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Fenland Neighbourhood Planning Vision

Stage 2 Report

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Prepared by:

Richard Jones
Senior Planner

Checked by:

Tom Bridgman
Associate Director

Approved by:

Paul Comerford
Director

Stage 2 report

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Telephone: Website: http://www.aecom.com

Job No 1040111_Fenland

Fenland Neighbourhood Planning Vision

Stage 2 Report - Final

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1. The Fenland Neighbourhood Planning Vision project

1.1 The Fenland Neighbourhood Planning Vision (SSF) project is being led by consultant AECOM, working with FDC and wider partners. The recommendations and outputs of this report should not be regarded as FDC policy, but rather a report recommending a way forward for FDC and its partners. As such it forms part of the evidence base for the emerging Core Strategy.

1.2 The FNPV project is about developing an integrated and holistic economic, social and spatial strategy that will help to inform and guide the future growth and development of the district between 2011 and 2031. The key outputs are:

- A vision for growth in Fenland
    - Economic
    - Social
    - Environmental
    - Spatial
- Spatial element of draft Core Strategy
- Core Strategy's Infrastructure Delivery Plan

1.3 The Stage 1 Report set out the emerging vision for growth based on a largely district wide assessment of economic, social and environmental issues and the potential opportunities that arise to address these through planned employment and housing growth. This Stage 2 report sets out the emerging spatial element of growth, setting out how it could be spatially distributed and the impact this could have on infrastructure provision. The Stage 3 report will bring both strands together into a costed delivery strategy and action plan that responds to the vision established in Stage 1 and shapes future housing and employment growth within Fenland over the period as well as strategic and social infrastructure, while providing a framework for service provision.

Localism and other proposed planning reforms

1.4 Since the FNPV work was commissioned there has been a change in Central Government. In December 2010 the Localism and Decentralisation Bill was published. Amongst a wide range of changes it proposes, the following have a direct and significant impact on the planning system and the FNPV work:

- The Abolition of regional strategies: the Localism Bill includes specific primary legislation to abolish the RSSs (Regional Spatial Strategies).
- Neighbourhood plans: Local people will be given new rights to develop planning guidance for their local area, albeit, based on any targets set out within the Core Strategy and conformity with national polices and European law (such as the need for a Strategic Environment Assessment). In Fenland (as with other rural areas), the focus will fall on the Parish and Town Councils to lead this process.
- Community Infrastructure Levy: Local authorities will need to allocate a proportion of Community Infrastructure Levy revenue back to the neighbourhood from which it was raised. Furthermore, the council now has the ability to set its own levels of CIL, justified by local need and evidence

- Neighbourhood Development Orders: Parish and Town Councils will be able to establish new areas of permitted development without the need for planning applications. It will be for communities to identify suitable land, sources of finance and secure support for their proposals.
- Duty to co-operate: The Localism Bill introduces a duty to co-operate in order to encourage and enable strategic planning. The duty covers local planning authorities and other public bodies.

1.5 A wide range of other changes are proposed, which are likely to have a significant impact on local government. A plain English guide to the bill can be found at: http://www.communities.gov.uk/documents/localgovernment/pdf/1818597.pdf

1.6 Subject to the legislation passing intact, the FNPV work then will provide an important evidence base to support housing and employment targets in Fenland due to the removal of the RSS. Moreover, as originally intended, the FNPV work will need to be used as a basis for engagement with a wide range of community, third sector and businesses representatives. This should ensure that they can feed into the development of the emerging Core Strategy and any subsequently developed Neighbourhood Plans that may come forward. It is vital that if the growth targets set out at the end of the FNPV work are taken forward into the Core Strategy that they have community ownership, as they, through the Town and Parish Councils should have an important voice through the Neighbourhood Planning process.

1.7 FDC have also adopted Neighbourhood Planning as a priority in its Corporate Plan 2011-14. As such, it is expected that there will an emphasis on this approach to community based planning, which the FNPV should form a key evidence base for.

1.8 Finally, it should also be noted that the government intends to consolidate all Planning Policy Statements (PPSs) and Planning Policy Guidance (PPGs) into one National Policy Framework. As such, many of the references to these forms of national policy guidance will soon be outdated.

2. The structure of this report

2.1 This report seeks to indentify a preferred option for growth in Fenland. It builds on the evidence base and emerging social, economic and environmental vision established is Stage 1, considering the spatial opportunities and constraints across the district. The report is structured in the following way:

Chapter 3 – Fenland in context

2.2 This chapter sets out where Fenland sits in terms of its neighbouring authorities, both in terms of linkages and their own plans for growth.

Chapter 4 – Making the case for growth – a catalyst to achieve the emerging vision

2.3 This chapter sets out the next version of the vision, first established in Stage 1. The update includes growth numbers based on the preferred option. The remainder of the report acts as the evidence base to support these housing and employment targets.

Chapter 5 – The key settlements

2.4 This chapter sets out the town wide objectives for the four main settlements in relation to opportunities associated with growth in housing and employment.

Chapter 6 - Proposed settlement hierarchy

2.5 This chapter sets out a proposed settlement hierarchy, which forms the basis for emerging growth options by reviewing the key settlements across the district and ordering them in terms of their ability to accommodate growth.

Chapter 7 – Setting strategic growth targets

2.6 This chapter builds on the settlement hierarchy and assessment of market towns to establish three different growth options for the market towns and identified local services centre/clusters. It also includes the population modelling findings undertaken to support the assessment of social infrastructure demand.

Chapter 8 - The Strategic Market Towns & Market Towns – broad locations for growth (housing and employment)

2.7 This chapter sets out an analysis of the markets towns, both in terms of the town centre opportunities and potential for urban extensions.

Chapter 9 Setting strategic growth targets – housing

Chapter 10 Setting strategic growth targets – demographic projections

Chapter 11 Setting strategic growth targets – employment land and jobs

2.8 Chapters 9, 10 and 11 seek to set out the levels of growth in relation to housing, the demographic implications of that growth and the impact of the FNPV growth on jobs across the district.

Chapter 12 – Economic impact assessment of options

2.9 This chapter considers the three options in terms of the level of employment each one is likely to generate and assessment of how realistic such a projection is based on analysis of the latest economic forecast for Fenland.

Chapter 13 – Social infrastructure impact assessment of options

2.10 This chapter uses AECOM's Social Infrastructure Framework model to consider the demand and capacity of provision across Fenland based on demographic trends and the growth options. It allows for an understanding of the potential impacts of growth across each main settlement.

Chapter 14 – Transport and movement infrastructure impact assessment of options

2.11 This chapter looks at the impact of the options in relation to known and assumed transport constraints in the district. It looks at potential requirements to allow development to take place and risks associated with various options.

Chapter 15 – Utilities infrastructure impact assessment of options

2.12 This chapter looks at utilities and flooding. This work is still on-going and AECOM are in the process of liaising with providers to ascertain the impact of the options. It is hoped this will be completed by the final iteration of this report. However, a steer from FDC is required in relation to assuming employment floorspace based on findings in this report.

Chapter 16 – Market assessment and initial viability

2.13 This chapter considers the implication of the recently completed Fenland Market Report (Drivers Jonas Deloitte). It looks at the housing trajectory of the growth options and considers risks associated with residential and commercial development across the district.

Chapter 17 – Conclusions

2.14 This chapter brings together key findings from Stage 2 and recommends a preferred option for each settlement in terms of housing and employment. It then sets out the next steps for the Fenland Neighbourhood Planning Vision project.

Section 1 – The Opportunity

3. Fenland in context

3.1 Over the last 25 years the East of England has been one of the fastest growing regions in the UK and Europe. Between 1981 and 2006 the region's population grew by over 13 per cent to around 5.6 million, more than double the rate for the UK as a whole. Between 2001 and 2006, The Office for National Statistics (ONS) estimated population growth to have been around 206,000, or 3.8 per cent. The largest percentage increases were in Cambridgeshire (6.3 per cent). Net migration has been the most important driver, accounting for three quarters of the recent increase (158,000 as compared with 48,000 'natural change'). In Cambridgeshire, Norfolk and Suffolk, net migration gain was 5 per cent for the 2001 to 2006 period; in Norfolk, growth has solely been due to in-migration as deaths have exceeded births.

3.2 Fenland sits within a functional economic sub-region focused on Cambridge and Peterborough as the engines of growth. The Greater Cambridge Greater Peterborough Local Enterprise Partnership has been formed in acknowledgement of this, to "lead our area's growth to 100,000 significant businesses and create 160,000 new jobs by 2025 in an internationally renowned low carbon, knowledge-based economy" (www.yourlocalenterprisepartnership.co.uk). The LEP's proposal includes:

- A doubling of GVA over a twenty year period - from £30 billion to £60 billion annually.
- Growth in number of significant businesses (as measured by Inter-Departmental Business Register) from 60,000 to 100,000 by 2025
- Creation of 160,000 net new jobs by 2025
- Delivery of 100,000 new homes over a 20 year period

3.3 Fenland sits at the geographic heart of the LEP, with Cambridge and Cambridgeshire to the south, Peterborough to the west and Kings Lynn & West Norfolk to the east. As such, it has the opportunity to benefit from economic drivers outside its boundaries as well as building its own economy to support wider social and environmental goals. Such opportunities, set within the context of a growth agenda for Fenland, will need to set out as part of the action plan in Stage 3 and will need to explore areas such as skills, supply chains and transport connections.

Cambridge & Cambridgeshire

3.4 Cambridgeshire is a centre of excellence and a renowned international leader in higher education and research. This has created a world class science base comprising international research institutes, globally significant information and communications technology and biotech clusters, multi-national HQ functions and a dense hinterland of professional service, legal and consultancy networks - known collectively as the Cambridge phenomenon. This high level knowledge intensive employment is located predominately in the South of the county. Cambridgeshire as a whole is the least deprived part of the East of England. There are however wide contrasts between the 48 districts with South Cambridgeshire having the least deprivation and North Cambridgeshire (Fenland and Huntingdonshire) being the most deprived.

3.5 Cambridge itself is a university city with a strong and dynamic economy with a large share of the vibrant high-tech clusters mentioned above. It is recognised as the key economic driver in the East of England with the largest retail and service sector in the sub-region, historically it has very low unemployment. Salaries in the knowledge and high tech sectors tend to be relatively high,

however housing affordability issues still persist in Cambridge for key workers and those on lower incomes.

Huntingdonshire

3.6 The economic strengths in the North (which includes Fenland) include specialist engineering, manufacturing, agriculture and food processing, distribution and logistics. Huntingdonshire to the South West of Fenland is focussed on business, services, manufacturing and a strong public sector base. The economy is stronger more diversified and generally higher value than Fenland with key employers in high tech manufacturing, bio-tech and life sciences. Huntingdon Life Sciences being a notable employer. Some pockets of deprivation still exist in wards to the north of the district. Huntingdon is potentially better placed geographically speaking to take advantage of any overheating in Cambridge but is challenged by demands on its physical and social infrastructure. Fenland has potential cost advantages over Huntingdonshire in terms of employment space, housing and labour.

Peterborough

3.7 Peterborough also has a significant impact on the Fenland economy bordering the district in the West near Whittlesey. The strategy for the Peterborough economy is about preparing for accelerated growth and transformation across the sub-region with its population expanding to more than 200,000 between 2010-2031. The central objective of Peterborough's strategy is building upon its position as UK's environmental capital and its strategic location with easy access to London or the North via the East Coast Mainline, the A1 and numerous ports and gateways. Peterborough has real growth and productivity potential in environmental technologies, logistics, high level business and professional services, high tech manufacturing, and ICT. The Peterborough economy is significant to Fenland in a number of ways, it is a source of high quality jobs for residents and is potentially a source of investment as employers look to alternative locations to save costs.

Kings Lynn & West Norfolk

3.8 King's Lynn, situated close to Wisbech, has a population of 36,400 and is the main economic driver and employment centre of the West Norfolk. It is a central government Growth Point, with a requirement to become a strategic sub-regional centre; as well as delivery a minimum of 7,000 new houses. 75% of West Norfolk allocated employment in their draft Core strategy is in King's Lynn. Wisbech and Kings Lynn's development will be closely linked, with plans for 500 homes adjacent to Wisbech set out in the Kings Lynn & West Norfolk Core Strategy.

Fenland's linkages with its neighbours

3.9 The biggest driver of functional links between Fenland and its neighbours is the flow of labour. This can be understood by looking at community patterns. Table 3.1: Journey to Work Destinations by District indicates the flow of Fenland residents to employment locations, based on Census 2001 data. It is clear that residents of Wisbech and March are most likely to work within the district, with 10% of those employed in Wisbech working in Kings Lynn and West Norfolk and 8% of March resident's community to Peterborough. However, less that 50% of residents in both Whittlesey and Chatteris work in the district, commuting respectively to Peterborough (44%) and Huntingdonshire (18%) among other locations.

Table 3.1: Journey to Work Destinations by District

	Town			
Destination District	**Wisbech**	**March**	**Whittlesey**	**Chatteris**
Fenland	73%	72%	40%	49%
Peterborough	6%	8%	44%	4%
Huntingdonshire	1%	5%	6%	18%
East Cambridgeshire	1%	2%	0%	7%
South Cambridgeshire	0%	2%	1%	7%
Cambridgeshire	1%	3%	1%	7%
Kings Lynn and West Norfolk	10%	2%	0%	1%
Forest Heath	1%	0%	0%	0%
South Holland	2%	0%	0%	0%
Other	4%	6%	7%	6%

3.10 Retail competition is another key area where links across borders are relevant to Fenland. The 2006 household survey, supporting the Retail Study (2006) showed that Wisbech Town Centre retains about 16 per cent of the overall comparison sector expenditure available to residents of Fenland's Overall Catchment Area (OCA), while March Town Centre retains around 6 per cent. The main outflow (or leakage) of comparison expenditure is to Peterborough city centre, which accounts for 32 per cent of the available expenditure within the OCA followed by King's Lynn town centre (13 per cent), Cambridge city centre (6 per cent), Ely city centre (4per cent) and Huntingdon town centre (also 4 per cent). The household survey also found that the aggregate convenience sector retention rate for the OCA as a whole was 62 per cent, which we considered to be modest. There was a relatively high level of leakage from some survey zones, particularly the zones on the periphery of the OCA, such as Wisbech, Whittlesey and Chatteris.

Identifying the challenges and maximising the opportunity for Fenland

3.11 Fenland therefore sits within a dynamic and exciting region that has developed rapidly and is set for more change of the next 20 years. Clearly then Fenland cannot be considered in isolation. It must in effect, compete with its neighbours to reduce leakage in terms of economic spend of it current and new residents as well as work within a wider functional economic area to respond to opportunities presented by growth sectors and strong economic sectors. Opportunities to exploit its location between key centres will need to be built upon, but clearly there are structural issues that have the potential to hold the district back.

4. Making the case for growth – a catalyst to achieve the emerging vision

Introduction

4.1 The FNPV work is about setting an overall vision and set of objectives to guide change in the district. The Stage 1 report sets out the opportunity in Fenland and identifies employment and housing growth as a catalyst to help achieve it.

4.2 The challenge in affecting this change is much wider than simply delivering growth. It will require new ways of delivering services and an uplift in the current skills and economic activity of the existing population. However, well planned growth should lead to, amongst other things, an influx of new skills, a younger and more economically active population, increased opportunities for better paid employment, more attractive and dynamic town centres and higher aspirations or expectations from providers. This should benefit the existing population, bringing with it an opportunity for better services, employment opportunities and improved housing. .

4.3 Furthermore, the Greater Cambridge and Greater Peterborough area is one with big aspirations and a strong track record in achieving growth. As such, Fenland is positioned within a dynamic and changing landscape and the district will need to adapt to ensure it is able to respond to opportunities and ensure that the gap in deprivation and the quality of life between it and its neighbours reduces, rather than increases. Change through growth then is vital to keep step with Fenland's neighbours.

4.4 Allied to all this are demographic projections for the district, which suggest an ageing and declining population. Growth then provides a clear basis to support the local economy, retaining and improving economic activity levels, as well as the business case for existing service provision.

4.5 Growth cannot address all aspects of the emerging vision as set out in Stage 1.In many cases service delivery will be at the heart of the solution. However, growth has a key role in delivering the vision and in positively impacting on the key issues affecting Fenland. For growth to have such an impact then a clear approach to its spatial distributions and impacts on key infrastructure is required. This is this basis of Stage 2 as set out over the coming chapters.

The impact of growth to date

4.6 Although the district remains relatively sparsely populated, Fenland has experienced considerable housing and population growth in recent years. This growth has been driven by a combination of demographic and household change as well as migration from other parts of the UK. Migration into Fenland from outside the UK has also increased. In the decade up to 2001, the district's population grew at four times the national average and has continued to grow rapidly. ONS mid-year population estimates for 2009 suggest Fenland has a population of approximately 91,700, compared to 83,500 at the last census and 75,100 in 1991. Chatteris and March in particular have accommodated significant new house building, as have Doddington, Wimblington and Manea. In the south and west of the district especially, Fenland's towns and villages have proved attractive choices for commuters to neighbouring Huntingdonshire, Cambridge and Peterborough.

4.7 Growth in employment in Fenland has not matched workforce expansion and out commuting is increasing. Nearly 40% of Fenland's working population commute out of the District for work, with the resultant impact on locally cohesive communities and their environment and health. It is clear that such is the wider functional economic area within which Fenland sites, that out-commuting will still be significant. However, growth will not be sustainable if it requires an increase in levels out of the district. To meet the needs of the growing workforce, Fenland requires growth in employment land and business opportunities, leading to an improved range of jobs for everyone. To achieve this, infrastructure needs to be improved to retain and attract employers, and the district needs to keep its presence and appeal in front of potential investors.

4.8 Moreover, based on the Index if Multiple Deprivation, recent growth at the district level, has not led to a reduction in deprivation, especially in a number of key wards and neighbourhoods. Across Cambridgeshire, 25 wards fall into the 20% most deprived wards in Cambridgeshire. 18 of them are within Fenland (Table 4.1). Drilling down into the district, deprivation levels in Fenland are generally more severe to the north of the district, Wisbech in particular, with areas further south performing better. This is possibly due to their proximity to the employment and educational opportunities in the larger and more prosperous centres of Cambridge and Peterborough. Over this period growth has not been planned holistically to address or focus on areas of deprivation, or the causes of this deprivation, such as skills, health, access to or availability of jobs.

Table 4.1: Cambridgeshire wards in bottom quintile of IMD

Local Authority	Ward	IMD 07 Score
Fenland	Waterlees	41.52
Fenland	Clarkson	32.83
Fenland	Medworth	32.01
Fenland	Staithe	31.21
Huntingdonshire	Huntingdon North	27.00
Fenland	Elm and Christchurch	25.73
Fenland	Parson Drove and Wisbech St Mary	25.39
Cambridge	King's Hedges	25.10
Fenland	Hill	24.41
Fenland	Kirkgate	24.36
Fenland	Kingsmoor	23.01
Cambridge	Abbey	21.93
Fenland	Roman Bank	21.24
Fenland	Peckover	20.42
Fenland	March East	20.08
Cambridge	East Chesterton	20.03
East Cambridgeshire	Littleport West	19.47
Cambridge	Arbury	18.97
Fenland	March North	17.83
Fenland	Lattersey	17.24
Fenland	Birch	16.78
Fenland	March West	16.49
East Cambridgeshire	Littleport East	16.48
Fenland	Wenneye	16.06
Fenland	Wimblington	15.55

4.9 Consultation with stakeholders as part of Stage 1 highlighted a number of interlinking issues that has limited the beneficial impacts of growth, including;

- low skills levels, which affect inward investment and economic spending power
- limited offer in the market towns causing leakage to centres outside the district
- the lack of joined up service delivery between providers
- difficulties in capturing the long-term benefits of interventions across different delivery agencies i.e. those who invest in long-term measures and those who benefit can be different
- large tracks of the population who lack aspiration, which feeds down and influences young people and creates a perpetual cycle of low aspiration
- access to Fenland's existing natural and environmental assets impacting on health outcomes and in turn influences levels of economic activity
- a significant population churn, which makes longer-term interventions more problematic as people move on and new people arrive

4.10 It is clear from the analysis in the Stage 1 report that growth to date has not made a marked impact on key issues including low density of employment, skills shortages, affordable housing capacity, health inequalities, cohesion, open space shortages or connectivity across the district. These are still prevalent in Fenland.

Demographic trends

4.11 In order to understand how growth will impact on service delivery in Fenland, it is important to understand how the population is likely to change. To do this, a hypothetical scenario of no housing growth has been modelled by Cambridgeshire County Council's Research Group (CCRG). It takes into consideration births, deaths and the changing make-up of households, but no housing development. While such is highly unlikely to happen, it provides the basis to understand the impact of different levels of housing growth.

4.12 CCCRG's population model is run forward from an original base year of 2001 derived from the 2001 Census mid-year estimates and utilises a range of fertility, mortality and migration assumptions. A detailed methodology is included in Cambridgeshire County Council Research Group "no housing growth" scenario for Fenland Neighbourhood Planning Vision, November 2010 included in Appendix C. It is important to note that the forecasts commissioned from CCCRG are not intended to represent a realistic growth or demographic scenario, but are intentionally 'constrained' as required to fit with the methodology we have used for this study. The CCCRG "no housing growth" forecasts show the population consequences of building no houses at all in the district; they do not show how today's population is expected to change in the future.

4.13 The data shows that at present, the population of Fenland is skewed towards the older generations. This would be exacerbated over time if there was no housing growth as the number of people over 65 consistently grows despite an overall reduction in population. This means that, in the future, a higher proportion of the population will be older adults and a lower proportion of the population will be children and young people. The extension of this is that more households will be made up of older adult couples (perhaps whose children have now left home) or single older adults (including those affected by bereavement), and therefore the average number of people per household will be lower than it is at present. If the number of households remained constant into the future, that would equate to fewer people that it does at present. As such, building no houses in coming years would imply significant out-migration from Fenland as, in simple terms, there would be no vacant dwellings for newly formed households to occupy. Put

another way, in order to provide housing for Fenland's current population, some house building is necessary.

