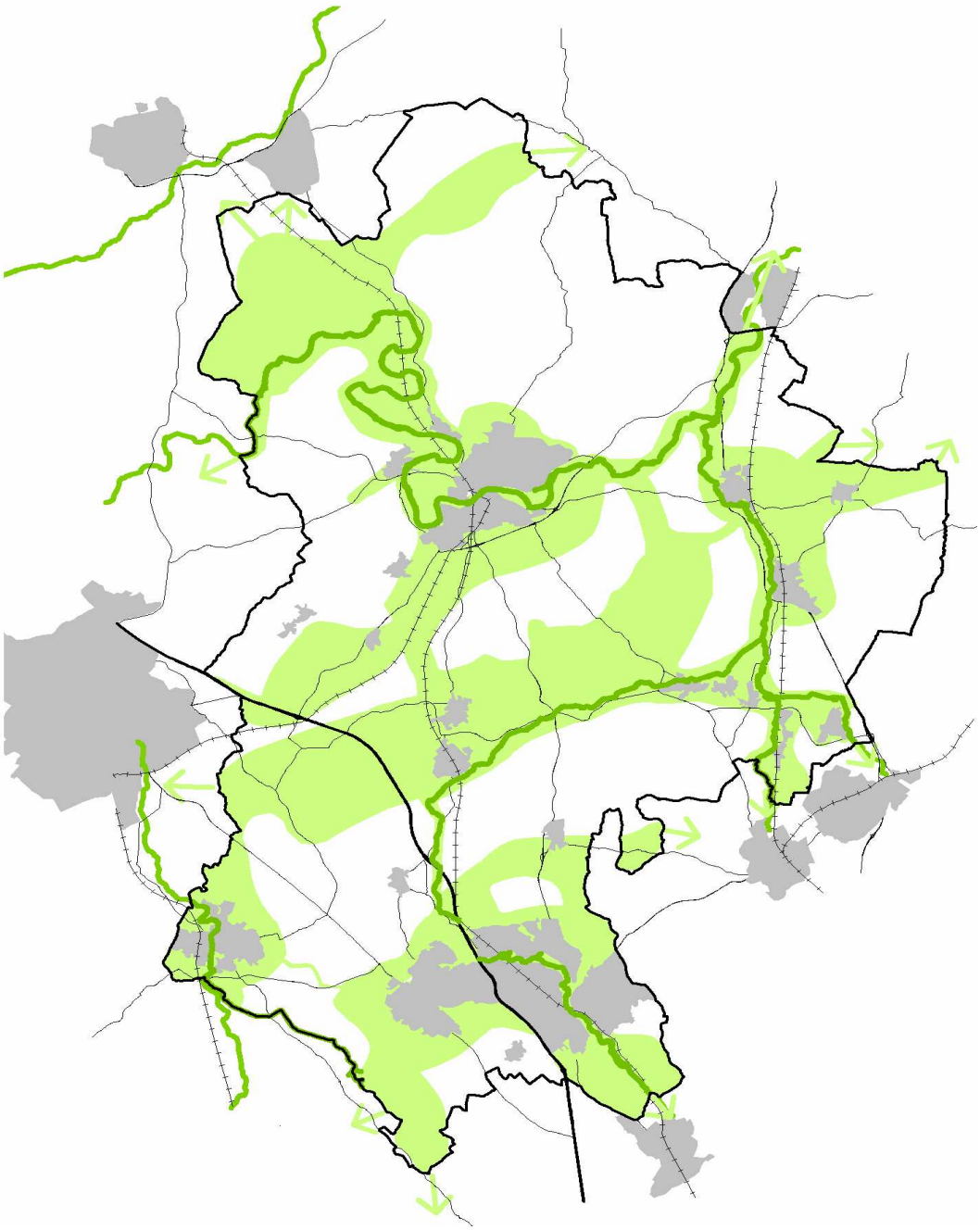
Bedfordshire & Luton Green Infrastructure Consortium

BEDFORDSHIRE & LUTON STRATEGIC GREEN INFRASTRUCTURE PLAN



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FOREWORD

This Plan sets out a proposed spatial vision, backed up by supporting baseline data and analysis, for establishing a strategic green infrastructure framework for Bedfordshire & Luton in the period to 2021. It is based on an independent study by Chris Blandford Associates (CBA) working under the close supervision of a steering group consisting of representatives from the Bedfordshire and Luton Green Infrastructure Consortium - a multi-functional partnership of local authorities, government agencies, countryside and community related organisations. The Consortium encompasses a wide range of interests from within the sector - including spatial planning, landscape, historic environment, biodiversity, countryside access and public open space. This has enabled us to draw from a deep pool of knowledge and experience in the production of this Plan.

The publication of the Milton Keynes & South Midlands Sub-Regional Strategy in March 2005 contained proposals that signalled a period of rapid growth in housing and employment-related development, and associated infrastructure for Bedfordshire & Luton. The Sub-Regional Strategy recognises the need to ensure that development contributes to an improved environment, by protecting and enhancing environmental assets and providing related green infrastructure to meet the needs of existing and expanding communities. The Plan responds to the Sub-Regional Strategy by providing the strategic framework for green infrastructure provision. It is based on the principle of ensuring a net gain in green infrastructure provision to meet growth needs and address existing strategic deficiencies.

It is intended that the strategic green infrastructure framework proposed in this Plan will be used:

- by local planning authorities/Local Delivery Vehicles in guiding the location/pattern of development, and formulating green infrastructure policy in their Core Strategy and associated supporting policies/plans within the Local Development Framework
- by the Consortium to prepare more detailed plans to guide the development/ delivery of the strategic green infrastructure investment priorities identified in the framework plan
- to provide the strategic framework for production of green infrastructure plans at the district and community level, which identify local green infrastructure frameworks and associated investment plans
- as a source of information and tool to guide landowners, planners and developers in formulating land use plans and proposals which maximise environmental benefits and deliver a net gain in green infrastructure.

The need to meet the deadlines for planning the new Growth Areas has meant a demanding timetable for the production of this Plan. Many members of the Consortium have been working to provide the necessary information for this strategic level document. We also acknowledge the flexibility and efforts of CBA in meeting our demanding work programme.

The production of this Strategic Green Infrastructure Plan for Bedfordshire & Luton marks an important first step in the process of proactively planning the future development and delivery of green infrastructure, necessary to build sustainable communities throughout the county.

The preparation of the Strategic Green Infrastructure Plan was financially supported by the following organisations:

Bedfordshire & Luton Green Infrastructure Consortium
February 2007

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We would like to thank all the organisations represented on the Steering Group for their guidance and support throughout the preparation of the Bedfordshire & Luton Strategic Green Infrastructure Plan, in particular:

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On behalf of the Steering Group, we would like to thank representatives of the organisations who participated in the two stakeholder workshops held in February and March 2006, and also those organisations who supplied data and background information for the project.

David Hopkins
Green Infrastructure Officer – Green Infrastructure Consortium
February 2007

SUMMARY

EXECUTIVE SUMMARY

Purpose of the Plan

This Plan has been developed by the Bedfordshire & Luton Green Infrastructure Consortium and is based on work undertaken by Chris Blandford Associates (CBA) to establish proposals for a Bedfordshire & Luton Strategic Green Infrastructure Plan. The aim of the Plan is to develop a spatial vision for establishing a strategic green infrastructure framework, necessary to provide the foundations for sustainable communities across Bedfordshire and Luton in the period to 2021. The Plan is intended to provide the spatial context and evidence base for guiding the location and pattern of development, formulating green infrastructure policy within Local Development Frameworks, and creating a framework for production of local green infrastructure plans, greenspace strategies and other similar documents at the district/borough and community level. It is also intended to be used as a source of information and tool to guide landowners, planners and developers in formulating land use plans and proposals which maximise environmental benefits and deliver a net gain in green infrastructure. Crucially the Plan is intended to provide a framework for action - in identifying opportunity areas which are of strategic importance and offer maximum value in terms of creating multi-functional green infrastructure.

Need for the Plan

The Milton Keynes & South Midlands Sub-Regional Strategy identifies Bedford/Kempston/Northern Marston Vale and Luton/Dunstable/Houghton Regis with Leighton Linslade as major locations for growth within Bedfordshire & Luton. The key objectives of the Milton Keynes & South Midlands Sub-Regional Strategy include:

- *'To ensure that development contributes to an improved environment, by requiring high standards of design and sustainable construction, protecting and enhancing environmental assets (including landscape and biodiversity) and providing green space and related infrastructure (green infrastructure)'*
- *'To create sustainable communities by ensuring that economic, environmental, social and cultural infrastructure needs are met in step with growth'*

The Bedfordshire & Luton Strategic Green Infrastructure Plan has been prepared to respond to these requirements, by providing the strategic framework within which green infrastructure can be identified, prioritised, extended and implemented at the district/borough and community level in concert with the planned growth.

Objectives for the Strategic Green Infrastructure Plan

The objectives and detailed requirements that the Green Infrastructure Consortium set out for this Plan can be summarised as the following:

- to define strategic green infrastructure**,** assess existing provision and identify deficiencies in strategic provision;
- to bring together and map available data and information on existing strategic landscape, historic environment, biodiversity, accessible greenspace and access route assets;
- to integrate opportunities for strategic enhancement of landscape, historic environment, biodiversity, accessible greenspace and access route resources, identified in consultation with stakeholders through workshops;
- using the analysis, to develop an integrated strategic green infrastructure network that links in with similar strategic networks in adjacent counties at the sub-regional scale.

Definition of Strategic Green Infrastructure

Green infrastructure can consist of public and private assets, with and without public access, in urban and rural locations. Examples of strategic green infrastructure assets which were included in the analysis that underpins the Plan include:

- Amenity open space
- Green corridors
- Large urban parks and gardens
- Registered commons and villages and town greens
- Natural and semi-natural habitat for wildlife
- Country parks
- Historic parks and gardens and historic landscapes
- Land in agri-environmental and agricultural management
- Nature reserves
- Sites of Special Scientific Interest and Scheduled Monuments
- Locally designated heritage sites, including county wildlife sites
- Waterways and waterbodies, including flooded quarries
- Public rights of way, cycleways and other recreational routes.

Local scale green infrastructure assets are not addressed in this strategic document. These local assets need to be identified and included in the more detailed local green infrastructure plans, greenspace strategies and other similar documents developed by the Boroughs/Districts for their respective areas.

Environmental Context & Strategic Opportunities

The strategic opportunities for enhancing existing environmental assets that contribute to, and form the context for green infrastructure in Bedfordshire & Luton are assessed in Section 2.0 and illustrated on Figures L,H,B,G, and A. They include:

- Landscape Character
- Historic Environment
- Biodiversity
- Accessible Greenspace
- Access Routes

The Proposed Strategic Green Infrastructure Framework

The proposed Strategic Green Infrastructure Framework is the key part of the Plan. The Framework is presented in Section 3.0, illustrated schematically on Figures F1, F2, F3 and F4 and summarised below:

Aspirations for Green Infrastructure in Bedfordshire & Luton

In line with the Green Infrastructure Consortium's aspirations and agreed definition, it is recommended that the strategic vision for green infrastructure in Bedfordshire & Luton should be for:

A strategically planned and managed network of accessible greenspace and access routes, landscapes, biodiversity and heritage which will meet the needs of existing and new communities in Bedfordshire & Luton by providing:

- *an essential environmental foundation and support system;*
- *a healthy and rich environment;*
- *attractive places to live and visit and a good quality of life;*

- *a sustainable future.*

The green infrastructure network will be protected, conserved, enhanced, and widely known and valued. It will be of high quality and an example of best practice and innovation. The long term maintenance of the network and its constituent elements will be resourced sustainably .The network will be multi-functional and meet a wide range of social, environmental and economic needs. It will connect urban and rural settlements and the countryside, and provide a spatial planning framework to guide sustainable development.

Strategic Objectives

The framework recommends six strategic objectives for integration into Local Development Frameworks and the investment plans of those national, regional and local agencies responsible for delivery of growth communities and environmental management in Bedfordshire & Luton. Objectives are provided in relation to the following:

- Net gain in Green Infrastructure Provision
- Multi-functional Green Infrastructure
- Enhancement of Landscape Character, Historic Environment and Biodiversity Assets
- Accessibility and Connectivity for Human Movement and Recreation
- Environmental Quality and Sustainability
- Community Ownership and Involvement

Limitations of the Strategic Green Infrastructure Plan

This Plan is a strategic level document guided by green infrastructure methodology. There are qualifications to the scope and application of this Plan, which include acknowledgement that the boundaries shown on maps are intended to be soft-edged and indicative; further district and local level green infrastructure planning work will be needed to pick up the level of detail required for implementation at the district and local scale; the supporting text and individual theme maps fill in crucial detail required to interpret the Strategic Green Infrastructure Network; and the white areas shown on Figure F3, whilst not constituting part of the Strategic Green Infrastructure Network, may well hold significance for green infrastructure at a local level or for a particular green infrastructure theme.

The Strategic Green Infrastructure Network

Existing Strategic Green Infrastructure Provision within the Network

Based on the written and mapped analysis in Sections 2.0 and 3.0, Figure F1 shows in simplified form most of the existing green infrastructure assets of strategic significance for Bedfordshire & Luton. This provision, which includes accessible and inaccessible green infrastructure, comprises:

- Accessible greenspace of strategic significance (as defined on Figures G1 and G2)
- Access routes of strategic significance (as defined on Figure A1)
- Designated sites of biodiversity value (as defined on Figure B1)
- Principal river corridors of the Great Ouse, Ivel, Flit and Ouzel
- National Landscape Initiatives - the Chilterns Area of Outstanding Natural Beauty and the Forest of Marston Vale (both defined by the East of England Plan as of particular regional significance for the retention, provision and enhancement of green infrastructure).

Existing historic environment and some landscape assets are not shown on Figure F1, but are considered by the characterisation and opportunity areas in Section 2.3 and 2.4.

Integration of Existing Strategic Green Infrastructure and Opportunity Areas

The pattern of existing green infrastructure assets shown on Figure F1 was integrated with the opportunity area mapping in Section 2.0 to identify areas and linkages of multi-functional strategic green infrastructure provision (see Figure F2).

The Proposed Strategic Green Infrastructure Network

Figure F3 shows the proposed Strategic Green Infrastructure Network for Bedfordshire & Luton.

This is a strategic network of multi-functional areas and corridors, linking and creating publicly accessible greenspace and semi-natural habitats and natural greenspaces. Reflecting its intended multi-functionality, the Green Infrastructure Network will provide a range of strategic functions as set out in the report.

The linkages the Green Infrastructure Network is founded on are of strategic importance as they maintain and enhance the connectivity of green infrastructure between individual Districts/Boroughs, and link with adjacent areas at the sub-regional scale. The linkages are of functional and recreational value for people; they encompass the existing strategic network of bridleway, cycle and footpath routes and navigable waterways that provide access to and enjoyment of green infrastructure areas throughout Bedfordshire & Luton for local communities, walkers, cyclists and horse-riders. The linkages also reflect corridors of strategic importance for biodiversity. They are designed to promote opportunities for the re-creation and linking of habitats to counter the effects of fragmentation and restore losses to biological diversity in ways that enhance the quality and extent of biodiversity resources, whilst helping strengthen overall landscape character. The linkages include the corridors of the major rivers, linking wetland habitats with surrounding natural and semi-natural greenspaces. The corridors outlined embody within them key elements of our historic environment and strategically important rural urban fringe areas. Where gaps in the connectivity of the network have been identified, new linkages are proposed to enhance links between existing and new green infrastructure areas.

The Green Infrastructure Network embodies a mix of areas - some of which require creation of new green infrastructure assets and some of which will require the enhancement of existing sites and assets. A focus on enhancement and creation of green infrastructure in the areas identified will complement and form the foundation for the benefits greater connectivity can bring.

The Strategic Green Infrastructure Network shown on Figure F3 includes the following broad areas and corridors:

- (1) Milton Keynes to Grafham Water Corridor
- (2) Upper Great Ouse River Valley Corridor
- (3) Lower Great Ouse River Valley Corridor
- (4) Ivel River Valley Corridor
- (5) Bedford to Milton Keynes Corridor
- (6) Greensand Ridge Corridor
- (7) Ouzel River Valley Corridor
- (8) Flit Valley Corridor
- (9) The Chalk Arc Corridor
- (10) Leighton Linslade to Dunstable Corridor
- (11) Upper Lea River Valley Corridor

In order that the Green Infrastructure Network can achieve its objectives, it will need to be embedded within a high quality environment outside its boundaries. Therefore beyond the Green Infrastructure Network shown on Figure F3, a key objective is for the strategic conservation and enhancement of the setting and context for the Network. This should involve strategic environmental land management action in the wider landscape, targeted to address opportunities identified in Section 2.0 for:

- Conservation and enhancement of landscape character
- Enhanced management, protection, accessibility and interpretation of the historic environment
- 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 greenspace of strategic significance.

Major growth is planned for Bedfordshire and Luton within the lifespan of this Plan - this is a key driver behind the need to embed green infrastructure as an essential element of existing and new communities. Figure F4 places the Green Infrastructure Network within the context of planned future growth. The Network will play a crucial role (alongside local scale green infrastructure) in providing the necessary foundations to ensure that the planned growth will be sustainable and that the required green infrastructure is in place to secure quality of life for people living in and around the growth locations.

Main Recommendations

- Secure adoption of the Bedfordshire and Luton Strategic Green Infrastructure Plan within the relevant Local Authority Local Development Frameworks, where feasible as a Technical Document

- Secure endorsement of the Bedfordshire and Luton Strategic Green Infrastructure Plan by all key partners, including local authorities and local delivery vehicles (LDVs) and the MKSM Environment and Quality of Life Sub-Group, as the agreed strategic spatial framework for the planning and delivery of the strategic green infrastructure provision within Bedfordshire & Luton in the period up to 2021

- Safeguard and enhance the existing green infrastructure of strategic significance for Bedfordshire & Luton as identified on Figure F1 and in Section 2.0

- Safeguard existing accessible greenspace and access routes of strategic significance identified in Section 2.0 and on Figures A1 and G2, and enhance the quality of these assets where appropriate, taking into account landscape character, historic environment and biodiversity opportunities

- Give priority to the conservation and enhancement of landscape character, historic environment and biodiversity in the opportunity areas identified in Figures L2, H2 and B2, within and beyond the Green Infrastructure Network identified on Figure F3

- Safeguard existing and proposed strategic linkages and corridors identified on Figure F3 and enhance the quality of existing links of strategic significance

- Address the key areas of deficiency in accessible greenspace of strategic significance identified in Section 2.6 and shown on Figure G2, via the targeted provision of new strategic accessible greenspace

- Promote the delivery of new green infrastructure of strategic significance within the Green Infrastructure Network identified on Figure F3

- Use the Bedfordshire and Luton Strategic Green Infrastructure Plan as the spatial context for polices to aid the delivery and planning of strategic green infrastructure in association with new housing and economic growth in the development plan documents being prepared by local planning authorities in Bedfordshire & Luton, as well as in regional and sub-regional plans

- Encourage and support all Local Authorities in Bedfordshire and Luton (including town and parish councils) to develop further detailed green infrastructure plans at a local level using this strategic plan as a framework, in conjunction with local stakeholders

- To consider the areas highlighted within Section 3.9 with a view to establishing whether further action on these issues would be beneficial in advancing the delivery of this strategic plan and the green infrastructure agenda

The Plan also recommends a number of areas for further consideration:

- The Green Infrastructure Consortium should consider the development of a Delivery Plan to identify a clear delivery framework for the implementation of the Strategic Green Infrastructure Plan

- The Green Infrastructure Consortium's potential key role in supporting the co-ordination of green infrastructure planning work across the appropriate levels including district, local and community level green infrastructure planning should be explored further

- Existing standards for informal open space should be subject to review by each of the Borough/District Councils, and revised and new standards, reflecting the findings of PPG17 open space needs assessment studies, should be included in the Local Development Frameworks

- Further consideration should be given to the implications of greenspace sites supporting increasing numbers of users or types of use and the associated potential impacts on quality and function. Consideration should be given to undertaking a needs analysis of demand on accessible greenspace which includes reference to the environmental carrying capacity of key sites

- Requirements for the provision of facilities for open-air sports and other formal recreation activities within greenspace should be assessed at the district and community levels, and integrated into the planning, delivery and management of local green infrastructure networks

- Local green infrastructure plans/greenspace strategies should take into account the needs of diverse communities and disabled and less mobile people in the planning, design and management of greenspace and access routes.

It is intended that the Strategic Green Infrastructure Plan would be reviewed every five years, and updated as necessary to reflect changing circumstances and opportunities.

1.0 INTRODUCTION

1.0 INTRODUCTION

1.1 Purpose of the Plan

1.1.1 This Plan has been developed by the Bedfordshire & Luton Green Infrastructure Consortium[1]. The Plan is based around work undertaken by Chris Blandford Associates (CBA) who were commissioned in January 2006 to prepare a study to develop proposals for a Plan. The Green Infrastructure Consortium was established to promote a strategic and consistent approach to the management, planning and delivery of green infrastructure provision as an integral element of growth and environmental management throughout Bedfordshire & Luton.

1.1.2 The aim of the Plan is to develop a spatial vision for establishing a strategic green infrastructure framework, necessary to provide the foundations for sustainable communities across Bedfordshire and Luton in the period to 2021[2]. The Plan is intended to provide the strategic green infrastructure context and evidence base for guiding the location and pattern of development, formulating green infrastructure policy within Local Development Frameworks, and informing and creating a framework for production of local green infrastructure plans, greenspace strategies and other similar documents at the district/borough and community level including to meet the requirements of PPG17[3]. It is also intended to be used as a source of information and tool to guide landowners, planners and developers in formulating land use plans and proposals which maximise environmental benefits and deliver a net gain in green infrastructure. Crucially the Plan is intended to provide a framework for action - in identifying opportunity areas which are of strategic importance and offer maximum value in terms of creating multi-functional green infrastructure.

1.1.3 The Plan is a strategic level document guided by Green Infrastructure methodology. In line with this, there are limitations to the scope and detail contained within the Plan and there are key qualifications which should be considered when utilising the Plan to guide practical delivery. A full list detailing the limitations of this Plan can be found in section 3.5. The term 'strategic' in the context of this Plan has been defined to mean of county level significance– further explanation of this definition can be found in section 1.3.6.

1.1.4 It is intended that the Strategic Green Infrastructure Plan will be reviewed every five years, and updated as necessary to reflect changing circumstances and opportunities.

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[1] See Appendix A and the Foreword for details.

[2] This timescale is used for consistency with the planning horizon of the draft East of England Plan – the Regional Spatial Strategy for the East of England (EERA, December 2004) and the Milton Keynes & South Midlands Sub-Regional Strategy (ODPM, March 2005)

[3] PPG17 Open Space, Sport and Recreation (HMSO, 2002)

1.2 Need for the Plan

1.2.1 Bedfordshire & Luton is bordered by the four counties of Cambridgeshire, Hertfordshire, Buckinghamshire and Northamptonshire (**Figure C1**). The southern boundaries of Bedfordshire & Luton are only 30 miles from London. The major transport routes provide good connections to the city of London, and much of the county has a high level of outward commuting to London and other centres. Significantly, Bedfordshire & Luton falls within the Milton Keynes & South Midlands Sub-Region, identified as one of four major growth areas in England by the Government's Sustainable Communities Plan[4]. The Milton Keynes & South Midlands growth area has been identified as having a key role in accommodating the growth required to address the strategic challenges facing the South East including increasing housing supply; making home ownership more affordable; tackling transport and other infrastructure issues; addressing issues concerning skills and the labour market; and tackling deprivation and the need for urban renewal.

1.2.2 Within Bedfordshire & Luton, the Milton Keynes & South Midlands Sub-Regional Strategy[5] identifies Bedford/Kempston/ Northern Marston Vale and Luton/Dunstable/Houghton Regis with Leighton Linslade as major locations for growth (**Figure C1**). Strategic Policy 1 of the Sub-Regional Strategy states that growth in these locations is to be focused within existing urban areas, with sustainable urban extensions needed to meet potential development needs.

1.2.3 In the Bedford/Kempston/Northern Marston Vale growth location, Strategic Policy 1 of the Sub-Regional Strategy requires that 19,500 new homes be planned for between 2001 and 2021. Beyond 2021, the Sub-Regional Strategy assumes that approximately 10,000 additional dwellings may be required in the period 2021-2031. The Sub-Regional Strategy supports a continued strategy of environmental regeneration in the Marston Vale and the creation and enhancement of green infrastructure, notably through the Forest of Marston Vale, as a key priority for this growth location.

1.2.4 In the Luton/Dunstable/Houghton Regis (with Leighton Linslade) growth location, the Sub-Regional Strategy requires that 26,300 new homes be planned for in the period 2001-2021. Beyond 2021, the Sub-Regional Strategy provisionally assumes that approximately 15,400 additional dwellings may be required in the period 2021-2031. Due to the lack of capacity within the towns, the Sub-Regional Strategy indicates that a review of Green Belt boundaries around Luton/Dunstable/Houghton Regis will be needed to provide land for sustainable urban extensions to meet potential development needs to 2031. The Sub-Regional Strategy recognises that this is likely to give rise to environmental and

[4] The Sustainable Communities Plan: Building for the Future (ODPM, February 2003)
[5] Milton Keynes & South Midlands Sub-Regional Strategy (ODPM, March 2005) - provides the sub-regional strategy for the period 2001-2021, and a long-term spatial vision for the sub-region towards the year 2031.

landscape considerations, including proximity of The Chilterns AONB. In this context, Local Development Documents for Luton/Dunstable/Houghton Regis and Leighton Linslade are required to set firm guidelines for proactive inter-agency approaches that should develop, *inter alia,* proposals for enhancing the character of and public access to the surrounding countryside within these growth locations.

1.2.5 The East of England Plan[6] also identifies the need for growth outside of the areas defined in the Sub-Regional Strategy, and there are current major allocations at Biggleswade, Stotfold and Arlesey identified in the Mid Beds District Local Plan.[7]

1.2.6 **Figure C1** shows the major housing sites[8] either currently under development or which have been granted planning consent and will be developed in the future. **Figure C1** also shows the areas of search for new housing development around the Luton/Dunstable/Houghton Regis (with Leighton Linslade) growth location, as set out in the Sub-Regional Strategy. More detailed information about housing site allocations and the areas of search for new housing development can be found in **Appendix L**.

1.2.7 Growth in neighbouring counties is likely to have a significant effect within Bedfordshire and Luton, particularly across those areas closest to the borders of the county. The broad location of future growth around the Buckinghamshire / Bedfordshire border to the east of Milton Keynes is shown on **Figure C1**, derived from information contained within the Milton Keynes Local Plan[9] and the Growth Strategy for Milton Keynes (to 2031)[10]. The Sub-Regional Strategy makes provision for 44,900 new homes across the Milton Keynes growth location up to 2021. Growth is also projected north of the county – growth locations are defined at Northampton as well as at Corby, Kettering and Wellingborough. In the period up to 2021 the Sub-Regional Strategy makes provision for 30,000 new dwellings around the Northampton growth location and for 12,800 new dwellings around Wellingborough (where the area of search for new housing development is to the east, north and west of the town, shown on **Figure C1**). Major development to the north will be focused on these defined

[6] As identified in the East of England Plan EIP Panel Report (June 2006) recommended changes to the Draft East of England Plan – the Regional Spatial Strategy for the East of England (EERA, December 2004)

[7] Mid Bedfordshire Local Plan – adopted by Mid Bedfordshire District Council in December 2005

[8] All sites with 150 dwellings or more are shown on Figure C1 – sites with smaller allocations are not shown for reasons of scale and significance.

[9] Figure C1 shows the Eastern Expansion Area as defined in the Milton Keynes Local Plan – adopted by Milton Keynes Council in December 2005. This area is expected to accommodate new housing growth of 2,100 dwellings up to 2011 and 1,900 dwellings post 2011. It also shows the Newton Leys Expansion Area to the south of Milton Keynes, expected to accommodate 800 new dwellings up to 2011 and another 800 post 2011. Shown at the far north end of Milton Keynes is the Northern Expansion Area which is expected to accommodate 455 dwelling up to 2011.

[10] Figure C1 shows "South East Growth Area 1" – a potential growth area identified (for the period up to 2026) in Annex 4 of "The New Plan for Milton Keynes: A Strategy for Growth to 2031" (Milton Keynes Partnership, June 2006). Figure 12.9 of this document outlines plans for a new urban extension within this expansion area, close to Wavendon and Woburn Sands, comprising development of c.7000 homes.

growth locations – however it is likely smaller scale development will also occur in towns such as Rushden and Higham Ferris.

1.2.8 The projected high levels of growth are likely to put increasing pressure on existing green infrastructure assets. This could have significant implications for landscape, historic environment and biodiversity resources, and routes and access to greenspace for informal recreation; all of which are important in maintaining environmental character and the quality of life for communities in Bedfordshire & Luton. In line with the sub-area statements set out in the Sub-Regional Strategy, it is intended that this Strategic Green Infrastructure Plan would be used to inform the review of regional and local policy as it applies to Bedfordshire & Luton to ensure a consistent and targeted approach to meeting growth objectives.

1.2.9 The need to include green infrastructure as an integral part of the planning process is now well defined in adopted and emerging policy at the national and regional level. A synopsis of the national and regional policy context is provided in **Appendix B**.

1.2.10 A significant number of the Government's planning policy statements and guidance notes identify the requirement for local planning authorities to incorporate policies for the protection, enhancement and creation of environmental assets that contribute to green infrastructure within Local Development Documents. For example, PPG17[11] on Open Space, Sport and Recreation requires polices to be developed based on standards for provision of accessible public open spaces, including greenspace; PPS9[12] (Biodiversity and Geological Conservation) requires local authorities to maintain networks of natural habitats by avoiding or repairing the fragmentation and isolation of habitat, undertaken as part of a wider strategy for the protection and extension of open space and access routes.

1.2.11 In line with the national policy framework, Policy ENV1 on Green Infrastructure in the East of England Plan[13] specifically identifies the requirement for '*areas and networks of green infrastructure'* to be *'identified, protected, created, extended, enhanced, managed and maintained throughout the region to ensure that an improved and healthy environment is available for the benefit of present and future communities'* (see **Appendix B** for full details). This regional policy approach is reflected in the Milton Keynes & South Midlands Sub-Regional Strategy[14], key objectives of which include:

[11] PPG17 Open Space, Sport and Recreation (HMSO, 2002)
[12] PPS9 Biodiversity and Geological Conservation (HMSO, 2005)
[13] As identified in the East of England Plan EIP Panel Report (June 2006) recommended changes to Policy ENV1 as proposed in the Draft East of England Plan – the Regional Spatial Strategy for the East of England (EERA, December 2004)
[14] Milton Keynes & South Midlands Sub-Regional Strategy (ODPM, March 2005)

- *'To ensure that development contributes to an improved environment, by requiring high standards of design and sustainable construction, protecting and enhancing environmental assets (including landscape and biodiversity) and providing greenspace and related infrastructure (green infrastructure)'*

- *'To create sustainable communities by ensuring that economic, environmental, social and cultural infrastructure needs are met in step with growth'*

1.2.12 The Sub-Regional Strategy makes the case that the provision of green infrastructure needs to be addressed in planning development so as to ensure a net gain to meet the needs generated by growth, and, where relevant, help to address existing deficiencies

1.2.13 The Bedfordshire & Luton Strategic Green Infrastructure Plan has been prepared to respond to the requirements of this national, regional and sub-regional policy framework, by identifying strategic green infrastructure and providing the framework within which green infrastructure can be identified at the district/borough and community level.

