


Planning for

# Infrastructure

in Worcestershire

NEEDS AND ISSUES RESEARCH PAPER



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**June 2012**

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## Chapter 1: Introduction

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### 1.1 Background and Context

In 2008 Worcestershire County Council commissioned Baker Associates and Transport Planning International (TPI) to undertake an Infrastructure Requirements Study. The purpose of the commission was to identify the infrastructure requirements arising from the development targets set out in the Regional Spatial Strategy (RSS) Phase Two preferred option.

The report identified the existing capacity of infrastructure (a baseline) and then assessed the impacts of additional development on the requirements for infrastructure. The study also sought to provide an indicative cost for additional infrastructure required as a result of development and to identify funding mechanisms and responsibility for delivery.

Since the study was commissioned, there have been profound changes to the framework within which councils operate, and to the planning system in particular. Much of this change has resulted from the Localism Act 2012. Regional Strategies are being revoked; Regional Development Agencies have been replaced by Local Enterprise Partnerships; and there is an increased focus on "localism", whereby power is devolved to communities through mechanisms such as Neighbourhood Plans. Alongside these changes sits the National Planning Policy Framework (discussed further below) and the National Infrastructure Plan (HMT, 2011) which sets the strategic direction for infrastructure nationally.

The move to revoke Regional Plans means Local Authorities now have the autonomy to set their own development targets through local strategies. These targets should be justifiable and defensible, based on robust evidence of need. The borough, city and district councils in Worcestershire are currently reviewing their development targets in light of new arrangements, and are at different stages in the production of their Local Plans (with Wyre Forest having the only adopted Core Strategy in the county). A full picture of development targets and population increases across Worcestershire is

therefore still emerging. The type and scale of infrastructure required will be dependent upon the level and distribution of growth.

What is known is that over the next 25 years the population will grow considerably. In particular, the number of people 75 and over is estimated to rise by 90% in rural areas compared to 47% in urban areas (State of the Countryside 2010, CRC). In planning the delivery of infrastructure and services it will be important to ensure service provision reaches these vulnerable groups.

## **1.2 What are we doing?**

Historically, there has been under-investment in infrastructure across the UK. There has been a tendency to 'patch-up', and add to existing assets rather than considering infrastructure networks in a holistic way when planning for the future. This approach can result in asset and operational failure and impacts on the cost of providing infrastructure, which is often more expensive than costs in other countries.

In order to ensure an integrated approach to infrastructure planning, Worcestershire County Council's Strategic Planning Team is preparing a county-wide Infrastructure Strategy, in consultation with public and private sector partners (including Local Planning Authorities, the Local Enterprise Partnerships, the Place Shaping Group of the Local Strategic Partnership, and infrastructure providers).

The Strategy will:

- Provide a strategic framework for co-ordinating and concentrating partner investment across the county to meet strategic needs and deliver maximum economic benefit and resource efficiencies, reflecting the challenges of the economic downturn and reduced public spending.
- Provide the economic and policy context for private and public sector investment in infrastructure to support development, growth and regeneration across Worcestershire.

- Be useful for investors (inward and existing Worcestershire businesses), house builders, housing associations, and developers who need to understand when and how infrastructure will be provided to support their investment decisions.
- Serve as a valuable bidding document when seeking funds from external funding sources as it takes an evidence-based approach to infrastructure planning, demonstrating a commitment by delivery partners to investment priorities.

### **1.3 Why do an Infrastructure Plan?**

The National Infrastructure Plan (2011) states:

*"Infrastructure networks form the backbone of a modern economy and are a major determinant of growth and productivity. The UK has extensive and sophisticated infrastructure that has been developed over hundreds of years. However, historically the UK's approach to the development of these networks has been fragmented and reactive. Investment has not kept up with the needs of a growing population and opportunities to maximise infrastructure's potential as a system of networks have not been exploited. Most importantly, the UK has never before had a clear long term plan for maintaining and improving its infrastructure. To remain globally competitive, the UK needs to address these failures and develop an infrastructure capable of supporting a dynamic, modern economy".*

As of 27th March 2012 the National Planning Policy Framework (NPPF), a consolidated, high-level statement of planning principle, replaced the suite of various Planning Policy Statements and Guidance<sup>1</sup>. The NPPF states that provision of infrastructure is an important element in building a strong and competitive economy. It highlights the need for local planning authorities to plan positively and to set out strategic priorities for the provision of different types of infrastructure such as transport, telecommunications, waste

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<sup>1</sup> PPS10: Planning for sustainable Waste Management remains extant.

management, water supply, wastewater, flood risk, minerals and energy, health, security, community and cultural infrastructure.

The approach being taken by WCC accords with the NPPF, which advocates the use of informal strategies such as joint infrastructure and investment plans, cooperation between tiers, and collaborative working between planning authorities to enable delivery of sustainable development in consultation with Local Enterprise and Local Nature Partnerships.

The Worcestershire Infrastructure Strategy will need to be integrated into the work of:

- The Sustainable Community Strategy
- The Local Investment Plan
- The Infrastructure Delivery Plans of Worcestershire's Local Planning Authorities
- Capital and Asset Pathfinder
- The Climate Change Strategy - adaptation to climate change
- The County Council BOLD initiative – via co-location of infrastructure and services
- A potential Community Infrastructure Levy for the county
- Worcestershire's Local Enterprise Partnership (LEP) and link with the Greater Birmingham and Solihull LEP

#### **1.4 What we have done to date**

In 2011 Worcestershire County Council's Strategic Planning Team consulted stakeholders on four research papers:

- Infrastructure Needs and Issues
- Prioritisation
- Funding and Delivery Mechanisms
- Viability Assumptions



These four reports provide the background evidence to underpin the development of the strategy and have been subject to a 'critical friend' review by Hewdon Consulting and Colin Buchanan.

## **1.5 Report Structure**

This report is the evidence base that sits behind the forthcoming Infrastructure Strategy. It sets out details of existing infrastructure assets and their capacities. Where possible, information on deficits and future need is included and this will act as a baseline until such time as it is possible to calculate more accurate deficits in infrastructure arising from updated development targets. The report represents a snap-shot in time and uses information available at the time of writing. The evidence base underpinning this research paper will be continually refreshed with an updated report being published at least annually.

The report also aims to set out, where possible, the methods for assessing future infrastructure requirements. In some cases this is via standards (e.g. X m<sup>2</sup> of green space per dwelling), but for some infrastructure types this approach will not be possible, as requirements will be scheme-specific and dependent on other factors.

Once fully completed the infrastructure report will:

- highlight infrastructure capacity issues and existing capacity where possible, through the review of existing information and consultation with stakeholders;
- identify the infrastructure impacts of additional development in generic and locationally-specific terms for main settlements and on a county and district basis;
- illustrate the net infrastructure impact of new development and highlight significant issues;
- provide information on the indicative cost of infrastructure;
- identify funding mechanisms and responsibility for delivery;
- prioritise investment in infrastructure across the county;

- produce county and settlement infrastructure schedules.

At the current time it is not possible to complete all the objectives listed, given the uncertainty surrounding the level and distribution of housing. Once more information is available the report will be updated to take this into account.

The scope of the plan will include physical, community and green infrastructure required to deliver the aims of the key strategies within Worcestershire.

- Physical Infrastructure
  - Transport: Road, Rail, Bus, Walk and Cycle
  - Energy: Renewable Energy, Gas and Electricity
  - Flood Risk Management
  - Water Supply and Waste Water Treatment
  - Communications
  - Waste Management Infrastructure
- Social infrastructure including:
  - Education services
  - Health services
  - Social Care
  - Community (including libraries, religious buildings and built leisure)
  - Emergency services
- Green infrastructure

## Chapter 2: Transport

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### 2.1 Introduction

The multi-modal transport network secures connectivity between different parts of Worcestershire and between the county and the wider West Midlands Region, the rest of the country, and to the rest of the world (via international hubs such as Birmingham International and London Heathrow Airports). The network links people to jobs; delivers products to markets; underpins supply chains and logistics; and supports domestic and international trade. Transport networks which are accessible to all and which deliver fast and reliable journey times for people and goods will support the economy. Conversely, slow and unreliable transport networks which do not provide the necessary access to key destinations such as businesses, employment opportunities and markets will inhibit economic performance.

The quality of transport infrastructure and services, and how comprehensive the transport network is, will influence the role transport plays and its contribution to the functioning of a successful economy. Where investment in transport infrastructure and services has been inadequate during periods of economic growth and has not kept pace with rising demand, this has been shown to adversely impact on future growth and competitiveness. This is an issue for parts of Worcestershire.

Transport networks are complex in terms of their interaction between modes and their relationship with land uses (the generators of travel demand). It is vital, therefore, that when considering the investment in the new/improved transport infrastructure and services required to support the economy, environment and quality of life, the roles and requirements of all modes of transport are taken into account in an integrated way. For example, focussing on a single (potentially large scale) piece of transport infrastructure without also recognising the impacts on other parts of the network and the need for wider (often less substantial) investment can lead to unintended adverse impacts on network performance.

An overly biased "single/large" scheme focussed approach may also miss the opportunity to take advantage of, for example, reduced urban area congestion, to implement improvements to the public realm and to locally focussed walk, cycle and passenger transport modes, which if implemented would reduce congestion, improve journey times and reliability and thus support economic growth and reduce carbon emissions in line with national and local policy objectives. It is for this reason that the Worcestershire LTP3 is based on an area-based multi-modal package approach to transport investment.

Evidence has shown that:

- Transport networks support the productivity and success of urban areas and their catchments, by getting people to work, supporting deep and productive labour markets and allowing businesses within the area to reap the benefits of agglomeration
- Delays and unreliability on transport networks impose direct costs on people and businesses, increasing business costs and affecting productivity and innovation
- In mature economies (like Worcestershire's), with well-established transport networks and where connectivity between economic centres is already in place, the evidence suggests investment should be focused on enhancing the performance of the existing networks, particularly where journey time reliability and accessibility is deteriorating
- The strategic economic priorities for long-term transport policy should be:
  - Growing and congested urban areas and their catchments
  - Key inter-urban corridors that are showing signs of increasing congestion and unreliability. They are the places where transport constraints have significant potential to hold back economic growth

Investments in improving the public realm, particularly in urban centres, can have significant growth benefits for visitor-focussed economies (such as Worcestershire)

New commercial and residential development in Worcestershire will add pressure to the local and regional (motorway and rail) transport network. This pressure is expected to be greatest in and around the urban areas and along key inter-urban links where most service and employment opportunities are located and demands for travel are likely to be greatest, even with a dispersed pattern of growth.

Worcestershire County Council (WCC) is the Highways Planning Authority, and as such prepares Local Transport Plans and Strategies. WCC works closely with the 6 district councils to consider how transport issues associated with new development can be addressed.

Worcestershire's third Local Transport Plan (LTP3 – underwent consultation Oct 2010–31st December 2011) and was adopted in February 2011. The LTP3 is based on an area-based multi-modal package approach to transport investment designed to ensure that transport is able to play a full role in supporting sustainable economic growth, managing transport related carbon emissions and minimising transports impact on the local environment, including air quality, noise and severance.

The Worcestershire LTP3 has established the following six overarching objectives:

- The Economic Objective: To support economic competitiveness and growth through delivering a reliable and efficient transport network
- The Environment Objective: To reduce the impact of transport on the local environment and public health, by reducing noise and transport-related emissions of carbon dioxide and other greenhouse gases
- The Public Health & Safety Objective: To contribute toward better safety, security, health and longer life expectancy and promote healthy modes of travel

- The Equality Objective: To support equality of opportunity
- The Quality of Life Objective: To promote a healthy natural environment, conserve our historic environment and heritage assets
- The Asset management Objective: To enhance the quality of Worcestershire's Transport Asset

The LTP3 provides the policy and strategy context for major transport projects and enable WCC to bid for additional Government (and other) funding over the next 15 years. It will also help WCC secure funds from development and ensure these are properly used to improve the efficiency of our transport networks.

### **2.1.1 Prioritising Investment in Transport**

The LTP3 has a clear objective of prioritising the spending of limited funds towards those schemes which will deliver the greatest benefits. Clearly, in the current economic environment the need to ensure that limited funds are efficiently prioritised is greater than ever.

The LTP3 includes a Transport Scheme Appraisal Framework, designed to be capable of considering all transport schemes, regardless of cost or mode. In particular, the scheme favours 'packages'; that is to say, grouping of smaller schemes to make a bigger integrated scheme. This is because larger 'package' schemes tend to give much better value for money (with the whole being greater than the sum of its parts), and also helps to ensure that investments are made in a holistic (area-wide) manner, rather than a piecemeal approach.

The criteria used in the Transport Scheme Appraisal Framework have been weighted by Worcestershire County Council's elected members. The highest weighted criteria were:

- Costs & Funding: Favouring schemes delivering the best value for money and/or maximise funding from sources other than Worcestershire County Council

- Support Economic Growth: Favouring schemes that improve journey time reliability and predictability for all modes, support redevelopment and regeneration and enhance transport infrastructure and services to be more resilient to incidents (such as flooding, accidents and road closures)
- Deliverability: Favouring schemes with public, political and stakeholder support and which do not represent an unacceptably high risk, particularly to Worcestershire County Council
- Reduce Carbon Emissions: Favouring schemes which reduce emissions from transport, such as alternative fuels and walking, cycling and passenger transport (rail, bus, taxis and community transport) schemes.

### **2.1.2 Calculating Infrastructure Requirements and Costs**

The Worcestershire LTP3 sets out in detail the policies associated with the existing and future role, performance and need to invest in the Worcestershire transport network. All future WCC-led bids for investment in the network (and the wider Worcestershire transport network) will be subject to appraisal to ensure value for money and alignment with policies. This will involve use of the LTP3 Scheme Appraisal Framework (SAF) and where appropriate highways/rail/bus industry business case protocols.

The LTP3 SAF has been developed to guide directorate capital spending (including S106 funds and grant allocations) to optimise value for money. This involves developing the case for capital investment on the basis of:

- Identifying the desired "outcomes" for each package, e.g. supporting economic growth, reduction in journey times, improved air quality, reduction in congestion, increased safety, improved public realm etc. (based on input from the LEP, elected members, district Councils, other key stakeholders, officers and the public)
- Defining the role of transport in delivering these "outcomes"

- Identifying at a high level the transport interventions needed to deliver the outcomes
- Producing estimates of costs (capital and revenue) of the proposed schemes
- Assessing risk and deliverability (resources, funding, constraints, support)

This approach has helped to develop a clear understanding of the transport infrastructure and service requirements in each area, prioritised according to overall business case, including value for money, support for policies etc. The 13 packages currently in the LTP3 are:

1. *NORTH EAST WORCESTERSHIRE TRANSPORT STRATEGY*

- a. *The Bromsgrove Urban Package*
- b. *The Redditch Urban Package*
- c. *The North-East Worcestershire Rural Package*

2. *SOUTH WORCESTERSHIRE TRANSPORT STRATEGY*

- a. *City of Worcester Urban Package*
- b. *The Upton-upon-Severn Urban Package*
- c. *The Droitwich Spa Urban Package*
- d. *The Great Malvern Urban Package*
- e. *The Tenbury Wells Package*
- f. *The South Worcestershire Rural Package*

3. *WYRE FOREST TRANSPORT STRATEGY*

- a. *The Kidderminster Urban Package*
- b. *The Stourport-on-Severn Urban Package*
- c. *The Bewdley Urban Package*
- d. *The Wyre Forest Rural Package*

Where proposed new development requires transport infrastructure and service investment to enable it to be delivered in a safe and sustainable way, WCC will be looking to the promoters (private and public sectors) to financially contribute toward the capital and ongoing maintenance costs.

## **2.2 Rail**



## 2.2.1 Context

Rail is the primary passenger transport mode for longer distance (regional and inter-city) journeys to/from Worcestershire. The rail network has a critical role as it provides the primary mode of public transport access to:

Regional destinations/markets/business opportunities across the West Midlands region

National destinations/markets/business opportunities including London and the South East, Bristol and the South West and other parts of the United Kingdom via interchange hubs such as Birmingham New Street

International transport hubs, including Birmingham International Airport, Heathrow , East Midlands Airport, High Speed1 (and High Speed2)

It is vital that the rail network offers reliable, affordable, fast and comfortable services between Worcestershire and these destinations.

Rail also provides for a number of key 'within Worcestershire' inter-urban demand flows, in particular along the A449/A38 Corridor between Malvern, Worcester, Droitwich and Bromsgrove and between Worcester and Cotswold Line destinations. It is imperative for the performance of the Worcestershire economy that the quality of these links are maintained and subject to resources, improved.

Network Rail own and manage the railway infrastructure in Worcestershire. Stations are leased to Train Operating Companies (TOCs) to use and maintain. Freight Operating Companies (FOCs) operate and manage freight services and facilities.

Railway infrastructure in Worcestershire represents the majority of the 'dedicated' passenger transport infrastructure in the County. In general, the majority of Worcestershire's stations are 'heritage' structures, which, although generally well maintained, often fall short of modern expectations for comfort and ease of use. The quality and perceived safety of stations acts to constrain use of rail.

Urban integration with the rail network needs to be improved in particular in terms of walk, cycle and passenger transport access and car parking facilities. The level of integration is constraining growth in use of rail with consequent adverse impacts on traffic congestion and carbon emissions, in particular in urban centres such as Worcester and Kidderminster.

Worcestershire's accessibility to the Inter-City services between South West/South Wales/Bristol and Birmingham/North East/North West is very poor. This impacts on rail usage (and results in greater reliance on the car for certain journeys), with consequent adverse impacts on the economy and environment. It also adversely impacts on the perception of Worcestershire as a place to do business.

### **2.2.2 Existing Assets**

The existing Worcestershire rail network includes the following lines:

- (Hereford/Ledbury) - Malvern - Worcester - Droitwich - Bromsgrove - Birmingham New Street
- Worcester - Droitwich – Hartlebury - Kidderminster - Birmingham Snow Hill
- Redditch - Barnt Green - Longbridge - Birmingham New Street - Lichfield
- Worcester - Pershore - Evesham - Honeybourne - Oxford - London (Cotswold Line)
- Worcester - Ashchurch - Cheltenham (- Bristol)

### **2.2.3 Current Demand & Performance**

Approximately 7.5 million passengers/annum use Worcestershire's rail stations. Rail patronage has grown by approximately 57% between 2004/05 and 2010/11. The most used station in the County is Worcester Foregate Street (accounting for approximately 21.6% of all rail journeys to/from Worcestershire). Worcester Foregate Street and Shrub Hill Stations combined account for 31.6% of all rail journeys to/from Worcestershire. The next most

used stations are Kidderminster (17.3% of passengers) and Redditch (15.3% of passengers).

The greatest growth in rail passenger demand (in terms of volume) over the period 2004/05 – 2010/11 occurred at:

- Worcester Stations: +696,820 (41.6%)
- Kidderminster: +563,862 (76.8%)

Although overall passenger numbers are lower, Bromsgrove Station has seen significant growth in passengers over the last 6 years (nearly 170%) despite the poor quality of services. However, continued growth at this station is now being constrained by inadequate infrastructure, which limits the number of trains that can call at the station due to platform lengths.

The key rail flows are:

- To/from Birmingham/West Midlands Met area, 2.3million passengers/annum (55% of rail journeys to/from Worcestershire)
- To/From Worcester, approx 1.35million passengers/annum (32%)

There are particularly significant flows to Birmingham and the West Midlands metropolitan area from:

- The Wyre Forest: 590,000 passengers/annum (14%)
- Redditch: 670,000 passengers/annum (17%)
- Bromsgrove: 240,000 passengers/annum (6%)

The poor quality of service between Worcestershire stations and locations served by the Birmingham – Cheltenham/Gloucester/Bristol and Cardiff main line is exacerbated by the lack of direct access to Cross Country services (operating between the North East/East Midlands, Birmingham and the South West/South Wales). The proposed Worcestershire Parkway would help to address this issue and improve access to the Cross–Country rail network and is an issue that needs to be addressed during the LTP3 period. The proposed

parkway station would also improve access to Worcestershire – Reading – London services.

#### **2.2.4 Capacity of Existing Assets**

Both within and outside Worcestershire there are infrastructure and rail service capacity constraints which impact on the performance of the rail network and its ability to accommodate growth in demand. For example, the Worcestershire to Birmingham New Street line is 100% occupied north of Kings Norton. This severely limits the scope for the delivery of additional fast and direct rail services between South Worcestershire, the West Midlands and key transport hubs such as Birmingham New Street and Birmingham International.

Over 30% (29.5 miles) of Worcestershire's railway lines are single track which imposes capacity constraints and can adversely impact on service frequencies and reliability. Although Network Rail has invested c.£84 million in track works on the Cotswold Line, significant sections of single line will remain, in particular:

- Central Worcester (Worcester Shrub Hill/Tunnel Junction – Henwick)
- Evesham – Pershore – Norton Junction
- Droitwich – Stoke Works Junction

Without major investment in the rail network infrastructure and services both inside and outside the County there is limited scope for significant new rail services from Worcestershire. The renewal of the Greater Western Franchise offers a key opportunity to press for improvements to infrastructure and services between Worcestershire and London and between Worcestershire and Gloucestershire/Bristol/South Wales.

As set out in the South Worcestershire Draft Core Strategy, the South Worcestershire area (in particular Worcester City, Malvern, Pershore and Evesham), will see significant planned growth in housing (circa 20,000 new homes) and commercial (circa 311 Hectares) development during the period to 2030. A significant proportion of this growth is planned for Worcester City

and its environs and will clearly generate significant demand for travel to destinations served by the Greater Western and London Midland Franchises.

This scale of development, allied to the existing important economic role of Worcester City and its hinterland has highlighted the role of the transport network in supporting economic growth and in particular, the role of the rail network in providing South Worcestershire residents and businesses with excellent access to regional and national destinations and international hubs such as Heathrow, London and Birmingham International.

Access to the above destinations by rail services is currently constrained due to a combination of poor car access, inadequate service frequencies, extended journey times and poor reliability. In combination this reduces accessibility to markets and employment, discourages inward investment, constrains economic growth and imposes environmental costs, particularly in terms of carbon emissions.

Whilst the Core Strategies have yet to be prepared for Bromsgrove and Redditch areas, previous information provided by the planning authorities has shown that significant growth in housing and commercial development is planned for these areas. The rail network will be expected to cater for a proportion of the travel demand generated by this (and existing) development, in particular for journeys to Birmingham and the Black Country, South Worcestershire and to other parts of the UK.

The LTP3 contains further details of:

- The rail network standards that Worcestershire County Council and its partners are seeking to achieve
- The role of passenger transport in helping to deliver sustainable new developments

The role of the promoters of new developments in funding the rail infrastructure and services required to deliver sustainable growth (i.e. without over-reliance on the car)

### **2.2.5 Future Investment Plans / Method of Funding**

The national rail industry works to deliver a five year workload set by the Department for Transport in a High Level Output Statement. The delivery of rail infrastructure from 2009 to 2014 by the rail industry was set by the High Level Output Statement in July 2007. The content of the 2012 High Level Output Statement will be largely dictated by funding availability allied to value for money and policy compliance. Public finance for transport schemes promoted by WCC is likely to be very constrained during the first 5 years of the LTP3 period (2011– 2016).

The implementation of some proposed enhancements, including Kidderminster and Bromsgrove rail station projects, have been delayed due to the changes in major transport scheme funding procedures. However, the Bromsgrove scheme is progressing using an alternative funding model and the Kidderminster scheme has obtained planning approval and every effort is being made to bridge the current funding gap.

Following First Group's decision to exercise its option to terminate the existing franchise agreement for the Greater Western franchise at the end of March 2013, the Department for Transport (DfT) have begun the refranchise (competitive bidding) process. The new Greater Western franchise will operate from April 2013, with the Invitation to Tender planned to be issued in May 2012 and the award of the franchise by the end of 2012. This process provides WCC and its key stakeholders with the opportunity to lobby for improvements to rail infrastructure and services to be included within the bid requirements to be delivered in full or in part by the operators. Similar opportunities will arise when the London Midland and Cross-Country franchises are retendered or renegotiated over the coming 5 years.

A key and strongly supported element of the Worcestershire County Council response is the need for a new “Worcestershire Parkway” station at the intersection between the Worcester – London (Cotswold Line) and Bristol – Birmingham lines at Norton, east of Worcester. This scheme would improve access (particularly by car) to Worcestershire – London and South West –

Birmingham – North East/North West Cross Country services (which currently bypass South Worcestershire), enable interchange between services and reduce journey times to regional and national destinations. This will be of benefit to economic growth in the county.

The business case for the scheme has now been updated to take account of changes to recent and committed investment in rail infrastructure and services, the latest information on rail demand and changes to planning (development) assumptions. This work has indicated an improved business case to Worcestershire Parkway, including:

- A £700,000 pa increase in Great Western revenue
- A £76,000 pa increase in Cross Country revenue
- A benefit cost ratio of 2.8:1 (increasing to 3:1 if Bristol – Birmingham services call at the station)
- Significant improvements in car + rail journey times between South Worcestershire and destinations across the UK

These proposals would greatly assist the economic development in Worcestershire and play a major part in reducing long distance car journeys as well as leading to increased profit to the relevant Train Operators and associated benefits in terms of government subsidy.

### **2.2.6 Who is responsible**

The WCC Environmental Services Directorate is responsible for liaising with the railway industry in respect of services, infrastructure and performance. It is also responsible for developing the WCC-led bids for investment in the rail network (and the wider Worcestershire transport network) and associated business cases for funding of railway infrastructure renewal and enhancement.

#### *1. Key Contacts*

- County Council Highways
- Train Operating Companies

- Network Rail

## 2. *Key Reference Documents*

- Worcestershire County Council (2011) Local Transport Plan 3
- Worcestershire Parkway Updated Business Case (April 2012)
- Worcestershire County Council response to Greater Western Franchise Consultation (March 2012)



**Table 1: Schedule of Potential Schemes (Rail)**

Scheme	Delivery Agent	Cost	Funding Source	Funding Secured	Status of Scheme
Rail elements of The North East Worcestershire Transport Strategy, including:  Bromsgrove Station  Cross-City Line Service extension to Bromsgrove  Increased frequency Redditch – Cross-City line services	Network Rail Train Operating Companies DfT (Rail) Worcestershire County Council district Authorities Private Developers	Bromsgrove Station: Circa £14m  Cross-City Line extension: Unknown at present Network Rail committed scheme for Control Period 4 (to 2014/15)  Increased frequency Redditch Branch services: Unknown at present Network Rail committed scheme for Control Period 4 (to 2014/15) Circa £16m	Potential combination of: Worcestershire County Council LTP3 IT Block, Network Rail, TOC, DfT (Rail), National Station Improvement Programme, Major Scheme Funding (Central Government) Local Sustainable Transport Fund (Central Government), Regional Growth Fund, Private sector (S106, S278 etc.) LTP3	Bromsgrove Station: Funding yet to be secured, and is subject to updated financial model and approval by Department for Transport and rail industry  Cross-City Line extension: Network Rail committed scheme  Redditch line frequency enhancements: Network rail committed scheme	Bromsgrove Station: Detailed design underway, planning application to be submitted 2012/13. Subject to funding scheme will be delivered during 2015/16  Cross City Line extension: Commitment for delivery by 2014/15 (Control period 4)  Redditch line frequency enhancements: Commitment for delivery by 2014/15 (Control period 4)

Scheme	Delivery Agent	Cost	Funding Source	Funding Secured	Status of Scheme
Rail Elements Of The South Worcestershire Transport Strategy, including:	Network Rail Train Operating Companies DfT (Rail)	Foregate Street and Malvern Link Station Upgrades: 1st Phase: Circa £1m, additional phases £TBC	Combination of: Network Rail TOC DfT (Rail) funding National Station Improvement Programme	Circa £1m toward improvements at Foregate Street and Malvern Link stations (Worcester Transport Strategy Major Scheme Bid)	Full Business cases for 1st Phase Malvern Link and Foregate Street Stations enhancements.
Worcestershire Parkway	Worcestershire County Council district Authorities	Worcestershire Parkway: Circa £20m (including development & off-site works).	Major Scheme Funding (Central Government)	No other funding secured	Updated Business Case Worcestershire Parkway completed April 2012
Foregate Street Station Upgrade	Private Developers		Local Sustainable Transport Fund (Central Government), Regional Growth Fund, Private sector (£106, £278 etc.) LTP3		
Shrub Hill Station Upgrade		Remaining costs to be identified in conjunction with rail industry during 2012/13 as part of Greater Western Refranchising process			Other schemes being developed in conjunction with rail industry as part of Greater Western Franchise process
Worcester Area re-signalling					
2tph Worcester – London service					
Improved station facilities					
Improved Worcester – Gloucester service					

Scheme	Delivery Agent	Cost	Funding Source	Funding Secured	Status of Scheme
<p>Rail Elements Of The Wyre Forest Transport Strategy, including:</p> <p>Kidderminster Interchange</p> <p>A451 Parkway (potential rail-based park &amp; Ride located adjacent to the British Sugar Site redevelopment)</p>	<p>Network Rail Train Operating Companies DfT (Rail)</p> <p>Worcestershire County Council district Authorities Private Developers</p>	<p>Kidderminster Interchange: £3.5m</p> <p>Remaining costs to be identified in conjunction with rail industry during development of Wyre Forest Strategy and Kidderminster Package</p>	<p>Combination of Network Rail, TOC &amp; DfT (Rail) funding, National Station Improvement Programme, Major Scheme Funding (Central Government), Local Sustainable Transport Fund (Central Government), Regional Growth Fund, Private sector (S106, S278 etc.), LTP3</p>	<p>No (Funding bid to be submitted for Kidderminster Interchange scheme)</p>	<p>Kidderminster Interchange: Planning consent in place Detailed design completed Ready to proceed subject to funding</p> <p>A451 Parkway: pre-feasibility stage (associated with British Sugar Site redevelopment and Hoo Brook Link Road scheme)</p>

## **2.3 Bus**

### **2.3.1 Context**

Bus services form the backbone of the passenger transport network in Worcestershire, carrying approximately 17.5 million passenger journeys annually.

The bus network is particularly important in terms of providing transport choice for shorter journeys within and between Worcestershire's urban areas. In so doing it plays a major role in terms of the economy and the environment.

### **2.3.2 Existing Assets**

At the time of writing, there were approximately 160 registered bus services, although levels of service are highly variable around the county, with the most frequent services provided on key urban and interurban routes.

The bus network is made up of:

- A network of urban, inter-urban and rural bus services
- Bus stations
- Bus Stops
- Park & Ride facilities
- Priority measures (limited in number)

### **2.3.3 Current Demand and performance**

Approximately 17.5million passengers travel by bus in Worcestershire every year. Bus patronage in Worcestershire has been increasing over the past five years with bus usage in 2008/09 9% higher than in 2006/07 (an increase of approx 1.43 million).

Redditch and Worcester have the highest "within district" bus demand (approx 47% of Worcestershire bus journeys)

- Redditch: Approximately 4.5million passengers/annum (26%)

- Worcester: Approximately 3.6million passengers/annum (21%)

Cross-Boundary services carry approx 4million passengers/annum (23%) where as inter-urban services carry approx 2.8million passengers/annum (16%)

### **2.3.4 Capacity of Existing Assets**

The operational performance (punctuality and reliability) of Worcestershire's bus network continues to be heavily affected by peak time congestion, particularly in Worcestershire's urban areas and along parts of the inter-urban network. This causes a range of significant disbenefits including:

- Deterioration in public perception of local passenger transport as a viable (reliable) option for travel
- Increased congestion as passengers switch to the car
- Reduced demand for bus travel, leading to:
  - Falling revenues
  - Deteriorating commercial performance
  - Increased subsidy to maintain the network OR poorer or withdrawn services
- Reduced operational efficiency of bus services which causes:
  - Increased costs
  - Reduced service provision (network attrition)

Worcestershire performs poorly in terms of punctuality in terms of both frequent and non-frequent services.