Table 4.2: Fenland Population by Age Range to 2031

	0-3	4-10	11-15	16-19	20-24	25-44	45-64	65-74	75+	Total
2009	4,070	7,370	5,970	4,690	4,580	23,100	25,210	9,360	8,880	93,250
2011	3,800	7,100	5,680	4,910	4,270	21,600	25,700	9,690	9,120	91,700
2016	3,280	6,290	5,030	4,010	4,800	17,980	25,400	11,560	9,580	87,700
2021	2,830	5,660	4,620	3,680	3,970	16,930	24,980	12,350	10,810	85,900
2026	2,640	5,030	4,130	3,340	3,970	15,170	24,170	12,490	13,010	83,700
2031	2,560	4,680	3,720	3,030	3,690	14,540	21,730	13,900	14,310	81,900

Figure 4.1: No housing growth population forecast - total

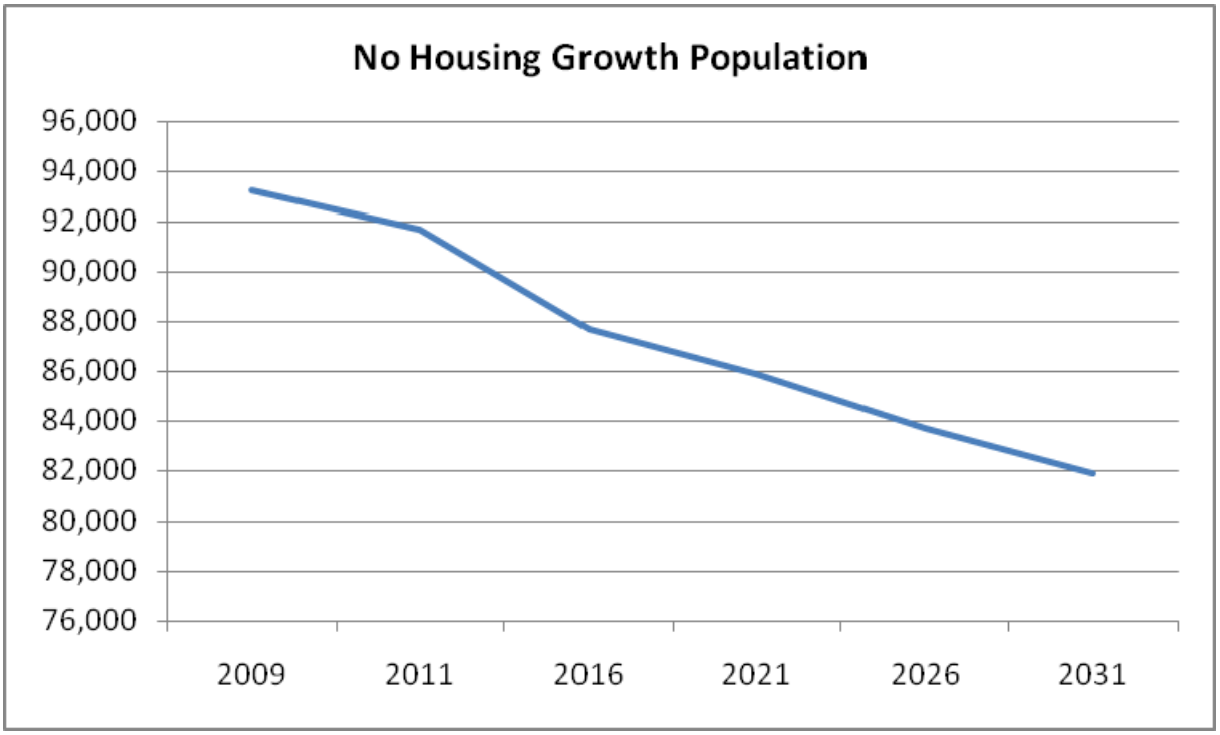
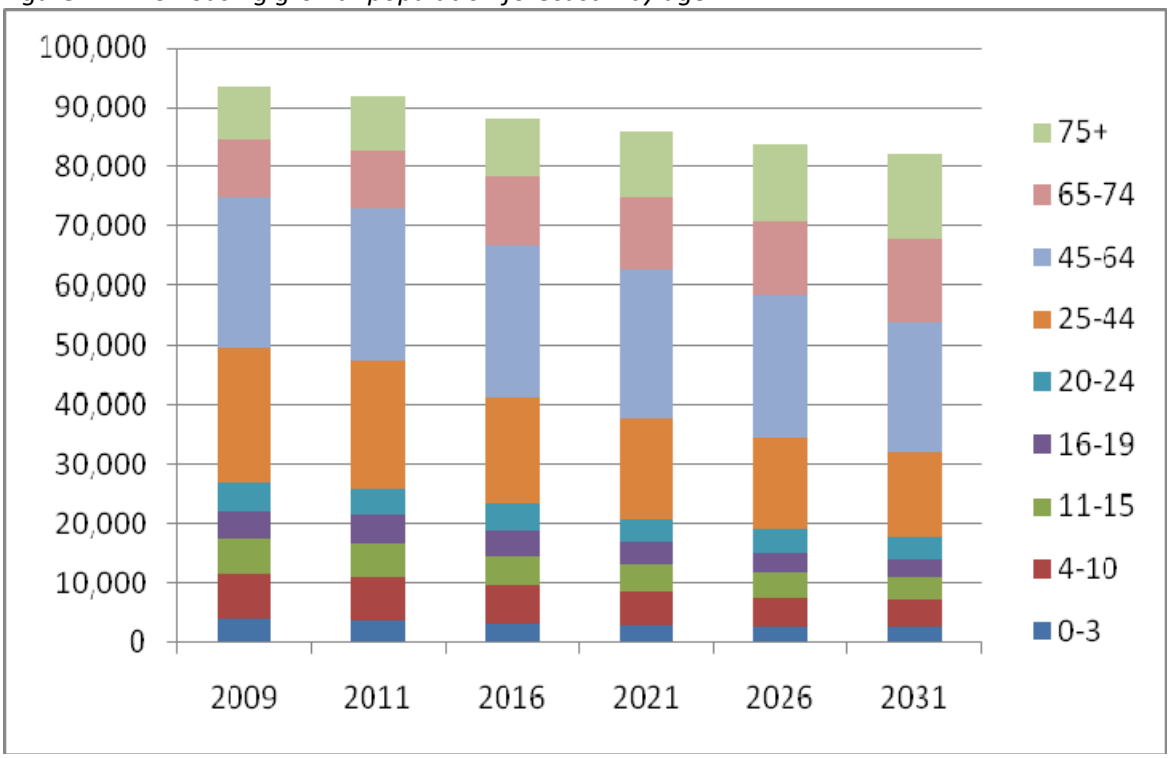


Figure 4.2: No housing growth population forecast – by age

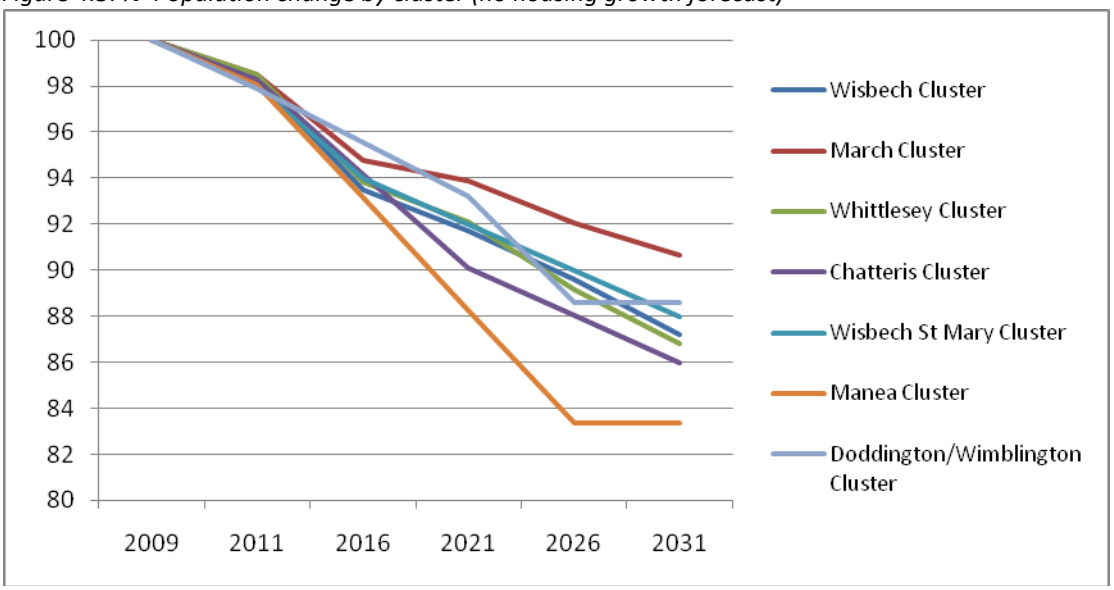


4.14 The population change has also been broken down by ward in order to work out the demographic change within each cluster and to more accurately anticipate the impact of new growth on the existing infrastructure and service provision.

Table 4.2: Population change by cluster (no housing growth forecast)

	2009	**2011**	**2016**	**2021**	**2026**	**2031**
Wisbech Cluster	33,260	32,700	31,100	30,500	29,800	29,000
March Cluster	21,730	21,400	20,600	20,400	20,000	19,700
Whittlesey Cluster	17,160	16,900	16,100	15,800	15,300	14,900
Chatteris Cluster	9,770	9,600	9,200	8,800	8,600	8,400
Wisbech St Mary Cluster	5,000	4,900	4,700	4,600	4,500	4,400
Manea Cluster	2,040	2,000	1,900	1,800	1,700	1,700
Doddington/Wimblington Cluster	4,290	4,200	4,100	4,000	3,800	3,800
Total	**93,250**	**91,700**	**87,700**	**85,900**	**83,700**	**81,900**

Figure 4.3: % Population change by cluster (no housing growth forecast)



How can growth affect change in deprivation over the next 20 years and what are the risks?

4.15 Much of direct financial benefit of growth (through developer contributions) will need to be directed at increasing capacity of strategic, social and environmental infrastructure to support the incoming new population. However, it is important that future growth also helps to address some of the structural issues, such as deprivation, that affect Fenland's existing population. This will be important in helping to identify additional sources of funding, including any available public sector support for growth in the district.

4.16 This stage 2 report concerns itself with how growth should be spatially distributed. The extent to which new employment and residential growth will need to spatially focus on areas of deprivation or close to ailing town centre's is an important consideration. Furthermore, the report also considers the level of infrastructure that could be delivered through growth. This provides a platform for the final stage of the work (Stage 3), which will consider how growth can act as the catalyst for the provision of additional or better planned services, facilities and amenities as well as support structural economic change to drive new skills and businesses in the district. .

4.17 However, growth should not be taken for granted, nor should it be assumed that if growth is achieved, it will necessarily bring about the desired change. There are a number of key strategic risks, which emerge from the Stage 1 report and the above analysis, which the emerging vision and the interventions that come out of the Stage 3 report will need to respond to. To address these risks the following areas need to be addressed:

- The need for an uplift in land values to stimulate development and provide adequate developer contributions
- The need for developer contributions to support both a step change in infrastructure and service provision and to provide affordable housing to meet the identified housing need.
- The need to access funding beyond CIL to meet infrastructure and growth requirements
- The need to improve educational attainment and skills across the district to support an increase in employment opportunities and reduce economic inactivity among the working age population

- The need to reduce health inequalities to support the economic and social well-being of the existing population
- The need to support improved access to Fenland through strategic transport links (road, bus and rail)
- The need to establish more and stronger links to neighbours through supply chains, skills, and education, to benefit from their success rather than loose out
- The need for service provision to adapt to the projected demographic trends of an ageing population

4.18 These strategic risks, articulated above as areas that need to be addressed are fundamental challenges to achieving sustainable growth in Fenland. There is a risk, if that if they are not addressed, then growth will not bring about the reduction in deprivation required across the district. The vision from Stage 1 seeks to address many of these areas. As noted above, this Stage 2 report looks to establish the scale and location of growth. The Stage 3 report will bring this work, together with the Stage 1 findings, to set out a clear strategy to address these risks and achieve such growth over the plan period.

The emerging FNPV vision for Fenland

4.19 The emerging vision from Stage One of the FNPV work is:

> 'Fenland's future success will be based on creating distinctive places and improved opportunities for all. This will be achieved through a 'can do' culture, where those who live or work in the district are encouraged to desire a better standard of living.
>
> Fenland will aspire to be a resource efficient district with resident communities benefiting from its ambitious and comprehensive approach to renewable power and energy efficiency. Fenland's strength in agriculture and food production will be harnessed to drive up new employment, encouraging healthy lifestyles and form the basis of an exciting new visitor economy. A radical multi-partner approach to education and skills development will create a new 'learning district' raising aspirations and creating a culture of achievement. Distinctive market towns will become vibrant hubs of commercial activity and capture economic value and investment from throughout the region and beyond.

4.20 To achieve the emerging vision a number of strategic programmes are proposed in the Stage 1 report. While growth will not be the only measure through which the vision is achieved, the intention is that it will act as a catalyst for change across the district. Growth in itself will lead to change. This report seeks to establish the scale and opportunity for growth. **This will then be drawn together with the socio, economic and environmental assessment in Stage 3 as part of an action plan**. This will set out a series of interventions structured against a series of the strategic propositions designed to take forward the vision.

Build Fenland

4.21 Housing and employment growth will bring opportunities to build strong communities. This should include consideration of good quality affordable housing provision, town centre regeneration opportunities and the integration of urban extensions into existing communities and neighbourhood. This growth must benefit local companies and the local labour market through development agreements and training schemes. Growth will also need to provide employment and business opportunities facilitating the right kind of competitive business

locations, supported by physical infrastructure and access to a skilled workforce. New homes should provide the opportunity for in migration, bringing with it new skills. Fenland's economy requires such skills to adapt and exploit opportunities created by its location within one of the countries strongest economic regions. This is especially the case of the short to medium term, as the existing population develops the skills necessary to compete in the modern economy.

Resource efficient Fenland

4.22 Fenland should strive for increased resource efficiency, with a whole range of community and environmental benefits. With the landscape currently at or close to saturation for large scale wind farms, opportunities for existing or new communities or businesses to exploit Fenland's wind supply through smaller, development or facility specific wind turbines or opportunities for Photo Voltaic farms to support sustainable living and working will need to be considered.

4.23 While providers want to ensure traditional forms of provision are in place to accommodate peak requirements, this should not prevent consideration of sustainable technologies forming part of growth agenda across Fenland. With limited funding for the provision of much needed infrastructure, new and existing communities should be empowered to establish their own energy companies, considering wind and solar (and others if feasible) to plough back profits into much needed provision. Such is the abundance of wind and the potential availability of land, the district has a tremendous opportunity to exploit these natural resources for its economic and social benefits. Growth could have a clear role to play in this, potentially providing the basis for funding initial capital costs, or providing land or expertise to act as the catalyst. Such an approach can also be used to bring new and existing communities together, providing a clear identifiable link for existing residents towards the benefits of growth.

Eat Fenland

4.24 Agriculture is an enormous part of Fenland's economic, social and environmental life. For growth to work, it must come forward in a way which builds on this opportunity. A key part of this is building on the existing economic benefits through access to skills development through Further and Higher Education opportunities. Both CoWA and the community colleges have a key role to play. Understanding the opportunities and issues for the sector over the plan period to provide a workforce and potential leaders who can advance the districts agricultural offer should support job in this sector. Furthermore, growth in Fenland will also need to be about place making and building on food as a core part of Fenland's identity could play a vital role in this. The development of the market town's is dependant bringing in new activity to extend their economic, social and cultural economies. Tourism should be a key element of this. Fenland already has strengths in this area, but a vital missing ingredient is its accommodation and catering offer. A focus on promoting this area, building on the district's own food growing capacity will be important in achieving wider town centre regeneration aspirations. Moreover, this could drive a new skills agenda in terms of catering and hospitality, boosting the employment opportunities for current and new residents.

4.25 Such an approach should also be linked back to supporting the existing needs of the population and a key area where such a change in perspective would be beneficial is health. Both a focus on agriculture and good food should be leveraged to promote healthier eating. Supporting the existing farmers markets and promoting access to Fenland's local produce through supermarkets, along with a focus through the education system, should help to bring down levels of obesity and help establish a stronger, healthier population.

Active Fenland

4.26 The link between healthy lifestyle and an active workforce is key to the success for Fenland. A focus on activity to improve life chances and productivity is an important element of the economic and social vision for Fenland. Growth can support healthier lifestyles through the provision of new or improved open space and better access to the countryside can be achieved through new development. Support for improvements to existing facilities, such as leisure centre should also be considered.

Aspirational Fenland

4.27 Raising aspirations and fostering positive attitudes around learning and skills is essential for the future well-being and prosperity of people in Fenland. Partners need to tackle the prevailing culture of low aspiration from a young age. While much of this relates to service delivery, physical interventions, such as the BSF programme, provide a good platform to further develop the offer of Fenland's secondary schools, to provide centres of excellence for both pupils and the wider community, boosting skills over the medium to long-term and in doing so, making Fenland an attractive place for employers and employees alike. At primary level growth, could help further focus schools as community-wide assets. Positioning the College of West Anglia as well as sixth form functions of the community colleges as essential gateways to wider opportunities.

One Fenland

4.28 There are a large number of public sector organisations working in Fenland. This programme looks to better focus these services towards the public, improve delivery and reduce costs. Opportunities such as the Making Assets Count (MAC) programme, which is considering opportunities to consolidate a range of public sector services into one location in Wisbech will be critical in acting as catalysts for wider regeneration. This should be further supported through town centre masterplanning to maximise secondary benefits. Growth that supports community led infrastructure programmes, providing the opportunity for communities to help plan their locality either by owning, managing or planning infrastructure and services to support local goals, will become increasing possible as the Big Society and Localism agendas evolve.

Connected Fenland

4.29 Improving connections will be vital to reducing inequalities. The rural nature of Fenland means that isolation will be an ever present challenge to accessibility. Enabling movement around, in and out of the district will be key to unlocking potential. Reducing the need for out-commuting through a focus on employment and services within settlements will be important, but such places will also need to become more accessible to employees and investors, whether physically and/or digitally.

The next stage of the FNPV work – how to deliver the vision

4.30 The remainder of this report looks to establish the levels of growth that could come forward. Stage 3 will look to build on the findings of this report and set out a framework for interventions across Fenland as an action plan within the parameters of these strategic programmes, against which partners will sign up to take forward delivery along with FDC. This work will also be supported by an initial assessment of the potential for Community Infrastructure Levy to support the requirements for social, strategic and green infrastructure across the district.

5. Proposed settlement hierarchy

Introduction

5.1 The FNPV work needs to demonstrate how growth, both in terms of its scale and location, can be brought forward sustainably. The settlement hierarchy is vital to this approach as it helps to provide a framework within which growth can be planned and brought forward.

5.2 The FNPV brief requires a fresh look at the existing settlement hierarchy in Fenland. Under the RSS, Fenland's four market towns sat grouped together, too large and significant to be local service centres, but too small to be sub regional centres. However, there is a clearly demonstrable difference between the market towns, which should be highlighted through the settlement hierarchy. With the forthcoming removal of the regional planning tier, there is more flexibility to shape the hierarchy to Fenland's needs. Another key question that needs to be addressed is whether clusters of rural settlements, can act collectively as service centres for the surrounding area by virtue of their current role or potential future role in the provision of key services to the surrounding area. As such, these groupings could have the potential to accommodate (and benefit from) a proportionate amount of strategic growth to support the sustainability of their services, especially when there is a forecasted population decline in areas of limited housing growth.

5.3 As such, this proposed settlement hierarchy seeks to provide the initial basis for both planning growth and the co-ordination of services. It should be underlined though, that it provides a framework for further analysis and not a rigid planning structure. It should be noted that consultation, with the public or members, is not included within the scope of the FNPV work. As such, beyond the market towns, the settlement hierarchy work is largely a desk-top exercise, which will need refining and tested through consultation.

Current Policy & guidance

5.4 The current policy position states that:

5.4.1 Most new development should be directed to existing towns and cities, to provide maximum access to employment and services by, walking and public transport (e.g. PPS1 paragraph 27(vi), PPS3 paragraphs 36-39, PPS4 paragraph EC6.2, PPG13 paragraph 6);

5.4.2 In rural areas market towns and local service centres should act as a focus where they can contribute in terms of sustainability for the settlement and the surrounding area (PPS3 paragraphs 36-39, PPS4 paragraphs EC6.2 and PPG13 paragraph 6);

5.4.3 Development in smaller rural communities should only occur where it can contribute to their sustainability (PPS3 paragraphs 33-39). Therefore only limited growth should be expected in such settlements, appropriate to services.

5.4.4 Rural communities should not be caught in the 'sustainability trap' by use of a development hierarchy that favours only urban development (The Taylor Review and The Rural Challenge – Matthew Taylor (2010)). However, this must be balanced with the need to balance growth with adequate levels of provision and infrastructure.

5.4.5 Fenland's current settlement hierarchy notes that the RSS and the Cambridgeshire and Peterborough Structure Plan both suggest more specific criteria to assist in the identification of Key Service Centres. The common elements of the criteria, contained in both plans, are:

a. A primary school and good access to secondary education
b. A doctor's surgery
c. A range of shops and services that can meet day to day needs (particularly for food
d. shopping)
e. Local employment opportunities
f. Frequent public transport services to higher-order centres.
g. The Structure Plan, in addition to the above criteria, indicates that such centres will generally have a population of 3,000 people and contain a post office (para 1.17).

5.5 This framework has been used to develop a revised settlement hierarchy for Fenland.

- **Strategic Market Towns** – those market towns with a demonstrably higher level of employment, facilities, services and accessibility based on available data.
- **Market Towns** – those market towns that play a critical role in terms of supporting their hinterland, but are demonstrably of a lower scale in terms of employment, facilities, services and accessibility.
- **Urban Cluster Settlements** – those settlements that sit within the catchment area of one of the four market towns.
- **Local Service Centres or Clusters** – those rural settlements that either as a standalone centre, or cluster, provide a level of service provision and population over and above other rural settlements in the region.
- **Villages** – those rural settlements that provide few services and have limit population levels.

Settlement hierarchy

5.6 The best available data for the analysis of settlements across Fenland is the previous Settlement Hierarchy (2006). Using the framework set out in the box below it may be necessary to update the data. However, such are the clear margins between settlements within each group; it is unlikely there would be any movement within the hierarchy at this stage.

For the purpose of this analysis, the criteria have been interpreted as follows:

- Population taken from 2005 mid year estimate (while updated town population's are available, lower order settlements were not available so this data has been used for consistency in this chapter only)
- Range of shops and services: Two or more convenience stores, together with one or more comparison store, a post office and pub
- Doctor's surgery: Whether there is a surgery in the settlement
- Access to education: In order to warrant a positive score (P) the settlement must have a primary school, and either secondary school provision in the village or within easy reach by cycle or foot (a distance of less than 5km along a route that is suitable for cycling). Note, this is defined as 'A_SS' in the tables below)
- Good access to higher order centres: These are the City of Peterborough, and the towns of Wisbech, Whittlesey, March, and Chatteris. Note, this is defined as 'a_higher_centre' in the tables below. Settlements are therefore regarded as having good access if either: (a) an

hourly bus service operates to a market town or city between 7am and 7pm Monday to Saturday; (b) a market town or city can be reached easily by foot or cycle (as defined for access to schools) (c) six or more individual route exist.

- Local employment opportunities: The settlement has an industrial estate/business park, or has one or more employment sites of 500 sqm.

Defining the Strategic Market Towns and Market Towns

5.7 It is clear from current policy guidance that the majority of any new development needs to be directed to existing towns. Within Fenland, the four largest settlements are the market town's of Wisbech, March, Chatteris and Whittlesey. Based on the latest available information (Fenland Settlement Hierarchy, 2006), the settlements compare as follows:

Table 6.1: Strategic Market Towns and Market Towns – Settlement summary

Name	Pop	Convenience	A2 Comparison	Banks	Food_Drink	Post_Office	Pub	Library	Church	Village_Hall	Doc_Surgery	Prim_School	A_SS	A_higher_centre	Industry
Wisbech	20460	13	117	16	24	4	19	Permanent	10	Y	3	7	1	12	Yes
March	19150	67	14	23	16	3	11	Permanent	9	Y	3	5	1	12	Yes
Whittlesey	12690	44	14	21	8	1	8	Permanent	8	Y	2	3	1	4	Yes
Chatteris	9480	24	12	15	6	1	1	Permanent	2	Y	1	2	1	7	Yes

5.8 Based on analysis of the current Fenland Settlement Hierarchy data, the four identified market towns have the largest and widest range of facilities and the greatest size of populations. On this basis, the previous settlement hierarchy put all four towns into one category. However, in shaping growth over the next 20 years it likely that each settlement will have different needs and capacities to accommodate change, as such it is proposed to revise the categories to support the different approach to growth that could come forward over the plan period.

5.9It is clear from the table above that Wisbech and March stand out as settlements which by virtue of the size of population, level of services and accessibility through public transport operate at a different level to Whittlesey and Chatteris. As such, it is considered appropriate to consider both Wisbech and March as separate from the other two market towns when drawing up a new settlement hierarchy for Fenland. This approach is supported through national policy as summarised in paragraph 3.4.1 above, which seeks to focus growth on areas most appropriate for sustainable development. This approach allows for a more nuanced approach to the four main settlements within the district.

Strategic Market Towns

5.10 As such, Wisbech and March, due to their size, population, character and context have the greatest potential and/or need to achieve the critical mass required to move up the hierarchy and stand apart from the other towns. The ability and the opportunity of either Wisbech and/or March to accommodate a larger proportion of growth (homes, jobs and infrastructure) are tested through the FNPV work. These two settlements are therefore defined as Main Urban Centres. It should be noted that the FNPV work does not include a retail impact assessment for the growth options, which should also form part of an assessment later in the LDF process.

Market towns

5.11 Whittlesey and Chatteris, in terms of their size, population, character and context do not have the potential to grow to levels close to, or above either Wisbech or March. As such, strategic growth, while potentially important to improve the sustainability of these settlements should be consistent with the relative scale of the settlements. These two settlements are therefore defined as Market Towns.

Strategic Market Towns - Wisbech and March

Market Towns - Chatteris and Whittlesey

Urban Cluster Settlements

5.12 The settlements, set out in the following tables, fall within 5kms of a Strategic Market Town or Market Town (5 minutes at 40mph drive time) and as such, can be viewed as having a mutually supportive relationship with the higher order settlement.

Table 6.2: Wisbech Urban Cluster Settlements

Name	Pop	Convenience	A2 Comparison	Banks	Food_Drink	Post_Office	Pub	Library	Church	Village_Hall	Doc_Surgery	Prim_School	A_SS	A_higher_centre	Industry
Wisbech	20460	13	117	16	24	4	19	Permanent	10	Y	3	7	1	12	Yes
Collett's Bridge	100	0	0	0	0	0	0		0		0	0	0	0	
Fitton End	70	0	0	0	0	0	0		0		0	0	0	1	
Gorefield	820	2	0	0	0	1	1	Mobile	2	Y	0	1	0	3	
Leverington	1790	1	0	0	1	1	2	Mobile	1	Y	0	1	1	3	
Elm	1650	2	0	0	0	1	3	Mobile	1		0	1	1	4	
Friday Bridge	1370	1	0	0	1	1	2	Mobile	1	Y	0	1	0	4	

Table 6.3: March Urban Cluster Settlements

Name	Pop	Convenience	A2 Comparison	Banks	Food_Drink	Post_Office	Pub	Library	Church	Village_Hall	Doc_Surgery	Prim_School	A_SS	A_higher_centre	Industry
March	19150	67	14	23	16	3	11	Permanent	9	Y	3	5	1	12	Yes
Westry	160	0	0	0	0	0	0		1		0	0	0	4	

Table 6.4: Whittlesey Urban Cluster Settlements

Name	Pop	Convenience	A2 Comparison	Banks	Food_Drink	Post_Office	Pub	Library	Church	Village_Hall	Doc_Surgery	Prim_School	A_SS	A_higher_centre	Industry
Whittlesey	12690	44	14	21	8	1	8	Permanent	8	Y	2	3	1	4	Yes
Pondersbridge	120	0	0	0	0	0			1		0	0	0	2	
Eastrea	810	0	0	0	0	0	1		1		0	0	1	2	
Coates	1150	1	0	0	1	0	2	Mobile	2	Y	0	1	1	2	

Note: Chatteris has no identified cluster settlements

5.13 It should be noted that none of the settlements listed in the tables above provide the full range of services defined in paragraph 3.4.6 above and so should not be considered as a focus or centre in their own right.