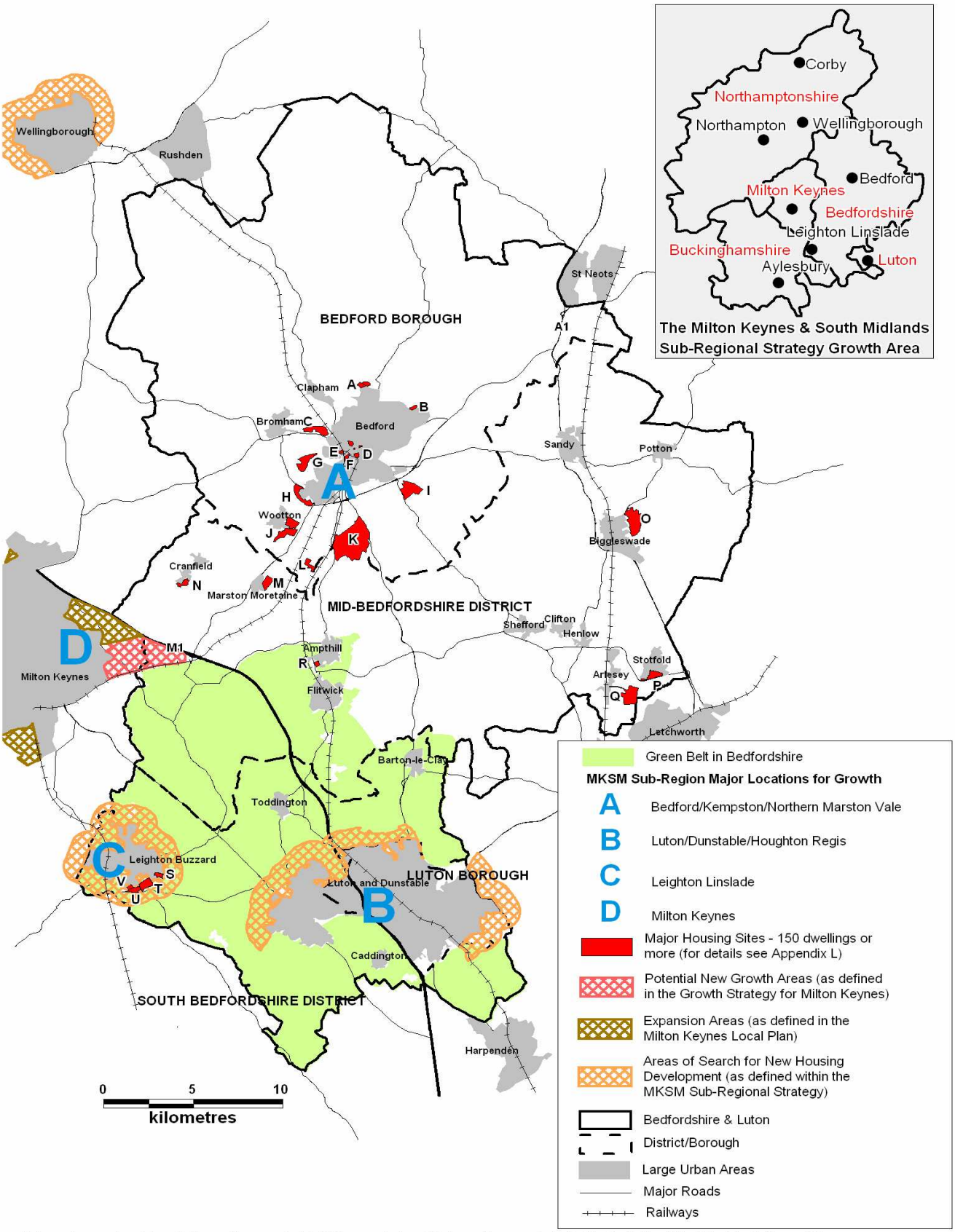

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Figure C1

Planning Context

1.3 Definition of Strategic Green Infrastructure

1.3.1 The Bedfordshire and Luton Green Infrastructure Consortium have defined green infrastructure as follows:

"A strategically planned and managed network of accessible greenspace and access routes, landscapes, biodiversity and heritage which will meet the needs of existing and new communities[15] by providing:

- an essential environmental foundation and support system;
- a healthy and rich environment;
- attractive places to live and visit and a good quality of life;
- a sustainable future"

1.3.2 This definition builds on the common acknowledgement that green infrastructure is based around three key principles

i. Green infrastructure involves natural and managed green areas in both urban and rural settings
ii. Green infrastructure is about the strategic connection of green areas
iii. Green infrastructure should provide multiple benefits where possible

1.3.3 In order to clearly define what we mean by green infrastructure it may be useful to revisit how we define infrastructure. According to Webster's New World Dictionary infrastructure can be defined as "the substructure or underlying foundation, especially the basic installations and facilities on which the continuance and growth of a community or state depends"[16]

1.3.4 *Planning Sustainable Communities – A Green Infrastructure Guide for Milton Keynes & the South Midlands*[17] underpins the application of the green infrastructure concept to strategic planning for growth communities within the Sub-Region. The Milton Keynes & the South Midlands (MKSM) Green Infrastructure Guide states that

[15] The preparation of this strategic level Plan has not included wider public consultation beyond that of the key stakeholder organisations referenced, or a detailed study of the views and aspirations of residents regarding green infrastructure. These elements will be particularly important to the planning and delivery of GI at a local and district level; the development of local and district level GI Plans are flagged up later in this Plan as a key recommendation for future action.

[16] As citied on www.greeninfrastructure.net – a green infrastructure website maintained by the Conservation Fund

[17] Planning Sustainable Communities – A Green Infrastructure Guide for Milton Keynes & the South Midlands (MKSM Environment & Quality of Life Sub Group, April 2005)

'(Green infrastructure) is set within, and contributes to, a high quality natural and built environment and is required to enhance the quality of life for present and future residents and visitors, and to deliver "liveability" for sustainable communities.'

1.3.5 The MKSM Green Infrastructure Guide advises that green infrastructure can consist of public and private assets, with and without public access, in urban and rural locations. It provides a list of assets that contribute to green infrastructure. Green infrastructure assets that have been assessed as strategic in nature and that underpin the Plan analysis include the following examples:

- Amenity open space
- Green corridors
- Large urban parks and gardens
- Registered commons and villages and town greens
- Natural and semi-natural habitat for wildlife (in particular woodland, grassland and wetland)
- Country parks
- Historic parks and gardens[18] and historic landscapes
- Land in agri-environmental and agricultural management
- Nature reserves
- Sites of Special Scientific Interest and Scheduled Monuments[19]
- Locally designated heritage sites, including county wildlife sites
- Waterways and waterbodies, including flooded quarries
- Public rights of way, cycleways and other recreational routes (including disused railway lines).

1.3.6 The definition of the term strategic in the context of this plan is as follows – an asset can be defined as strategic if it holds county-wide significance or if it is likely to attract use from more than just a local catchment or has value beyond its immediate local surroundings. This Plan is designed to examine green infrastructure issues from a Bedfordshire and Luton perspective and thus this is the level at which analysis has been undertaken.

1.3.7 The Strategic Green Infrastructure Plan does not include the following green infrastructure assets identified in the MKSM Green Infrastructure Guide:

- Allotments
- Children's play space

[18] Registered historic parks and gardens are not included on the mapping of existing green infrastructure in this report at the request of the Consortium's historic environment theme leader due to reasons of scale.
[19] Scheduled monuments are not included on the mapping of existing green infrastructure in this report at the request of the Consortium's historic environment theme leader due to reasons of scale.

- Formal sports facilities
- Cemeteries
- Pocket parks

1.3.8 **Local scale green infrastructure assets are not addressed in this strategic document. However, these assets are an important element of green infrastructure, particularly in providing accessible greenspace within and close to urban areas.** Local green infrastructure, often located within walking distance of people's homes, is of central importance for the creation of sustainable communities. These local assets need to be identified and included in the more detailed local green infrastructure plans, greenspace strategies and other similar documents developed by the Boroughs/Districts for their respective areas.

1.4 The Plan Preparation Process

1.4.1 The Green Infrastructure Consortium as a collective has guided the development of this Plan and have provided key input throughout the process. A smaller Steering Group, comprising representatives drawn from within the Green Infrastructure Consortium, carried out detailed work on the preparation of the Plan working alongside Chris Blandford Associates. This Steering Group contained representatives from all the relevant Local Authorities including Bedfordshire County Council, Bedford Borough Council, Luton Borough Council, Mid Bedfordshire District Council and South Bedfordshire District Council. It also included representatives from key voluntary organisations including BRCC, The Greensand Trust and the Wildlife Trust as well as statutory bodies including the Countryside Agency (now Natural England).

1.4.2 The overall approach to the identification of strategic green infrastructure in Bedfordshire & Luton is broadly consistent with similar existing and emerging strategies produced in adjacent counties - notably Cambridgeshire and Northampton. Attention has been given to the mapping of green infrastructure assets across county boundaries to ensure connectivity of networks at the regional scale. Green infrastructure is a cross boundary issue – people regularly cross local authority administrative boundaries to use green infrastructure assets in neighbouring counties – thus it would be sensible to continue to look at areas of linkage and overlap at the boundaries of Bedfordshire and Luton in the implementation of this Plan.

1.4.3 The approach taken in the development of this Plan has centred on the analysis of existing and potential assets which contribute to green infrastructure, rather than an explicitly needs-led approach. For example the preparation of this strategic level Plan has not included wider public consultation,

beyond that of the key stakeholder organisations referenced; or a detailed study of the views and aspirations of residents regarding green infrastructure. These elements will be particularly important to the planning and delivery of GI at a local and district level; the development of local and district level GI Plans are flagged up later in this Plan as a key recommendation for future action. Accordingly it is planned that future updated editions of the Strategic Green Infrastructure Plan will incorporate further information on local need as district and local level GI and greenspace strategies are completed. The asset based approach used in the development of the current edition of the Plan in is in line with guidance produced for green infrastructure planning across the Milton Keynes and South Midlands Growth Area[20].

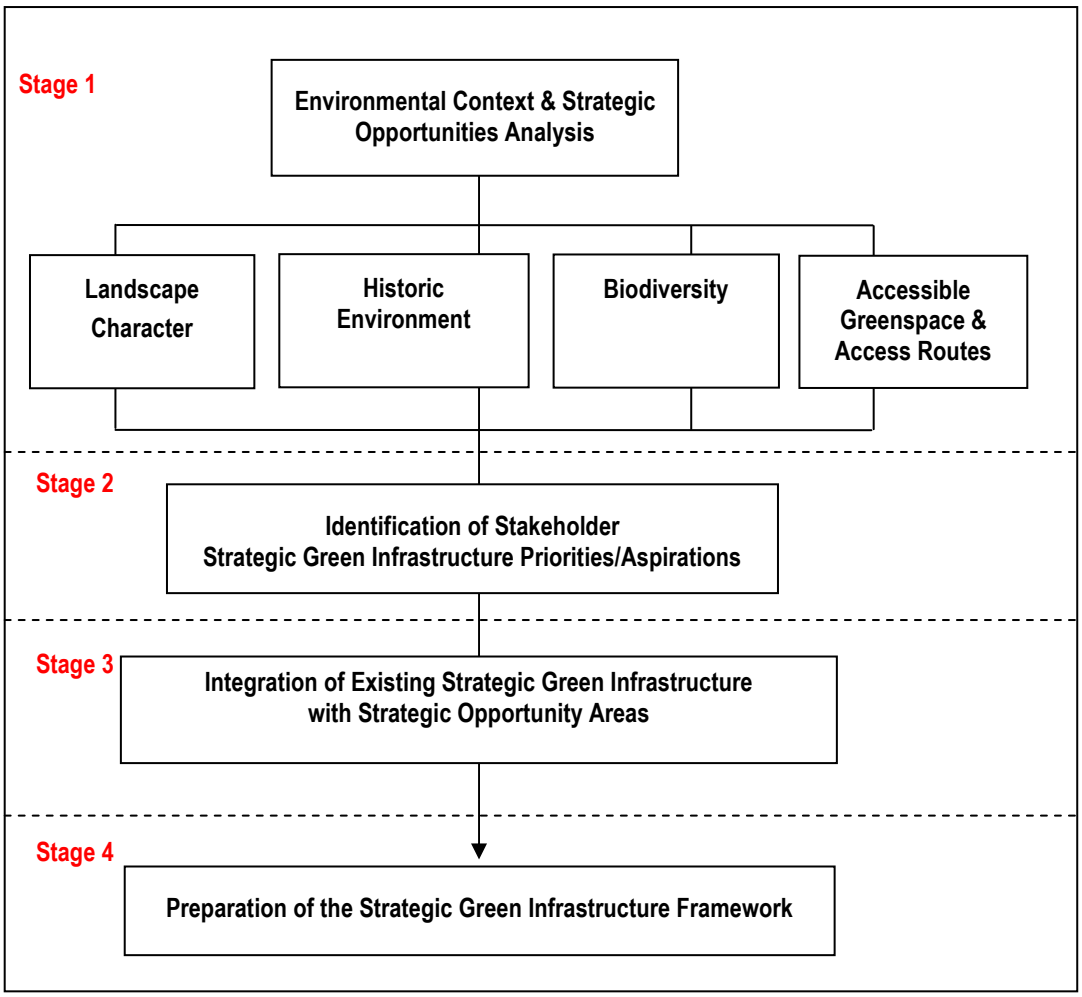
1.4.4 The objectives and detailed requirements that the Green Infrastructure Consortium set out for this Plan can be summarised as the following:

- To define strategic green infrastructure**,** assess existing provision and identify deficiencies in strategic provision
- To bring together and map available data and information on existing strategic landscape, historic environment, biodiversity, accessible greenspace and access route assets
- To integrate opportunities for strategic enhancement of landscape, historic environment, biodiversity, accessible greenspace and access route resources, identified in consultation with stakeholders through workshops
- Using the analysis, to develop an integrated strategic green infrastructure network that links in with similar strategic networks in adjacent counties at the sub-regional scale.

[20] See "Strategic Framework and Delivery Programme" section of "Planning Sustainable Communities: A Green Infrastructure Guide for Milton Keynes & the South Midlands" (MKSM Environment & Quality of Life Sub Group, April 2005)

1.4.5 The preparation of the Plan involved four main stages as outlined in **Box 1.1** and described below.

Box 1.1 - The Plan Preparation Process



Stage 1 – Environmental Context & Strategic Opportunities Analysis

1.4.6 The first stage involved the mapping of the various existing strategic green infrastructure assets in Bedfordshire & Luton, and the analysis of strategic opportunities for enhancing these assets (see Section 2.0). The analysis was based on information provided by members of the Green Infrastructure Consortium for the following key themes:

- ***Landscape Character*** – information co-ordinated/provided by Alison Myers, Bedfordshire County Council (Heritage & Environment Service)

- ***Historic Environment*** – information co-ordinated/provided by David Bevan, Bedfordshire County Council (Heritage & Environment Service)
- ***Biodiversity*** – information co-ordinated/provided by Michelle Edwards, Bedfordshire and Luton Biodiversity Recording and Monitoring Centre, and John Comont, Bedfordshire and Luton Biodiversity Forum
- ***Accessible Greenspace and Access Routes*** – information co-ordinated/provided by Jonathan Woods, Bedfordshire County Council (Countryside Access Service) and Richard Woolnough, Greensand Trust

1.4.7 The information and data used in the mapping and analysis of individual themes is recorded in **Appendix D**, and is also referenced where appropriate as footnotes throughout the report.

Stage 2 - Identification of Stakeholder Strategic Green Infrastructure Priorities/Aspirations

1.4.8 The emerging mapping of strategic opportunities from Stage 1 was integrated onto a composite map over a 1:50,000 OS base to facilitate the preliminary identification of green infrastructure. This map was used as the basis of discussions with stakeholders at an initial workshop in February 2006 (see **Appendix C**), to identify priorities for strategic green infrastructure provision in relation to a wide range of desired functions and benefits.

1.4.9 This stage also involved the preparation of a preliminary map of green infrastructure sites and corridors based on the integration of (i) the mapped data and supporting information for each of the key themes from Stage 1 and (ii) the views and aspirations for green infrastructure provision generated from the first stakeholder workshop. This map, displayed over a 1:50,000 OS base, was used as the basis of further discussions with stakeholders at a second workshop held in March 2006 (see **Appendix C**), to discuss and refine the proposed strategic green infrastructure elements, and to consider their potential for multifunctional use and benefits.

1.4.10 The results of Stage 2 were incorporated into the opportunity analysis presented in Sections 2.0 as appropriate, and used to inform the development of the proposed Strategic Green Infrastructure Framework set out in Section 3.0.

Stage 3 - Integration of Existing Strategic Green Infrastructure with Strategic Opportunity Areas

1.4.11 This stage involved the integration of existing green infrastructure assets with the opportunity area mapping from Sections 2.0, to identify strategic areas and linkages of multi-functional green infrastructure within Bedfordshire & Luton. The results of this integration can be found on **Figure F2.**

Stage 4 - Preparation of the Strategic Green Infrastructure Framework

1.4.12 The final stage involved using the results of the above integration stage to inform the development of the proposed Strategic Green Infrastructure Network map (**Figure F3**) presented in Section 3.0.

1.4.13 More details on the methodology utilised in this process can be found in section 3.7.5

1.4.14 This stage also involved the preparation of the Strategic Green Infrastructure Plan including the supporting evidence base and justification.

2.0 ENVIRONMENTAL CONTEXT & STRATEGIC OPPORTUNITIES

2.0 ENVIRONMENTAL CONTEXT & STRATEGIC OPPORTUNITIES

2.1 General

2.1.1 This section outlines the various existing strategic green infrastructure assets in Bedfordshire & Luton, and provides an analysis of strategic opportunities for adding to and enhancing these assets. The opportunities reflect the current nature of strategic green infrastructure assets in both countryside and urban contexts, and seek to respond to the objectives of relevant plans and strategies. The assets are considered in relation to the following themes:

- Landscape Character
- Historic Environment
- Biodiversity
- Accessible Greenspace
- Access Routes

2.2 Natural Resources

2.2.1 Natural resources, physical systems and processes are important in underpinning the health and integrity of green infrastructure assets, and provide both constraints and opportunities for the delivery of new and enhanced green infrastructure. A useful overview of the topography, geology (and minerals) and hydrology resources in Bedfordshire is provided by the draft County Landscape Character Assessment[21].

2.2.2 Some natural resources in Bedfordshire are renewable whilst others are limited in supply and are non-renewable. Water, although renewable, is limited by availability. The depletion of natural resources is a key concern as population levels and standards of living rise. There is a need to conserve non-renewable resources and encourage the sustainable use of renewable resources, particularly in view of additional pressures from new developments. There are major aquifers in the Chalk and Woburn Sands formations that are exploited for public water supply, and any increase in water abstraction could have serious consequences for precious wetlands and spring fed streams. In addition, specific ecological habitats can only be recreated on certain soil types and this factor can limit opportunities in some areas. It is intended that, wherever possible, the proposed Strategic

[21] Bedfordshire LCA - Volume One : Countryside Study (LUC for Bedfordshire Design Forum, Draft Report Dec. 2003)

Green Infrastructure Network will promote and integrate opportunities for the sustainable management and use of natural resources within Bedfordshire.

Climate Change and the role of green infrastructure

2.2.3 There is growing recognition that climate change is an issue which has the potential to have wide ranging effects on our landscape and on our quality of life. Emerging impacts include rising temperatures; increases in sea level resulting in increased risk of flooding; a net decrease in annual rainfall with hotter, drier, more stormy summers and wetter windier winters[22]; and changes to horticulture and arboriculture including extended growing seasons, changes to the range of plants grown in the UK and water shortages leading to problems maintaining grass swards and plants[23]. Green infrastructure can play a role in helping to mitigate impacts including via the use of green corridors to provide flood storage and conveyance in areas of high risk, ultilising areas of parkland and woodland to counter the "heat island effect" increasingly experienced in urban areas and improved connectivity of areas of high ecological value enabling species greater mobility along networks and facilitating migration to more favourable areas. Attention will also need to be paid in the implementation of this Plan to ensure that climate change impacts are taken into account in the delivery of future green infrastructure – for example in selecting suitable species for planting that can thrive in likely future conditions, and in embracing sustainable maintenance practices and use of natural resources.

Wider issues

2.2.4 Our existing green infrastructure assets and the natural resources they are founded upon are key to much of what we value about our surroundings and central to quality of life for people living in Bedfordshire and Luton. Some of the issues that influence how people use, value and benefit from green infrastructure include public health, wider transport issues, community safety, social inclusion, sport and recreation, development and tranquility. These wider issues have not been addressed in this Plan but nonetheless provide an important context for the role green infrastructure plays in the lives of people in Bedfordshire and Luton.

[22] UK Climate Change Impacts Programme (UKCIP) "Climate Change Scenarios for the UK" November 2002
[23] Bisgrove and Handley "Gardening in the Global Greenhouse- Impacts of Climate Change on Gardens in the UK" Technical Report, November 2002

2.3 Landscape Character

Existing Landscape Character

2.3.1 As described in Volume 1[24] of the Bedfordshire Landscape Character Assessment, the considerable variety in the character of Bedfordshire's landscapes is reflected by landscapes ranging from intimate wooded hills to open arable plateau, river valleys and rolling chalk downland. Geological variation is a fundamental factor in determining variation in landscape character. The chalk landscapes to the south are recognised for their scenic beauty – falling within The Chilterns Area of Outstanding Natural Beauty. Elsewhere, the low-lying vales with their deposits of clays and valley gravels have given rise to a mixed landscape of settlement, mineral extraction and intensive arable crop production. Bedfordshire is characterized by many small settlements, with agriculture as the major land use. The arable plateau in the north and east of the county provide wide panoramas of a rural landscape; elsewhere landscapes tend to be smaller in scale and have more diversity. The landscapes of the river valleys – particularly the Ouse, Ivel, Flit and Lea – together with the escarpments of the Greensand Ridge and the Chiltern Hills are particularly valued for their scenic qualities, rich wildlife and cultural associations. Management to conserve and enhance these key rural areas is a strategic priority. The rural urban fringe landscapes close to the main towns vary greatly in terms of quality but are widely recognized as highly important to people's experiences. The character of each urban fringe will vary depending on the landscape type, but high quality river or downland landscapes are frequently involved.

2.3.2 At the County level, the Landscape Character Assessment identifies and describes 12 generic Landscape Character Types at a scale of 1:50,000 (**Figure L1**). Detailed descriptions assess the character of each type in terms of its key characteristics, location and boundaries, overall landscape character including the physical influences, historic landscape, biodiversity, settlement and built form. The positive features of key significance, strength of character, and condition of each Landscape Character Type is evaluated, leading to identification of a landscape strategy and management guidelines for landscape renewal and in relation to development. Further assessment has been undertaken at the scale of 1:25,000, leading to the production of three stand-alone District studies describing Landscape Character Areas which are locally distinctive subdivisions of the Landscape Character Types.

[24] Bedfordshire Landscape Character Assessment – Volume One: Countywide Study (Draft Report, Prepared for the Bedfordshire Design Forum by Land Use Consultants, December 2003)

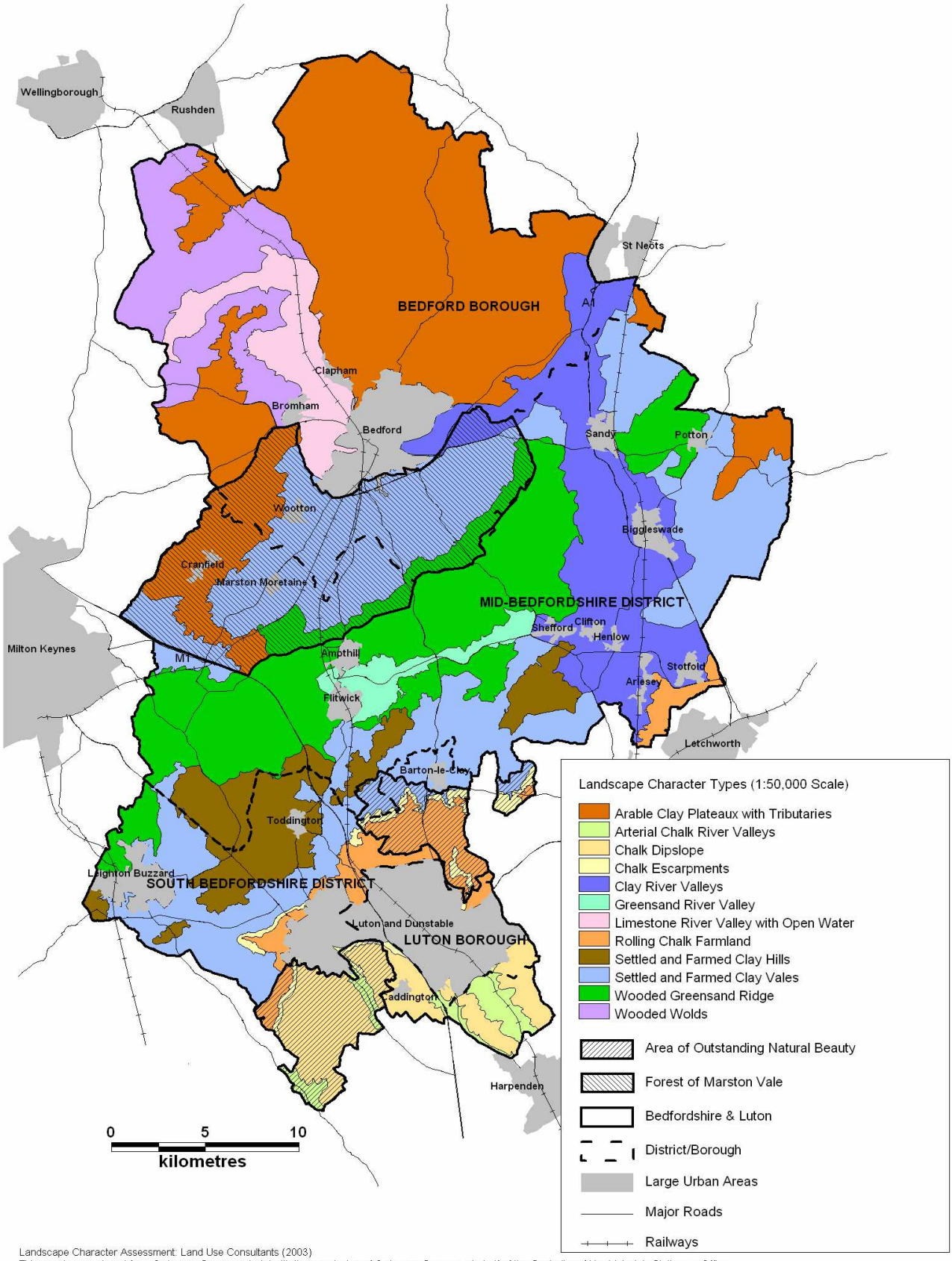


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Figure L1

Existing Landscape -
Character Types and Designated Landscapes

Strategic Landscape Opportunities

2.3.3 **Figure L2** identifies areas considered to be strategic priorities for landscape conservation and enhancement[25]. The Landscape Character Assessment management guidelines were used as a basis for selection, alongside national and county policies (including the County Structure Plan[26] and Mineral and Waste Local Plan[27]) for landscape protection and enhancement. Key priorities were considered to be the landscapes in and around urban areas and landscapes valued for their intrinsic character. An integrated approach to enhancement and management is required. This is particularly important in relation to planning for sustainable landscapes in and around the major growth area locations within Bedfordshire & Luton (see **Figure C1**). As an exemplar, the Forest of Marston Vale was designated to bring integrated landscape renewal within an area extensively changed by the brick industry but also central to a major growth area.

2.3.4 These areas of strategic priority have been broadly characterised into three categories on **Figure L2**

- areas in which the primary aim should be landscape conservation
- areas in which the primary aim should be landscape enhancement
- areas in which the aim should be a roughly equal prescription of landscape conservation and enhancement

2.3.5 It is important to note that these categories are designed to reflect the primary characteristic rather than the exclusive characteristic of these areas. For example, within areas which primarily demand landscape conservation there will be pockets of degraded landscape which will require enhancement; and the same applies to areas in which the primary aim is landscape enhancement, which will also include pockets of high quality landscape which will demand conservation.

2.3.6 There are two nationally recognised areas of strategic importance for landscape conservation and enhancement within Bedfordshire and Luton – the Chilterns Area of Outstanding Natural Beauty and the Forest of Marston Vale. These areas are shown on **Figure L2** and a detailed description of the landscape issues and opportunites relating to these areas can be found in the following text.

2.3.7 The strategic areas for landscape conservation and enhancement shown on **Figure L2** are described overleaf:

[25] Strategic Areas for Landscape Conservation and Enhancement Map (Prepared in conjunction with Bedfordshire County Council Heritage and Environment Service)
[26] Bedfordshire and Luton Structure Plan 2011 (adopted March 1997) – Bedfordshire County Council
[27] Bedfordshire and Luton Minerals and Waste Local Plan (adopted Jan 2005) – Bedfordshire County Council

Strategic Areas for Landscape Conservation

2.3.8 *The Chilterns Area of Outstanding Natural Beauty* – this designation is for landscapes of the highest quality which are of national importance - the primary purpose of which is conservation of the natural beauty of the landscape. As one of the nation's finest landscapes, the Chilterns are considered to be a strategic priority. The AONB is managed in line with its statutory Management Plan[28], which provides a framework within which the local authorities, government bodies and the AONB Conservation Board operate. The continued integrated management of the visual, ecological and historic dimension of the AONB provides an opportunity to demonstrate exemplary approaches to landscape conservation management. Land adjacent to the AONB is also of significance in terms of the potential to protect and enhance the setting of the AONB. The juxtaposition of the AONB, existing communities, and the future growth area north of Luton is a major issue for green infrastructure planning.

2.3.9 *The Greensand Ridge*- this prominent landform is well wooded and forms an important feature when seen from the clay vales. The steep sides and elevated nature of the ridge provide extensive views, e.g. of the Marston Vale across to the Ouse Valley. The landscape is dominated by the number of historic houses present, with their associated parkland and woodland creating an attractive, well maintained landscape. The Greensand Ridge Walk crosses the County along the escarpment – the ridge is easily accessible from Leighton Buzzard, Flitwick and Ampthill and Sandy – and is very important for recreation. It has strong landscape character, but conservation is required to safeguard features such as the parkland trees and pastures and boundary walls. Coniferous woodland is a key characteristic but there will be opportunities to diversify plantations to enhance wildlife habitat and visual amenity. Enhancement and recreation of heathland is also a key priority.

2.3.10 *The Upper Ouse Valley and Estate Wolds* - a distinctive area to the northwest of Bedford; with limestone buildings, walls and church spires creating a strong vernacular style, together with traditional features associated with the river valley and estate landscapes. This landscape has a strong character, with the river valley being visually highly sensitive to change. The area is also extremely important for recreation. There has been extensive development in villages to the south and in Northamptonshire, which adds to the pressure on green infrastructure and has the potential to lead to a decline in visual quality through loss of features and the intrusion of urban influences in the view. Enhancement of the riverside landscape is required, particularly where features such as willows or marginal vegetation has been lost. The wooded and hedged landscape of the Wolds requires conservation to maintain its integrity. Use of the local stone should be considered for new features.

[28] Chilterns AONB Management Strategy -The Framework for Action 2002-2007, May 2002

Strategic Areas for Landscape Conservation and Enhancement

2.3.11 *The Flit Valley* - the fen vegetation, pasture and characteristic trees such as alders and willows have created a distinctive landscape within the narrow valley between Shefford and Flitwick. This is a unique area of limited extent but is important strategically as it offers a contrasting landscape experience within the County and provides opportunities for green infrastructure enhancements to benefit the communities from the above towns, which have both experienced growth and a decline in their landscape setting as a result of development and road construction. Enhancement is required to restore lost features, integrate development and improve the amenity of rights of way. Conservation and expansion of the unique fen and wet woodland habitats is a priority.

2.3.12 *The Lower Ouse Valley* - to the east of Bedford the valley of the Great Ouse broadens to form a more open landscape which, as a result of development and agricultural change, is a less cohesive landscape than the Upper Ouse. The farmed landscape has large geometric fields, often poorly enclosed by hedgerows. Woodlands tend to be scattered blocks, although the parkland and the riverside willows which mark the course of the Ouse are important features. The land has been greatly influenced by urban expansion on the edge of Bedford and towards St Neots. Mineral working has led to the creation of new lakes and other habitat, but the scale of working has transformed the riverside landscape into a complex of lakes and restored ground which can detract from the setting of the river and villages. Highway corridors also dominate, with the A1 and A421 creating visual and noise disturbance. This area has great potential to create extensive green infrastructure. The strategy for enhancement will include the restoration of riverside pasture, planting screen woodlands to mitigate noise, and the planting or restoration of woods and hedges.

Strategic Areas for Landscape Enhancement

2.3.13 *Forest of Marston Vale* – originally an initiative of the Countryside Agency and the Forestry Commission in partnership with Bedfordshire CC, Mid Bedfordshire DC and Bedford BC, the principal aims of which include regenerating the landscape of the Vale by creation of significant areas of woodland and wetland. The Forest is considered to be a strategic area for landscape enhancement within Bedfordshire & Luton. The Marston Vale Trust was established to lead the delivery of environmental regeneration and green infrastructure within the Vale through partnership with the Government, local authorities, developers, businesses and local communities. The strategy for the Forest is set out in the Forest Plan[29] and annual business plans. The Forest Plan is the key local delivery document in terms of green infrastructure across the Marston Vale area - a key driver is the Forest target to achieve 30% woodland cover by 2030. The Forest receives Government funding for green infrastructure projects from the Department of

[29] Forest of Marston Vale Forest Plan 2000 - Marston Vale Trust

Communities and Local Government Growth Area Fund – including for example the purchase of land that will form the core of the proposed 868ha Bedford River Valley Park.

2.3.14 *The Ivel Valley* - this valley has undergone significant landscape change, both in terms of agriculture, mineral extraction and the expansion of towns such as Sandy and Biggleswade. It still retains the qualities of a secluded landscape, with traditional features, particularly pasture and pollarded willows. Access is good but there is scope for landscape enhancement of rights of way, particularly to screen urban intrusion. Enhancement is required to improve the connections between the settlements and the riverside and to create appropriate new features such as wet woodlands or reedbeds within mineral restoration. To the north, the River Ivel provides great opportunities to enrich the urban fringe landscape.

2.3.15 *The Lea Valley* - to the south of Luton countryside varies in character and quality; and includes the high quality landscapes of the Luton Hoo estate, the pastoral landscape of the River Lea and the wooded farmland around Caddington. This area is under considerable pressure from major development such as the M1 widening, expansion of Luton airport and related development. Uncertainty and urban fringe land uses have led to a decline in quality of landscape features. The overall strategy for the area is to renew elements that have been lost or degraded.

Strategic Enhancement – The Countryside in and Around Towns

2.3.16 The landscape quality of the urban fringe countryside is a key influence on how the overall character of Bedfordshire & Luton's landscape is perceived and enjoyed. New development on the edges of settlements has the potential to be visually intrusive, particularly in the early years before landscape mitigation schemes mature. There are many examples of inadequate or inappropriate planting which fail to integrate the development into its setting. In responding to the planned expansion of settlements within the major growth area locations (**Figure C1**), particular attention will need to be paid to the manner in which new development can be sensitively accommodated into the rural - urban fringe landscape in terms of their scale, layout, siting and landscape mitigation. Planning and implementing substantial landscape frameworks in advance of development of the major urban expansions would bring many benefits.

2.3.17 The importance of securing a high quality urban fringe countryside which meets the need of communities is promoted by Government, through the Rural White Paper and in particular through the Countryside Agency (now Natural England) and Groundwork's vision for "The Countryside in and around

Towns"[30]. Urban fringe management has long been a priority for the County Council, District Councils and the Countryside Trusts. Bedfordshire and Luton have extensive areas of urban fringe, most notably in the "Chalk Arc" area encompassing Luton, Dunstable and Houghton Regis. However, the expansion of Bedford, Biggleswade, Sandy and other market towns, particularly Leighton Buzzard and Stotfold, is creating urban influenced countryside at a scale which needs to be addressed strategically. The latter towns are also under pressure from growth outside of the County – e.g. from Milton Keynes and Letchworth respectively. Green infrastructure planning would safeguard vital landscape assets, helping to create a sense of place for new development, whist retaining the link with the past.

2.3.18 Areas of Strategic Urban Fringe Landscape Enhancement are shown in a schematic way on **Figure L2** to highlight the broad areas of opportunity as described above.

