single benefits should not be discounted, as these may be crucial in achieving specific aims and objectives for green infrastructure and can help support more multi-functional projects.

The Action Plan

A provisional schedule of potential green infrastructure projects within the Greater Norwich Area to be put forward for funding and delivery by the Government, local authorities, developers and landowners is identified. The schedule is not exhaustive; it is intended to provide an indication of the scale and nature of green infrastructure projects needed to support the needs of people and wildlife in response to the proposed growth in the Greater Norwich Area. The indicative locations of the potential projects are shown on Figure 8.2.



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GREATER NORWICH GREEN INFRASTRUCTURE STRATEGY

September 2007

Norwich Urban Area Projects

- 1 Mapping Accessible Green Networks 3 - Green Grid Strategy for Norwich 4 - Norwich Crossings and Bridges -
- 5 The Wensum River Parkway, Norwich 6 - The South Norwich Cycle Loop 7 - City Centre Community Gardens 8 - Norwich Crossings and Bridges -
- 9 Mulbarton Swardeston Green Way
- 11 The Yare River Parkway (Phase
- 12 South West Norwich Ecological

- 1 Norwich Fringes Wooded Ridge
- 4 Norwich Green Gateways Project 5 - Whitlington County Park Eastern
- 6 The Yare River Parkway (Phase 1) 7 - Mousehold Heath and Northeast
- 8 South West Norwich Ecological
- 9 Yare and Wensum Valley Link 10 - Lakenham Way Enhancements
- (Only project references in **bold** shown on



Norwich Fringe Environs Projects

- 1 Community Woodlands Scheme 2 - The Mid Yare National Nature Reserve 3 - Marriott's Way Route Enhancements 4 - Tas Valley Blue Way 5 - Norwich - Wymondham -Attleborough – Thetford Green Way 6 - South Norfolk Claylands Landscape Project 7 - Rural Settlements Doorstep Greenspaces 8 - Norwich to Broads via Yare Valley Blue Way 9 - North West Norwich Forest 10 - Yare Valley west of Norwich Blue Way 11 - Bure Valley Blue Way 12 - Waveney Valley Blue Way
- (Only project references in **bold** shown on map)

Greater Norwich Area -Wide Thematic Projects

1 - Green Infrastructure in School Grounds Grant Aid 2 - New County Parks 3 - Historic Park Restoration Fund 4 - The Sanctuary Project 5 - Amenity Parks and Allotments 6 - The Greater Norwich Area Waterway Crossings & Gateway Project 7 - Urban Ecological Networks Stepping Stones 8 - Greater Norwich Community Landmarks Project 9 - Green Gym 10 - Environmental Training Programme 11 - Youth Engagement Project 12 - Green Way and Blue Way Route Design Guide 13 - Quiet Lanes Project 14 - Sustainable Transport 15 - Green Infrastructure Guidelines for Developers 16 - Bikes on Buses and Trains 17 - Safe Crossings 18 - River Interpretation Strategy (Locations not mapped)

See Section 6.2 of the Strategy Report for details of the potential projects.

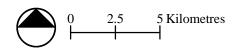


Figure 8.2 Potential Green Infrastructure Projects The potential projects are a response to the key issues and opportunities analysis, and reflect suggestions from stakeholders for actions to address perceived needs for enhanced green infrastructure provision. In many cases, these projects would require feasibility studies, undertaken in consultation with relevant stakeholders, to examine in detail issues of project design, land ownership considerations and sources of funding.

For the first phase of the delivery programme to 2011, thirty-two potential projects, addressing both current needs and paving the way for sustainable green infrastructure provision are proposed. A further fifteen potential projects are proposed to support subsequent phases of the Growth Delivery Programme over the medium (2012-15) and longer term (2016-21).

Next Steps

The proposed Strategy has been designed to inform the planning, delivery and management of green infrastructure in the Greater Norwich Area. The recommended next steps for implementing the Strategy are summarised diagrammatically below:



Embedding the green infrastructure approach into Local Development Framework documents is critical. This would help promote the adoption and use of the Green Infrastructure Strategy as (i) a framework within which land required for new green infrastructure can be identified for allocation within the relevant development documents for the Greater Norwich Area, and (ii) as a tool to assist planners and developers in implementing green infrastructure.

Establishing a Green Infrastructure Delivery Team to co-ordinate implementation of green infrastructure in the Greater Norwich Area is also a key priority. The Delivery Team will need to prepare a Business Plan to identify a clear delivery framework for the implementation of the Green Infrastructure Strategy. The Plan will need to determine detailed costs, identify potential sources of funding and to set out priorities for action and identify project leaders/champions.

Priority actions for the proposed Green Infrastructure Delivery Team to take forward include:

- Raise awareness of the Green Infrastructure Strategy through a public launch
- Deliver one or more of the community-based 'quick win' green infrastructure projects
- Consult key stakeholders and community groups, landowners and developers to identify sitespecific opportunities and aspirations
- Undertake feasibility studies for specific project proposals
- Develop Green Infrastructure guidance for developers and land mangers
- Establish on-going mechanisms for engaging local community/interest groups in project delivery
- Undertake a Norwich Townscape Character Study to inform development options and proposals

Monitoring and Review

It is recommended that a formal review of the Green Infrastructure Strategy is undertaken in 2011 following the first, Growth Areas Fund oriented, phase of project delivery. If required, the Strategy should be revised to reflect changing circumstances and opportunities, and to take account of lessons learnt through the monitoring process.





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