5.14 However, by virtue of the proximity to a higher order settlement, they are proposed to be defined as Urban Cluster Settlements. As such, to focus economic and infrastructure impact of growth on the high order settlement, no planned strategic growth is proposed in these settlements. Growth can still take place through windfall and rural exception sites, but should be limited to that which can support the settlements sustainability and retains its character and identity. By linking these settlements more closely with their higher order neighbour it allows for more appropriate spatial policies to be drawn up to support their mutually supportive relationships.

Local service centres and clusters

5.15 There are two settlement clusters, which when grouped together provide the majority of services as defined in policy. These are the Doddington/Wimblington and Wisbech St Mary clusters. Furthermore, the stand alone settlement of Manea, while not having the population, has the majority of services on its own and should be considered for further growth through the FNPV process. These settlements are set out in the following tables.

Table 6.5: Doddington/Wimblington Local Service Cluster - Summary

Name	Pop	Convenience	A2 Comparison	Banks	Food_Drink	Post_Office	Pub	Library	Church	Village_Hall	Doc_Surgery	Prim_School	A_SS	A_higher_centre	Industry
Wimblington	1780	2	3	0	0	1	2	Mobile	2	Y	0	1	0	8	Yes
Doddington (H)	2140	3	1	1	1	1	2	Mobile	2	Y	1	1	0	8	Yes
Total	3920	5	4	1	1	2	4	0	4	0	1	2	0	16	0

Table 6.6: Wisbech St Mary Local Service Cluster - Summary

Name	Pop	Convenience	A2 Comparison	Banks	Food_Drink	Post_Office	Pub	Library	Church	Village_Hall	Doc_Surgery	Prim_School	A_SS	A_higher_centre	Industry
Murrow	970	0	0	0	0	0	1	Mobile	1	Y	0	1	0	2	
Parson Drove	900	2	0	0	1	1	2	Mobile	2	Y	1	1	0	2	
Wisbech St. Mary *	3140	1	0	0	1	1	3	Mobile	2	Y	0	1	0	4	
Guyhirn	660	1	0	0	0	0	1	Mobile	0	Y	0	1	0	6	
Tholomas Drove	100	0	0	0	0	0	1		0		0	0	0	3	
Ring's End	90	0	0	0	1	0	0	Mobile	1		0	0	0	3	
Total	5860	4	0	0	3	2	8	0	6	0	1	4	0	20	0

Table 6.7: Manea Local Service Centre- Summary

Name	Pop	Convenience	A2 Comparison	Banks	Food_Drink	Post_Office	Pub	Library	Church	Village_Hall	Doc_Surgery	Prim_School	A_SS	A_higher_centre	Industry
Manea	1810	2	0	0	2	1	1	Mobile	2	Y	1	1	0	1	Yes
Total	1810	2	0	0	2	1	1	0	2	0	1	1	0	1	0

5.16 The FNPV work proposes the clustering approach to recognise that rural settlements have mutually supportive relationships, that when taken as a complete picture can provide the role of a service centre. This approach allows for strategic growth to be considered within these clusters. This is a departure from the previous Fenland Settlement Hierarchy (2006). In adopting this approach, more opportunity and capacity to focus sustainable growth across the district is identified for testing through the FNPV work.

5.17 Manea is included as a Local Service Centre because it has the full range of service, defined in policy, to support its population. As such, it is included within this category for the FNPV work to assess its potential to accommodate growth due to its potential. It lacks the population requirement, but with additional growth this could increase, supported by existing and expanded provision.

5.18 It is assumed that the level of growth in each cluster to achieve a new doctor's surgery or primary school would be too large in terms of the settlement character and identity to warrant testing it as a potential local service cluster. As such, the scale of strategic growth will be based on projected capacity of existing facilities (principally primary school and doctors) given demographic changes, planning permissions, windfalls and rural exception assumptions, plus an extension of 1 form of entry or 1 GP. This can be refined through discussions with providers. Furthermore, transport access (to secondary schools, higher order settlements and between settlements within the cluster) will be assessed to inform potential strategic growth allocations.

5.19 The other cluster that was considered but discounted due to lack of critical mass of existing population and services was the cluster of settlements to the north of Wisbech, which include Tydd St Giles, Tydd Gote, Foul Anchor and Newton. This is set out below.

Table 6.8: Tydd St. Giles Discounted Cluster - Summary

Name	Pop	Convenience	A2 Comparison	Banks	Food_Drink	Post_Office	Pub	Library	Church	Village_Hall	Doc_Surgery	Prim_School	A_SS	A_higher_centre	Industry
Tydd St. Giles	730	1	0	0	0	0	1	Mobile	2	Y	0	0	0	2	
Tydd Gote	80	1	0	0	0	1	1		1		0	0	0	2	
Foul Anchor	80	0	0	0	0	0	0	Mobile	0		0	0	0	2	
Newton	440	0	0	0	0	0	1	Mobile	1	Y	0	1	1	2	
Total	1330	2	0	0	0	1	3	0	4	0	0	1	1	8	

Local Service Clusters

Doddington & Wimblington Cluster
Wisbech St Mary Cluster (Wisbech St. Mary, Murrow, Parson Drove , Guyhirn , Tholomas Drove , Ring's End)

Local Service Centre
Manea

Villages

5.20 Based on those settlements that are not part of an Urban Cluster or Local Service Centre or Cluster as defined above, the following settlements can be defined in the hierarchy as villages.

Table 6.9: Villages - Summary

Name	Pop	Convenience	A2 Comparison	Banks	Food_Drink	Post_Office	Pub	Library	Church	Village_Hall	Doc_Surgery	Prim_School	A_SS	A_higher_centre	Industry
Tydd St. Giles	730	1	0	0	0	0	1	Mobile	2	Y	0	0	0	2	
Tydd Gote	80	1	0	0	0	1	1		1		0	0	0	2	
Foul Anchor	80	0	0	0	0	0	0	Mobile	0		0	0	0	2	
Newton	440	0	0	0	0	0	1	Mobile	1	Y	0	1	1	2	
Stonea	80	0	0	0	0	0	0		0		0	0	0	0	
Benwick	920	0	0	0	0	0	1	Mobile	0	Y	0	1	0	2	
Christchurch	540	0	0	0	0	0	2	Mobile	1	Y	0	1	0	1	
Coldham	170	0	0	0	1	0	0	Mobile	0		0	0	0	4	
Turves	360	0	0	0	0	0	1	Mobile	0		0	0	0	1	
Total	3400	2	0	0	1	1	7	0	5	0	0	3	1	16	0

5.21 Based on the existing level of provision within these settlements, no strategic growth should be proposed in these areas. This is the same approach as adopted in the previous settlement hierarchy for the district

Growth in relation to villages and settlements supported by market towns

5.22 To ensure that settlements are not caught in Taylor's 'sustainability trap' (see policy summary), growth will need to be acceptable in all settlements where it can be shown that it will come forward sustainably. The soon to be published Localism Bill should include new legislation on how this could come about. At this stage, the proposals by the Rural Coalition in 'The Rural Challenge' (2009) could be considered through FDC's development policies within its Core Strategy. These set out that development in rural settlements should be allowed where

- Parish Council support as part of a community-led plan backed by the principal authority councillors from that community.
- Sound evidence of need.
- The scheme is affordable in perpetuity.
- A suitable, viable site.
- Appropriate scale.
- Good design.

5.23 The level of growth and its impact would need to be dealt with on a case by case basis. It terms of where this allocation should come from, it could be identified as part of the windfall allocation and rural exceptions allocation. Understand the Coalition Government's proposals for Community Right to Build will also be important in this regard.

The settlement hierarchy & key plan

5.24 The settlement hierarchy set out the main settlements and clusters as per the proposed approach. This supports the key plan, which sets out the headlines of the overall spatial strategy for Fenland, based on the settlement hierarchy, emerging vision and town-wide objectives.

5.25 It should be underlined that the settlement hierarchy is one point of entry to understanding the growth need and capacity of each settlement. As such, the remainder of the report looks in more detail to assess the most appropriate level and location for growth across Fenland.

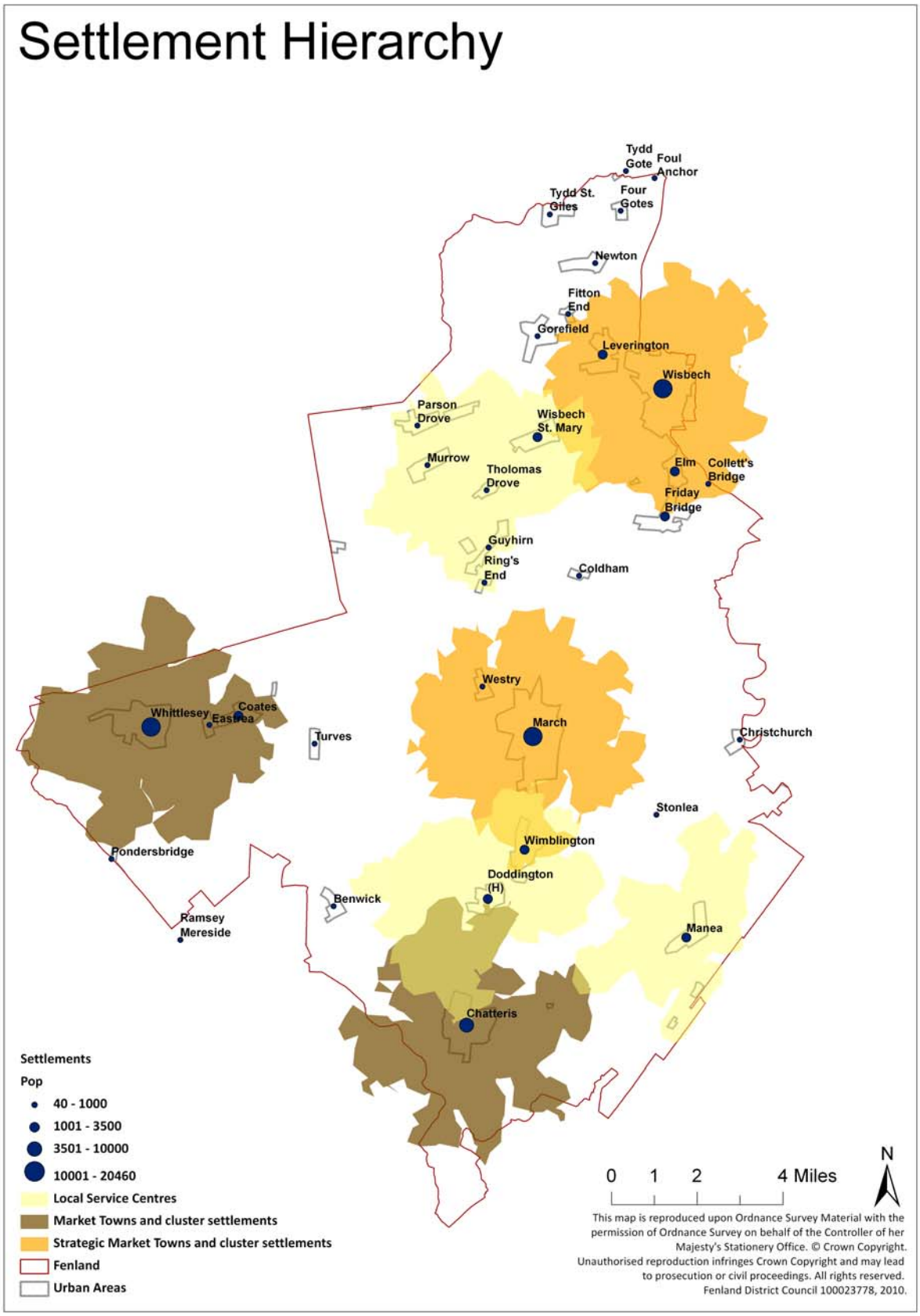


Figure 6.1: Settlement Hierarchy

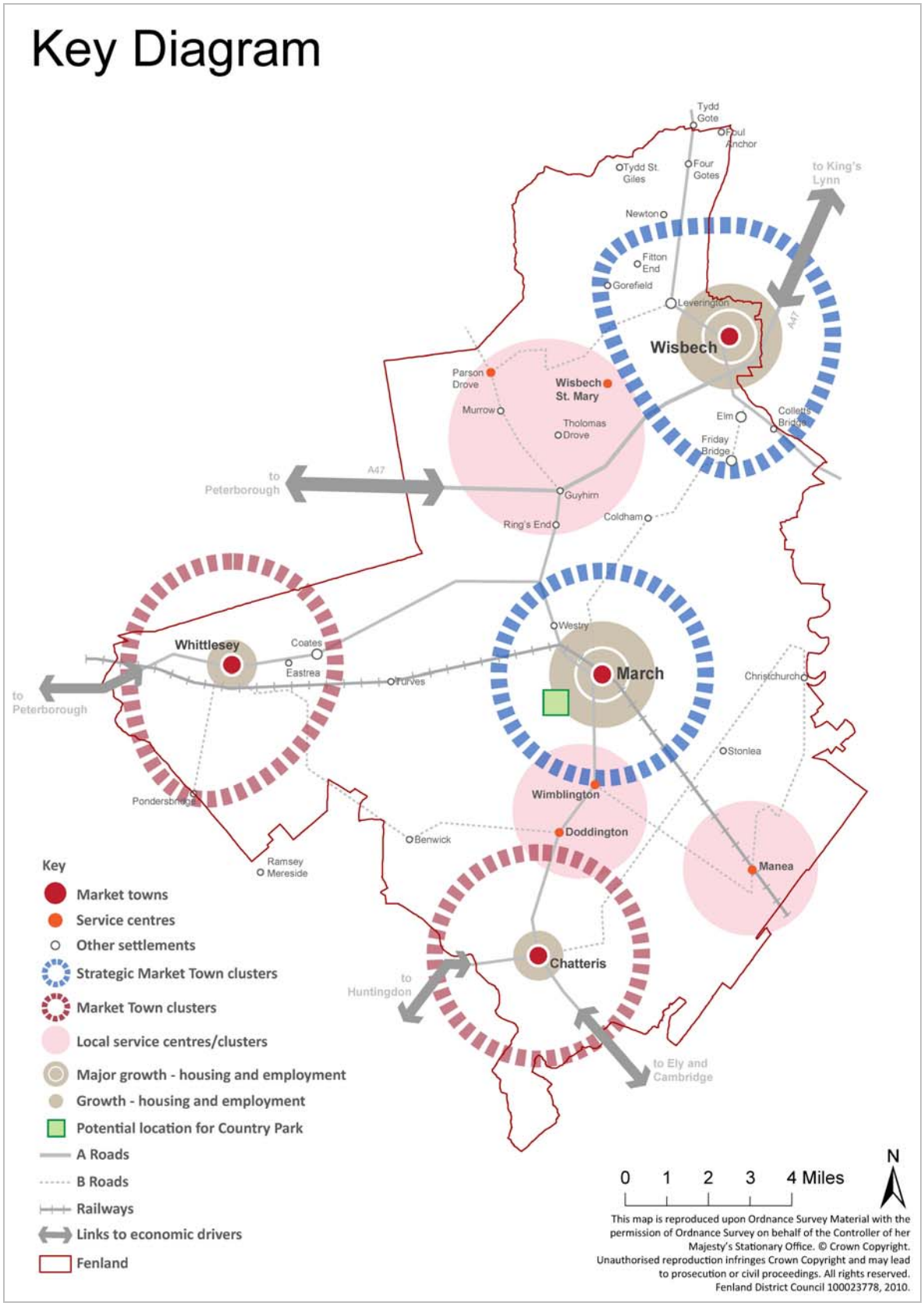


Figure 6.2: Spatial strategy key plan

6. The key settlements

6.1 The Stage 1 report looked at district wide issues across Fenland. This work concluded with a vision and 7 Strategic Programmes. In order to understand the potential for growth across Fenland and in particular the spatial distribution of it, it is useful to understand in more detail its four main settlements, as these will be a major part of any growth strategy coming forward. This chapter identifies a number of town-wide objectives against which growth should be assessed.

Wisbech

6.2 Wisbech is the largest settlement in Fenland with a population of approximately 20,500. An inland port located on the River Nene, Wisbech has long played an important role as a trading centre serving a wide rural catchment. Today it remains an important destination for comparison retail and services for the surrounding rural communities. Key sources of employment include food processing industries, as well as manufacturing, logistics and storage. The town is characterised by high levels of deprivation. In terms of the local economy, poor educational attainment, low skill levels and worklessness continue to undermine the town's competitiveness and ability to attract new investment.

6.3 The competitiveness of Wisbech is affected by its relatively poor accessibility. The town is no longer served by a railway station, while the A47 and A1011, which provide strategic vehicular access, are single-carriageway and heavily congested. The town centre suffers from localised congestion associated with the convergence of busy routes carrying goods traffic from Norfolk and Lincolnshire.

6.4 The limited success in attracting new employers, particularly those operating within higher value growth sectors has reinforced the town's narrow employment structure, low wage profile and high benefit claimant rate. Low levels of disposable income are reflected in the declining health of the town centre, which the Council's Retail Study (July 2009) highlighted as having fallen from 368th to 511st in the UK Shopping Index between 2001 and 2008. A number of communities contain pockets of severe deprivation characterised by poor health, inadequate housing and low levels of community cohesion.

6.5 Although all of Fenland's settlements contain pockets of deprivation, it is clear that Wisbech is the town with the greatest need for regeneration and where the benefits of growth could be most keenly felt. The delivery of new and improved social infrastructure, together with the investment in Thomas Clarkson College through the BSF scheme, will be vital in addressing health inequalities, improving skills and promoting community cohesion. While improving skills levels are vital in improving the town's competitiveness, unless there is an increase in the range of employment available, there will continue to be a 'brain drain' as skilled labour seeks opportunities elsewhere. There is a need for a greater variety of employment space to accommodate a range of new businesses in different sectors, in both town centre and out-of-town.

6.6 Wisbech has a number of existing physical assets that can provide a catalyst for change. The town centre, although having suffered from steady decline, nevertheless boasts an exceptional built heritage and a historic waterfront. Combined with its location on the A47, this unique heritage already makes Wisbech a stopping point for tourists en route to the Norfolk coastline. There is an opportunity to capitalise more fully on the town's physical distinctiveness and attractive waterfront in order to lever greater tourist spend and boost the centre's vitality. The

reuse of historic buildings can provide an attractive setting for high quality food/drink cultural, retail and visitor accommodation offer. The provision of new open space will be important in order to address identified green infrastructure deficiencies.

6.7 A number of town specific strategic objectives have been developed based on the Portrait of Place assessments.

Wisbech town-wide objectives

Place making

- Strengthen the town's role as key service centre
- Progress development on key regeneration sites in town centre
- Create a first class visitor destination building on excellent heritage assets
- Make the most of distinctive town centre physical opportunities including:
  - Nene Waterfront
  - Wisbech Port

Economic

- Create a range of distinctive employment locations (waterfront /town centre / out of town) accommodating a range of business space products
- Create a diverse economy by targeting new employment across a range of sectors and at different occupational levels
- Build on the Port area as a hub for marine based leisure, trade and/or technology sectors
- Strengthen the visitor economy and retail offer
- Maximise the role of investment from MAC programme

Social

- Tackle deprivation and persistent worklessness in priority neighbourhoods
- Improve education attainment and skills levels
- Reduce health inequalities by targeting priority neighbourhoods

Environmental

- Address congestion (Freedom Bridge and North/South movements) and town centre air quality
- Enhancing accessible green space
  - Country park
  - Suburban parks
  - Formal play equipped areas
  - Natural greenspaces
- Address flood risk
- Respond positively to climate change

March

6.8 March is an historic market town at the heart of Fenland with a population of around 20,000. It is relatively well connected by road and benefits from a railway station situated on the Stansted-Cambridge-Leicester-Birmingham line. Like Wisbech, March has an established legacy as a trading centre. Today it benefits from a town centre with an historic urban form and attractive

riverside setting, although it, like Wisbech, was highlighted in the recent Retail Study Update (2009) as poorly performing. Although the centre does not require major overhaul, there is a need to refresh the range and scope of the leisure and retail offer to maintain its function as a key service centre serving the wider hinterland. In addition, there is potential to capitalise on the town's heritage and accessibility in order to strengthen the visitor economy.

6.9 Fenland's ongoing economic function as a centre of agricultural production is reflected in a number of food production businesses which are key employers in the town. As the administrative centre of the district and home to the Council's offices, the public sector is also an important local employer. Home to Network Rail's supply and infrastructure depot, March supports a variety of rail-based jobs in freight and logistics. There is an opportunity to build on this existing strength to attract rail-based engineering employment.

6.10 While March's accessibility provides an opportunity to attract such higher value sectors, as well as ICT and creative sectors, this will be crucially dependent on efforts to increase skills. Although March benefits from a number of stable employers, its economic competitiveness and ability to attract new sectors is undermined by relatively low levels of educational attainment and skills. March is home to some pockets of relatively severe deprivation, including East March, which are characterised by a high incidence of worklessness and poor health. BSF investment in Neale Wade Community College will be an important step in addressing low aspirations, increasing skill levels and encouraging lifelong learning. Further social infrastructure investment will be vital to addressing health inequalities and ensuring services respond to anticipated demographic change over the next twenty years. Given the identified shortage of open space in Fenland, providing new open spaces, including a potential Country Park, will be an important component of future development in March.

6.11 A number of town specific strategic objectives have been developed based on the Portrait of Place assessments.

March town-wide objectives

Place Shaping

- Strengthen role in settlement hierarchy as service centre for hinterland
- Enhance the physical appearance of the town centre
- Exploit potential of River Nene in place making
- Exploit March's advantageous location at the heart of Fenland-a well connected town, with good links to Peterborough and London

Economy

- Strengthen the retail and visitor economy to capture more income
- Build on existing strengths and encourage and support new rail based engineering and other advanced manufacturing/precision engineering employment
- Position March as a high quality employment location driven by growth in business and professional services, ICT, Creative Industries and lifestyle business.

Social

- Tackle deprivation and worklessness in March East
- Improve education attainment and skills levels
- Reduce health inequalities in east and west of town
- Consider redevelopment of George Campbell leisure centre

Environmental

- Reduce heavy goods movements through town
- Opportunity for enhancing accessible green space
  - Country park
  - Accessible natural greenspaces south of the town centre
  - Formal play equipped areas (town centre fringe & south eastern surburbs)
- Respond positively to climate change

Whittlesey

6.12 Whittlesey is a broadly linear settlement situated in the west of the district with a population of around 13,000. It has a close functional relationship with Peterborough which is located only a few kilometres to the west. Although Whittlesey is a local service centre in its own right, Peterborough's role as a major sub-regional employment centre has seen Whittlesey emerge as an increasingly popular settlement for out-commuters. Nevertheless, Whittlesey is not purely a dormitory town and supports important local employers including a brickworks and McCain Foods.

6.13 The town centre predominantly serves a localised convenience retail and service function supporting a relatively small catchment. There is scope for environmental improvements to enhance the physical appearance of the centre, which is somewhat dominated by the A605 which runs east-west through Whittlesey. Future growth of the town should focus on strengthening the centre which has displayed increasing vacancy rate in recent years, in order to stem income leakage to neighbouring centres. Although the town is located on the line between Ely and Peterborough, services from Whittlesey rail station are limited.

6.14 In addition to transport constraints, investment in social infrastructure capacity will be required to support future growth in Whittlesey. The infrastructure component of Fenland Neighbourhood Planning Vision has helped to identify requirements in terms of unlocking development in the town. Investment in Sir Harry Smith Community College represents an important step in improving skills, which in common with the rest of Fenland, are below the Cambridgeshire average.