Strategic Transport Route Corridor Enhancement

2.3.19 The strategic transport routes are a primary means by which many people see and experience Bedfordshire & Luton. These routes include motorway and A-road corridors such as the M1, A1, A421, A428, A6, A5 and A507, as well as the railway network. Opportunities exist to enhance these corridors in order to improve the overall visual experience, strengthening landscape character and sense of place. Such enhancements may include the ecological management of roadside verges for wild flowers, the extension of roadside verge tree and shrub planting, public art and safeguarding/ enhancing key views of landmarks from route corridors. Landscape enhancement can help contain the impact of the transport corridor and hence enhance the amenity of recreational greenspace or wildlife habitat. Mitigation and enhancement of these road corridors to strengthen landscape character is a priority identified within the Landscape Character Assessment. Corridors considered to be a priority for enhancement are shown on **Figure L2.**

- M1- nationally important route and within the growth area. Opportunities to create a framework for, or gateways to, the Forest of Marston Vale. Planned widening and new junctions could have a high landscape impact and create visual and noise intrusion into otherwise unspoilt landscapes, as well as severing wildlife habitat connections. Green infrastructure gains are required to protect rural amenity e.g. of the Chalk Arc / Chiltern and Greensand Ridge landscapes and to enhance disrupted rights of way and connect habitats.

[30] The Countryside in and around Towns – a Vision for Connecting Town and Country in pursuit of Sustainable Development (Countryside Agency/ Groundwork, 2005). This document promotes a vision for the countryside in and around towns that combines the ten key functions within "multifunctional" landscapes.

- A1 –a nationally important route, but one which is poorly integrated into the landscape. Surrounding land is undergoing change e.g. urbanisation, intensive farming and a decline in horticulture. Opportunities exist to enhance the river landscapes to emphasise distinctiveness e.g. at Stotfold, Biggleswade, Sandy and Roxton. Enhancement would aid integration and improve the urban fringe landscape.

- A421 – western section is a key corridor within the Forest of Marston Vale. Views increasingly of urbanisation and also of incongruous landform associated with landfilling. Green infrastructure will further the aims of the Forest Plan. The new alignment of the A421 has extensive landscaping but additional planting in the wider landscape would aid mitigation, particularly for rights of way.

- A428 – enhancement south of Bedford is required to help conserve the qualities of the rural landscape for example at Cardington – Elstow, where urbanisation is out of scale with the small scale, often pastoral village landscape.

- A6 – this road passes through the most valued landscapes in terms of scenic quality and for recreation. The visual quality of the A6 north of Bedford has declined in recent years through a combination of urbanisation, proliferation of large scale buildings in the countryside and road improvements. The existing landscape is valued for its strong hedgerow boundaries, which are an important feature in the Forest of Marston Vale. The landscapes of the Greensand Ridge e.g. at Clophill/Maulden are extremely attractive and important in terms of tourism and image of the County. North of Luton enhancement is required to reinforce local landscape character.

- A507- this is a strategic east-west route, linking the Bedford-Milton Keynes growth area to the A1 corridor. Enhancements to mitigate the impact of the road on the Greensand Ridge and Flit Valley landscapes would be beneficial in terms of recreational amenity and to restore local distinctiveness. In the east of the County, the road intrudes into the open, agricultural landscape, detracting from the setting of the market towns and their rural fringe. Enhancement would strengthen landscape character in an area subject to further housing growth.

- A5 – this road links two growth areas –connecting north of Dunstable through to Milton Keynes. Views from the road vary – from large scale intensively farmed land and mineral workings to areas enclosed by woodland. Land beyond the immediate corridor is often small scale and of local interest, particularly for landscape history. Enhancement would help to minimise the intrusion of the road on the wider countryside and restore the distinctiveness of the chalk landscape through to the Greensand.

Strategic Agricultural Landscape Enhancement

2.3.20 Whilst not mapped for any specific area, it is recognised that the quality and appearance of the agricultural landscape is crucial as the framework for more specific environmental enhancement. Conservation and enhancement of traditional features of the farmed landscape is a common theme within the management guidelines within the Landscape Character Assessment, particularly for Landscape Character Types assessed as being in poor condition and where intensive farming practices dominate. Due to the intensification of agricultural practices, coupled with the loss of many hedgerow and field trees through Dutch Elm Disease, the landscape has become much more open over the past 30- 40 years. Opportunities exist to enhance the landscape and so enrich the visual experience of the countryside through the Environmental Stewardship and other agri-environmental grant aid schemes - for example by restoring hedgerows and field patterns, reintroducing hedgerow trees, and establishing new copses and woodlands on farmland. In addition, opportunities exist to create richer green lanes through a mixture of tree and hedge planting beside rights of way, in order to 'break up' views across large areas of open farmland. These types of enhancements would help create a richer and more varied complex of views and vistas across the area - for example, in the agricultural landscapes in the north of the County and in the clay hills and vales to the south.

Summary

2.3.21 The considerable diversity of landscapes throughout Bedfordshire & Luton is a key contribution to the character and local distinctiveness of the area. The main strategic areas of opportunity for strengthening landscape character include the enhancement of the river and upland landscapes, the urban fringe, strategic routes and the wider agricultural landscape. The Forest of Marston Vale and the continued conservation of the AONB are also national recognised priorities in terms of landscape enhancement and conservation. It is intended that, wherever possible, the proposed Strategic Green Infrastructure Network in Section 3.7 is set within, and contributes to, the delivery of these strategic landscape opportunities over the long term.

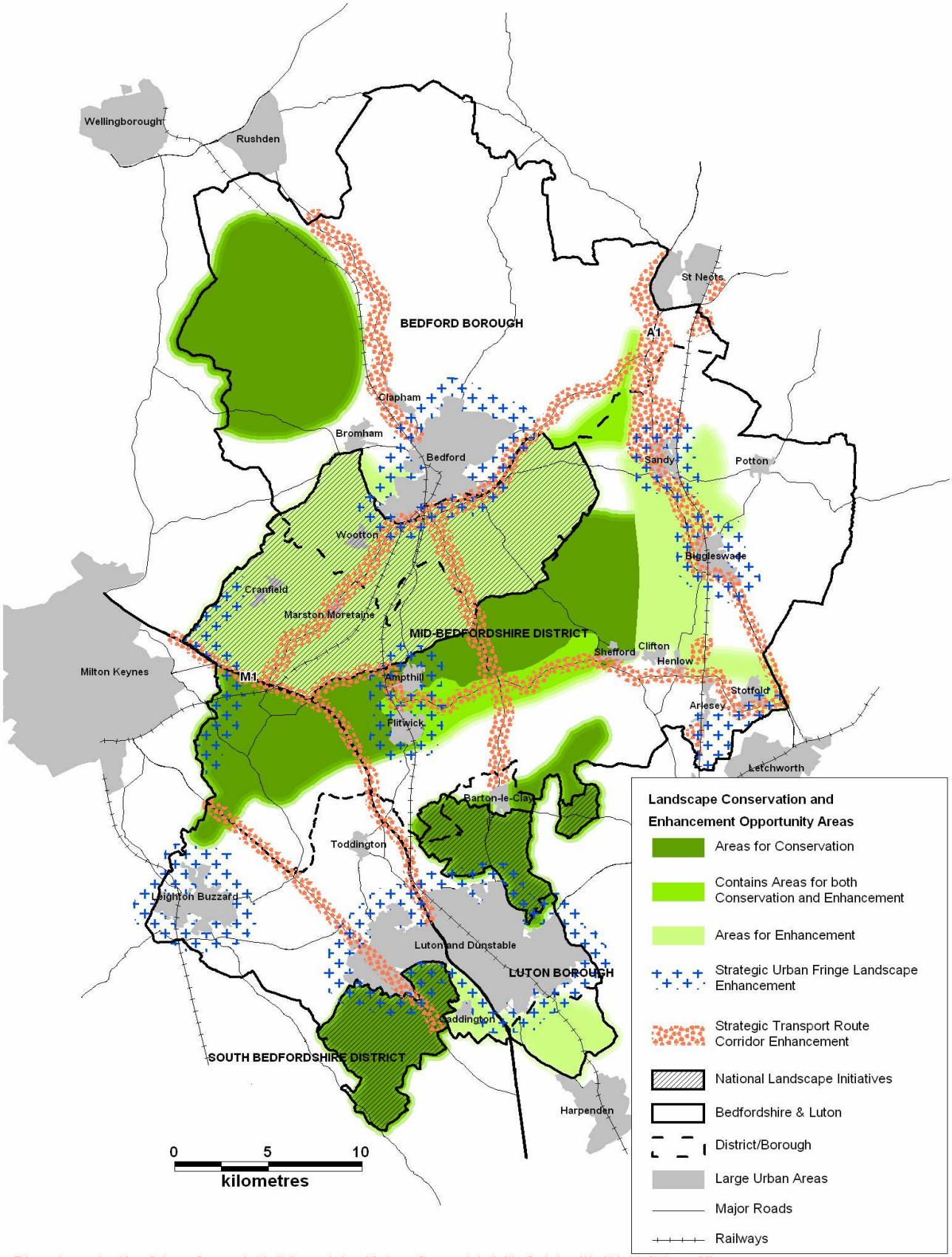

Figure L2

Landscape Opportunities - Strategic Areas for Conservation and Enhancement

2.4 Historic Environment

Existing Historic Environment

2.4.1 Forty eight Historic Environment Character Areas, covering the whole County, have been defined by the Bedfordshire County Council Heritage and Environment Service (see **Figure H1**). These areas provide an integrated spatial framework for understanding and managing the County's historic environment assets – including the built heritage, archaeology and historic landscape. A synopsis of the key known assets and characteristics of the Historic Environment Character Areas, prepared by Bedfordshire County Council Heritage and Environment Service, is provided in **Appendix E**. It was not possible to identify key designated assets meaningfully on **Figure H1** due to scale. However these assets - which include historic parks and gardens, scheduled ancient monuments, listed buildings and conservation areas – were combined with undesignated assets to contribute to the historic environment character and opportunity areas shown in **Figures H1** and **H2**.

2.4.2 The characterisation process was based on the principles of historic environment characterisation developed in the Thames Gateway and elsewhere[31]. The tight timescales involved in the project meant that it was not possible to undertake the detailed analysis of the historic environment that formed part of the Thames Gateway Historic Environment Characterisation Project; inevitably professional judgement played a significant part in defining character areas and describing the historic environment character of those areas. Bedfordshire County Council Heritage and Environment Service and Albion Archaeology worked together to develop the characterisation. Initially character areas were defined on the basis of distinctive geology and topography. This was based on the assumption that the environment, expressed through geology and topography, is a major determinant of past human use of the landscape and thus the identifiable surviving historic environment and historic environment potential. The County's Historic Environment Record and the draft Historic Landscape Characterisation was then used to describe the Historic Environment Character of each of the preliminary areas. Where necessary, the Character Areas were modified to take account of the historic environment information more accurately. The Character Area boundaries should be seen as soft zones of transition between one character and another, rather than hard delineations. The character descriptions are broad and only describe the most prominent elements of the historic environment. The Bedfordshire Historic Environment Characterisation Project, currently in development, will refine the characterisation, providing more accurate definition

[31] For further information on Historic Environment Characterisation see www.english-heritage.org.uk where reports on the Thames Gateway Historic Environment Characterisation Project (prepared by CBA for English Heritage) and other characterisation projects are available.

of the character areas and more comprehensive description of the historic environment character of those areas.

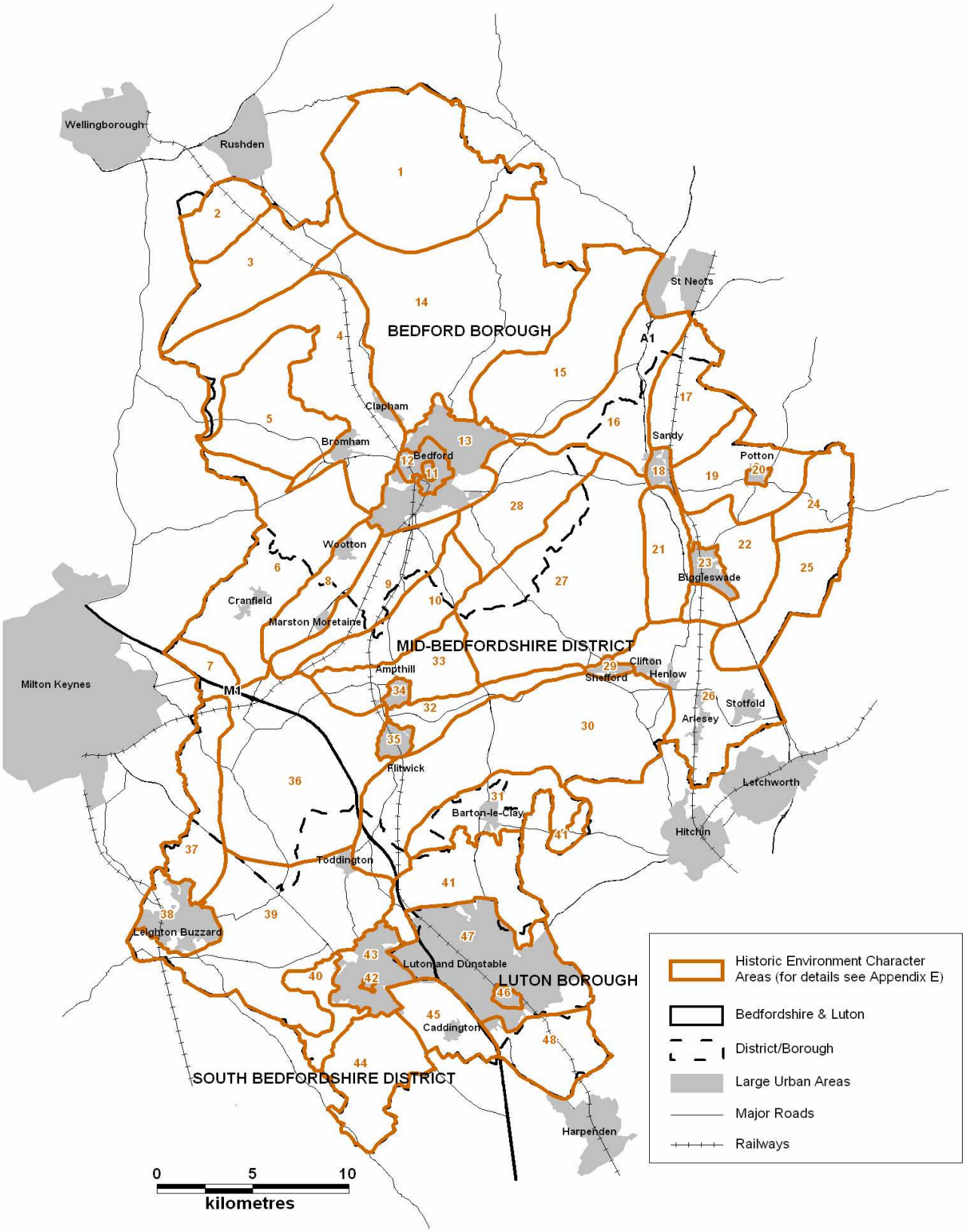

Figure H1

Existing Historic Environment - Character Areas

Strategic Historic Environment Opportunities

2.4.3 **Figure H2** shows the distribution of 45 Historic Environment Opportunity Areas (which include 7 Historic Routeways) identified by the Bedfordshire County Council Heritage and Environment Service[32]. These are priorities at a strategic county level for enhancing the management, presentation, accessibility and interpretation of historic environment assets for the benefit of those living and working in the county and visiting it.

2.4.4 The analysis of Opportunity Areas was part of the same process and was informed by the analysis which led to the Historic Environment Character Areas. The Opportunity Areas were selected on the basis of a number of criteria including historic environment significance, variety or homogeneity of character and assets, visibility, and potential for enhancing management, presentation, accessibility or interpretation.

2.4.5 As with the characterisation, tight timescales meant that it was not possible to undertake a detailed analysis and professional judgement was important. The Bedfordshire Historic Environment Character Assessment currently in development will provide detailed analysis and refine the identification and description of opportunity areas.

2.4.6 The specific opportunities within each of the Historic Environment Opportunity Areas/ Routeways are described in **Appendix F**. These are complemented by key strategic themes and opportunities for enhancing the management, presentation, accessibility and interpretation of the historic environment in Bedfordshire & Luton which can be summarised as:

- Historic routeways - Great Ouse Valley, Ivel Navigation, Great North Road/White Way, Watling Street, Icknield Way / Ridgeway, Theedway, Railways, Grand Union Canal
- History of agricultural development - extant ridge and furrow, earthworks in what is now woodland, influence of the Bedford Estate, the model farms, impact of steam ploughing
- Extractive industries- river valley gravels, brick pits, sand at either end of the Greensand Ridge, Totternhoe clunch, chalk, Fullers earth
- Brick making - initially varied and small-scale, Marston Vale then became the biggest brickfields in Europe producing Fletton bricks
- WW2 / espionage - Tempsford Airfield, Chicksands listening posts, Milton Bryan black propaganda, links to Bletchley Park, Shuttleworth Collection

[32] Historic Environment Opportunity Areas Map and Descriptions (Prepared by Bedfordshire County Council Heritage and Environment Service, Received 28th February 2006)

- US 8th Air Force and RAF Airfields (such as at Podington/Santa Pod, Little Staughton, Tempsford, Thurleigh, Twinwood, Cranfield and Barton)
- Very varied pattern of rural settlement (historic and present-day)
- Industrial development - particularly engineering and agricultural engineering
- History of early man during the Palaeolithic period
- Designed landscapes and country houses
- Social history of immigration
- Great variety of building materials.

Summary

2.4.7 People have been living in the Bedfordshire & Luton area for 125,000 years or more, and have left behind a physical record of their lives and stories. The historic environment that covers much of Bedfordshire & Luton comprises landscapes, towns, villages and buildings, and archaeological sites and features. Bedfordshire & Luton's historic environment is distinctive, diverse and fascinating. The area is noted for the richness and variety of its heritage such as buildings constructed from brick, limestone, chalk, ironstone or timber-framing. Other important features include remains of Prehistoric and Roman settlement in the river valleys; mediaeval earthworks; large country houses, and historic parks and gardens; model villages (at Old Warden and Stewartby) and estate houses; brick and engineering works; the Cardington Airship Sheds; and hat factories in Luton and Dunstable. There are a wide range of opportunities for enhancing the management, presentation, accessibility and interpretation of the historic environment in Bedfordshire & Luton as part of green infrastructure, which can have major quality of life benefits. These opportunities are reflected in the proposed Strategic Green Infrastructure Network in Section 3.7.

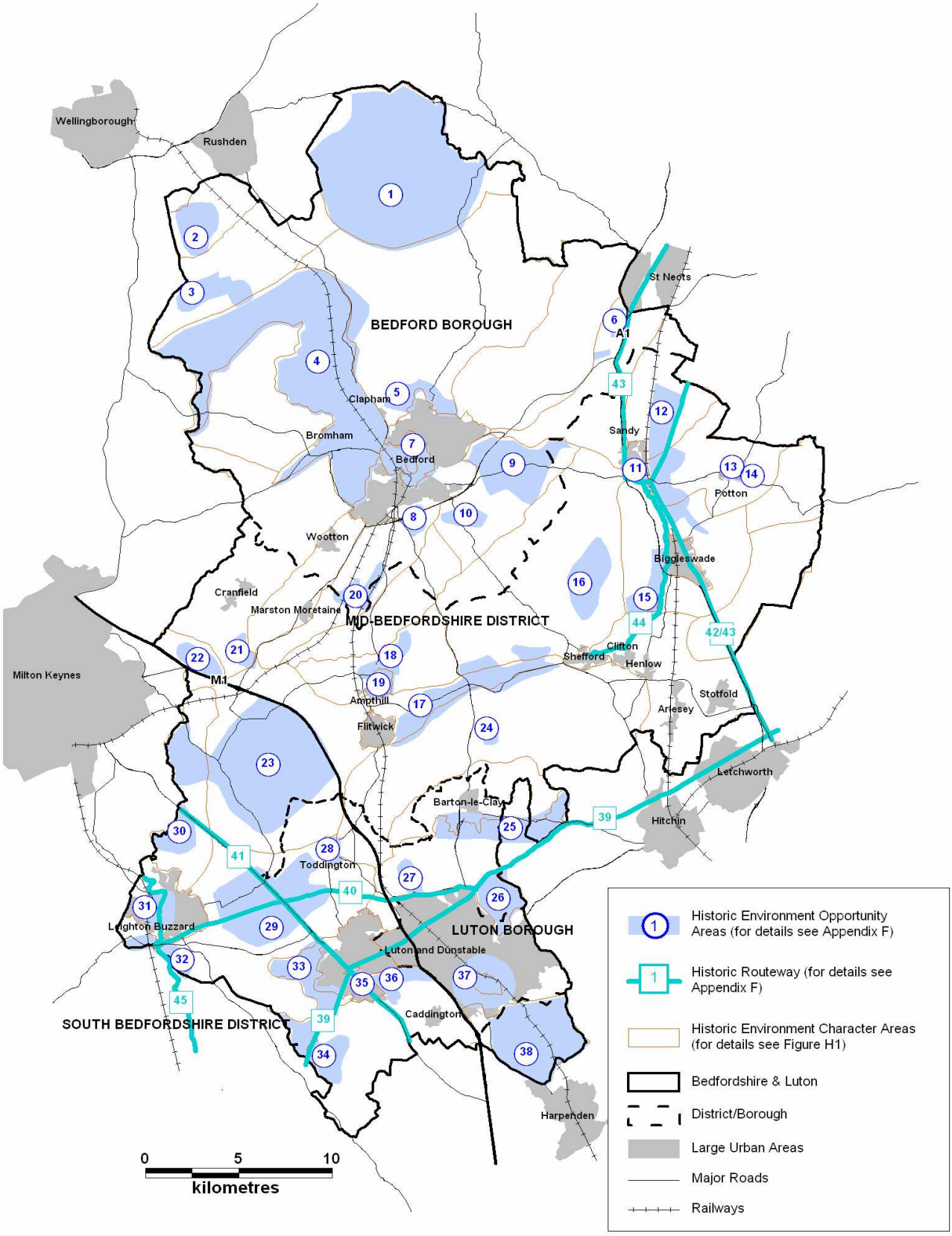

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Figure H2
Historic Environment Opportunities - Strategic Areas for Enhanced Management, Presentation, Accessibility and Interpretation

2.5 Biodiversity

Existing Biodiversity – Designated Sites

2.5.1 **Figure B1** illustrates sites with statutory designations such as SSSIs that are part of the national biodiversity resource. The figure also shows non-statutory sites that are of county value. Together with sites supporting known Biodiversity Action Plan (BAP) priority habitats for conservation and restoration, these statutory and non-statutory sites are considered by the Bedfordshire and Luton Biodiversity Forum 'Rebuilding Biodiversity' project[33] to provide the strategic tier of the biodiversity resource in Bedfordshire & Luton.

Biodiversity Characterisation

2.5.2 A detailed biodiversity characterisation of the Landscape Character Types defined for the Bedfordshire Landscape Character Assessment[34] has been undertaken for the Bedfordshire and Luton Biodiversity Forum 'Rebuilding Biodiversity' project[35]. Appendix 6 of the 'Rebuilding Biodiversity' report illustrates the unique contribution of all parts of Bedfordshire & Luton to biodiversity at a strategic landscape-scale, by providing a detailed description of each Landscape Character Type (**Figure L1**) in terms of:

- Physical characteristics and land use
- The biodiversity characteristics and importance of habitats, species and sites
- Threats and opportunities
- Biodiversity management guidelines and proposals for delivering Biodiversity Action Plan targets for specific habitats and species.

2.5.3 This biodiversity characterisation information thus describes the special features and opportunities in every part of Bedfordshire & Luton, and provides a framework for delivery of biodiversity enhancement initiatives at a local level. It provides the basis for the identification of strategic opportunities for biodiversity enhancement at a countywide scale.

[33] Bedfordshire & Luton Biodiversity Action Plan : Rebuilding Biodiversity (Biodiversity Recording and Monitoring Centre for Bedfordshire & Luton on behalf of Bedfordshire County Council and Bedfordshire & Luton Biodiversity Forum, Draft Report, October 2006)
[34] Bedfordshire Landscape Character Assessment – Volume One: Countywide Study (Draft Report, December 2003) and Volume Two: Priority Area Study (Draft Report, March 2004) – both prepared for the Bedfordshire Design Forum by Land Use Consultants
[35] Bedfordshire & Luton Biodiversity Action Plan : Rebuilding Biodiversity (Biodiversity Recording and Monitoring Centre for Bedfordshire & Luton on behalf of Bedfordshire County Council and Bedfordshire & Luton Biodiversity Forum, Draft Report, October 2006)

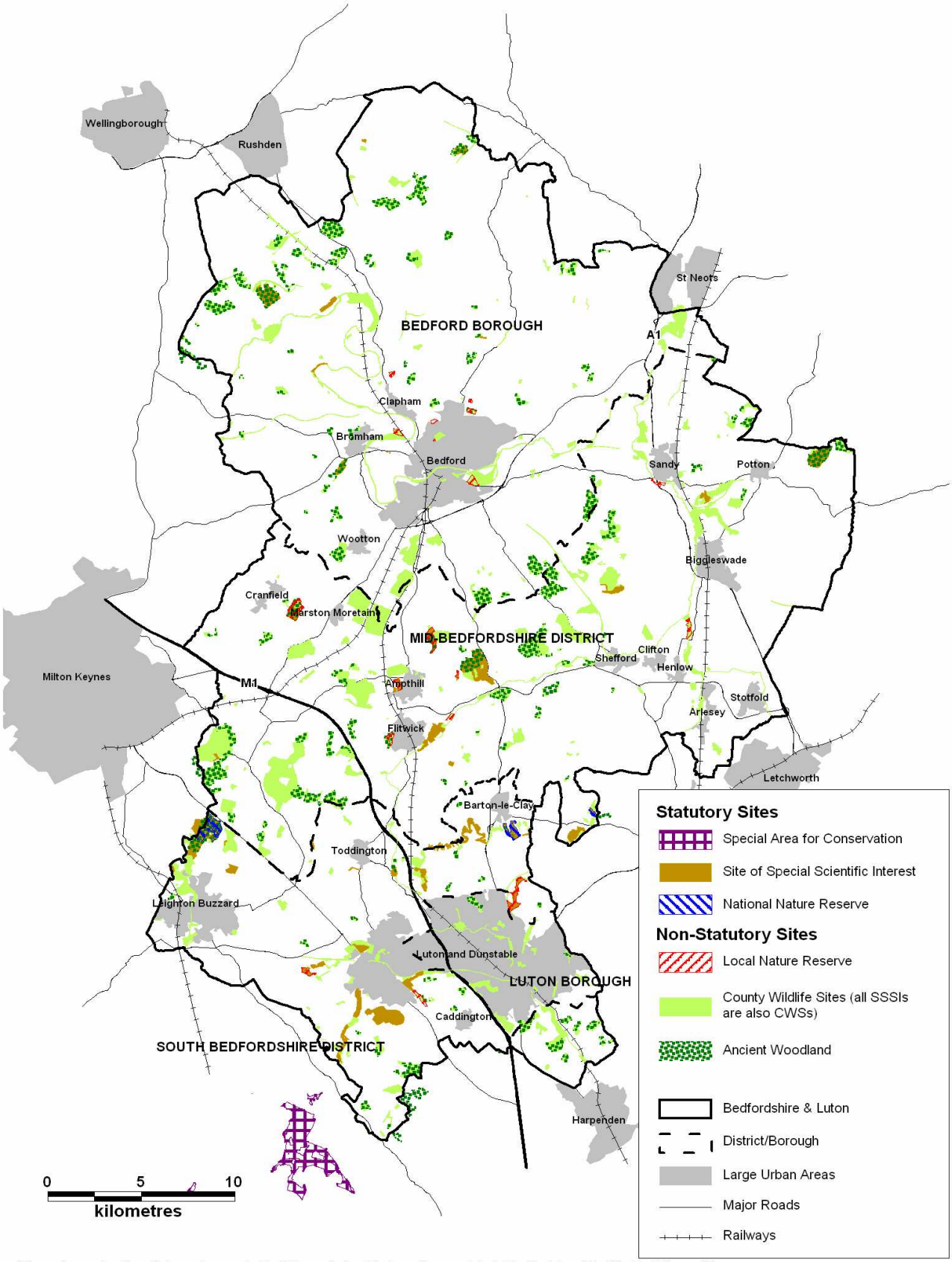

Figure B1

Existing Biodiversity - Designated Sites

Strategic Biodiversity Opportunity Mapping

2.5.4 **Figure B2** illustrates schematically strategic areas of search in Bedfordshire & Luton for biodiversity where habitat enhancement, linkage and creation would be most beneficial. These areas were defined in the draft 'Rebuilding Biodiversity' report, which attempts to identify where national and county BAP targets for conserving and creating new habitat can best be met in ecological terms. The identification of these areas was guided by the Regional Biodiversity Network Map, which underpins the draft East of England Regional Spatial Strategy[36]. The objectives for the biodiversity opportunity mapping were to:

- Show, in broad strategic terms, areas of the greatest potential for the conservation, enhancement, restoration and creation of key habitats
- Outline a future ecological network and provide a means of focusing Biodiversity Action Plan targets in a manner that is accessible and potentially inspirational
- Help crystallize the long-term vision developed in the Biodiversity Action Plan
- Be capable of being used in community and spatial planning as well as by those involved in biodiversity conservation and countryside management
- Be the context for the development by local communities of greater detail and specific projects.

2.5.5 The methodology used to produce the strategic biodiversity opportunity mapping is as follows. Mapped data from a range of sources were fed into the strategic map shown in **Figure B2** to help identify key biodiversity areas, which form the basis of ecological networks. The key biodiversity areas mapped included woodland, wetland and waterway, farmland, and grassland habitats, taking into account national priority species and site designations data. Analysis of the potential for the enhancement, linkage and creation of wetlands, grasslands/heaths and woodlands was carried out separately, and the resultant maps merged to create an overall pattern.

2.5.6 The strategic areas include the enhancement, linkage and creation of:

- Woodland, neutral grassland and hedgerow habitats
- Calcareous grassland habitats
- Heathland and acid grassland habitats
- Waterways and wetlands habitats
- Farmland BAP habitats

[36] Draft East of England Plan – the Regional Spatial Strategy for the East of England (EERA, December 2004)

2.5.7 It is intended that the opportunities highlighted within these areas be reflected in the provision of green infrastructure across Bedfordshire & Luton, linking up with green infrastructure provision outside of the area. However, it should be noted that the strategic areas are not intended to be directly used at a local scale for site planning purposes, without a more detailed examination of opportunities and constraints informed by the strategic map. This would include the need to consider compatibility of the biodiversity opportunities with the objectives of rural land uses such as agriculture and forestry, and land ownership issues.

2.5.8 The strategic areas highlighted aim to create a biodiversity rich tapestry of different elements which will be hosted across a range of land types, including publicly accessible and private land. This will include land being farmed in a commercial manner where opportunities exist for enhancement to biodiversity primarily via management of arable field margins and hedgerows. Whilst the majority of the county is represented by general opportunity areas for Farmland BAP Habitats and Species (shown in cream on **Figure B2**), which have not been carried through to the integration process detailed in section 3.7.5, there will be opportunities to improve the biodiversity of farmland throughout these areas, which should be pursued where possible.

2.5.9 More detailed information relating to the current deficit in terms of biodiversity across Bedfordshire and Luton can be gleaned from the local[37] and national[38] Biodiversity Action Plans. These describe in detail national, regional and local priorities and targets to positively address habitat and species deficit – a summary of which can be found in Appendix 4 of the "Rebuilding Biodiversity" report [39].

Summary

2.5.10 There are a wide range of habitats and features that contribute to the overall ecological value and biodiversity of Bedfordshire & Luton. At the strategic scale, key habitats where enhancement, linkage and creation offer most potential to protect and enhance biodiversity include woodland, neutral grassland and hedgerows, calcareous grassland, heathland and acid grassland, waterways and wetlands and farmland. Rivers in particular provide key corridors for species dispersal and migration. Opportunities to create and extend wetland habitats, including the creation of wet woodland, would not only enhance the overall ecological value of these areas, but also serve in the management of flood alleviation and water storage. There are also major potential opportunities to substantially enhance, extend and link grassland and woodland habitats across the Greensand

[37] Bedfordshire & Luton Biodiversity Action Plan (Bedfordshire and Luton Biodiversity Partnership 2001)
[38] United Kingdom Biodiversity Action Plan (first published in 1994 by the UK Biodiversity Steering Group and subject to a number of subsequent reporting rounds- see www.ukbap.org.uk for details)
[39] Bedfordshire & Luton Biodiversity Action Plan : Rebuilding Biodiversity (Biodiversity Recording and Monitoring Centre for Bedfordshire & Luton on behalf of Bedfordshire County Council and Bedfordshire & Luton Biodiversity Forum, Draft Report, October 2006)

Ridge, in the Chilterns and within Marston Vale. It is intended that, wherever possible, the proposed Strategic Green Infrastructure Network in Section 3.7 is set within, and contributes to, the delivery of these strategic biodiversity opportunities over the long term.