Whilst there are some good (but limited in number) examples of measures to improve the operational performance of bus services in Worcestershire, e.g. protection from congestion, improved quality bus stop infrastructure and information systems, higher quality vehicles etc. these are clearly not sufficient to deliver the level of performance required to support the delivery of agreed policy outcomes.

The major issues with the bus network are:

- Poor reliability and delays (due to lack of protection from effects of congestion)
- Infrequent services
- Increasing dependence upon concessionary fare patronage
- Limited integration of ticketing and fares systems
- High fares (driven in part by inflated operating costs due to effects of congestion)

### **2.3.5 Calculating Infrastructure Requirements and Costs**

The Worcestershire LTP3 sets out in detail the policies associated with the existing and future role, performance and need to invest in the Worcestershire bus network. All future investment in the bus network (and the wider Worcestershire transport network) will be subject to appraisal to ensure value for money and alignment with policies. This will involve use of the LTP3 Scheme Appraisal Framework (SAF).

The LTP3 contains further details of:

- The bus network standards that Worcestershire County Council and its partners are seeking to achieve
- The role of passenger transport in helping to deliver sustainable new developments
- The role of the promoters of new developments in funding the bus infrastructure and services required to deliver sustainable growth (i.e. without over-reliance on the car)
- The SAF and its priorities for investment.

### **2.3.6 Future Investment Plans / Method of Funding**

Investment (private and public sector) will be prioritised to support local and national policies. This will include working with the LEP(s) covering

Worcestershire (when formalised), the bus industry and Department for Transport (Dft) to invest in bus infrastructure and services.

This will include bus infrastructure in urban areas (particularly those with congestion problems which undermine economic performance and lead to environmental/Air Quality problems) and along the key inter-urban network.

All investment will be subject to appraisal to ensure value for money and alignment with policies. This will involve use of the LTP3 Scheme Appraisal Framework.

### **2.3.7 Who is responsible**

The Worcestershire County Council Environmental Services Directorate is responsible for preparing the LTP3 and associated bus policies, and strategies. It is also responsible for funding, planning and tendering those socially necessary bus services which would not otherwise be provided on a commercial basis by the private bus companies. The private bus companies operate the commercial element of the bus network (i.e. that which is profit making requiring no subsidy) and the tendered (subsidised) element of the network.

#### *1. Key Contacts*

- County Council Highways
- Bus Operating Companies

#### *2. Reference Documents*

- Local Transport Plan 3

Scheme	Delivery Agent	Cost	Funding Source	Funding Secured	Status of Scheme
<p><b>Bus elements of the North East Worcestershire Transport Strategy including:</b></p> <p>Bus infrastructure and service enhancements required to support economic growth and delivery of Bromsgrove and Redditch Core Strategies.</p> <p>Bromsgrove Package will include following measures relating to local bus infrastructure and services:</p> <ul style="list-style-type: none"> <li>• Bromsgrove Town Junctions Enhancement Programme</li> <li>• Bromsgrove Road Based Local and Strategic Passenger Transport Infrastructure Enhancement Scheme</li> <li>• Bromsgrove Rail Interchange Scheme</li> <li>• Bromsgrove Local Bus Service Enhancement Scheme</li> <li>• Bromsgrove Smarter Choices Programme</li> </ul>	<p>Worcestershire County Council, Bus Operators, district Authorities, Land Use Developers</p>	<p>Costs to be determined as part of the IDP and LTP3 package development work for Bromsgrove and Redditch.</p>	<p>Combination of Major Scheme Funding (Central Government), Local Sustainable Transport Fund (Central Government), Regional Growth Fund, Private sector (S106, S278 etc.), LTP3</p>	<p>Schemes will form part of CIL Infrastructure Delivery Plans for Bromsgrove and Redditch Core Strategies</p>	<p>Bus infrastructure and service schemes at development stage (in support of Core Strategies IDP evidence work). Reporting 2012/13 (subject to confirmation of Core strategy assumptions in Redditch)</p>



Scheme	Delivery Agent	Cost	Funding Source	Funding Secured	Status of Scheme
<p>Bus elements of the South Worcestershire Transport Strategy, including Bus elements of the Worcester Transport Strategy (WTS). The strategy includes the following measures relating to local bus infrastructure and services:</p> <ul style="list-style-type: none"> <li>• Worcester key corridors improvements</li> <li>• Real Time Information System</li> <li>• South Worcestershire Bus stop infrastructure enhancement schemes</li> <li>• South Worcestershire Rail/Bus interchange improvements</li> <li>• City Centre public realm enhancements</li> <li>• South Worcestershire Smarter Choices Programme</li> </ul>	Worcestershire County Council, Bus Operators, district Authorities, Land Use Developers	Circa£40m (including general traffic flow and public realm improvement measures along key corridors)	Combination of LTP3 IT Block, Major Scheme Funding (Central Government), Local Sustainable Transport Fund (Central Government), Regional Growth Fund, Private sector (S106, S278 etc.), LTP3	<p>WTS: £5m secured through WTS Major Scheme Bid and LTP3 IT Block</p> <p>Remaining schemes will form part of CIL Infrastructure Delivery Plan for SWDP</p>	<p>WTS: Full business case supported by outline designs</p> <p>Malvern Hills &amp; Wychavon: Bus infrastructure and service schemes at development stage (in support of SWDP IDP evidence work). Reporting</p>
<p><b>Bus elements of the Wyre Forest Transport Strategy including:</b></p> <p>Bus infrastructure and service enhancements required to support economic growth and delivery of Wyre Forest Core Strategy</p>	Worcestershire County Council, Bus Operators, district Authorities, Land Use Developers	Costs to be determined as part of the IDP and LTP3 package development work for the Wyre Forest	Combination of Major Scheme Funding (Central Government), Local Sustainable Transport Fund (Central Government), Regional Growth Fund, Private sector (S106, S278 etc.), LTP3	Schemes will form part of CIL Infrastructure Delivery Plan for the Wyre Forest Core Strategy	Bus infrastructure and service schemes at development stage (in support of Core Strategies IDP evidence work). Reporting 2012/13

## **2.4 Walk and Cycle**

### **2.4.1 Context**

An effective walk and cycle network is essential in order to give people, both in the urban and rural areas of Worcestershire, access to the opportunities and benefits that contribute to the enjoyment of a better quality of life. LTP3 states that walking and cycling as modes of transport are used as a means to an end for everyday access to employment, education, shops, healthcare and other day-to-day activities; and as an end in themselves for walking and cycling as recreational activities. They can form the sole mode of transport from origin to destination; however walking also forms part of nearly every other journey made,

There is a need to take account of the potential social exclusion from work, health, education, retail and leisure opportunities and services of those without access to a car in the event of an inadequate network. It is also important to offer those with access to a car a viable and realistic alternative for journeys to/from/across congested parts of the network where more efficient use of constrained capacity must be promoted to support the economy, environment and other socio-economic objectives. LTP3 states that cycling and walking enable access to local employment, shops and services and is very reliable in terms of journey time. Mode shift from car trips to walking reduces congestion, which can improve journey time reliability for all road users and consequent benefits to the economy..

The quality of walk and cycle infrastructure, and how comprehensive the network is, will influence the role these modes play and their contribution to the functioning of a successful economy.

### **2.4.2 Existing Assets**

Worcestershire county Council manages a network of:

- 150km on-road dedicated cycle routes and 120km off-road cycle routes

- 2,923km of footpaths adjacent to roads and 331km of segregated footpaths
- 4,653km of Rights of Way covering 1,600 different routes

The Connect2 Worcester initiative led to the opening in summer 2010 of the Diglis Walking and Cycling Bridge. The bridge is positioned just south of Diglis Island and the supporting walk-cycle links provide vital links for Worcester, Malvern and Powick residents. The bridge connects Powick and Lower Wick with the city centre, using route 46 of the National Cycle Network and significantly enhance links between St Johns and Cherry Orchard, Red Hill and St Peters.

The Bridge formed the final stage of a sustainable travel project called the Diglis Riverside Renaissance. The significant benefits the scheme achieved were recognised when it was awarded the MJ Sustainable Infrastructure Achievement of the Year Award 2010.

### **2.4.3 Capacity of Existing Assets**

The major issues with the cycle/pedestrian network are:

- Significant new links are required
- Gaps in footway and footpath network in urban areas
- Needs better integration with other modes
- Calculating Infrastructure Requirements and Costs

No information is available at present on how new infrastructure requirements for walk and cycle routes are calculated or how much they cost to implement.

There are no standards that we have been made aware of to date that we should aim to achieve.

### **2.4.4 Future Investment / Funding Options**

Investment (private and public sector) will be prioritised to support local and national policies.

This will include walk and cycle infrastructure in urban areas (particularly those with congestion problems which undermine economic performance and lead to environmental/Air Quality problems) and in rural areas.

All investment will be subject to appraisal to ensure value for money and alignment with policies. This will involve use of the LTP3 Scheme Appraisal Framework.

The delivery of walk and cycle infrastructure will be largely dictated by funding availability allied to value for money and policy compliance. Public finance for transport schemes is likely to be very constrained during the first 5 years of the LTP3 period (2011– 2016).

#### **2.4.5 Who is responsible?**

The Worcestershire County Council Environmental Services Directorate is responsible for managing and developing the Worcestershire highway network in relation to pedestrian and cycle routes. Routes not on highway are developed with, and maintained by, other parties such as British Waterways and city/district/borough councils. Sustrans is a key partner in developing the National Cycle Network (NCN). Summary of Schemes Identified in Baker Report and Status

##### *1. Key Contacts*

- County Council Highways
- Sustrans

##### *2. Key Reference Documents*

- Worcestershire County Council (2011) Local Transport Plan 3
- Summary of Schemes Identified and Status

**Table 2: Potential Schemes (Walk and Cycle)**

Scheme	Delivery Agent	Cost	Funding Source	Funding Secured	Status of Scheme
South Worcestershire & Worcester City Centre Cycle and Pedestrian route improvements	Worcestershire County Council, Worcester City Council, Malvern Hills district Council and Wychavon district Council	WTS: Circa £20m	Schemes will form part of CIL Infrastructure Delivery Plans for South Worcestershire  Combination of LTP3 IT Block, Major Scheme Funding (Central Government), Local Sustainable Transport Fund (Central Government), Regional Growth Fund, Private sector (S106, S278 etc.),	Schemes will form part of CIL Infrastructure Delivery Plan for SWDP	Walk & Cycle infrastructure schemes at development stage (in support of SWDP IDP evidence work). Reporting 2012/13
Improvements to Bromsgrove and Redditch walking and cycling network	Worcestershire County Council, district Authorities, Land Use Developers	Costs to be determined as part of the IDP and LTP3 package development work for Bromsgrove and Redditch.	Combination of LTP3 IT Block, Major Scheme Funding (Central Government), Local Sustainable Transport Fund (Central Government), Regional Growth Fund, Private sector (S106, S278 etc.),	Schemes will form part of CIL Infrastructure Delivery Plans for Bromsgrove and Redditch Core Strategies	Infrastructure schemes at development stage (in support of Core Strategies IDP evidence work). Reporting 2012/13 (subject to confirmation of Core strategy assumptions in Redditch)

Scheme	Delivery Agent	Cost	Funding Source	Funding Secured	Status of Scheme
<p>Walk &amp; Cycle elements of the Wyre Forest Transport Strategy including:</p> <p>Infrastructure enhancements required to support economic growth and delivery of Wyre Forest Core Strategy</p>	<p>Worcestershire County Council, district Authorities, Land Use Developers</p>	<p>Costs to be determined as part of the IDP and LTP3 package development work for Wyre Forest</p>	<p>Combination of LTP3 IT Block, Major Scheme Funding (Central Government), Local Sustainable Transport Fund (Central Government), Regional Growth Fund, Private sector (S106, S278 etc.),</p>	<p>No</p>	<p>Pre-feasibility</p>

## **2.5 Highways**

### **2.5.1 Context**

The highway network caters for the majority of motorised travel demand in Worcestershire (including journeys by car, taxi, bicycle, bus and coach and road freight). Its performance is therefore of vital importance to the economy and environment of Worcestershire.

### **2.5.2 Existing Assets**

There are three types of road network in Worcestershire:

- National (Strategic) Trunk Road Network managed by Highways Agency
- Strategic Road Network managed by WCC
- Local Road Network managed by WCC

Worcestershire is served by three motorways (M5, M42 and M50) and one designated Trunk Road (A46). These roads form part of the National (Strategic) Trunk Road Network and are managed by the Highways Agency, which has a clear remit to deliver a safe and efficient network.

The National (Strategic) Trunk Road Network is also vital for road freight and helps to minimise the volume of Heavy Goods Vehicles (HGVs) using the non-strategic network.

The parts of the strategic road network which are managed by Worcestershire County Council include the A38, A422, A449, A448, A4103, A44, A442, A456 and A435. The local road network includes A4440 and A4184 as well as other A, B and C roads.

There are approximately 4,100km of roads in Worcestershire managed by Worcestershire County Council.

Worcestershire County Council's role as local highway authority also includes responsibility for traffic management (e.g. traffic calming, weight/speed limits

and pedestrian refuges), management of traffic signals, road safety and highway/cycleway/footway maintenance.

### **2.5.3 Current Demand & Performance**

#### *1. National (Strategic) Trunk Road Network*

The busiest sections of the motorway network in Worcestershire carry approximately 28million vehicles per annum. The section of the M5 between Junction 4A and Junction 5 has the highest flow of traffic with Annual Average Weekday Traffic (AAWT) of 122,200 vehicles

The next two busiest sections of the motorway network are those between Junctions 5 and 6 (AAWT of 115,000 vehicles) and between junctions 6 and 7 (AAWT of 110,700 vehicles).

The sections of the M42 to the east of Junction 1 also accommodate AAWT's in excess of 100,000 vehicles (106,000 vehicles between Junctions 3 and 2 and 100,600 vehicles between Junctions 2 and 1)

Flows on the M50 are significantly lower than for the other motorways in Worcestershire with a maximum AAWT of 35,000 vehicles between Junction 1 and M5 Junction 8.

Traffic flows on the A46 are significantly less than for the M5 and M42, but comparable with the M50 along certain sections, in particular at the A46 junction with the B4510 (AAWT of 26,400 vehicles) and between the junction with the A44 and B4035 (AAWT of 24,300 vehicles)

None of the top five sections of motorway in the West Midlands in terms of AADT fall within Worcestershire's boundary.

#### *2. Worcestershire Road Network*

The sections of the Worcestershire County Council maintained network with the highest traffic flows include:

- Worcester City Centre (Worcester Bridge and the A38 at Sidbury)



- Worcester Southern Link Road (A44 and A4440, M5 Junction 7 - Whittington – Powick)
- A38 (M42 Junction 1 - Lickey End - Bromsgrove)
- A435 (North of the M42)
- A448 (Southcrest Wood, Redditch)
- A456 Hagley Hill
- A491 Stourbridge Road North, Hagley
- A441 Alvechurch Highway Redditch (south of B4160)
- A449 Oldfield
- Kidderminster (A451 east of Sutton Road and A456 north of A448)

A number of other A-roads in Worcestershire carry over 20,000 vehicles per day on average.

The automatic traffic count (ATC) sites demonstrate a small decline in road traffic during the period 2004 – 2010, heavily influenced by the economic environment and rising fuel prices. Some sections of the network have recorded increases (e.g. A44 Wyre Piddle Bypass). The largest increase was recorded on the A44 Wyre Piddle Bypass.

#### **2.5.4 Capacity of Existing Assets**

There are some parts of the Worcestershire highway network which have significant peak period traffic flows where demand is exceeding capacity, with resultant increases in traffic congestion, delays and variable journey times. These have an adverse impact on Worcestershire's economy and environment.

As part of the multi-modal strategy to address these issues, the Worcestershire LTP3 seeks to deal with the key pinch points on the network and where appropriate provide a more realistic alternative to the car for journeys along the main inter-urban corridors and within congested urban areas. This is particularly the case for journeys-to-work during peak periods,

where mode switching can deliver real benefits in terms of congestion and the environment.

The LTP3 highlights some of the key inter-urban corridors and urban areas where congestion is particularly prevalent. Encouraging greater use of sustainable modes (walking, cycling and passenger transport) and providing capacity enhancements where these can be justified, are being considered and developed to alleviate some of the existing traffic congestion problems. In particular, the following corridors are subjected to journey time unreliability and delay:

- **Key Corridors:**
  - Alcester – Redditch (A435)
  - Bewdley – Kidderminster (A456)
  - Droitwich – Bromsgrove – M42 (A38)
  - Droitwich – Ombersley – Tenbury (A443)
  - Evesham – Pershore – Worcester (A44)
  - Kidderminster – Bromsgrove (A448)
  - Malvern - Worcester (A449/A4440)
  - Stourport – Kidderminster (A451)
  - Worcester – Droitwich (A38)
- *Congested Urban Areas:*
  - Bromsgrove
  - Evesham
  - Kidderminster
  - Worcester

### **2.5.5 Calculating Infrastructure Requirements and Costs**

Investment (private and public sector) will be prioritised to support local and national policies. This will include working with the Worcestershire and Greater Birmingham LEAs, the Highways Agency and Department for Transport (Dft) to invest in highway infrastructure and services.

This will include highways infrastructure in urban areas and along the key inter-urban network (particularly those with congestion problems which undermine economic performance and lead to environmental/Air Quality problems).

All investment will be subject to appraisal to ensure value for money and alignment with policies. This will involve use of the LTP3 Scheme Appraisal Framework.

### **2.5.6 Future Investment / Funding Options**

Investment (private and public sector) will be prioritised to support local and national policies. All investment will be subject to appraisal to ensure value for money and alignment with policies. This will involve use of the LTP3 Scheme Appraisal Framework.

The delivery of highway infrastructure will be largely dictated by funding availability allied to value for money and policy compliance. Public finance for transport schemes is likely to be very constrained during the first 5 years of the LTP3 period (2011– 2016).

Improvements to the highway network will be targeted at those locations where investment will support local and national policies (in particular the economy and the environment, including Air Quality). In terms of the Worcestershire County Council managed network all investment will be subject to appraisal to ensure value for money and alignment with policies.

Of particular importance will be the highway infrastructure which forms part of the key inter-urban network (e.g. A38/ A4440/A449/A451/A456/A442) and within Congested Urban Areas such as Worcester and Kidderminster and parts of other urban areas. Capacity pinch points have been identified.

The Worcester Transport Strategy (WTS) highlights the need to invest in removing pinch points on the highway network to deal with existing problems. This includes significant capacity enhancements on the A4440. Funding to improve two junctions on the A4440 and introduce measures to improve traffic

flows along two key radial corridors into Worcester has been secured via a £14.2m Major Scheme Bid to the DfT. Significant additional funding will be required to deliver the highway infrastructure needed to support sustainable economic growth and support the growth set out in the South Worcestershire Core Strategy.

The Abbey Bridge in Evesham needs to be replaced and the funding for this has been secured via a £9million Major Scheme Maintenance Bid to the DfT.

In terms of the Highways Agency network all improvements will be subject to its appraisal process and its remit to manage strategic traffic flows and not local traffic.

### **2.5.7 Who is responsible?**

The Worcestershire County Council Environmental Services Directorate is responsible for managing and developing the Worcestershire highway network and liaising with the Highways Agency. It is also responsible for developing the bids and associated business cases for funding of highway infrastructure renewal and enhancement.

#### *1. Key Contacts*

- County Council Highways
- The Highways Agency

#### *2. Reference Documents*

- Worcestershire County Council (2011) Local Transport Plan 3

**Table 3: Potential Schemes (Highways)**

Scheme	Delivery Agent	Cost	Funding Source	Funding Secured	Status of Scheme
Highways elements of the North East Worcestershire Transport Strategy	Worcestershire County Council, district Authorities, Highways Agency, Land Use Developers	Costs to be determined as part of the IDP and LTP3 package development work for Bromsgrove and Redditch.	Combination of: Major Scheme Funding (Central Government), Highways Agency, Local Sustainable Transport Fund (Central Government), Regional Growth Fund, Private sector (S106, S278 etc.), LTP3	Schemes will form part of CIL Infrastructure Delivery Plans for Bromsgrove and Redditch Core Strategies	Infrastructure schemes at development stage (in support of Core Strategies IDP evidence work). Reporting 2012/13 (subject to confirmation of Core strategy assumptions in Redditch)
Highways elements of the South Worcestershire Transport Strategy, including: Highway elements of the Worcester Transport Strategy  Highways infrastructure needed to support delivery of Worcester Technology Park  Highways infrastructure enhancements required to support economic growth and delivery of South Worcestershire Core Strategy in Malvern Hills and Wychavon districts. This will include enhancements to inter-urban roads	Worcestershire County Council, district Authorities, Highways Agency, Land Use Developers	WTS: Circa £106m (including SLR dualling & key corridor improvements)  SWDP IDP Costs (excluding those in the WTS and Highways Agency network): Circa£22m	Combination of Major Scheme Funding (Central Government), Highways Agency, Local Sustainable Transport Fund (Central Government), Regional Growth Fund, Private sector (S106, S278 etc.), LTP3	WTS: £9.4m secured through WTS Major Scheme Bid  Worcester Technology Park: unknown amount secured through Regional Growth Fund Bid  Remaining schemes will form part of CIL Infrastructure Delivery Plan for SWDP	WTSMSB Elements: Full business case supported by outline designs  Other WTS elements: Outline design and business case  Malvern Hills & Wychavon: Highways infrastructure schemes at development stage (in support of SWDP IDP evidence work). 2012/13

Scheme	Delivery Agent	Cost	Funding Source	Funding Secured	Status of Scheme
<p>Highways elements of the Wyre Forest Transport Strategy, including:</p> <p>Hoo Brook Link Road and other highways infrastructure enhancements required to support economic growth and delivery of Wyre Forest Core Strategy This will include enhancements to inter-urban roads</p>	<p>Worcestershire County Council, , district Authorities, Land Use Developers</p>	<p>Hoo Brook Link Road: Cost to be confirmed, but circa £20m</p> <p>Other costs to be determined as part of the IDP and LTP3 package development work for the Wyre Forest Core Strategy</p>	<p>Combination of Major Scheme Funding (Central Government), Local Sustainable Transport Fund (Central Government), Regional Growth Fund, Private sector (S106, S278 etc.), LTP3</p>	<p>Schemes will form part of CIL Infrastructure Delivery Plans for Wyre Forest Core Strategy.</p> <p>Elements of the Hoo Brook Link Road may be delivered via s278 agreements associated with redevelopment of part of the former British Sugar Site (subject to planning process)</p>	<p>Infrastructure schemes at development stage (in support of IDP evidence work). Reporting 2012/13</p>

## **2.6 Key Message: Transport**

A good transport network is necessary to ensure reliable connectivity between people and places, in order to support the economy.

Based on current travel patterns there are capacity constraints impacting the rail network; the bus network is heavily affected by peak-time congestion on the highway network, which also affects car users and road freight; and the cycle and pedestrian networks also need improvement to enable them to offer support to the urban transport networks.

New development will add pressure to the whole transport network and this impact will need to be carefully planned for to ensure transport choices are as sustainable as possible and new development promotes a modal shift away from the car.

Funding mechanisms for transport schemes are changing. The Government is proposing a radical reform and simplification of local transport funding, by moving from 26 grant streams to 4 resulting in uncertainty about potential future investment.

## Chapter 3: Energy Usage and Supply

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### 3.1 Introduction

A safe, reliable supply of heating, cooling and power is essential for all development.

In order to ensure targets for reducing carbon emissions are met, the way in which energy is used and supplied across Worcestershire needs to be carefully managed. It is likely that in order to secure emissions reductions, more and more of our energy needs will have to be met from electricity from low-carbon sources. For the foreseeable future, however, natural gas will maintain a key role in the energy mix.

There are generally fewer requirements for developer contributions for energy than for other infrastructure types. This is because utility companies provide much of the energy infrastructure themselves, recovering their costs through sales to energy suppliers and customers.

### 3.2 Gas

#### 3.2.1 Context

The National Grid owns the Local Distribution Zone (LDZ) for the West Midlands, which covers most of Worcestershire. A small proportion of the county in the south is covered by Wales and West Utilities. Gas reaches consumers from a Gas Supplier.

Under the Gas Act 1986 (as amended 1995), gas distributors must develop and maintain an efficient and economical pipeline system and, must comply, so far as it is economical to do so, to connect to the system to any premises.

National Grid prepares annual delivery plans and major reinforcements can be programmed if communicated in advance. Local reinforcements to gas networks can usually be made within 12 months.

Payment for gas connection might be required depending on the outcome of an economic test, which is undertaken by National Grid.

#### 3.2.2 Existing Assets



Unknown at present but WCC is seeking to develop this understanding over the next few months through building working relationships with National Grid.

### **3.2.3 Capacity of Existing Assets**

National Grid, in their Gas Distribution - Long Term Development Plan 2009 say of the situation nationally that "Some investment to add capacity is required even with overall demand reducing because new consumers may connect in areas where there is inadequate capacity, and the presence of surplus capacity elsewhere (e.g. resulting from industrial decline) may be of little use in fulfilling new consumer needs".

### **3.2.4 Calculating Infrastructure Requirements and Costs**

According to the Baker study (para 5.135), growth in the larger settlements (Redditch, Worcester and Bromsgrove) will require network reinforcement to meet future development growth. At present it is unclear how much these improvements might cost but it is assumed that National Grid will undertake the improvements and there will be no abnormal costs that will require external funding. In summary, there are no foreseen problems with gas supply over the next 20 years, however further consultation with National Grid is required to confirm this assumption.

The South Worcester Development Plan (SWDP) has identified that a gas supply to the Worcester South urban extension will be provided by National Grid at an unknown cost. This is a medium priority, desirable (not essential) requirement.

Bromsgrove district Council (BDC) provided data from a Longbridge background study that suggests that enquiries would be made with the gas operators at preferred options stage. No data was supplied by BDC for other areas of the district and no gas providers are recorded as having responded to any stage of BDC consultation on the Core Strategy.

Further information on how capacity of the gas network is determined is required. WCC will be seeking to work with the National Grid to develop this understanding.

### **3.2.5 Future Investment Plans / Method of Funding**

National Grid Gas state that "Details of how we charge for reinforcement and the basis on which contributions may be required can be found in the published Licence Condition 4B Statement. Please note that dependent on scale, reinforcement projects may have significant planning, resourcing and construction lead times and that as much notice as possible should be given."

Pipeline construction [for high-pressure distribution system] projects typically take three years to complete. Therefore they typically require two to four years notice of any project requiring the construction of high pressure pipelines or plant, although in certain circumstances, project lead-times may exceed this period.

### 1. *Key Contacts and*

- National Grid

### 2. *Reference Documents*

Scheme	Delivery Agent	Cost
Gas Network Reinforcement at Worcester West	National Grid	Unknown
Gas Network Reinforcement at Worcester South	National Grid	Unknown
Gas Network Reinforcement at Redditch	National Grid	Unknown
Gas Network Reinforcement at North West Bromsgrove	National Grid	Unknown

## 3.3 Electricity

### 3.3.1 Context

The National Grid owns and operates the major (high-voltage) electricity generation and transmission system in the UK. Within Worcestershire, the smaller-scale local transmission network (11 and 32kV) is the responsibility of Western Power Distribution (the Distribution Network Operator for the East and West Midlands).

### 3.3.2 Existing Assets

Unknown at present but WCC is seeking to develop this understanding over the next few months through building working relationships with Central Networks.

### 3.3.3 Capacity of Existing Assets

Western Power Distribution state in their Long Term Development Statement (November 2011) that "some parts of the 66kV network in north Worcestershire are ageing and would require replacement over the next 5-10 years. The company would consider reinforcement at the 66kV voltage level or conversion to 132/11kV transformation depending on the solution offering the optimum technical and economical value". It is important that any upgrades take account of future growth to ensure best value for money.

Bromsgrove DC provided data that suggests the Longbridge site should be capable of accommodating development needs for electricity. No data was supplied by BDC for other areas of the district and no electricity providers are recorded as having responded to any stage of BDC consultation on the Core Strategy. At a meeting with Central Networks in 2009 the figure of 2/3000 new dwellings around Bromsgrove Town was not considered to create any immediate problems. The 11,000 volt infrastructure has been expanded at Upton Warren power station which supplies Bromsgrove and extra capacity would happen anyway in the form of contribution. Although employment can create a substantial burden on energy consumption it is unlikely to be a problem in Bromsgrove due to spare capacity.

Redditch BC, Bromsgrove DC and Stratford upon Avon met with Central Networks in 2008. Central Networks stated that "it is imperative employment growth locations are determined because this has a great impact on their infrastructure requirements". No gas or electricity providers are recorded as having responded to any stages of Redditch's CS consultation. Other information on energy supply in Redditch has been taken from the Baker Study.

Local knowledge provides information on known 'weak' networks that are acting as constraints to existing businesses and future economic growth. This information comes from WCC Economic Development (Paul Sampson) and advantage West Midlands. (TBC - BH to discuss further with PS and AWM contact).

### **3.3.4 Calculating Infrastructure Requirements and Costs**

The Baker report highlights the concern that the "lack of clear direction in terms of commitments to development could act as a disincentive to distributors to provide a supply in any instance in which there is no proven end-user demand, such as an

allocation of land for development in advance of a developer commitment" and that "given that forward planning of 36,600 dwellings across Worcestershire illustrates proven demand, this is considered unlikely to impact on the infrastructure improvements required to ensure delivery".

Various measures to ensure electricity supply across Worcestershire are listed in table 2 below. Central Networks is the lead body for each, and the cost remains unknown. According to SWDP infrastructure schedule, funding could come from developer contributions, Central Networks, or customers (but could anticipate these costs being borne entirely by the developer as site costs).

The schedule notes that there is a four-year lead time to commission and install a 132KV/11KV Substation or a 66KV/11KV Substation.

"Standard charges are levied on developers connecting to the mains. No additional charge is normally levied if (a) the additional demand is less than a 25% increase in burden at the point of connection or (b) any need for system reinforcement at 1 voltage step above the connection. Utilities can refuse if the cost of connection is 'uneconomic' in the context of their subsequent income. This covers all but the most power hungry schemes" (from 'Guide to estimating the needs, Costs and funding of social and environmental infrastructure', Version 4 Nov 2010, Michael Beaman Limited:

<http://www.regenerate.co.uk/MBL%20Infrastructure%20Costs%20&%20Funding%20Ready%20Reckoner%20%20V4.pdf>)

### **3.3.5 Future Investment Plans**

Central Networks manage the substations and cabling to reach consumers.

Distribution companies need certainty in order to invest in supply infrastructure; this means commitments for specified sites.

Baker report: "Broadly speaking, over the twenty year period of planned growth, there should not be a problem in delivering electricity capacity to support development in Worcestershire. However, as development takes place, hotspots can occur in specific locations where a lack of capacity at substations arises. This could

be addressed at the time but is likely to be addressed systematically over time. The Central Network is fairly heavily loaded and some infrastructure is 40-50 years old. EON Central Networks is planning to replace substations because of age. As they are replaced, additional capacity for growth will be built in where it is known that there will be demand to pay for that investment".