6.15 A number of town specific strategic objectives have been developed based on the Portrait of Place assessments.

Whittlesey town-wide objectives

Place Shaping

- Retain existing character as small market town , with key role in settlement hierarchy
- Strengthen role as a vibrant service centre to capture more spend from out commuters living locally

Economic

- Utilise industrial land assets to provide more employment locations
- Improve connections between town and employment areas
- Strengthen retail and amenity offer in town centre
- Prioritise place making and environmental improvements to reinforce the town

centre offer

Social

- Improve education and skills

Environmental

- Localised town centre congestion
- Opportunity for enhancing accessible green space
  - Suburban park
  - Outdoor sport facilities in north & east
  - natural playspace in town centre
  - formal play equipped area in north and east
- Respond to climate change

Chatteris

6.16 Located in the south of Fenland, Chatteris is the smallest of the four market towns with a population of approximately 10,000. It boasts an attractive town centre, with narrow streets and a rich mix of historic properties forming a tight urban grain which contributes to the town's unique character. The town centre is in relatively good health. As well as serving a local retail function, Chatteris features several hotels and a range of pubs, bars and restaurants which indicate its role as a visitor destination as well as a service centre.

6.17 Chatteris has grown quickly in recent years with the town's proximity to Cambridge acting as a catalyst for significant housing growth. Although Chatteris is a popular choice for people commuting to neighbouring employment centres, major local employers include large-scale food production firms as well as Metalcraft, which specialises in high-end engineering solutions. The construction of the South Fens Business Centre reflects the ambition to harness 'knowledge spillovers' from the dynamic Cambridge sub-region and strengthen Chatteris as an employment hub.

6.18 To attract the required skills to Chatteris, future development should focus on the creation of 'neighbourhoods of choice' which respect the town's historic character and scale that have underpinned Chatteris' current popularity. In addition to bringing forward desirable family housing, growth will need to be accompanied by high quality social infrastructure. As such, Fenland Neighbourhood Planning Vision's infrastructure work provides an estimate of the requirements for future provision in Chatteris for different growth scenarios.

6.19 While attracting new skills and talent is a crucial aspect of capitalising on the dynamism of the Cambridge sub-region, up-skilling the existing and future workforce of Chatteris is also paramount. Cromwell College will benefit from investment through the BSF programme. This capital spending provides the opportunity to increase the physical capacity of facilities, improve skill levels in Chatteris and establish the College as a community hub which provides a focus for lifelong learning.

6.20 A number of town specific strategic objectives have been developed based on the Portrait of Place assessments.

Chatteris town-wide objectives

Place Shaping

- Retain existing character as small market town , with key role in settlement hierarchy
- Higher-end employment location reinforced by high quality housing offer and proximity to Huntingdonshire, Ely and Cambridge

Economic

- Location for accommodating knowledge 'overspill'
- Build on the existing high value engineering (e.g. Metalcraft) and skills centre
- Support South Fens Business Park expansion (Phase II) – a knowledge economy hub
- Create 'talent attractor' neighbourhoods

Social

- Improve education and skills
- Improved leisure facilities and social infrastructure

Environmental

- Opportunity for enhancing accessible green space
  - Potential for new country park
  - Accessible natural greenspace
  - Park & Gardens
  - Outdoor sport facility in North
- Respond to climate change

Section 2
Shaping the growth

7. Setting strategic growth targets

FNPV growth options for the key settlements

7.1 The FNPV work has to balance the need to create a robust and evidenced justification for growth targets, while also supporting an aspiration to shape the district and push the boundaries to maximise opp34ortunities for existing and new residents and employers.

7.2 To test growth against its impact on jobs, social infrastructure, transport and utilities, three growth scenarios, based on an assessment of physical opportunities and constraints have been developed based on scale and risk/opportunity of development opportunity.

7.3 The proposed growth locations are set out in the next chapter and includes considerations of:

- Town centre opportunities
- An assessment of broad locations around the each key settlement for
    - Residential-led urban extensions
    - Employment land allocations

7.4 The three growth scenarios explore what different scales of growth could mean. To do this, over the following chapters, the FNPV work identifies for each scenario:

- Housing targets (Chapter 9)
- Population projections (Chapter 10)
- Employment land and job targets (Chapter 11)

7.5 From this it is then possible to take the physical assessment of constraints and opportunities and assess these options against a number of key areas:

- Economic development (Chapter 12)
- Social infrastructure (Chapter 13)
- Transport and movement (Chapter 14)
- Utilities and sustainable technologies (Chapter 15)
- The property market (Chapter 16)

7.6 Based on these assessments, the FNPV work recommends the minimum and maximum scale of development appropriate to each of the key settlements. The minimum level will be based on the most defensible position, while still seeking to achieve the vision, strategic programmes and town-wide objectives outlined earlier in this report. The maximum level will be based on exploiting the full a range of opportunities, while acknowledging that to achieve it, a series of key changes will need to take place. On this basis, the FNPV work will then inform the emerging FDC Core Strategy, will take as its base, the minimum level, but promote the full range of growth up to the maximum option.

FNPV growth options for other settlements across the district

7.7 Clearly the FNPV work needs to consider the potential of other settlements within the district to accommodate growth. The approach here is based on the settlement hierarchy and focuses on

the Local Service Centres and Clusters level to consider if an amount of strategic growth can be accommodated based on existing infrastructure provision.

8. The strategic market towns & market towns – broad locations for growth (housing and employment)

Introduction

8.1 The chapter focuses on the potential capacity of the four market towns in Fenland to support strategic housing and employment growth. It considers the physical capacity, opportunities and constraints and provides the basis for establishing three growth scenarios of increasing scale, which in turn informs alternative population and employment projections to allow for an assessment of infrastructure needs from the different growth scenarios to be assessed.

8.2 In discussion with FDC planning officers, it has been agreed that strategic growth in other settlements within the hierarchy (below the market towns) will be based on existing infrastructure capacity, as growth in these areas should not be of a scale required to deliver new facilities (e.g. a new school). This is dealt with in the next chapter. This chapter comprises of two core components:

- Town Centre Assessments
- Broad Location Assessments

8.3 The town centre assessments look at opportunities for long term change and development for each of the key settlements in Fenland. These assessments are based on urban design and socio-economic analysis of each town. They focus on the strategic scale and do not identify detailed site capacities and land use mix. This finer grain detail will need to be identified through town-centre specific masterplanning and/or development briefs for key sites.

8.4 The Broad Locations Assessments consider spatial, environmental and physical constraints, which help to determine the capacity of Fenland's key settlements to accommodate:

- Strategic housing growth (through sustainable urban extensions)
- Strategic employment growth (through new allocations)

8.5 The broad locations are, in effect, arbitrary areas of search which correspond broadly to the north, south, east and west of each town. A map of each of these areas is included in the relevant section for each of the four towns. Broad locations are narrowed down into more specific 'Opportunity Zones' from which an outline understanding of housing numbers can be derived and more focused testing can be undertaken against economic projections, viability, infrastructure and sustainability criteria. It should be noted that quantum for employment sites will need to wait until the emerging Employment Land Review is completed by FDC. At this stage, the sites included relate to the previous Employment Land Review (2007), but have been tested through AECOM's broad location assessment process.

8.6 To determine the growth potential of broad locations, a range of thematic development criteria have been developed. These criteria relate to Fenland's Sustainability Appraisal (SA) objectives, but are articulated in a way which is more appropriate to this scale of search. The constraints and opportunities allow for a judgement to be taken as to whether a particular broad location has potential to accommodate development. These identified areas are considered to be

'opportunity zones'. The full assessment against these criteria is set out for each town as Appendix B.

Table 8.1: Area Development Criteria

Criteria	Opportunity (low risk)	Constraint (high risk)
Brownfield Land	Opportunities for reuse of brownfield land	Greenfield site – no opportunity for reuse
Grade of Agricultural Land	Poor quality agricultural land (Grade 5) – development could make better use of land	High quality agricultural land (Grade 1-2) that should be protected for
Water Resource (Extraction)	No extraction issues for future development	Unmitigatable issues that would constrain sustainable development
Water Network Capacity (Pipe network)	No capacity issues for future development	Exceeds existing Capacity that would constrain sustainable development
WWT Capacity	No capacity issues for future development	Exceeds existing Capacity that would constrain sustainable development
Minerals	Not within safeguarded minerals area	Within or partly within safeguarded minerals area
Proximity to Hazardous Pipelines and Gas Compressor Stations (assuming sensitivity level 3 – large developments for more than 30 dwelling units)	High pressure main unlikely to affect development opportunities	High pressure main running through middle of potential development opportunities
Proximity to European and National wildlife sites	Over 5km from designated site and therefore unlikely to need Appropriate Assessment	Less than 5km from designated site and therefore will need Appropriate Assessment
National / Local Designation	Not on site	Onsite
BAP / HAP priority species/area	Not on site	On-site
Onsite habitat	Limited / Monoculture, which can be or is provided elsewhere	High / Diverse mix of species that would need to be protected through development
Historic Features (SAMs, listed buildings, structures and features)	No heritage asset / opportunities to make positive impact (dependent on type heritage asset)	Limited opportunities to make positive impact (dependent on type heritage asset)
Relationship to settlement pattern (inc morphology, visual impact and character of settlement)	Character / urban design assessment demonstrates positive impact to town centre and surrounding uses	Character / urban design assessment demonstrates negative impact to town centre and surrounding uses
Flooding	Out of Flood Zone (i.e. in Flood Zone 1	3a or b

Criteria	Opportunity (low risk)	Constraint (high risk)
Potential low carbon/ renewable energy sources for new built development.	Potion of opportunity would allow for low carbon energy sources to be included	No capacity for sites to accommodate low carbon energy sources
Potential for increase from transport related carbon emissions	Located within walking distance (1km) to public transport hub or key employment / retail	Located further than 3km from public transport hub or key employment / retail
Noise (only relevant for residential assessment)	Not next to noisy neighbour (road / industry)	within 300m of noisy neighbour (road / industry)
Land contamination	More than 500m away from known contaminated land	Within 50m or located on known contaminated land
Road network safety and capability	Direct access to strategic and/or principal road network with minimal network capacity constraints (AM and PM peaks)	Requires new infrastructure to access strategic and/or principal road network, or significant network capacity constraints (AM and PM peaks)
Rail access	Development opportunity less than 1k (walking)	Development opportunity greater than 3km (bus and car access)
Bus access	Good public transport connections and / or less than 500 dwellings (does not support improvements to bus infrastructure)	Poor public transport connections and / or >1500 new homes supports new commercial bus service
Opportunity to improve quality of life in most deprived areas	Adjacent to bottom quartile IMD with opportunities to create linkages and improved facilities in the area	Within 5km of area in bottom quartile IMD with limited opportunities to create linkages and improved facilities in the area
Proximity to existing employment areas (only relevant for residential assessment)	Less than 2km to enable sustainable travel to work from new development	Over 5km, so limits opportunities for sustainable travel to work from new development

Broad Locations Assessments – Housing

8.7 In terms of housing growth, the opportunity zones have been graded, depending on the relative balance of constraints with development opportunity.

- Zone 1 – Opportunity zone with limited constraints / risks
- Zone 2 – Zones with more risks / constraints, but potentially more opportunity
- Zone 3 – High opportunity zones but highly constrained

8.8 These constraints and opportunities are combined with narrative as to how these opportunity zones are envisaged to contribute to the vision for each of the four market towns, set out in the Portrait of Place chapter.

8.9 This is consistent with PPS 1, which highlights that the role of planning in achieving this by 'promoting sustainable and inclusive patterns of urban and rural development'. In order to do this, growth options should be developed by:

- making suitable land available for development in line with economic, social and environmental objectives to improve people's quality of life;
- contributing to sustainable economic development;
- protecting and enhancing the natural and historic environment, the quality and character of the countryside, and existing communities;
- ensuring high quality development through good and inclusive design, and the efficient use of resources; and,
- ensuring that development supports existing communities and contributes to the creation of safe, sustainable, liveable and mixed communities with good access to jobs and key services for all members of the community.

8.10 An assessment of each identified Opportunity Zone has been undertaken in order to get a reasonable, but indicative site boundary. A quantum of 30 dwellings per hectare was used to establish an understanding of the potential development numbers. Further work, to identify site boundaries, will be required through the planning application process.

Broad Locations Assessments – Employment

8.11 In terms of employment growth potential, the broad locations assessments identify potential options for new industrial and commercial allocations which would support town-specific and Fenland-wide economic objectives. FDC is currently undertaking an Employment Land Review which will provide detailed information to inform land allocations.

Wisbech

8.12 An initial town centre assessment has been undertaken, which seeks to build on the town-wide objectives set out in Chapter 5.

Town centre assessment

8.13 Figure 8.1: Wisbech Town Centre Opportunities sets out a number of interventions that should be explored through more detailed design and viability assessment. The assessment identifies a clear need for a comprehensive masterplan to realise the potential of the area.

1. Riverfront to west of Town Centre: Opportunity to extend new riverside public realm from Nene Waterfront into the town centre. Create new frontage and pedestrian orientated public realm.

2. Freedom Bridge and Churchill Road: Opportunity to improve streetscape and form a 'Wisbech Boulevard' with new public realm, and street planting to re-integrate parts of the town to the east of the road. Traffic speeds should be reduced and pedestrian crossing points promoted. Has important role in connecting the Nene Waterfront proposal to the town centre.

3. Eastern Town Centre Frontage: Poor quality frontage and built form along Churchill Road - opportunity to improve and re-develop where possible to form an improved impression of the town centre and to promote stronger links to the town centre from areas to the north and east.

4. Green Links: Opportunity to promote links between the major open spaces to the east and west of the town centre. Links should be strengthened to promote connections to possible development areas in the west of the town. This should include opportunities to link Wisbech Park as an important existing open space.

5. Nene River Bridge: Possibility of locating a new pedestrian bridge across the river to re-connect the western bank of the river to the town centre.

6. Southern Car Parks: Possibility of re-organising large surface car parks and redeveloping for town centre residential uses.

7. Opportunity to expand operation of the Port for commercial and or leisure activities

8.14 Opportunities within the wider town area are included in the emerging growth options (set out in Chapter 9 below) as urban capacity sites and extra urban capacity sites. Development in the town centre as identified here could support part of this allocation.

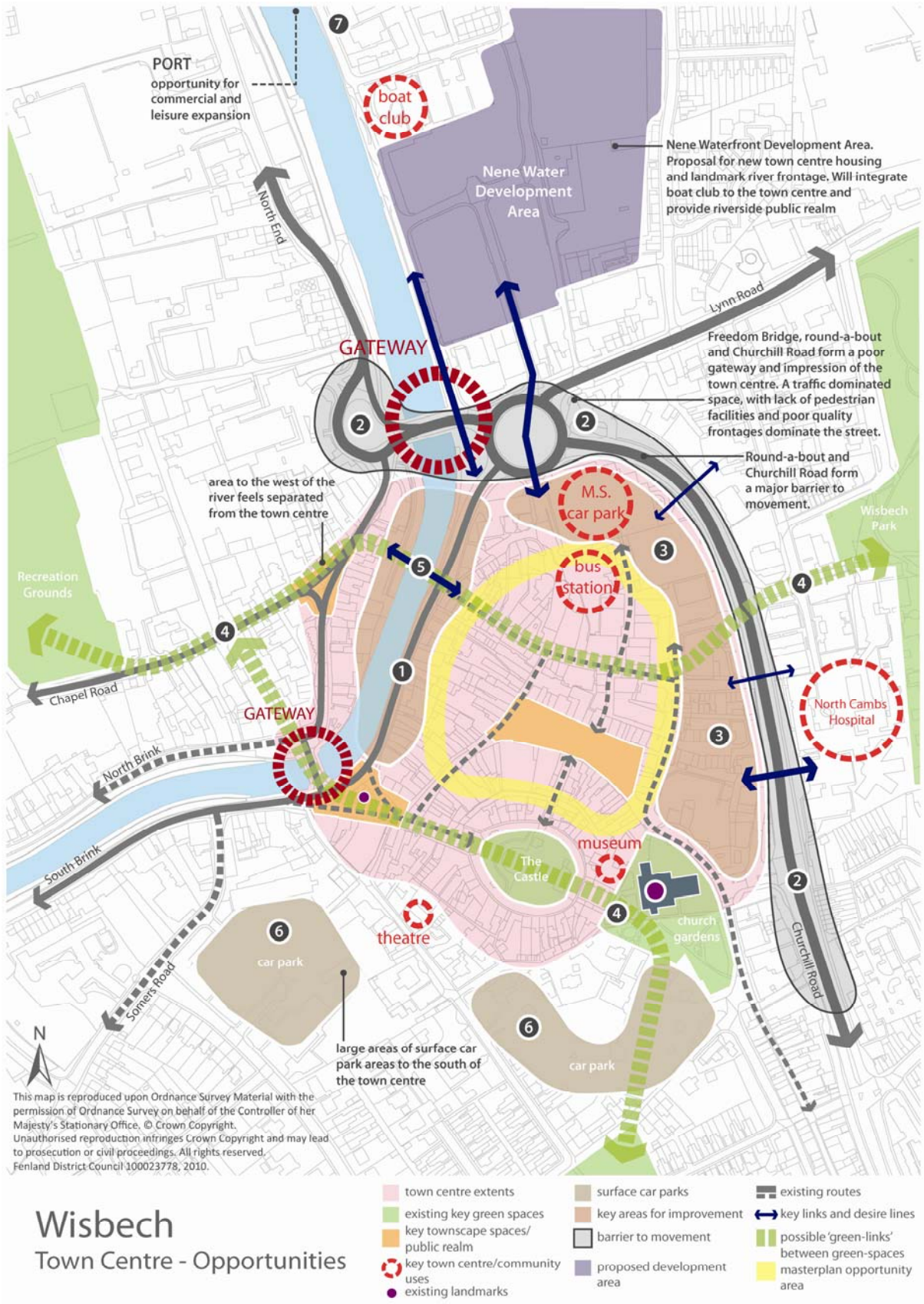


Figure 8.1: Wisbech Town Centre Opportunities

Broad Locations Assessment

8.15 Figure 8.2: Wisbech Broad Locations illustrates the four broad locations which have been used as an area of search to identify opportunities for future residential development through urban extensions as well as new employment growth.

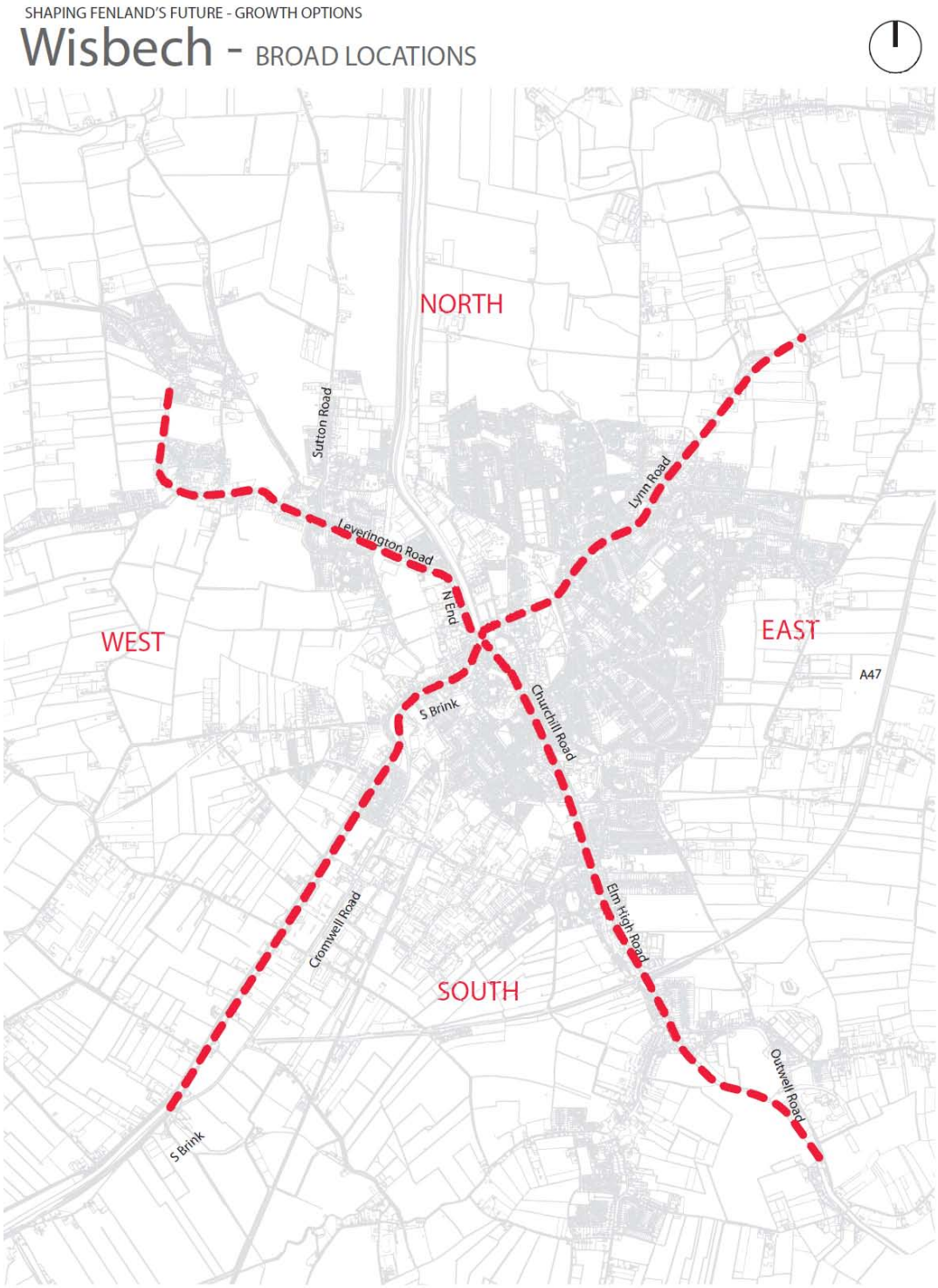


Figure 8.2: Wisbech Broad Locations

Town-wide Issues

8.16 In terms of water network capacity, Wisbech is characterised by a surplus although higher growth scenarios are likely to require more rigorous standards for water use. Furthermore, there are no constraints in terms of water extraction. There is, however, a wastewater treatment capacity shortfall, but development should be serviceable within BAT and Water Framework Directive standards. In relation to transmission, new strategic mains will be required for the majority of growth. All of the Broad Locations have limited opportunities to reuse previously developed land and would involve the loss of Grade 1 agricultural land. Nevertheless, the ecological value of these zones is relatively low in terms of biodiversity and there are no major issues in relation to nationally or internationally protected sites. All of the development zones are within or adjacent to wards within the bottom quartile in terms of IMD. As such, development within any of the zones presents an opportunity to improve the quality of life in Fenland's most deprived communities.

8.17 The town sites along the boundary with Kings Lynn and West Norfolk Council. Their Core Strategy includes provision for 500 homes adjacent to Wisbech. This has implications for considering growth locations within the FDC boundary, both in terms of urban form, but also social and strategic infrastructure planning.

8.18 The east of Wisbech emerges as the least constrained for future development. Both the north and the west broad locations have flooding issues (zone 3) and as such, if they were to come forward ahead of areas not in flood zone 3, the Exception Test will be required. With issues of access, severance and coalescence constraining future development to the north and only limited opportunities in the south, the potential for growth to the west of Wisbech becomes a key consideration. Although located within Flood Zone 3, the potentially significant regeneration benefits associated with growth in west Wisbech suggest further consideration through the Shaping project.

- Zone 1 – East Wisbech (including 500 homes allocated in the King's Lynn and West Norfolk Core Strategy)
- Zone 2 – South Wisbech
- Zone 3 – West Wisbech

8.19 Figure 8.3: Wisbech Opportunity Zones sets the Opportunity Zones that emerge through the Broad Location analysis. A summary and the full assessment are then set out. A detailed assessment table in set out in Appendix B.