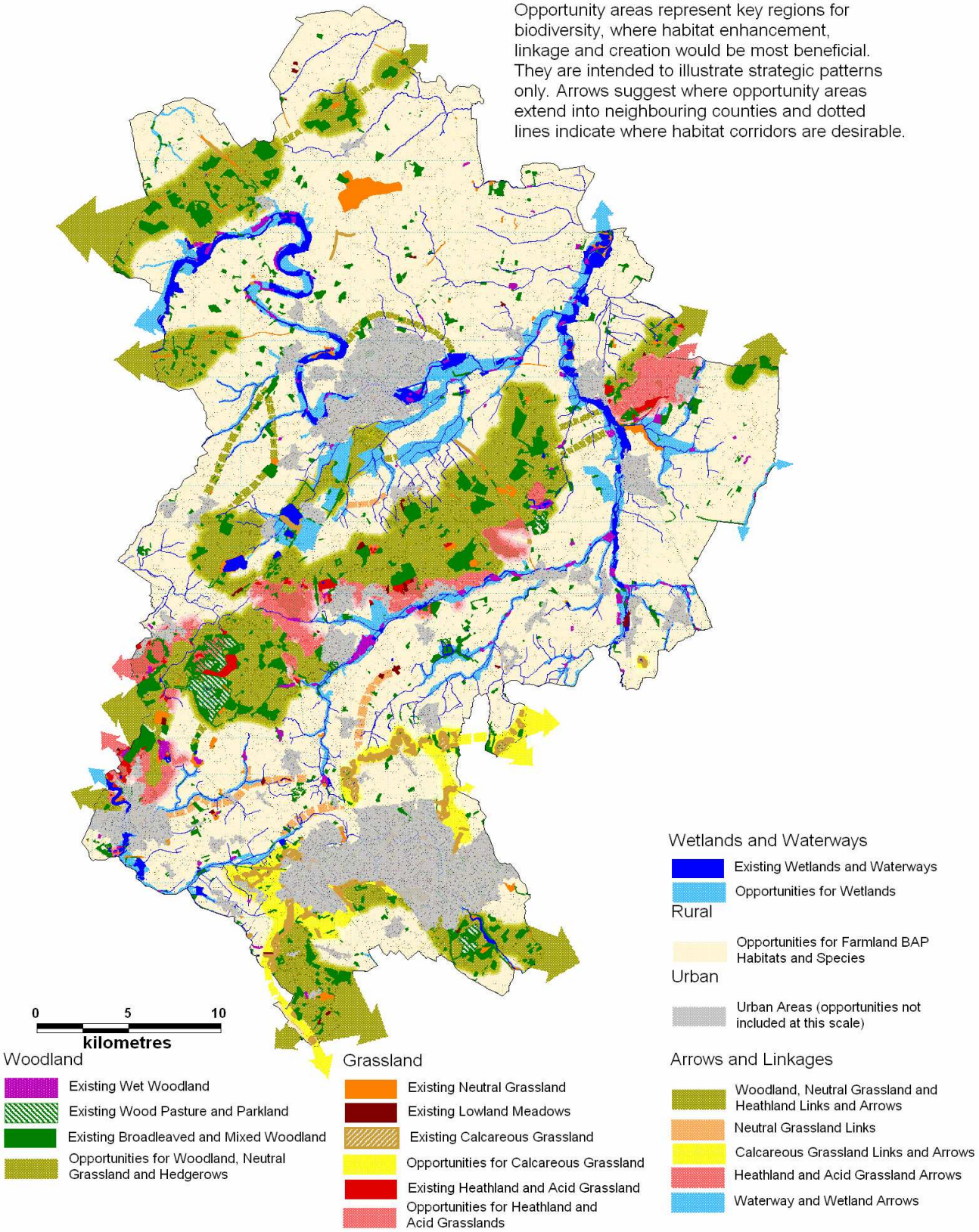

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Figure B2
Biodiversity Opportunities - Strategic Areas for Habitat Enhancement, Linkage and Creation

2.6 Accessible Greenspace

Existing Accessible Greenspaces

2.6.1 'Accessible Greenspace' is used consistently throughout this Plan to mean an area of land that provides opportunities for open access to the public for informal, and in limited examples formal, recreational purposes. **Figures G1** and **G2** map existing accessible greenspace of strategic significance and of sub-regional significance. The main types of greenspace within Bedfordshire & Luton include country and urban parks, natural and semi-natural greenspaces, green corridors and amenity greenspaces. Much of the greenspace outside of urban areas provides key destinations for visits to the countryside for informal recreation activities.

2.6.2 Deficiencies in accessible greenspace provision for local communities in Bedfordshire & Luton are examined in the strategic accessible greenspace needs assessment set out later in this section and is represented on **Figure G2.**

Strategic Accessible Greenspace Assessment Methodology

2.6.3 PPG17[40] requires Local Authorities to undertake local assessments of need, audits of provision and setting of standards for the quality and quantity of open space. Some of these are underway in Bedfordshire but none were available for this study. These local studies will be used as they become available to inform the more detailed green infrastructure studies being undertaken at District and Borough level and, where relevant, revisions of later drafts of the Strategic Green Infrastructure Plan.

2.6.4 For this strategic study the overall approach to the assessment of accessible greenspace for informal recreation purposes within Bedfordshire & Luton was developed by the Steering Group based on the approaches advocated in the following published national guidance:

- PPG17 (Planning for Open Space, Sports and Recreation) companion guide 'Assessing Needs and Opportunities'[41]
- The Town & Country Planning Association's 'Biodiversity by Design'[42] guidance
- English Nature's 'Accessible Natural Greenspace in Towns and Cities' guide[43].

[40] Planning Policy Guidance 17 Planning for Open Space, Sports and Recreation (ODPM, 2004)
[41] Planning Policy Guidance 17 Planning for Open Space, Sports and Recreation : Companion Guide - Assessing Needs and Opportunities (ODPM, 2004)
[42] Biodiversity by Design: A Guide for Sustainable Communities (TCPA. 2004)
[43] Providing Accessible Natural Greenspaces in Towns and Cities: A Practical Guide to Assessing the Resource and Implementing Local Standards for Provision (English Nature, 2003)

Greenspace Typology

2.6.5 PPG17 defines open spaces as including both civic spaces and greenspace. Greenspace is defined as relating to both publicly accessible and private spaces. Private spaces are relevant to sports facilities, but less so to this study's prime consideration of accessible greenspace for informal recreation. Based on the PPG17 Open Space Typology[44], the following greenspace types are included in the assessment:

- Urban parks and country parks
- Natural and semi-natural greenspaces
- Green corridors
- Amenity greenspace

2.6.6 For this strategic study, it should be noted that the following greenspace types are not included in the assessment[45]:

- Outdoor sports facilities
- Provision for children and young people
- Allotments, community gardens and urban farms
- Cemeteries, disused churchyards and other burial grounds.

Hierarchy of Accessible Greenspace Sites

2.6.7 The method for identifying accessible greenspace sites of strategic significance within Bedfordshire & Luton involves an assessment of accessible greenspace sites based on a hierarchy of provision as detailed in the PPG17 Guidance. This hierarchy takes into account a range of factors including size, effective catchment, the range of facilities and levels of management. This assessment was undertaken by the Consortium in conjunction with the greenspace officers from the Districts and Boroughs as part of a provisional study of Strategic Greenspace and Access within Bedfordshire & Luton[46].

[44] Planning Policy Guidance 17 Companion Guide : Assessing Needs and Opportunities - Annex A Open Space Typology (ODPM, 2004)
[45] It should be noted however that many of the strategic greenspace sites identified and assessed as part of this Plan are multi-functional, and therefore as a secondary function may well be used for one or more of the range of uses set out in 2.6.6 as being excluded from this study. For example Rowney Warren has as its primary function woodland for informal recreation but also includes formal mountain bike facilities.
[46] Bedfordshire & Luton Greenspace and Access Study for Green Infrastructure Planning (Supplied by Bedfordshire County Council to CBA, January 2006)

2.6.8 Three categories of the hierarchy were identified within Bedfordshire and Luton, however both the Town and Country Planning Association and English Nature (now Natural England) also identify a category of larger sites of above 500ha. within their standards[47]. Although no sites within the County were identified within this sub-regional provision category, three sites within the sub-region within 10km of the boundary have been included in the assessment. The categories defined within the hierarchy are:

- Sub-regional Provision
- Strategic Provision (i.e. of borough / district significance)
- Neighbourhood Provision
- Local Provision.

Only the top two categories of the hierarchy are utilised in this strategic study. It is recognised that in relation to the more local sites, the levels and quality of provision will be influenced by the emerging greenspace strategies being produced by the borough and district authorities in accordance with PPG17 guidance.

Catchment Areas

2.6.9 Each category within the hierarchy has a notional catchment area that people should reasonably have to travel to reach the site. It was recognised that in some cases people needed to travel long distances to access high quality sites and this under-provision also led to some fragile sites being damaged by over visiting. The target catchments have been set to reduce travelling times to assist with sustainability targets and overcome damage to sensitive sites. It is recognised that catchment distances as used in this report do not take account of barriers such as rivers, canals, railway lines and motorways or the extra time taken for travelling in some urban areas, all of which can have a significant impact on travel times. The sensitivity of sites needs further work; with many of the sites on the data base being Sites of Special Scientific Interest, containing Ancient Monuments or provided by nature conservation organisations as nature reserves. These catchment distances are applied to each site to identify gaps in existing provision to inform the Strategic Green Infrastructure Network proposals in Section 3.0.

[47] Biodiversity by Design: A Guide for Sustainable Communities (TCPA. 2004)

Audit of Existing Strategic Accessible Greenspace Provision

Sub-regional Greenspace Provision

2.6.10 Sub-regional greenspace provision is defined as large areas and corridors of linked largely accessible semi-natural habitat, but also including some areas not accessible to the public that contribute to the overall environmental quality of the greenspace. These areas are primarily providing for informal recreation with some non-intensive active recreation uses, and a range of car parking and other facilities are provided at key locations. Most greenspace at this scale of consideration will typically be in excess of c.500ha and the Town and Country Planning Association suggest they will have a target catchment of 10km[48].

2.6.11 No sites meeting this description were identified in Bedfordshire and Luton, but in order to encompass consideration of this scale of provision within the context of the wider Milton Keynes & South Midlands Sub-Region large areas of greenspace within 10km of Bedfordshire & Luton were included in the analysis. These are shown in red on **Figure G1.** The analysis shows that the majority of Bedfordshire & Luton is not within the 10km catchment of large-scale strategic accessible greenspace, including in particular the main settlements of Bedford and much of Luton, and most of the market towns and large villages in Mid Bedfordshire.

2.6.12 Taking into account the needs of communities in growth areas within the wider Milton Keynes & South Midlands Sub-region, there is a strong case for the provision of accessible greenspace of sub-regional significance within Bedfordshire & Luton. There is emerging work to create an 868 hectare Bedford River Valley Park close to the River Ouse, extending Priory Country Park out to the east of Bedford towards Willington. This work, led by the Marston Vale Trust, has the potential to address this deficiency around the Bedford and Mid-Beds areas by establishing a new asset of sub-regional significance. To the south of the county there are no current plans for development of a new sub-regional scale greenspace asset; though the emerging work around the Chalk Arc initiative has the potential to help meet identified deficiency by creating new accessible greenspace and linking this with existing provision.

Visitor Attractions

2.6.13 Bedfordshire and Luton contain major visitor sites which are of strategic importance. They serve the local area and draw in people from neighbouring areas. Some attract visitors from the rest of the UK

[48] Biodiversity by Design: A Guide for Sustainable Communities (TCPA. 2004)

and abroad. These sites have high numbers of visitors, and act as a gateway to Bedfordshire and Luton. A preliminary list of major visitor sites is given below. This list is drawn from local knowledge rather than set criteria. Such criteria and a definitive list could be produced in more detailed studies. The sites chosen all contain significant areas of greenspace, some of which can be accessed outside of the restricted areas for which an admission fee must be paid. Many of these sites are designated as registered historic parks and gardens. The major visitor sites within Bedfordshire & Luton include:

- Whipsnade Wild Animal Park
- Woburn Abbey and Safari Park
- Wrest Park Silsoe
- The Shuttleworth Collection / Swiss Garden
- The Lodge Sandy – RSPB Reserve
- Moggerhanger House[49]

These sites are shown on **Figure G1** for reference and listed in **Appendix K**. These sites are not included in the assessment as they charge for access but nevertheless have an important role to play in provision across Bedfordshire and Luton.

[49] Moggerhanger House operates largely as a private conference centre but public tours are available of the house and the tea rooms and bistro are open to the public. The grounds of the House, Moggerhanger Park, offer open public access, free of charge.

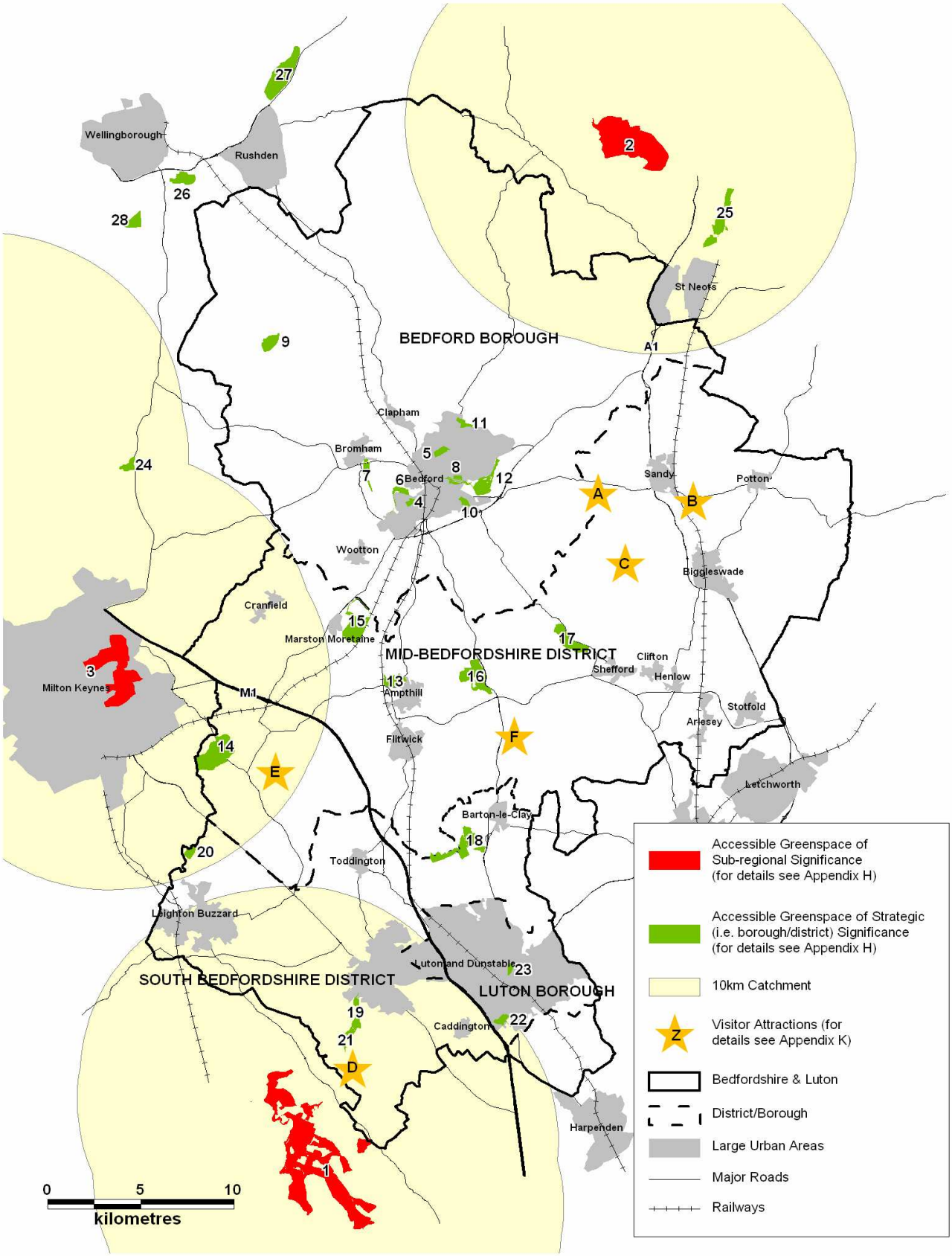

Figure G1

Accessible Greenspace of Sub-regional and Strategic Significance

Strategic Greenspace Provision

2.6.14 Strategic greenspace provision is defined as the network of accessible greenspace such as Country Parks or large urban parks that are of strategic significance in the context of the Borough/District councils within Bedfordshire & Luton. Most greenspace at this scale will attract a high number of users and provide a range of facilities or attractions. The Town and Country Planning Association suggest that an appropriate catchment for strategic sites of this nature is 3.2km[50]. **Figure G2** shows the strategic sites in orange with the 3.2km catchment in beige. The sites are also listed in **Appendix H**.

2.6.15 These sites vary in terms of what each one can provide as regards facilities, activities and accessibility – this impacts on usage levels with many sites experiencing high levels of use and others underused, often due to a lack of facilities or relative remoteness.

2.6.16 In many cases these strategic sites are designated for their landscape, archaeological or wildlife significance and need to be buffered from neighbouring agricultural or urban environments to maintain and enhance their qualities. These designated sites in particular struggle to support current high levels of use and will not be able to sustain the likely increased future public usage.

2.6.17 Many of these strategic sites would benefit from improved connectivity with other sites and the neighbouring communities. The provision of interlinking green corridors would enhance the availability and accessibility of safe, open family-friendly spaces, and provide access for natural space enhancement and wildlife movement. Opportunities exist to link access to these sites from strategic access routes, which when considered together as inter-dependent elements can provide a countryside facility to the public which can make a significant contribution to quality of life and meet a range of needs.

2.6.18 The analysis shown in **Figure G2** shows that there are a number of strategic greenspace sites, distributed across the county and on its boundary with other authority areas. **Figure G2** shows there are clear gaps in provision in terms of access to strategic greenspace for major populations of the county in Leighton Buzzard, Toddington and Houghton Regis in South Beds; around Cranfield in the Mid Beds area; as well as throughout the Ivel Valley corridor including Stotfold, Arlesey, Biggleswade, Sandy and Potton.

2.6.19 **Figure G2** highlights the key areas of deficiency in strategic accessible greenspace. In order to arrive at these key areas of deficiency, a 3.2km radius was drawn around each of the large urban settlements

[50] Biodiversity by Design: A Guide for Sustainable Communities (TCPA. 2004)

(i.e. those with a population above 3750) to highlight those areas which do not fall within the catchments of existing strategic accessible greenspace. Essentially these areas are the priority areas of search for provision of new strategic greenspace, to meet current identified deficiencies around the large urban areas of Bedfordshire and Luton. These areas have been fed through into the integration process shown in **Figure F2**. This analysis is based on existing population levels – it will be necessary in future editions of this Plan to re-examine provision in order to take account of impacts of future growth within the county.

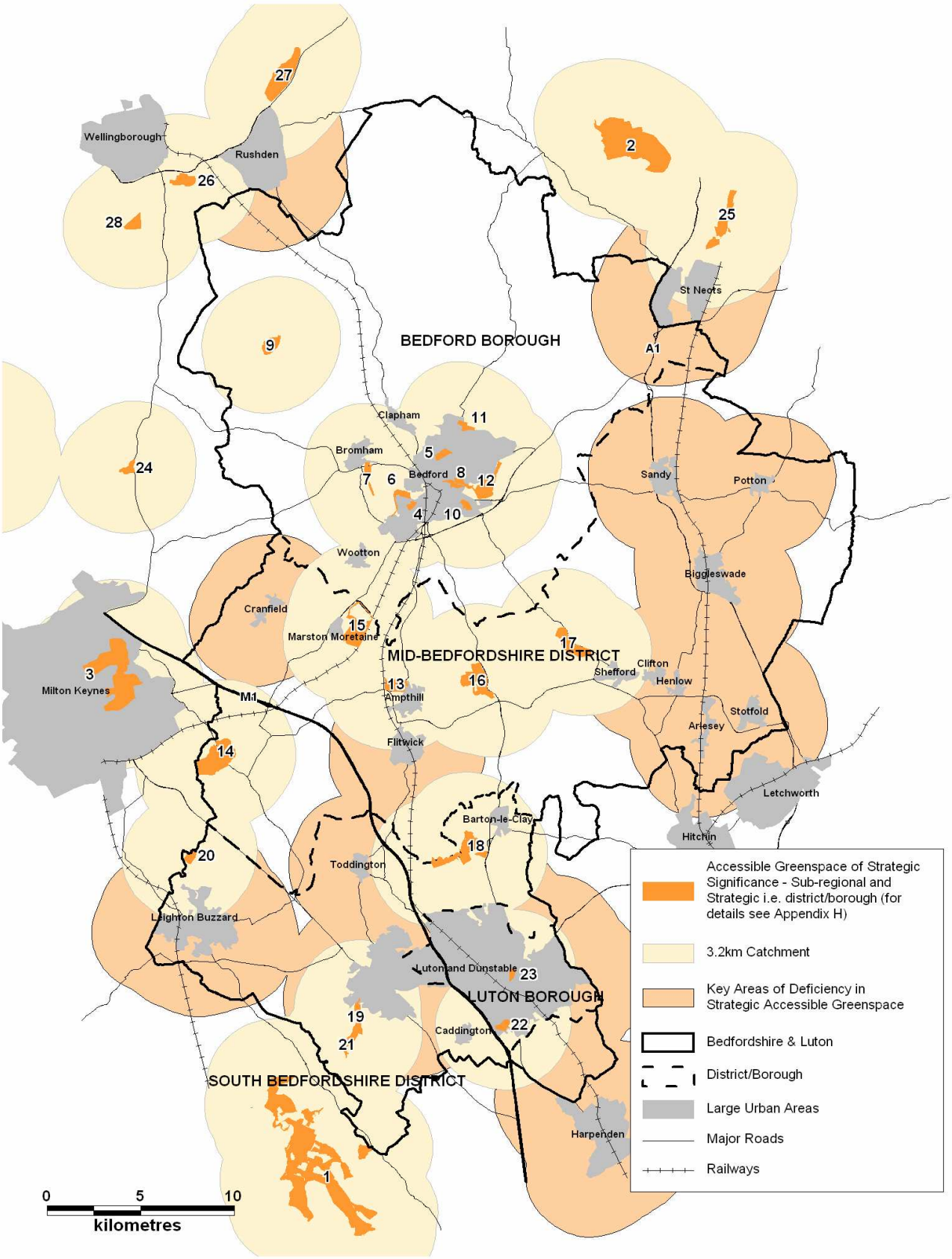

Figure G2

Accessible Greenspace of Strategic Significance Assessment

Carrying Capacity

2.6.20 This assessment does not take into account the environmental carrying capacity of sites to accommodate unlimited numbers of users or types of use. As indicated in section 2.6.16, many greenspaces are designated for their wildlife value (such as SSSI/County Wildlife Sites etc), contain sensitive historical earthworks or because of ground conditions may be more suitable for access in the summer than in the winter. It may be that some sensitive sites, although they are available for visiting by the public, should be removed from the assessment. This assessment also does not take into account the number of people living within the catchment. For example, a single site might cover a large part of Luton in its catchment, but that single site could not support the level of population or their evolving trends of usage. There are some sites that are already considered to be at or above their sustainable carrying capacity and this will need to be taken into account when planning new provision.

Standards of Informal Open Space Provision

2.6.21 Documents such as Biodiversity by Design do not propose a level of public open space per 1,000 population for specific types of site that a development of a given size is required to deliver through the planning process. However, some of the Borough/District Councils in Bedfordshire & Luton have developed their own minimum standards for the provision of new urban/ rural 'informal open space' in their Local Plans. These current standards are:

- Mid Beds District - 0.8ha per thousand population for informal open space (not clear if rural or urban)
- South Beds District - 0.93ha per thousand population for informal open space (urban)
- Bedford Borough – 0.1ha per hundred dwellings for informal play space and 0.2ha. per hundred dwellings for amenity space.

2.6.22 No informal open space standards are included in the adopted Local Plan for Luton Borough.

2.6.23 Whilst these standards potentially contribute to the provision of accessible green infrastructure they are not in themselves green infrastructure standards. Green infrastructure is much more than solely open space provision for people; it also takes into account the conservation and enhancement needs of landscapes, historic features and wildlife habitats. The Green Infrastructure Network is therefore required to be more extensive than any provision for just public open space.

2.6.24 As Local Development Frameworks (LDFs) are prepared, the existing standards for informal open space will need to be subject to review by each of the Borough/District Councils. Revised and new standards, reflecting the findings of PPG17 open space needs assessment studies, would need to be included in the LDFs and used to secure developer contributions towards informal open space provision through the planning process. These standards should reflect the complete range of open space from neighbourhood to sub-regional provision, and reflect the need to contribute to substantially increased levels of strategic accessible greenspace to address current and projected deficiencies in provision.

Summary

2.6.25 At the sub-regional level of provision, the assessment has identified that there is currently a lack of large areas and corridors of linked accessible semi-natural greenspace within Bedfordshire & Luton. As indicated in 2.6.12, emerging developments to create the Bedford River Valley Park have the potential to help meet this deficiency in the Bedford area.

2.6.26 At the strategic level of provision, most of the network of country parks have been established for many years, until the establishment of the Millennium Country Park in the Marston Vale in 2000 and more recently the Biddenham Loop Country Park to the west of Bedford. These sites attract large numbers of visitors, with most sites attracting over 250,000 visits a year and figures as high as 1,000,000 estimated for Dunstable Downs. Coverage is not complete, with poor provision in east Bedfordshire (along the Ivel Valley), Leighton Buzzard, Houghton Regis and Flitwick South. There is a large gap in availability in the largely tranquil area of North-East Bedfordshire; however this area is sparsely populated and therefore has not been selected as a priority area in terms of new provision. Luton is poorly provided with accessible greenspace relative to its large population, and has limited space for new sites. Although there are important areas of chalk grassland that are available around Luton, facilities are few. Two of the existing country parks are considered by the Consortium to be at capacity with plans being drawn up for alternative provision in the vicinity to safeguard the conservation interests of the sites. In line with the national trend, the longer established sites have suffered from low capital investment and a squeeze on maintenance budgets.

2.6.27 In relation to provision for the major urban areas, Bedford is better provided than Luton with respect to urban parks, and this imbalance is accentuated by the greenspace areas along the River Ouse that cuts through the Town. In Luton there is a smaller and more fragmented corridor following the River Lea. The lack of opportunity for new greenspace provision within the built up area in Luton adds further impetus to the need for substantial new provision to be incorporated in future growth areas within South Beds District.

2.6.28 Future work should be undertaken to review the carrying capacity of strategic sites, and where feasible these studies should be undertaken at a local level including engagement with local communities.

2.6.29 The areas of deficiency of strategic accessible greenspace identified in this assessment are fed through to the integration process to guide the identification of new areas of accessible green infrastructure provision in Section 3.0.

2.7 Access Routes

Existing Access Routes

2.7.1 The existing access routes in Bedfordshire & Luton are shown on **Figure A1**. These include the network of national and regional cycle routes; well used and widely promoted footpath and bridleway routes which were created to promote the county's landscape and historical features; and navigable waterways that provide strategic links between individual Districts/Boroughs within Bedfordshire & Luton and with neighbouring areas at the Sub-Regional scale. These routes provide strategic access opportunities for walkers, cyclists, equestrians and water-craft users and link with the wider Rights of Way Network in Bedfordshire & Luton.

2.7.2 The Rights of Way Network provides an important element of the overall jigsaw which when taken together makes up the strategic access routes network. This network is considered to constitute an important access resource across the county, providing immediate and local access for communities to the countryside on their doorstep. The strategic context of this network is addressed below in section 2.7.4

2.7.3 Gaps in the connectivity, availability and quality of the strategic access network for local communities in Bedfordshire & Luton are assessed in the strategic access route assessment below.

Strategic Access Routes Assessment

Assessment Methodology

2.7.4 For this strategic study, an access route of strategic significance is defined as a recreational bridleway, cycle route, footpath or waterway that attracts a significant proportion of users from throughout Bedfordshire & Luton and also from further afield, and therefore has a large effective catchment. This study has also defined access routes as being of strategic significance where their creation was based on the strategic intention of promoting key landscape and historical features, and as such have been publicised across the county and beyond. More local routes that tend to attract almost all of their users from a particular area such as a neighbourhood, parish or village are not considered to be strategic, and are thus not considered by this assessment. However the Rights of Way Network is considered to offer a key role in terms of providing links between strategic routes and addressing connectivity deficits and so is included for reference to provide a complete, joined up picture.

2.7.5 The overall approach to the assessment of access routes of strategic significance for informal recreation purposes within Bedfordshire & Luton was developed in conjunction with the Steering Group, based on adaptation of the approaches set out in the PPG17 (Planning for Open Space, Sports and Recreation) companion guide 'Assessing Needs and Opportunities'.[51] Attention has also been paid to ensure consistency with the Bedfordshire County Council "Outdoor Access Improvement Plan"[52] which has reviewed public usage of the access network throughout the county.

2.7.6 As discussed in 2.7.4. the method for identifying access routes of strategic significance involves an assessment of access routes based on their primary function, level of recreational use and how widely the route is promoted. This approach is considered to reflect the specific circumstances within Bedfordshire & Luton, and to be consistent with the aim of identifying strategic access to inform the Strategic Green Infrastructure Plan.

Access Route Typology

2.7.7 The typology includes all routes for non-motorised forms of access. The following access route types[53] are included in the strategic assessment:

- Strategic bridleway routes – comprising horse riding routes (also providing access to off road cyclists)
- Strategic cycle routes – comprising recreational routes for cyclists
- Strategic footpath routes – comprising functional and recreational footpath routes as defined above
- Strategic waterways – comprising navigable river/canal routes for watercraft
- Rights of Way Network – comprising the strategic routes above in addition to a wider county network.

Analysis

2.7.8 The following analysis identifies gaps in linkages within the existing strategic access network to support the recommendations for potential new linkages as part of the Green Infrastructure Network proposals in Section F3. In addition to identifying gaps in the connectivity and availability of the network, the analysis also assesses the accessibility to the strategic access route network for users.

[51] Planning Policy Guidance 17 Planning for Open Space, Sports and Recreation : Companion Guide - Assessing Needs and Opportunities (ODPM, 2004)
[52] Bedfordshire Outdoor Access Improvement Plan 2006-2011- Bedfordshire County Council. Produced following guidelines from the CROW Act 2000 and adopted in August 2006.
[53] The Bedfordshire County Council's Countryside Access Service provided the majority of the access route data. Additional route data, including data for access routes outside of Bedfordshire & Luton, was created by CBA and added to the County Council's database.

Audit of Existing Strategic Access Provision

2.7.9 Existing access routes that provide linkages of strategic significance in Bedfordshire & Luton are shown on **Figure A1** and listed in **Appendix J**.

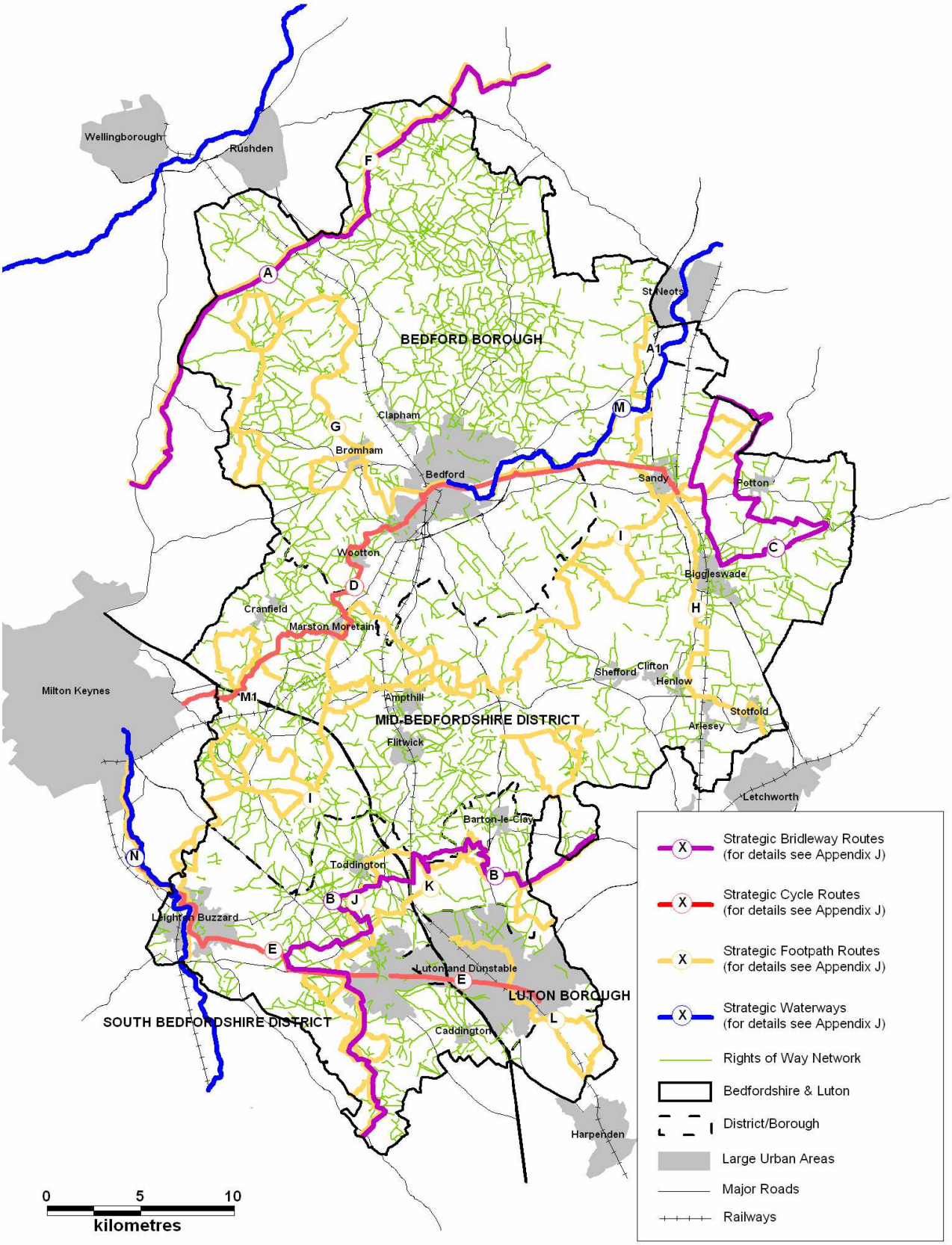

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Figure A1

Existing Strategic Access Routes

Strategic Access Route Needs Assessment

2.7.10 Taking into account the above audit of existing provision, deficiencies in accessibility and connectivity of the strategic access route network are identified below.