#### 1. *Key Contacts*

- Western Power Distribution

#### 2. *Reference Documents*

- Summary of Proposed Schemes

### **Table 4: Schedule of Potential Upgrades Required (Electricity)**

TBC

## **3.4 Renewable Energy**

### **3.4.1 Context**

The UK must meet ambitious targets to reduce greenhouse gas emissions by 34 % relative to 1990, with 15% of energy from renewable resources by 2020.

Worcestershire must play its part in providing energy infrastructure provide a source of secure, affordable low carbon energy, to help achieve a long-term reduction in the UK's dependence on imported hydrocarbons.

Worcestershire County Council commissioned consultants IT Power to undertake an assessment of the potential capacity for the generation of large-scale renewable energy in the county. This assessment concluded that a realistic target of 3.5% of energy consumption from renewable energy could be achieved in the county by 2026. The assessment also identified broad locations within the county in which renewable technologies might be capable of being developed. Both the targets and broad locations currently remain consultant's technical evidence, and have not been endorsed as Council policy.

### **3.4.2 Existing Assets**

In spite of the low baseline, Worcestershire does have some notable examples of renewable energy development. For example, County Hall in Worcester is heated by a 700kW biomass boiler burning locally-sourced woodchips, and the Arrow Valley centre in Redditch demonstrates a range of technologies, including small-scale wind and solar panels. But most renewable energy in the county (notwithstanding landfill and sewage gas) remains relatively small-scale and led by the public sector.

As of May 2012, the County Council is awaiting the Secretary of State's decision on whether or not to allow an Energy-from-Waste plant at Hartlebury. If approved, this will generate 15.5 MW, much of which would be classed as 'renewable'.

### **3.4.3 Capacity of Existing Assets**

Whilst it is known that Worcestershire's current renewable energy resource is not well developed, there is not yet any system of county-wide monitoring in place, making it difficult to establish exactly what exists, and where. Best estimates suggest there is likely to be around 9.5MW of total installed capacity within the county, mainly derived from landfill gas generators.

### **3.4.4 Calculating Infrastructure Requirements / Standards**

There are currently no local standards suitable for the Infrastructure Plan.

However, the UK has a target of achieving 15% of energy from renewable sources by 2020. There is not yet an adopted target for renewables in Worcestershire. No requirement is currently in place requiring developer contributions to large-scale renewable energy, but some emerging LDF policies do seek to secure a percentage of renewable energy from small-scale on-site measures in developments over a certain size.

Working on the assumption that the IT Power research provides an appropriate future level of renewables, this leads to a potential capacity for the whole County under their 'likely future development' scenario of 109MW of energy generation (355,413MWh) - sufficient to provide for the energy needs of approximately 15,500 homes. This level of capacity is likely to come from a combination of technologies. As an example of how this capacity could be reached, this could equate to around 44

wind turbines of varying sizes, up to 10 biomass plants and up to 7 hydropower plants.

There is currently no onus on local authorities to provide renewable energy, but it is encouraged in new developments through PPS1 Climate Change Annex and the West Midlands Regional Spatial Strategy.

The primary means of encouraging investment in large-scale technologies is through the Renewables Obligation, which means energy companies must either supply a proportion of renewable energy, or else contribute to a fund which will support renewables elsewhere. Renewables developers are rewarded for their energy in addition to receiving market rates for what is generated. There is no obligation to develop in Worcestershire - larger renewables are generally market-led and will be developed where the best and most accessible resources exist.

The South Worcestershire Development Plan infrastructure schedule lists combined heat and power for Worcester south and Worcester west. These are desirable, rather than essential, and are low priority to be funded by developer contributions and the private sector.

There appears to be no strategic policy framework for renewable energy in Worcestershire (especially with abolition of RSS). The public sector is not in a position to play an enabling role and will leave to the private sector. It is currently unclear how this will impact on the soundness of Core Strategies under the new National Planning Policy Framework.

### **3.4.5 Future Investment Plans**

It is anticipated that Worcestershire will see an increase in renewable energy. Companies are already investigating areas of the county for wind, hydro and biomass schemes, and several large projects are muted, with several schemes being submitted for planning permission. This includes a 12MW five turbine scheme near Lenchwick, and an energy-from-waste facility near Hartlebury which will include a proportion of biomass among its waste feedstock.

In terms of connecting distributed energy sources to the grid, Central Networks suggest that "there are few places where significant amounts of generation can be connected without extensive work and hence there may be long lead times to facilitate new connections".

1. *Key Contacts*

- No specific contact for Renewable Energy

2. *Key Reference Documents*

- IT Power's Renewable Energy Study

### **3.5 Key Message: Energy**

Energy providers tend to engage once proposals are advanced.

The IT Power report found that 3.5% of energy consumed could come from large-scale renewables within Worcestershire by 2026. This potential proportion could be higher when taking into account improvements to energy efficiency and the contribution of micro-renewables. However, the slow rate of development of large schemes to date means that the bulk of renewables development would need to come forward in the next 15 years to meet this proportion.

"There are few places where significant amounts of generation can be connected without extensive work. This is largely due to historical development. For the past 50 years, power flow has been from the transmission system, through the distribution system to the customer. Consequently, networks have been optimised for the unidirectional flow of power and, although ideal for supplying load, some features of this type of design make connection of generation more difficult" (WPD LTDS, 6.2.2)

Local reinforcements to the Gas Network can usually be made within 12 months and are usually paid for by the National Grid.

Some parts of the Electricity Network are ageing in the north of the county and will require replacement over the next 5 to 10 years. It will be important to ensure the infrastructure provider takes account of predicted growth.



Local knowledge indicates there are pressure points within the Electricity Network which are constraining business and economic growth.

Lead in times can be up to 4 years to commission and install a new Electricity substation.

## **Chapter 4: Flood Risk**

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### **4.1 Introduction**

The following chapter summarises the current understanding of the current and future capacity (where possible) of water infrastructure and including potable water, waste water treatment and flood defence.

It should however be noted that this assessment has been produced during a transitional period, during which the guidelines for implementation of Flood and Water Management Act (2010) are still emerging.

The commencement of the Act is being undertaken in stages alongside the development of national guidance. It is currently perceived that the Act will have implications for the provision not only of flood defences but also for waste water infrastructure. The existing right to connect to a public sewer under S106 of the Water Industry Act 1991 will be amended by the Flood and Water Management Act in two ways.

- Firstly, the automatic right of connection will be removed to Surface Water sewers unless prior consent is granted by the SuDS Approval Body (SAB).
- Secondly, the right of connection to Foul Water sewers will be conditional upon entering into a S104 Agreement for the adoption of the system.

Water resources cover a range of different types of infrastructure from water supply and sewerage to waste water treatment to flood risk and defences . Although it is not the purpose of the plan to improve water quality, by providing the necessary water related infrastructure, water quality can be improved and maintained.

Within Worcestershire Severn Trent Water Limited (STWL) have a statutory duty to provide potable water as well as treating and disposing of it. STWL treat and

disposes of the all the waste water for all Worcestershire residents. STWL are also responsible for providing the majority of clean potable water supply to Worcestershire residents, with the exception of a small corner in the Bromsgrove district which South Staffordshire Water (SSW) supply to. Welsh Water and South Staffordshire abstract water from parts of Worcestershire to supply its customers. Welsh Water abstract water from the River Teme at Whitbourne for it's customers and South Staffordshire abstract groundwater at Cookley and Hagley for their customers.

Wyre Forest is supplied by both Severn Trent Water and South Staffordshire Water. The majority of the district's water supply is abstracted from the River Severn at the Hampton Loade Water Treatment Works.

The County Council, under the Flooding and Water Management Act, has a lead role in flood risk management. The Act details that the role of local authorities should be enhanced so that they take on responsibility for leading the co-ordination of flood risk management. Under the Act they will have a duty to investigate flooding incidents in the County as well as maintain a register of structures or features which they consider have a significant effect on flood risk in their area; at a minimum recording ownership and state of repair. They will also become SUDS Approving Bodies (SABs). SABs will have a role in the approval, adoption and maintenance of SUDs which serve more than one property. The focus of this chapter is largely concerned with the protection of water supply and preventing flooding. However it is also worth noting the value of water as a natural resource for sport and recreation.

## **4.2 Context**

Planning Policy Statement 25 and the Water Framework Directive set the context in which flood risk and water drainage must be considered. The sustainable management of water is an essential issue to be addressed in Worcestershire. A particular problem is managing the disposal of waste from buildings. A significant investment in waste water infrastructure, such as sewers and sewage treatment works is likely to be needed to ensure the water environment is protected from the effects of new development. Reducing the volume of waste water from both new and

existing buildings by water efficiency measures will help to reduce demand on existing infrastructure.

Flood and Water Management Act 2010 includes a new lead role for upper tier local authorities in managing local flood risk (from surface water, ground water and ordinary watercourses).

New housing can increase the risk of diffuse pollution getting into surface water sewers. The pollution can come from a range of sources, such as waste water from houses or industry that should go to the foul drain, or oil and sediment collected on hard surfaces that is washed into these drains during rain. Sustainable Drainage Systems (SUDS) should be used wherever possible to mitigate the impact of this type of diffuse pollution. Surface Water Management Plans (SWMP) are encouraged by the practice guide companion to PPS 25. These plans should focus on managing flood risk, making efficient use of SUDS and safeguarding existing features of the water environment. There is the opportunity to turn these plans into SPDs to support the delivery of effective spatial plans.

The Technical Paper 'Planning for Water in Worcestershire' (March 2008) states that "approximately 10% of the land area of Worcestershire is at risk of flooding (about 167km<sup>2</sup>). There are over 9,146 properties at risk of flooding, approximately 4% of the total number of properties. 38% of the 9,146 properties are at significant risk; 30% are at moderate risk; 32% are at low risk. The types of flooding that arise in Worcestershire include rainfall, rivers, rising groundwater, overwhelmed sewers, drainage systems, and from canals. Parts of Worcestershire are particularly prone to river flooding.

### **4.3 Existing Assets**

A number of major flood defence schemes, led by the EA and supported by WCC and the district councils, have been started, continued or completed in 2011 including:

- Pershore - complete
- Upton-upon Severn – New Street complete, Waterside underway
- Powick - complete

- Kempsey - underway
- Riddings Brook - complete
- Badsey Brook – underway
- Uckinghall – complete

### **Local flood defence / alleviation schemes**

Flood defence schemes at a more local level have been implemented by the district councils, often supported by WCC, at locations including:

- Puxton Marshes
- Harvington
- Barbourne Brook
- Wilden Marsh
- Bishampton
- Snuff Mill

### **South Worcestershire**

- Powick - (complete)
- Hylton Road - (Worcester)
- Bewdley – temporary flood barriers
- Upton-upon-Severn - temporary flood barriers

Agricultural defences are located along the River Severn downstream of Worcester. These are permanent earth embankments which exist along the rural areas of the River Severn and are mostly constructed to a 1 in 10-year level, designed to protect agricultural land against the more frequent floods but to allow the larger floods to overtop and fill washland areas behind them.

The effect of filling these washland areas is to provide attenuation of flood flows going downstream and hence they are extremely important for the flood protection of the larger towns such as Upton upon Severn, Tewkesbury and Gloucester. In addition, temporary defences in Upton on Severn give some protection from flooding

for more frequent flood events. A demountable and permanent defence has recently been completed at Hylton Road in Worcester which offers 1 in 100 year standard of protection. However it must be noted that the 1 in 100 year standard of protection does not include an allowance for climate change.

### **Wyre Forest**

Kidderminster is protected by a flood alleviation scheme, which was completed in 2003. The scheme comprises a concrete culvert which serves to limit the flow of the River Stour through a dam structure, causing flood water to back up on the Puxton Marshes. The flood alleviation scheme also includes channel improvements downstream through Kidderminster.

Further understanding of existing assets and long term costs are still required.

#### **4.4 Capacity of Existing Assets**

An assessment of each district by Faber Maunsell 2007 provides the following information which illustrates where flood risk can be a significant constraint on the location of new development.

It is perceived by Wychavon Local Planning Authority that flood risk is a significant factor for strategic planning in the district, with no developments anticipated in Flood Zone 3 in the next 20 years. Wychavon Local Planning Authority considers that the following areas are not defended to a satisfactory standard: Badsey, Beckford, Cleeve Prior, Evesham (Hazel Ave), Harvington, Honeybourne, Little Comberton, North Littleton, Pinvin, Rous Lench, Stock and Bradley.

In Redditch, flood risk is not seen as a significant factor for strategic planning in the district. No development is anticipated in Flood Zone 3 in the next 20 years. It is considered that the following areas are not defended to a satisfactory standard: Beech Tree Close/Salters Lane, Batchley, Windsor Works, Enfield, Loxley Close & Brooklands Lane, Church Hill, Furze Lane and Wingates Green.

In Bromsgrove, flood risk is seen as a factor affecting strategic planning in the district. There is the possibility of some development on some small sites in Flood Zone 3 in the next 20 years. Given the size of the strategic sites allocated for

development, although some parts of these sites fall within Flood Zone 3, development is expected to be limited to the areas of the sites within Flood Zone 1.

Wyre Forest Local Planning Authority sees flood risk as a significant factor in strategic planning for the district. It considers that neither Kidderminster nor Bewdley are defended against flooding to a satisfactory standard. It is anticipated that there will be some development in Flood Zone 3 in the next 20 years, but this is less than 1% of the total Zone 3 land in the district.

Flood risk is considered to be a significant factor in strategic planning in Worcester City. No significant development is anticipated in Flood Zone 3 in the next 20 years, although there could be some limited development. The Local Planning Authority considers that the following locations are not defended against flooding to a satisfactory standard: along the River Severn and Teme, along Duck Brook, Laugherne Brook, Barbourne Brook, Astwood Brook and flash flooding from rainstorms at other locations.

In Malvern Hills, flood risk is seen as a significant factor for strategic planning in the district. It is anticipated that there will be no development in Flood Zone 3 in the next 20 years. The Local Planning Authority considers that Upton Upon Severn and the area west of Worcester are not defended against flooding to a satisfactory standard.

The Bromsgrove and Redditch Water Cycle Study (WCS) looks at the impact of new development on water services focusing on water supply, sewage disposal, flood risk management and surface water drainage.

It finds that the greatest risk of flooding within Bromsgrove and Redditch is from pluvial sources e.g.: rapid rainfall runoff resulting from high flows into poorly maintained ordinary watercourses.

#### **4.5 Calculating Infrastructure Requirements and Costs**

The Baker Study set out indicative costs to construct and maintain flood defences. The costs are based on an Environment Agency Guide: Unit Cost Database 2007. They created an illustrative whole-life costing for a flood defence wall which

amounted to just over £500,000 over 50 years. Detailed figures can be found on page 57 of the Baker Report.

If new development is located outside flood zones and thereby does not rely on flood defences to render it appropriate, the costs associated with flood alleviation will be negligible. However, water cycle studies are essential in understanding the detailed implications on development sites. All new development is likely to require the inclusion of SUDS and most will require the collected surface runoff to be disposed of on site, together with an infiltration assessment. It will therefore be necessary to use sustainable demand management techniques to recycle the collected water into the existing developments. There will also be costs associated with achieving appropriate drainage solutions to attain the higher standards required from the Code for Sustainable Homes.

Further consultation with the Environment Agency is required to identify the water infrastructure costs associated with new development. There are likely to be proposed flood relief schemes to protect specific settlements and it could be considered that new development should contribute a proportional share of this cost. Until development proposals become clearer in locational terms, the schemes to protect them cannot be identified or costed at this time.

#### **4.6 Future Investment Plans / Method of Funding**

The way that Government funding is allocated to flood and coastal erosion risk management projects in England is changing. The new system will begin from now for all projects seeking financial approval.

Instead of meeting the full costs of just a limited number of projects, the new approach could make Government money available towards any worthwhile scheme over time. Funding levels for each scheme will relate directly to the number of households protected, the damages being prevented, plus the other benefits a scheme would deliver. For the first time, grants for surface water management and property-level protection will be available alongside funding for other risks and approaches.

Three aspects of a project will influence the amount of national funding available:

- The value of benefits for householders as a result of flood or coastal erosion risks being managed, especially in deprived areas and where risks are significant.
- The value of other benefits achieved, such as the benefits to businesses, agricultural productivity and protection for national and local infrastructure, across the whole-life of the scheme.
- The environmental benefits of the scheme, needed to maintain healthy ecosystems as well as offset any habitats lost when defences are built to protect people and property.

The maximum amount of funding for a project will be based on multiplying each of the aspects above by a set of payment rates, which are fixed amounts of national funding per unit of outcome or benefit achieved. Payment rates for protecting households will be higher in deprived areas, so that schemes in these areas are more likely to be fully funded by Government. Levels of deprivation will be assessed using the existing Index of Multiple Deprivation.

There are likely to be some projects that stand to be fully funded and others that could attract partial funding from Defra. LLFA's are required to work together in partnership with others to develop local flood risk management strategies for their areas, as required under the Flood and Water Management Act. As part of this, local partners could decide to concentrate solely on those schemes likely to be fully funded by Defra.

Alternatively, they may decide that the benefits to the community arising from some or all of the part-funded schemes going ahead more than justify the extra amounts of money required. In doing so, local partnerships can have a considerable influence on the overall number and priority of schemes taken forward.

The new system will apply from now for projects seeking funding approval from the Environment Agency. Through to the end of March 2013 will be treated as a transitional period, allowing lessons to be learned and refinements made to the approach before being confirmed for the 2013/14 financial year onwards.



## 4.7 Examples

The £765,000 Powick flood scheme included Local Levy funding (£654,000), with contributions from Worcestershire County Council Highways Department (£100,000), Powick Parish Council (£10,000) and village fund raising activities (£1,000): **£312k needed for flood plan**

The Badsey Brook Flood Defence Scheme will reduce the flood risk to the three villages after between 200 and 300 homes were affected by flooding in the summer of 2007. The proposed construction of a flood storage area will consist of earth embankments and a control structure that will control the flow of Bunches Brook into Badsey Brook.

The Regional Flood and Coastal Committee and local authorities have contributed £570,000. However there is a £312,000 shortfall from funding already raised.

Residents in and around Broadway have been asked to donate £312,000 towards a £3 million flood defence scheme. Letters were sent to 1,725 homes in Broadway, Childswickham and Murcot asking each household to donate £100 to the scheme.

### 4.7.1 Local Levy

Local authorities raise a levy from households (included in Council Tax calculation). It can be used to help fund local flood risk and coastal protection projects which do not qualify for full central government funding. Local Levy can also contribute to flood and coastal defence schemes which are part funded by Flood Defence Grant in Aid. This levy funding is allocated by the Regional Flood and Coastal Committees (RFCC) to local priority projects.

Under the new Flood and Coastal Resilience Partnership Funding process, Local Levy can be used to contribute to flood and coastal defence schemes which are part funded by Flood Defence Grant in Aid.

Local Levy funding can be spent on building or maintaining coastal defences and flood risk management assets. Local Levy funds can be saved and carried forward from one year to the next and used to fund high cost schemes. This is different to

Flood Defence Grant in Aid which must be spent within the financial year that it is allocated.

Worcester City Council is set to receive £1,156,000 of external funding to repair a damaged culvert which runs under the Perdiswell Golf Course. A detailed investigation has shown that the culvert -a large tunnel running underneath the Perdiswell site - is badly damaged and in urgent need of repair. The City Council is set to receive a Flood Defence Capital Grant and funding from the Regional and Coastal Committee, which is expected to cover the total costs of the work.

Barbourne Brook (project to try to complete within 2013/14). A figure of £93k was put forward from Local Levy funding for appraisal in 2012/13 and £200k for construction in 2013/14. However in this case the bulk of the FCRPF funding (£655k) has been given in 2014/15.

A site appraisal will be conducted in March and the work is expected to take up to four years to complete. The Environment Agency has confirmed that contaminated water is entering the Barbourne Brook via cracks in the culvert. It is suspected that the source is waste from a nearby former landfill site.

#### **4.7.2 Sustainable Urban Drainage Systems (SUDS)**

The Flood and Water Management Act makes considerable changes to the role of upper tier local authorities in planning and development control. In brief, the legislation makes lead local flood authorities the SUDS Approving Body (SAB), with the role of approving, adopting and maintaining SUDS connecting more than one property. The SAB is also responsible for providing approval before connection to the public sewerage system can be made. SUDS consent must be provided before construction can begin and will be a parallel process to planning permission.

It is likely that the provisions of the Flood and Water Management Act 2010 relating to sustainable drainage systems will be commenced from April 2012, although this remains to be confirmed. It is possible that it may take place later, in October 2012. SUDS will need to be designed and built in accordance with National SUDS

standards. Publication of National SUDS standards is currently awaited, together with a sustainable scheme for funding their maintenance.

It is currently envisaged that local authorities will be have powers to hold a 'bond' (of up to 100% of the value of a SUDS) to be retained until satisfactory sign off of that scheme.

When costing SUDs it is important to take into consideration the whole life span of the scheme and not just the construction costs. The costs to maintain the SUDs are mainly due to labour, equipment and material costs, replacement of or additional plants and the disposal of vegetation or sediment. As with construction costs, the cost of maintenance can vary depending on factors such as location, ease of access and design e.g. sediment management system design.

A table is appended below with indicative costs for SUDS schemes for strategic sites in South Worcestershire.

#### Flood Defence Costs – Environment Agency (Unit Cost Database, 2007)

Flood defences – Walls				
Wall height	<1.2m	1.2 to 2.1m	2.1 to 5.3m	Basis for cost rates: - average 185m plan length - minimum 25m length
Masonry wall (£/m run)	406	1500	1057	
Retaining wall* (£/m)	1565	1751	2286	
Wall* with cutoff (£/m)	916	2652	3031	
Wall* with piling (£/m)	-	3059	2671	
Flood defences - Embankment				
Volume	500-5,000	5,000-15,000	>15,000	- average 12m <sup>3</sup> per metre run
Fill material (£/m <sup>3</sup> )	31-116	29-53	17-31	- average 700m length - average 12,000m <sup>3</sup> volume

\*wall type - steel reinforced concrete

The cost rates quoted include:

- contractors' direct construction costs;
- direct overheads – preliminaries and site costs (site establishment, insurance, profit, etc.);
- minor works such as fencing, drainage, minor repairs to road surfacing, etc;
- temporary works such as access tracks, pumping, cofferdams, river diversions, etc.

The cost rates exclude external costs such as client/consultants' charges, land compensation, contingency, etc. In addition, no flood defence works should be undertaken without appropriate mitigation such as compensatory flood storage. Otherwise, ground level raising could increase the flood risk to the surrounding area.

By way of an example, the following cost build-up is presented for a flood defence wall:

- wall cost rate at £1500 per metre run over 100m £150,000
- compensatory storage to offset 'lost' floodplain £25,000
- client/consultant charges £20,000
- land compensation £25,000
- contingency, 30% £66,000
- total capital scheme cost £286,000

Maintenance cost of £1,430 every year (based on 0.5% of capital cost) and major refurbishment works cost of £143,000 every 25 years (based on 50% of capital cost), therefore the whole-of-life scheme could cost over 50 years £500,000 (capital, maintenance, refurbishment). It must be noted that this illustration is to allow a strategic level of assessment to be possible.

In conclusion, if new development is located outside flood zones and thereby does not rely on flood defences to render it appropriate, the costs associated with flood alleviation will be negligible.

However, water cycle strategies are essential in understanding the detailed implications on development sites. All new development is likely to require the inclusion of SUDS and most will require the collected surface runoff to be disposed of on site, together with an infiltration assessment. It will therefore be necessary to use sustainable demand management techniques to recycle the collected water into the existing developments. There will also be costs associated with achieving appropriate drainage.

Proposed Strategic Site Allocations	Storage Volume (m <sup>3</sup> )	Greenfield Runoff for 2yr Event (l/s)	SuDs Component			
			Attenuation Pond	Permeable pavement	Wetland	Soakaways
			Indicative Cost (£)*	Indicative Cost (£)*	Indicative Cost (£)*	Indicative Cost (£)*
<b>WORCESTER</b>						
Worcester North West	234,634	1077	7,625,605	12,200,968	9,150,726	30,502,420
Worcester North	12,215	89.08	396,988	635,180	476,385	1,587,950
Kilbury Drive	8675	51.62	288,438	461,500	346,125	1,163,750
Worcester South	144,117	1029.46	4,883,803	7,494,084	5,620,563	18,735,210
Fernhill Heath	20,661	118.38	671,483	1,074,372	805,779	2,885,930
<b>DROITWICH SPA</b>						
Hill End	8,803	56.38	286,098	457,756	343,317	1,144,390
Pulley Lane	35,736	219.56	1,161,420	1,858,272	1,393,704	4,645,680
Copcut Lane	28,113	175.89	913,673	1,461,876	1,096,407	3,654,690
<b>GREAT MALVERN</b>						
Malvern North	39,154	233.3	1,272,505	2,036,008	1,527,006	5,090,020
Malvern East	47,855	284.23	1,555,288	2,488,480	1,866,345	6,221,150
Malvern South	16,670	88.58	541,775	866,840	650,130	2,107,100
Blackmore Park	5,636	36.2	140,900	225,440	169,080	563,600
<b>PERSHORE</b>						
Pershore	34,213	162.28	1,111,923	1,779,076	1,334,307	4,447,690
<b>EVESHAM</b>						
Offenham Road	25,061	108.93	814,483	1,303,172	977,379	3,257,930
Cheltenham Road	29,947	147.88	973,278	1,557,244	1,167,933	3,893,110
Hampton	8,000	32.16	260,000	416,000	312,000	1,040,000

\*Cost includes an additional 30% for design, contingency and planning costs.

## 1. Key Contacts and Reference Documents

Defra – Flood and Coastal Resilience Partnership Funding – an introductory guide – <http://archive.defra.gov.uk/environment/flooding/funding/documents/flood-coastal-resilience-intro-guide.pdf>

Defra – National Standards for sustainable drainage systems , Designing, constructing, operating and maintaining drainage for surface runoff. Consultation document. <http://www.defra.gov.uk/consult/files/suds-consult-annexa-national-standards-111221.pdf>

**Table 5: Potential Schemes (Flood Defences)**

Scheme	Total Funding Allocation	Total cost of the scheme	Funding Gap	Funding Sources	Current RFCC Allocation
<b>Pershore</b>	933			Local Levy & Local Contributions	Complete
<b>Powick</b>	861			Local Levy & Local Contributions	Complete
<b>Kempsey</b>	1743			Local Levy & Local Contributions	Ongoing
<b>Riddings Brook (Wribbenhall)</b>	413			Local Levy & Local Contributions	Complete
<b>Wick Flood Reduction</b>	30			FDGiA	Complete
<b>Hylton Road</b>	905			Local Levy	Complete
<b>Upton</b>	4,480			FDGiA	Ongoing
<b>Upton IPP</b>	25			Defra Scheme	Complete
<b>Tenbury IPP 1</b>	125			Defra Scheme	Complete
<b>Tenbury IPP 2</b>	205			Local Levy & Local Contributions	Ongoing
<b>Pershore IPP</b>	11			Defra Scheme	Ongoing
<b>Barbourne Brook</b>	1,156			Local Levy, FDGiA & Local Contributions	Ongoing
<b>Hurcott &amp; Podmore SSSI, Kidderminster</b>	10			FDGiA	Ongoing
<b>Puxton Marshes SSSI, Kidderminster</b>	10			FDGiA	Ongoing
<b>Wilden Marsh SSSI, Kidderminster</b>	10			FDGiA	Ongoing
<b>Charlton</b>	342			Local Levy	Ongoing
<b>Uckingham</b>	1,086			Local Levy & Local Contributions	Complete
<b>Wickhamford</b>	399			Local Levy & Local Contributions	Ongoing
<b>Broadway</b>	578			Local Levy, FDGiA & Local Contributions	Ongoing

The caveat that some of the funding is for future years and has been allocated using the best available information using the partnership funding tools (calculator etc) and principles – if better information is derived as part of the project then the figures could change for some of the projects.

## Chapter 5: Water Supply and Sewerage

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### 5.1 Introduction

The capacity of existing water infrastructure (water supply & water treatment) could have a significant impact on the timing of development and this will apply to both residential and employment land.

Severn Trent Water Ltd have previously stated that it is not feasible to undertake detailed analysis to determine the infrastructure requirements and associated capital costs, due to the long term phasing of developments and the uncertainty presented by the preparation of development of plans. It should be noted that any development application will require a formal submission to the water companies outlining the water usage requirements in order that the application can be assessed in detail to identify the potential impact on the water distribution system and any upgrades that may be required.

### 5.2 Water Supply

Severn Trent's Water Resources Management Plan (WRMP) (2010) provides a 25 year strategy for ensuring the security of its customers' water supplies between 2010 and 2035. Their supply / demand planning objective is to provide a continuous supply of water at least cost to their customers. It intends to achieve this by reducing demand and ensuring the sustainable use of its water resources without having to implement a hosepipe ban more than three times in every 100 years. The plan considers the future pressures on Severn Trent's capability to balance the supply and demand for water in the region and presents the potential shortfall in the strategic water supply capability if no action is taken. The plan also sets out the proposed long term investment strategy for ensuring that the future demand for water can be met. The plan takes increases in housing into account.

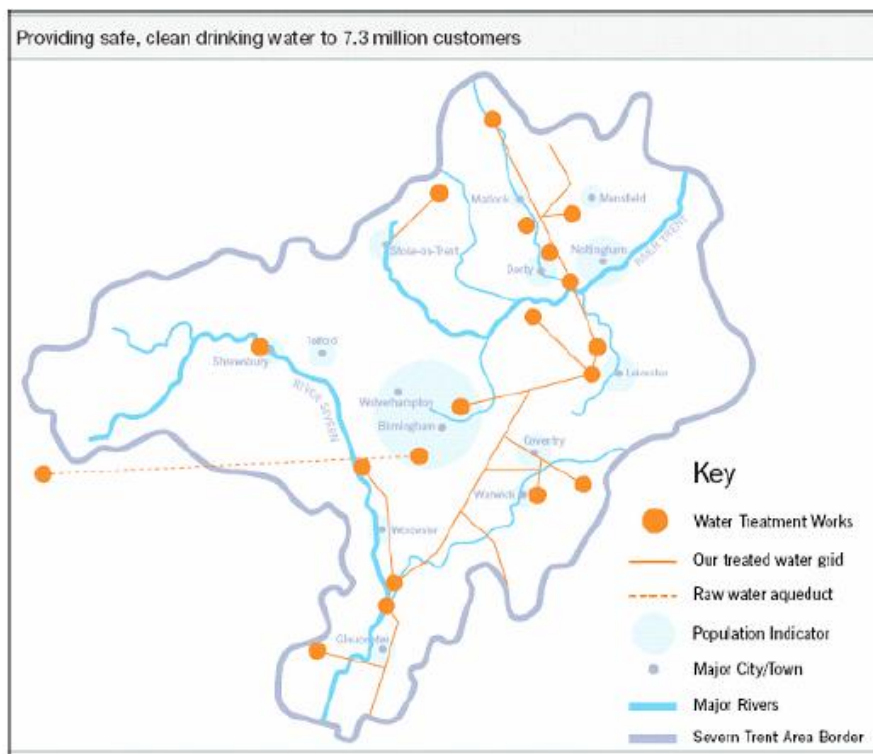
Since the publication of the Water Resource Management Plan in 2008, Severn Trent Water Ltd re-assessed their supply demand analysis. The latest assessment of supply/demand for the Severn Water Resource Zone (WRZ) compares the Distribution Input (total demand) with the Water Available for Use. Whilst the

recalculation has identified a lower demand forecast, it has also predicted lower water availability (largely due to revised climate change scenarios).

The new projections identify sufficient supply to meet demand until 2013-14, however beyond this point the supply-v-demand balance becomes increasingly negative reaching a projected shortfall of approximately 120ml/d by 2035. It should be noted that these scenarios have factored in mitigation measures and are influenced by both housing/population growth and climate change.