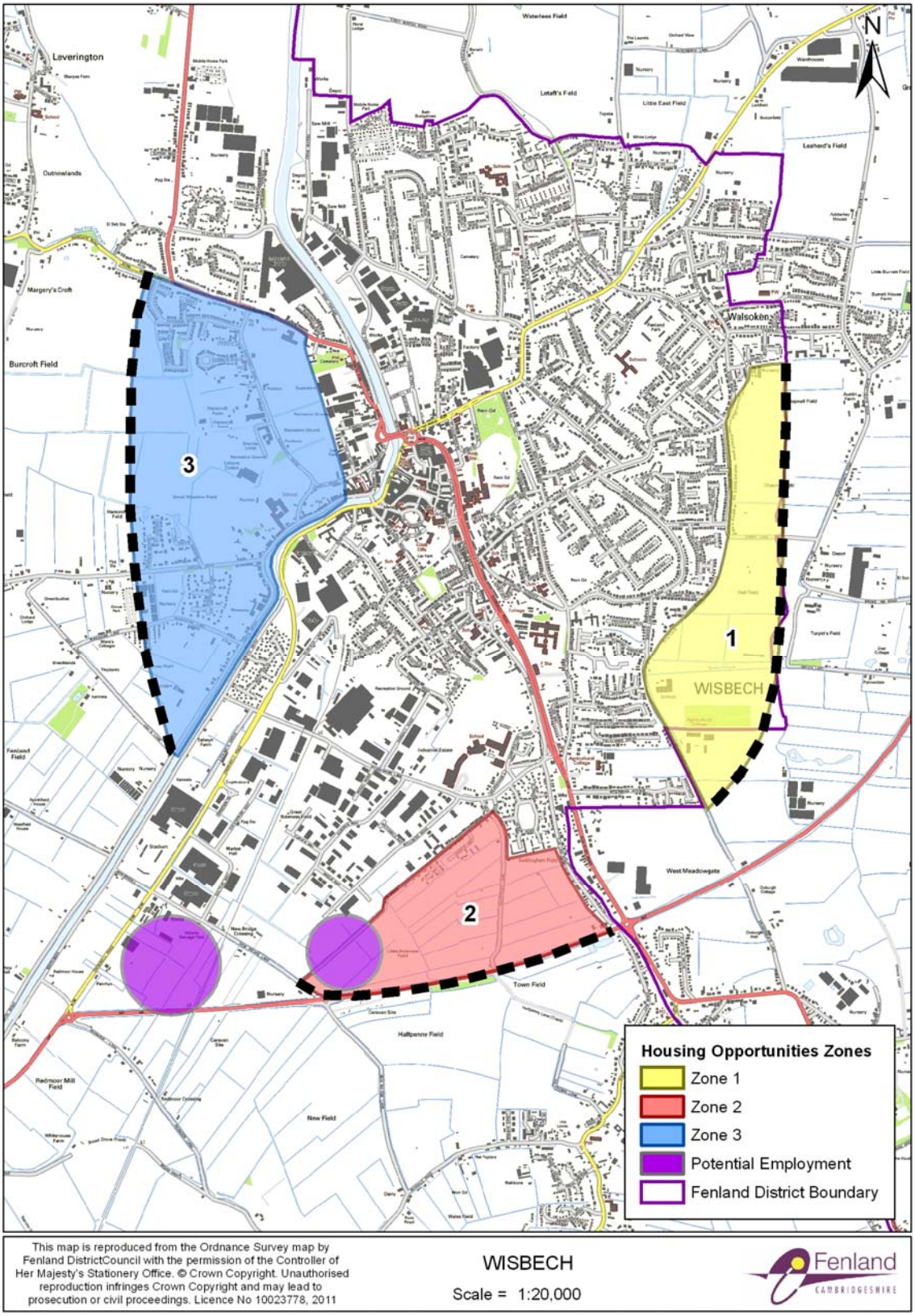


Figure 8.3: Wisbech Opportunity Zones

North – Limited opportunities

Opportunities

- Opportunity to improve quality of life in Waterlees ward
- Proximity to existing employment

Constraints

- Largely in flood risk zone 3
- Development may cause linear form with coalescence with neighbouring settlements
- Potentially incompatible neighbours
- Land within King's Lynn and West Norfolk Borough Council
- Loss of grade 1 agricultural land
- Capacity constraints on A1101

8.20 With much of the area in Flood Zone 3, flooding represents a key constraint in the northern zone should other sequentially preferable sites be suitable for residential development. A second principal constraint is that much of the land north of Wisbech is located within the King's Lynn and West Norfolk boundary, much of which is high quality agricultural land. Compared to other broad locations, North Wisbech is relatively remote from the town centre. Expansion to the north may not only discourage sustainable modes of transport but could lead to coalescence with settlements such as Leverington. However, new development may provide an opportunity to address deprivation in the ward of Waterlees. While it may be possible to bring forward their allocation of Kings Lynn and West Norfolk's 500 homes in this area, flooding and distance from the town centre are the biggest concerns with such an approach.

8.21 Although development in North Wisbech may benefit from proximity to existing employment, noise generated by the A1101 and industrial uses to the north of Wisbech may present conflicts with residential uses. Opportunities to provide access from the A1101 would be limited by existing capacity constraints and therefore significant development is likely to require substantial road improvements and infrastructure upgrades. These access constraints are likely to limit potential for further extensions to the existing employment / industrial area in North Wisbech. The impact of development on listed buildings such as Leverington church would need to be carefully considered through detailed design.

East – Good opportunities with limited constraints (Z1)

Opportunities

- Relatively good existing connections with town centre
- Potential to provide bus route to serve new development
- Improving quality of life in Staithe and Hill wards

Constraints

- Loss of Grade 1 agricultural land
- Land within King's Lynn and West Norfolk Borough Council

8.22 Given the extent of flood risk across Fenland, a major advantage of residential development East of Wisbech is that it contains a significant land parcel which is outside Flood Zone 3. Residential development would also be compatible with surrounding uses, with few noise constraints in the area (although further from the town centre, proximity to the A47 may be more of an issue). With limited land available for new homes (in flooding terms) and given the predominantly residential character of East Wisbech, employment development is considered

less suitable in the area. In terms of the urban morphology of Wisbech, new development would contribute to the already pronounced eastern 'bias' of the town and other sites could present better opportunities to connect with the town centre. This is likely to be exacerbated by the existing pattern of residential development. New development provides an opportunity to address deprivation and improve quality of life in Staithe and Hill wards. Current poor transport accessibility could be overcome with a new bus route serving potential opportunity zones.

8.23 The Opportunity Zone should include the 500 homes currently allocated in the Kings Lynn and West Norfolk Core Strategy, to ensure it is fully tested in terms of its potential cumulative impact. The Eastern Broad location includes three areas were this development could go. The preferred location is where the Opportunity Zone 1 arrow indicates in Figure 8.3: Wisbech Opportunity Zones. The site to the north is considered to be dislocated from the town centre and limits opportunities for larger scale development, as there is no real opportunity in this area for additional development within FDC boundaries. Land to the south (i.e. to the east of Elm Road) could be a reasonable opportunity for further consideration, but only if residential development to the west of Elm Road is brought forward within the FDC boundary as part of Opportunity Zone 2 development (considered as part of the South broad location assessment). This would allow for a comprehensive development, which would better connect the development within the fabric of the town.

South - Some opportunities with constraints (Z2)

Opportunities

- Proximity to existing employment area
- Access from A1101 / A47
- Improving quality of life in Medworth and Hill wards
- Building on existing employment cluster

Constraints

- Loss of Grade 1 and 2 agricultural land
- Potential severance beyond A47
- Potential conflict with industrial uses and noise from A47

8.24 Flood risk is mixed in South Wisbech with some areas to the east located outside Flood Zone 3. Although this is an advantage in terms of delivering residential development, the presence of pre-existing industrial uses and the A47 could pose conflicts in terms of noise. Nevertheless, the A47 and A1101 could prove an advantage in terms of providing convenient access to both new residential development or an extension to the existing employment allocation. The provision of new commercial floorspace will be a key component of delivering strategic economic objectives in Wisbech and Fenland more generally. There may be an opportunity to deliver both residential and employment space in South Wisbech by focusing new homes further east and reducing potential for conflicts. The provision of a mix of both employment and residential uses may also encourage more sustainable travel by reducing the need to commute by car. The potential need to dual the A47 and associated need to safeguard land will be considered in later infrastructure testing. New residential development provides an opportunity to improve quality of life in the relatively deprived wards of Medworth and Hill.

West – Good opportunities, but increased risk/constraints (Z3)

Opportunities

- Proximity to the town centre
- Contribution to more balanced urban form that could support the town centre
- Improving and enhancing existing open space
- Improving quality of life in Medworth, Clarkson and Hill wards

Constraints

- Within Flood Zone 3
- Access

8.25 Flood risk is the key constraint which limits residential development west of Wisbech and this has pushed the town's growth further eastwards away from the centre. While in flooding terms, employment development may be more appropriate in West Wisbech such uses are unlikely to unlock sufficient land values to fund the necessary new road infrastructure to overcome access constraints. If residential-led development can be deemed appropriate through the PPS25 Exception Test, there may be significant regeneration benefits for Wisbech. The primary attribute of West Wisbech as a location for residential development is its proximity to the town centre, the historic port as well as existing employment areas. Moreover, there is an opportunity to improve the quality of life of residents in the relatively deprived wards of Medworth, Clarkson and Hill.

8.26 In line with the town's strategic objective of consolidating Wisbech's role as a service centre, new developments would be within easy walking and cycling distance of the town centre, potentially helping to strengthen its vitality and viability. Development in the broad location west of Wisbech would help redress the unbalanced urban morphology and potentially create a new western gateway into the town. It would be critical for development to sensitively consider the Georgian architectural heritage and listed buildings overlooking the River Nene. New development may help to enhance to vitality of the historic North Brink as a strategic connector with the town centre, producing increased footfall to and from the new neighbourhoods. In terms of green infrastructure, there is an opportunity to improve and enhance existing open space through development in West Wisbech. Highways access is somewhat constrained by the river and there may be a requirement for a new bridge which could prove excessively costly. Infrastructure costs will be considered in Stage 3 as part of the delivery assessment.

March

8.27 An initial town centre assessment has been undertaken, which seeks to build on the town-wide objectives set out in Chapter 5.

Town centre assessment

8.28 Figure 8.4: March Town Centre Opportunities sets out a number of interventions that should be explored through more detailed design and viability assessment. The assessment identifies a clear need for a comprehensive masterplan to realise the potential of the area.

1. Town Centre Car Parks: Possibility of re-organising large surface car parks and redeveloping for town centre residential uses.

2. 'Lanes' Area: Opportunity to redevelop poor/quality disused industrial buildings to extend town centre/ residential uses to the west towards the key community buildings and the open space. Opportunity to reinforce the 'Lane' character that exists in parts of the area. Key opportunity to improve and extend river frontage.

3. New Street and 'Lane' Network: Through redevelopment of the car parks and industrial area a new network of streets and lanes can be formed, including a possible pedestrian link over the river. These will re-link the open space and town centre.

4. Town Park: Opportunity to improve park landscape and reconnect park to town centre

5. Town Centre - Hierarchy of Spaces: Opportunity to improve public space and reorientate them more for pedestrian use. Southern space can be improved significantly with new public realm and development frontage.

6. Poor quality areas to south of town centre: Possibility of re-developing these areas and for town centre residential uses. Opportunity to improve public realm.

7. 'North Bank': Opportunity to improve northern gateway to the town centre. Reduce traffic impacts on the space and introduce new pedestrian space and high quality public realm. Opportunity in the south of the area to introduce new south facing river frontage.

8. Green Riverside Link: Opportunity to improve riverside link to re-link open space to west as well as possible developments to the west.

8.29 Opportunities within the wider town area are included in the emerging growth options (set out in Chapter 8 below) as urban capacity sites and extra urban capacity sites. Development in the town centre as identified here could support part of this allocation.

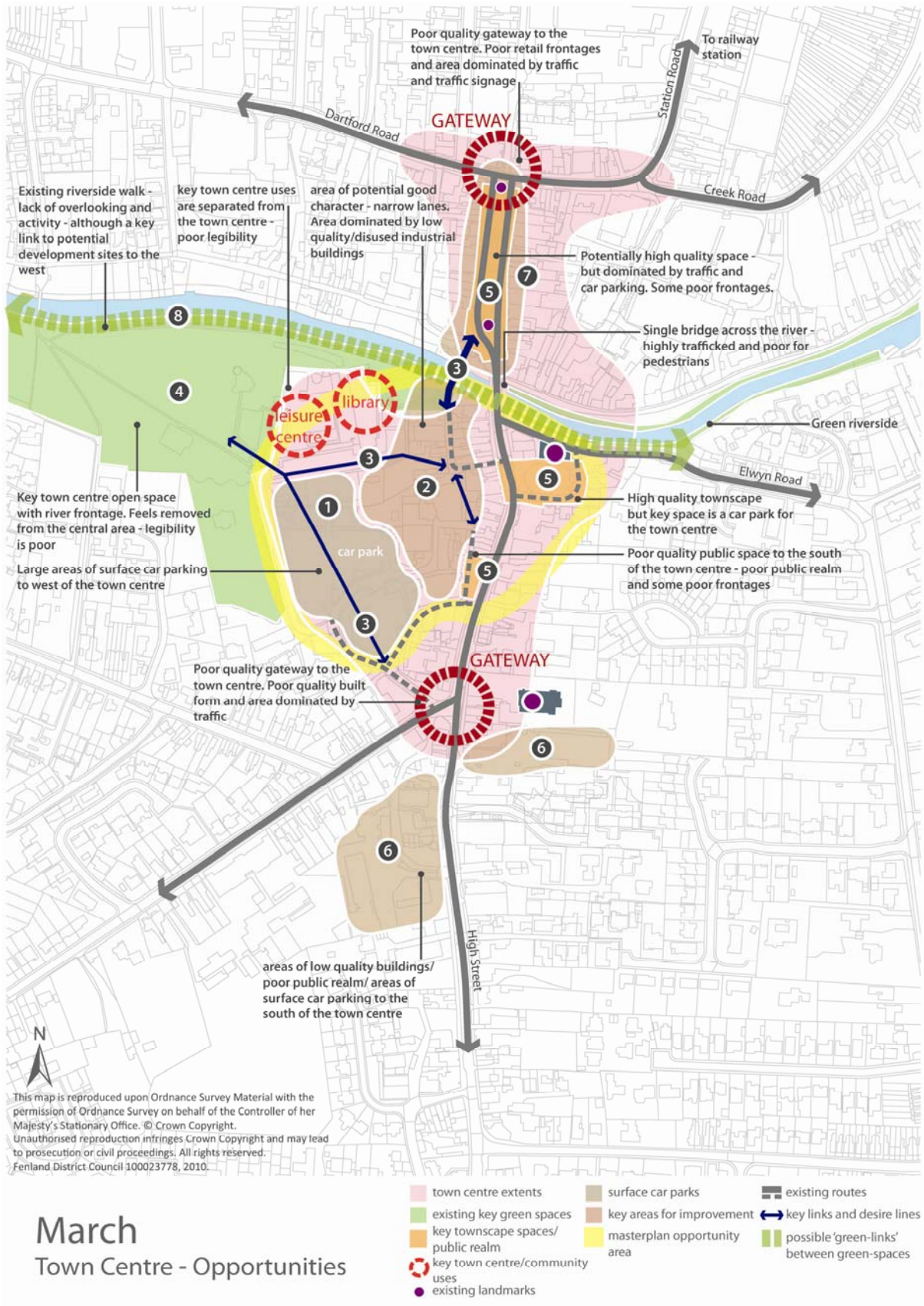


Figure 8.4: March Town Centre Opportunities

Broad Locations Assessment

8.30 Figure 8.5: March Broad Locations illustrates the four broad locations which have been used as an area of search to identify opportunities for future residential and employment development in March.

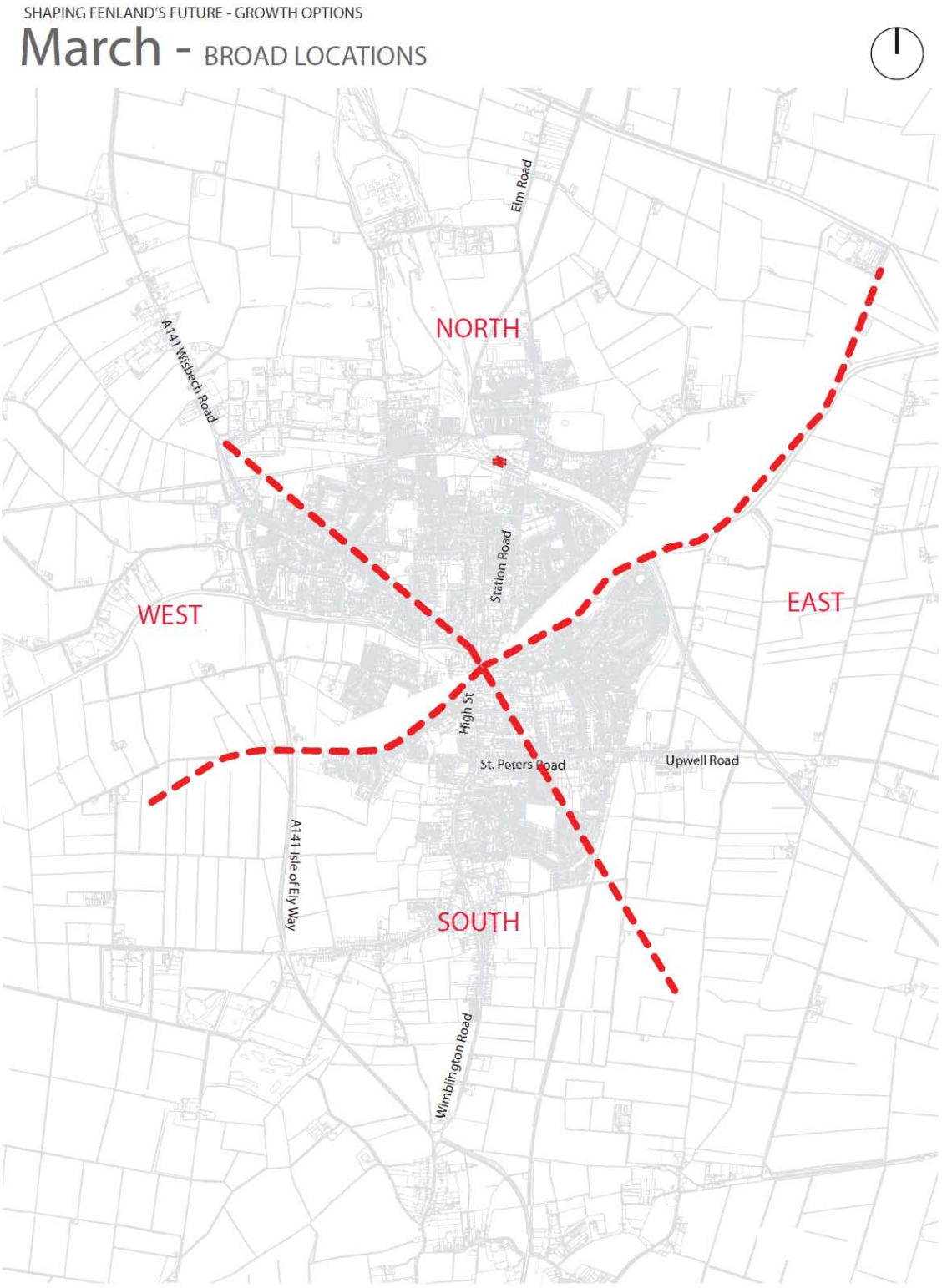


Figure 8.5: March Broad Locations

Town wide issues

8.31 Development in March is likely to put significant pressure on the waste water treatment capacity requiring new infrastructure provision. There may also be a need for water supply infrastructure to be upgraded to meet additional demand. Agricultural land around March is however generally of lower grade than elsewhere in the district and is of limited biodiversity value.

8.32 Figure 8.6: March Opportunity Zones sets the Opportunity Zones that emerge through the Broad Location analysis. A summary and the full assessment are then set out. A detailed assessment table in set out in Appendix B.

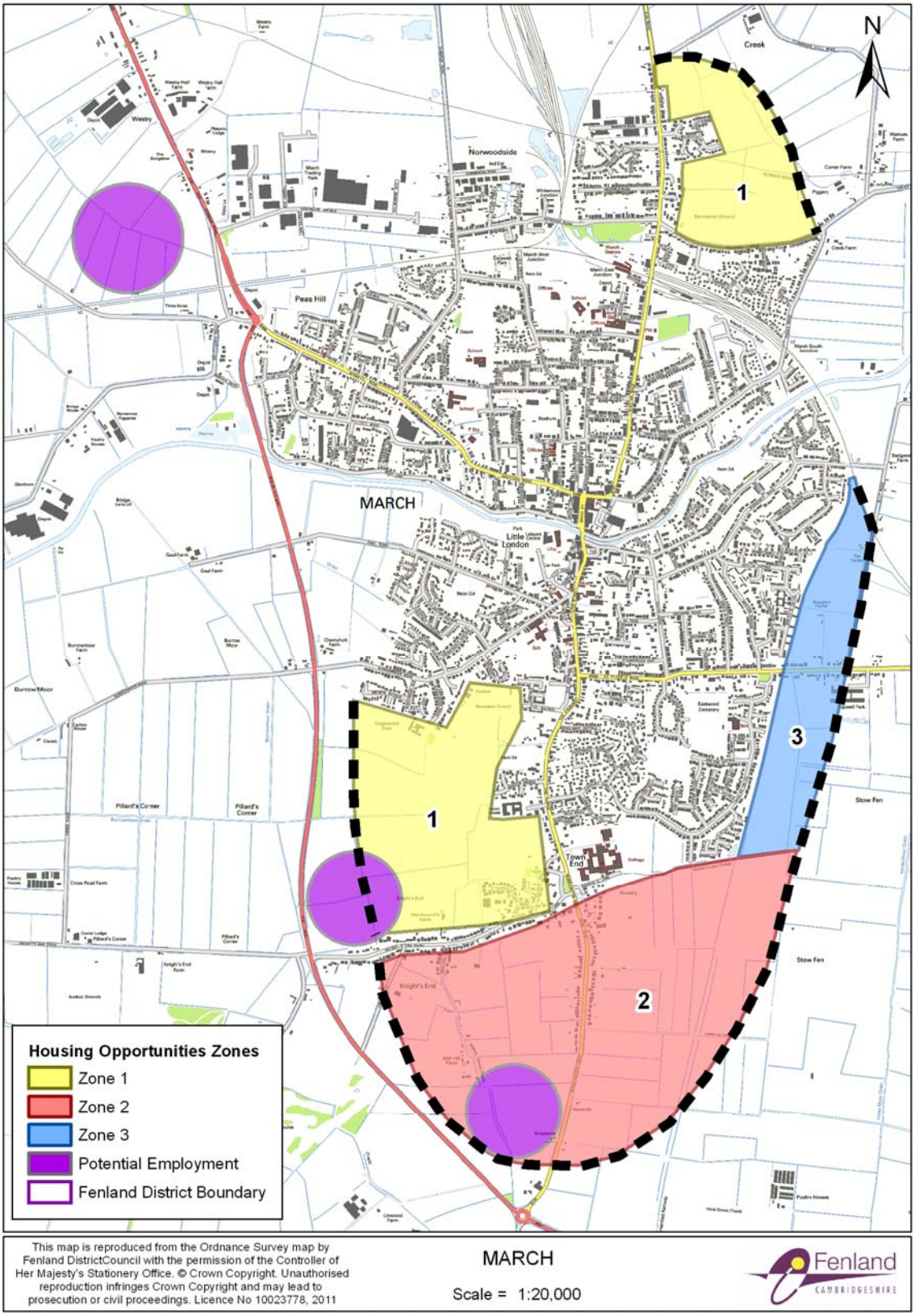


Figure 8.6: March Opportunity Zones

North – Greatest opportunities to north east where constraints are limited (Z1)

Opportunities

- Close proximity to rail station
- Proximity to key employers

Constraints

- Junction improvements required
- Level crossing
- Potential conflicts with neighbouring uses in the NW

8.33 While flooding represents a constraint in some areas of North March, there are locations outside Flood Zone 3 which may be suitable for new residential development. Specifically, in North East March there is an opportunity to capitalise on the location of the station, although access constraints may need to be overcome through junction and crossing improvements. These are being investigated through the March Area Transport Study. Additionally, the opportunity zone identified in North March is located a short distance from a number of employers which may further promote sustainable travel choices for local commuting trips. In the west of the broad location, there may be conflicts between residential developments and existing industrial uses, the marshalling yard, the prison, and land fill sites. As such, new employment space which builds on the existing allocation may be appropriate in North West March, particularly given favourable highways access from the A141. Any future development would need to ensure that County wildlife sites are protected and enhanced. Higher quality agricultural land may be lost through development compared to other broad locations in March. There are also sites within a safeguarded minerals allocation.

8.34 The railway is a key asset for March and there is potential opportunity to capitalise on locations in close proximity of the station. The least constrained sites would be to the north east of the town, although they would have to respect the area of open space and those within the flood risk zone. Significant opportunities also arise in the south west where land is of lower agricultural grade, out of the flood risk zone and provides scope to work with the urban morphology of the town. Development would however have to be respectful of the existing employment activities. Additional opportunities exist further to the south, although these eventually run into areas liable to flooding and risk coalescence with Town End. Areas to the west would benefit from proximity to the town centre but are constrained by flood risk and similarly there are small areas to the east that might be suitable for development but are constrained by higher quality land, and flood risk beyond the rail line. As such sites within the north and south west are more likely to come forward early, with development extending south to follow.

- Zone 1 – North east March and South west March
- Zone 2 – South March
- Zone 3 – East March

East – Opportunities with some constraints (Z3)

Opportunities

- Could contribute to improving quality of life in March East ward
- Close to town centre

Constraints

- Access through existing residential areas to town centre
- Severance beyond rail line
- Flood risk beyond rail line

8.35 Along with flood risk which increases with distance from the town centre, the railway line acts as a key constraint to development east of March. Although East March benefits from including land within 1km of the town centre, access is somewhat constrained by the residential nature of the street network. For this reason, opportunities for new employment floorspace are somewhat limited within Eastern March. With a number of sites within or immediately adjacent to areas of March East ward within the bottom IMD quartile, development could potentially contribute to improving the quality of life in deprived communities.