Strategic Bridleway Routes

2.7.11 **Figure A1** shows that strategic bridleway provision is not connected to that of strategic cycle provision. The two main east-west bridleway routes identified (routes A and B) form part of longer regional routes which cross the county, but add little to address strategic usage requirements. Both routes are linear in nature, thus providing little opportunity to interconnect with communities or provide alternate links to vary travel. The remoteness of routes may be explained by the needs of the main user group to have access from land for stabling and the availability of horse box parking.

2.7.12 As both of the routes highlighted above are linear there is little opportunity to return to the point of origin, other than by retracing the route or using a support vehicle. The adjacent and wider Rights of Way Network could provide this linkage.

2.7.13 As a consequence of recent user research the need to develop more opportunities for horse riding in the county has been identified. It is anticipated that strategic level circular bridleway routes will be developed as a consequence in addition to the current Skylark Ride circular bridleway route (route C) shown on **Figure A1**.

2.7.14 **Figure A1** also shows gaps in the connectivity of the Strategic Bridleway Route Network. These include:

- Gaps in north-south connectivity for horse-riders between the Three Shires Way and Icknield Way bridleways.
- Due to poor bridleway connectivity to the north and west of Luton, Dunstable and Houghton Regis the alignment of the Icknield Way follows and crosses a number of increasingly busy roads.
- The tranquil area of North - East Bedfordshire is void of any routes.
- As the network is also available to off-road cyclists it should be noted that connectivity with the strategic cycle network should be improved.
- All opportunities should be used to link these routes into the wider Rights of Way Network to provide circuits.

Strategic Cycle Routes

2.7.15 **Figure A1** shows that strategic cycle route provision is not connected to that of strategic bridleway provision. The two cycle routes identified form part of more extensive National Cycle Network (NCN) routes which cross the county. Sustrans, the charity who have worked with the Bedfordshire County Council to develop these routes, have sustainable transport as a core principle; as a consequence these routes are designed to provide connectivity between large communities. Both routes are well used, in parts for commuter travel, but more frequently for leisure travel.

2.7.16 Both the above routes are linear in nature, thus providing little opportunity to interconnect with other communities or provide alternate links to vary travel or expand and develop experience. The adjacent and wider rights of way and rural road network could provide this access.

2.7.17 Within large communities there are proposals, and have been some local improvements, to provide route linkages across urban areas. There is a great deal of inter-urban connectivity development occurring in Luton, South Beds District and Leighton Buzzard, and progress is being made on improvements in the Bedford Borough and Mid Beds areas. Outside these larger communities opportunities need to be realised to link smaller more rural communities with the strategic cycle routes.

2.7.18 As a consequence of recent user research, the need to develop an extended network of formal and informal cycling opportunities has been highlighted. Future developments will include the continued creation of the National Cycle Network through the development of a link between St. Neots and Letchworth; the creation of a number of off-road circular cycle routes; and a Green Cycle Grid using the Rights of Way Network and quiet road links.

2.7.19 **Figure A1** also shows gaps in the connectivity of the Strategic Cycle Route Network. These include:

- Gaps in quality of connectivity in the Icknield Way bridleway route (see earlier strategic bridleway section) within South Beds District .
- Gaps in north-south connectivity for cyclists between the National Cycle Network Route 6 / Icknield Way bridleway in South Beds District and the National Cycle Network Route 51 in Mid Beds District/Bedford Borough. Thus providing no linkage between the communities of Bedford, Ampthill, Flitwick and Luton.
- Gaps in north - south connectivity in the east of the county, thus providing no link between St. Neots and Hitchin, intersected by Sandy and Biggleswade.
- Gaps in north-south connectivity for cyclists between the National Cycle Network Route 51 in Mid Beds District/Bedford Borough and the Three Shires Way bridleway in the north of Bedford

Borough. Thus proving no linkage between the larger communities of Rushden, Wellingborough and Bedford.

- Gaps in the east-west connectivity for cyclists across the central area of the county between Sandy, Biggleswade, Ampthill and Flitwick.
- The tranquil area of North - East Bedfordshire is void of any routes.
- There are gaps between all those strategic routes and rural communities not directly intersected**.**

2.7.20 Currently developed proposals for improvement are shown on **Figure A2**.

Strategic Footpath Routes

2.7.21 **Figure A1** shows that most of these routes have been developed in linear groupings based on or in relation to key landscape or cultural heritage features (The Chilterns, Greensand Ridge, Great Ouse River Valley, Ouzel River Valley and the Ivel River Valley). The routes defined are a combination of both linear and circular; the circular routes are focused on selected areas of special landscape or cultural heritage significance generally not exceeding 10km in distance. In many cases these more accessible circular routes are intersected by the linear routes which generally cross the county in an east - west direction. The benefit of this, is that the pedestrians are able to utilise the main rail, bus and road links which cross the county.

2.7.22 Research undertaken has shown that these routes are generally used for leisure purposes only and that although the linear routes are well used; this use is mainly focused on sections near to urban areas where the route passes close enough and where the Rights of Way Network is capable of providing linkage. Improvements to access connectivity with urban areas should be enhanced.

2.7.23 **Figure A1** also shows gaps in the connectivity of the Strategic Footpath Route Network. These include:

- Gaps in north-south connectivity between largely east-west recreational footpath routes in South Beds District, Mid Beds District and Bedford Borough.
- Gap in connectivity between Leighton Linslade and recreational footpath routes near Houghton Regis.
- Gaps in connectivity between Luton, Dunstable, Houghton Regis and routes which circuit the urban conurbation.
- Gaps between Stotfold and Bedford interconnecting with Shefford, Clifton and Henlow.

- The tranquil area of north-east Bedfordshire is void of any routes, though this area is relatively well served by the Rights of Way Network.

2.7.24 Currently developed proposals for improvement are shown on **Figure A2**.

Strategic Waterways

2.7.25 **Figure A1** shows the Grand Union Canal providing navigable linkage between Leighton Buzzard and Milton Keynes (this route provides wider access to a number of waterways and networks between Birmingham and London), and the River Great Ouse that is navigable east from Bedford (providing linkage to the East Anglia Waterways Network). There is currently a logical aspiration to enhance the connectivity of these strategic waterways linking Bedford to Milton Keynes to provide linkage between the regional networks. This aspiration has been recognised by the East of England Plan as being of regional significance for green infrastructure[54]. This link is shown as a proposed undefined route on **Figure A2**.

2.7.26 Both nationally and within the county there is a growing interest in providing wider access to waterways for canoeists. There are potential opportunities within the county to both enhance access to existing navigations and by potentially increasing availability to the River Great Ouse north of Bedford (providing linkage to Milton Keynes) and the disused navigation on the River Ivel (linking to Shefford). If these opportunities are to be pursued further, it would be useful to implement impact assessments to ascertain the possible effects of the extension of use of these sections of river, including on biodiversity interests.

Rights of Way Network

2.7.27 **Figure A1** shows the distribution of the Bedfordshire and Luton's Rights of Way Network. This strategic asset provides access into the wider countryside, and people travel from across the county and surrounding areas to use this network and experience the varied landscapes available[55].

2.7.28 Public rights of way form part of the highway network, and use roads to interconnect between paths and to provide direct access from urban areas. Many of the county's roads have a high volume of traffic; these roads have a critical effect on the accessibility, safety and connectivity of the Rights of Way Network. There are some areas of the county where low levels of traffic use on particular roads provide an excellent opportunity to improve connectivity - the largest of these areas being the tranquil

[54] As identified in the East of England Plan EIP Panel Report (June 2006) recommended changes to Policy ENV1 on Green Infrastructure.
[55] Bedfordshire Outdoor Access Improvement Plan 2006-2011- Bedfordshire County Council.

area of north east Bedfordshire. It should be remembered however that on many of these "quieter roads" the national speed limit still applies, so consideration should be given to promotion of speed reduction measures and the creation of "Quiet Lanes"[56] in the county to reduce traffic speed and volume, and enhance less formal access opportunities.

2.7.29 The Rights of Way Network comprises 3 main categories of path:

- Public footpaths (1,564km / 71%) – providing pedestrian access
- Public bridleway (613km / 27%) – providing equestrian, cyclists and pedestrian access
- Public byway (52km / 2%) – providing motor vehicle, horse and carriage, equestrian, cyclist and pedestrian access.

2.7.30 Each of these categories of access is distributed across the county but not evenly; some areas have clear deficits and others concentrations. In the case of public bridleways and byways this is particularly pertinent - there are network concentrations in the north west of Bedfordshire, in the north east of Bedfordshire, west of Dunstable (Totternhoe Lanes) and north east of Luton (Warden, Galley and Barton Hills Area). Even within these areas opportunities to vary and interconnect user travel is limited due to status differences, gaps and connectivity. Many users travel into these areas to horse ride and cycle from across the county and surrounding areas.

2.7.31 The area with the greatest density of rights of way is the tranquil north east area of the County, north of Bedford. This area benefits from generally lower levels of road traffic, thus providing safety and connectivity and in the absence of strategic access routes in this area opportunities exist to further enhance and promote this access resource.

2.7.32 Bedfordshire County Council, under the requirements of the CROW Act 2000 has prepared an Outdoor Access Improvement Plan (OIAP)[57]. A number of key issues are comparable with this study; these have been flagged to be addressed over the 10 year span of the OAIP:

- The management of the strategic access network and prevention of future severance of road, rail and watercourse links throughout the network
- Improved connectivity with existing and potential new communities
- The review of current network alignments and provision against current need and potential future use
- Development of greater community ownership of the network

[56] Quiet Lanes are minor rural roads which are appropriate for shared use by walkers, cyclists, horse riders and motorised users. These roads should have low levels of traffic travelling at low speeds. Quiet Lanes have piloted by a number of local authorities in partnership with the former Countryside Agency. For details see www.greenways.gov.uk

[57] Bedfordshire Outdoor Access Improvement Plan 2006-2011- Bedfordshire County Council, 2006

- The creation of green cycle route provision
- Improved physical accessibility to the countryside
- Improved access connectivity near to where people live.

2.7.33 Over the first 5 years of delivery within the Outdoor Access Improvement Plan the main area of work will be focused on improvements to the networks surrounding the county's largest communities (i.e. those with population exceeding 3500). These 2km zones of enhancement are shown on **Figure A2** as OAIP Priority Enhancement Areas. These improvements will include increased connectivity to strategic bridleways, cycle and footpath routes

Summary

2.7.34 The assessment has identified a range of existing waterways, bridleway, cycle and footpath routes that are considered to be of strategic significance in Bedfordshire & Luton and beyond. The assessment identifies gaps in the connectivity of this strategic access route network, and also found that in some areas accessibility and availability to the network for equestrians, cyclists and pedestrians is poor. The assessment has identified the relationship between the land based strategic access resource and the need for improvement and enhancement of the Rights of Way network to enhance connectivity and availability. The areas of opportunity shown on **Figure A2,** in the form of defined and non-defined proposed routes and OAIP Priority Enhancement Areas, have been fed through to the integration process to guide the identification of new strategic accessible green infrastructure provision in Section 3.0.

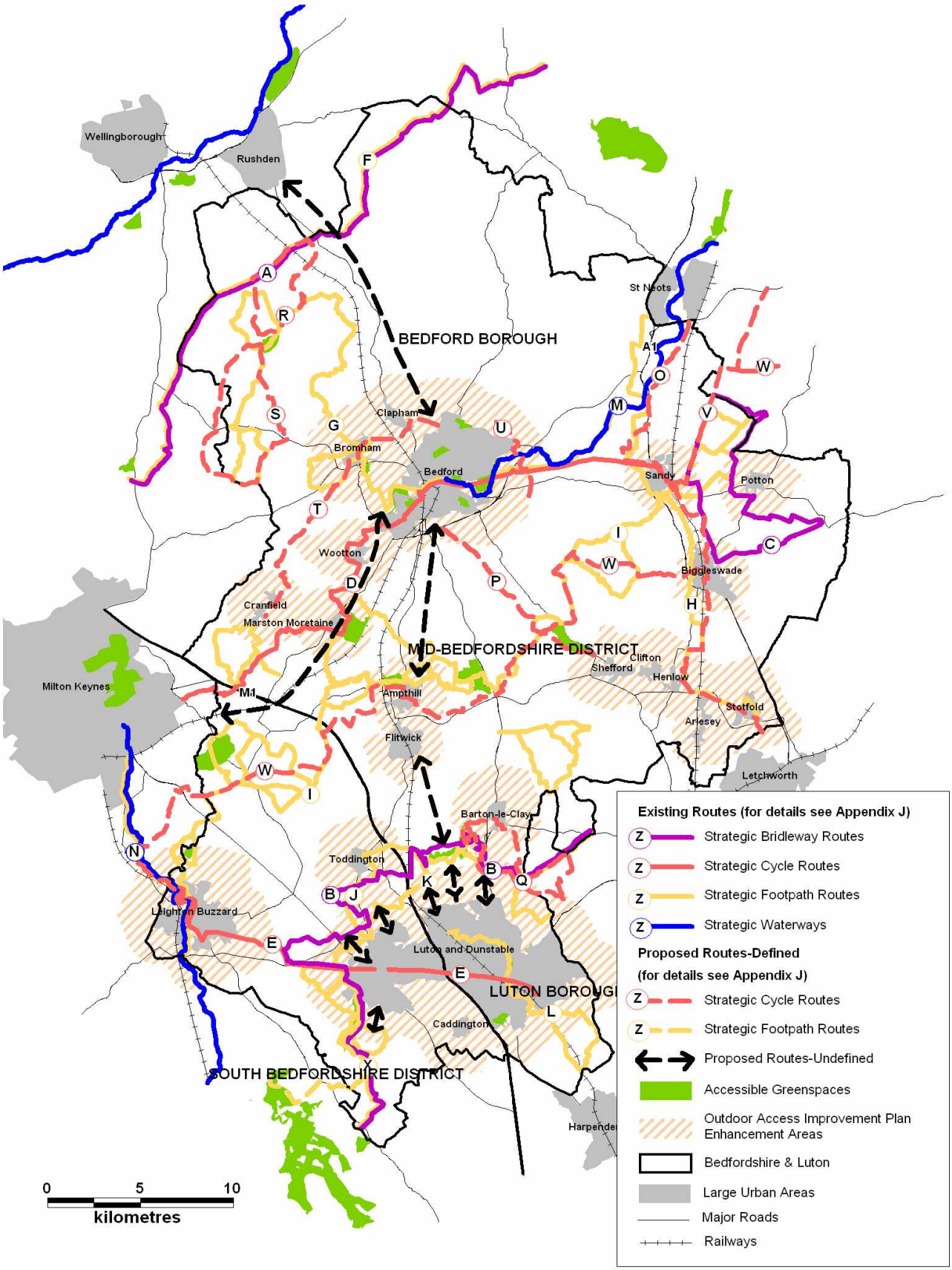

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Figure A2

Access Route Opportunities

3.0 THE PROPOSED STRATEGIC GREEN INFRASTRUCTURE FRAMEWORK

3.0 The Proposed Strategic Green Infrastructure Framework

3.1 General

3.1.1 This final section sets out the proposed Strategic Green Infrastructure Framework for Bedfordshire & Luton. This comprises a "**Context"** section which sets out the following

- An aspirational vision for green infrastructure in Bedfordshire & Luton
- Strategic objectives for future green infrastructure provision in Bedfordshire & Luton
- Limitations of the Strategic Green Infrastructure Plan.

3.1.2 This also includes the **"Making It Happen"** section which details the key elements which will drive green infrastructure implementation including

- The proposed Strategic Green Infrastructure Network including integration methodology
- Recommendations for implementation of the Strategic Green Infrastructure Network
- Areas for further consideration.

3.2 Context

3.2.1 This section sets out the key contextual information which will underpin the delivery of green infrastructure across Bedfordshire and Luton.

3.3 Aspirations for Green Infrastructure in Bedfordshire & Luton

3.3.1 In line with the Green Infrastructure Consortium's aspirations and agreed definition, it is recommended that the strategic vision for green infrastructure in Bedfordshire & Luton should be as set out in Box 3.1:

Box 3.1 - Strategic Vision for Green Infrastructure in Bedfordshire & Luton

A strategically planned and managed network of accessible greenspace and access routes, landscapes, biodiversity and heritage which will meet the needs of existing and new communities in Bedfordshire & Luton by providing:

- **an essential environmental foundation and support system;**
- **a healthy and rich environment;**
- **attractive places to live and visit and a good quality of life;**
- **a sustainable future.**

The Green Infrastructure Network will be protected, conserved, enhanced and widely known and valued. It will be of high quality and an example of best practice and innovation. The long term maintenance of the network and its constituent elements will be resourced sustainably. The network will be multi-functional and meet a wide range of social, environmental and economic needs. It will connect urban and rural settlements and the countryside, and provide a spatial planning framework to guide sustainable development.

3.3.2 The proposed Strategic Green Infrastructure Network set out in Section 3.7 has been developed to provide the spatial context for delivering this vision in Bedfordshire & Luton.

3.4 Strategic Objectives for future Green Infrastructure provision

3.4.1 It is recommended that the following objectives should be used to inform the planning and delivery of green infrastructure in Bedfordshire & Luton. These objectives are based on the principles set out in the MKSM Green Infrastructure Guide[58].

Net gain in Green Infrastructure Provision – ensure that development and implementation results in a net gain in the quantity and quality of green infrastructure assets; and meets future needs, including addressing existing strategic deficiencies in provision for Bedfordshire & Luton as identified in this Plan. New development and land use changes should support the Strategic Green Infrastructure Network. Where some loss is accepted, compensatory measures should be required.

Multi-functional Green Infrastructure – subject to environmental sustainability considerations, green infrastructure should aim to be multi-functional. This means providing a range of benefits from the same area of land, and is based on the acknowledgement that a single land unit may be able to accommodate simultaneously different and mutually beneficial land uses. Reflecting this intended multi-functionality green infrastructure can, for example, provide the following functions:

- Key destinations as focal points for visits to the countryside
- 'Hubs' within the strategic access route networks, providing gateways to the wider countryside
- Focus for informal and formal recreation and for quiet enjoyment and tranquillity
- Contributions to conservation of local landscapes and the historic environment
- Areas of wildlife habitat and biodiversity value
- Venues for cultural and sporting events
- A source of sustainable energy including biomass and other renewables
- Food production
- Outdoor classrooms for environmental education and learning
- Contributions to sense of place and identity for local communities and visitors.

In line with the Plan's strategic vision for green infrastructure set out in box 3.1, delivery of multiple benefits should be embedded at the heart of the provision of new green infrastructure in Bedfordshire & Luton wherever possible.

Enhancement of Landscape Character, Historic Environment and Biodiversity Assets – green infrastructure provision and development should strengthen landscape character in Bedfordshire &

[58] Planning Sustainable Communities – A Green Infrastructure Guide for Milton Keynes and the South Midlands (MKSM Environment and Quality of Life Sub Group, April 2005)

Luton by reflecting locally distinctive natural and cultural landscape patterns, and integrating with natural processes and systems. Proposals should be informed by the guidance contained in landscape character assessments produced by the local authorities. Targeted enhancement of strategic transport routes, urban fringe landscapes and agricultural landscapes, together with the continued management of the Chilterns AONB and Forest of Marston Vale in line with their approved plans, are strategic landscape priorities for Bedfordshire & Luton. Green infrastructure provision should also seek contribute to the protection, conservation and enhanced management, presentation, accessibility and interpretation of historic landscape, archaeological and built heritage assets. Proposals should seek to help counter fragmentation of habitats through improved linkages between existing and proposed green infrastructure resources, and contribute to maintaining and enhancing biodiversity through habitat enhancement, linkage and creation in areas where Biodiversity Action Plan habitat and species targets can best be met.

Accessibility and Connectivity for Human Movement and Recreation – green infrastructure provision in Bedfordshire & Luton should enhance the connectivity of the access route network through improved access linkages between existing and proposed green infrastructure resources. New accessible greenspaces with facilities for informal and formal recreation, particularly those that present opportunities to link urban and countryside areas, should be created in locations with limited provision. Linkages between settlements, and between settlements and the countryside in and around urban areas, should be improved to provide green routes for informal recreation and commuting.

Environmental Quality and Sustainability– green infrastructure provision in Bedfordshire & Luton should be managed to high standards of environmental quality and sustainability to deliver integrated social, economic and environmental benefits that contribute to quality of life in Bedfordshire & Luton. As such, funding for the long term management of green infrastructure needs to be addressed as part of the provision process, and funding mechanisms which can provide long term ring fenced maintenance funding such as endowments should be implemented where possible. Within the context of Bedfordshire and Luton, future growth and built development provides a key driver for the provision of green infrastructure. All major new built development should have green infrastructure provision at its heart, and as such relevant elements of the Green Infrastructure Network outlined in this Plan should be delivered as an initial earliest stage of any such development. Green infrastructure should be integrated alongside other infrastructure development needs such as sustainable drainage, utilities, transport, education, sustainable building/ energy production technologies and public realm.

Community Ownership and Involvement - High quality and accessible green infrastructure can provide a focus for social inclusion, community development and education. Green infrastructure should be developed via the active involvement of local communities at all stages including planning, delivery and ongoing management.

3.4.2 To take forward the Consortium's vision for green infrastructure, these strategic objectives should be integrated into Local Development Frameworks and the investment plans of those national, regional and local agencies responsible for delivery of sustainable communities and environmental management in Bedfordshire & Luton.

3.5 Limitations of the Plan

This Plan is a strategic level document guided by green infrastructure methodology. There are qualifications to the scope and application of this Plan, and it is important to bear these in mind when reading the Plan and when utilising the Plan to guide practical delivery. These qualifications include the following:

3.5.1 Application and Methodology

- The methodology employed in this plan is based on objective data analysis combined with, and informed by, local expertise and knowledge from members of the Green Infrastructure Consortium. Green infrastructure methodology is not an exact science and in order to arrive at an effective outcome the process of using local expertise as a "reality check" is necessary and desirable.

- This Plan and the Green Infrastructure Network map (**Figure F3**) is not a planning constraints map and is not intended to be used as such. This Plan is instead intended to be used in the following manner

    i. Any proposed development within the Green Infrastructure Network outlined in **Figure F3** should conform with and further strategic Green Infrastructure Plan objectives and aspirations. The Green Infrastructure Network Map (**Figure F3**) is an 'alert map', highlighting a spatial area of strategic significance/ value for green infrastructure provision and investment.
    ii. It should be used to inform the more detailed local level green infrastructure planning at district and community level.
    iii. It should be used to direct investment opportunities to create new and conserve and enhance existing strategic green infrastructure within the defined spatial area.

- The maps are intended to be used in context i.e. with the supporting text alongside. This supporting text adds key detail necessary in order to interpret the maps effectively.

- This Plan represents a strategic level county-wide response to the issue of green infrastructure provision. It is a key part of the green infrastructure jigsaw but by no means the only piece. In order to effectively address future green infrastructure provision there will need to be further district level

and local level green infrastructure planning work, which can pick up the level of detail required for implementation at a local and district scale.

- In the drawing up of this Plan and its maps, "on the ground" practical considerations such as land ownership, and in many instances current land use, were not examined as this was not part of the remit of this strategic level document. This level of detail will become particularly relevant in the implementation of the Plan and will be addressed at this stage.

- As discussed in section 2.6.20 carrying capacity of existing sites has not been reviewed in this Plan, though its importance as a factor in provision is fully acknowledged and recommendations for further action on this issue are covered in section 3.9.5.

- This Plan is not intended to be a static document – and it will be need to be reviewed and updated in order to retain relevance to the evolving context in which it operates.

3.5.2 *The Maps*

- The individual maps have been drawn up to reflect strategic level overviews. Many of the assets and opportunity areas included do not have sharply defined boundaries. Therefore it is important to note that boundaries on the maps are intended to be indicative – these are soft edged boundaries rather than defined, hard edged boundaries.

- The individual theme maps have value in their own right – each one represents a coherent response to the priorities of that particular area of work.

- The Green Infrastructure Network map (**Figure F3**) is intended to give a broad "birds eye" view of the areas of green infrastructure opportunity and is not designed to be divorced from the wider Plan. The individual theme maps and commentary text should be utilised alongside the GI Network map to fill in the underlying detail including deficiencies, strengths, assets, designations, opportunities etc.

- The Green Infrastructure Network Plan (**Figure F3**) is populated by green areas and white areas. It may be useful to note the following:

i. The white areas are areas which have not emerged from the integration process as strategic green infrastructure opportunity areas – this however does not mean they are not potentially important in terms of green infrastructure. They may well hold significance for green infrastructure at a district or local level– for example they may host important local green infrastructure assets which have not been considered in this strategic level study; such as small woodlands and conservation habitats, sports facilities, play parks or allotments. These white areas may also hold considerable importance for a particular individual theme – for example a white area may have been highlighted as a landscape opportunity but not highlighted by any other themes and thus did not emerge from the integration process as a green area.

ii. The green areas are areas which have emerged through the integration process as strategic green infrastructure opportunity areas. These areas have multi-functional value in green infrastructure terms. However, it is important to note that these areas are also likely to support a range of other uses and activities, including grey infrastructure (buildings, roads, utilities etc).

3.6 Making It Happen

3.6.1 This section sets out a way forward for green infrastructure across Bedfordshire and Luton. It details the proposed Strategic Green Infrastructure Network which will act as the key delivery mechanism for green infrastructure - encompassing the enhancement of existing assets, the creation of new assets and the development of greater connectivity and linkages between assets. This section also sets out the next steps and actions required to create the Network and progress the green infrastructure agenda.

3.7 The Strategic Green Infrastructure Network

3.7.1 The Green Infrastructure Network comprises green infrastructure assets and linkages, both existing and aspirational, of strategic significance for Bedfordshire & Luton.

Existing Strategic Green Infrastructure Provision within the Network

3.7.2 Based on the written and mapped analysis in Sections 2.0, **Figure F1** shows in simplified form most of the existing green infrastructure assets of strategic significance for Bedfordshire & Luton. This provision, which includes accessible and inaccessible green infrastructure, comprises:

- Accessible greenspace of strategic significance (as defined on **Figures G1** and **G2**)
- Access routes of strategic significance (as defined on **Figure A1**)
- Designated sites of biodiversity value (as defined on **Figure B1**)
- Principal river corridors of the Great Ouse, Ivel, Flit and Ouzel.

3.7.3 Existing historic environment assets and some landscape assets are not shown on **Figure F1**, but are considered by the characterisation and opportunity areas in Sections 2.3 and 2.4.

National Landscape Initiatives

3.7.4 The East of England Plan identifies existing assets that are of particular regional significance for the retention, provision and enhancement of green infrastructure[59]. Within Bedfordshire & Luton, the following national landscape initiatives are defined as regionally significant existing green infrastructure assets, and are thus included on **Figure F1** and **Figure F3**:

[59] As identified in the East of England Plan EIP Panel Report (June 2006) recommended changes to Policy ENV1 on Green Infrastructure.

- *The Chilterns Area of Outstanding Natural Beauty* – this designation represents an area of high landscape quality of national importance, the primary purpose of which is conservation of the natural beauty of the landscape (see Section 2.3).

- *Forest of Marston Vale* – this area is a focus for strategic environmental regeneration of the landscape by creation of significant areas of green infrastructure such as woodland and wetland. The Marston Vale Trust's Forest Plan is the key local delivery document in terms of green infrastructure across the Marston Vale area- a key driver is the Forest target to achieve 30% woodland cover by 2030[60] (see Section 2.3).

[60] Forest of Marston Vale Forest Plan 2000 - Marston Vale Trust

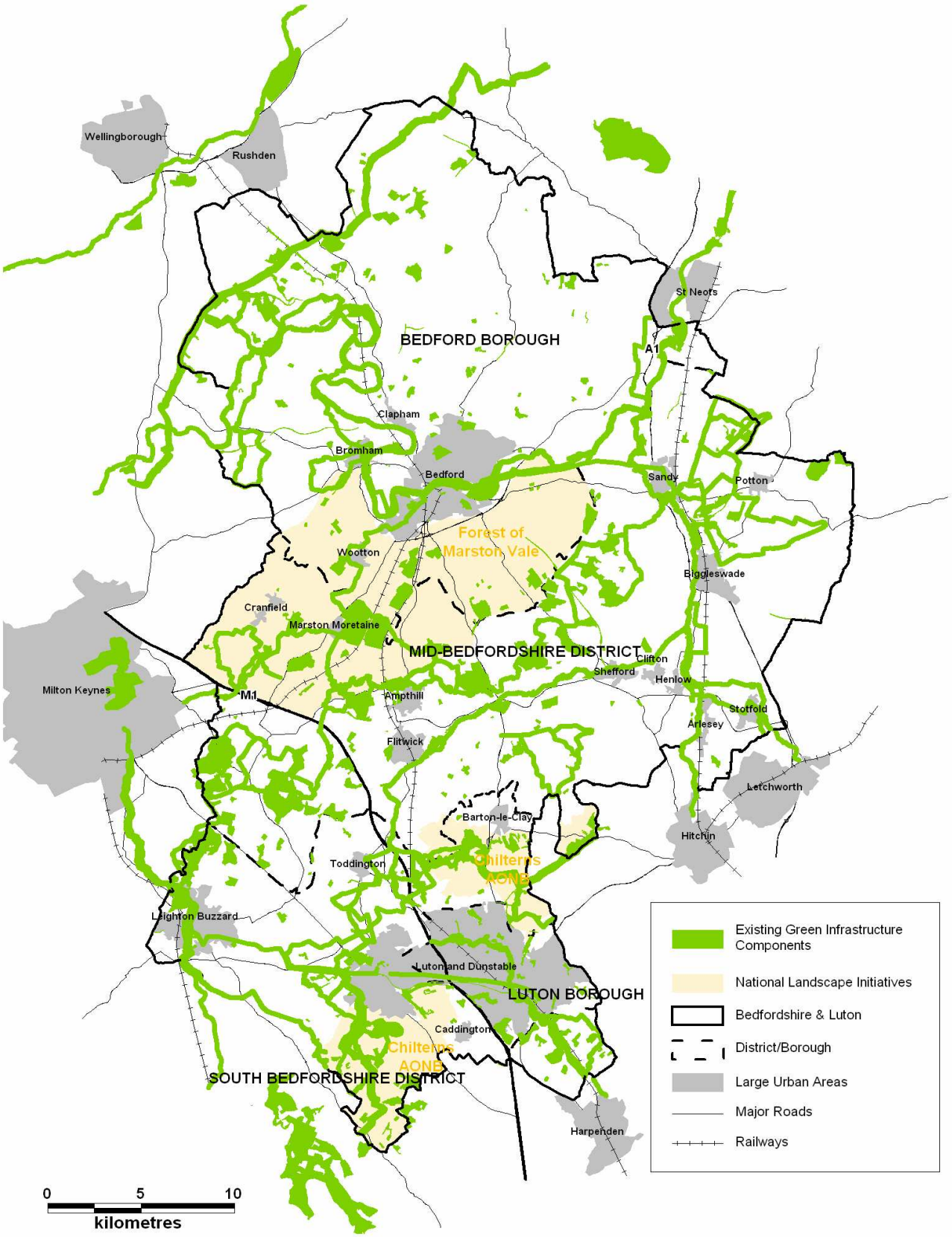

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Figure F1

Existing Strategic Green Infrastructure Provision

Methodology

3.7.5 In order to create the Strategic Green Infrastructure Network Map (**Figure F3**), broadly speaking the pattern of existing green infrastructure assets shown on **Figure F1** has been integrated with the opportunity area mapping in Section 2.0 to identify areas and linkages of multi-functional strategic green infrastructure provision. The following key principle was the main driver of the integration process:

- The higher the degree of overlap a particular area experienced in terms of prioritisation by the individual themes (landscape character, historic environment, biodiversity, accessible greenspace and access routes) the more likely it was to be feature as a part of the GI Network. For example if a particular area has been highlighted as a priority by four, or indeed all five, theme areas it was considered to be of high strategic value and should clearly feature on the Green Infrastructure Network map.

This overarching principle is supported by a number of other principles driving the integration process

- A key feature of the Green Infrastructure Network is connectivity and the creation of green infrastructure corridors. Therefore attention has been paid to take advantage where patterns naturally emerge to create corridors and link areas of green infrastructure. We have also sought to incorporate links into green infrastructure in neighbouring counties.

- Local knowledge and expertise from members of the Green Infrastructure Consortium has been applied as part of the mapping process to ensure the Green Infrastructure Network is grounded in reality.

- It was accepted that as this is a strategic level Network boundaries would be indicative and therefore are not intended to act as definitive hard-edged borders.

3.7.6 **Figure F2** details this integration process. This map has been built up from the multiple overlays created when different themes have selected the same area as an area of priority. As is clear from examination of this map the Green Infrastructure Network follows broadly the areas which have been highlighted as a priority by multiple themes, in line with green infrastructure methodology.