The Worcestershire, Warwickshire and Gloucestershire area of the Severn (WRZ) has a predicted supply-demand balance deficit. The deficit was identified in the Water Resource Plan 04 and solutions were funded in the Asset Management Plan for this period and this included a new river intake and water treatment works at Ombersley. However problems were experienced in gaining the appropriate both the abstraction licence and planning permission and as such the proposed works were delayed resulting in a continued shortfall.

Over half of the public water supply in Worcestershire is provided by groundwater.





### **5.2.1 Capacity of Existing Assets**

Within the Severn Zone 53% of Worcestershire is supplied by groundwater.

The current Severn Zone faces a supply/demand risk that worsens over the forecast period to 2034. The Worcestershire, Warwickshire, Gloucestershire and South Shropshire sub area has a predicted supply-demand balance deficit under both annual average and peak demand periods. Latest analysis shows that the Severn Zone faces a long term supply / demand risk, and that risk worsens over the forecast period. The reasons are due mainly to climate change driven uncertainty, long term uncertainties in water quality trends and the projected growth in demand for water across this zone.

The baseline supply-demand balance position goes into deficit in 2010-11 and remains negative thereafter. At the end of AMP6 (2019/20) the supply shortfall is around 100 Ml/d. By the end of the planning period (2034/35) the supply shortfall is around 145 Ml/d.

Aquifers are under pressure in many areas including Kidderminster and Bromsgrove. The River Severn is a major source of water with five key water supply abstractions having the potential to impact on the Severn Estuary. In addition, there are low flow watercourses identified around Kidderminster and Bromsgrove.

New water management techniques and subsequent planning policy can help to achieve a reduction in water consumption. The inclusion of Sustainable Urban Drainage Schemes (SUDS) will play an increasing role in recharging both groundwater and watercourses providing opportunity for infiltration of surface water into soil, to replenish groundwater and help to maintain base flows in rivers.

It should also be noted that the movement of water within a Water Resource Zone is reliant upon existing infrastructure, such as pump capacities and pipe size, which may act as a limiting factor to future development.

### **5.2.2 North Worcestershire**

In Wyre Forest the aquifer underlies much of the district including Kidderminster, Bewdley and Stourport-on-Severn. This groundwater supplies smaller areas within

the district including Chaddesley Corbett & Blakedown. The majority of water supply to the rest of the district originates from the Hampton Loade Water Treatment Works (from the River Severn) which is owned by South Staffordshire Water.

The Wyre Forest WCS finds that at a regional level Severn Trent Water are confident that water supply will not constrain growth in the district however consideration will need to be given to abstraction on some watercourses. There are no issues envisaged with regard the connection of new development sites in the urban areas. However new water infrastructure will be required to connect green field sites and may require higher levels of investment with resultant cost implications.

The Bromsgrove and Redditch WCS finds that at present:

- groundwater is over abstracted and demand outweighs supply across the Severn Zone
- sewage treatment works (STWs) are generally at or approaching capacity
- in many places surface water flooding from lack of sewer capacity is seen.

This will have an impact on the timing of growth, while investment is made to resolve these issues.

**Table 6: Available Potable Water Imports and Exports by zone**

Zone	Potable Water imports (MI/d)	Potable Water exports (MI/d)	Comments
Severn	35.0	0	There are two imports into this zone: 20 MI/d from Birmingham via the Link from Highters Hearn Reservoir to Meriden Reservoir 15 MI/d from the East Midlands Zone via the East West Link. Note that an additional 5 MI/d from East Midlands is accounted for in the Severn Zone DO

There are also a number of imports and exports between Severn Trent Water and its neighbouring water companies, these are shown in the table below.

**Table 7: Imports and Exports between Severn Trent Water and neighbouring companies**

Zone	Imports	Exports
<b>Severn</b>	25.99 MI/d from South Staffordshire Water at Hampton Loade	1.76 MI/d to the Forest and Stroud Zone at Ketford 4 MI/d to the Oswestry Zone at Shelton 22 MI/d to the Birmingham Zone at Trimpley 6.79 MI/d to the Birmingham Zone at Whitacre

### **5.3 Waste Water Treatment**

All waste water is transmitted by either gravity systems or pumps to a Waste Water Treatment Works to be cleaned and released in to the river network. The capacity of these works is an important consideration in terms of both capacity to treat and the quality of the water released.

The emerging Water Cycle Study has identified that there is minimal or negligible spare treatment capacity at both the STWs in Redditch Borough (Priestbridge & Spenal). These two treatments works deal with all of Redditch’s waste water. The WCS recommends that in order to be able to take any amount of further load the STWs require upgrading.

As a result of this emerging evidence it is becoming clear that the first infrastructure priority for Redditch will have to be wastewater treatment as it will affect short-term delivery.

#### **5.3.1 South Worcestershire**

In Wychavon Severn Trent Water has stated that they will be able to accommodate all proposed strategic site allocations and potential windfall sites. However, it was found that improvements to the sewage treatment, sewerage and water supply infrastructure would be necessary for the majority of the proposed strategic site allocations.

The following water treatment infrastructure is located in South Worcestershire

- Worcester - Bromwich Road STW
- Powick - STW
- Droitwich - Ladywood - STW

- Malvern Works (Mill Lane) - STW
- Pershore - STW
- Evesham - STW

Severn Trent Water have noted that whilst sewage treatment works may not have sufficient spare capacity to accept the levels of development being proposed in its catchment area this does not necessarily mean that development cannot take place. Under Section 94 of the Water Industry Act 1991 sewerage undertakers have an obligation to provide additional treatment capacity as and when required. There are no physical constraints to the expansion of sewage treatments works if this is required.

Detailed assessment should be undertaken when proposed strategic site allocations locations and dwelling numbers/employment type is finalised.

Malvern (Mill Lane) – There are mothballed filters at the works which may be able to provide additional capacity.

Evesham – Additional capacity will be needed but further assessment will be required to determine how much of initial phasing can be accepted prior to triggering investment.

Droitwich (Ladywood) – Marginal. Will have some capacity for initial phasing but detailed assessments will be required to confirm whether additional capacity is required.

Pershore (Tiddesley Wood) – Possibly has some hydraulic capacity but Severn Trent Water expect that additional treatment will be required to meet quality standards.

Powick – This will require significant capacity improvements to inlet pumping and provision of additional primary, secondary and new tertiary treatment.

Worcester (Bromwich Road) – May need to upgrade elements of treatment process but as the works discharges directly to the River Severn. Severn Trent Water do not anticipate any issues with accepting early phases of development.

### 5.3.2 North Worcestershire

Bromsgrove – The two main sewage treatment works within the district are Fringe Green, located on the River Salwarpe, southwest of Bromsgrove, and Alvechurch, on the River Arrow.

Redditch – Priest Bridge and Redditch (Spernal) STW.

Two smaller works are also located within the district boundaries, at Stoke Prior and Belbroughton. However, the remainder of the sewage within the borough is pumped beyond its borders and treated at Roundhill (for the Hagley area), Lower Gornal (treats the Romsley area), Minworth, (which takes all the sewage from the Rubery, Hollywood and Wythall areas) and Spernal (which serves the Bordesley and Holt End areas).

In Bromsgrove and Redditch Severn Trent Water has stated that they will be able to accommodate all proposed strategic site allocations and potential windfall sites. However, improvements to the sewage treatment, sewerage and water supply infrastructure would be necessary for the majority of the proposed strategic site allocations.

The joint Outline Redditch & Bromsgrove WCS identified that the Priest Bridge and Redditch (Spernal) STW works had spare hydraulic capacity within current consents to accommodate 3,053 and 16,912 dwellings respectively but that there are limitations in the biological treatment processes which are likely to require upgrading to accommodate additional development flows.

Both these works currently operate within their consented quality parameters but the treatment processes employed (oxidation ditch at Priest Bridge and activated sludge processes at Spernal) have the flexibility to increase treatment process rates though changes in operational regimes. Consequently these treatment works will have some capacity to accommodate initial phases of development without the need for capacity investment.

As the catchments for these treatment works both serve parts of Redditch the location, size and phasing of developments will influence when further capacity

improvements may be required. To assist with the long term planning of capacity improvements early clarification will be required concerning the size and timing of developments being proposed in these treatment works catchments.

STW have already identified the need for improvement works at Fringe Green, Alvechurch, Roundhill and Minworth sewage treatment works within their AMP4 submission, all of which were identified as High or Medium Risk within the EA risk assessment report, based upon water quality and flow risk.

If additional improvements are required based upon the updated DWMRSS figures, they will incorporate this need into their AMP5, PR09 submission this year. The most concerning sewage treatment works within Bromsgrove district is the Fringe Green site, which receives all the sewage from Bromsgrove town and the villages to the north. This has been identified by the EA as being at high risk and STW states that it will be under pressure if new development were to occur.

The other main sewage treatment works for the district is Alvechurch, which is also identified by STW as being under pressure. Stoke Prior, which is another area identified for development south of Bromsgrove town has also been identified as struggling to cope at present and has significantly failed its RQO. These three sewage treatment works therefore require assessment and potential upgrade before development takes place within their catchments.

Although Roundhill and Minworth were identified as being at high risk within the EA report, they have been identified by STW and plans have already been put forward to upgrade the systems.

### **5.3.3 Wyre Forest**

In Wyre Forest Kidderminster (Oldington) is the main Waste Water Treatment Works within Wyre Forest district, serving the towns of Kidderminster, Stourport and Bewdley, although numerous smaller works are also present within and outside of the district boundaries these include:

- Rectory Lane, Rock
- Fox Lane, Chaddesley Corbett

- Blakedown
- Upper Arley
- Belbroughton (just outside the western boundary of the district)
- Horton Lane (south of the district) and Roundhill (north of the district boundary).

The results of past analysis indicate that there are concerns with regard to water treatment in the following locations:

- Blakedown
- Roundhill
- Upper Arley
- Chaddesley Corbett
- Rectory Lane

These issues are likely to be overcome through improvement in treatment processes and/or extension of existing works. These are therefore not viewed as showstoppers to development but merely indicate a potential time or cost implication.

The table below details the amounts of available potable water imports and exports by zone, which shows that the Severn Zone import 35 MI/d.

#### **5.4 Calculating Infrastructure Requirements and Costs**

The plan sets out a baseline scenario which illustrates the projected demand for water that would arise due to changes in the customer base and behaviours but assuming that current policies are maintained regarding leakage, meterage, and demand management. It depicts the hypothetical situation in which a dry year is assumed to occur in each and every year to 2035, with demand being unrestricted, with reliable resources. This scenario is used to test whether future investment is likely to be required to maintain the balance of supply and demand and to ensure that the target level of service can be maintained.

More information / advice is required about the costs of STW, the tipping points (i.e. at what dwelling number) at which a new facility will be required and where new

facilities may be required (i.e. which are at or near capacity and could reach tipping point as a result of new development).

## **5.5 Future Investment Plans / Method of Funding**

Under the Severn Trent WRMP there are no new water resource schemes being delivered for AMP5 supply / demand balance purposes. This is partly because their supply / demand balance investment plan is integrated with other parts of their Business Plan, which includes investment in schemes to increase their strategic treatment and distribution capacity.

The final strategy includes the creation of six new sources which will prevent supply / demand deficits occurring. The ones that will benefit the Seven Zone are:

- Highters Heath Aquifer Storage and Recovery<sup>2</sup> (ASR ) (which will benefit the Birmingham and Severn zones)
- Minworth ASR (which will benefit the Birmingham and Severn zones)
- Norton ASR (which will benefit the Severn zone)
- Whitacre ASR (which will benefit the Severn zone)
- Edgbaston borehole (which will benefit the Severn zone)

These new sources are planned in future Asset Management Plans. In the current AMP5 STWL will be working on the feasibility of these schemes

Severn Trent Water has supplied notional solutions and costs for the improvements required. The costs for sewerage do not include potential improvements required for the Fernhill Heath and Great Malvern developments; Great Malvern was also unable to be assessed in terms of investment for water supply infrastructure. A notional total cost for improvements is in the region of £7.3m for the water supply infrastructure and £4.3m-£4.4m for the sewerage infrastructure. It is probable that there will be additional costs due to sewage treatment work hydraulic capacity or treatment upgrades, however at present exact costs are unavailable.

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<sup>2</sup> This is where treated water is pumped into an aquifer during times when there is surplus water and re-abstracted during high demand periods



Severn Trent Water has made a £3M provision within their 2010-2015 Business Plan for water mains infrastructure reinforcement to meet the needs of the Worcester Growth Point developments as they were understood in 2008 and 2009. These infrastructure improvements will be progressed as and when development sites start to come forward. These improvements will be funded by contributions from developers through requisitioning procedures and "claw back" a mechanism by which subsequent developments make a contribution for infrastructure capacity provided at an earlier date in anticipation of future development.

Extension to the water supply network will be required as a result of the development of greenfield sites and adjustments for brownfield sites, the exact locations, timing and size of development will need to be submitted to the water companies at the earliest possible stage to enable calculation of costs and design to be factored into their next AMP and to be submitted to OFWAT. The calculation of these costs is generally not undertaken until application by developers, who will then be required to pay an infrastructure charge.

The regulator for the water industry is OFWAT, and the principle underlying the regulation of the sector is that the various companies such as Seven Trent submit consumer pricing proposals for a five year period. The price structure subsequently agreed with the regulator rewards them with a predetermined return on:

The asset base which effectively forms their inheritance from the old nationalised system.

The cost of the additional investment that is required and which has been agreed between OFWAT and Severn Trent.

The regulator aims to balance the need to allow the water companies enough financial leeway to invest while protecting consumers from predatory pricing. In December 2004 OFWAT issued their Determination on Future Water and Sewage Charges for 2005-2010 and this effectively determines how much will be invested during this period. Within this additional investment, money will be spent on responding to:

- New regulations and standards such as the Urban Waste Water Treatment Directive, the Groundwater & Habitats Directives, the Water Framework Directive, the Integrated Prevention of Pollution and Control Directive and the Landfill Directive
- Increases in the water consumption of existing households
- Increases in the number of households

For new development, Severn Trent can recover contributions from developers for a range of works, as set out in the Water Industry Act 1991. The statutory rights set out in the Act mean that the only recoverable costs for Water and Sewerage Companies (WASCs) from developers apply to connections to WASCs' existing water mains and sewers. WASCs have to offset connection costs against the revenue income they will receive from the proposed development when it is occupied. Hence, the major responsibility falls to the relevant WASC.

Capital expenditure to water and wastewater treatment works has to be approved by the regulator, Ofwat. Capital expenditure can then be funded through customer's water and sewerage charges and not by the development industry. The major concerns are therefore timing issues, particularly in relation to relevant planning and environmental consents and approval by Ofwat.

Severn Trent is planning for future population growth and at this strategic stage it is considered that suitable infrastructure will be provided. Severn Trent does not anticipate any major barriers in terms of funding to providing the necessary infrastructure/supply for water or sewerage.

#### *1. Key Contacts and Reference Documents*

- Severn Trent Water
- Environment Agency

## 5.6 Summary of Proposed Schemes

The joint Outline Redditch & Bromsgrove WCS identified that the works at Priestbridge and Sernal had spare hydraulic capacity within current consents to accommodate 3,053 and 16,912 dwellings respectively. There are however limitations in the biological treatment processes which are likely to require upgrading to accommodate additional development flows.

Both these works currently operate within their consented quality parameters but the treatment processes employed (oxidation ditch at Priest Bridge and activated sludge processes at Sernal) have the flexibility to increase treatment process rates though changes in operational regimes. Consequently these treatment works will have some capacity to accommodate initial phases of development without the need for capacity investment.

As the catchments for these treatment works both serve parts of Redditch the location, size and phasing of developments will influence when further capacity improvements may be required. To assist with the long term planning of capacity improvements clarification will be required in the long term concerning the size and timing of developments being proposed in these treatment works catchments.

**Table 8: Potential Schemes (Water Supply and Sewerage)**

Infrastructure Required	When Required	Delivery Agent	Cost	Funding Source
Priestbridge STW Upgrade	Subject to development levels and phasing	STW	Unknown	STW
Sernal STW Upgrade	Subject to development levels and phasing	STW	Unknown	
Unknown for other areas	Unknown	Unknown	Unknown	Unknown

## Chapter 6: Communications Infrastructure

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### 6.1 Introduction

Communications infrastructure includes telephone services (both wire and mobile) and broadband. The Government is committed to securing a world-class communications system, and currently the main barrier to this is the availability of super-fast broadband.

Urban areas generally enjoy better fixed-line broadband and 3G (mobile) coverage than rural areas, primarily because they have better communications infrastructure. However, there is increasing evidence that suggests that this is causing the rural economy and rural areas to fall behind their urban counterparts. Rural businesses and communities across England highlight the lack of Information and Communications Technology (ICT) infrastructure (and therefore the decreased connectivity) as detrimental to their competitiveness. In order to compete on a level playing field with their urban counterparts and globally, the gap between urban and rural connectivity and capacity needs to be closed (CRC, 2010).

For investors, rural communities will always be less attractive investment propositions compared to urban areas because their infrastructure costs are much higher and potential revenues far smaller.

A much more holistic approach to communications infrastructure is required, and this required network operators, rural communities and the government to collaborate to identify present and future needs and forge joint solutions.

### 6.2 Telephony

1.2.1 The law requires that copper wire telephone services are provided to all new developments. It is therefore assumed that there will be no issue with provision of telephone services to new developments.

### 6.3 Mobile Coverage

#### 6.3.1 Context

Mobile phone ownership and usage is rising across the UK. A mobile phone is now considered a necessity as opposed to a lifestyle choice. It is expected that people can and should be contactable all the time and wherever they are. Yet there remain areas in the UK without basic 2G (second generation) coverage, where it is not possible to make or maintain a mobile phone call, or send or receive texts. These areas are known as not spots and while some are in urban areas, most are in rural areas.

Third Generation (3G) technology is increasing in prominence and enables people to use the internet and send and download large quantities of data, as well as making calls and sending texts. The CRC (2010) state this is blurring the line between mobile and broadband use. And as mobile and broadband technologies are converging they need to be considered collectively and planned strategically.

Poor mobile coverage makes delivering rural services more inefficient and difficult to deliver. For example, due to a lack of 3G coverage, the Norfolk mobile library service has to use a separate library catalogue and cannot connect with the main library catalogue causing added expense and duplication.

### **6.3.2 Existing Assets**

Unknown at present

### **6.3.3 Capacity of Existing Assets**

Mobile phone coverage is measured according to population, not landmass, so the methodology for calculating coverage does not pick up areas of poor coverage in sparsely populated areas. An area may therefore be classed as 'covered' when in fact large areas may not be. Ofcom classifies a postcode district (e.g. WR5) as covered if 90% of the population within that postcode can receive outdoor coverage from at least one operator. Ofcom calculates that 98% of England has 2G coverage and 87% has 3G coverage.

2G coverage has reached its commercial limit, so further roll-out is unlikely. 3G is unlikely to exceed the footprint of 2G, so 'not spots' will remain even when 3G has reached its commercial limit.

### **6.3.4 Calculating Infrastructure Requirements and Costs**

Ofcom agrees that 2G 'not-spots' still affect parts of rural England and is investigating why. It is due to present its findings in autumn 2010.

Changing the methodology for measuring access to mobile networks from population to landmass could provide a better overview of not-spots and therefore a clear indication of where improvements need to be made in coverage in order to enable, at the very least, emergency roaming.

### **6.3.5 Future Investment Plans / Method of Funding**

CRC undertook research with parishes in rural England in May 2010. Most interviewees cited planning as an obstacle, as did the mobile operators in response to Ofcom's first mobile assessment. However, Ofcom's research into 'not-spots' found that none of the case studies were due to planning permission being denied.

In France and Norway local action and government grants which provide mechanisms for subsidising network operator costs in remote areas have been effective in significantly reducing the number of not-spots in those countries (Ofcom, 2009).

Private networks are a potential solution for areas without any network coverage or where there is only one operator. They are fully compatible with the main networks and could be run as a local / sub-regional business or community interest company, but they would probably require start-up funding (see CRC, 2010 for example of where a community in Ceredigion Wales purchased masts with grant and leased these to operators).

#### *1. Key Contacts and Reference Documents*

Following the European Commission's approval in March 2010 of the Orange UK Ltd and T-Mobile UK Ltd merger, there are now four UK network operators:

- Everything Everywhere (Orange & T-Mobile)
- O2
- Three

- Vodafone

The Mobile Operators Association (MOA) represents these four mobile network operators.

### 6.3.6 Summary of Proposed Schemes

**Table 9: Potential Schemes (Mobile Coverage)**

Infrastructure Required	Delivery Agent	Cost	Funding Source
Unknown	Unknown	Unknown	Unknown

## 6.4 Broadband

### 6.4.1 Context

The Coalition Government's aim to create the best broadband network in Europe is echoed by the County's Corporate Plan for which Open for Business is a priority and broadband a key enabler. This is fully supported by the business community and the Worcestershire Local Enterprise Partnership (LEP).

The vision for Worcestershire is to deliver faster broadband for all by 2015 – namely:

- 90% of businesses in Worcestershire to have access to the Superfast Broadband
- Minimum 2Mbps speed for everyone in the county
- 90% of the county with access to the superfast broadband

Open Reach is required by law to provide copper wiring to all new developments. Copper wiring provides telephone services and broadband to 99% of the UK population (at speeds of at least 512kbps). There is no such requirement for fibre optic.

Businesses and home workers require access to superfast broadband in order to make the most of technology available to them.

BT Openreach is not the only provider of superfast networks.

There is a Universal Service commitment in UK for a national minimum of 2Mbps by 2015. The EU may make broadband provision compulsory by 2013, with a minimum access requirement of 30 Mbps by 2020. Should this happen, with UK will have a lot of catching up to do and little time in which to do it.

#### **6.4.2 Existing Assets**

Traditionally, broadband is provided by ADSL (Asymmetric Digital Subscriber Line). Speeds using this technology are limited because the further away from the exchange the premises is, the slower the broadband speed achieved. As the name suggests, the service is asymmetrical meaning that upload speeds are far slower than download speeds. 99% of UK households have access to ADSL, while speeds of up to 8Mbps are possible within Worcestershire the mean speed achievable is 4.575 Mbps, yet 12% of postcodes fall below the Universal Service Commitment of 2Mbps.

Wireless broadband is a high-speed internet connection that does not require a phone line or fibre cable. Instead of cable, a radio device/transmitter (a client access point antenna) is installed on a number or all buildings to create a wireless mesh and point-to-point system allowing households within the specified location to connect to the Internet. Wireless broadband requires you to be within range of one or more mobile masts. A number of masts are already installed across Worcestershire. To ensure wider coverage the number of masts would need to be increased.

Broadband in Worcestershire is currently delivered through:

- BT telephone infrastructure (Asymmetric Digital Subscriber Line [ADSL], Fibre-To-The-Cabinet [FTTC]);
- Virgin Media Cable (in Redditch, Kidderminster and parts of Bromsgrove District), and;
- Wireless community projects including Airband and Martley Mesh.

Premises in Worcestershire are served by 86 telephone exchanges; 65 are actually located within the county with the remaining 21 in neighbouring authorities.



Almost 97% of premises in Worcestershire are served by exchanges located within the county, however, some 8,600 premises are served by exchanges located outside of the county. Cross-boundary working will be particularly important to ensure that these areas benefit from access to broadband in line with the ambitions of the Local Broadband Plan.

By September 2011, in addition to the areas able to access Virgin Media Cable service, 8 exchanges in the county will have been upgraded to FTTC allowing the potential delivery of broadband at speeds in excess of 24Mbps. Malvern exchange is planned for upgrade in December 2011, with a further 3 exchanges planned for upgrade to FTTC in 2012.

None of the exchanges located outside of the county, but serving Worcestershire premises, have been upgraded or are on the rollout schedule as it is currently known (as at July 2011).

We do not have any information about the expansion plans of Virgin Media in Worcestershire however we are in the early stages of engagement with them to establish this information.

### **6.4.3 Capacity of Existing Assets**

Distance of premises from exchange is a major barrier to providing superfast broadband. ADSL is only able to travel up to 5km, with available speed reducing the further from the exchange the premises is. Provision of at least FTTC (fibre to the cabinet), preferably FTTP (fibre to the premises), would increase speed available to premises. Fibre can carry massive amounts of information over much longer distances than copper – and much faster too. In speed terms, downloads of up to 100Mbps and uploads of up to 30Mbps are already available in some (mainly urban) parts of the country. With FTTC fibre (which is capable of faster speeds and no speed loss over distance) is laid from the exchange to street cabinets, with only the distance from the street cabinet to the premises remaining copper. With FTTP fibre is laid all the way to the premises.

Superfast Broadband (SFB) is not necessarily the best product for businesses. In many cases a private, Ethernet Local Area Network could be the best product. This

product gives guaranteed and symmetrical, up- and down-load speeds. The cost of this is coming down therefore businesses should not automatically rule this out as they have done in the past. They should seek a quotation for Ethernet.

#### **6.4.4 Calculating Infrastructure Requirements and Costs**

It has not been possible to assess the cost for providing broadband infrastructure within Worcestershire are available at this time.

Costs for Nationwide provision vary dependent upon source for example: BT suggest £5.1bn yet PC Pro estimated £1.622bn. BT acknowledge there are issues with their calculations.

In Rutland, a community came together to pay for fibre to their locality. It cost £37,000 to supply superfast broadband to 200 homes and businesses (at a cost of £185 per premises).

The business case and cost for upgrading exchanges changes after every new upgrade to an exchange, as it can bring isolated communities closer to an enabled exchange.

It has been estimated that the cost of providing superfast broadband across Worcestershire will be in the region of £20 to £25 million.

#### **6.4.5 Future Investment Plans / Method of Funding**

BT is currently rolling out superfast broadband to 2/3 of the population by 2015. 12 Exchanges in Worcestershire have been upgraded to date and are already accepting orders (according to BT openreach). However, not all cabinets on an exchange will be enabled. Those that won't be enabled may be those which have few premises linked to them, or which are further from an enabled exchange. BT's experience to date shows that around 80 - 90% of street cabinets on an enabled exchange will be upgraded with fibre. There is a rolling programme of upgrades, with quarterly announcements of those exchanges which will be upgraded. As recently as April 2012, both parts of Stourport and area of Redditch were also announced for inclusion in the programme. There remains other more densely populated urban areas in the county which could well meet the enablement criteria in the future.

£530m will be spent by the UK Government over the next three years on rolling out superfast broadband to where the market alone would not reach. Bidding for the first £50 million of funding was opened on 4th March 2011. Local Public Authorities will be able to apply to Broadband Delivery UK (BDUK) for this funding to improve broadband in their area.

WCC submitted an Expression of Interest for the second wave funding and as a result was granted £3.35m. In addition, the County Council has produced Local Broadband Plan.

The plan sets out three key objectives for broadband in Worcestershire:

- Everyone in the county to have access to broadband speeds of at least 2Mbps by 2015
- Superfast broadband available for 90% of the county by 2015
- 90% of businesses in Worcestershire to have the ability to access superfast broadband by 2015

It is anticipated that the total capital funding required for the programme is approximately £20 - 25 million. £8.5 million towards the total has already been endorsed by WCC cabinet to support the Local Broadband Plan (LBP). £3.35 million is BDUK's contribution available now the LBP has been approved. In addition, the private sector partner, procured through Central Government's Procurement Framework is expected to match the total public sector funding made available for Worcestershire.

The Worcestershire Local Broadband Plan will facilitate a drive in economic growth and improve the quality of life for all residents and local businesses. As part of the Broadband Programme WCC have been actively engaged with local communities and commercial suppliers. Through such engagement we aim to raise broadband awareness, educate communities as to the potential use of broadband and stimulate demand which will then maximise opportunities for private sector investment, thus reducing the need for public sector investment.

Work has already commenced in some parts of Worcestershire. Allocated grant funding (Green Infrastructure Fund and Sustainable Transport Fund) is available for

improvements to broadband in rural areas which is outside of the Local Broadband Plan (LBP). The communities which will receive this funding have been selected through an Expressions of Interest (Eoi) and Business Case process. The Parish of Little Witley, The Redditch Travel Consortium (Redditch Arc) and North West Malvern Consortium have been awarded funding through this process.

### 1. Key Contacts and Reference Documents

The main providers of fibre networks to homes and business are BT Openreach and Virgin Media. These companies own miles of fibre networks and sell use of these networks on the wholesale market to Internet Service Providers, who then sell packages to consumers.

Other companies, including Cable and Wireless; H2O Networks, Geo, provide bespoke private fibre networks for business.

## 6.4.6 Summary of Proposed Scheme

**Table 10: Potential Schemes (Broadband)**

Infrastructure Required	Delivery Agent	Cost	Funding Source
Target for coverage and speed will be agreed through LBP	Unknown until after procurement	Unknown until after procurement Estimated 20-25 million	Private Sector; WCC; BDUK; DfT

## 6.5 Key Messages: Communications

There is increasing evidence that because rural areas have poorer coverage than urban areas their economy is suffering. The cost of provision is higher in rural areas and the returns are smaller than urban areas, this acts as a barrier to private sector investment.

There are no specific costs available for universal provision of superfast broadband and 3G mobile in Worcestershire, however the estimated capital cost for providing superfast broadband is £20 to £25 million as set out in Worcestershire's Local Broadband Plan.

## Chapter 7: Waste Management

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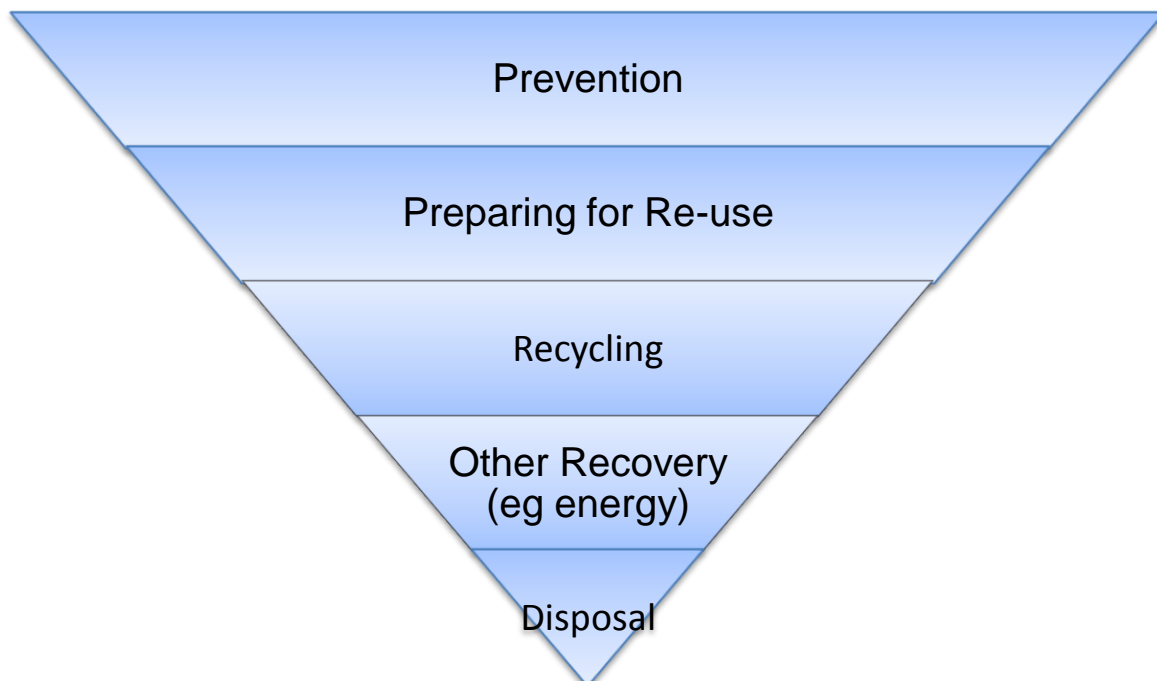
### 7.1 Context

The Waste Management sector is a primary industry. Waste management facilities enable the re-processing of waste materials into resources or recover energy from waste. Residual waste (that which is not recycled or used in energy recovery) is disposed of to landfill.