South – Potential opportunities with limited constraints, particularly to the south west (Z1). There are also possibilities further south although these would naturally come at a later point (Z2)

Opportunities

- Good highways infrastructure
- Development to the south west could support local retail
- Integration with existing social infrastructure

Constraints

- Potential coalescence with settlements to the south
- High pressure main running south of Burrowmoor Road

8.36 The principal advantage of the expansion within South March is the availability of land outside Flood Zone 3, particularly on higher ground to the southwest. Furthermore, the south and west of March are better served by existing highways infrastructure than the north and east, with the A141 and B1101 capable of providing access to new developments. The area is also relatively well served by existing bus routes. Given the level of accessibility, South March also represents a suitable location for accommodating new employment space, particularly further from the town centre in Zones 2a and 2b. If possible conflicts between uses can be minimised through appropriate site design and layout, there is potential to deliver a mix of employment and residential development. Taking a sequential approach to site development, less vulnerable employment uses could be focused in areas of higher flood risk further west. Development will also need to consider the presence of a high pressure gas main running south of Burrowmoor Road.

8.37 The presence of existing social infrastructure such as the Community College would be compatible with residential uses and promote more sustainable transport choices for trips to such local destinations. Development would need to consider the potential impact on heritage assets to the south of March such as the Church of St. Wendrera. Both south and west broad locations could strengthen the southern sector of the town in terms of retail offer. Testing to

assess trigger points for public transport requirements will be undertaken as part of more detailed infrastructure testing.

West – Limited residential opportunities

Opportunities

- Support for local retail and town centre

Constraints

- Limited land available outside of flood risk zone 3
- Severance due to A141
- High voltage pylons and electricity substation

8.38 West March benefits from relative proximity to the centre of March and could be accessed from the A141 although there is a lack of public transport. A key barrier to new residential development is the availability of land outside flood zone 3, of which there is very little in the western broad location. Furthermore, the route of the A141 means that, unlike in South March, any new development would be severed from the town centre. In addition, the presence of an electricity substation and high voltage pylons represents a key constraint to residential development. West March may therefore be more suited as a future employment location.

Whittlesey

8.39 An initial town centre assessment has been undertaken, which seeks to build on the town-wide objectives set out in Chapter 5.

Town centre assessment

8.40 Figure 8.7: Whittlesey Town Centre Opportunities sets out a number of interventions that should be explored through more detailed design and viability assessment.

1. Market Square: Opportunity to improve this primary space within the town centre. Improve bus station visually and improve public realm. Opportunity to introduce new frontage and active use to vacant building to south of square.

2. Church Gardens: Improve gardens to create a high quality town centre garden. Introduce functions and activity to space as well as new landscape. Improve setting for church. Improve existing lanes between new gardens and existing square.

3. Northern Gateway: Improve frontage to south side of street. Improve public realm and northern shop frontage to create a new high quality gateway to the town centre. Ensure good quality pedestrian crossing points across Syers Lane.

4. Gateway: Improve public realm and frontage around the roundabout where possible.

5. Green Links: Improve links between the new Church Gardens and recreation spaces. Ensure good pedestrian comfort along Station Road.

6. Car Park: Re-organise car park to provide new high quality development frontage to Syers Lane - to improve impression of town centre and the entry experience.

8.41 Opportunities within the wider town area are included in the emerging growth options (set out in Chapter 9 below) as urban capacity sites and extra urban capacity sites. Development in the town centre as identified here could support part of this allocation.

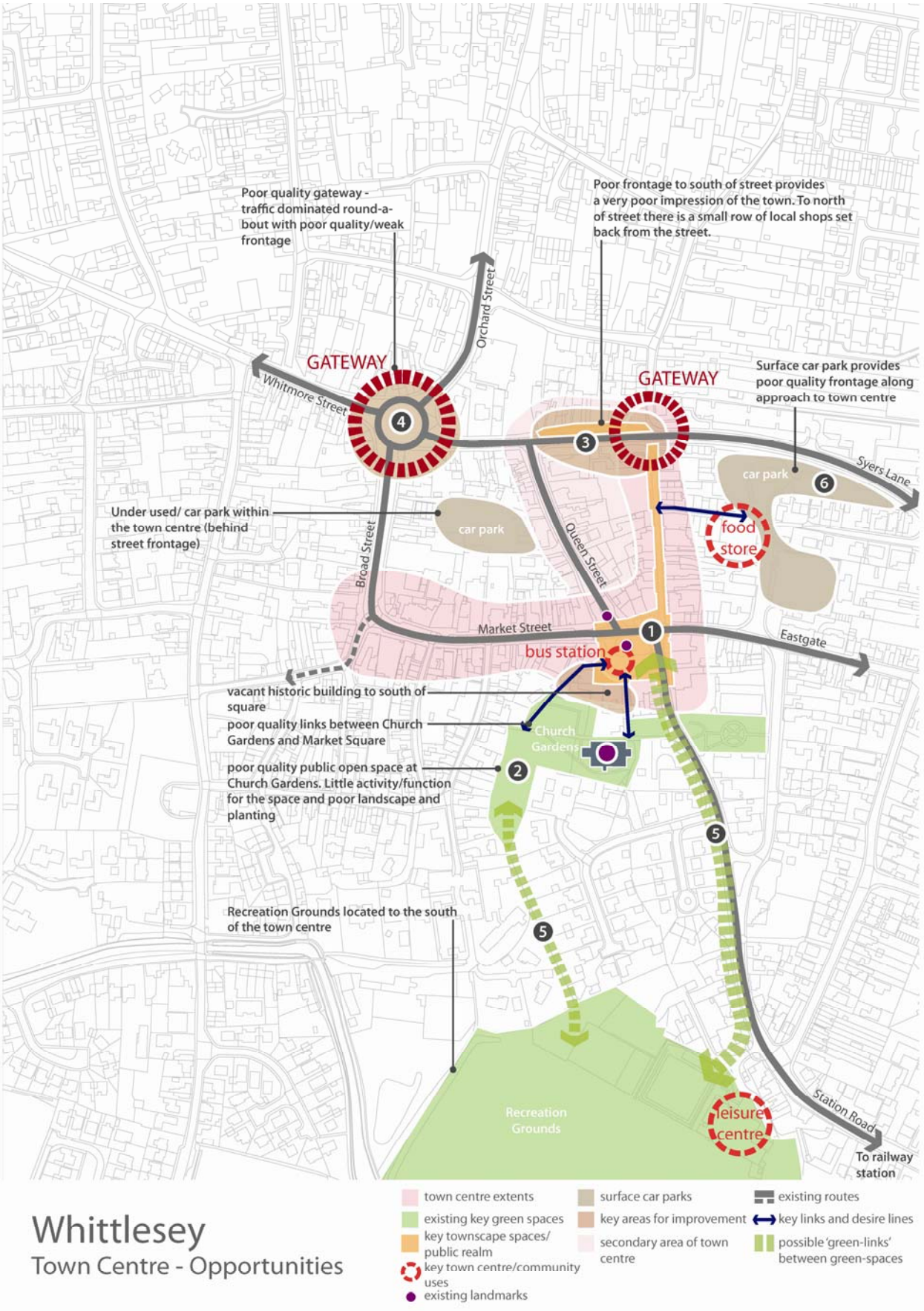


Figure 8.7: Whittlesey Town Centre Opportunities

Broad Locations Assessment

8.42 Figure 8.8: Whittlesey Broad Locations, illustrates the four broad locations which have been used as an area of search to identify opportunities for future residential and employment development in Whittlesey.

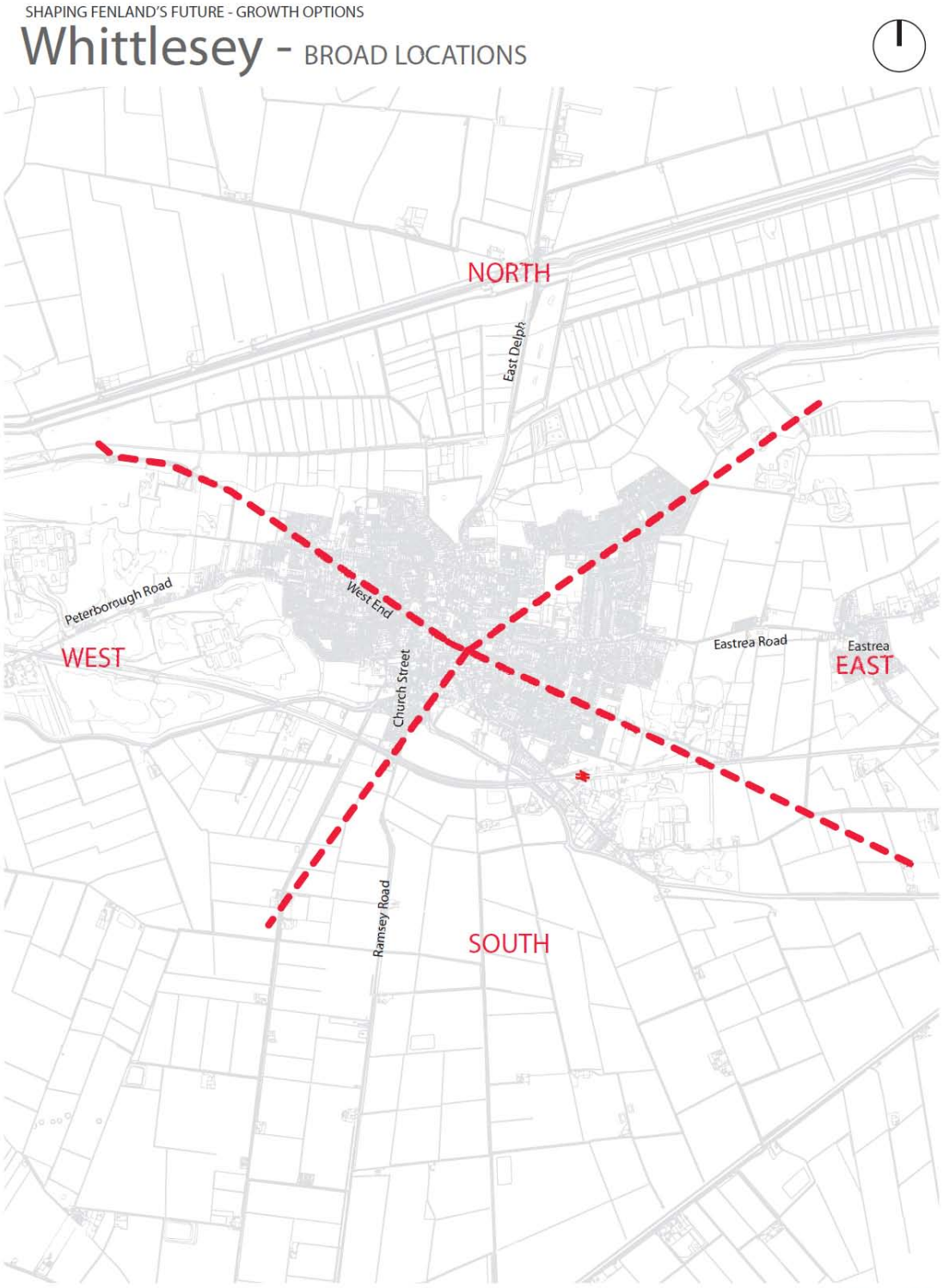


Figure 8.8: Whittlesey Broad Locations

Town-Wide Issues

8.43 Whittlesey is a broadly linear settlement running east-west, situated close to the Nene Washes SAC. This European biodiversity designation is likely to be particularly sensitive to development to the north of the settlement, although development throughout the town is likely to require appropriate assessment to scope the potential significance of development risk. In terms of water extraction, the town is within the Peterborough Water Resource Zone with no forecast deficit at peak demand. Similarly, there is capacity within the supply network with no new trunk mains or upgrades likely to be associated with new growth.

8.44 Development may, however, cause a shortfall in the waste water treatment capacity, although this is likely to be less significant than development elsewhere in the district. There are few heritage features likely to be at risk from development. The town has a relatively positive IMD score, suggesting that development is less likely to play as an important role in initiating change within Fenland. Large areas around Whittlesey, particularly to the north and south, are safeguarded minerals sites.

8.45 It is noted that in the Cambridgeshire and Peterborough Structure Plan, Whittlesey is identified as being significantly constrained in terms of infrastructure, most notably in relation to transport. This conclusion will be assessed as part of the infrastructure testing work conducted during Stage 2 of the Fenland's Future work.

8.46 Flood risk is a major constraint for sites around Whittlesey, with the only non-restricted opportunities in the east and North West. Development in the east needs to be respectful of the county wildlife site and coalescence with Eastrea, but could take advantage of some brownfield sites and proximity to employment. The impacts of development on the SAC designations will have to be assessed though an appropriate assessment scoping report.

- Zone 1a - North Whittlesey
- Zone 1b – West Whittlesey
- Zone 2- East Whittlesey
- Zone 3- East Whittlesey

8.47 Figure 8.9: Whittlesey Opportunity Zones sets the Opportunity Zones that emerge through the Broad Location analysis. A summary and the full assessment are then set out. A detailed assessment table in set out in Appendix B.

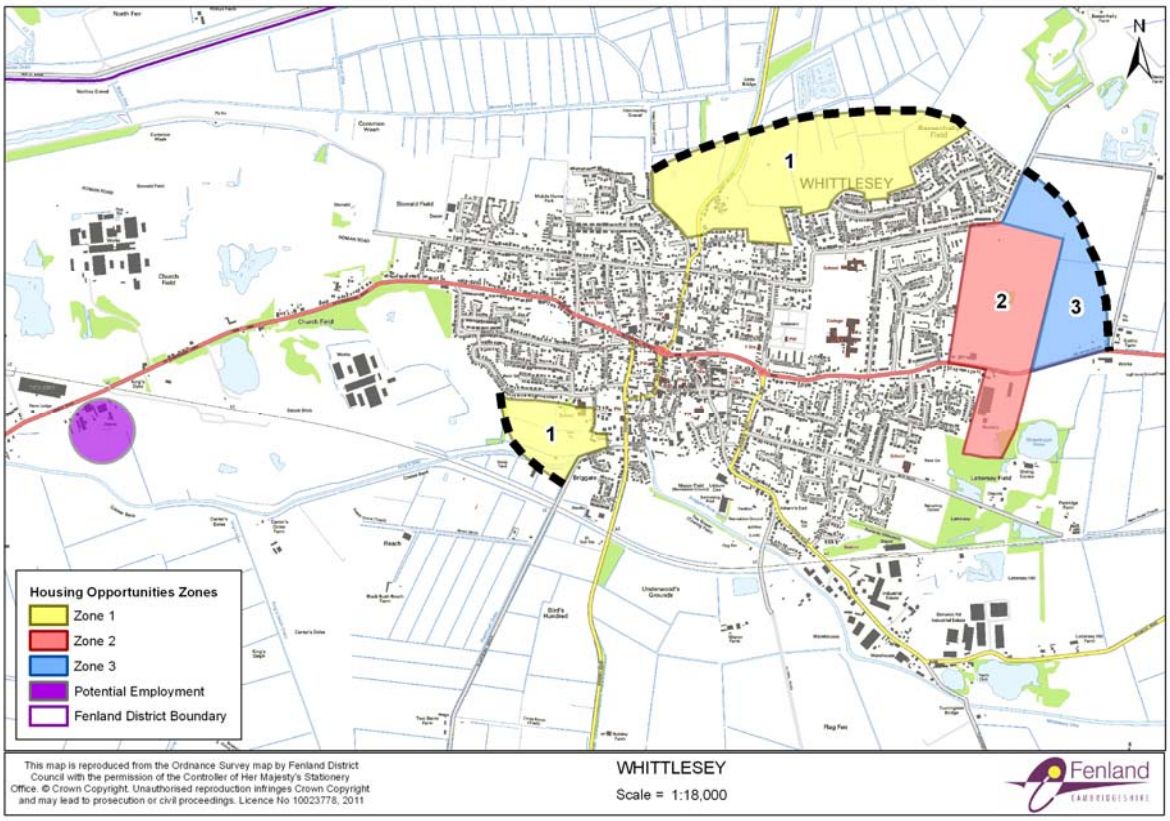


Figure 8.9: Whittlesey Opportunity Zones

North – Constrained area with some opportunities (Z1a)

Opportunities

- Good proximity to town centre

Constraints

- Closest areas to SAC
- Mostly in Flood Zone 3
- Poor public transport access

8.48 The key development constraints north of Whittlesey are the Nene Washes SAC and the widespread risk of flooding. Despite North Whittlesey's relative proximity to the Nene Washes, it is likely that development in all broad locations will require Appropriate Assessment. The majority of the area is within flood zone 3, although there are limited areas which may support new residential development. Although North Whittlesey benefits from generally good proximity to the town centre, access using the current road and bus network is constrained, which is likely to rule out significant employment development. The north offers little potential for the redevelopment of brownfield land being wholly located on agricultural land, albeit of relatively low value.

East – Opportunities with limited constraints / risks (Z2, Z3)

Opportunities

- Land available outside flood zone 3
- Relatively good access to the town centre and Peterborough
- Some previously developed land
- Good access from A605

Constraints

- Potential encroachment on neighbouring settlements to the East
- Potential noise from A605

8.49 This site links well with the Sir Harry Smith Community College, with the opportunity to support wider education objectives. In terms of flood risk, East Whittlesey contains the largest area of land outside flood zone 3 and thus represents an appropriate location for the development of new housing. In addition, there is some potential to utilise areas of previously developed brownfield land, although there maybe some ecological sensitivities at county wildlife sites. Although the A605 represents a potential source of noise and severance, it is likely that this route could provide convenient access to new development East of Whittlesey. Furthermore, development is likely to be served by existing bus routes to Peterborough and March. Although the location is also appropriate for new employment development given its accessibility, the limited availability of appropriate land for residential development elsewhere in Whittlesey is likely to make housing a more appropriate use of the area. However, a principal drawback of further growth east of Whittlesey, is that it may accentuate the town's already linear form. Additionally, there may also be issues of encroachment on the neighbouring village of Eastrea.

South – Constrained area with limited opportunity

Opportunities

- Proximity to employment area

Constraints

- Within Flood Zone 3
- Poor accessibility with highway constraints
- Safeguarded minerals area

8.50 Land is predominantly within Flood Zone 3 and this is likely to represent a key constraint on housing development. The area suffers from poor accessibility with constraints identified in terms of highways access and severance caused by the east-west railway line. There may be conflicts arising from proximity to industrial uses in the southeast of the broad location although there may be benefits in terms of promoting sustainable travel. Furthermore, the area lies partially within a safeguarded minerals allocation.

West – Some land parcels out of flood risk zone 3 provide opportunities but with limited constraints (Z1b)

Opportunities

- Good access to Whittlesey centre and Peterborough
- Potential reuse of brownfield land
- Access from existing bus routes and A605

Constraints

- Mostly in flood risk zone 3, although there are some pockets out of flood risk
- Potential conflicts with industrial uses nearby
- Safeguarded minerals allocation

8.51 The majority of the area west of Whittlesey is within Flood Zone 3, although there are some sites at lower risk of flooding to the north and south. An area in the far south of the western broad location could provide housing in close proximity to the town centre. Elsewhere in this broad location a key consideration will be the suitability of development given the area's proximity to existing industrial activities. Furthermore, parts of the area lie within a safeguarded minerals allocation. In terms of opportunities due west of Whittlesey, while this area is furthest from the railway station, there are a number of benefits related to access. Development could be accessed from the A605 and served by existing bus routes. Housing development in this area may focus towards Peterborough as the key employment, retail and leisure destination and as such, not greatly benefit Whittlesey town centre. However, in terms of employment,, growth to the west of town may have less of an impact on town centre congestion than other potential development locations. The limited availability of land appropriate for new housing, combined with good highways accessibility, may provide opportunities for employment development in West Whittlesey.

Chatteris

8.52 An initial town centre assessment has been undertaken, which seeks to build on the town-wide objectives set out in Chapter 5.

Town centre assessment

8.53 Figure 8.10: Chatteris Town Centre Opportunities sets out a number of interventions that should be explored through more detailed design and viability assessment.

1. Vacant/poor uses - High Street: Opportunity to redevelop and provide new High Street frontage and residential

2. New Road large areas of vacant/underused land. Opportunity to redevelop for town centre residential uses.

3. Adjacent to Library (Furrowfelds Road): Opportunity to redevelop vacant/underused land for town centre residential use. Opportunity for new community uses to form a northern community focus for the town centre.

4. Gateways - Opportunity to improve gateway spaces. Both are spaces isolated by traffic movement. Introduce activity and active frontages where possible.

5. 'Market Square' - Opportunity to improve public realm and introduce new frontage and active uses. Potential to use public realm to visually combine this space with the adjacent gateway space, to improve the entry experience and slow traffic.

6. Furrowfield Car Park provides an opportunity for a new public transport interchange facility

8.54 Opportunities within the wider town area are included in the emerging growth options (set out in Chapter 8 below) as urban capacity sites and extra urban capacity sites. Development in the town centre as identified here could support part of this allocation.

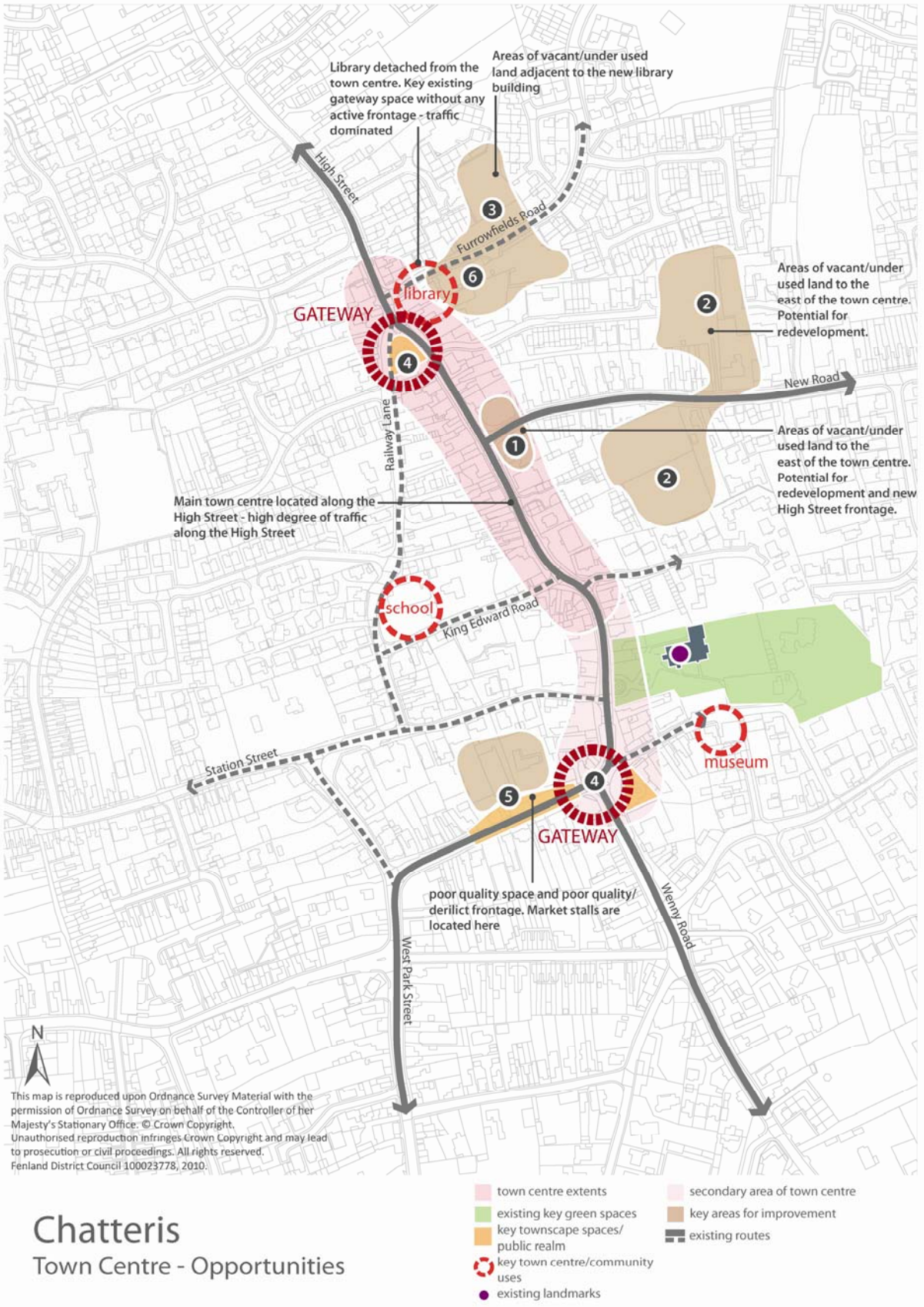


Figure 8.10: Chatteris Town Centre Opportunities

Broad Locations Assessment

8.55 Figure 8.11: Chatteris Broad Locations illustrates the four broad locations which have been used as an area of search to identify opportunities for future residential development through urban extensions as well as new employment growth.