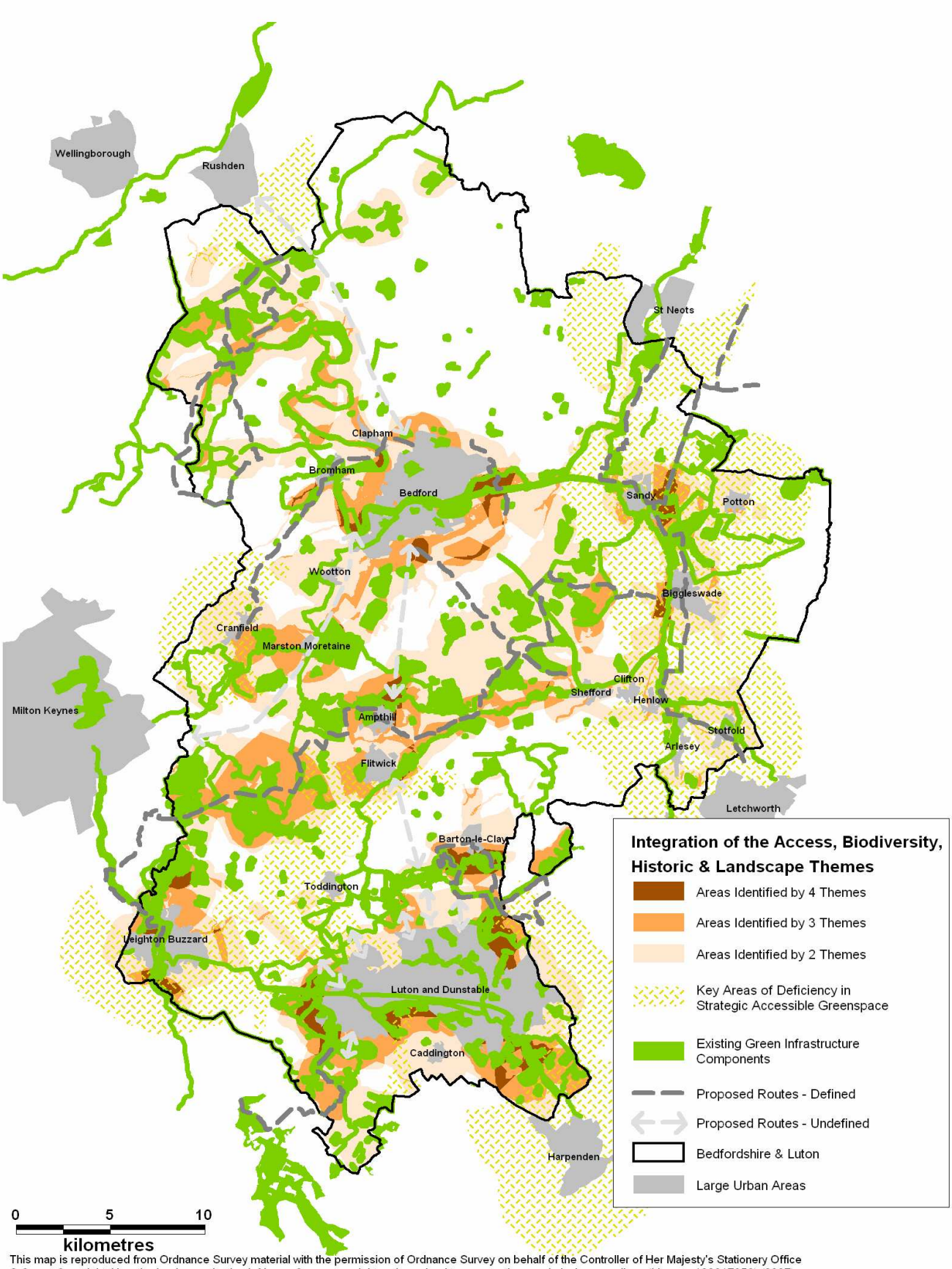

Figure F2

Integration of Opportunity Areas from Theme Sections

The Strategic Green Infrastructure Network

3.7.7 **Figure F3** shows the proposed Strategic Green Infrastructure Network for Bedfordshire & Luton. The areas highlighted in green collectively constitute the Strategic Green Infrastructure Network.

3.7.8 The Strategic Green Infrastructure Network is a strategic network of multi-functional areas and corridors, linking and creating publicly accessible greenspace and semi-natural habitats and natural greenspaces. These linkages are of strategic importance as they maintain and enhance the connectivity of green infrastructure between individual Districts/Boroughs, and link with adjacent areas at the sub-regional scale. The linkages are of functional and recreational value for people; they encompass the existing strategic network of bridleway, cycle and footpath routes and navigable waterways that provide access to and enjoyment of green infrastructure areas throughout Bedfordshire & Luton for local communities, walkers, cyclists and horse-riders. The linkages also reflect corridors of strategic importance for biodiversity. They are designed to promote opportunities for the re-creation and linking of habitats to counter the effects of fragmentation and restore losses to biological diversity in ways that enhance the quality and extent of biodiversity resources, whilst helping strengthen overall landscape character. The linkages include the corridors of the major rivers, linking wetland habitats with surrounding natural and semi-natural greenspaces. The corridors outlined embody within them key elements of our historic environment and strategically important rural urban fringe areas. Where gaps in the connectivity of the network have been identified, new linkages are proposed designed to enhance links between existing and new green infrastructure areas.

3.7.9 The Strategic Green Infrastructure Network embodies a mix of areas - some of which require creation of new green infrastructure assets and some of which will require the enhancement of existing sites and assets. The individual theme maps fill in the detail and show where enhancement is primarily required and where creation will be required. A focus on enhancement and creation of green infrastructure in the areas identified will complement and form the foundation for the benefits greater connectivity can bring, as outlined above.

3.7.10 The Strategic Green Infrastructure Network shown on **Figure F3** includes the following broad corridors:

- ***(1) Milton Keynes to Grafham Water Corridor*** – this connects existing strategic green infrastructure assets in a broad corridor extending from the countryside north east of Milton Keynes, across the northwest corner of Bedfordshire and into Cambridgeshire to link with Grafham Water.

- This corridor includes the communities of Sharnbrook, Milton Ernest, Thurleigh, Keysoe and Riseley and adjoins a number of key settlements in Northamptonshire including Rushden, Irchester, Wellingborough and Higham Ferris.

- It encompasses a range of green infrastructure assets including the Harrold Odell Country Park, the Three Shires Way bridleway, a concentration of ancient, semi-natural woodland and a number of SSSIs.

- This corridor links up green infrastructure in Bedfordshire with green infrastructure in Northamptonshire, Cambridgeshire and Buckinghamshire – key linkages include into the River Nene Regional Park Initiative; creation of a linkage between country parks in Harrold / Odell and in Emberton in Bucks; and linking green infrastructure in Beds through to Grafham Water in Cambridgeshire.

- Green infrastructure opportunities include woodland, neutral grassland and hedgerow linkage, enhancement and creation; a proposed Harrold Odell Country Park off road cycle route; historic environment enhancement; landscape conservation; enhancement of the landscape of the A6 route; and an identified deficit in strategic accessible greenspace to the south of Rushden.

- ***(2) Upper Great Ouse River Valley Corridor*** – this corridor extends from Bedford north along the Great Ouse River Valley, connecting with the Milton Keynes to Grafham Water Corridor.

  - This corridor includes the communities of Clapham, Bromham, Oakley, Milton Ernest, Kempston and those around the northern edge of Bedford.

  - Green infrastructure assets within this corridor include Biddenham Loop Country Park, the Ouse Valley Way and Bromham Mill. The River Ouse is not navigable upstream from Kempston Mill.

  - This area holds strategic importance for the county in a number of ways including as a mainline railway and road (A6) transport corridor; use of floodplain for strategic flood storage by the Environment Agency; and it also is an area of high landscape value.

  - This corridor provides a link between the east-west green infrastructure corridors which lie to the north (Milton Keynes to Grafham Water Corridor 1) and to the south (Bedford to Milton Keynes Corridor 5 and Lower Great Ouse Corridor 3).

- ❖ Green infrastructure opportunities include landscape conservation; enhancement of the landscape of the A6 route; and enhancement and conservation of the historic environment including the medieval churches and settlements of Oakley, Clapham, Bromham, Biddenham, Stevington and Stagsden.

- ***(3) Lower Great Ouse River Valley Corridor*** – this broad corridor extends through the centre of Bedford east along the Great Ouse River Valley, connecting with the Greensand Ridge Corridor and the Bedford-Milton Keynes Corridor to the south of Bedford.

  - ❖ This corridor includes the communities of Bedford, Great Barford, Willington, Cople and Roxton and adjoins St Neots in Cambridgeshire.

  - ❖ Green infrastructure assets within this corridor include the Ouse Valley Way, National Cycle Route 51, Bedford Park and Priory Country Park, and a rich historic arable and archaeological landscape including archetypal prehistoric and Roman Great Ouse landscapes around Willington and Cople. The River Ouse is navigable downstream from Kempston Mill through to St Neots.

  - ❖ This corridor provides a link into green infrastructure in Cambridgeshire including through to Paxton Pits and also links with the Greensand Ridge Corridor 6 and the Bedford – Milton Keynes Corridor 5 to provide full east-west/ north-south linkage across Bedfordshire. It is a strategically important green corridor running through the centre of Bedford, providing a link out to the wider countryside.

  - ❖ The corridor includes the proposed Bedford River Valley Park identified in Policy NE23 of the Bedford Borough Local Plan as 'an area where opportunities exist for landscape enhancement, nature conservation, recreation and increased public access whilst protecting sites of acknowledged archaeological importance'[61]. At 868ha it would be Bedfordshire's largest country park, encompassing and extending the existing c.124ha Priory Country Park eastwards along the River Great Ouse valley towards Willington. The 121ha Grange Estate, acquired by the Marston Vale Trust in May 2006 with funding from DCLG, forms the core of the proposed park. The National Cycle Network Route 51 runs through the centre of the park.

  - ❖ Green infrastructure opportunities include an identified deficit in strategic accessible greenspace to the south of St Neots, which development of the Bedford River Valley Park has the potential to address; landscape enhancement and conservation opportunities including enhancement of the A421 and A1 routes; and the proposed Great North Cycle Route.

[61] Bedford Borough Local Plan – Bedford Borough Council, Oct 2002

- ***(4) Ivel River Valley Corridor*** – this broad corridor extends from south of Arlesey on the Bedfordshire/Hertfordshire border north along the Ivel River Valley, connecting with the Greensand Ridge Corridor north of Biggleswade.

    - ❖ This corridor includes the communities of Arlesey, Stotfold, Shefford, Henlow, Biggleswade and Langford, and adjoins the major settlements of Hitchin, Baldock and Letchworth in Hertfordshire at the southern end of the valley.

    - ❖ This corridor provides an important north-south green infrastructure link along the east of the county, linking with the Greensand Ridge Corridor 6 to the north and west and the Flit Valley Corridor 8 to the west.

    - ❖ Green infrastructure assets within this corridor include county wildlife sites, SSSIs and some ancient woodland; the Kingfisher Way; a concentration of gravel pit lakes along the river valley floor and high quality agricultural land, especially in the central and northern sections of the corridor; and historic routes including the Great North Road and White Way. The River Ivel is not currently navigable, though it did enjoy navigation in the mid 1800s.

    - ❖ Whilst not falling under one of the MKSM Sub Regional Strategy major areas for growth, areas within this corridor are earmarked for significant urban extension and housing growth. Mid Beds District Local Plan outlines growth allocations for Stotfold in the region of 1,750 new homes including the new community being developed at Fairfield Park; and for 2,100 new homes around Biggleswade[62].

    - ❖ Green infrastructure opportunities include an identified deficit in strategic accessible greenspace throughout this corridor serving the communities of Biggleswade, Stotfold, Arlesey, Henlow and Clifton. There are also opportunities for heathland and acid grassland linkage, creation and enhancement; landscape enhancement and enhancement of the A1 route; and the proposed creation of Great North Cycle Route which will link from Stotfold through the corridor towards St Neots.

- ***(5) Bedford to Milton Keynes Corridor*** – this broad corridor extends east from Milton Keynes, across the M1 motorway to the Marston Vale Millennium Country Park, then north to link with the southern edge of Bedford connecting with the Lower Great Ouse River Valley Corridor south east of the town.

[62] Mid Bedfordshire Local Plan – adopted by Mid Bedfordshire District Council in December 2005.

- This corridor includes the communities of Wootton, Marston Moretaine, Stewartby, Elstow, Aspley Guise and south Bedford/Kempston. It adjoins the eastern edge of Milton Keynes in Buckinghamshire.

- Green infrastructure assets within this corridor include National Cycle Network Route 51 and a historic environment including some medieval ridge and furrow, late prehistoric and Roman cropmarks and historic woodland.

- This corridor includes two projects of regional significance in green infrastructure terms – the Forest of Marston Vale and an ambitious project championed by British Waterways to create a navigable waterway connection and a linear park between the Grand Union Canal at Milton Keynes and the River Great Ouse near Bedford. The canal corridor will also provide the opportunity to enhance strategic bridleway, cycle and footpath links. The future development of the Forest of Marston Vale will be guided by the Forest Plan[63] - a key driver is the Forest target to achieve 30% woodland cover by 2030. Strategic development of green infrastructure assets within the Forest has been ongoing since 2000 and has been supported by a range of external funders – including £2.9 million from OPDM (now DCLG) which enabled, *inter alia*, creation of new community woodland throughout this area. The Bedford to Milton Keynes Waterway Park and the Forest of Marston Vale are recommended for inclusion in a revised policy ENV1 in the East of England Plan as assets of particular regional significance for the retention, provision and enhancement of green infrastructure.[64]

- This corridor provides a key east-west green infrastructure linkage across the county, taking in the parts of the major settlement of Bedford and linking with the Lower Great Ouse River Valley Corridor 3.

- This corridor falls within the Bedford/ Kempston/ Marston Vale growth location. This area has an overall allocation of 19,500 new homes to be developed for the period 2001-2021[65], making the early strategic provision of green infrastructure to support built development particularly important. A new 750 acre settlement known as the Wixams will begin development in the near future on the site of what was previously Elstow Storage Depot. This will host 4,500 new homes and a range of facilities – it is important that green infrastructure, both within this development and linking it to adjoining communities and the wider countryside, is established as a central element of the Wixams.

[63] Forest of Marston Vale Forest Plan 2000 - Marston Vale Trust
[64] As identified in the East of England EIP Panel Report (June 2006) as recommended changes to Policy ENV1 on Green Infrastructure.
[65] Milton Keynes & South Midlands Sub-Regional Strategy (ODPM, March 2005) - provides the sub-regional strategy for the period 2001-2021, and a long-term spatial vision for the sub-region towards the year 2031.

- Green infrastructure opportunities include continued development of the Forest of Marston Vale, the BMK Waterways Park and the Wixhams discussed above; further landscape enhancement and enhancement of the landscape of the A6 and A421 routes; woodland, wetland, grassland and hedgerow enhancement; an aspiration to create an access route link between Bedford and Ampthill; and enhancement of historic environment assets including the industrial heritage and architecture of the brick making industry at Stewartby.

- ***(6) Greensand Ridge Corridor*** – this wide corridor extends from the Ouzel River Valley Corridor north of Leighton Linslade on the Bedfordshire/Buckinghamshire border, north-east through mid Bedfordshire via Woburn and Ampthill to connect with the Ivel River Valley Corridor before continuing to the Cambridgeshire border via Sandy and Potton.

  - This corridor includes the communities of Ampthill, Haynes, Maulden, Woburn, Ridgmount, Sandy and Potton. It adjoins the eastern edge of Milton Keynes.

  - This is an area of high landscape value and green infrastructure assets within this corridor include large areas of woodland, parkland, remnant heathland, accessible greenspace and the long distance Greensand Ridge Walk. There are large estates at Woburn, Southill and Shuttleworth with associated houses and parkland of great historic importance. Strategic accessible greenspace include the Aspley Wood complex - 800 acres of conifer woodland with some ancient woodland and heathland remnants on the eastern side of Milton Keynes; Ampthill Park - Capability Brown designed parkland and the biggest expanse of acid grassland in the County under intense visitor pressure; and Maulden Woods - a large expanse of SSSI woodland and grassland in urgent need of better visitor facilities. This corridor also hosts the Rowney Warren woodland site north of Shefford and the RSPB Lodge Reserve in Sandy.

  - This corridor lies at the heart of the county and provides a key east-west green infrastructure link from Buckinghamshire in the east to the Ivel River Valley in the west. It also includes a connecting link to the Bedford to Milton Keynes Corridor 5 to the north via the Marston Vale Millennium Country Park, and towards Luton and Dunstable via the Flit Valley Corridor 8.

  - Green infrastructure opportunities include proposals for the Greensand Ridge Cycle Ride route; historic environment enhancement to the area around Swiss Garden; landscape conservation; and enhancements to the existing accessible greenspace for woodland and acid grassland/heathland linkages and landscape protection. Sand extraction north of Leighton-Linslade in the south west of this corridor and Potton and Sandy in the north east of this corridor provide opportunities for biodiversity and recreation after use, such as at Sandy Heath. There is also an identified deficit in

strategic accessible greenspace at Sandy, Potton and surrounding areas; and to the west of Flitwick.

- ***(7) Ouzel River Valley Corridor*** – this broad corridor extends north along the Ouzel River Valley through the centre of Leighton Linslade, linking the town with the southern edge of Milton Keynes to the north.

  - ❖ This corridor contains the communities of Leighton Buzzard and Linslade.

  - ❖ Green infrastructure assets within this corridor include the Ouzel flood plain, with its distinctive landscape of summer grazed flood meadows and pollard willows, which provides a range of open space and access opportunities right through the urban area. The Grand Union Canal also uses the river valley and is now a major tourist holiday cruising facility. The towpath has recently been upgraded to cycle way standard from Leighton Linslade to Milton Keynes and further improvements to the cycle network are planned. This corridor also encompasses Stockgrove Country Park, the Greensand Ridge Walk, Leighton Buzzard's historic market square and an exemplary example of historic woodland at Kings Wood.

  - ❖ Leighton-Linslade is an identified growth location. It sits as part of the Luton/Dunstable/Houghton Regis growth location which has an overall requirement that 26,300 new homes be developed for the period 2001-2021[66].

  - ❖ Green infrastructure opportunities for this corridor include enhancement of existing historic assets and the need to address a deficit in strategic accessible greenspace around the south of Leighton Linslade. This could be addressed in part by proposals for the future use of restored quarries, previously used for sand extraction, for recreational use. Tiddenfoot Water Park is one such site with extensions proposed into Ledburn Quarry. A major facility with a 100 acre lake is planned in Grovebury Quarry when extraction of sand is completed. Comprehensive green infrastructure proposals are included within the Ouzel Valley Park Strategy.[67]

- ***(8) Flit Valley Corridor –*** this corridor extends from the north-western edge of Luton/north-eastern edge of Houghton Regis, north to Flitwick close to the M1 corridor and then north-east along the Flit Valley to connect with the Ivel River Valley Corridor at Shefford. For much of this section it is close to the A507 which is becoming a busier east-west route between the A1 and the M1.

[66] Milton Keynes & South Midlands Sub-Regional Strategy (ODPM, March 2005) - provides the sub-regional strategy for the period 2001-2021, and a long-term spatial vision for the sub-region towards the year 2031.
[67] This work is being developed by a multi-agency partnership which includes the Greensand Trust. See www.greensandtrust.org/pdfs/ouzelValley.pdf for details

- ❖ This corridor includes the communities of Flitwick, Clophill and Pulloxhill.

- ❖ Green infrastructure assets within this corridor include important historical sites such as Cainhoe Castle, Chicksands Priory and Ruxox Moat; the most important wetland in the county at Flitwick Moor; as well as the SSSI at Fancott Wood and Meadows and wet woodland at Upper Alders. There are important accessible greenspaces at Flitton Moor and Flitwick Manor (though of a locally significant scale). The restored fuller's earth workings at Clophill provide new wildlife and access opportunities.

- ❖ Green infrastructure opportunities include landscape conservation and enhancement including enhancement of the landscape along the A507 route; historic environment enhancement; opportunities for wetland and habitat linkages; and an identified deficit in strategic accessible greenspace around the south of Flitwick, which could be addressed in part by emerging plans for a new country park between Flitwick and Amphill.

- ***(9) The Chalk Arc Corridor*** – this corridor extends in a broad arc around the perimeter of the Luton/Dunstable/Houghton Regis conurbation in south Bedfordshire. It expands out in the south extending towards the Whipsnade area near the Buckinghamshire border and around towards the north of Caddington; it extends out and connects with the Leighton Linslade- Dunstable Corridor 10 at the east; it links with the Flit Valley Corridor 9 at the north; and extends around to the east across the countryside north of Luton south of Barton-le-Clay and towards the border with Hertfordshire.

  - ❖ This corridor includes the communities living in the outlying areas of Luton, Dunstable and Houghton Regis as well as Sundon, Warden Hill and Totternhoe.

  - ❖ The corridor contains numerous areas of large existing green infrastructure assets, and includes the Chalk Arc initiative - a major project originated by the Green Infrastructure Consortium with £1.7m funding from the ODPM (now DCLG) to enhance, secure and create green infrastructure on the chalk to the north and west of the Luton/Dunstable/Houghton Regis conurbation in the Luton and South Bedfordshire growth area. The project includes provision of c.55ha of new greenspace, c.5.5km of new access routes and enhancements to the existing sites of Totternhoe Knolls and Sundon Hills Country Park.

  - ❖ The Chalk Arc encompasses the Icknield Way Corridor regional scale initiative promoted by Bedfordshire County Council, Groundwork East of England, Natural England, EEDA and the Tourist Board. The initiative seeks to promote the historic route of the Icknield Way as the focus

for an economic and social enhancement corridor linking business, community and the environmental and recreational resources of the multi-user routes.

- ❖ Other green infrastructure assets include the National Cycle Network Route 6, Dunstable Downs and Whipsnade Downs, several SSSIs and a significant amount of historic environment interest including Sharpenhoe Clappers hill fort, Dunstable Priory and Friary, and the Theedway historic route. Much of the area covered by this corridor has been designated as an Area of Outstanding Natural Beauty (AONB).

- ❖ This corridor provides strategic links into Buckinghamshire and Hertfordshire and a link to green infrastructure in the centre of the County and towards Leighton Linslade.

- ❖ This corridor falls within the Luton/Dunstable/Houghton Regis (with Leighton Linslade) growth location. This area has an overall allocation of 26,300 new homes to be developed for the period 2001-2021[68].

- ❖ Green infrastructure opportunities include landscape conservation; historic environment enhancement; proposals to create an off road cycle route at Barton Hills and enhance access route linkages between the urban centres and the wider countryside and Rights of Way Network; opportunities for the creation and enhancement of calcareous grassland and an identified deficit in strategic accessible greenspace to the south of Toddington and to the west of Caddington.

- ***(10) Leighton Linslade to Dunstable Corridor*** – this narrow corridor connects Leighton Linslade to Dunstable.

  - ❖ This corridor is focused on the enhancement of the disused railway line that forms the route of National Cycle Network Route 6, which includes a bridge over the A505 road.

  - ❖ This route contains some high quality chalk grassland habitats on the cuttings and embankments.

  - ❖ It is now a high priority to complete an off road cycle route connection to Leighton-Linslade and via the canal towpath to Milton Keynes.

[68] Milton Keynes & South Midlands Sub-Regional Strategy (ODPM, March 2005) - provides the sub-regional strategy for the period 2001-2021, and a long-term spatial vision for the sub-region towards the year 2031.

- ***(11) Upper Lea River Valley Corridor*** – this corridor extends from northwest of Harpenden on the border with Hertfordshire along the Upper Lea River Valley into the centre of Luton, connecting with a link to the Chalk Arc Corridor on the eastern and western edges of Luton.

    - ❖ This corridor includes the communities of central and southern Luton. It adjoins Harpenden to the south and provides a strategically important green corridor running through the centre of Luton linking out to the wider countryside. This is particularly important given the deficit in strategic accessible greenspace in Luton highlighted in section 2.6.

    - ❖ Green infrastructure assets within this corridor include the Lea Valley Way, ancient woodland, Wardown Park, Waulud's Bank Neolithic earthwork and Luton Hoo.

    - ❖ This corridor falls within the Luton/Dunstable/Houghton Regis (with Leighton Linslade) growth location, referenced earlier.

    - ❖ Green infrastructure opportunities include landscape and historic environment enhancement; woodland and grassland linkage and enhancement and an identified deficit in strategic accessible greenspace to the south east of Luton towards Harpenden.

3.7.11 In order that the Green Infrastructure Network can achieve its objectives, it will need to be embedded within a high quality environment outside its boundaries. Therefore beyond the Green Infrastructure Network shown on **Figure F3**, a key objective is for the strategic conservation and enhancement of the setting and context for the Network. This should involve strategic environmental land management action in the wider landscape, targeted to address opportunities identified in Section 2.0 for:

- Conservation and enhancement of landscape character
- Enhanced management, protection, accessibility and interpretation of the historic environment
- Habitat enhancement, linkage and creation (particularly farmland BAP habitats and species)
- Enhanced connectivity of the rights of way network to the strategic access route network, and to accessible greenspace of strategic significance.

3.7.12 As outlined in section 1.2, major growth is planned for Bedfordshire and Luton within the lifespan of this Plan - this is a key driver behind the need to embed green infrastructure as an essential element of existing and new communities. **Figure F4** places the Green Infrastructure Network within the context of planned future growth. As is clear from examination of **Figure F4**, the Network will play a crucial role (alongside local scale green infrastructure) in providing the necessary foundations to ensure that the

planned growth will be sustainable and that the required green infrastructure is in place to secure quality of life for people living in and around the growth locations.

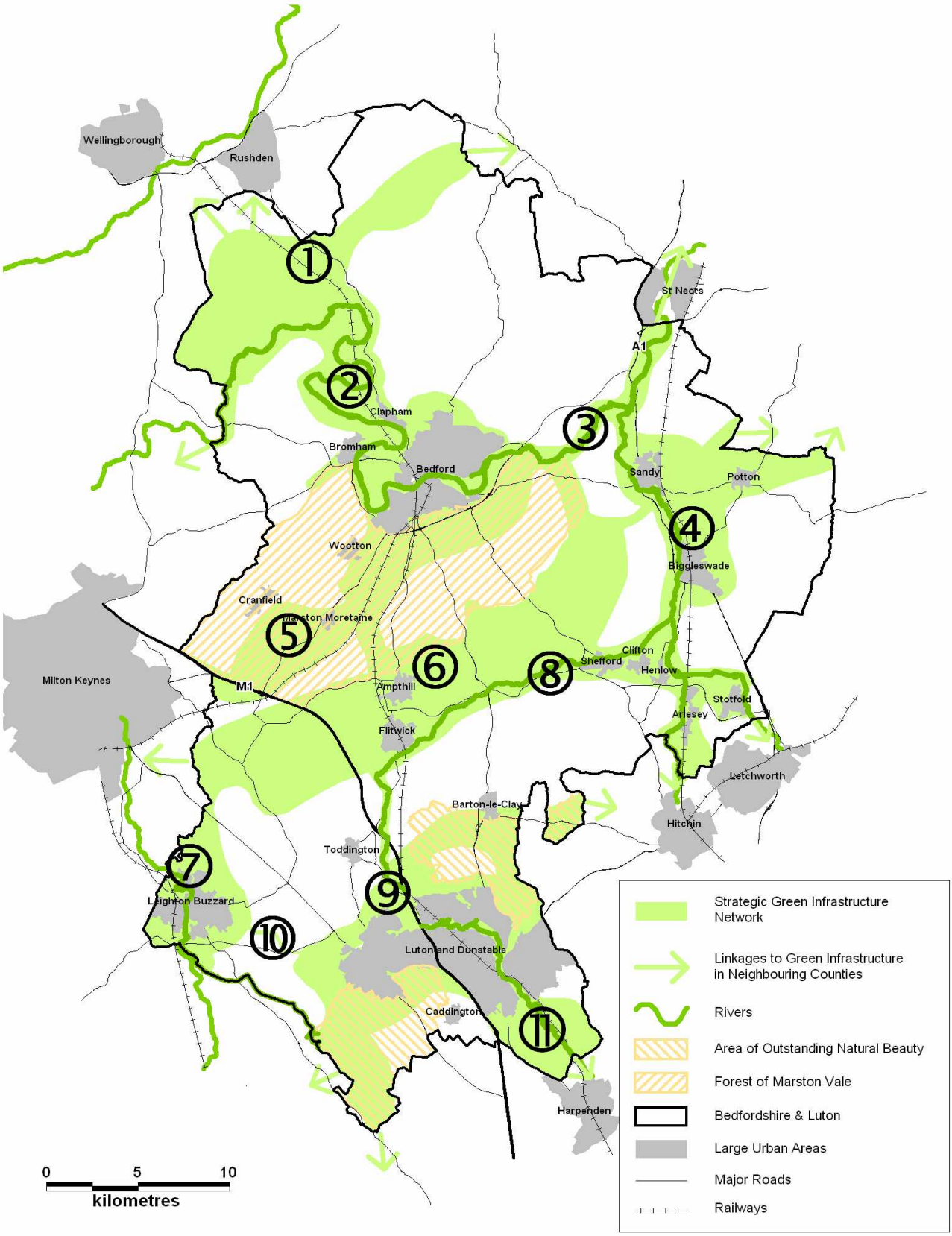

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Figure F3

The Bedfordshire & Luton Strategic Green Infrastructure Network

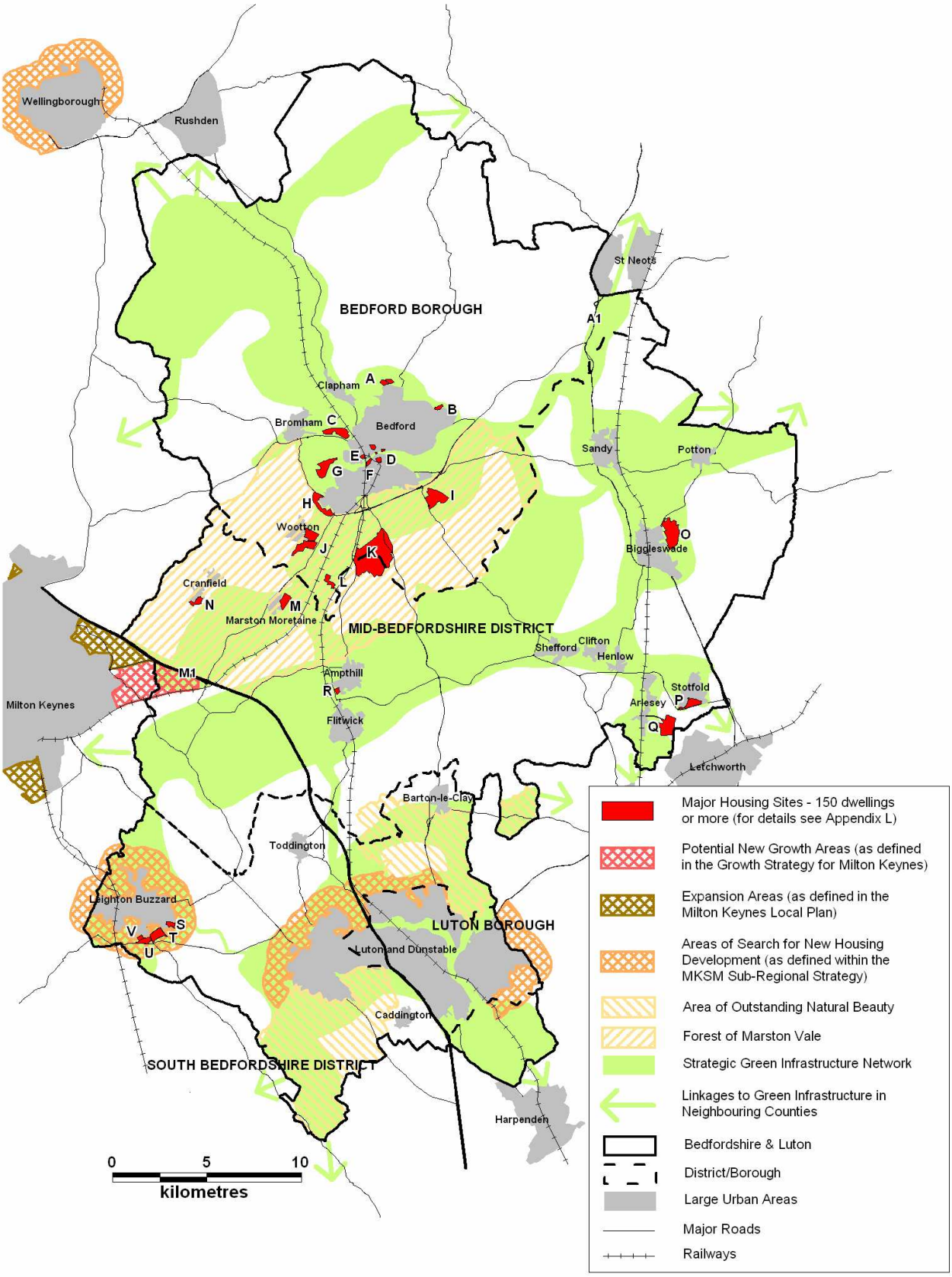

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Figure F4
The Bedfordshire and Luton Strategic Green Infrastructure Network and its Relationship to Housing Growth

3.8 Recommendations for Implementation of the Green Infrastructure Network

3.8.1 The main recommended strategic actions for implementation of the proposed Strategic Green Infrastructure Network are outlined below. Where not directed to a specific body, such as Local Authorities for example, then it stands as a recommendation to all constituent Green Infrastructure Consortium members to respond to.

1. Secure adoption of the Bedfordshire and Luton Strategic Green Infrastructure Plan within the relevant Local Authority Local Development Frameworks, where feasible as a Technical Document

2. Secure endorsement of the Bedfordshire and Luton Strategic Green Infrastructure Plan by all key partners, including local authorities and local delivery vehicles (LDVs) and the MKSM Environment and Quality of Life Sub-Group, as the agreed strategic spatial framework for the planning and delivery of the strategic green infrastructure provision within Bedfordshire & Luton in the period up to 2021

3. Safeguard and enhance the existing green infrastructure of strategic significance for Bedfordshire & Luton as identified on **Figure F1** and in Section 2.0

4. Safeguard existing accessible greenspace and access routes of strategic significance identified in Section 2.0 and on **Figures A1** and **G2,** and enhance the quality of these assets where appropriate, taking into account landscape character, historic environment and biodiversity opportunities

5. Give priority to the conservation and enhancement of landscape character, historic environment and biodiversity in the opportunity areas identified in **Figures L2**, **H2** and **B2**, within and beyond the Green Infrastructure Network identified on **Figure F3**

6. Safeguard existing and proposed strategic linkages and corridors identified on **Figure F3** and enhance the quality of existing links of strategic significance

7. Address the key areas of deficiency in accessible greenspace of strategic significance identified in Section 2.6 and shown on **Figure G2**, via the targeted provision of new strategic accessible greenspace

8. Promote the delivery of new green infrastructure of strategic significance within the Green Infrastructure Network identified on **Figure F3**

9. Use the Bedfordshire and Luton Strategic Green Infrastructure Plan as the spatial context for polices to aid the delivery and planning of strategic green infrastructure in association with new housing and economic growth in the development plan documents being prepared by local planning authorities in Bedfordshire & Luton, as well as in regional and sub-regional plans

10. Encourage and support all Local Authorities in Bedfordshire and Luton (including town and parish councils) to develop further detailed green infrastructure plans at a local level using this strategic plan as a framework, in conjunction with local stakeholders.