Waste management infrastructure is necessary to support the natural functions of the economy. By managing waste produced from homes and businesses as a resource the sector contributes towards the aims of sustainability and forms an integral part of the national strategy for sustainable development. It also provides for safe disposal of waste, minimising any pollution impacts.

In line with Waste Framework Directive waste must be managed in accordance with the Waste Hierarchy as set out below:

**Table 11: Waste Hierarchy**



The *Waste Strategy for England 2007* (Defra) addresses the waste hierarchy, aiming to break the link between economic growth and waste growth. It sets out to reduce waste through reducing the raw materials used to make new products and increasing

reuse and recycling. Through this it aims to reduce the greenhouse gas emissions that result from the disposal of biodegradable waste and to reduce the energy and raw materials required to produce new products.

The Waste Strategy for England 2007 is currently under review and a "Government Review of Waste Policy in England 2011" has been published. This includes measures to prioritise managing waste in line with the waste hierarchy, encourage waste prevention and resource efficiency, and develop voluntary approaches to cut waste, increase recycling, and improve quality of recyclate material. Following this, the latest estimates from Defra<sup>3</sup> suggest that a new National Waste Management Plan should be published by the end of 2013.

The Waste Framework Directive also requires that waste management is carried out without endangering human health or harming the environment, causing nuisance. Government policy reflects this, with PPS 10 aiming "*to protect human health and the environment by producing less waste and by using it as a resource wherever possible*" (PPS 10, Para 1)<sup>4</sup>. Pollution control is dealt with by the Environment Agency through the permitting regime.

To contribute towards the implementation of the waste hierarchy the Proposed Regional Spatial Strategy Revision set targets for how much waste should be diverted from landfill in each County (Phase 2 Revision Preferred Options December 2007 Tables 5 and 6). These elements were accepted by the Panel at the Examination into the soundness of the Phase 2 Revision. The likely future abolition of RSS policy will still leave the evidence on which it was based in place and the County Council is currently preparing a Waste Core Strategy which substantially reflects that evidence.

The UK is currently at risk of not meeting the requirements of EU Directives that require member states to adopt plans which either show "a map specifying the exact location of waste disposal sites or location criteria which are sufficiently precise to

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<sup>3</sup> "Progress with delivery of commitments from the Government's Review of Waste Policy in England (2011) - March 2012", Defra.

<sup>4</sup> Following publication of the National Planning Policy Framework, "Planning Policy Statement 10: Planning for Sustainable Waste Management" will remain in place until the National Waste Management Plan is published.

enable the competent authority ..... to determine whether the site or installations falls ..... within the plan ..." The adoption of the appropriate DPD policies (in this County a Waste Core Strategy) is therefore a high political priority. Failure to comply would result in the imposition of fines running into millions of pounds per day. In theory some of this could be charged to WCC but there is currently no timescale in place for this. The Waste Core Strategy has been submitted to the Secretary of State and examination hearing sessions have been held. If it is found sound and adopted, this will eliminate the risk of any charges being passed down to WCC.

The Waste Framework Directive requires self-sufficiency of Waste Management Capacity in the EU as a whole. To contribute towards these aims the emerging Waste Core Strategy is being developed with an objective of achieving 'equivalent self-sufficiency'<sup>5</sup> in Waste Management in Worcestershire over the life of the Strategy.

Until the Waste Core Strategy is adopted, all planning applications for Waste Management facilities will be judged against the saved structure plan policies, and other relevant policies in the development plan.

## **7.2 Existing Assets**

At present there are 79 waste management facilities in the County. This includes:

- Treatment and recovery
  - 4 Composting sites
  - 6 Physical treatment sites
  - 15 Metal recycling sites (10 of which manage End of Life Vehicles)
  - 3 Thermal treatment sites
- Sorting and transfer
  - 2 Material reclamation facilities,

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<sup>5</sup> Equivalent self-sufficiency means Worcestershire's capacity to treat waste that arises in the County; however cross-boundary movements are inevitable as specialised facilities exist, often benefiting from economies of scale. As such, some facilities perform a regional or even national function and the concept of equivalent self-sufficiency allows imports and exports of waste to be taken into account. Some cross boundary movements of waste will occur due to the waste management industry being market driven.

- 26 Waste transfer stations,
- Household recycling centres
  - 11 Household recycling centres,
- Disposal
  - 12 Landfill sites or infilling operations

There are also about 155 sewage treatment works, mostly under the control of Severn Trent Water. There are also large numbers of private dwellings with simple sewage collection/disposal systems and a small but growing number of business that use low energy alternatives such as SuDS and WET systems. These are not usually considered part of conventional waste management infrastructure and are considered separately under the Water Management Chapter of this report.

Waste infrastructure is usually provided and operated by the public or private sector, however the 'third sector' and quangos can have a role to play. The particular infrastructure and nature of the operation largely reflect the waste stream.

Local Authority Collected Waste (LACW) (mostly but not exclusively, household waste) is managed by Waste Disposal Authorities (County Councils) in partnership with Waste Collection Authorities (District Councils) through partnership with the private sector). Worcestershire's LACW is managed jointly with Herefordshire, by an integrated PFI contract with Mercia Waste Management.

Commercial and industrial (C&I) waste is managed by the private sector. Cross over contracts between the public and private sector to manage Construction & Demolition (C&D) waste are common. The third (voluntary) sector plays a small but increasing role in both streams. Very specialist waste, notably medium and high level radioactive waste is managed by quangos.

Some types of waste require specialist treatment facilities or economies of scale. Cross boundary, even cross national movements of waste are therefore inevitable and reflect the normal working of the economy.



### 7.3 Capacity of Existing Assets

Defining waste management capacity is not easy. It can be defined in the following ways:

**Actual capacity:** This is the throughput of operational facilities with both valid planning permissions and waste management licences, permits or exemptions and refers to the actual quantity of waste which the facility manages. However it may be possible for sites to have spare capacity which would not be recorded using this method.

**Notional capacity:** This is the potential throughput which could be achieved if operations were to work to the maximum levels permitted in their planning permission or waste management licence, permit or exemption. However these licences, permits and exemptions are often set out in broad bands and this may not give a realistic indication of what is possible at any given facility.

There may well be significant differences between the two. Worcestershire County Council have used actual capacity as it is felt to be a more realistic indicator. Based on this method it is estimated that existing Waste Management facilities in Worcestershire have an approximate capacity of 1,274,500 tonnes<sup>6</sup> per annum. This is made up as follows:

**Table 12: Waste Management capacity (Tonnes/p.a.)**

	Capacity 2008/9
<b>Re-use and recycling capacity</b>	310,000 tpa
<b>'Other recovery' capacity</b>	8,000 tpa
<b>Sorting and transfer capacity</b>	859,000 tpa
<b>Household recycling centres</b>	97,500 tpa
<b>Landfill capacity</b>	9,778,000 m3
<b>Other disposal capacity</b>	<500 tpa

Note: LACW capacity in Herefordshire is included due to the joint way in which Herefordshire and Worcestershire's waste is managed. This table may include some element of double counting.

<sup>6</sup> Not including waste water treatment capacity or landfill.

## 7.4 Calculating Infrastructure Requirements and Costs

Data about waste management is collected by the Environment Agency. With the exception of Hazardous Waste, data about how much waste is generated (waste arisings) or where has been quite poor although this is improving (via the EA Waste Data Interrogator). Data about waste imports and exports is also not robust. Defra have been trying to improve the situation for some years. These figures include an element of double counting: operators often treat a material to some extent and forward it to another operator who may also treat it before it is reused, disposed of, or subdivided into elements each of which may themselves be treated differently and despatched to different places. There is also a significant element of undercounting. A large and increasing range of materials can be managed as 'exemptions'. In practice this means handled without a specific waste management licence or permit. These activities are not generally inspected or monitored by the Environment Agency and there is no reliable information on the volume of material involved.

This means that analysing what capacity exists and how much is needed is difficult. However, the background document "Arisings and Capacity" was produced to provide part of the evidence base for the development of the Waste Core Strategy. It looks at the best available sources of information and includes risk assessments of the approaches taken, and from this has set out the best possible estimate of the level of current capacity and future requirements.

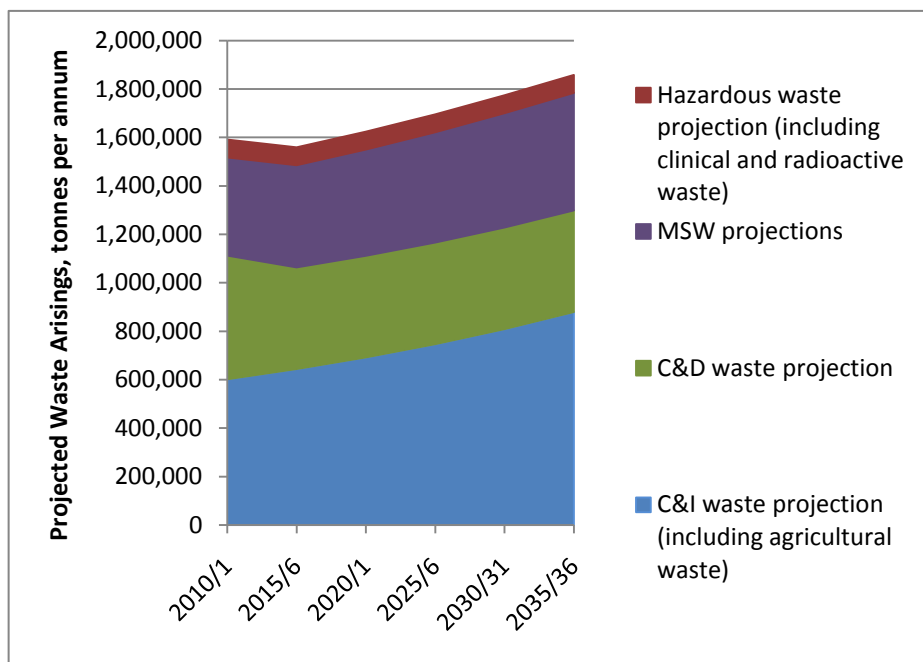
Infrastructure requirements are mostly based on projections of how much waste will be produced, and therefore require management, in the future. It is estimated that approximately 1,591,000 tonnes of waste are currently produced in Worcestershire each year (waste arisings)<sup>7</sup>. This has been used as a base for projections of future arisings<sup>8</sup> and this is expected to increase as shown below.

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<sup>7</sup> Based on 2010 figure/projections, see background document "Arisings and capacity".

<sup>8</sup> Full details of how these projections have been calculated can be found in Worcestershire Waste Core Strategy background document: Arisings and Capacity available at [www.worcestershire.gov.uk/wcs](http://www.worcestershire.gov.uk/wcs)

Figure 1: Projected waste arisings



Despite the difficulties in ascertaining future waste arisings and in understanding surplus capacity within existing operations, the emerging Waste Core Strategy identifies the following capacity gap (scale of facilities needed). This table calculates the capacity gap between existing management levels and future predicted waste arising and assumes no surplus capacity within existing facilities or the provision of new facilities. To provide for this capacity, it has been calculated<sup>9</sup> that, on average, between 25,000 and 32,500 tonnes per annum is managed per hectare and these figures have been used to calculate the land requirement.

<sup>9</sup> See background document "Arisings and capacity"

**Table 13: Capacity Gap and land requirements to 2035**

		2010/11	2015/16	2020/21	2025/26	2030/31	2035/36
Re-use and recycling	Total capacity gap (tpa)	<b>391,000</b>	<b>400,500</b>	<b>460,000</b>	<b>498,500</b>	<b>541,500</b>	<b>586,500</b>
	Total land requirement (ha)	17	17	20	21	23	25
'Other recovery'	Total capacity gap (tpa)	<b>240,500</b>	<b>253,500</b>	<b>268,000</b>	<b>283,500</b>	<b>300,500</b>	<b>318,500</b>
	Total land requirement (ha)	8	8	9	9	10	10
Sorting and transfer	Total capacity gap (tpa)	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
	Total land requirement (ha)	0	0	0	0	0	0
<b>Total capacity gap (tpa) (excluding landfill)</b>		<b>631,500</b>	<b>654,000</b>	<b>728,000</b>	<b>782,000</b>	<b>842,000</b>	<b>905,000</b>
<b>Total land requirement (ha)</b>		<b>25</b>	<b>25</b>	<b>29</b>	<b>30</b>	<b>33</b>	<b>35</b>

## 7.5 Future Investment Plans / Method of Funding

A 25 year PFI contract with Mercia Waste Management to manage all the Local Authority Collected Waste in Worcestershire and Herefordshire has been agreed between the eight local authorities.

In order to develop sufficient capacity to manage LACW in the period to 2023, part of this contract is the proposal to develop an Energy from Waste facility at Hartlebury, Worcestershire. This facility would manage LACW from both the counties. Members of Worcestershire County Council Planning and Regulatory Committee were minded to approve planning permission for this facility. However, the application was 'called in' by the Secretary of State for his own determination. A Public Inquiry into the 'called in' planning application was held in November 2011 and the result of the inquiry is anticipated in July.

Additionally, the Council's contractor estimates the need for 5 household waste recycling centres across Worcestershire.

The cost of both the EfW and HWRCs is anticipated to be between £120m and £160m. This will be funded via the PFI contract and private sector investment.

Additional facilities to deal with C&I, C&D and hazardous waste will be provided by the private sector. New facilities will only be provided where operators believe they can make a profit. The industry representatives at the WM Regional Technical Advisory Board (RTAB) have consistently stated that normal market considerations apply and that over provision of such facilities is not possible.

The cost of facilities reflects other market conditions; AWM predict however that by 2015 the cost of other methods will have fallen to match and then undercut the cost of landfill. Increased provision of new facilities by the private sector to meet most of the capacity gap seems realistic.

It is anticipated that by 2025/26 around £70m of private sector capital investment in new facilities will be required, and this is estimated to have increased to £210 million by 2035. This is based on the cost of modern recycling site at £12m per 1000,000 tpa and composting at £1m per site.

Any failure in the market to achieve the scale of development required will result in considerably greater costs falling on the Worcestershire economy. Advantage West Midlands (the former Regional Development Agency) identified that if not addressed waste management would cost 5.7 to 6.2% of business turnover by 2010/11 and 7.5% - 8.4% by 2019/20<sup>10</sup>.

## 7.6 Summary of Proposed Schemes

**Table 14: Potential Schemes (Waste)**

Infrastructure Required	Delivery Agent	Cost	Funding Source
LACW Management Facilities	Mercia Waste Management	£120m to £160m (to 2023)	PFI PFI Credits Private Sector
Private Sector Waste Management Facilities	Private Sector	£70m (to 2025/26) £210m (to 2035)	Private Sector

<sup>10</sup> Source: Advantage West Midlands (March 2008), *Waste A Future Resource for Business*

## Chapter 8: Education

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### 8.1 State Funded Education - Primary and Secondary

#### 8.1.1 Context

Worcestershire County Council (WCC) has a statutory duty to ensure there are sufficient school places for all children of statutory school age living in Worcestershire and whose parents / carers apply for a place at a state funded school. Future housing developments will lead to an increase in the 0 – 19 year old population in the area, resulting in a demand for additional school places for all types of education (early-years to post-16 and Specialist provision.)

The number of places expected to be needed in a given year is estimated through pupil number forecasting. The reception intake can be forecast 4 years in advance, as this is calculated from actual birth data. For middle and high schools, forecasts can look further ahead based on the known numbers already on roll in first and primary schools. WCC Research and Intelligence provide longer-term population forecasts which can provide early indications of trends in school age children.

Demand varies across the County with some areas having increased demand and some experiencing falling numbers. Demand at individual schools can be affected by many factors including; a favourable or not favourable Ofsted report, change of Headteacher, economic climate etc.

Forecasts are reviewed and monitored annually. Where additional places are needed a school may request or be asked to increase the Published Admission Number (PAN); similarly where demand is falling a school may request or be asked to reduce its PAN. All changes are reported to Cabinet and where necessary Public Consultation takes place. Under the Code of Practice for Admission a school may increase its PAN if there is sufficient capacity in the school building. If additional capacity is needed then extensions to schools are considered before a new school. Additional places can be provided at maintained schools and Academies and free schools. The County Council has a very good record in terms of accurate short and long term forecasting of pupil numbers.

Primary pupil numbers are increasing in parts of Kidderminster, Worcester City and Redditch as the birth rate is rising and a greater percentage of parents / carers are applying for places at state funded schools. The secondary schools are currently experiencing more of a dip in numbers but will feel the impact of the higher primary numbers in due course. Pupil numbers are falling in other parts of the county, particularly in the rural areas of Martley, Upton and Evesham.

Academy schools are state funded schools but are outside of Local Authority control. There are 24 Academies in Worcestershire as at May 2012, and it is likely that any new school from now on will be an Academy. Despite their more autonomous status, Academies still form part of the provision of 'basic need' for school places which must be satisfied by WCC. Experience to date demonstrates a strong level of co-operation between Academies and WCC.

Contributions from housing will be sought for Local Authority maintained schools, free schools and Academies alike.

### **8.1.2 Current Assets**

As at 1 May 2012 there were 218 Local Authority maintained schools in the county (i.e. not including independent schools or Academies). This total is made up of 1 nursery; 168 primary; 21 middle; 13 secondary; 9 special; and 6 PRU/short-stay schools.

There are 8 primary and 16 secondary Academies, with a number of schools currently undergoing conversion to Academy status.

The 2011 School Capacity Survey report showed that there were 15 primary schools and 10 secondary schools over capacity, by 135 and 407 pupils respectively. In the remaining schools there were 4372 primary and 2895 secondary surplus spaces respectively.

### **8.1.3 Calculating Infrastructure Requirements and Costs**

The Local Authority's statutory duty to provide sufficient places for all pupils living in the County whose parents / carers apply for a place at a state funded school means

that as soon as the first child moves into a new housing development, the Local Authority must have a school place available if a place is applied for.

Wherever possible, additional pupils are accommodated within existing schools because the schools are already known locally and it is quicker to provide the places in line with the housing development. If existing capacity prevents this, then extensions and alterations are considered over new-build schools in the first instance. This is because of the significant financial cost involved in wholly new buildings, and the difficulties in matching new school buildings to pupil demand (as it can take years to reach a point of efficient operation).

Where it is not possible to accommodate the additional pupils from a development within existing schools, or the nearest available school places are not within reasonable travelling distance, then a completely new school will be required.

The lead-in time to establish, design and build a new school is approximately three and a half years. Discussions would need to take place with developers to identify when the new school would be required, in line with the phasing of the housing development. Ideally, the new school would open at the start of an academic year (i.e. in September). The Local Authority would have to put interim arrangements in place for the children from the development to attend other schools until the new school had opened.

Based on average pupil yield figures (the expected number of school-age children per dwelling), the equivalent of a new 1-form entry primary school might be 'triggered' by a development of around 1100 dwellings. The current pupil yield is based on 2001 census data, which remains the best available until new figures from the 2011 census are published. The 'trigger' for a new secondary school would be a very significant development (e.g. a new town or very large development), where expansion of existing schools would not be possible).

- Each 100 dwellings is estimated to generate:
  - 21 pupils of primary education age;
  - 15 pupils of secondary education age;
  - 1 pupil with special education needs requiring specialist provision.



These ratios are applied to development proposals to calculate the requirements for primary and secondary school provision. It is considered that special school requirements are insufficient to generate new facilities; special educational needs will therefore be accommodated within existing special schools, with a proportionate financial contribution being required.

The cost of additional school capacity arising from a new development is calculated by applying a 'building cost multiplier' to the pupil yield, and multiplying by the number of year groups in the school. The building cost multiplier is a figure established by the Department for Education, and weighted for Worcestershire, which gives a rough capital cost for providing a school place for one child. These are revised from time to time, but currently stand at £10,439 per primary place; £15,793 per secondary place; and £17,113 per post-16 place<sup>11</sup>. It is worth noting that the *Baker study* of infrastructure requirements in Worcestershire found the DfE cost multipliers and existing Worcestershire SPD costs provided a conservative estimate of the funding required for primary and secondary provision, and reflected the cost of extending existing schools, rather than allowing the construction of new schools.

A typical calculation would therefore be:

Pupil Yield x Building Cost Multiplier x No. of Year Groups

The pupil yield is assumed to be 0.029 pupils **per year group** per dwelling. The calculation for a 1,000 home development might therefore be:

Primary school need	$(1000 \times 0.029) \times 10,096 \times 7$	£2,049,488
Secondary school need	$(1000 \times 0.029) \times 15,299 \times 5$	£2,218,355
Post-16 need	$(1000 \times 0.029) \times 16,572 \times 1$	£480,588
<b>Total cost for providing school places</b>		<b>£4,748,431</b>

Some areas of the county operate a three-tier schooling system (first, middle and high schools) rather than two-tier (primary and secondary schools). For the purposes of infrastructure planning, this difference is accommodated through apportioning the three-tier places between primary and secondary phases to allow for simplified calculations.

<sup>11</sup> DfE Building cost Multipliers: 2012/13:  
<http://www.worcestershire.gov.uk/cms/pdf/Building%20Cost%20Multipliers.pdf>

Most Worcestershire districts have adopted Supplementary Planning Documents which set out a formula for calculating developer contributions for education facilities. The SPDs provide information on existing capacities and the costs, per dwelling type, towards providing school places on developments of up to 100 dwellings. Large-scale new developments of 100 or more dwellings are negotiated individually.

#### **8.1.4 Future Investment Plans / Methods of Funding**

WCC recommends inclusion of education provision within the Community Infrastructure Levy (CIL) charging schedules being prepared for Worcestershire. Whilst CIL may not deliver substantially greater funds than Section 106 agreements, it will allow those funds to be targeted more effectively to meet needs. Section 106 Agreements are, for example, site specific, and must be used to increase school places in the immediate vicinity of the development. CIL funding, meanwhile, could be used to increase capacity where it is most needed in the wider 'education district'. Local Authority maintained schools, Free Schools and Academies would be eligible to receive CIL funding for extra school places.

##### *1. Key Contacts and Reference Documents*

#### **Worcestershire County Council**

#### **8.1.5 Summary of Proposed Schemes**

Contributions towards increased capacity (table over following pages)

District	Settlement	Site	Dwellings	Primary Contribution to Education	Secondary Contribution to Education
<b>Worcester</b>	Worcester	West Worcester	1000	£2,130,079	£2,289,985
<b>Worcester</b>	Worcester	South Worcester	2425	£6,000,000	£5,553,214
<b>Worcester</b>	Worcester	Kilbury Drive	300	£639,024	£686,996
<b>Worcester</b>	Worcester	Gwilliams Farm	300	£639,024	£686,996
<b>Worcester</b>	Worcester	Former Ronkswood Hospital Site	200	£426,016	£457,997
<b>Worcester</b>	Worcester	Shrub Hill Opportunity Zone	200	£426,016	£457,997
<b>Worcester</b>	Worcester	Gregory's Bank	140	£298,211	£320,598
<b>Worcester</b>	Worcester	Government Offices	120	£255,609	£274,798
<b>Worcester</b>	Worcester	Blockhouse/Carden Street Opportunity Zone	120	£255,609	£274,798
<b>Worcester</b>	Worcester	Land South of Lyppard Hill	100	£213,008	£228,999
<b>Worcester</b>	Worcester	Small sites inside city boundary	296	£630,503	£677,836
<b>Worcester</b>	Windfall	Small sites inside city boundary	204	£434,536	£467,157
<b>Worcester Developments Total</b>			<b>5405</b>	<b>£12,347,635</b>	<b>£12,377,369</b>
<b>Current situation May 2012</b>					
Pressure on places at primary level for the next four years. Additional places have been made available for September 2012. Lyppard Grange and Nunnery Wood expansion planned for 2013. . A review will be completed for potential September 2014 changes.					
Secondary school forecast running accurately with sufficient places available across the City. Low numbers will continue with no expected increase until September 2018.					

District	Settlement	Site	Dwellings	Primary Contribution to Education	Secondary Contribution to Education
<b>Malvern Hills</b>	Malvern	Newland	700	£1,491,055	£1,602,990
<b>Malvern Hills</b>	Malvern	QinetiQ Site	250	£532,520	£572,496
<b>Malvern Hills</b>	Malvern	Small sites inside town boundary	201	£428,146	£460,287
<b>Malvern Hills</b>	Kempsey	Small sites	139	£296,081	£318,308
<b>Malvern Hills</b>	Powick	Small sites	60	£127,805	£137,399
<b>Malvern Hills</b>	Lower Broadheath	Small sites	67	£142,715	£153,429
<b>Malvern Hills</b>	Tenbury	Small sites	60	£127,805	£137,399
<b>Malvern Hills</b>	Upton upon Severn	Small sites	55	£117,154	£125,949
<b>Malvern Hills</b>	Village Allocations	Small sites	353	£751,918	£808,365
<b>Malvern Hills</b>	Windfall	Small sites	360	£766,828	£824,395
<b>Malvern Developments Total</b>			<b>2245</b>	<b>£4,782,027</b>	<b>£5,141,016</b>

## **Current situation May 2012**

### Malvern

Malvern has a distinct urban / rural split with pressure on places in the urban area.

Malvern village schools are dependent on the movement of pupils out from the town and therefore consideration will be given to increasing places within the town schools.

At secondary level there are a high number of spare places. Low numbers will continue with no expected increase until September 2016.

### Martley

Sufficient primary places for next four years. Need to monitor numbers in rural areas.

Sufficient places at secondary school for in-catchment applications.

### Tenbury

There are sufficient places for all in-county applications for the next four years.

### Upton

Low numbers of children in the area.

Secondary school is popular and filling with out-of-catchment pupils.

District	Settlement	Site	Dwellings	Primary Contribution to Education	Secondary Contribution to Education
<b>Wychavon</b>	Droitwich	Copcut Lane	740	£1,576,258	£1,694,589
<b>Wychavon</b>	Pershore	Station Road/Wyre Road	600	£1,278,047	£1,373,991
<b>Wychavon</b>	Evesham	Cheltenham Road	257	£547,430	£588,526
<b>Wychavon</b>	Evesham	Pershore Road Hampton	223	£475,008	£510,667
<b>Wychavon</b>	Evesham	Abbey Road	400	£852,032	£915,994
<b>Wychavon</b>	Droitwich	Small sites inside town boundary	464	£988,357	£1,062,553
<b>Wychavon</b>	Evesham	Small sites inside town boundary	292	£621,983	£668,676
<b>Wychavon</b>	Pershore	Small sites inside town boundary	79	£168,276	£180,909
<b>Wychavon</b>	Broadway (Cat 1)	Small sites	131	£279,040	£299,988
<b>Wychavon</b>	Hartlebury (Cat 1)	Small sites	100	£213,008	£228,999
<b>Wychavon</b>	Honeybourne (Cat 1)	Small sites	100	£213,008	£228,999
<b>Wychavon</b>	Inkberrow (Cat 1)	Small sites	90	£191,707	£206,099
<b>Wychavon</b>	Offenham (Cat 1)	Small sites	79	£168,276	£180,909
<b>Wychavon</b>	Fernhill Heath (Cat 2)	Small sites	120	£255,609	£274,798
<b>Wychavon</b>	Other Category 1 Village Allocations	Small sites	118	£251,349	£270,218

<b>Wychavon</b>	Other Category 2 Village Allocations	Small sites	285	£607,073	£652,646
<b>Wychavon</b>	Other Category 3 Village Allocations	Small sites	172	£366,374	£393,877
<b>Wychavon</b>	Windfall	Small sites	1,080	£2,300,485	£2,473,184
<b>Wychavon Developments Total</b>			5,330	£11,353,321	£12,205,620
<b>Total South Worcestershire</b>			20,630	£56,965,968	£47,242,391

### **Current situation May 2012**

#### Droitwich

Sufficient places for all in area applications for the next four years in all three stages.

#### Evesham

High number of surplus places at reception level with the forecast in September 2012 reaching 515 compared with 608 places available.

There is a significant difference between the urban and rural areas with the village schools dependent on the movement of pupils out from the town.

This trend will continue with a maximum forecast, for reception intake, of 542 in the next four years.

The middle and high schools are also likely to have surplus places although not to the same level.

#### Pershore

At reception phase Pershore will have around 45 spare places in September 2012.

Incoming reception numbers in Pershore are declining with September 2015 currently forecasting 84 spare places.

There are approximately 80 spare places at Middle school phase in Pershore Middle school numbers as a whole are steady for the next few years with the drop off in reception numbers hitting from September 2018.

District	Settlement	Site	Dwellings	Primary Contribution to Education	Secondary Contribution to Education
<b>Bromsgrove</b>	Alvechurch	Land adj Crown Meadow, Alvechurch	27	£57,512	£61,830
<b>Bromsgrove</b>	Alvechurch	Land fronting Birmingham Road, Alvechurch	27	£57,512	£61,830
<b>Bromsgrove</b>	Barnt Green	Kendal End Road, Barnt Green	88	£187,447	£201,519
<b>Bromsgrove</b>	Bromsgrove	Perryfields Road, Bromsgrove	1300	£2,769,103	£2,976,981
<b>Bromsgrove</b>	Bromsgrove	Whitford Road, Bromsgrove	500	£1,065,040	£1,144,993
<b>Bromsgrove</b>	Bromsgrove	Norton Farm, Bromsgrove	318	£677,365	£728,215
<b>Bromsgrove</b>	Bromsgrove	Land adjacent Wagon Works, Bromsgrove	212	£451,577	£485,477
<b>Bromsgrove</b>	Bromsgrove	Church Road, Catshill	80	£170,406	£183,199
<b>Bromsgrove</b>	Frankley	Egghill Lane, Frankley	66	£140,585	£151,139
<b>Bromsgrove</b>	Hagley	Kidderminster & Stourbridge Road, Hagley	200	£426,016	£457,997
<b>Bromsgrove</b>	Hagley	Strathearn, Western Road, Hagley	40	£85,203	£91,599
<b>Bromsgrove</b>	Hagley	Land at Algoa House, Western Road, Hagley	18	£38,341	£41,220
<b>Bromsgrove</b>	Hagley	Rose & Thicknall Cottage, Western Road, Hagley	15	£31,951	£34,350
<b>Bromsgrove</b>	Wythall	Bleakhouse Farm, Station Road, Wythall	150	£319,512	£343,498
<b>Bromsgrove</b>	Wythall	Selsdon Close, Wythall	76	£161,886	£174,039
<b>Bromsgrove Developments Total</b>			<b>3117</b>	<b>£6,639,456</b>	<b>£7,137,883</b>



## **Current Situation May 2012**

### Bromsgrove

Sufficient places for all in-county applications for the next four years.

### Hagley

Sufficient places in Reception for the next four years.

Sufficient secondary places for in-county applications for next four years.

Demand for places from outside the county

### Rubery

Sufficient places for all in-county applications for the next four years in both phases

### Wythall

Sufficient places for all in-county applications for the next four years.