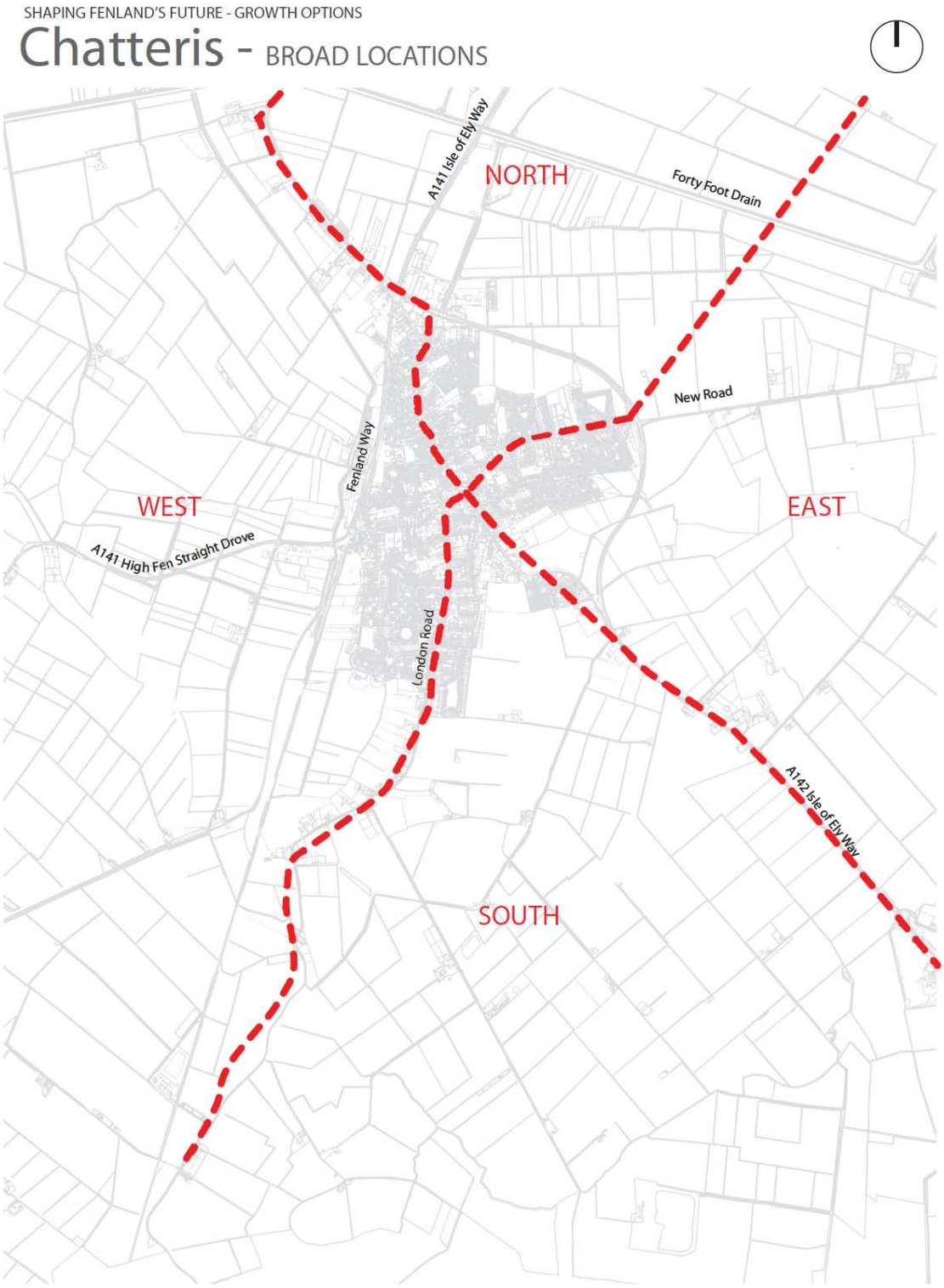


Figure 8.11: Chatteris Broad Locations

Town-wide issues

8.56 In terms of land and water extraction and network capacity, all potential sites in Chatteris benefit from a surplus of water resources, although higher levels of growth will require more stringent water use requirements. On the other hand, waste water capacity constraints mean that a new strategic mains supply will be required for the majority of growth. Generally, all potential development zones are further than 5km from national or European wildlife sites and are characterised by predominantly agricultural land, with limited biodiversity. In addition, all sites benefit from relative proximity to existing employment areas in Chatteris as well as the town centre.

8.57 Flood risk is the key determinant in terms of the distribution of growth in Chatteris. Expansion to the east and south represent the most sequentially appropriate locations for housing development. Beyond flooding considerations, the eastern zone is preferable in terms of its proximity to the town centre and its potentially positive relationship with the existing urban form. This is in contrast with the west of town, where a combination of road infrastructure, ditches and employment uses acts as barriers to development. The potential to provide access from the A142 without severance becoming a major issue is another key advantage of the eastern zone. New development to the south would not benefit from existing road infrastructure to the extent of the eastern zone, but would have few constraints in terms of noise, flooding or incompatible neighbouring uses.

8.58 Figure 8.12: Chatteris Opportunity Zones sets the Opportunity Zones that emerge through the Broad Location analysis. A summary and the full assessment then follow. A detailed assessment table in set out in Appendix B.

- Zone 1 – East Chatteris
- Zone 2 – East Chatteris
- Zone 3 – South east Chatteris

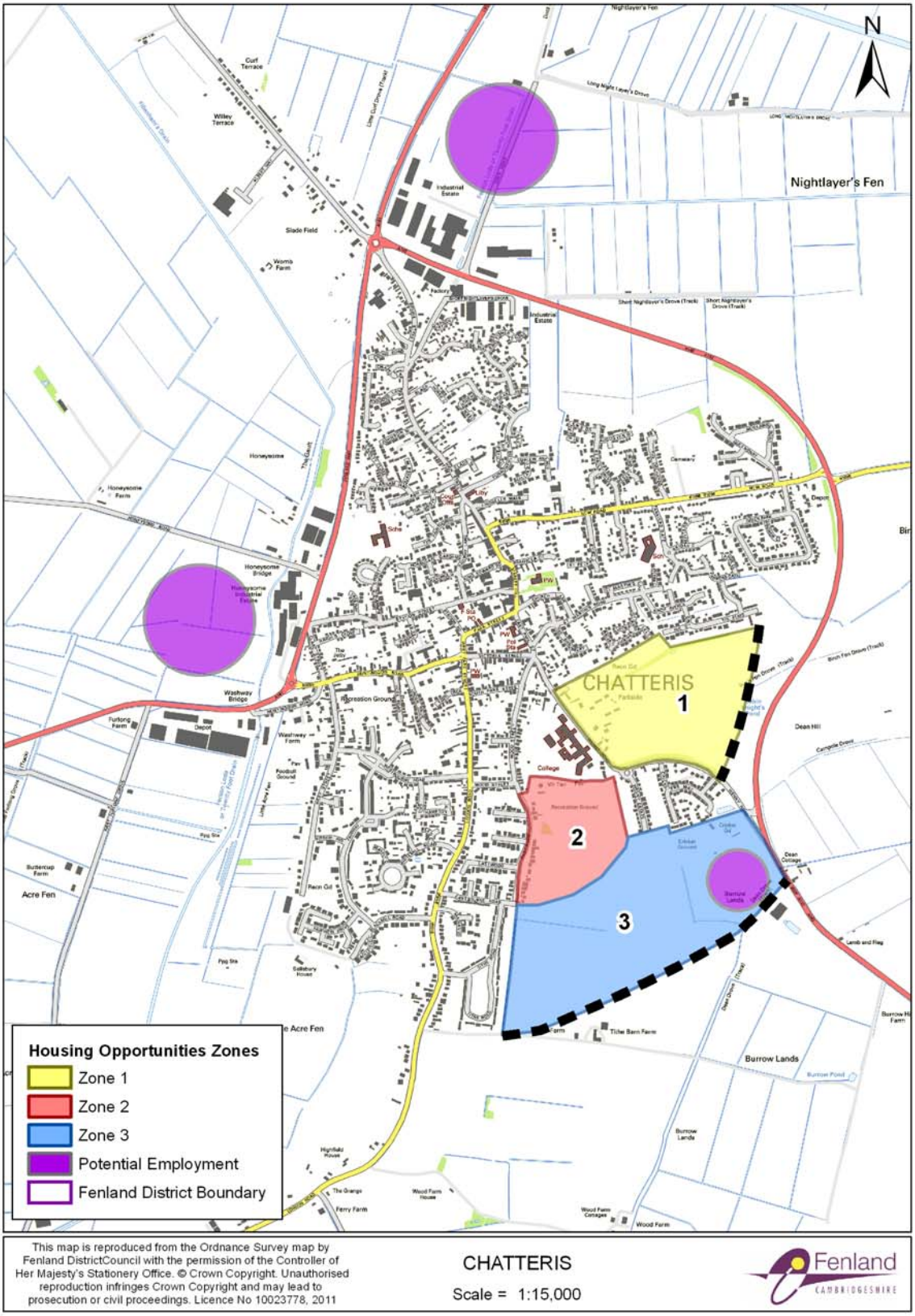


Figure 8.12: Chatteris Opportunity Zones

North – Highly constrained for residential development, opportunities to extend employment area

Opportunities

- Strategic access from A142
- Extension of employment location
- Dock Road provides existing access from A142
- Some underutilised brownfield land could be redeveloped

Constraints

- Significant areas in Flood Risk Zone 3
- Minerals safeguarded sites
- Conflict with noise-generating industrial uses and A142
- Higher grade agricultural land

8.59 With significant areas of the northern zone within Flood Zone 3, flooding represents a key constraint in residential terms. Of the land available in areas at lower risk of flooding, it is likely to prove difficult to demonstrate that this represents a sequentially preferable location for housing development relative to other opportunities zones. Furthermore, development is likely to involve loss of quality agricultural land. The minerals allocation within the northern zone represents another barrier to the development of residential uses. Additionally, noise generated by the A142 and 141 is likely to conflict with such development, although these routes may be capable of providing access to sites. The route of these A-roads, which form the northern boundary of Chatteris mean that new development, unlike in South and East Chatteris, is likely to be severed from the existing urban fabric of Chatteris.

8.60 While flooding and potential conflicts with existing industrial uses present a barrier to residential development in North Chatteris, there is nevertheless an opportunity to extend this employment allocation. The A141 and A142 offer excellent strategic accessibility while Dock Road provides an existing link to serve further employment developments in the area.

East – Good opportunity zones with limited constraints. Primary opportunity (Z1) directly east, but potentially more opportunity moving south (Z2).

Opportunities

- Land available outside Flood Zone 3
- Proximity to the town centre and links to existing employment
- Proximity to Community College
- Development would respect the existing urban form and character
- Existing park could be incorporated and potentially enhanced within new development
- Access from A142

Constraints

- May require appropriate assessment
- Greenfield development
- Noise from A142, which also forms a natural boundary limiting development potential

8.61 Noise generated by the A142 presents a potential issue. However, the A142 also represents an opportunity to provide convenient access with a resultant reduction in pressure on town centre junctions. Furthermore, the availability of land west of the A142 means development in Opportunity Zone 1 would not be severed from the rest of Chatteris. East of the A142, development may encroach within 5km of European / national wildlife sites, potentially

requiring Appropriate Assessment. Development would need to consider the impact on the character and setting of listed buildings on Wenny Road.

South – Good opportunity but access issues may be a constraint (Z3)

Opportunities

- Limited flood risk
- Potential to incorporate large area of open space within new development
- Proximity to Community College

Constraints

- New access road would be required
- Threat of linear / ribbon development
- Higher grade agricultural land
- Lack of existing transport infrastructure

8.62 The broad location south of Chatteris is generally located outside Flood Zone 3, making it a sequentially preferable location for the development of vulnerable uses such as housing. New development provides an opportunity to incorporate existing open space south of Chatteris, although there may be a loss of high quality agricultural land. The relative proximity of Cromwell Community College would help to promote sustainable transport choices for new residents, while development provides the opportunity to extend the functions of this key community asset.

8.63 The A142 provides South Chatteris with good highways access which could support both employment and residential development. If it can be demonstrated that employment uses do not affect amenity in new neighbourhoods, there is a potential to bring forward a mix of uses. The impact of noise generated by the A142, on residential areas could be minimised by focusing less noise-sensitive uses adjacent to the road. However, a new link to the A142 (and potentially a new bus route) may be required to serve any new development which could reduce S106 monies to fund other community facilities. In terms of its impact on the urban morphology of Chatteris, significant development to the south of the town may produce a more linear urban form. Development would need to consider the impact on the character and setting of listed building within Tithe Barn Farm.

West – Limited opportunities for residential development, scope to extend industrial area

Opportunities

- Building on existing employment

Constraints

- Within Flood Zone 3
- A141 forms a barrier to development
- Noise impacts from employment uses and strategic roads
- Loss of Grade 1 agricultural land

8.64 Flood risk is the key barrier to residential development West of Chatteris, with much of the area located within Flood Zone 3. In addition, the A141 effectively forms the current western boundary of Chatteris. This strategic route, combined with employment uses focused to the west of the town, would effectively sever new communities from the existing urban fabric of Chatteris. Noise generated from industrial uses and the A141 would conflict with residential

development in this location. West Chatteris also suffers from poor connectivity in terms of existing public transport. While these factors limit scope for new residential development, good highways access in the form of the A141 and Honeysome Road provide an opportunity to extend the existing industrial area.

9. Setting strategic growth targets – housing

Establishing the correct spatial scale for analysis

9.1 Chapter 8 provides the basis for developing an estimate for the potential housing growth that could be physically accommodated in Fenland, based on an assessment of risk and opportunity. It is important to understand the implications of this potential housing growth and the related rise in population, in terms of demographics and social & strategic infrastructure.

9.2 To do this, the district has been divided into 7 'infrastructure clusters'. These are broadly based on the main settlements identified in the settlement hierarchy, and focus on the Strategic Market Towns (and their cluster settlements), Market Towns (and their cluster settlements) and the Local Service Centres and Clusters. However, the infrastructure clusters work along existing ward boundaries to enable available demographic data to be analysed and trends to be tailored to these specific areas of the district (the only settlement that sits in a different cluster is Rings End, which sits in the Wisbech infrastructure cluster, but the Wisbech St Mary Local Service Centre Cluster). Those settlement that do not form part of either a Market Town Cluster or a Local Service Centre or Cluster, have been linked in with their closest market town for infrastructure planning purposes. As such, they are assumed to look to this town for the majority of their services. Figure 9.1: Infrastructure Clusters sets out the seven areas and Table 9.1: FNPV spatial growth options for testing sets out the numbers, which will be tested to better understand Fenland's capacity for growth.

Establishing the 3 scenarios for growth

The Strategic Market Towns, Market Towns and their cluster settlements

9.3 The capacity assessment in Chapter 8, sets out three groups of Opportunity Zones based on risk and opportunities for each key settlement (with those in group 1 being the least risky and 3 being the most risky, but potentially with the most opportunity). The housing growth options for each key settlement are based on these Opportunity Zones, with those identified as least risky forming Option 1, while those most risky, identified as Option 3. The options are also cumulative and build up in terms of quantum of development. As such, Option 3 for each of the four key settlements will include the locations identified in Option 1 and 2 as well as Option 3. The three options therefore provide different scales of development to test in terms of economic, social and environmental impact, based on the assessment of the appropriateness and the opportunity of the location. The number of housing within the Opportunity Zone is based on an assessment of broad development opportunity at 30dph.

9.4 These indicative numbers will be tested to understand what level of growth could actually be planned in each town. This number is added to a range of other known and assumed factors to get to the final number for each town. This includes identified market town urban capacity sites (from the SHLAA and FDC officer review).

9.5 Moreover, based on the settlement hierarchy, each town is set within its surrounding cluster settlements, and the number of extant planning permissions within the cluster (including the market town) is added and an assumption for windfall (again, including the market town). The district-wide rural affordable exceptions housing target is then divided between the four town clusters and the three Local Service Centres/Clusters.

Local service centres and clusters

9.6 For each of the three Local Service Centres and Clusters a number to initially test will be derived from extant planning permissions within the cluster, along with an assumption for windfall and an equal split of the district-wide rural affordable exceptions housing target. For Option 3 an additional allocation of housing is made based on an assessment of existing capacity within local primary schools, to provide an indication of the level of growth required to retain the same level of pupil occupation within these facilities, given the context of projected demographic change in the cluster. This option is named 'Infrastructure led growth'.

Villages

9.7 As set out in the settlement hierarchy, no strategic growth is planned in the villages. A criteria based approach through development management policies (or potentially the Community Right to Build proposals in the Decentralisation and Localism Bill) should apply in these areas.

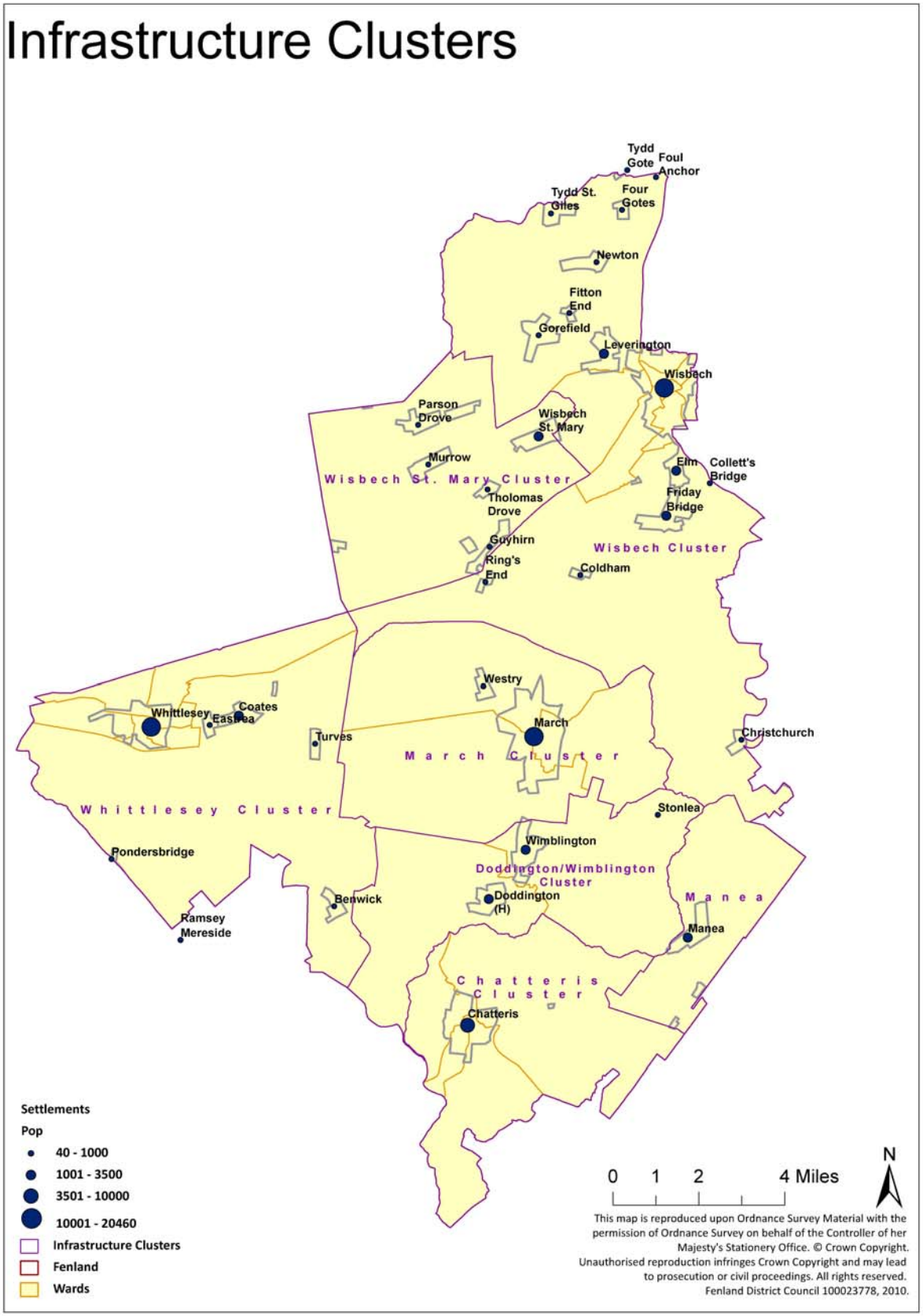


Figure 9.1: Infrastructure Clusters

The spatial growth scenario figures explained

9.8 The extant permissions, urban capacity sites, additional urban capacity sites, district-wide windfall allowance and rural exceptions figures have all been provided to AECOM by FDC officers as a baseline from which additional growth on top of should be established. In essence, the Opportunity Zone assessment provides the AECOM input into these numbers.

9.9 The settlement figures consist of a number of elements. Firstly, the 'Opportunity Zone' figure is based on the assessment of the Broad Locations set out in Chapter 8. The options effectively assess the cumulative impact of bringing forward the Opportunity Zones in order (i.e. Opportunity Zone 1, then 1+2 and the 1+2+3).

9.10 The 'Extant' row is based on extant (or granted and sill valid) planning permissions taken from the 2008/09 Annual Monitoring Report. The 'Urban capacity sites' are those sites identified through the June 2008 Strategic Housing Land Availability Assessment (SHLAA) as opportunities within existing market towns for residential development. The 'extra urban capacity sites' are those sites identified by FDC officers as additional to those in the SHLAA.

9.11 The 'district-wide windfall allowance' is the total number of small scale windfall sites completed during the plan period (2001-2009) is 1,405. This averages out at 176 dwelling per year. The Council has taken a conservative approach and assumed 50% of this windfall allowance leaving 88 p.a. This has been spread across the last 10 years of the plan period for the purposes of infrastructure planning, as set out in PPS3 (para. 59). In reality as the plan is adopted and sites are built out we may see this windfall allowance decline. However, in the absence of robust evidence to the contrary, this remains the best available information to use as part of the assumptions.

9.12 The 'affordable exceptions' are based on a district-wide figure provided by FDC (42 sites). This has been divided equally between the 7 clusters, which all contain rural settlements.

9.13 It should be noted that the testing set out over the following chapters will lead to a hybrid scenario or range between two scenarios for each cluster, based on choices made about each specific cluster. Furthermore, while it is the intention that the selected scenario(s) inform the Core Strategy target, such is the level of assumptions included around urban capacity and windfall (to ensure infrastructure testing considered the highest possible level of growth), a degree of flexibility based on available evidence at the time the Core Strategy is drafted may be required. This evidence is likely to include an updated SHLAA.

Table 9.1: FNPV spatial growth scenarios for testing

	Option 1	Option 2	Option 3
Wisbech			
Opportunity Zones	**2000***	**2700***	**6200***
Extant	812	812	812
Additional Capacity Sites	411	411	411
Extra Urban Capacity Sites	482	482	482
Windfall	594	594	594
Affordable exceptions	29	29	29
Urban sub-total	**2327**	**2327**	**2327**
Wisbech sub-total	**4327**	**5027**	**8527**
March			
Opportunity Zones	**2200**	**4250**	**5150**
Extant	491	491	491
Additional Capacity Sites	97	97	97
Extra Urban Capacity Sites	199	199	199
Windfall	379	379	379
Affordable exceptions	29	29	29
Urban sub-total	**1194**	**1194**	**1194**
March sub-total	**3394**	**5444**	**6344**
Whittlesey			
Opportunity Zones	**500**	**1200**	**1700**
Extant	340	340	340
Additional Capacity Sites	20	20	20
Extra Urban Capacity Sites	0	0	0
Windfall	341	341	341
Affordable exceptions	29	29	29
Urban sub-total	**730**	**730**	**730**
Whittlesey sub-total	**1230**	**1930**	**2430**
Chatteris			
Opportunity Zones	**500**	**1000**	**1750**
Extant	301	301	301
Additional Capacity Sites	79	79	79
Extra Urban Capacity Sites	28	28	28
Windfall	184	184	184
Affordable exceptions	29	29	29
Urban sub-total	**620**	**620**	**620**
Chatteris sub-total	**1120**	**1620**	**2370**
Wisbech St Mary			

Extant	150	150	150
Infrastructure led growth			241
Windfall	130	130	130
Affordable exceptions	29	29	29
Wisbech St Mary Total sub-total	**309**	**309**	**550**
Manea			
Extant	97	97	97
Infrastructure led growth			113
Windfall	36	36	36
Affordable exceptions	29	29	29
Manea sub-total	**162**	**162**	**275**
Doddington/Wimblington			
Extant	48	48	48
Infrastructure led growth			291
Windfall	93	93	93
Affordable exceptions	29	29	29
Doddington/Wimblington sub-total	**169**	**169**	**460**

FENLAND TOTAL	**10711***	**14661***	**20956***

*Note: This includes 500 homes allocated in the Kings Lynn & West Norfolk Core Strategy

10. Setting strategic growth targets – demographic projections

10.1 In order to understand how growth will impact on service delivery in Fenland, it is important to understand how the population is likely to change. In order to do this, FNPV has looked at the population in two stages:

- What would happen to the current population if there was no housing growth? This is what would happen to Fenland's population if there was no new housing in Fenland, taking into consideration births, deaths and the changing make-up of households. This has been provided for this study by Cambridgeshire County Council's Research Group for the district as a whole and broken down by each ward (this is set out in Chapter 4)
- The population associated with new housing growth. This models the make up for the new population that will be supported by new housing. In order to work this the study has made a number of assumptions associated with:
    - The number, size and tenure of new housing based on existing planning permissions, predicted windfall, known urban capacity, rural exceptions and strategic growth areas.
    - The likely nature of new movers into the area. This is based on the 2001 Census Tables CO511 for market housing and CORE data 2008-09 for affordable housing to derive an average household size, based on the characteristics of households which have moved within or into the Fenland area within the previous 12 months. For affordable homes
    - When new housing will be delivered – the housing trajectory (see section 7.21 onwards)

10.2 In order to make effective assumptions about service delivery – particularly for education and health care, population projections have also been broken down by age range.