11. To consider the areas highlighted within Section 3.9 with a view to establishing whether further action on these issues would be beneficial in advancing the delivery of this strategic plan and the green infrastructure agenda.

3.9 Areas for further consideration

3.9.1 In addition to the above, the following potential options for action may be useful in progressing the Strategic Green Infrastructure Network and the wider green infrastructure agenda. Therefore it is recommended further consideration is given to these issues as focus shifts to implementation of the Strategic Green Infrastructure Plan.

3.9.2 ***Delivery Plan***- in line with the advice set out in *Planning Sustainable Communities – A Green Infrastructure Guide for Milton Keynes & the South Midlands*[69], it is recommended that the Green Infrastructure Consortium considers the development of a Delivery Plan to identify a clear delivery framework for the implementation of the Strategic Green Infrastructure Plan. The Delivery Plan will need to:

- determine resource requirements, including the costs of establishing and maintaining green infrastructure;
- identify potential sources of public and private sector funding;
- set out a programme and priorities for action;
- identify project leaders/champions.

This work could include preparation of feasibility studies where necessary to consider the potential for delivery of key green infrastructure projects.

[69] Planning Sustainable Communities – A Green Infrastructure Guide for Milton Keynes & the South Midlands (MKSM Environment & Quality of Life Sub Group, April 2005)

The co-operation of landowners, and their willingness to sell land or implement alternative land management regimes, is fundamental to the implementation and long-term maintenance of strategic green infrastructure. It is therefore recommended that the Green Infrastructure Consortium actively consults key stakeholder groups and landowners in Bedfordshire & Luton to identify local opportunities, constraints and aspirations to inform the setting of priorities for action within the Delivery Plan.

3.9.3 ***Co-ordination of green infrastructure planning work across Bedfordshire and Luton -*** it is envisaged that the Strategic Green Infrastructure Plan will act as an overarching document which will help inform and guide district level and local level green infrastructure planning work. This further level of planning work will complete the picture in terms of green infrastructure planning and delivery across Bedfordshire and Luton.

Therefore it is recommended that further consideration be given as to how best the Green Infrastructure Consortium can support the co-ordination of green infrastructure planning and green infrastructure delivery at district, local and community level. The Green Infrastructure Consortium is well placed to play a key role in this next level of green infrastructure planning given its broad base of representation and expertise in this field.

In additional to these two key areas – primarily concerning the Green Infrastructure Consortium - there are a number of other issues to consider further in the wake of completion of this Plan. These issues will be particularly relevant to the development of district level green infrastructure planning and it may be useful to consider addressing these issues directly as part of future district and local level green infrastructure plans.

3.9.4 ***Standards of Informal Open Space Provision*** - as LDFs are prepared, it is recommended that the existing standards for informal open space should be subject to review by each of the Borough/District Councils. Revised and new standards, reflecting the findings of PPG17 open space needs assessment studies, should be included in the LDFs and used to secure developer contributions towards informal open space provision through the planning process. It is also recommended that LDFs should stress the need for provision of informal open space by developers and public bodies to contribute to the vision and objectives for delivery of strategic green infrastructure provision, and to demonstrate consistency with the spatial proposals of the Strategic Green Infrastructure Network shown in **Figure F3.**

3.9.5 ***Carrying Capacity -*** as discussed in 2.6.20 it has not been feasible for this Plan to take into account the environmental carrying capacity of sites to accommodate large numbers of users or types of use.

There are some key sites that are already considered to be at or above their sustainable carrying capacity and there is a risk that in the context of growth increasing visitor numbers could lead to negative impacts on these sites. Therefore it is recommended that consideration is given to undertaking a needs analysis of demand on accessible greenspace which includes reference to the carrying capacity of key sites. This could form part of the emerging greenspace strategies which are being developed at district level.

3.9.6 ***Outdoor Sports and Formal Recreation Provision*** - in considering the need for new and enhanced strategic green infrastructure provision, it will be important to take into account provision of facilities for open-air sports and other formal recreation activities within greenspace to meet local and strategic needs. A wide range of land, water and air-based sporting activities make use of the countryside, many of which need special facilities. These can provide revenue to sustain non-revenue generating green infrastructure asset management. It is recommended that these requirements are assessed at the district and community levels, and that playing field and sport pitch strategies should be integrated into the planning, delivery and management of local green infrastructure networks. The strategic provision and need for outdoor sports and formal recreation facilities should be considered when developing plans for delivery of strategic green infrastructure.

3.9.7 ***Access to Green Infrastructure for All*** – it is important that the Green Infrastructure Network is a resource that welcomes all and is accessible to all, including the less mobile and those with disabilities and Bedfordshire and Luton's diverse communities.

The Disability Discrimination Act[70] has focused attention on the need to consider disabled and mobility-impaired people when managing public access. The requirements for improved access to the countryside and sites in urban areas are highly variable and one solution is not necessarily appropriate for all disabled people. It is recommended that local green infrastructure plans/greenspace strategies should take into account the needs of disabled people and those with mobility issues (including the elderly) in the planning, design and management of greenspace and access routes, following best practice advice such as that available from the Countryside Agency (now Natural England)[71].

Recent work by the Countryside Agency's (now Natural England) Diversity Review[72] has focused attention on the issue of access to wildlife and the countryside to people from black and ethnic minority backgrounds, young people and those living in inner cities. The Diversity Review points to the need of

[70] The Disability Discrimination Act 2005 aims to give people with disabilities equal access to services and facilities and contains provision to compel organisations to take reasonable steps to tackle physical features that act as a barrier to disabled people who want to access their services

[71] Managing Public Access – A Guide for Land Managers (Countryside Agency, CA 210, 2005)

[72] The Countryside Agency's Diversity Review was a two year study between 2002 and 2004 researching the needs and perceptions of diverse groups towards the countryside and outdoor recreation. Its recommendations are contained within "Outdoors for All? Draft Diversity Action Plan" (Countryside Agency, May 2006)

outdoor recreation providers and managers of greenspace to engage with these groups as customers and to market facilities and activities with a clear welcome, with a view to increasing participation. It is recommended that in the development of local green infrastructure plans/ greenspace strategies and in the delivery of strategic green infrastructure, the needs of diverse communities should be considered as part of future planning.

APPENDIX A
BEDFORDSHIRE & LUTON GREEN INFRASTRUCTURE CONSORTIUM MEMBERS

APPENDIX A

BEDFORDSHIRE & LUTON GREEN INFRASTRUCTURE CONSORTIUM MEMBERS

- Bedford Borough Council
- Bedfordshire County Council
- Bedfordshire Group of Drainage Boards
- BRCC
- British Trust for Conservation Volunteers (BTCV)
- Chilterns Conservation Board
- Countryside Agency (now Natural England)
- Campaign to Protect Rural England (CPRE)
- Department for Communities and Local Government
- English Heritage
- English Nature (now Natural England)
- Environment Agency
- Forestry Commission
- Go- East
- Greensand Trust
- Groundwork East of England
- Luton Borough Council
- Marston Vale Trust
- Mid Bedfordshire District Council
- National Trust
- North Chilterns Trust
- Royal Society for the Protection of Birds (RSPB)
- South Bedfordshire District Council
- Sustrans
- The Wildlife Trust

APPENDIX B
NATIONAL AND REGIONAL POLICY CONTEXT

APPENDIX B

NATIONAL AND REGIONAL POLICY CONTEXT

Sustainable Communities: Building for the Future (ODPM, 2004)

The ODPM plan 'Sustainable Communities: Building for the future' sets out the government's proposed locations for major growth. A key growth area is Milton Keynes & South Midlands, which encompasses Bedfordshire & Luton. The objectives for Green Infrastructure in the growth areas are:

- To raise the quality and accessibility of greenbelt land by improving accessibility, biodiversity and utility value;
- To promote more and better publicly accessible greenspace in and around communities; and
- To protect green wedges and green corridors through the planning system.

The Bedfordshire & Luton Strategic Green Infrastructure Plan considers accessibility, biodiversity and green corridors, contributing to the objectives set out within the Sustainable Communities Plan.

PPG 2: Greenbelts (ODPM)

PPG2 defines the objectives that greenbelts should fulfil. The objectives relate broadly to the contribution that greenbelts can make towards the protection of the countryside and the role that greenbelts have in encouraging more sustainable patterns of urban development. The objectives of PPG2 are as follows:

- To provide opportunities for access to the open countryside for the urban population;
- To provide opportunities for outdoor sport and outdoor recreation near urban areas;
- To retain attractive landscapes, and enhance landscapes, near to where people live;
- To improve damaged and derelict land around towns;
- To secure nature conservation interest; and
- To retain land in agricultural, forestry and related uses.

The extent of the Greenbelt is shown on **Figure C1**. The realisation and implementation of the Strategic Green Infrastructure Plan will help deliver a number of the above greenbelt objectives.

PPG17: Open Space, Sport and Recreation (ODPM, 2002)

PPG17 states that provision for open space, sport and recreation is fundamental to delivering broader government objectives including urban renaissance, rural renewal, social inclusion and community cohesion, health and well being and sustainable development. The companion guide to PPG17 reiterates the role of provision for open space, providing guidance on how local authorities should assess that open space. Sport is not considered within the Bedfordshire & Luton Strategic Green Infrastructure Plan; however, the Plan will contribute significantly to open space and informal recreation in Bedfordshire & Luton.

PPS7: Sustainable Development in Rural Areas (ODPM, 2005)

Aims within PPS7 include ensuring the improvement of the quality and sustainability of local environments and neighbourhoods and continuing the protection of valued landscapes and natural resources. The quality and sustainability of Bedfordshire & Luton will be improved and landscapes will be protected through the implementation of the Strategic Green Infrastructure Plan.

PPS9: Biodiversity and Geological Conservation (ODPM, 2004)

PPS9 is an extension of the government's biodiversity strategy **–** 'Working with the grain of nature: A biodiversity strategy for England'. PPS9 states that biological and geological diversity should be sustained and enhanced as an integral part of social, environmental and economic development. Through enhancing public access to

existing greenspace and proposing a range of future opportunities the proposed Strategic Green Infrastructure Plan aids in the delivery of biological diversity and social development in a manner sensitive to the underlying environmental character of Bedfordshire & Luton.

Greenspaces, Better Places (Urban Greenspace Task Force, 2005)

The Urban Greenspace Task Force document identifies the benefits of urban parks and greenspaces. The implementation of the Strategic Green Infrastructure Plan will bring these benefits to the urban areas within Bedfordshire & Luton, including the principal conurbations and the surrounding market towns. The document considers that urban parks and greenspaces contribute to urban regeneration and renewal, health, social cohesion, community development and citizenship, education and life long learning, environmental sustainability, heritage and culture.

Living Places – Cleaner, Safer, Greener (ODPM, 2002)

The ODPM consider that new thinking is required in the way that the public realm is designed, managed and maintained. The implementation of the Strategic Green Infrastructure Plan will need to address the four challenges identified. These include accounting for the wide range of owners, tenants and users, combating creeping degradation, improving the quality of public space for everyone and responding to rapidly changing circumstances.

Reconnecting People and Nature: English Nature's approach (English Nature, 2002)

A key aim of English Nature (now Natural England) is to promote access to designated areas, enhancing people's understanding of biodiversity. A critical focus is on 'People and Nature' considering the principles of both social inclusion and sustainability. This is reflected in the research report 'Re-connecting people and nature: English Nature's approach'. A priority within the report is greater involvement of the community in natural areas. Improving green infrastructure provision in Bedfordshire & Luton will help improve communities' access to natural areas.

Position Statement on Local Environmental Quality and Liveability (The Environment Agency, 2002)

The role of the Environment Agency is to improve the environment and people's quality of life, and as such the Agency supports central government's liveability agenda. The position statement reiterates that environmental improvements should be combined with social and economic benefits. The document also requires urban rivers and wildlife corridors to be included as part of 'greenspace' initiatives. The Bedfordshire & Luton Strategic Green Infrastructure Plan includes rivers and wildlife corridors and combines environmental improvements with social and economic benefits.

The Countryside in and around Towns: A vision for connecting town and country in pursuit of sustainable development (The Countryside Agency and Groundwork, 2005)

The Countryside Agency (now Natural England) and Groundwork set out their vision for connecting town and country within this document. It sets out ten key functions for the countryside in and around towns and how these can contribute to a high quality of life for all, in addition to reducing collective impacts on scarce resources. Key functions are defined as the creation of a bridge to the country and a gateway to the town, in addition to providing a health centre, a classroom and a centre for recycling and renewable energy. Other functions identified include the role of the countryside as a productive landscape, a cultural legacy, a place for sustainable living, an engine for regeneration and a nature reserve. The Bedfordshire & Luton Strategic Green Infrastructure Plan is consistent with this vision.

Biodiversity by Design: A Guide for Sustainable Communities (Town and Country Planning Association, 2004)

The Town and Country Planning Association document provides guidance on how to maximise the opportunities for biodiversity in the planning and design of sustainable communities. It offers exemplars from international projects on successful design and management of environmental infrastructure, benefiting communities, to demonstrate new approaches which have the potential for replication in the UK. The document considers core design principles which relate well to biodiversity, examines methods of analysing a site and its context, advises on how new green infrastructure can be created that links to existing networks, and considers detailed design and long term management. The standards in this document have been utilised in the assessment of green infrastructure provision needs with Bedfordshire & Luton undertaken to inform the preparation and implementation of the Strategic Green Infrastructure Plan.

Regional Planning Guidance 6: Regional Planning Guidance for East Anglia to 2016 (GO-E)

Regional Planning Guidance 6 (RPG6) provides advice on how Local Authorities should address the adoption of strategies aimed at ensuring that all development is sustainable with regard to the countryside and biodiversity. The advice set out within RPG6 echoes that of central government.

The Draft East of England Plan, A Regional Spatial Strategy for the East of England (EERA, 2004)

The policies relevant to Green Infrastructure within the East of England Plan are identified below.

SS1: Achieving sustainable development
SS7: Green Belt
SS8: Land in the urban fringe
SS11: Priority areas for regeneration
SS12: Health, education and social inclusion
GPSR1: Strategy for the Greater Peterborough Sub-Region
ENV1: Environmental infrastructure
ENV2: Landscape character
ENV3: Biodiversity and earth heritage
ENV4: Woodlands
ENV5: The historic environment

The key policy is ENV1: Environmental infrastructure. Taking into account the recommendations of the EIP Panel Report[73] Policy ENV1 sets out the following requirements:

'Policy ENV1: Green infrastructure
Areas and networks of green infrastructure will be identified, protected, created, extended, enhanced, managed and maintained throughout the region to ensure that an improved and healthy environment is available for the benefit of present and future communities. This will be particularly important in those areas identified to accommodate the largest amounts of growth in the region, whether or not officially recognised as such in the Sustainable Communities Plan.

Local development documents will:
- define a multiple hierarchy of green infrastructure, in terms of location, function, size and levels of use, at every spatial scale and across all areas of the region based on analysis of existing natural, historic, cultural and landscape assets, including the identification of new assets required to deliver green infrastructure;
- identify and require the retention and provision of substantial connected networks of green space, in urban, urban fringe and adjacent countryside areas to serve the new communities in the sub-region by 2021; and

[73] The East of England EIP Panel Report (June 2006) recommended changes to Policy ENV1 as proposed in the Draft East of England Plan – The Regional Spatial Strategy for the East of England (EERA, December 2004)

- ensure that policies have regard to the economic and social as well as environmental benefits of green infrastructure assets.

Assets of particular regional significance for the retention, provision and enhancement of green infrastructure are:
- The Norfolk and Suffolk Broads, the only area in the region with status equal to a National Park, whose statutory purposes and influence need to be considered well beyond its formal boundaries;
- The North Norfolk Coast AONB;
- The Brecks: a unique area of landscape, ecological and recreational importance with increasing pressures for secure long-term management as a regional park or similar entity;
- Dedham Vale AONB;
- Suffolk Coast and Heaths AONB and associated areas of the Stour Estuary;
- The Great Fen Project;
- Wicken Fen Vision;
- Epping Forest;
- Hatfield Forest;
- Watling Chase Community Forest;
- Thames Chase Community Forest;
- Lee Valley Regional Park;
- The Chilterns AONB;
- Forest of Marston Vale;
- Milton Keynes to Bedford Waterway Park (a project to create a navigable connection between the Grand Union Canal and the River Great Ouse within a linear waterway park).

Urban green infrastructure networks, especially (but not exclusively) at the "Key Centres for Development and Change" and including the "Greening the Gateway" project and the "Green Arc" project around the fringes of Greater London'.

The Strategic Green Infrastructure Plan provides guidance for Local Development Documents within Bedfordshire & Luton, aiding in the implementation of policy ENV1.

Draft Milton Keynes & South Midlands Sub-Regional Strategy (EERA, EMRA & SEERA, March 2005)

The Milton Keynes & South Midlands area was identified in the Government's Sustainable Communities Plan: Building for the Future (February 2003) as one of four key growth areas alongside M11 corridor (London/Stansted/Peterborough/Cambridge), Ashford and Thames Gateway.

The strategic challenges facing the South East include the need to increase housing supply, make home ownership more affordable, tackle transport and other infrastructure issues, address issues concerning skills and the labour market and to tackle deprivation and the need for urban renewal. These growth areas have been identified as having a key role in accommodating the growth required to ensure that the economic success and international competitiveness of London and the wider South East is sustained.

The Sustainable Communities Plan makes it clear that new or expanded communities in these four growth areas should be sustainable, well designed, high quality and attractive places where people will choose to live and work.

The MKSM area straddles parts of three government office regions: the East Midlands, the East of England and the South East. It covers an area of 4,850 square kilometres and has a population of 1.5 million. It contains all districts within Northamptonshire and Bedfordshire, part of Buckinghamshire (Aylesbury Vale) and the two unitary authority areas of Milton Keynes and Luton.

The Secretary of State published the Milton Keynes & South Midlands Sub-Regional Strategy on 17 Marsh 2005. The purpose of the document is to provide a clear, agreed, sub-regional strategy for the period 2001-2021, and a long-term spatial vision for the sub-region towards the year 2031.

The objectives of the Strategy are:

- To achieve a major increase in the number of new homes provided in the area, meeting needs for affordable housing and a range of types and sizes of market housing
- To provide for a commensurate level of economic growth and developing skills in the workforce, particularly in the high value, knowledge-based sectors
- To locate development in the main urban areas to support urban renaissance, regeneration of deprived areas, recycling of land and sustainable patterns of travel
- To ensure that development contributes to an improved environment, by requiring high standards of design and sustainable construction, protecting and enhancing environmental assets (including landscape and biodiversity) and providing green space and related infrastructure (green infrastructure)
- To meet existing infrastructure needs and provide for requirements generated by new development by investing in new and improved infrastructure, by planning to reduce the need to travel and by creating a shift to more sustainable modes of travel
- To create sustainable communities by ensuring that economic, environmental, social and cultural infrastructure needs are met in step with growth

The Strategic Green Infrastructure Plan for Bedfordshire & Luton is intended to directly complement and support these objectives.

Our Environment, Our Future: The Regional Environment Strategy for the East of England (EERA and EEEF, 2003)

The Regional Environment Strategy underpins the Draft RSS by providing a summary of the current state of the environment in the East of England and describes the main environmental challenges facing the region and provides a series of strategic aims for responding to these challenges. The strategy presents a number of key actions that should be implemented to meet the strategic aims.

The Strategic Green Infrastructure Plan for Bedfordshire & Luton will contribute to the following strategic aims:
SA1: Accommodate population and economic growth whilst protecting and enhancing the environment
SA4: Reduce the vulnerability of the region to climate change
SA8: Promote the environmental economy
SA10: Maintain and enhance landscape and townscape character
SA11: Enhance biodiversity
SA12: Conserve and enhance the historic environment
SA14: Increase understanding and ownership of environmental issues

A Shared Vision: The Regional Economic Strategy for the East of England (EERA and EEDA, 2004)

The Regional Economic Strategy underpins the Draft RSS by setting the long-term vision for sustainable economic development in the East of England. The relevant goal is to provide high quality places to live, work and visit. A key priority within this goal is to develop and enhance greenspace and infrastructure to support economic growth. The key actions identified to achieve this key priority include the following:

- The development and management of green networks of infrastructure for the region
- The investment in and enhancement of key environmental assets
- The development of a high quality and accessible urban-rural fringe

The Strategic Green Infrastructure Plan contributes to the implementation of these three actions within Bedfordshire & Luton by developing and enhancing greenspaces and infrastructure.

The Regional Social Strategy: A strategy to achieve a fair and inclusive society in the East of England (EERA, ODPM and EEDA, 2004)

The Regional Social Strategy underpins the Draft RSS by setting out a vision, objectives and actions to achieve a fair and inclusive society for the East of England. A key objective presented is SO6: To support the development of sustainable communities. The strategy highlights the strong links between proximity to nature and social well-being. Action Point 3 of the Regional Social Strategy is as follows:

'To directly promote the development of strategic networks of greenspace that benefit physical and mental well being, particularly in areas of deprivation, by providing for more contact with nature for all across the Sustainable Communities Plan growth areas'.

The Bedfordshire & Luton Strategic Green Infrastructure Plan will directly support the Regional Social Strategy.

Woodland for Life: The Regional Woodland Strategy for the East of England (EERA and the Forestry Commission, 2003)

The Regional Woodland Strategy underpins the Draft RSS by setting out a vision and a series of action plans to enable trees and woodlands to deliver high quality and sustainable benefits within the region. Key themes include:

- Quality of life
- Spatial planning
- Economic development
- Renewable energy
- Education and learning
- Natural environment

The Regional Woodland Strategy considers the advantages that trees can bring to the urban fringe and the built environment, stating that trees and woodlands in and around the built environment can contribute towards creating places where people want to live and work and help to define the cultural identity of urban areas. Trees and woodlands will be an essential consideration within the implementation of the Bedfordshire & Luton Strategic Green Infrastructure Plan.

The East of England Regional Landscape Framework : Scoping Study (CBA for Natural England/East of England Regional Landscape Forum (2006)

The scoping study was undertaken to establish the foundation for an integrated framework and approach to landscape planning, assessment and management for the East of England Region. The regional landscape framework would build on and work with the existing regionally orientated strategies, e.g. the Regional Biodiversity Strategy, and the wide range of landscape strategies and assessments prepared at a more local scale. These will include landscape character assessments and national, regional and local landscape designations.

The Bedfordshire & Luton Strategic Green Infrastructure Plan reflects an integrated approach to the planning, assessment and management of landscapes, and is therefore generally consistent with the emerging regional approach.

APPENDIX C
STAKEHOLDER WORKSHOPS

APPENDIX C

STAKEHOLDER WORKSHOPS

First Workshop - Thursday 2nd February 2006

Purpose
To review and discuss the strategic opportunities mapping/analysis from Stage 1 (presented as a composite map of potential multifunctional green infrastructure), and to identify priorities for strategic green infrastructure provision in relation to a wide range of desired functions and benefits.

Attendance List

Countryside Management Projects
James Russell – Forest of Marston Vale
Richard Woolnough – Greensand Trust
Richard Lawrence – Ivel and Ouse Countryside Project

Bedfordshire County Council
Alison Myers – Landscape Officer
David Bevan – Historic Environment
John Comont – Ecologist
Jon Balaam – Countryside Development Officer
Jonathan Woods/Clive Beckett – Recreation and Access
Martin Oake – Historic Environment
Stephen Coleman – Historic Environment
Tim Earthy – Strategic Planning

Luton Borough Council
Jane Conway

South Bedfordshire District Council
George Crutcher
Mark Saccoccio
Tom Crutcher

Mid Bedfordshire District Council
Sue Frost – Planner
Lisa White – Open Spaces

Bedford Borough Council
Gill Cowie – Planner
Simon Fisher – Green Space

Voluntary Sector
Graham Bellamy – Wildlife Trust
Matthew O'Brien – Farming and Wildlife Advisory Group (FWAG)
Andy Knight – Sustrans
Heather Webb – Bedfordshire and Luton Biodiversity Partnership
Colin Wilkinson – RSPB
Joel Carré – BRCC

Statutory Sector
Neil McKillen – Go-East
Bruce Collinson – Office of the Deputy Prime Minister (ODPM)
Graham King – Countryside Agency
Emma Pritchard – Forestry Commission
Sunny Singh – Forestry Commission

Second Workshop - Wednesday 1st March 2006

Purpose
To review a preliminary map of green infrastructure sites and corridors, discuss and refine the proposed strategic green infrastructure elements, and to consider their potential functions and benefits.

Attendance List

Countryside Management Projects
James Russell – Forest of Marston Vale
Richard Woolnough – Greensand Trust

Bedfordshire County Council
John Comont – Ecologist
Jon Balaam – Countryside Development Officer
Martin Oake – Historic Environment
Stephen Coleman – Historic Environment
David Bevan – Historic Environment
Tim Earthy – Strategic Planning

Luton Borough Council
Barry Timms
Jane Conway

South Bedfordshire District Council
George Crutcher
Tom Crutcher

Mid Bedfordshire District Council
Sue Frost – Planner

Bedford Borough Council
Gill Cowie – Planner
Simon Fisher – Green Space

Voluntary Sector
Graham Bellamy – Wildlife Trust
Matthew O'Brien – FWAG
Pat Olney – Bedfordshire Rural Sport and Activity Group
Matt Briers – Wildlife Trust
Andy Knight – Sustrans
Heather Webb – Bedfordshire and Luton Biodiversity Partnership
Joel Carré – BRCC

Statutory Sector
Roger Handford – Environment Agency
Graham King – Countryside Agency
Emma Pritchard – Forestry Commission
Sunny Singh – Forestry Commission
Frances Prince – Department for Environment, Food and Rural Affairs (DEFRA)

APPENDIX D
STRATEGIC GREEN INFRASTRUCTURE DATA SOURCES

APPENDIX D

STRATEGIC GREEN INFRASTRUCTURE DATA SOURCES

All the datasets used and created in the production of the Strategic Green Infrastructure Plan are available from the Consortium. The key sources of data and supporting information used in the mapping and analysis of the green infrastructure assets included:

1. Landscape

Theme Leader: Beds County Council, Heritage and Environment - Alison Myers

Mapping Layers

- National landscape designations (AONBs)
- Landscape designations (AGLVs)
- LDU boundaries

Support Material:

- 1:50000 Landscape Characterisation study description, analysis and guidelines

2. Historic Environment:

Theme Leader: Beds County Council, Heritage and Environment - David Bevan

Mapping Layers

- Historic buildings and areas, historic landscape and archaeology. These include statutory designated sites, Bedfordshire Historic Environment Record point data and archaeological notification areas.

Support Material:

- The first stage of the Bedfordshire Historic Environment Characterisation comprising a strategic character area assessment at 1:50,000 and summary of opportunity areas.

3. Biodiversity:

Theme Leader: Bedfordshire & Luton Biodiversity Recording and Monitoring Centre - Michelle Edwards (to Nov 05) and Bedfordshire Biodiversity Forum - John Comont (Nov 05 onwards)

Mapping Layers

- SSSIs, NNRs and CWSs
- Biodiversity conservation and enhancement areas
- Flood plains
- Opportunity map showing core areas, scope for expansion, corridors, buffers and linkages related to national/regional and local targets for BAP priority habitats and species
- Key species

Support Material:

- Biodiversity character descriptions of LDUs, analysis and guidelines
- Identification of characteristic species

4. Access Routes

Theme Leaders: Beds County Council, Access and Partnerships - Jonathan Woods and Richard Woolnough, Greensand Trust

Mapping Layers

- Strategic footpath routes
- Strategic cycle routes
- Strategic bridleways
- Strategic networks
- Strategic links proposals

Support Material:

- Strategic study of sustainable [foot, cycle and horse] access routes, networks and proposed links including development of typology and hierarchy for access routes following the same concepts as those used in PPG17 methodology.

5. Accessible Greenspace

Theme Leaders: Beds County Council, Access and Partnerships - Jonathan Woods and Richard Woolnough, Greensand Trust

Mapping Layers

- Strategic PPG17 Typology sites
- Strategic greenspace proposals

Support Material

- Strategic Greenspace PPG17 type study including identification of strategic assets in adjacent counties

APPENDIX E
HISTORIC ENVIRONMENT CHARACTER AREAS IN BEDFORDSHIRE & LUTON

APPENDIX E

HISTORIC ENVIRONMENT CHARACTER AREAS IN BEDFORDSHIRE & LUTON

General

The Historic Environment Character Areas in Bedfordshire & Luton were defined by the Bedfordshire County Council Heritage and Environment Service. The County prepared the following summaries of the existing key assets of each of the 48 Historic Environment Character Areas (HECAs). This text should be read in conjunction with Section 2.4 and **Figure H1** in the main report, and the Historic Environment Opportunity Areas described in Appendix F.

HECA 1

Valleys of the NE-flowing Til and Kym and land in between. Settlements of Yelden, Upper Dean, Melchbourne, Riseley, Pertenhall etc. Melchbourne Park. Mixture of brick, timber-framed and (some) clay lump buildings, a simple rural vernacular. Interspersed with woodland. Considerable archaeological potential. Extensive cropmark evidence; presumed to be late prehistoric / Roman but few have been tested by fieldwork. Good survival of medieval earthworks, e.g. Yelden motte and bailey castle, Melchbourne magnate enclosure. Some medieval shrinkage and shift.

HECA 2

Valleys of the north-flowing Knuston Brook, minor tributary of the River Nene. Settlements of Podington and Wymington. Predominantly limestone buildings. Farm buildings tend to be in centre of villages, rather than outlying. Hinwick House and Hinwick Hall. Podington motte and bailey castle.

HECA 3

Block of clay upland to the north of Harrold and Sharnbrook. Former boundary line between Mercia and kingdoms of southern England. Very high percentage of ancient woodland: Great Odell Wood, West Wood. Boundaries reflect medieval assarting. Woodland earthworks and some ridge and furrow. Late prehistoric and Roman cropmarks. Settlement of Souldrop. Industrial archaeology – ancient iron smelting.

HECA 4

Long-settled and farmed river valley from Turvey to Bromham. Outcropping limestone. Some seasonally flooded meadow. Nucleated settlements of Harrold, Odell, Sharnbrook, Felmersham, Stevington, Milton Ernest, Oakley. In the past, some of the villages were small-scale, self-contained commercial centres. Limestone-built. Churches often close to river, away from centre of modern settlements. Mills, weirs and historic bridges. Former leather working industry in Harrold and Odell. Long history of gravel extraction, which has provided evidence of settlement from early prehistoric onwards. [Includes Stagsden and its tributary stream.]

HECA 5

Area of clay upland to north of A428, enclosed by course of River Great Ouse between Turvey and Stagsden, formerly more wooded than at present. Late prehistoric / Roman cropmarks.

HECA 6

Western Bedfordshire clay ridge, centred on Cranfield. Includes area of high ground to south of Turvey and east of Stagsden. As far as the ridge of Boulder Clay to the north of Brogborough. At 113mOD – highest point in the county north of the Greensand Ridge. Arable agriculture. Limestone building tradition giving way to brick and timber framing. Cranfield Airfield, which preserves 1930s neo-Georgian airfield buildings. Village ends. Moated sites. Late prehistoric / Roman cropmarks evidence dense former settlement (c.f. settlement remains of this date on housing development at Home Farm Cranfield.)

HECA 7

Upper reaches of the Broughton Brook, which drains westwards as part of the River Ouzel catchment. Settlements of Salford and Hulcote, featuring medieval settlement earthworks and former fish ponds. Includes block of land on SW side of M1 next to Wavendon House (Milton Keynes). Gravel extraction has indicated long settlement history from at least Bronze Age onwards.

HECA 8

Western side of Oxford Clay vale of Marston. Line of settlements between clay plateau and Elstow Brook: Kempston, Wootton, Marston Moretaine. Wootton House. Historic woodland on lower slopes of clay upland. Arable farmland (old enclosure). Iron Age and Roman settlement is more extensive than previously thought (land south of Fields Road, Wootton; Beancroft Road, Marston Moretaine). Medieval ridge and furrow, settlement earthworks, moats. Artificial hills at Brogborough landfill site.

HECA 9

Central third of Oxford Clay vale of Marston, encompassing the upper reaches of the Elstow Brook. Late prehistoric and Roman cropmarks (e.g. Marsh Leys Farm, land east of Bedford Road Marston Moretaine). Dominated by formerly more extensive clay quarrying and brick making. Industrial archaeology (although above ground physical remains are fast disappearing). Central to this area is the little altered, planned settlement of Stewartby. WW2 Elstow Storage Depot, shortly to be redeveloped as The Wixams.

HECA 10

Eastern side of Oxford Clay vale of Marston. Series of spring line settlements between Elstow Brook and Greensand Ridge: Lidlington, Houghton Conquest, Wilstead. Woodland on the lower slopes. Arable farmland, mainly parliamentary enclosures. Vehicle proving ground next to Millbrook Station.

HECA 11

Historic core of Bedford, north and south of the Great Ouse. Above ground evidence confined to castle, churches, street pattern, King's Ditch, occasional medieval vernacular building but, more commonly, Georgian architecture. Administrative centre with typical range of municipal buildings. Valuable below ground Saxon and medieval archaeological deposits.

HECA 12

Edwardian and Victorian Bedford. Domestic architecture and industrial housing. Municipal parks and embankment leisure facilities. Railway hub. Engineering developments: Allens and Britannia ironworks. Expansion of Harpur Trust schools. Influence and stimulus of Anglo-Indian community and other migrant communities.

HECA 13

Post-Victorian expansion of Bedford. Subsuming much of former Bedford's rural hinterland, e.g. Goldington village, Kempston, sites of former religious establishments, former Roman and earlier settlement sites.

HECA 14

Extensive Boulder Clay uplands to north of Bedford. N-S running grain to the landscape. Late prehistoric / Roman cropmarks. Mowsbury Park Iron Age hillfort. Medieval settlement ends of Thurleigh and Bolnhurst; historic squatter settlement. Bushmead Priory. Mix of brick and timber-framed buildings with some cob. Twinwoods and Thurleigh Airfields (small part of Little Staughton Airfield on Cambs. Border).