Significant interaction with neighbouring areas

District	Settlement	Site	Dwellings	Primary Contribution to Education	Secondary Contribution to Education
Redditch	Redditch	Webheath ADR	600	£1,278,047	£1,373,991
Redditch	Redditch	Brockhill ADR (part pp)	577		£1,321,321
Redditch	Redditch	Brockhill Green Belt	400		£915,994
Redditch	Redditch	New first school required at Brockhill as part of overall development		£5,000,000	
Redditch	Redditch	A435	261	£555,951	£597,686
Redditch	Redditch	Dingleside Middle School (pp)	220	£468,617	£503,797
Redditch	Redditch	Foxlydiate Green Belt	150	£319,512	£343,498
Redditch	Redditch	Rear of the Hospital	145	£308,861	£332,048
Redditch	Redditch	Marlfield farm School (pp)	79	£168,276	£180,909
Redditch	Redditch	Prospect Hill	61	£129,935	£139,689
Redditch	Redditch	Widney House, Bromsgrove Road	58	£123,545	£132,819
Redditch	Redditch	Church Hill District Centre (pp)	51	£108,634	£116,789
Redditch	Redditch	Former Dorothy Terry House (pp)	41	£87,333	£93,889
Redditch	Redditch	Windsor Road Gas Works (pp)	37	£78,813	£84,729
Redditch	Redditch	Former Claybrook School	36	£76,683	£82,439
Redditch	Redditch	Fire Station & Millfields	35	£74,553	£80,149
Redditch	Redditch	Land south of Scout Hut	32	£68,163	£73,280
Redditch	Redditch	Former Ipsley School Playing Field	31	£66,032	£70,990
Redditch	Redditch	Rear of 144-162 Easemore Road	24	£51,122	£54,960
Redditch	Redditch	Mayfields Works (pp)	23	£48,992	£52,670
Redditch	Redditch	St Stephens Playing Field	22	£46,862	£50,380
Redditch	Redditch	Birchfield Road	22	£46,862	£50,380

<b>Redditch</b>	Redditch	Matchborough District Centre	17	£36,211	£38,930
<b>Redditch</b>	Redditch	Land adjacent to Castleditch Ln/ Pheasant Ln	16	£34,081	£36,640
<b>Redditch</b>	Redditch	Wirehill Drive (pp)	15	£31,951	£34,350
<b>Redditch</b>	Redditch	Tanhouse Lane (pp)	14	£29,821	£32,060
<b>Redditch</b>	Redditch	Brockhill East (pp)	14	£29,821	£32,060
<b>Redditch</b>	Redditch	Loxley Close	10	£21,301	£22,900
<b>Redditch</b>	Redditch	Sandycroft	10	£21,301	£22,900
<b>Redditch</b>	Redditch	Rear of Sandygate Close	8	£17,041	£18,320
<b>Redditch</b>	Redditch	Wellington Works (pp)	7	£14,911	£16,030
<b>Redditch</b>	Redditch	Land off Torrs Close	6	£12,780	£13,740
<b>Redditch</b>	Redditch	Clifton Close	6	£12,780	£13,740
<b>Redditch</b>	Redditch	High Trees, Dark Lane (pp)	5	£10,650	£11,450
<b>Redditch</b>	Redditch	Adj. Saltways Cheshire Home (pp)	5	£10,650	£11,450
<b>Redditch</b>	Redditch	Brush Factory Evesham Road (pp)	4	£8,520	£9,160
<b>Redditch Developments Total</b>			3042	£9,398,613	£6,966,134
<b>Current Situation May 2012</b>					
<p>Pressure for places in first schools.  Some additional first school places being created for September 2013.  A review will be completed into further changes required for September 2014  Sufficient spare places at middle and high level but higher first school numbers will feed through in time.</p>					

District	Settlement	Site	Dwellings	Primary Contribution to Education	Secondary Contribution to Education
Wyre Forest	Kidderminster	Former British Sugar Site, Stourport Road, Kidderminster	320	£681,625	£732,795
Wyre Forest	Kidderminster	Oasis Arts and Craft, Stourport Road, Kidderminster	100	£213,008	£228,999
Wyre Forest	Kidderminster	Blakebrook School & County Buildings	50	£106,504	£114,499
Wyre Forest	Kidderminster	Northumberland Avenue Surgery	10	£21,301	£22,900
Wyre Forest	Kidderminster	Aylmer Lodge Surgery	5	£10,650	£11,450
Wyre Forest	Kidderminster	Chester Road South Service Station	20	£42,602	£45,800
Wyre Forest	Kidderminster	Broadwaters Community Centre	10	£21,301	£22,900
Wyre Forest	Kidderminster	Rifle Range Shops & Musketeer PH	23	£48,992	£52,670
Wyre Forest	Stourport	Bridge Street Basins Link	40	£85,203	£91,599
Wyre Forest	Stourport	Tan Lane	20	£42,602	£45,800
Wyre Forest	Stourport	County Buildings	20	£42,602	£45,800
Wyre Forest	Stourport	Civic Centre	20	£42,602	£45,800
Wyre Forest	Stourport	Swan Hotel & Working Mens Club	10	£21,301	£22,900
Wyre Forest	Stourport	Sion Gardens	10	£21,301	£22,900
Wyre Forest	Stourport	Carpets of Worth	159	£338,683	£364,108
Wyre Forest	Stourport	Cheapside	60	£127,805	£137,399
Wyre Forest	Stourport	Former Parsons Chain	150	£319,512	£343,498
Wyre Forest	Stourport	Worcester Road Car Garage	30	£63,902	£68,700
Wyre Forest	Stourport	Baldwin Road Redevelopment Area	50	£106,504	£114,499

<b>Wyre Forest</b>	Stourport	Morgan Technical Ceramics & MIP	200	£426,016	£457,997
<b>Wyre Forest</b>	Stourport	Former Lucy Baldwin Unit	40	£85,203	£91,599
<b>Wyre Forest</b>	Stourport	Queens Road Shops	15	£31,951	£34,350
<b>Wyre Forest</b>	Stourport	Robbins Depot	12	£25,561	£27,480
<b>Wyre Forest</b>	Bewdley	Load Street Redevelopment Area	16	£34,081	£36,640
<b>Wyre Forest</b>	Blakedown	Blakedown Nurseries	40	£85,203	£91,599
<b>Wyre Forest</b>	Clows Top	The Terrace Clows Top	40	£85,203	£91,599
<b>Wyre Forest</b>		Sebright Road	10	£21,301	£22,900
<b>Wyre Forest</b>	Kidderminster	Phase 1 -Grasmere Close	97	£206,618	£222,129
<b>Wyre Forest</b>	Kidderminster	Phase 2a - Former Georgian Carpets Stoney Lane	223	£475,008	£510,667
<b>Wyre Forest</b>	Kidderminster	Phase 2b - Former Sladen School	25	£53,252	£57,250
<b>Wyre Forest</b>	Kidderminster	Phase 3a - Churchfields Business Park	200	£426,016	£457,997
<b>Wyre Forest</b>	Kidderminster	Phase 3b - Lime Kiln Bridge	120	£255,609	£274,798
<b>Wyre Forest</b>	Kidderminster	Comberton Hill Area - Comberton Place Inc. Kidderminster Market Auction	25	£53,252	£57,250
<b>Wyre Forest</b>	Kidderminster	Phase 1 - Bromsgrove Street	30	£63,902	£68,700
<b>Wyre Forest</b>	Kidderminster	Phase 2 - Worcester Street Retail Development	10	£21,301	£22,900
<b>Wyre Forest</b>	Kidderminster	Phase 3 - Lion Street	10	£21,301	£22,900
<b>Wyre Forest</b>		Waterloo Street Area	55	£117,154	£125,949
<b>Wyre Forest</b>		Park St Industrial Est. & Rock Works	70	£149,106	£160,299
<b>Wyre Forest</b>		Park Lane Canalside	30	£63,902	£68,700
<b>Wyre Forest</b>		MCF Complex	25	£53,252	£57,250

<b>Wyre Forest</b>	Kidderminster	Tram Street	25	£53,252	£57,250
<b>Wyre Forest</b>		Mill Street Mixed Use Area	30	£63,902	£68,700
<b>Wyre Forest</b>		Frank Stone	25	£53,252	£57,250
<b>Wyre Forest Developments Total</b>			2480	£5,282,596	£5,679,163
<b>Total North Worcestershire</b>			8639	£23,401,752	£19,783,180
<b>Current Situation May 2012</b>					
<u>Bewdley</u>					
Sufficient places for all in-county applications for next four years at both phases					
<u>Kidderminster</u>					
Pressure on primary school places for next three years.					
A review will be completed into changes required for September 2014					
Free School application for September 2013					
Sufficient spare places at secondary level for next few years. Higher numbers will feed through in time.					
<u>Stourport</u>					
Sufficient places for in-area applications for next four years					
Fluctuating demand for reception places.					

## **8.2 Early Years, Further and Higher Education**

### **8.2.1 Early Years**

WCC has a statutory duty to ensure sufficiency of pre-school provision to allow for all 3 and 4 year olds resident in Worcestershire to access free entitlement to childcare and Early Years education.

From September 2013 some 2 year olds will be eligible for free nursery education and the Local Authority will be responsible for ensuring there are sufficient places; expected to be 1100 for September 2013 and 2200 for September 2014.

Many schools have some form of pre-school provision, either in the form of a Local Authority maintained nursery class or privately run provision which shares the school site. Where new schools are created to serve new developments it is likely that some form of pre-school provision will be established.

Numbers of pre-school children generated is expected to be similar to the figures used for primary school year groups. Children do not have to receive pre-school education but take-up of the free entitlement is high.

### **8.2.2 Post-16 Education and Training**

Current legislation states that young people enrolled in education must remain there until the end of their statutory 'school age', which lasts until the last Friday in June of the school year in which they become 16. Under Raising of the Participation Age (RPA), the Education and Skills Act 2008 now requires, by law, that all young people continue in education or training to the end of the academic year in which they turn 17 from 2013, and until at least their 18<sup>th</sup> birthday from 2015. This does not mean that they have to stay on at the same school they have attended pre-16.

WCC has a statutory responsibility to secure enough, suitable post-16 education and training to meet the reasonable needs of all young people in Worcestershire and fulfils the requirements under RPA. WCC does not fund school sixth forms or other post-16 education or training, but the departmental bodies that do (the Education Funding Agency and Skills Funding Agency) do not plan, commission or determine the provision that should be made available in a local area. Ongoing strategic

planning of post-16 requirements will be undertaken by WCC to ensure sufficiency of education and training opportunities, in terms of volume, mix and balance, location, meeting economic and community need, and quality of provision.

There are currently 23 state funded schools in Worcestershire with sixth form provision. Tenbury, Martley and Worcester schools with the exception of Tudor Grange Academy do not have sixth form provision. Provision is also made by Worcester Sixth Form College and by colleges of further education of which there are four.

The University of Worcester is the county's only university (although there is some limited higher education provision available through colleges). The university has expanded significantly in the last five years and is the fastest growing university in the country. This expansion reflects a strong demand for places from within the county and beyond.

The Local Enterprise Partnership (LEP) recognises that almost one thousand young people aged 15-19 every year leave Worcestershire. The LEP attributes these losses not only to a lack of employment opportunities, but also to a lack of higher education provision.

### **8.3 Key Message: Education**

Worcestershire County Council (WCC) has a statutory duty to secure:

- sufficient school places for all children of statutory school age living in Worcestershire and whose parents / carers apply for a place at a state funded school,
- sufficient pre-school provision to allow for all 3 and 4 year olds resident in Worcestershire to access free entitlement to childcare and Early Years education
- enough suitable post-16 education and training to meet the reasonable needs of all young people in Worcestershire.

Extensions and alterations to existing schools are considered before new schools.



The lead-in time to establish, design, and build a new school is approximately three and a half years and costs around £6 million for a 2FE primary school and £35 million for an 8FE secondary school at 2012 rates.

Schools funding and governance is likely to change dramatically over the next 5+ years with many schools moving out of Local Authority control and funding. The impact this will have on education provision, particularly in relation to new development, remains unclear.

## Chapter 9: Health and Social Care

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### 9.1 Health

#### 9.1.1 Context

Health infrastructure includes a variety of primary and secondary care facilities, including acute hospitals, community hospitals, general practices, dentists' surgeries, opticians' premises, and pharmacies.

The Worcestershire Acute Hospitals NHS Trust provides hospital-based services from three main sites:

- Worcestershire Royal Hospital
- The Alexandra Hospital (Redditch)
- Kidderminster Hospital and Treatment Centre

They also provide specialist outpatient clinics in some community hospitals, and this shift of care away from acute setting and into community settings is planned to continue and strengthen in coming years.

Worcestershire PCT commissions a full range of health services for Worcestershire residents. A new Health and Social Care Bill is currently going through the Parliamentary process, and has been significantly amended during the early stages of this, following a wide-ranging consultation exercise. The commissioning architecture of the NHS has been completely reformed, and these reforms will take effect from April 2013. Worcestershire PCT will be abolished from March 31<sup>st</sup> 2013, and its current commissioning functions will be dispersed between a number of organisations.

First, there will be three Clinical Commissioning Groups (CCGs) which will be new NHS organisations which will assume many of the commissioning functions of the Worcestershire PCT. The three consortia will be: Wyre Forest, Redditch and Bromsgrove and South Worcestershire. These will have broad matching with the relevant District Council boundaries, but there is not an exact fit. The staffing

structures for these CCGs are currently being developed, but as yet there is no organisational detail.

Second, other commissioning, currently carried out by Worcestershire PCT will in future be carried out by the NHS Commissioning Board which will have a sub-national structure. This is likely to consist of a first tier where Midlands is one of four units, and a second where West Mercia is one of about fifty organisations.

Third, some services will be commissioned through the Public Health system. A new organisation, Public Health England, will be established to provide leadership and advocacy for public health in England, and this will receive money from the Department of Health, some of which it will allocate to upper tier and unitary Local Authorities as a ring-fenced grant. This grant will be used to support Local Authorities to discharge new statutory responsibilities with regard to improving population health. The NHS reforms are now in the final stages of the parliamentary process and detailed transition plans are in place at every tier of the current system, to enable full and robust implementation by April 2013.

Currently, much capital planning is led through the Strategic Health Authority, and this tier of NHS management will be abolished in April 2013. It is expected that capital planning will be developed through NHS Commissioning Board structures in the future.

Under the health reforms, upper tier and unitary local authorities will have a new duty for improving population health. How they deliver this will partly be for local determination, but they will have new responsibilities across the three domains of public health: health improvement; health protection; and health service improvement. The ring-fenced public health grant will support them in discharging these responsibilities. The new statutory duty for local authorities to improve population health will strengthen the need to consider the health impact of planning decisions, and the need for the local authority to use all its powers to create an environment where healthy choices are the easiest choices.

The government expects action to largely happen at a local level by creating healthy places delivered by a new partnership between housing, planning, schools and transport. Further, the government proposes to streamline planning policy by aligning

social, economic, environmental and health priorities in one place and will consider how to take health forward in the new National Planning Policy Framework.

The population in the county as a whole is projected to increase by about 15,100 or 2.7% in the five year period from 2006 to 2011 (see table 9). The age breakdown of this anticipated growth shows that almost all of this growth will be in the 65+ age group which is projected to increase by 14,200. Looking further into the future, by 2026 the 65+ age group is expected to have risen by over 59,000 people and will account for 25% of the population in Worcestershire. The years of living without disability are not increasing in the same way, and the trends of avoidable disease would suggest that this pattern will continue with the ageing population having a greater need for services than ever before.

**Table 15: ONS Population Projections 2006**

Year	2006	2011	2016	2021	2026
<b>Population</b>	552,900	568,000	584,400	601,900	618,400
<b>Age</b>					
<b>0-24</b>	157,500	158,300	156,400	157,00	159,400
<b>25-64</b>	298,900	299,200	298,800	302,600	303,300
<b>65+</b>	96,400	110,600	129,300	142,100	155,700

Although health in Worcestershire is generally good, this is not uniformly true. There are health hotspots where both social deprivation and premature mortality are above average. There are a number of existing and emerging population health needs. Population profiles are changing and these will change service demands. Increasing numbers of older people, for example, will increase needs for capacity for dementia care.

### **9.1.2 Existing NHS Assets**

The Worcestershire Acute Hospitals NHS Trust is responsible for three main sites - the Alexandra at Redditch, Kidderminster and Worcestershire Royal at Worcester. These together currently cater for over 95,000 planned and emergency operations, more than 130,000 A&E attendances and around 500,000 outpatient appointments, including appointments with consultants or specialist nurses, diagnostic tests such as X-rays and minor surgical procedures.

The recently formed Worcestershire Health and Care Trust is responsible for delivery of a range of community services, including community hospitals and the estate formerly owned by the Worcestershire Mental Health Partnership Trust. A first draft audit and comprehensive listing of all the premises from which services are delivered was undertaken in October 2009. This covers PCT owned and leased properties, GP surgeries, pharmacists, dentists and opticians.

The Council is also recognised as an important stakeholder. The potential for joint commissioning, partnership working and multi-agency use of community facilities will be a part of the strategy to ensure value for money. Work on shared asset use was begun through the Total Place initiative where Worcestershire was one of 12 national pilot sites. This work continues, with a particular focus in Wychavon and the Wyre Forest areas.

NHS Worcestershire has been through a programme of investment in community health facilities with the aim of achieving modern, fit for purpose premises able to meet patient expectations and clinical standards. The strategy is to ensure optimal and flexible use of all available estate. New facilities include new community hospitals in Pershore and Malvern and new GP premises in Malvern.

### **9.1.3 Capacity of Existing Assets**

The Baker Study found that "following discussions, it has been identified that there is some capacity in Worcestershire within existing GP practices based on GP patient registers. The availability of capacity is locationally specific, so at this stage has not been considered due to the uncertain ability of capacity to address future infrastructure requirements".

The lack of community hospital facilities for Worcester City has an influence on care pathways and access to local services. Commissioners are considering how the need for rehabilitation services in particular can best be met in order to optimise patient outcomes and value for money. A health market analysis including private sector provision will be part of the project.

There is variability of provision across the County, mainly because of previous NHS reforms which changed the geographical footprint for service planning several times

in recent years. The three CCGs will in the future wish to review their local provision, and the Health and Well-being Board will have an oversight role with regard to ensuring that coherent commissioning plans are in place to cover the needs of the whole County population.

Initial discussions with NHS representatives have suggested that there is unlikely to be any new capital investment in new health infrastructure in the short term. The focus is likely to be on refurbishment or expansion of the existing estate in part driven by sustainability considerations and the need to reduce the estates carbon footprint. It is likely that services will be consolidated with the disposal of unsustainable locations funding the improvement of the remaining estate.

#### 9.1.4 Calculating Infrastructure Requirements and Costs

Calculating the required amount of additional health facilities is complex, as it does not just include only provision of consulting rooms for new GPs and dentists, but also could include:

- public spaces, e.g. reception area, pharmacy, toilets
- clinical activity spaces, e.g. consulting room and specialist treatment room
- non-clinical activity spaces, e.g. group activity meeting space
- support spaces, e.g. utility and storage spaces
- administration spaces, e.g. office and record/archive space
- staff spaces, e.g. staff room, changing facilities and training room.

There are clear standards for the provision of health facilities, including carbon reduction standards.

The following table sets out the calculation used to determine the need for dentists and GPs:

**Table 16: Standards for Health Provision**

	Standard
<b>General Practitioners</b>	1 per 1,500 people
<b>Dentists</b>	1 per 2,000 people

For example: If the population were to rise by 18,000 people 12 new GPs and 9 new dentists would be required and this would, in the past, have been funded through a capital programme managed by the SHA.

The Worcestershire Acute Hospitals NHS Trust is modernising service provision away from traditional forms of 'capacity' planning of wards or beds and towards increased primary care and more efficient ways of working. This is a recurring theme within healthcare planning and has been given increased emphasis by the coalition government and their intentions for restructuring of healthcare away from the centre in the white paper.

Length of life is being extended beyond the years of healthy life. There are differences across the county, and this gives some indication of where there will be a greater need for services for dependent elderly people. For example, at 65 years of age, men in Malvern Hills have only 13.9 years of health life expectancy, but 17 years of actual life expectancy, so are likely to need tailored health and social care services for 3.1 years. In Redditch, male life expectancy exceeds healthy life expectancy by 3.9 years.

Avoidable health risk as a result of obesity, high alcohol intake, smoking and drug use can be treated in acute and community NHS settings. However, as the local authority assumes responsibility for population health, it will want to demonstrate it is doing all it can to change the environment, so that the likelihood of unhealthy lifestyle choice is reduced. Measures to encourage non-alcohol related leisure and increase chances for physical activity, including in particular active travel, will be needed.

Future health commissioning plans will be expected to flow from the Joint Strategic Needs Assessment, the production of which will become a statutory requirement of the Local Authority. A new body, the Health and Well-being Board, will be required, and will be the main County forum for partnership between the CCGs and others, overseeing the effective implementation of commissioning plans which must meet the needs of the local population. LA. Future Investment Plans / Method of Funding

Although the Coalition government has made a commitment to protect front line health services, the NHS as a whole is required to save £20bn by 2014, though a programme of quality improvement, innovation and prevention.

It is important to recognise that any assessment of future need and provision for capital infrastructure is being undertaken during a time of major structural reform and financial pressure for the NHS, and for the public sector as a whole.

The Health and Social care Bill makes it clear that will be increasingly commissioned from the open market from any qualified provider. This will create a new market in health care provision and it is unclear what the consequences of this might be for health infrastructure planning. Current providers might either leave the market or increase dramatically in size. Others could enter the market with different infrastructure requirements. The new approach could result in Worcestershire being either a net importer or exporter of patients, as patient flows change. Thus the planning principles based only on resident populations may require some revision as the market develops over time and this will need to be kept under review.

The cost of health facilities to meet future needs is dependant on the size of facility and contents. Health centres and clinics vary in size from 600 sqm to 6,000 sqm and some individual GP practices are as small as 95 sqm. The Worcestershire PCT prefers to provide health centres that can cater for 10,000 or 15,000 patients. Costs can be based on two approaches, of which the first uses a standard cost multiplier. Kier Group as cost advisors to PCTs has benchmarked the construction costs for recent health centres and concluded that typical healthcare buildings are in the order of £2,105 per sqm to £2,359 per sqm.

The Baker Associates study provides details of benchmarked national cost of Health Centres on page 28. It shows the cost varies significantly depending on the composition of facilities, and the size of the facility does not directly correlate with the level of patients that can be services. The average cost per sqm is £1,797.84.

Initial discussions with NHS representatives have suggested that there is unlikely to be any new capital investment in new health infrastructure in the short term. The focus is likely to be on refurbishment or expansion of the existing estate in part driven by sustainability considerations and the need to reduce the estates carbon footprint. It should be noted that two new community hospitals have been completed in the period of time since the publication of the Baker study at Pershore and Malvern, and this further reduces the likelihood of new building.



## 1. *Key Contacts*

- NHS Worcestershire
- Worcestershire Health and Care Trust
- GP Commissioning Consortia

## 2. *Reference Documents*

- Department of Health (2011) Healthy Lives, Healthy People: Update and Way Forward
- Department of Health (2010) Healthy Lives, Healthy People Cmd 7985
- Department of Health (2010) Equity and Excellence: Liberating the NHS

## 8.1.5 Summary of Proposed Schemes

**Table 17: Potential Schemes (Health)**

Infrastructure Required	Specific Scheme	Delivery Agent	Cost	Funding Source
Capital Investment (new facilities)	Unknown	Unknown	Unknown	Unknown
Maintenance & Refurbishment (existing facilities)	Unknown	Unknown	Unknown	Unknown

## 9.2 Social Care

### 9.2.1 Context

WCC has a responsibility to support, care and protect people in the community. In Worcestershire there are people with a wide range of social care needs from the very young to the elderly.

This chapter covers the infrastructure that will be required to support these people in the future as a result of population growth. This covers a wide range of infrastructure types from residential homes to children's centres.

### 9.2.2 Existing Assets

According to the Care Quality Commission, as at 1 April 2010, there are 162 registered residential homes, 60 registered nursing homes, 1 registered adult place scheme (shared lives), 62 registered home care agencies, and 6 registered nursing agencies in Worcestershire. Together they supply 2,928 residential home places and 2,483 nursing home places<sup>12</sup>.

### 9.2.3 Capacity of Existing Assets

Changing needs of the population (e.g. the ageing population) and changing nature of delivery (e.g. improvements in medical procedures, the move to independent living, the move to personalised budgets) have meant there is a move away from the need for larger facilities and this will increase in the future. Instead, there is an increasing drive to deliver services closer to patients, in community facilities or in the patient's home. Changes to service delivery and disability standards could results in

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<sup>12</sup> Bromsgrove Social Infrastructure Audit 2010

different requirements for property: making some properties redundant and need for more buildings / facilities in different locations as services move.

A number of other impacts on housing could flow from the demographic change and the shifting pattern to more localized independent living solutions, an increase in adaptive technology and the increase in care in the community.

- Increased need for a percentage of adapted housing stock,
- A move to flexible life time housing allowing easy adaptation from single to married to family to single occupation,
- A reduction in churn of the housing stock where there is a concentration of older residents,

The impact of the Welfare Bill changes in terms of maximum rents and reduction in benefits leading to a shift from market housing to affordable housing have yet to emerge.

#### 9.2.4 Calculating Infrastructure Requirements and Costs

The JSNA for Adult Health and Well Being has on the basis of the demographic changes projected, shifts in policy and older people's expectations, it is possible to give an indication of how the supply of specialised accommodation for older people may need to change as below:

**Table 18: Property Requirements for Supported Housing**

Type of Facility	More/less properties needed
Sheltered housing for rent	1,171 fewer properties
Sheltered housing for sale	4,636 more properties
Enhanced sheltered housing for rent or sale	1,610 more properties
Extra care housing for rent or sale	1,938 more properties
Housing based provision for dementia	838 more places
Residential care places	3,068 more places
Nursing care places	1,069 more places

This has implications for WCC in terms of duty of care that will be extrapolated down to district authorities through assessment of SHLAAs and Housing Strategies. There is an additional need to identify the providers of such services i.e. local authority or private sector.

## 9.2.5 Future Investment Plans / Method of Funding

Limited information is available on how investment into social care facilities is determined and funded at this time. We are continuing to develop this evidence base.

### 1. Key Contacts

- Worcestershire County Council Adult and Community Services

## 9.2.6 Summary of Proposed Schemes

**Table 19: Potential Schemes (Social Care)**

Infrastructure Required	Specific Scheme	Delivery Agent	Cost	Funding Source
<b>Capital Investment (new facilities)</b>	Unknown	Unknown	Unknown	Unknown
<b>Maintenance &amp; Refurbishment (existing facilities)</b>	Unknown	Unknown	Unknown	Unknown

## 9.3 Key Messages: Health and Social Care

Services are currently provided by Worcestershire Acute Hospitals NHS Trust and Worcestershire Health and Care Trust.

The NHS is going through major structural reform and is now moving into a transition phase to implementation in April 2013. Commissioning in the future will be done through a very different set of structures and the precise local footprint of some of these is not yet clear. There will be a need to review infrastructure responsibilities as the period of transition develops.

## Chapter 10: Community

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### 10.1 Introduction

Libraries, museums, community, faith and cultural facilities play a key role in underpinning education and quality of life in its broadest sense.

The Worcestershire Sustainable Community Strategy (2008) presents a vision for Worcestershire. This vision is based on what Worcestershire residents said was important to them in making the County a great place in which to visit, work or live. The Worcestershire Partnership vision is for

*“a County with safe, cohesive, healthy and inclusive communities, a strong and diverse economy and a valued and cherished environment”*

This piece of work focuses on physical infrastructure such as libraries, community centres and built leisure facilities.

The key theme around the future development of community buildings within Worcestershire will be partnership working across the public and voluntary sectors at schemes that look to co-locate and integrate facilities where possible. It will not be about developing new bespoke cultural facilities such as libraries, museums, community centres, , but rather it will be about working with partners such as schools, parish councils, town councils and local communities to co-locate facilities in a given area. These facilities will often be run locally through the voluntary sector with the public sector taking less of a direct role. On this basis, we do not foresee the need for specific new infrastructure in the near future.

The Worcestershire Partnership engaged with central government's Total Place and subsequent Capital and Asset Pathfinder initiatives, focusing particularly on developing a closer working relationship with other public sector organisations in the locality regarding the use of property and collaborative service development. The Partnership includes 19 full partners with an additional 17 organisations from across the public and third sectors being regularly involved as Stakeholders.

The outcomes from this partnership have so far included

- The production of a comprehensive map of all public sector property interests in the county. This has highlighted opportunities for property rationalisation.
- The development of a number of joint property rationalisation projects where different organisations share premises and save on running costs.
- Development of shared back office support in jointly used premises
- A number of joint land disposals which have facilitated better redevelopment, greater regeneration to the locality and raised a greater level of capital receipt than could have been achieved individually.
- Improved engagement with the voluntary sector and communities around the delivery of services
- Using property rationalisation as a catalyst for service transformation, producing both innovative and sustainable service delivery models.
- A shared 10 year strategic asset management plan has been adopted by most of the partner organisations.

The Partnership believes that the diverse nature of Worcestershire's communities call for local responses to meet local needs. Consequently it has developed a number of different service models within Worcestershire with different accommodation solutions. Some examples of these differences are illustrated by the following:

- Droitwich, where the Library, CAB and Worcestershire Hub have co-located into the library, improving customer footfall, extending service availability, reducing running costs and releasing two buildings for disposal.
- Pershore, where the Town Council has bought the Library building, is refurbishing it and co-locating the Library with Tourist Information Service and other voluntary groups to improve service availability at a lower cost
- Broadway, where options to co-locate Police, Library, Parish Council and a voluntary organisation are under consideration.

Although the outcomes are different in all cases, the common themes that run through all CAP projects are

- No more single use buildings

- A shared approach to service delivery
- Single back office / support infrastructure for all services
- Flexibility in terms of space usage
- All projects are based on a business case and are financially sustainable

The Partnership has a number of further aspirations. These include developing additional collaborative projects on an area by area basis, closer working with the voluntary sector, a number of specific county-wide themed projects, (such as shared vehicle workshops, shared training facilities, etc.), and using its unique position to consider public infrastructure issues. For example, the Partnership would be able to provide a broad perspective on opportunities presented by Community Infrastructure Levy contributions, ensuring that funding goes into prioritised and sustainable assets and service models.

There will also be a lot of potential collocation opportunities on school sites (recently have developed a library and police base on a school site).

## 10.2 Libraries and Archives

### 10.2.1 Context

Library authorities have a statutory duty to provide a public library service and to ensure that it is “comprehensive and efficient”. However, previous standards for library provision have been abolished and it is now for local authorities to determine how to provide an efficient service.

### 10.2.2 Existing Assets

There are 23 public libraries in Worcestershire

Bromsgrove District	Malvern District
Alvechurch	Malvern
Bromsgrove	Martley
Catshill	Tenbury Wells
Hagley	Welland
Rubery	Upton-Upon-Severn
Wythall	

Redditch Borough	Worcester City
Redditch	St Johns
Woodrow	Warndon
	Worcester

Wychavon District	Wyre Forest District
Broadway	Bewdley
Droitwich Spa	Kidderminster
Evesham	Stourport-On-Severn
Pershore	

### 10.2.3 Capacity of Existing Assets

Libraries are to be assessed individually over a 3 year period. The proposal is to take an individual approach to reform of the service rather than a one size fits all or 'salami-slicing', engaging with local communities and partners to come up with a model, supported by the County Council working with the communities and local members, to deliver a service which met the needs of communities and provided a sustainable and efficient service. As part of the consultation process, the concept of seeking expressions of interest from the local community in running a library will be explored.