HECA 15

Settlements on the south-facing slopes of the clay upland. More open landscape than HECA 14, with E-W running grain. Streams draining south-eastwards and eastwards into the Great Ouse. Relatively narrow, steeply cut valleys. Villages of Renhold, Ravensden, Wilden, Colesden. Scatter of moats. Settlement shrinkage. Howbury Hall. Considerable archaeological resource (Iron Age to medieval) demonstrated during construction of Great Barford Bypass.

HECA 16

Great Ouse and Ivel valleys downstream of Great Barford and Sandy. Riverside settlements of Blunham, Great Barford, Tempsford, Roxton, Wyboston etc. Historic bridges. Roxton Park, former Little Barford Park. Extensive arable landscape, given an historical dimension by Land Settlement Association smallholdings at Wyboston and Chawston. Until 1689 Great Barford was the head of the Great Ouse navigation, after it had been extended from St Neots. Rich archaeological landscape, early prehistoric sites likely to be sealed by alluvium.

HECA 17

Small spur of the extensive Huntingdonshire / Cambridgeshire claylands, sandwiched between the Great Ouse valley and the Greensand escarpment. Parliamentary enclosure. Late prehistoric / Roman cropmarks. Bisected by part of Sandy to Godmanchester Roman road. Tempsford Park. Tempsford WW2 airfield.

HECA 18

Sandy town centre. Strategic location on gap in Greensand Ridge. Given developmental impetus by market gardening and 19th century railway. Modest brick buildings. Onion sheds associated with market gardening.

HECA 19

Greensand upland to east of Sandy. Characterised by heathland (Sandy Heath, Potton Heath, Gamlingay Great Heath (Cambs.)). History of sand extraction. Parkland associated with Woodbury Hall, Hazells Hall and Sandy Lodge. Tetworth Gardens. Settlements of Everton and Potton (the latter an historic town in its own right). Late medieval pottery production at Everton. Smallholding / market gardening landscape, notably Land Settlement Association "colonies" at Potton.

HECA 20

Historic town of Potton. Archetypal small town. Brick facing on earlier timber-framed buildings.

HECA 21

Western side of the Ivel valley between Sandy and the Flit / Ivel confluence. Extensive glacial and river gravels. Long standing extraction industry at Manor Farm (Sandy) and Broom has produced a wealth of prehistoric and Roman archaeology. Biggleswade ringwork controlling the Ivel crossing. Extensive market gardening with surviving onion sheds. East-west grain to the landscape. Beeston Green. Elements of stonework associated with Ivel Navigation survive at Warren Villas and Holme.

HECA 22

Eastern side of the Ivel valley between Sandy and the Flit / Ivel. Extensive Biggleswade Common. Prehistoric (including Bedfordshire's only convincing cursus) and Roman cropmarks. Crossed by line of Roman road between Baldock and Sandy. Medieval settlement desertion at Stratton and Holme.

HECA 23

Historic town of Biggleswade. Gault brickwork. Church and bishop's palace. Planned, east-west aligned marketplace, now heavily encroached upon. Stratton Park. Impact of Great North Road (coaching) and the railway. Market gardening centre; Dan Albone and the tractor. .

HECA 24

Boulder Clay upland in furthest eastern extremity of county, on watershed between Cam and Ivel catchments. Settlements at Cockayne Hatley (with ancient woodland to north) and Wrestlingworth, both with impressive churches. Formerly extensive apple orchards. Archaeological potential largely untapped.

HECA 25

Ridged landscape to SW of Biggleswade between Ivel valley and upper reaches of the Cam. Settlements of Dunton, Edworth, Millow. Gault Clay brickwork. Includes high ground to west of A1 at Topler's Hill.

HECA 26

Upper reaches of Ivel and Hiz valleys, including short-lived section of Ivel Navigation to Shefford. Gateway to the Hitchin Gap. Settlements of Langford, Clifton, Henlow, Stotfold, Arlesey. Good potential for Iron Age and Roman archaeology, within orbit of known north Hertfordshire settlements (e.g. Baldock, Great Wymondley). Linear Iron Age boundaries, perpendicular to Icknield Way. Stotfold Mill. Fairfield Hospital. Henlow Airfield. Former brickworks at Arlesey. Some meadow and former quarries, particularly on Ivel.

HECA 27

Large block of Greensand upland to north of River Flit. Attractive landscape of marginal heathland, formerly extensive monastic estates. Characterised by ancient woodland, extant (and former) parkland/estates and country houses. Moggerhanger Park, Shuttleworth, Southill Park, Chicksands Priory, Haynes Park. Some arable land amongst the woodland. Complex network of minor roads. Varied settlement pattern; Ickwell Green; much evidence for medieval assarting. Buildings of a variety of ages. Main building stone is ironstone. Limited archaeological fieldwork but where undertaken (e.g. Haynes Park) has revealed settlement from late prehistoric onwards.

HECA 28

Southern side of Great Ouse Valley between Vale of Marston and Great Barford. Includes lower reaches of Elstow Brook. Valley bottom settlements Harrowden, Cardington, Cople, Willington. Group of churches (and a dovecote at Willington). Parishes aligned north-south, while main routes run east-west. Planned settlement at Shortstown (analogous to Stewartby) and airship hangers. Extensive gravel extraction has revealed rich prehistoric and Roman landscape (ritual and settlement).

HECA 29

Historic town of Shefford. Located at river confluence.

HECA 30

Block of mixed country between River Flit and chalk escarpment. Characterised by a series of (mostly) Gault Clay ridges either side of the Campton Brook (a small but long tributary which rises from the Sundon Hills and joins the Flit at Shefford). Settlements include Meppershall, Shillington, Silsoe, Pulloxhill, Harlington, (and Westoning on its northern fringe). May also include, at its western end, Toddington which sits on the watershed between the Flit and the Clipstone Brook, a tributary of the River Ouzel. Wrest Park. Archaeological potential largely untapped but likely to include significant settlement evidence from at least the late prehistoric (e.g. known Roman settlement at Pegsdon, Shillington).

HECA 31

Small plain at foot of chalk escarpment, centred on Barton. Other, smaller settlements at Sharpenhoe and Higham Gobion. Late prehistoric and Roman cropmarks. Moated sites. Barton Airfield.

HECA 32

Flit Valley between Shefford and Flitwick. Much narrower floodplain than, for example, the Ivel Valley. Meadowland. Important palaeoenvironmental remains at Flitwick Moor, preserving good pollen data. Significant late prehistoric and Roman sites in upper reaches (e.g. Ruxox Farm and Ampthill bypass). Flitwick and Cainhoe castles.

HECA 33

Block of Greensand / Boulder Clay upland between Clophill and Lidlington. Centred on Maulden and Ampthill, with smaller settlement at Millbrook. Former heathland (with warrens), later given over to timber plantations. Historic woodland at Maulden Wood and King's Wood. Houghton House and Park. Ampthill Park and House. Greensand Ridge Walk.

HECA 34

Historic town of Ampthill.

HECA 35

Urban centre of Flitwick. Railway town. Expanded out to Flitwick Moor and Flitwick Wood.

HECA 36

Woburn Park and Bedford Estate land. Estate settlements, e.g. Husbourne Crawley, Ridgmont, Tingrith, Milton Bryan etc and model farms. Woburn Experimental Farm. Steppingley Park. Traversed by M1. Archaeological potential largely untapped. Deserted medieval settlement at Potsgrove and Segenhoe (latter includes a ruined church). Complex pattern of small settlements to east of Woburn Park: fossilised medieval landscape. WW2 black propaganda wireless station at Milton Bryan.

HECA 37

Wooded Greensand upland / former heathland to west of Woburn and north of Leighton Buzzard. Ironstone- and brick-built settlements at Aspley Guise, Aspley Heath, Heath and Reach. Former and extant sand quarries on the SW side of A5; Duke of Bedford land to NE is unquarried. Stockgrove Country Park. Remains of medieval woodland management. Bisected by Watling Street (A5).

HECA 38

Historic, planned market town of Leighton Buzzard with its characteristic red and blue (vitrified headers) brickwork. Now linked with the contrasting industrial town of Linslade, a product of the canal and railway age. The two are separated by the River Ouzel and the Grand Union Canal, which are crossed at a number of bridging points. Historic core at confluence of the River Ouzel and the Clipstone Brook.

HECA 39

Gault Clay basin to east of Leighton Buzzard and north of chalk escarpment, drained by upper reaches of River Ouzel and Clipstone Brook (several streams arising on the spring line at the foot of the escarpment). Settlements include Hockcliffe, Tebworth, Tilsworth, Stanbridge, Billington, Eaton Bray. Billington hillfort. Sand quarries at western extremity in Ouzel Valley, led to excavation of manorial and monastic centre at Grove. Extensive earthworks of medieval ridge and furrow and settlement remains. Interesting pattern of parish boundaries, laid out on Watling Street and Theodway (prehistoric routeway).

HECA 40

Chalk escarpment west of Dunstable, including outlying Totternhoe Knolls. Characteristic prehistoric and medieval monuments (Maiden Bower, Five Knolls, warrens and lynchets on Dunstable Downs). Also, more unusual maze and rifle range. London Gliding Club.

HECA 41

Chalk escarpment and downland to north of Luton, including Barton Hills. Southern boundary marked by line of Theodway, a prehistoric routeway. Minor settlements at Streatley and Sundon. Some small scale former chalk quarrying. Woodland on escarpment. High points characterised by extant prehistoric and medieval earthworks (Sharpenhoe Clappers, Galley Hill barrows, Drays Ditches, lynchets at Stopsley common and other medieval earthworks). Sundon Country Park.

HECA 42

Historic core of Dunstable. Royal foundation and long association with peripatetic royal court. Dunstable Priory and Friary.

HECA 43

Victorian and modern Dunstable. Coalesced with Houghton Regis to north. Houghton Hall and Park. Modern industrial dimension, e.g. Bedford Trucks. Chalk quarrying on northern fringe, leading to discovery of prehistoric and Saxon settlement at Puddlehill.

HECA 44

Chiltern dipslope around Whipsnade, Kensworth and Studham, bounded by River Gade on extreme SW corner of the county and by the dry valley of the Ver to the east (also the line of Watling Street (A5). Some ancient woodland. Clay-with-flints geology – possible Palaeolithic potential. Historically, would have looked southwards towards, for example, Roman town of Verulamium. Former large commons, now enclosed. Whipsnade Zoo, including 1930s modernist architecture.

HECA 45

Eastern side of the dry valley of the Ver, on edge of Dunstable and Luton. Centred on Caddington. Association with Worthington-Smith and Palaeolithic archaeology of the brick pits. Extant earthworks at Zouches Farm and lynchets at Blows Down and Chaul End.

HECA 46

Historic core of Luton, including 19th century industrial area. Archaeological potential of central Luton is largely unexplored. Recent work on one of its two medieval castles.

HECA 47

Modern Luton, including Luton Airport. Extremely rapid growth in the modern period. Good examples of 20th century town planning. Wartime and later engineering, including Vauxhall Motors. Has subsumed many historic features in surrounding landscape: Waulud's Bank Neolithic earthwork (also the source of the River Lea), Leagrave Roman settlement, Great Bramingham Wood, a number of former village greens etc. Wardown Park. Few opportunities to date for archaeological investigation. Butterfield development revealing late prehistoric and medieval settlement remains.

HECA 48

Lea Valley to SE of Luton. Dominated by Stockwood Park and, more particularly, Luton Hoo Park, which together have effectively prevented the southwards expansion of Luton. Capability Brown landscape within and around Luton Hoo Park. Higher ground to east and west on Clay-with-flints, includes Someries Castle (early example of brick building). Hyde House.

APPENDIX F
HISTORIC ENVIRONMENT OPPORTUNITY AREAS IN BEDFORDSHIRE & LUTON

APPENDIX F

HISTORIC ENVIRONMENT OPPORTUNITY AREAS IN BEDFORDSHIRE & LUTON

General

The Historic Environment Opportunity Areas in Bedfordshire & Luton were defined by the Bedfordshire County Council Heritage and Environment Service. The County prepared the following summaries of the existing key assets of each of the 45 Historic Environment Opportunity Areas (HEOAs). This text should be read in conjunction with Section 2.4 and **Figure H2** in the main report, and the Historic Environment Character Areas described in Appendix E.

HEOA 1

Attractive group of villages and churches: Yielden, Upper Dean, Melchbourne, Riseley, Pertenhall etc. Simple but varied rural vernacular architecture, including clay lump. Widespread late prehistoric / Roman cropmarks. Medieval earthworks, e.g. Yielden motte and bailey castle.

HEOA 2

Attractive group of villages and churches: Hinwick, Podington, Farndish. Hinwick House and Park, and Hinwick Hall. Podington motte and bailey castle.

HEOA 3

Great Odell Wood and Park Wood on clay ridge to north of Odell and Harrold. Evidence for medieval woodland management, incorporating a number of locally significant historic bridleways (part of Three Shires Way).

HEOA 4

Network of roads and bridges across the meandering Great Ouse, linking the medieval churches and settlements of Turvey, Harrold, Odell, Sharnbrook, Felmersham, Stevington, Milton Ernest, Oakley, Clapham, Bromham, Biddenham, and the outlying Stagsden. Number of excellent viewpoints. Harrold-Odell Country Park. Bromham Mill.

HEOA 5

Clapham Park Wood and Mowsbury Hill hillfort to north of Bedford. Medieval woodland management and historic earthworks. Association with Duke of Bedford agricultural innovations.

HEOA 6

Land Settlement Association smallholdings at Wyboston and Chawston, important component of the social history of market gardening.

HEOA 7

Edwardian and Victorian Bedford, including the historic core evidenced (above ground by the castle, churches, street pattern, King's Ditch). Occasional medieval vernacular building but, more commonly, Georgian and later architecture. A number of urban regeneration projects are in train, e.g. Castle Lane, Greyfriars. Municipal parks and embankment leisure facilities. Social history dimension provided by influence and stimulus of 19th century Anglo-Indian community and other, more recent, migrant communities. Many opportunities for community involvement and presentation.

HEOA 8

Remains of Elstow Abbey and Elstow village. John Bunyan association.

HEOA 9

Archetypal prehistoric and Roman Great Ouse landscape, focussed around present-day settlements of Willington and Cople. Includes Willington dovecote.

HEOA 10
Planned settlement of Shortstown together with the Cardington airship hangers. Engineering equivalent to Stewartby.

HEOA 11
Sandy market square and town centre, including museum display in Town Hall. Market gardening associations.

HEOA 12
Land east of Sandy, including the below ground Roman town and road, Hazells Hall and Park, and the former Tempsford airfield with its associations with WW2 espionage operations.

HEOA 13
Potton market square and town centre. Archetypal small east Bedfordshire town. Brick facing on earlier timber-framed buildings.

HEOA 14
Smallholding / market gardening landscape, notably Land Settlement Association "colonies" to east of Potton.

HEOA 15
Proposed Broom Quarry extension, buried multi-period archaeological landscape.

HEOA 16
Attractive landscape of marginal heathland on Greensand upland: Southill Park, Old Warden, Swiss Garden, Ickwell Green. Medieval woodland management.

HEOA 17
Varied riverine landscape of the Flit valley, including Flitwick Moor, Cainhoe Castle, Beadlow Priory, Chicksands Wood and Priory, isolated Church of St Mary to north-east of Clophill.

HEOA 18
Ampthill Park and House, and Houghton House. Extensive views northwards over Marston Vale.

HEOA 19
Largely unaltered Ampthill town centre and market place. Georgian architecture.

HEOA 20
Industrial heritage and architecture of the remaining elements of the brick making industry, including the brick works, model settlement (analogous to Shortstown) and former brick pits. Cultural association with a variety of migrant communities. Long history of discovery of dinosaur fossils within the Oxford Clay.

HEOA 21
Localised area of significant woodland and hedged boundary survival around Brogborough Manor Farm.

HEOA 22
Attractive villages of Salford and Hulcote featuring medieval settlement earthworks and former fish ponds.

HEOA 23
Woburn Estate and surrounding estate-influenced woodland, farmland, model farms and settlements (e.g. Husbourne Crawley, Ridgmont, Tingrith, Milton Bryan etc.) History of agriculture. WW2 black propaganda wireless station at Milton Bryan.

HEOA 24
Wrest Park house and gardens.

HEOA 25
Chalk escarpment south of Barton. Woodland on escarpment. High points characterised by extant prehistoric and medieval earthworks (e.g. Sharpenhoe Clappers hillfort).

HEOA 26
Galley Hill escarpment north of Luton. High points characterised by extant prehistoric and medieval earthworks (e.g. Bronze Age barrows, Drays Ditches, lynchets at Stopsley common). Traversed by Icknield Way Path.

HEOA 27
Upper and Lower Sundon. Lower Sundon Park incorporates designed garden earthworks and some medieval ridge and furrow. Upper Sundon contains well preserved medieval settlement earthworks. Crossed by the Chiltern Way and several public footpaths.

HEOA 28
Toddington town centre. Church, market square, Conger Hill and Town Water.

HEOA 29
Group of historic villages to east of Leighton Buzzard, e.g. Hockcliffe, Tebworth, Tilsworth, Stanbridge, Billington, Eaton Bray, set in remains of medieval agricultural landscape (extensive ridge and furrow and settlement earthworks). Interesting pattern of parish boundaries, laid out on Roman Watling Street and Theodway (prehistoric routeway).

HEOA 30
Historic woodland to north of Leighton Buzzard, including King's Wood, the best example in the county. Stockgrove Country Park.

HEOA 31
Leighton Buzzard town centre. Historic market square and cross. Characteristic red and blue (vitrified headers) brickwork.

HEOA 32
Grovebury sand quarries in Ouzel Valley. Extraction led to excavation of manorial and monastic centre at Grove.

HEOA 33
Chalk escarpment west of Dunstable, including outlying Totternhoe Knolls. Wide range of extant downland monuments: prehistoric Maiden Bower and Five Knolls barrows; medieval warrens and lynchets on Dunstable Downs; more unusual maze and rifle range. New Dunstable Downs visitors' centre.

HEOA 34
Whipsnade Zoo and village centre, including 1930s modernist architecture. Archetypal Chilterns landscape. Chilterns Way

HEOA 35
Historic core of Dunstable. Royal foundation and long association with peripatetic royal court. Dunstable Priory and Friary. Historic crossroads of Roman Watling Street and prehistoric Icknield Way. Industrial heritage, e.g. straw plaiting and hatting. Recently opened Heritage Centre.

HEOA 36
Extant medieval earthworks at Zouches Farm and lynchets at Blows Down and Chaul End. Association with Worthington-Smith and Palaeolithic archaeology of the brick pits.

HEOA 37
Historic core of Luton, including 19th century industrial area and surrounding Victorian / Edwardian townscape.

HEOA 38
Luton Hoo designed landscape and historic house.

Historic Routeways:

HEOA 39
Icknield Way. Prehistoric routeway traversing the Chiltern escarpment. Links a number of extant prehistoric and medieval earthworks.

HEOA 40
Theedway. Skirts the southern boundary of Leighton Buzzard and joins the Icknield Way north of Luton. Likely to be prehistoric in origin and continued to be an important route during the Saxon period. Recorded in the Chalgrave charter of AD926 and was incorporated into a number of parish boundaries.

HEOA 41
Watling Street. Course of Roman road between London and Chester, preserved by line of modern-day A5. Intersects with Icknield Way in centre of Dunstable and with Theedway south of Hockcliffe.

HEOA 42
White Way. Course of Roman road between Baldock (Herts.) and Godmanchester (Cambs.) Preserved by line of modern-day A1 to south of Biggleswade and bridleway to north-east of Sandy.

HEOA 43
Great North Road. Line of present-day A1. One of the first roads in the country to be turnpiked.

HEOA 44
Ivel Navigation. Short-lived 18th-century improvement of River Ivel as far as Shefford. Elements of stonework survive at Warren Villas (near Sandy), bridges at Holme and to east of Shefford, former wharfage at the head of the navigation in Shefford.

HEOA 45
Grand Union Canal. Separates the historic town of Leighton Buzzard and the industrial town of Linslade, a product of the canal and railway age. Also runs alongside the former medieval settlement of Old Linslade to north of present town. A significantly under-used resource at present.

APPENDIX G
TOWNS AND VILLAGES WITH A POPULATION ABOVE 3750 IN BEDFORDSHIRE & LUTON

APPENDIX G

TOWNS AND VILLAGES WITH A POPULATION ABOVE 3750 IN BEDFORDSHIRE & LUTON

Settlement	2004 Population Estimate[74]
Bedford	78,260
Kempston	19,510
Luton	186,000
Dunstable	33,830
Houghton Regis	16,890
Leighton Linslade	34,370
Biggleswade	16,010
Sandy	11,170
Flitwick	12,830
Ampthill	6,580
Stotfold	6,320[75]
Shefford	5,400
Arlesey	5,210
Bromham	4,920
Barton	4,890
Potton	4,820
Cranfield	4,770
Toddington	4,280
Wootton	4,240
Marston Moretaine	4,140
Clapham	3,930
Henlow	3,880
Caddington	3,760

[74] Population Estimates and Forecasts 2005. Luton Borough Council and Bedfordshire County Council. www.bedfordshire.gov.uk/About Bedfordshire/facts and figures/population estimates and forecasts/. Section 5.9 pp. 19-24.
[75] Population estimates for Stotfold to Caddington inclusive are for whole parish.

APPENDIX H
CLASSIFICATION OF EXISTING ACCESSIBLE GREENSPACE BY TYPE AND STRATEGIC SIGNIFICANCE

APPENDIX H - CLASSIFICATION OF EXISTING ACCESSIBLE GREENSPACE BY TYPE AND STRATEGIC SIGNIFICANCE

SUB-REGIONAL PROVISION (see Figure G1)			
Site Number (see Fig G1)	**Greenspace Site Name**	**Local Authority**	**Greenspace Type**
1	Ashridge Estate	Buckinghamshire	Natural/semi-natural habitat
2	Grafham Water	Cambridgeshire	Natural/semi-natural habitat
3	Milton Keynes Parks (Willen Lake)	Milton Keynes	Urban park
STRATEGIC PROVISION (see Figure G2)			
Site Number (see Fig G2)	**Greenspace Site Name**	**Local Authority**	**Greenspace Type**
4	Addison Howard Park, Kempston	Bedford BC	Urban park
5	Bedford Park	Bedford BC	Urban park
6	Bedford River Corridor	Bedford BC	Green corridor
7	Biddenham Loop Country Park	Bedford BC	Country park
8	Embankment, Mill Meadows, Russell Park, Everards Meadow	Bedford BC	Amenity greenspace
9	Harrold Odell Country Park	Bedford BC	Country park
10	Jubilee Park, Bedford	Bedford BC	Urban park
11	Mowsbury Park, Bedford	Bedford BC	Urban park
12	Priory Country Park, Bedford	Bedford BC	Country park
13	Ampthill Park	Mid Beds DC	Country park
14	Aspley Woods (Beds only)	Mid Beds DC	Natural/semi-natural habitat
15	Marston Vale Millennium Country Park	Mid Beds DC	Country park
16	Maulden Wood	Mid Beds DC	Natural/semi-natural habitat
17	Rowney Warren	Mid Beds DC	Amenity greenspace
18	Smithcombe Hills	Mid Beds DC and South Beds DC	Amenity greenspace
19	Dunstable Downs Country Park	South Beds DC	Country park
20	Stockgrove Country Park	South Beds DC	Country park
21	Whipsnade Downs	South Beds DC	Amenity greenspace
22	Stockwood Park	Luton BC	Urban park
23	Wardown Park, Luton	Luton BC	Urban park
24	Emberton Country Park	Buckinghamshire	Country park
25	Paxton Pits	Cambridgeshire	Natural/semi-natural habitat
26	Irchester Country Park	Northamptonshire	Country park
27	Stanwick Lakes	Northamptonshire	Natural/semi-natural habitat
28	Summer Leys	Northamptonshire	Natural/semi-natural habitat

APPENDIX I
ANTICIPATED POPULATION GROWTH TO 2021

APPENDIX I

ANTICIPATED POPULATION GROWTH TO 2021

The population estimates and forecasts for each Borough/District are taken from the Bedfordshire County Council and Luton Borough Council population figures[76]. 2021 has been used as the basis for considering project provision as it is consistent with the planning horizon for the Milton Keynes & South Midlands Sub-Regional Strategy[77]: The population estimates and forecasts are:

Borough/District	2004 Population Estimate	2021 Population Forecast
Bedford Borough	150,800	172,200
Mid-Bedfordshire	125,500	131,700
South Bedfordshire District	114,200	156,900
Luton Borough	186,000	183,800

[76] Population Estimates and Forecasts 2005. Luton Borough Council and Bedfordshire County Council. www.bedfordshire.gov.uk/About Bedfordshire/facts and figures/population estimates and forecasts/. Section 5.9 pp. 19-24.
[77] Milton Keynes & South Midlands Sub-Regional Strategy (ODPM, March 2005)

APPENDIX J
EXISTING AND PROPOSED STRATEGIC ACCESS ROUTES IN BEDFORDSHIRE & LUTON

APPENDIX J – EXISTING AND PROPOSED STRATEGIC ACCESS ROUTES IN BEDFORDSHIRE & LUTON

STRATEGIC BRIDLEWAY ROUTES			
Route No (see Fig A2)	**Name**	**Local Authority**	**Location**
A	Three Shires Way Bridleway	Bedford BC	North west Bedfordshire
B	Icknield Way Bridleway	South Beds DC	Houghton Regis – north east Luton
C	Skylark Ride Circular Route	Mid Beds DC	Sandy-Potton-Biggleswade
STRATEGIC CYCLE ROUTES			
Route No (see Fig A2)	**Name**	**Local Authority**	**Location**
D	National Cycle Network Route 51	Bedford BC/Mid Beds DC	Milton Keynes – Bedford – Sandy
E	National Cycle Network Route 6	South Beds DC	Leighton Linslade – Luton
STRATEGIC FOOTPATH ROUTES			
Route No (see Fig A2)	**Name**	**Local Authority**	**Location**
F	Three Shires Way	Bedford BC	North west Bedfordshire
G	Ouse Valley Way	Bedford BC	Linking Bedford and Sandy
H	Kingfisher Way	Mid Beds DC	Stotfold – Arlesey – Biggleswade – Sandy
I	Greensand Ridge Walk	Mid Beds DC	North of Leighton Linslade – Ampthill - Sandy
J	Icknield Way Path	South Beds DC	Houghton Regis – north east Luton
K	Chiltern Way	South Beds DC	Ashridge – Dunstable - Houghton Regis
L	Upper Lea Valley Walk	Luton BC	Luton – Harpenden
STRATEGIC WATERWAYS			
Route No (see Fig A2)	**Name**	**Local Authority**	**Location**
M	River Great Ouse	Bedford BC/Mid Beds DC	Bedford - St Neots
N	River Ouzel/Grand Union Canal	South Beds DC	Leighton Linslade - Milton Keynes
PROPOSED CYCLE ROUTES - DEFINED			
Route No (see Fig A2)	**Name**	**Local Authority**	**Location**
O	National Cycle Route 12: Great North Cycle Route	Mid Beds DC	Stotfold-Biggleswade-Sandy-St. Neots
P	Green Cycle Link: Shefford to Bedford	Bedford BC / Mid Beds DC	Linking Bedford and Shefford
Q	Barton Hills Off Road Cycle Route	South Beds DC	Barton-le-Clay
R	Harrold-Odell Country Park Off Road Cycle Route 1	Bedford BC	Harrold-Odell
S	Harrold-Odell Country Park Off Road Cycle Route 2	Bedford BC	Harrold-Odell
T	Green Cycle Link: Bedford –Clapham-Bromham- Cranfield	Bedford BC	Bedford–Clapham-Bromham-Cranfield
U	Green Cycle Link – Bedford East	Bedford BC	Bedford East

V	Green Cycle Link–Sandy - Huntingdon	Mid Beds DC	Sandy-Huntingdon
W	Greensand Ridge Cycle Ride	Mid Beds DC / South Beds DC	Leighton- Ampthill-Biggleswade
PROPOSED FOOTPATH ROUTE			
Route No (see Fig A2)	**Name**	**Local Authority**	**Location**
X	Dunstable Downs – Ridgeway Link	South Beds DC	Dunstable – Ashridge Estate

APPENDIX K
VISITOR ATTRACTIONS IN BEDFORDSHIRE AND LUTON
(ADMISSION CHARGING)

APPENDIX K – VISITOR ATTRACTIONS IN BEDFORDSHIRE AND LUTON (ADMISSION CHARGING)

Bedfordshire and Luton contain major visitor sites which are of strategic importance. These sites have high numbers of visitors, and act as a gateway to Bedfordshire and Luton. A preliminary list of major visitor sites is given below. This list is drawn from local knowledge rather than set criteria.

Attraction	Name	Borough / District
A	Moggerhanger House[78]	Mid Bedfordshire
B	The Lodge Sandy – RSPB Reserve	Mid Bedfordshire
C	The Shuttleworth Collection / Swiss Garden	Mid Bedfordshire
D	Whipsnade Wild Animal Park	South Bedfordshire
E	Woburn Abbey and Safari Park	Mid Bedfordshire
F	Wrest Park Silsoe	Mid Bedfordshire

[78] Moggerhanger House operates largely as a private conference centre but public tours are available of the house and the tea rooms and bistro are open to the public. The grounds of the House, Moggerhanger Park, offer open public access, free of charge.

APPENDIX L
MAJOR HOUSING SITES AND ALLOCATIONS

APPENDIX L – MAJOR HOUSING SITES AND ALLOCATIONS

Shown overleaf are the major housing sites across Bedfordshire and Luton and their allocations, specifying the number of dwellings to be built. Some of these sites have commenced development and on other sites shown work has yet to begin. All sites shown have planning consent. This information has been supplied directly by the local authorities across the county and more detailed information can be found in the relevant Local Plans.

Within the Bedford / Kempston / Northern Marston Vale growth location there is sufficient land committed for housing development to meet the growth requirements to 2021 set out in the Milton Keynes South Midlands Sub-Regional Strategy.

In the south of the county around the Luton/ Dunstable / Houghton Regis (with Leighton Linslade) growth location, the major housing sites required to meet growth requirements set out in the Milton Keynes South Midlands Sub-Regional Strategy have not yet been agreed. There is insufficient development capacity within the urban areas and thus it has been determined that a review of the Green Belt is required around Luton, Dunstable, Houghton Regis and Leighton Linslade to provide headroom for development needs to 2021 and beyond. The Milton Keynes South Midlands Sub-Regional Strategy defines the areas of search for new housing development within the Green Belt as follows - from the west of Dunstable to the A6 north of Luton; to the east and south east of Luton, south of the A505 and east of the B653; and a comprehensive review of all the options for urban extension around Leighton Linslade. These areas are shown on **Figure C1** and **Figure F4**. This issue is currently under consideration as part of the preparation of Local Development Documents, which are being developed jointly by Luton Borough Council, South Bedfordshire District Council and Bedfordshire County Council for the Luton/Dunstable/Houghton Regis (with Leighton Linslade) growth location.

Outside of the County, Milton Keynes, Northampton and Wellingborough / Corby / Kettering have been defined as major growth locations by the Milton Keynes South Midlands Sub-Regional Strategy.

The broad location of future growth around the Beds / Bucks border to the east of Milton Keynes is shown on **Figure C1** and **Figure F4**. The main areas shown are the Eastern Expansion Area defined in the Milton Keynes Local Plan, which is expected to accommodate new housing growth of 2,100 dwellings up to 2011 and 1,900 dwellings post 2011; and the potential "South East Growth Area 1" identified within the Milton Keynes Partnership document "The New Plan for Milton Keynes: A Strategy for Growth to 2031" as hosting a new urban extension, close to Wavendon and Woburn Sands, comprising development of c.7000 homes. Also shown are the Local Plan Northern Expansion Area expected to accommodate 455 dwellings up to 2011 and the Newton Leys Expansion Area (to the south of MK) expected to accommodate 800 dwellings up to 2011 and 850 dwelling post 2011.

To the north of the county in the period up to 2021 the Sub-Regional Strategy makes provision for 30,000 new dwellings around the Northampton growth location and for 12,800 new dwellings around Wellingborough (where the area of search for new housing development is to the east, north and west of the town, shown on **Figure C1** and **Figure F4**).

Site number	Location / Name of Housing Site	Local Authority	Proposed number of dwellings
A	Land North of Brickhill	Bedford Borough Council	500
B	Land North of Norse Road	Bedford Borough Council	250
C	Land North of Bromham Road, Biddenham	Bedford Borough Council	1200
D	Bedford Town Centre Sites	Bedford Borough Council	893
E	Former Gas Works Site, Ford End Road	Bedford Borough Council	154
F	Britannia Iron Works	Bedford Borough Council	c.600
G	Biddenham Loop	Bedford Borough Council	1250
H	Land West of Kempston	Bedford Borough Council	1000
I	Land at Shortstown	Bedford Borough Council	1100
J	Land North/South of Fields Road, Wootton	Bedford Borough Council	1080
K	The Wixams	Bedford Borough Council / Mid Bedfordshire District Council	4500
L	Land at Rousbury Road,Stewartby	Bedford Borough Council	610
M	Land East of Bedford Road, Marston Moretaine	Mid Bedfordshire District Council	380
N	Land at Home Farm, Cranfield	Mid Bedfordshire District Council	350
O	Land to the East of Biggleswade	Mid Bedfordshire District Council	2100
P	Land South of Stotfold	Mid Bedfordshire District Council	650
Q	Fairfield Hospital, Stotfold	Mid Bedfordshire District Council	850
R	Land at Tavistock Avenue, Ampthill	Mid Bedfordshire District Council	150
S	Land at RAF Stanbridge, Leighton Buzzard	South Bedfordshire District Council	422
T	Pratts Quarry, Leighton Buzzard	South Bedfordshire District Council	1200
U	Land at Grovebury Farm, Leighton Buzzard	South Bedfordshire District Council	600
V	Brickyard Quarry, Leighton Buzzard	South Bedfordshire District Council	236