Library	Potential Outcome	Reasons
<b>Alvechurch</b>	1	Already linked to First and Middle school (PFI). Opportunity to draw in further services and get greater community involvement.
<b>Bewdley</b>	2,3,4	Opportunity to re-define service and to relocate and integrate with other local services e.g. Police / Health and District Council Hub. Also scope to involve local community in delivery of service. Will be subject to local consultation.
<b>Broadway</b>	3,4	Already wealth of volunteer run services in Broadway. Opportunity for greater local community involvement in delivery of services. Is currently in standalone facility next to Police Station. Will be subject to local consultation. Already wealth of volunteer run services in Broadway. Opportunity for greater local community involvement in delivery of services. Is currently in standalone facility next to Police Station. Will be subject to local consultation.
<b>Bromsgrove</b>	2,3	Hub Library Opportunity to re-define service and to relocate and integrate with other local services as part of town centre regeneration. Opportunity for local community to take greater role in delivery. Will be subject to local consultation.
<b>Catshill</b>	3,4	Small and unsustainable library. Opportunity for local community to deliver service. Will be subject to local consultation.
<b>Droitwich</b>	1	Opportunity to draw in further services – District Council hub, CAB, Job Centre Plus, Probation, Children's Centre. Opportunity to explore further links with voluntary sector, local community and private sector.
<b>Evesham</b>	1	Hub Library Very popular and well used library, co-located with Registration Service. Opportunity to draw in further. services. Opportunity to explore further links with voluntary sector and local community.
<b>Hagley</b>	3,4	Small stand alone building. Opportunity for local community to deliver service. Will be subject to local consultation.
<b>Kidderminster</b>	1	Hub Library Large building with spare capacity. Opportunity to draw in further services. Opportunity to integrate with local college, Wyre Forest District Council.
<b>Malvern</b>	1	Hub Library Very busy co-located library.

		<p>Potential to pilot integration of library staff with Hub staff.          Opportunity to draw in further services.          Opportunity to explore further links with voluntary sector and local community.          Opportunity to investigate further co-location with Town council, Tourist Information and Adult Social Care.</p>
<b>Pershore</b>	2,3	<p>Linked to Capital Asset Pathfinder project.          Option to re-locate to Civic centre and integrate with other services, Health, Adult Social Care, Children's and others.          Option to work with Town Council on a localism solution at the present site.          Subject to local consultation.</p>
<b>Redditch</b>	1	<p>Hub Library,          Very large recently refurbished building, some spare capacity          Opportunity to draw in further services, Voluntary, Private Sector, Health and District Council.</p>
<b>Rubery</b>	1,2	<p>Potential to bring other services on site e.g. Youth and Police.          Opportunity to investigate co-location opportunities e.g. Youth.          Opportunity for greater involvement of Local Community.          Will be subject to local consultation if Library moves.</p>
<b>St Johns</b>	1	<p>Recently refurbished          Tied into National Lottery agreement.          Opportunity to draw in further services and link to City Council and University.          Opportunity to explore increased use by local organisations and greater volunteer input.</p>
<b>Stourport</b>	2,3,4	<p>Building in poor condition          Is part of major town centre review (Stourport forward)          Opportunity to re-define service and to relocate and integrate with other local services.          Opportunity for local community for greater role in delivery.          Will subject to local consultation.</p>
<b>Tenbury</b>	1	<p>Already a co-located library – HUB and Registration Service.          Highest usage in borough in terms of catchment due to isolation.          Opportunity to draw in other services and have greater community involvement in delivery of service.</p>
<b>Upton</b>	3,4	<p>Small Library but is linked to HUB.          Look to involve local community in running Library.          Will be subject to local consultation.</p>
<b>Warndon</b>	1	<p>Part of a very successful multi use site – Children's Centre, School, Health Centre, Nursery, Adult Learning Disadvantaged community          Opportunity to draw in further services          Opportunity to explore further links with Worcester Trust.</p>

<b>Woodrow</b>	1	Disadvantaged community Opportunity to draw in further services e.g. Hub next door, community cafe. Opportunity to explore further links with voluntary sector and local community.
<b>Worcester (Foregate St)</b>	1	Opportunity to explore further links with voluntary sector and local community Will close 2012 and re-locate to the HIVE.
<b>Worcester (The Hive)</b>	1	Hub Library New PFI facility – joint University/Public Library, History Centre, Hub and Archaeology Service. Will act as a key hub for overall library service. Opportunity to explore further links with voluntary sector and local community.
<b>Wythall</b>	3,4	Shares site with redundant health centre owned by PCT. Potential for re-provision developing a volunteer ran service from adjoining newly developed parish rooms. Will be subject to local consultation.

#### **10.2.4 Future Investment Plans / Method of Funding**

A new multi-million pound Library and History Centre has recently been completed in Worcester City Centre. The centre, known as "The Hive" will be the first of its kind in Europe, providing the community with a range of services and facilities which include:

- A fully-integrated public and university library
- Worcestershire Record Office
- Worcestershire Historic Environment and Archaeology Service
- Worcestershire Hub Customer Service Centre

The building provides over 10,000m<sup>2</sup> of public space, over five floors and has been nominated for numerous national and international design awards.

The centre is to be opened officially in July 2012 and is anticipated attract over a million visitors a year.

It is hoped that future investment in libraries will be managed and delivered in a joint way with other providers of community infrastructure such as the NHS and / or the police.

Asset disposal will generally be subject to the outcomes of public consultations for each site. Proposals for Foregate Street when relocated to the Hive are currently unknown.

The gross library budget 2010/11 is £7.5m which includes re-charges of £1.3m (£6.2m net).

### 1. Key Contacts and Reference Documents

- Worcestershire County Council

## 10.2.5 Summary of Proposed Schemes

**Table 20: Potential Schemes (Libraries)**

Infrastructure Required	Specific Scheme	Delivery Agent	Cost	Funding Source
<b>Capital Investment (new facilities)</b>	Unknown	Unknown	Unknown	Unknown
<b>Maintenance &amp; Refurbishment (existing facilities)</b>	Unknown	Unknown	Unknown	Unknown

## 10.3 Community Centres

### 10.3.1 Context

Community centres provide valuable facilities to promote community cohesion. It is important that with significant levels of residential development in the future that community meeting space is provided to address the increased requirements for such facilities.

The development of high quality, well equipped and well-maintained community centres is encouraged by community groups. It is important that in the design of such facilities, consideration is given to joint use improving their cost effectiveness.

Strategic studies into infrastructure impacts have been used to provide standard assumptions on the provision of community centres.

### 10.3.2 Existing Assets

Local Authority	Assets
Redditch	14 Community Centres
Bromsgrove	9 Community Centres
Wyre Forest	14 Community Centres

The City of Worcester PPG 17 Audit identified the community assets in the table below:

Ward	Population	Provision Details	Total
<b>Arboretum</b>	5611	2 Church Halls 2 Private Community	4
<b>Battenhall</b>	5216	2 Church Halls 2 Private Community 1 Youth Facility	5
<b>Bedwardine</b>	7875	2 Church Halls	2
<b>Cathedral</b>	7458	10 Church Halls 7 Private Community 3 Youth Facilities	20
<b>Claines</b>	7873	4 Church Halls 1 Private Community 2 Youth Facilities	7
<b>Gorse Hill</b>	5524	2 Private Community	2
<b>Nunnery</b>	8011	2 Youth Facilities 2 Church Halls	4
<b>Rainbow Hill</b>	5845	3 Church Halls 1 Private Community 1 Youth Facility	5
<b>St Clement</b>	5493	1 Private Community	1
<b>St Johns</b>	8033	5 Church Halls 2 Private Community 2 Youth Facilities	9
<b>St Peters Parish</b>	5620	1 Community Facility 1 Youth Facility	2
<b>St Stephens</b>	5047	1 Community	1
<b>Warndon</b>	5292	2 Church Halls	2
<b>Warndon Parish North</b>	5232	2 Church Halls	2
<b>Warndon Parish South</b>	5224	2 Community Facilities	2
<b>Totals</b>	93354		68

Worcester City Council has developed a network of community centres across the city. These centres have been purpose built as multi-use venues where local residents can meet, organise private or community activities or events and where the various statutory agencies can give local residents easy access to their services.

The community centres are managed by the local community in which they are situated and in some areas, charitable companies have been set up with local people to both manage the centres and a range of community activities, especially for children and young people.

### **10.3.3 Future Investment Plans / Method of Funding**

In November 2011 a report to Cabinet recommended that:

As part of the Council's programme to meet the budget reductions, the Council has agreed to make a £1.4m cut in expenditure on positive activities for young people over the next 3 years.

The proposed direction of travel for Children's Services is to no longer be the provider of Youth Support and will instead be commissioning this provision. It would therefore become the responsibility of other providers to identify possible locations for delivery. If agreed, this means that the current assets would no longer be required by the Council for delivering youth support activities and alternative sustainable options are required.

Property Services have been fully involved in evaluating the value of the assets and the extent to which they can be reutilised or disposed of:

- the leases are terminated on Kidderminster, Riverside and Tenbury Youth Centres;
- the assets at Arrowvale, Catshill, Kingsley, Spennells, Stourport and Woodrush Youth Centres are leased to the schools on which they are located, subject to the agreement of the school, and with a requirement that they are available for community use;
- the assets at Bewdley and Droitwich Youth Centres are re-used for other Council services, thereby releasing other assets for disposal, and that a transition plan is put in place to enable current users to find other locations;
- the assets at Redditch and Worcester City Youth Centres are sold to raise capital and that a transition plan is put in place to enable current users to find other locations;

- an options appraisal is undertaken in respect of Rubery Youth Centre to identify the most cost effective way of providing a single facility for library, youth and community use, and that a report on this is brought back to the Cabinet by the Director of Planning Economy and Performance by March 2012;
- the Council continues to rent Ourside Centre, Evesham, and transfers other Council services into the Centre, thus securing its youth and community use; and
- St John’s Centre Youth is leased to Worcester Community Trust with a transitional grant of £42,000 to secure the future of the building as a youth and community asset.

The Local Government (Miscellaneous Provisions) Act 1976 gives local authorities the power to lease premises at less than market rent for recreational purposes for any period. They may also grant aid or provide in-kind support to organisations managing the premises. Leases of up to seven years may be granted for non-recreational purposes under the Local Government Act 1972. Community associations and similar multi-purpose community centre charities are usually constituted under the Recreational Charities Act 1958 and would qualify for full relief.

#### 1. Key Contacts

- Worcestershire County Council
- Voluntary and Community Groups
- City, Borough and District Councils

### 10.3.4 Summary of Proposed Schemes

**Table 21: Potential Schemes (Community Centres)**

Infrastructure Required	Specific Scheme	Delivery Agent	Cost	Funding Source
<b>Capital Investment (new facilities)</b>	Unknown	Unknown	Unknown	Unknown
<b>Maintenance &amp; Refurbishment (existing facilities)</b>	Unknown	Unknown	Unknown	Unknown

## **10.4 Built Leisure**

Sport plays a significant role in contributing to sustainable communities, reducing the need to travel and benefiting access by disadvantaged groups. Sport and active recreation are important contributors to the health and economy of local communities.

Built leisure includes infrastructure such as swimming pools, sports centres, theatres and cinemas.

### **10.4.1 Existing Assets**

Across the County there are a variety of built leisure facilities, including theatres, cinemas bingo halls, sports centres and swimming pools.

Some assets are provided by the private sector (e.g. cinemas, theatres, private leisure clubs), while other facilities are provided or commissioned by the public sector (e.g. local authority run sports centres).

The table below lists the local authority run / commissioned leisure facilities across Worcestershire.



Local Authority	Leisure Centre
<b>Redditch</b>	Abbey Stadium Sports and Leisure Centre Arrow Vale Sports Centre Kingsley Sports Centre St Augustines Sports Centre
<b>Bromsgrove</b>	The Dolphin Centre Haybridge Sports Centre Woodrush Sports Centre
<b>Wyre Forest</b>	Wyre Forest Glades Leisure Centre Stourport Sports Centre Bewdley Leisure Centre
<b>Worcester City</b>	Nunnery Wood Sports Complex St Johns Sports Centre Perdiswell Leisure Centre Worcester Swimming Pool & Fitness Centre
<b>Wychavon</b>	Droitwich Leisure Centre Evesham Leisure Centre Persore Leisure Centre Droitwich Lido
<b>Malvern Hills<sup>13</sup></b>	Malvern Splash Leisure Complex. Tenbury Swimming Pool Sport Martley Leisure Centre. Sport Dyson Perrins Leisure Centre.

#### 10.4.2 Capacity of Existing Assets

New communities including those working in and visiting business parks and town centres will generate additional demand for sport and recreation activities. This tends to be at the peak times e.g. early morning, at lunch times, late afternoon and early evening. Sport England has recommended that this is fully assessed.

Based on the current and future population projections, it is estimated that in Bromsgrove, there is a shortfall of 0.75 ha in the current balance of outdoor sports facilities against the 1.67 ha per 1000 population local standard and this deficiency is set to increase to 17.81 ha by 2026 against the 1.67 ha per 1000 population local standard.

Sport England has developed a number of tools and guidance to assist planning authorities in quantifying the demand side of facility provision created by new communities.

<sup>13</sup> Malvern Hills District Council also works with a range of partners, to provide and support a variety of additional local high quality leisure and Cultural facilities. A list can be found [here](#)

The Sports Facility Calculator (SFC) is designed to estimate the facility needs of discrete populations and can be used to estimate the swimming, sports halls, Artificial Grass Pitches and indoor bowls centres needs for whole area populations. The SFC should not however be used for strategic gap analysis as it has no spatial dimension.

The SFC produces a total demand figure for a chosen population it does not however take account of facility location compared to demand, capacity and availability of facilities, cross boundary movement or travel networks.

Sport England recommend the use of the Facilities Planning Model (FPM) for estimating the future need based on housing growth.

Sport England is currently working with Redditch Borough Council to produce sports facility strategy and a PPG17 Audit of playing pitches to inform the development of a Play Pitch Strategy (PPS) and also with Wyre Forest to produce a swimming pool strategy.

Further research is required to determine the capacity of existing infrastructure across Worcestershire to accommodate additional development.

#### **10.4.3 Calculating Infrastructure Requirements and Costs**

Sport England considers that the production of a robust PPS is crucial to underpinning local authorities' core strategies. As stated previously Sport England are currently working with Redditch Borough Council on evidence to inform the development of a PPS. Malvern Hills currently has a PPS but it requires updating. Sport England considers Wyre Forest, Worcester City and Wychavon to not have an up to date PPS.

Sport England has noted that setting a global figure per 1,000 population for playing pitch provision is not helpful. Rather it should be the number and type of pitches which is needed for geographic area and that this may vary considerably from ward to ward and from authority to authority.

Sport England are also able to provide indicative costs for the building of sports facilities with some exclusions such as ground conditions, ground modelling and SUDS attenuation.

No information has been made available regarding how investment decisions are made for built infrastructure and the costs for different facilities. Further research / advice will be required in this area.

#### **10.4.4 Future Investment Plans / Method of Funding**

How and by whom future investment in built leisure will be made is currently unknown. Further research / advice will be required in this area.

Wyre Forest District Council are currently exploring options to close the existing Glades Leisure Centre and build a new £10.1 million sports complex. The new project would include a sports hall, six courts, a 25 metre swimming pool and five-a-side football pitches.

The University have completed the first stages of developing 'The Worcester Arena' including a centre for drama, dance, sport and performance teaching facilities. The Arena will include facilities for community and University sports teams. Funding for the Arena has been identified from the following sources:

- Sports England £1.5 million
- Trustees of the Foundation for Sport and the Arts £250k
- England Basketball £375k
- England Badminton £200k
- Private Donations £95k

#### *1. Key Contacts and Reference Documents*

- District Councils

## 10.4.5 Summary of Proposed Schemes

**Table 22: Potential Schemes (Built Leisure)**

Area	Major Schemes	Responsible Bodies	Funding Sources	Total Cost	Funding Secured	Funding Gap
<b>Wyre Forest</b>	Leisure Centre	Wyre Forest	Cost savings as a result of the closure and potential asset transfers.	£10.1m	TBC	At least £10.1m
<b>Bromsgrove</b>	Dolphin Centre	Bromsgrove	TBC	£9M	TBC	TBC
<b>Worcester</b>	University of Worcester Sports Arena	University of Worcester	Sport England £1.5m Trustees of the Foundation for Sport and the Arts £250k England Basketball £375k England Badminton £200k Private Donations £95k	£15m	c. £2.5m	At least £12.5m
<b>Worcester</b>	New Swimming Pool	Worcester City	Developer Contributions	c. £6.25m	TBC	At least c. £6.25m
<b>Worcester</b>	4 Court Sports Hall (linked to Worcester West)	Malvern Hills	Developer Contributions	£2.7m	TBC	At least £2.7m
<b>Worcester</b>	4 Court Sports Hall (linked to Worcester South)	Malvern Hills	Developer Contributions	£2.7m	TBC	At least £2.7m
<b>Worcester</b>	6 court sports hall badminton performance centre)	Worcester City	Developer Contributions	£4.1m	TBC	At least £4.1m
<b>Wychavon</b>	5 court sports hall (indoor cricket)	Wychavon	Developer Contributions	£3.4m	TBC	At least £3.4m
<b>Wychavon</b>	8 court sports hall	Wychavon	Developer Contributions	£5.5m	TBC	At least £5.5m
<b>Wychavon</b>	4 court sports hall	Wychavon	Developer Contributions	£2.75m	TBC	At least £2.75m
<b>Worcester</b>	25m x 4 lane pool plus teaching (linked to Worcester West SUE)	Malvern Hills	Developer Contributions	£3.9m	TBC	At least £3.9m

## Chapter 11: Emergency Services

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### 11.1 Introduction

Emergency services infrastructure includes the requirements of the police, fire and rescue service and ambulance service. The requirement for additional emergency services infrastructure is related to both the anticipated growth in population (because more people will require increased levels of service) and the planned growth in development which will require emergency services across a greater geographical area.

West Mercia Police (WMP) and Hereford & Worcester Fire and Rescue Service (HWFRS) are working together on infrastructure planning. This has led to joint responses to Local Development Framework (LDF) consultations and more recently, a planning application for a new Joint Police and Fire Station in Bromsgrove.

WMP and HWFRS in turn regularly consult with West Midlands Ambulance Service (WMAS) to ensure that all three emergency services coordinate their infrastructure planning for future development and population growth.

At the present time, the funding formula used by Government only covers revenue costs for the emergency services. This means that the emergency services will struggle to fund infrastructure requirements related to the delivery of planned development growth.

New development growth such as major urban extensions will provide new destinations to be serviced and an increase in demand for emergency services relative to current levels. Infrastructure is therefore required to meet this increase in demand and/or if response times cannot be met. Infrastructure funding therefore needs to be secured through the planning system, to ensure that an acceptable level of emergency service resourcing can be provided commensurate with development growth.

Requirements have been identified, based on three factors:

- existing ratios of staff to residents

- spatial implications of new development on service provision and response time
- existing facility capacity

The Comprehensive Spending Review (CSR) was announced on 20<sup>th</sup> October 2010. The relevant headline cuts were as follows:

- Confirmation that Central Government police funding will reduce by 20% in real terms over the next four years. Almost two thirds of this will be cut in the first two years;
- Fire Service funding from Central Government will be cut by 25% in real terms over the CSR period; and
- 26% cut in real terms to the Central Government funding to local authorities over the CSR period.

The Home Office informed the Chief Officers of WMP on 13 December 2010 of the savings that the Force would have to make during the next four years. In broad terms, WMP will need to save approximately £30million over that period (a 17% reduction in real terms). At the same time, the Government advised police authorities nationally not to increase the policing element of Council Tax. WMP is currently adapting itself to the new fiscal context through its own internal 'Making the Difference' structural review and entering into a 'Strategic Alliance' with Warwickshire Police.

HWFRS is facing a period of significant uncertainty over future funding. It is known that the initial grant cuts were to be back loaded, but details are yet to emerge about how this will affect individual Authorities. In addition, there is the unknown effect on HWFRS of the major reforms to the Business Rates and Council Tax Benefits. HWFRS is currently engaged in medium term financial planning as a result, which at the time of writing, anticipated saving £1m in each year for the next three years to 2015-16. Further work on financial planning and identifying savings is on-going.

## **11.2 Police**

### **11.2.1 Context**

West Mercia Police Authority (WMPA) has the responsibility for ensuring that an efficient and effective police service is provided to the people of West Mercia. The West Mercia Police Joint Policing Plan 2012-2015 contains the Authority's priorities and underpin its work programme.

WMPA will however be replaced with an elected Police and Crime Commissioner (PCC) on 15 November 2012. The PCC will be responsible for representing the people of West Mercia and making sure the service provided by the police is effective and efficient. The PCC will also hold the Chief Constable to account.

### **11.2.2 Existing Assets**

In order to assess future requirements it is necessary to understand the types of Police infrastructure these include:

- Territorial Policing Unit Headquarters (TPU HQ) – These facilities function as command and control centres, normally on a county wide basis. They encompass offices, usually a call management centre, facilities for specialist police units and a custody suite. A building/ complex of this type would typically provide accommodation for approximately 300-400 Police Officers and support staff on shift.
- Police Station – This is a facility which is capable of accommodating approximately 10-40 Police Officers and support staff working on shift. A typical station of this would include offices, interview rooms, data rooms, briefing rooms and storage for equipment.
- Police Post – These can be found as rooms within larger buildings, or as a small free-standing facility. They provide accommodation for 3-10 Police Officers and Police Community Support Officers (PCSOs) on shift. They are not always for public use. They usually consist of an office/offices and possibly a shared interview room, W.C. and kitchen area. Freestanding Police Posts typically have an internal floor area of approximately 60sq.m, with 2 parking spaces immediately outside.

#### Police Stations – North Worcestershire:

- Territorial Policing Unit Headquarters - Kidderminster

- 8 Police Stations - Bewdley, Bromsgrove, Crabbs Cross, Hagley, Redditch, Rubery, Stourport-on-Severn and Wythall
- 11 Police Posts - Bromsgrove, Kidderminster, Redditch and Stourport-on-Severn.

#### Police Stations – South Worcestershire:

- Territorial Policing Unit Headquarters - Worcester
- 10 Police Stations - Broadway, Dines Green, Droitwich, Evesham, Malvern, Pershore, Tenbury Wells, Upton-upon-Severn and Worcester
- 2 Police Posts - Worcester

### **11.2.3 Capacity of Existing Assets**

WMP is engaged in a comprehensive structural review, which involves reassessing geographical priorities, in response to the Government's Comprehensive Spending Review.

As part of this work, consultants WYG were appointed by WMP to prepare Strategic Infrastructure Assessments (SIAs), to provide the necessary evidence base. The approach adopted by WMP and WYG is to assess the requirements for new Police infrastructure based on:

- The planned growth proposals in emerging development/local plans
- A review of the capacity of WMP's existing estate to serve that projected growth
- The requirement for new strategic WMP infrastructure to serve that growth, and
- The capital costs of providing that new infrastructure.

WMP and WYG completed the first SIA in November 2011. This covered South Worcestershire (Worcester City, Wychavon and Malvern Hills Districts) and formed part of the WMP and HWFRS joint submission to the South Worcestershire Development Plan (SWDP) public consultation.



At the time of writing, WMP and WYG were shortly to commence preparation of Strategic Infrastructure Assessments (SIAs) for each of the three North Worcestershire Districts, in response to anticipated Local Development Framework consultations.

The information from the three SIAs, once completed, will supersede the presently available police infrastructure information for North Worcestershire.

### **South Worcestershire**

The South Worcestershire SIA sets out WMP's strategic infrastructure requirements to serve the planned growth in the South Worcestershire area until 2030. The SIA identified the infrastructure required to serve the growth and identified where and when that infrastructure is required, based on the proposals in the SWDP.

The SIA has identified the need for 96 new staff to police the planned growth in the area based on current and anticipated staffing levels in the near future. Of these 96 staff, 64 will be police officers and 32 will be other support staff. The staff will need to be recruited, equipped and trained and this will result in one off costs of about £900,000.

The staff and other resources will need to be accommodate in new estate to serve the planned growth. The new estate will include the provision of: -

- Two new police stations, one each in south Worcester and west Worcester
- five new police posts spread across the area

This provision includes extensions and improvements to existing accommodation (Evesham and Pershore Police Stations), new stations (as identified above), new Police Posts in Worcester (2no.), Droitwich Spa, Hartlebury and Newlands (NE Malvern) and custody facilities expansion at Worcester Police Station (2 cells).

The build costs for the above are estimated as below:

- South Worcester (£1,625,000)
- West of Worcester (£1,625,000)
- Extension to Evesham Police Station (£1,420,000)

- Extension to Pershore Police Station (£800,000)
- New Police Post (£159,000 each)
- Custody facilities expansion (2 cells) (£106,000)

The cost of the new estate (excluding land) is approximately £6.371m. Taking account a capital receipt from potential disposal from a site at Dines Green Police Station the estimated funding gap will be £6.271m.

This cost excludes land acquisition because it is assumed that the land required for the infrastructure will be provided to WMP via developer obligations at nil cost.

The total estimated additional costs to meet the planned growth are shown in the following table:

	Current (net) cost for planned growth (12,000 dw)
Additional buildings and enhanced accommodation	£6,271,000
Additional officers (set-up costs for 64 no. Officers)	£244,014
Additional vehicles and other operational equipment	£566,565
Additional central support staff (set up costs for 32no. Support staff)	£86,464
<b>Total infrastructure cost</b>	<b>£7,168,043</b>

The overall cost equates to approximately £597 per dwelling or £7.47 per square metre of residential development. The above costs have not been differentiated across dwelling sizes at this stage because the SWDP does not set out proposals for a specific mix of housing in the draft policies.

At this stage WMP do not have data on the related requirements for Police infrastructure to meet planned employment growth.

### **North Worcestershire**

WMP and WYG are waiting, at the time of writing, for the publication of Local Development Framework (LDF) public consultation documents from the three North Worcestershire district councils. The proposed development growth figures set out in these documents will be used to inform the preparation of SIAs for each district. The SIAs, once complete, will set out WMP's strategic infrastructure requirements to serve planned growth in the districts up to 2030.

The information currently available to WMP highlights the following infrastructure requirements in North Worcestershire: -

- 1 New Police Station - Stourport-on-Severn
- 2 New Joint Police & Fire Stations – Bromsgrove & Redditch
- Upgrade to Kidderminster Station

Costings for the above infrastructure projects are set out in the Emergency Services chapter of the '*Planning for Infrastructure in Worcestershire*' document.

Once the SIAs have been completed by WMP and WYG and are available to Worcestershire County Council, this subsection will be updated and expanded.

#### 10.2.4 Future Investment Plans / Method of Funding

The principal sources of WMP funding are the Home Office grant and the Council Tax precept.

The funding of WMP is in turn divided into two broad streams, revenue and capital funding. The revenue funding stream relates broadly to the day to day running costs of maintaining the existing Force, that being the payment and management of staff, the ongoing costs relating to running and maintaining buildings and equipment and repaying of any loans. The capital projects element relates to the provision of additional buildings, equipment and other infrastructure items required to both sustain existing policing services and address increased pressures and requirements placed on the Force as a consequence of growth in demand for services.

Funding allocated to Police Authorities via Home Office grants and other specific limited grants is insufficient to fund requests for capital expenditure. Capital programmes are funded generally from a mixture of asset disposal (a finite option); re-direction of revenue funding (with implications for operational policing) and prudential borrowing. Prudential borrowing is not a nil cost option, with any borrowing required to be repaid from revenue/income; repayments from this source have implications for delivery of operational policing in a similar vein to the re-direction of revenue funding.

Funding received by the Police via the Council Tax precept is used entirely for revenue costs and is not available for capital projects on the basis that this diminishes the resource available for operational delivery.

Detailed information regarding Government and Council Tax funding for the Police and WMP's response to the CSR is set out below: -

### **Home Office/Central Government Funding**

Police Authorities are funded by similar methods used to fund all other Local Authorities and/or other public services. The funding allocated to Police Authorities via Home Office grants, the Council Tax precept and other specific limited grants is insufficient to fund requests for capital infrastructure.

Following the CSR, the Home Office grant which over recent years led to Forces receiving a percentage increase year on year based on the previous year's grant, has from 2011/2012 lead to Forces receiving a percentage reduction year on year. In effect, this means that the Home Office grant is entirely unresponsive to new needs for policing which arise from an increase in population and development stock

Therefore the only option is to supplement it with alternative local funding sources such as prudential borrowing, reinvestment of capital receipts (increasingly unfeasible) and/or the one-off use of reserves or balance surpluses (also limited in scope). Many of these funding options have negative repercussions as discussed briefly below.

Prudential borrowing is not a nil cost option, with any borrowing required to be repaid from revenue/income; repayments from this source have implications for delivery of operational policing in a similar vein to revenue contributions to capital expenditure.

Three-year funding settlements for the Police are determined in accordance with the Comprehensive Spending Review (CSR), which utilises population forecasts that are historic. Funding is based on population figures that are three years in arrears, on which basis the Police Grant received in the current financial year is based on population figures from three years earlier; accordingly there is a consistent lag between the level of revenue funding available and the population to be policed.

Although PFI is an option, it is a diminishing resource with serious shortcomings.

These can be summarised as follows: -

- It is considered unwise for Police Authorities to enter into the long term contracts associated with PFI. Indeed HM Treasury is actively reviewing all PFI arrangements and suggesting options of contract review. Changes in demand and unforeseen events in the future may mean severe restrictions in resources if Police Authorities are tied into PFI contracts. For example, if due to a change in circumstances it is decided that a Police Facility is no longer needed, a termination of the contract would require the Police Authority to pay all outstanding debt, interest and foregone profits of the consortium.
- PFI facilities are usually very expensive. There are examples of Police Authorities being forced to cut services so as to stay within their budgets i.e. the PFI unitary payment consumes a greater proportion of diminishing revenue budgets.
- Schemes built under PFI do not generally provide value for money when comparing the savings on policing infrastructure built under the Public Sector Comparator (PSC) i.e. estimated cost if the project had been undertaken by the Police Force itself.
- It has been found that public services planned by private companies are generally done with a 'commercial ethos' in mind i.e. most PFI consortiums would much rather build larger projects than smaller locally-accessible community facilities, as they generate larger profits for the consortium.
- The rate of interest at which a company may borrow reflects the level of risk associated with that loan. Therefore, with the negligible amounts of risk associated with building policing infrastructure a private company can obtain debt finance at a low level of interest. There is therefore no real risk that can be saved by transferring from the public to the private sector.
- The PFI system is also widely criticised for the commercial confidentiality that is commanded by private companies, as this obscures accountability. To expand on the points made above, although some Forces do use PFI and have operated it successfully, others have had negative experiences of PFI. As a form of borrowing requiring repayment, use of this funding mechanism

inevitably impacts on a Force's revenue stream and subsequently delivery of the Police service within that area. The corollary is that, in simple terms, there is less funding for officers and support staff and consequently a less visible profile for the police within communities, undermining the neighbourhood policing objective of reducing both the incidence and fear of crime and disorder.

Alternatively, new capital projects can be funded through efficiency savings generated from the existing police estate. This is an option WMP have been examining closely. However, this is necessarily a finite resource, which cannot be relied upon to deliver considered and planned infrastructure improvements needed to respond to the levels of growth planned over the medium to long term.

Notwithstanding all of the above, the pressure on revenue funding is such that it is extremely unlikely it could be made available to finance capital projects of any significance.

### **Council Tax Precept**

Funding received by WMP via the Council Tax precept is used exclusively for revenue purposes and the income contributes towards the running of the existing Force. It does not include any surplus that could be directed towards capital projects/programmes on the basis that directing funds towards such projects would diminish that available for delivery of the policing service.

It should also be noted that even with revenue raised from Council Tax precept there has been a recognised funding gap created by inflation and a continuing expansion of the role of the Police service and the demands placed upon it. Indeed, in relation to WMP, there is no increase in the Council Tax precept in the current financial year.

### **Comprehensive Spending Review**

As a result of the CSR, WMP will need to save approximately £30 million over the next four years. Effectively, this is a 17% reduction in real terms. At the same time, the Government advised police authorities nationally not to increase the policing

element of Council Tax. The CSR settlement comes into effect from April 2011 onwards.

WMP has been adapting itself to this new fiscal context through its own internal 'Making the Difference' structural review and entering into a 'Strategic Alliance' with Warwickshire Police. The 'Strategic Alliance' was formally signed off by both Police Authorities on 28 and 29 June 2011.

Although strategic proposals have since been agreed by the two forces, work is ongoing on how these will be delivered in practice. It is however expected that the 'Strategic Alliance' will enable the fiscal gap between the efficiencies identified by the internal 'Making the Difference' structural review and the CSR settlement to be closed.

WMP have also sought to establish partnerships with other emergency services and sought direct discussions with developers regarding planned development and population growth, alongside the above work.

### **Joint Police and Fire Stations**

WMP and HWFRS have sought to innovatively deliver new joint police and fire stations in Bromsgrove and Redditch, costing approximately £10million each. This cost will be met up-front entirely through prudential borrowing shared between WMP and HWFRS.

The capital receipts raised from the disposal of the existing police and fire stations in Bromsgrove and Redditch will also be put towards the cost of the new facilities. However, at the time of writing, it is unknown how much could potentially be raised by these disposals.

However, this consequently results in WMP and HWFRS forward funding strategic facilities required to deliver police and fire and rescue services to new development growth. It is therefore reasonable to expect the new developments that will benefit from the delivery of police and fire and rescue services from the new facilities to contribute towards the cost of their provision i.e. through Section 106 or Community Infrastructure Levy payments, i.e. such contributions would be: -

- Necessary to make the developments acceptable;
- Directly related to the developments; and
- Fairly and reasonably related in scale and kind to the developments.

Alongside the delivery of the new Joint Stations, ongoing discussions have been taking place between WMP and developers with regard to the provision of police infrastructure

### **Overview of discussions between WMP and Developers**

Representatives of WMP and HWFRS attended all consultation events organised by the promoters of the South Worcester urban extension site, Welbeck Strategic Land LLP. The representatives requested an on-site police station and the incorporation of Secured by Design and traffic calming measures throughout the development. HWFRS envisage no requirement for a new facility at this location (they do reserve the right to change this position). However, HWFRS are seeking the inclusion of fire hydrants and sprinkler systems throughout the development. The promoters have included provision of a Police Station in the Masterplan for the site, which WMP have welcomed.

With regard to Bevere (Worcester), WMP have an outline agreement with the developers for the provision of a police post. Although the first planning applications for the site were withdrawn by the applicants in December 2011, it is understood that a revised planning application for the site is due for submission in summer 2012.

Copcut and Yew Tree Lane (Droitwich) – agreement with developers to provide police posts.

Knarsboro Homes Ltd offered to provide a Police Post on their proposed development at Hartlebury. The offer was welcomed and accepted. Subsequently the application was refused by Wychavon DC. A resubmission by the developer, which will also include a Police Post, is anticipated during June 2012 (at the time of writing).

Whilst WMP have also positively engaged with the various planning policy teams throughout the County regarding infrastructure issues to date, it has become



increasingly apparent that schemes are progressing well ahead of the adoption of new development plan documents.

This in turn means that limited contributions are being received by the emergency service infrastructure providers, as negotiation of contributions towards emergency service infrastructure requirements is taking place with reference to currently adopted local planning policies, which in the majority of cases did not include reference to contributions towards this type of infrastructure.

However, where revised development plan documents have been prepared, these have included planning policies that cover emergency service infrastructure requirements.

WMP have successfully negotiated contributions from developers for a number of sites in South Worcestershire. However, the picture is constantly changing as following agreement to provide posts etc in pre-application discussions with developers, applications can then be refused or withdrawn.

However, notwithstanding the above, it has become increasingly apparent that developers are progressing schemes ahead of the adoption of new development plan documents. This in turn means that assessment of emergency service infrastructure requirements is taking place with reference to currently adopted local planning policies, which were never designed to take them into account with a resultant inconsistency of approach across the County.

#### *1. Key Contacts and Reference Documents*

- West Mercia Police

#### **10.2.5 Summary of Proposed Schemes**

Currently no programme for capital expenditure on existing assets is envisaged.

WMP made a submission to the SWDP public consultation during November 2011 in respect of their HQ at Hindlip Hall. The submission seeks the designation of the operational core of Hindlip Park as a Major Developed Site in the Green Belt.

**Table 23: Potential Schemes (Police: South Worcestershire)**

Infrastructure Required	Delivery Agent	Cost (approx)	Funding Source
<b>Gwillams Farm/Bevere, Worcester – Police Post</b>	WMPA	£159k	Unknown
<b>Kilbury Drive, Worcester – Police Post</b>	WMPA	£159k	Unknown
<b>Copcut Lane, Droitwich Spa – Police Post</b>	WMPA	£159k	Unknown
<b>West of Worcester – Police</b>	WMPA/ HWFRS	£1.625 million	Unknown
<b>South of Worcester – Police</b>	WMPA	£1.625 million	Unknown
<b>Evesham extension to Police Station</b>	WMPA	£1.42m	Unknown
<b>Station Road &amp; Wyre Road and Small Sites/Urban Capacity – Upgrade of the existing Pershore Police Station</b>	WMPA	£800k	Unknown
<b>Newland – Police Post</b>	WMPA	£159k	Unknown
<b>Hartlebury – Police Post</b>	WMPA	£159k	Unknown
<b>Expansion of Worcester Custody (2 cells)</b>	WMPA	£106k	Unknown

**Table 24: Potential Schemes (Police: North Worcestershire)**

Infrastructure Required	Delivery Agent	Cost (approx)	Funding Source
<b>North Worcestershire</b>			
<b>1 New Police Stations - Stourport-on-Severn</b>	WMPA	£3 million	Unknown
<b>Upgrade to Kidderminster Station</b>	WMPA	£0.5-1 million	Unknown
<b>2 New Joint Police and Fire Stations (Bromsgrove and Redditch)</b>	WMPA/ HWFRS	£10 million each	Unknown

## 10.3 Fire

### 10.3.1 Context

The Hereford and Worcester Fire & Rescue Service (HWFRS) provides support for emergency incidents across Worcestershire and Herefordshire.

The majority of calls for assistance are to fires, road traffic collisions and alerts from automatic alarm systems. HWFRS also receive calls for rope rescues and for grass fires in open areas. HWFRS is also a Category 1 responder during floods events.

The service has highly trained specialist teams to deal with all of these specific types of emergencies.

The long-term vision of HWFRS is 'making Herefordshire and Worcestershire safer from fire and other hazards and to improve community well-being'.

### **10.3.2 Existing Assets**

The HWFRS has four whole time stations in Worcestershire based in the city of Worcester and the three towns of Kidderminster, Bromsgrove and Redditch. It also operates three day-crewed stations in the Worcestershire towns of Malvern, Droitwich and Evesham. In addition there are 7 stations which all operate the retained duty system. These are located in Pershore, Bewdley, Stourport-on-Severn, Upton, Tenbury Wells, Broadway and Pebworth.

### **10.3.3 Capacity of Existing Assets**

The capacity of existing fire stations to be able to accommodate additional pressures due to new development growth is currently being assessed.

This work is being undertaken by an HWFRS internal research group. As results become available, the planning authorities are being made aware of them.

Work by this group contributed to the evidence base for the requirement for the proposed Joint Police and Fire Stations in Bromsgrove and Redditch. The Joint Stations will replace the existing police and fire stations in the two towns. Research work has also examined the four proposed urban extensions to Worcester and the impact on capacity. The results of this are discussed below.

Worcestershire County Council are continuing to work closely with HWFRS in respect of the above work.

### **10.3.4 Calculating Infrastructure Requirements and Costs**

The requirement for additional fire and rescue infrastructure is related to both the anticipated growth in population (because more people will require more fire and rescue services) and the planned growth in development which will require fire and rescue services across a greater geographical area .

All types of development, no matter where it is located, require continuous coverage by and fire and rescue services, in order that a response can be made should an incident arise. In simple terms, the travel time from a development to the nearest fire station should be 10 minutes or less.

The proposed development of Joint Police and Fire Stations in Bromsgrove and Redditch, for example, will therefore not just provide coverage to the existing urban areas, but are also being designed to accommodate the expected increase in demand for emergency services from the delivery of planned development growth. As a result, HWFRS and WMP are closely monitoring the emerging development plans being prepared by Bromsgrove and Redditch District Councils.

The internal research group established by HWFRS to examine the implications arising from new development had recently concluded its preliminary analysis of the implications arising from the four proposed urban extensions to Worcester. On the basis that transport improvements will be delivered, it is not considered that new on-site fire stations will be required. HWFRS however reserves the right to change this position as further information emerges regarding the proposed urban extensions.

It is very important to be aware that infrastructure in the fire and rescue service context refers not only to fire stations, but also to the inclusion of preventative measures within developments as well. The Chief Fire Officers Association and HWFRS strongly advocate the installation of automatic water suppression systems within all new developments. These systems are proven to significantly reduce fire deaths, injuries and property damage as a consequence of fire.

The inclusion of water suppression systems should be within domestic properties as well as commercial developments. The Welsh Assembly Government recently passed a law to make the installation of sprinklers compulsory in all new build homes in Wales. HWFRS wholly endorse this approach. In partnership with WMP, HWFRS are submitting representations to Local Development Framework consultations, advocating that this approach is incorporated into the development plans for Worcestershire and Herefordshire.

As well as water suppression systems, it is expected that adequate water supplies will be provided for effective fire fighting in new developments of all types. Existing

HWFRS funding is insufficient to meet the cost of providing fire hydrants in all new development in Worcestershire. It is expected that developers will install hydrants attached to the mains suitable for the purposes of fire fighting at their own expense, and to provide funds for their ongoing maintenance. Locations of fire hydrants to be approved by mutual agreement between developers and HWFRS. Where hydrants are not feasible, HWFRS will expect suitable alternative water sources, such as gravity tanks, to be installed.

### **Comprehensive Spending Review**

In common with the rest of local government, the Fire and Rescue Authority faces a period of significant uncertainty over future funding. It is known that the initial grant cuts were to be back loaded, but details are yet to emerge about this will affect individual Authorities (and the past variation has been very large). In addition, there is an unknown effect on the Authority of the impact of the major reforms to the Business Rates and Council Tax Benefits.

The Fire and Rescue Authority has taken the best available information into consideration in preparing the medium term financial plan, which anticipates a need to save an additional £1m in each year for the next three years to 2015-16. The achievement of these savings will demand radical changes, and the Authority is, therefore, reviewing how it needs to adapt services, priorities and ways of working in order to sustain its standards of service delivery and performance improvement for the future.

#### *1. Key Contacts and Reference Documents*

- Hereford and Worcester Fire and Rescue Authority (c/o Andrew Morgan, WMP)

## 10.3.5 Summary of Proposed Schemes

**Table 25: Potential Schemes (Fire)**

Infrastructure Required	Delivery Agent	Cost	Funding Source
Replacement of Bromsgrove and Redditch police and fire stations with two new joint stations	HWFRS/ WMP	(£10m each)	Unknown
Installation of adequate water supplies for effective fire fighting in all new developments	Developer/ HWFRS	Unknown	Developer
Installation of automatic water suppressions systems in all new developments, including new domestic properties	Developer/ HWFRS	Unknown	Developer

## 10.4 Ambulance

### 10.4.1 Context

The West Midlands Ambulance Service NHS Trust (WMAS) provides a 24-hour, 7 day per week Emergency and Urgent Ambulance Service for the people living in or travelling through the two counties. This service covers:

- 999 emergency calls
- urgent hospital admissions requested by a doctor
- maternity admissions
- mental health admissions for patients sectioned under the Mental Health Act
- transfers between acute hospitals which require paramedic care or a fully equipped ambulance

WMAS aims to consolidate accommodation into centralised hubs supported by a network of Community Ambulance Stations thus driving down costs by reducing the occupied floor area. Surplus Estate will be disposed of to enable maximum efficiency savings which will be redeployed to provide enhanced patient care.”

The WMAS Estates Strategy aims to deliver a cost effective estate via a process of rationalisation by ensuring fit for purpose accommodation is located in the best locations to support its new operating model, termed ‘Make Ready’ to address the following issues:

The rationalisation of operational and non-operational property leases

- Poor location factors
- An aged Estate in poor condition with escalating maintenance costs. A Condition Survey of the whole Estate it has been identified that there is currently a Back Log Maintenance liability of £3.9 million. This figure represents an ageing Estate falling into disrepair and requiring significant investments to bring in-line with modern day standards.
- The need to reduce occupied floor area.
- The underlying principle of reduction of annual running costs
- Realignment of the estate to fit modern day ambulance service provision

#### **10.4.2 Existing Assets**

Limited information is available regarding existing ambulance stations / emergency response infrastructure.

#### **10.4.3 Capacity of Existing Assets**

It is envisaged that the Make Ready system will be implemented into 12 central hubs and these may be existing ambulance stations if large enough or new sites by 2015. One proposed for Worcester (2012/13).

For the Estate to support the introduction of Make Ready significant changes are envisaged to the current portfolio:

- Current Estate – 50 Ambulance Stations and 25 FRP's
- The new plan is envisaged to have up to 100 Community Ambulance Station's of which there will be 12 central Make Ready hubs.
- Some of the Community Ambulance Station's will be existing ambulance stations, some will be Portakabin's others will be rooms in fire stations and other sites within the community.

#### **10.4.4 Calculating Infrastructure Requirements and Costs**

No information is available on future infrastructure requirements for the ambulance service. Baker Study did set out a number of requirements but this has been identified as being out of date by the ambulance service.

#### 10.4.5 Future Investment Plans / Method of Funding

The potential gross capital receipts following a comprehensive disposal programme could realise circa £8.6m. This money will be used to address funding deficiencies elsewhere within WMAS, after the cost of a new Worcestershire Hub is covered. Potential gross revenue savings as a result of this plan could realise circa £1.9m p.a.

These savings would be offset via the costs needed to establish and maintain the network of Community Ambulance Stations.

##### 1. Key Contacts and Reference Documents

- West Midlands Ambulance Service

#### 10.4.6 Summary of Proposed Schemes

**Table 26: Potential Schemes (Ambulance)**

Infrastructure Required	Delivery Agent	Cost	Funding Source
Provision of Make Ready Hub in Worcester	WMAS	(£0.4m)	Capital receipts



## Chapter 13: Green Infrastructure

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### 13.1.1 Context

*"Green Infrastructure is the network of green spaces and natural elements that intersperse and connect our cities, towns and villages. It is the open spaces, waterways, gardens, woodlands, green corridors, wildlife habitats, street trees, natural heritage and open countryside. Green Infrastructure provides multiple benefits for the economy, the environment and people."*

The Worcestershire Sub-regional Green Infrastructure partnership have been working together since 2008, and are preparing a Green Infrastructure strategy for the County. The partnership includes representatives from both the districts councils including Worcester City, Wychavon and Malvern Hills, Worcestershire County Council, Defra agencies (Environment Agency, Natural England and Forestry Commission), plus the voluntary sector. The partnership is being chaired by the Worcestershire Wildlife Trust.

Green Infrastructure considers both public and private assets in both a spatial dimension (for example, areas or links/corridors) and also a conceptual/thematic level (for example, sustainable living, as individual elements within sites such as trees and their contribution to shading and cooling, and as part of wildlife corridors). The multi-functional character of GI means that it also considers cultural as well as landscape and ecological assets/habitats, along with concepts such as sustainable water and resource management and use of river corridors and floodplains for amenity greenspace, and biodiversity, in addition to positive benefits to human health and mental well-being.

In discussing assessment of the future need, provision and funding of green infrastructure it is important to recognise the multifunctional role of such space and the different delivery tools for its planning and provision. Green infrastructure provision should therefore be integral to sustainable design.

For example provision of green infrastructure may come from:

- The implementation of SUDS within new development;

- From the inclusion or upgrade of sustainable transport solutions such as footpaths or cycleway's within new or existing development;
- The creation of parks and/or open space in new developments for both housing and business;
- Regeneration or improvements to public space;
- The creation of flood defence schemes;
- Innovative building design methods such as green roofs or street trees for solar shading;
- Wider landscape enhancements through countryside stewardship or the management plans of landowners or caretakers such as AONB's.
- Playing pitch provision.

The role that green spaces can have in meeting policy objectives linked to other agendas, such as education, diversity, health, safety, environment and regeneration is also recognised. The Green Spaces, Better Places Report (DTLR Task Force May 2002) highlighted that parks and open spaces:

- contribute significantly to social inclusion because they are free and accessible to all;
- can become a centre of community spirit;
- contribute to child development through scope for outdoor, energetic and imaginative play;
- offer numerous educational opportunities;
- provide a range of health, environmental and economic benefits.

The other areas of green infrastructure include the protection and potential enhancement of existing green infrastructure, environmental assets and public rights of way. It is considered that the infrastructure impact in these areas is about the specific impact of development on surrounding assets and the detailed design and layout of schemes to ensure that they enhance existing green infrastructure assets and public rights of way rather than adversely affect them.

### **13.1.2 Existing Assets**

Key themes for green infrastructure include biodiversity, landscape, historic environment, blue infrastructure (water) and access and recreation. In addition, green infrastructure can assist in climate change adaptation and mitigation, and can bring health and economic benefits

A baseline assessment of green infrastructure themes for Biodiversity, Landscape and Historic Environment has informed the development of an Environmental Character Areas map for Worcestershire. The baseline assessment was derived from or existing evidence bases including:

- Worcestershire Habitat Inventory and Biodiversity Analysis
- Landscape Character Assessment and condition assessment
- Historic Environment Assessment
- This combined assessment has been undertaken to give a high level analysis of the overarching quality of GI within each character area. This is accompanied by a series of objective tables which highlight the issues and priorities for each of the character areas providing the focus for intervention.

The map identifies areas of strategic intervention based on existing GI quality and the broad strategic approach to be taken i.e. protection, enhancement of existing assets or creation of new assets.

The typology of GI assets is varied recognising its multifunctional role key assets could be seen to include the woodlands, river corridors, country parks (i.e. Arrow Valley/Worcester Woods), formal parks, allotments, footpaths and cycleways and SUDS.

In 2011 the Worcestershire GI partnership commissioned a report into the strategic recreational assets in the county.

This report has identified a number of sites that stakeholders consider to be currently under-utilised and a number of others that with management changes could sustain an increase in visitor numbers.

These sites often lie towards the edge of sub-region, particularly to the west, and are less accessible to the large centres of population in the sub-region. Park Wood and

Dymock Woods have both been identified as underutilised but both lie on the far side of the Malvern Hills away from most of the population of the sub-region and therefore it would be difficult to promote them as an alternative site for visitors.

A similar situation applies to Whitcliffe Woods, and Clee Hill Common both of which are a substantial size and were identified as being underutilised and able to sustain an increase in visitors with management respectively. They both lie to the west of the Wyre Forest and the majority of potential visitors would have to drive past the Wyre Forest in order to reach these two sites which are significantly further away.

However the geographical distribution of sites with capacity may limit the potential to redistribute visitors amongst the existing sub-regional assets and reduce current pressure on the sites in the central corridor of the sub-region.

The report establishes a clear pattern of assets that run through the central north – south corridor of the sub-region close to the centres of population coming under the most pressure.

The majority of sub-regional GI assets are at risk from increased visitor pressure from planned development both within and outside the sub-region.

Future development largely reinforces the pattern of current visitor pressure on assets with the central north – south corridor of the sub-region coming under the most pressure in the future as the population increases in Worcester, Kidderminster and Stourport-on-Severn in particular. Several of the large assets to the west of the sub-region such as Whitcliffe Woods and Clee Hill Common are likely to be unaffected by future development due to their distance and relative inaccessibility from the proposed increases in population.

PPG 17 audits have been undertaken for district authorities that identify future requirement for recreation space however these require drawing together into report/map at a sub regional scale.

The South Worcestershire Sports Facilities Framework includes a Programme of Development (POD) for new built sports facilities and playing fields their location and

expected phasing of delivery (reflecting the delivery of individual housing developments).

### 13.1.3 Calculating Infrastructure Requirements and Costs

In order to understand or test the viability of the provision green infrastructure and the implications for developer contributions it is necessary to have an understanding of the strategic provision of green infrastructure. .

Assessment will also need to include green space at a strategic scale i.e. country parks and will ideally be informed by the Worcestershire AIRS (Access and Informal Recreation Strategy) and by other strategic plans such as Local Transport Plans and management plans for AONBs.

In assessing infrastructure provision it is important to recognise that the distribution of provision by typology may vary significantly across a district or borough and this can identify a significant disparity between total provision across a district (which may be deemed to be surplus to requirements) and provision at the local scale i.e. ward which may be deficient. This is illustrated in the table below which gives a breakdown of the variances between the Redditch's wards, indicating deficiencies or surpluses. The table provides information on the number of open spaces, number of unrestricted open spaces and hectares of informal unrestricted open space.

Ultimately the future provision of green infrastructure will need to be assessed on an individual site by site basis based on a site's characteristics and those of surrounding neighbourhoods.

**Table 27: Redditch Borough Council - Open Space Provision SPD**

Ward	No Open Spaces	Informal (ha / 1000)	Variance ward / borough standard (ha / 1000)
Abbey	28	13.5	6.07
Batchley	30	5.66	-1.76
Central	32	8.1	0.67
Church Hill	24	2.82	-4.61
Crabbs Cross	29	3.7	-3.72
Feckenham	28	8.33	0.90
Greenlands	34	8.28	0.86

<b>Lodge Park</b>	32	5.14	-2.28
<b>Marchborough</b>	37	15.21	7.78
<b>West</b>	29	7.92	0.49
<b>Winyates</b>	25	2.11	-5.31

**Table 28: Existing Open Space Quantity Standards**

Typology	Quality Standard per 1,000 population						
	Bromsgrove	Malvern Town	Malvern District	Wyre Forest	Worcester	Wychavon	Redditch
<b>Town/Local Parks and Gardens</b>	0.26	0.29	0.14	0.57	0.61	0.76	7.43 Informal unrestricted open space
<b>Natural and Semi Natural Green Space</b>	0.44	2.98	7.72	2.3	2	0.75	
<b>Amenity Green Space</b>	0.42	2.13	1.86	0.29	0.5 includes cemeteries	0.61	
<b>Provision for Children (equipped)</b>	0.027	0.05	0.04	0.05	0.2	0.07	0.8
<b>Provision of Your People (equipped)</b>	0.03			0.03	0.4	0.02	1.21
<b>Outdoor Sport Facilities</b>	1.67	2.01	1.83	1.91	0.8	1.9	
<b>Allotments</b>	0.19	0.2	0.14	0.191	0.4	0.39	
<b>Cemeteries</b>		0.24	0.13				
<b>Civic</b>		0.01	0.01				
<b>Total</b>	3.037	7.91	11.87	5.341	4.91	4.5	9.44

The Baker Study undertook an initial strategic assessment of environmental assets in order to provide an assessment if the impact development is likely to have on future development. They identified that 1,165 ha of habitat will be impacted upon by development and therefore the same amount should be restored or expanded to mitigate

There is wide variation in the cost of open space provision identified across existing evidence; this reflects the differing experiences across authorities and the varying cost of provision and maintenance of different typologies and designs.

### 13.1.4 Future Investment Plans / Method of Funding

As discussed above green infrastructure is a multifunctional asset and will be influenced by the plans and delivery mechanisms from a number of cross cutting areas. In order to avoid double counting the analysis of cost (where data is available) has centred on the provision of green space rather than other assets such as sustainable transport infrastructure or SUDS these will however need consideration in relation to a wider tariff.

GI will be derived from a range of contexts including:

- Provision of GI and open space linked to strategic housing and employment land.
- Provision of playing pitches or sports fields linked to strategic housing development or the delivery of education infrastructure.
- New sustainable transport infrastructure as part of LTP3.

The Flood and Water Act 2010 and the implications of requirement for SUDS approval prior to planning permission accompanied by forthcoming National SUDS guidance will see an increasing emphasis on the development and funding of multifunctional space.

The Worcestershire GI Partnership is responsible for developing the evidence base and strategy for GI in the county focussing on delivery of through the work of partner/stakeholder organisations (e.g. Natural England, Worcestershire Wildlife Trust and the Forestry Commission) including through development site design and contributions.

A key challenge for local authorities in the sub-region will be to secure funding for the delivery of green infrastructure – particularly in the face of cuts in central government expenditure. A review of potential sources of capital and revenue funding for the acquisition and management of GI assets reveals a wide variety of sources. These include:

**Local Authorities:** Although currently under significant pressure as a result of reduced central government funding, many Local Authorities have provided

significant resources directly and to a lesser extent, through grant aid funding to other bodies.

**Central Government Departments:** Local Authorities have access to specific streams of funding such as the Regional Growth Fund, which is operated by the Department for Business, Innovation and Skills, and Growth Point Funding (from the Homes and Communities Agency). Other funding is more widely available (for instance to community organisations) such as from Sport England (for sports facilities).

**Hypothecated taxes:** The Landfill Community Fund (allocated money from the Landfill Tax) is administered through waste companies and other bodies including the Wildlife Trusts but is not available for revenue expenditure.

**The European Union** (with matched UK exchequer funding): Agri-environment schemes on farmland and woodland are delivered through the Rural Development Programme for England (RDPE) which is part of the Common Agricultural Policy. Transnational 'INTERREG' funding may also be available for specific projects through the European Regional Development Fund. The EU Life+ fund is directed to innovative projects with nature conservation objectives.

**The National Lottery:** The two most relevant funding streams generated by the National Lottery are the Big Lottery (for community projects including acquisition and establishment of public open space) and the Heritage Lottery Fund (HLF). The HLF operates a number of funds, including the large scale Landscape Partnership programme to the more site-based Parks for People programme.

**Developer contributions** are secured as a condition of planning permission. In the past these were obtained through Section 106 of the Town and Country Planning Act 1990, for revenue spending that mitigated an impact of the development. The recently introduced Community Infrastructure Levy (CIL) allows Local Authorities to set tariffs that apply to all qualifying development, for use more widely in the area in which it is generated



**Financial markets** may provide fixed term loans for capital or revenue funding in the form of bonds. These are most likely to be suitable where there is a secure revenue stream to finance the loan.

**Private sector endowments:** Certain sites may lend themselves to acquiring endowments from individuals, businesses or communities. However, these are likely to be site specific and unpredictable at a sub-regional level.

**Funding in kind:** Voluntary and not-for-profit groups can be a significant source of labour and expertise, usually more appropriate for revenue than capital projects. Additionally such groups may have access to funds that local authorities are unable to access.

**Agri-environment schemes:** There are opportunities to use funding from agri-environment schemes to support the development and maintenance of GI assets in Worcestershire including the two current schemes of Environmental Stewardship and the English Woodland Grant Scheme which run until 2013 but also looks at potential support from successor schemes.

**New Homes Bonus Scheme:** and the **CIL** make provision for a proportion of funds to be returned to local communities for expenditure.

**Local Transport Capital Settlement:** The Integrated Transport Block is capital funding used by local transport authorities for small transport improvement schemes costing less than £5 million. Schemes can include walking and cycling schemes

**Local Sustainable Transport Fund:** Separate funding has also been set aside by the Department for Transport for the Local Sustainable Transport Fund. The government has set aside £560 million for the fund over a 4 year period to 2014-15. The guidance supporting this fund invites local transport authorities to apply for funding to support the cost of a range of sustainable travel measures and can include measures that promote walking and cycling.

**The Flood and Water Management Act:** The Flood and Water Management Act encourages the use of sustainable drainage in new developments and re-developments and will require drainage systems to be approved, against a set of

National Standards before building can commence and a connection to the sewer can be allowed (if needed). The Act establishes County Councils as the Lead Local Flood Authorities (LLFA).

LLFAs are required to establish a SAB (SUDS Approval Body) with responsibility for adopting and maintaining SUDS. It is currently envisaged that National Guidance will require SUDS to be multifunctional where possible.

Defra is currently consulting on the Implementation of the Sustainable Drainage Systems provisions in Schedule 3 and draft National Standards. Consultation is also expected in April 2012 on National Guidance. This guidance is likely to include proposals for an affordability test.

Under paragraph 17 of Schedule 3 to the Act the SAB is required to adopt drainage systems. In the short-term, maintenance of adopted SuDS will be funded by Government. This will pay for the costs of SuDS maintenance in the early years of implementation.

Government is considering a range of options for the long term funding of maintenance for adopted SuDS. The information below provides examples of the potential cost for the provision of green infrastructure.

The table below provides a summary of extracts from this report and provides an indication of the potential costs of providing elements of green infrastructure.

**Table 29: Potential Costs of GI**

<b>Infrastructure Type</b>	<b>Cost</b>	<b>Worked Example</b>
<b>External Sports Pitches (2.52ha site)</b>	£150,000	4 pitches = £600,000
<b>LEAPS/NEAPS (1 per 500 units)</b>	£120,000	12 = £1,440,000
<b>Proposed woodland structure: whip planting</b>	£3.00 per m <sup>2</sup>	
<b>A linear Park: formal/soft landscaped</b>	£75 m <sup>2</sup>	53,400 m <sup>2</sup> = 4,005,000
<b>Town Centre Park</b>	£200 m <sup>2</sup>	16,100 m <sup>2</sup> = £3,220,000
<b>Swales (for 100m/ha developable land)</b>	£200 m	17,500 m = £3,500,000

<b>Dry attenuation basins (1 per 5000 houses)</b>	£100,000	12 = £1,200,000
<b>Cemetery Contribution</b>		£1,000,000

**Note:** The worked examples above are based on the proposed Middle Quinton eco town site and on National standards of provision including the National Playing Field Standard (NPFA) and CLG/TCPA guidance on green infrastructure provision requiring a minimum of 40% a site to be green infrastructure (including gardens).

### 13.1.5 Summary of Proposed Schemes

**Table 30: Potential Strategic GI Schemes (Green Infrastructure)**

Infrastructure Required	Delivery Agent	Cost	Funding Source
<b>Wyre Forest Extension Area</b>	Unknown	Unknown	Unknown
<b>Lickey Hills Extension</b>	Unknown	Unknown	Unknown
<b>Sandford Water Park</b>	Unknown	Unknown	Unknown
<b>North of Worcester Option A (Worcester Droitwich park )</b>	Unknown	Unknown	Unknown
<b>North of Worcester Option B (Hallow Riverside park)</b>	Unknown	Unknown	Unknown

### 13.1.6 Key Messages: Green Infrastructure

Green infrastructure is required at a number of different scales; strategic, district and neighbourhood. GI assets can deliver a range of functions and GI needs should be informed by the detailed evidence base

The priorities and delivery of GI in the county will be determined through the Green Infrastructure Strategy which is being developed by the Worcestershire Sub-regional GI partnership.

The Baker Study identified that 1,165 ha of habitat will be impacted upon by development and therefore the same amount should be restored or expanded to mitigate.

There is widespread variation in the cost of open space provision, and it is important not to double count requirements / costs given the multifunctional nature of GI (e.g. SUDs are both a flood risk management tool and form part of the GI network).