Housing Growth Associated Demographics

Housing Tenure, Size and Type Split

10.3 Since a number of social infrastructure requirements are based on per capita provision, it is necessary to understand the population generated by different levels of housing growth. This is derived by applying various parameters (such as average household size and average child yield) to the housing trajectory described above. These parameters vary according to housing tenure, type and size. It is therefore important to consider the housing mix which is likely to come forward up to 2031.

Tenure

10.4 The Council's sliding scale approach to affordable housing seeks to balance viability concerns with the fact that a large proportion of Fenland's housing comes through relatively small sites. Adams Integra was commissioned to prepare a financial viability assessment, which recommended the following approach to affordable housing targets:

Table 10.1: Fenland District Council Affordable Housing Policy

Scheme Size (no. of dwellings)	Affordable Housing Target	Affordable Housing Tenure Split
5-9	20%	Social Rented: 70% Intermediate: 30%
10+	30%	
100+	35%	

Source: Affordable Housing Viability Assessment (2010)

10.5 Within these aggregate affordable housing levels, it is necessary to factor in the relative split between social rented accommodation and intermediate properties. The Affordable Housing Viability Assessment suggests a split of 70% social rented and 30% intermediate.

10.6 It is assumed that all sites considered as broad locations through SFF will be 100+ dwellings.

Housing Size and Type

10.7 The size of housing delivered in Fenland will be a function of housing need, as demonstrated by the Strategic Housing Market Assessment, as well as local market conditions. A robust estimate of the size of new properties, as well as the relative split between houses and flats, is important because this will affect parameters used to determine population growth and age profile, such as child yield and average household size. Crucially, these will determine the requirements for social infrastructure.

10.8 The type of properties purchased is partly a function of housing delivery. The figures below set out the type and size of housing completed during the ten year period between 2001 and 2010.

Table 10.2: Recent Housing Completions by House Size

	Fenland	Cambridgeshire wide
1 bed	7.89%	13.21%
2 bed	30.19%	30.67%
3 bed	33.75%	28.32%
4+ bed	25.38%	25.67%
unknown	2.79%	2.14%

Source: Cambridgeshire County Council Monitoring Table H1.4: New Dwelling (Gross) Completions in Cambridgeshire (2001-2010)

10.9 At the Fenland Neighbourhood Planning Vision Partner Steering Group it was agreed to use the Fenland new dwelling completions (2001-2010) to inform the social infrastructure modelling work. It has been assumed that all properties will be houses rather than flats.

10.10 The current assumed affordable housing size mix has been informed by the Strategic Housing Market Assessment, which identifies the appropriate mix of unit sizes for affordable housing, based in identified need. FDC have set out the proposed tenure split for social and intermediate houses as set out in the table below.

Table 10.3: Housing size mix

	Houses (no. of bedrooms)				Total
	1	2	3	4+	
Market Housing	8%	31%	35%	26%	100%
Social Rented	30%	30%	30%	10%	100%
Intermediate	30%	30%	30%	10%	100%

Additional growth in the Local Service Centres and Clusters – the 'infrastructure led growth approach'

10.11 The approach to strategic growth in the proposed Local Service Centre (Manea) and Local Service Clusters (Doddington & Wimblington and Wisbech St Mary clusters) is to model extant permission, windfalls and rural exceptions, as Option 1 and 2. However, with the demographic trends projected above, along with the limited growth set out in Option 1 and 2, the result is a reducing and ageing population, including falling demand for local community facilities. Option 3 is therefore based on an assessment of the housing growth required, based on the demographic projections, to maintain the local primary schools at their current capacity. This method provides a tangible basis to assess a higher order of growth across the settlement(s) within each of the areas.

10.12 The following table sets out the level of additional housing growth required to counterbalance the projected decline in the population shown in Options 1 and 2.

Table 10.4: Infrastructure led growth

	Infrastructure led growth
Parsons Drove / Wisbech St Mary cluster	241 additional homes
Manea cluster	113 additional homes
Wimblington / Doddington cluster	291 additional homes
TOTAL	**645 homes**

Source: AECOM analysis, 2011

10.13 These numbers have been fed into the overall number of homes for each of the three settlement clusters in Table 9.1 in the previous chapter. They are identified as 'Infrastructure led growth'.

Fenland Housing Trajectories

10.14 The housing trajectories presented under each of the Growth Options described below are based on a view of the potential level of development which could come forward across the district over the period to 2030/2031.

10.15 The approach seeks to project housing completions in order to identify the infrastructure requirements across the district in order to deliver the associated level of growth. By estimating trajectories we are seeking to identify trigger points associated with growth that can help plan for the provision of that infrastructure. This will enable planning to ensure that delays in their funding and consequent delivery do not constrain housing development. This is particularly important with regard to transport and utilities infrastructure that is required to open up sites for development. If housing growth does not come forward at the rate described here, the infrastructure requirements will still remain valid; however it may be possible to delay their delivery until the necessary housing threshold are met or until preliminary work is required to open up specific sites for development.

Growth Scenarios

10.16 Table 9.1 in the previous chapter sets out the distribution of growth across Fenland for the three scenarios. These housing trajectories are built up from expected completions from:

- Opportunity Zones
- Extant Permissions
- Urban Capacity Sites
- Extra Urban Capacity Sites
- Windfall
- Affordable exceptions

Completions

10.17 Between April 2001 and March 2006, there were 3,343 completions across Fenland.

Table 10.5: Completions, 2001-06

	Chatteris	March	Whittlesey	Wisbech	Rural	
Housing completions 01-06	476	900	196	565	1206	3343

10.18 The average Completions in 07/08 for Fenland approached nearly 1000 homes. Due to reduced levels of completions from 2006 the average completions across the period 2001 – 2009 stands at 476 dwellings across the district.

District Wide Growth Options

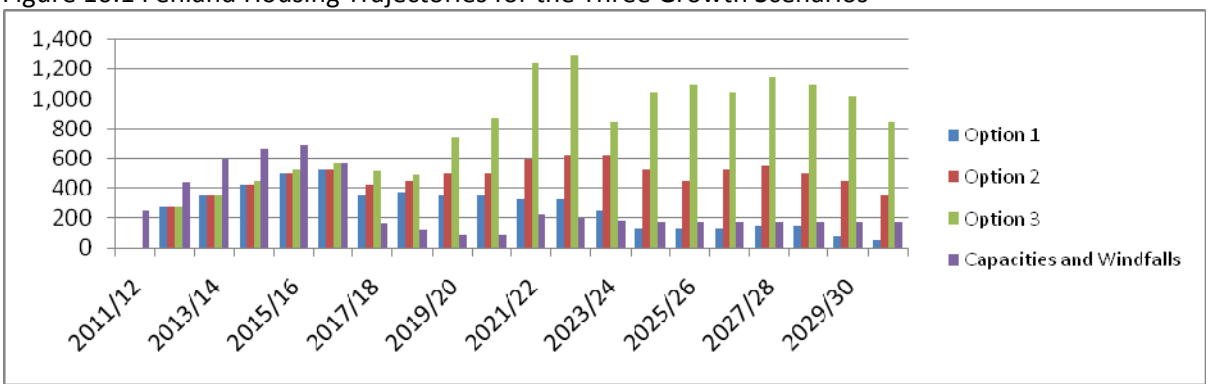
10.19 In many cases infrastructure requirements will be triggered when a given number of dwellings or associated population threshold is exceeded. In these cases, the forecasting of the housing trajectory is essential for infrastructure projects to be phased appropriately.

10.20 The trajectories are prepared on the basis of

- The perceived relative strengths of the housing market across the district and broad assumptions as to the time needed to allow significant levels of growth in housing completions in the four market towns;
- The completions are not simply spread at an even rate to accommodate capacity as estimated in Table 9.1. They are instead spread to reflect the likelihood of economic cycles and site completions affecting the level of delivery possible. Where the rates of delivery required are significant the affect of economic cycles is less due to assumptions about the transformational conditions needed to deliver a very challenging rate of completions (e.g. Option 3 at Wisbech).
- The dwelling trajectory breakdown for Cambridgeshire (Cambridgeshire Horizons 2010).

The figure below illustrates the housing trajectory of the three growth scenarios up to 2030/31.

Figure 10.1 Fenland Housing Trajectories for the Three Growth Scenarios



Source: AECOM

Capacity and Windfalls

Within these completion numbers the capacity sites and windfalls remain constant across the three growth options for the purposes of these trajectories. The contribution of these sites peaks in 2015/16 alongside the first peak in the initial delivery of housing from the opportunity zones in this year and2016/17. The capacity and windfall figures are sourced from the Annual Monitoring Report 2008/09. The windfall figures have been included at 50% of historic average rolled back to the last 10 years of the plan period.

Growth Option 1

10.21 In Option 1 housing growth across the district under this scenario peaks first in 2015/16 at 1188 units per annum (including capacity and windfalls) and then reverts sharply to approximately 400 units per annum until 2023/24. After this point, the average annual rate of completions reduces to between two and three hundred units per annum to 2031.

Growth Option 2

10.22 In Option 2 housing growth across the district again peaks at 1188 units in 2015/16 then peaks again at 800+ units per annum between in 2021/22 and 2023/24 in response to a potentially improved market situation. The rate then settles at 600+ units per annum before with a gradual decline to 2030/31 across the district.

Growth Option 3

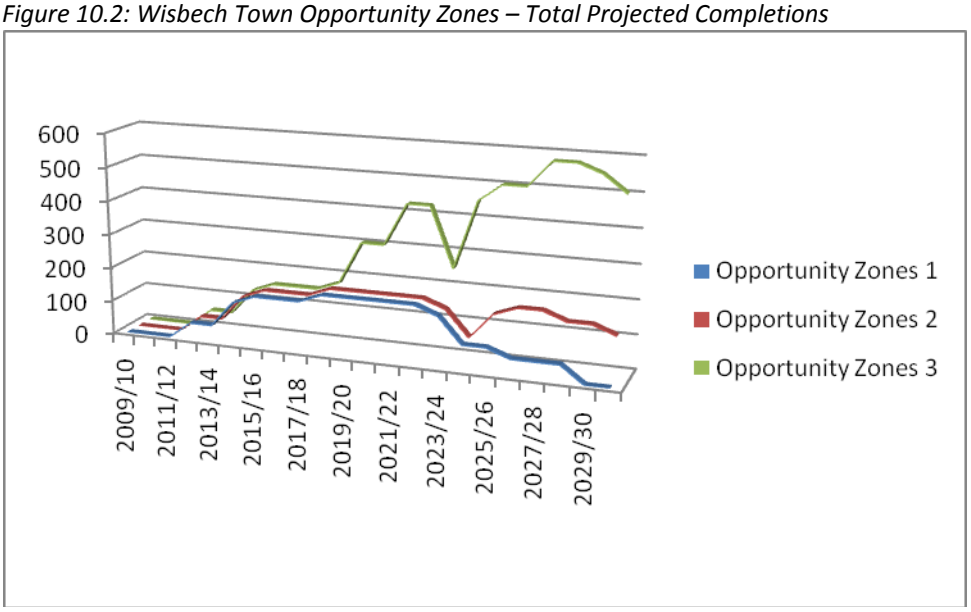
10.23 In Option 3 the first significant increase in completions beyond 2015/16 (1213 units) does not occur until 2021/22 reflecting the need for a significant transformation in the market to occur for the delivery of the numbers of homes located in opportunity zones (as combined) around Wisbech. The significant quantum of homes in option 3 demands peaks in the completion of units across the district in 2021/22 and 2022/23 of around 1500 units per annum. A rate of around 1200 units per annum until 2030/31 is then required during the remainder of the period.

Growth Options

Wisbech

10.24 The growth for the four principal growth clusters can be seen in the figures below;

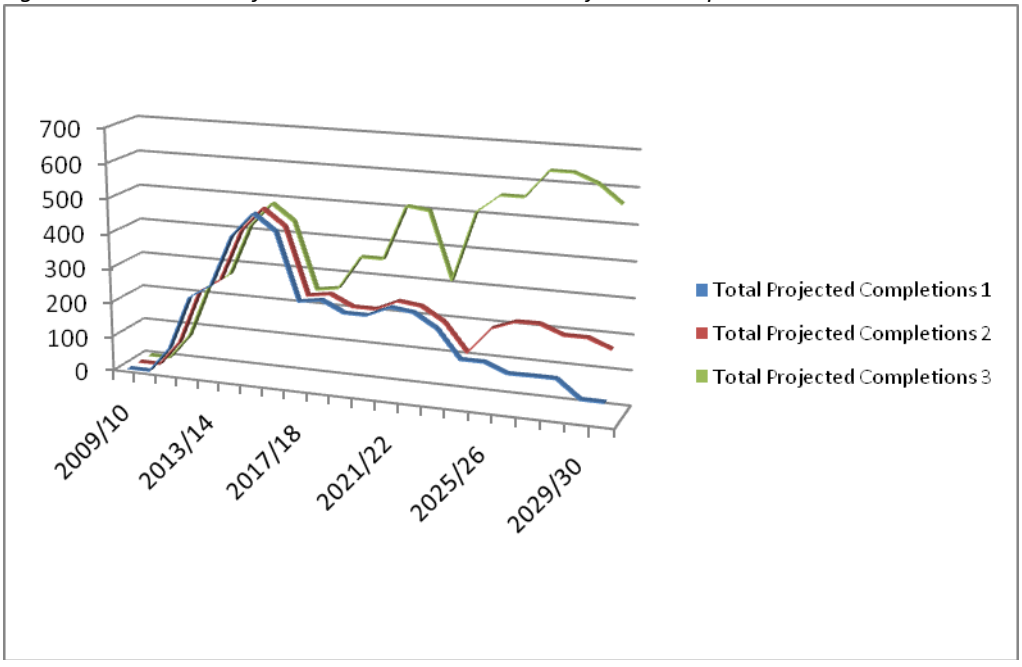
Figure 10.2: Wisbech Town Opportunity Zones – Total Projected Completions



Source: AECOM

10.25 Excluding the capacity and windfall figures for Wisbech illustrates that for Options 1 and 2 in relation purely to the opportunity zones there is sustained peak of 175 completions per annum between 2018/19 and 2022/23. Completions fall away for a period for Option 2 but would need to return to these levels in 2026/27 and 2027/28. Figure 10.5 incorporates the capacity and windfall sites to show complete trajectory of housing completions over the period.

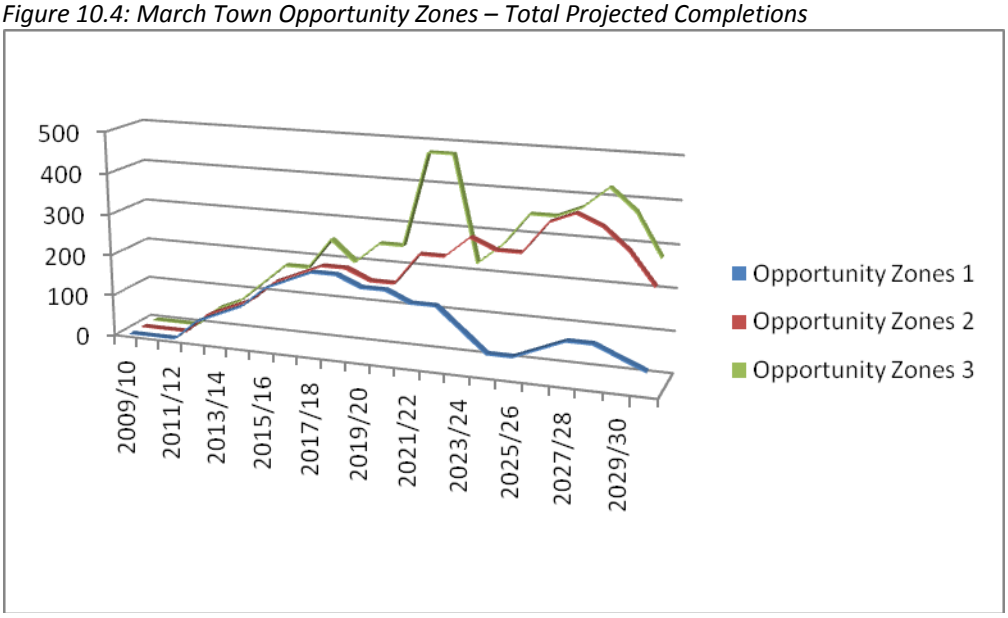
Figure 10.3: Wisbech Infrastructure Cluster – Total Projected Completions



Source: AECOM

March

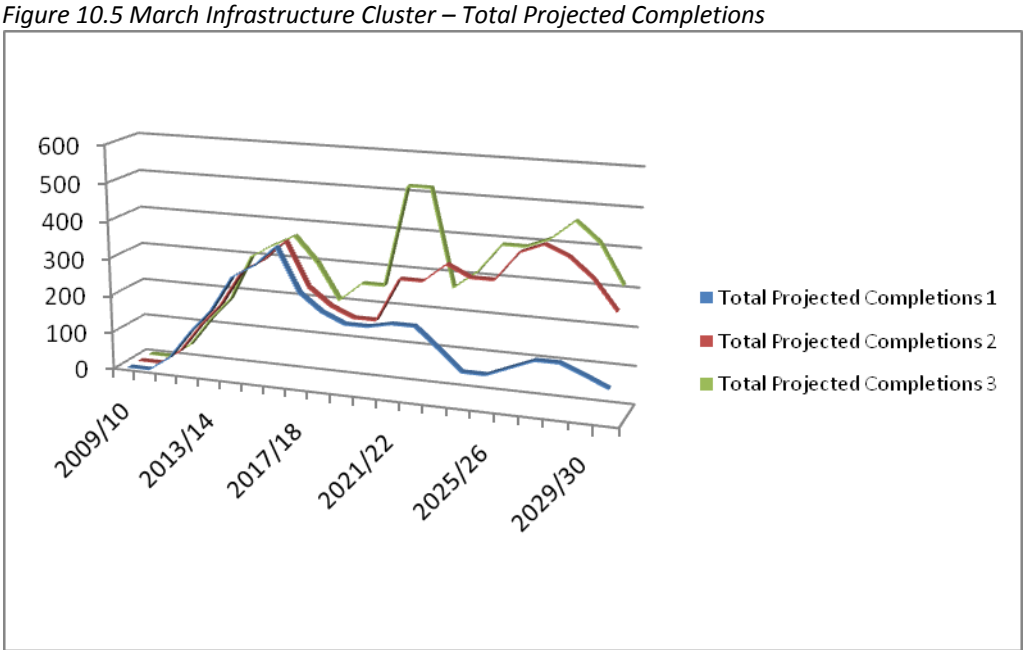
Figure 10.4: March Town Opportunity Zones – Total Projected Completions



Source: AECOM

10.26 In March, with the capacity and windfall figures excluded Figure 10.6 above demonstrates the need for sustained delivery of housing completions above 200 units per annum from 2021/22 with Option 3 requiring a significant peak of 475 units per annum for two years between 2021/22 to 2022/23. This assumes delivery across a number of sites and then allows a cyclical build up in completion rates towards the end of the period. The figure below incorporates the capacity and windfall sites to show complete trajectory of housing completions for March over the period.

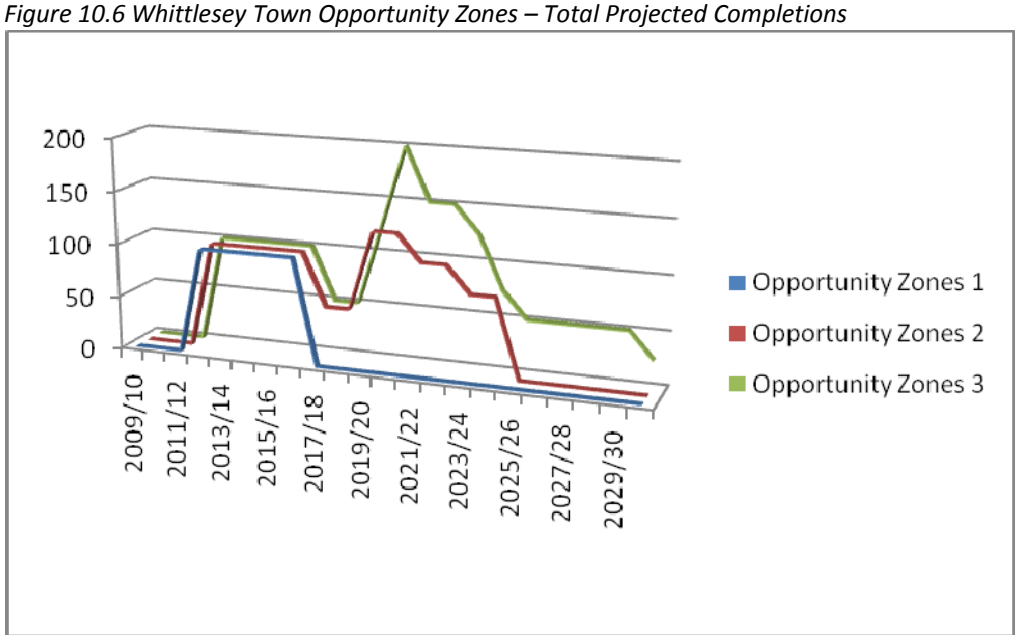
Figure 10.5 March Infrastructure Cluster – Total Projected Completions



Source: AECOM

Whittlesey

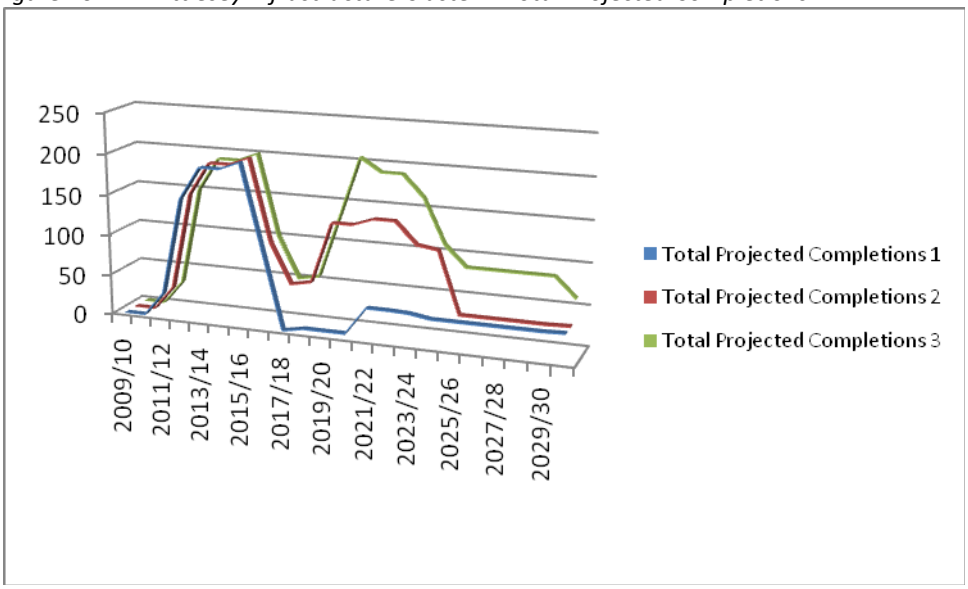
Figure 10.6 Whittlesey Town Opportunity Zones – Total Projected Completions



Source: AECOM

10.27 The housing trajectory for Whittlesey assumes that housing delivery could come forward earlier on the opportunity zones than in either March or Wisbech based on the assumption that market conditions are required to improve to a lesser extent to enable the delivery of such completion levels. This is for the purposes of infrastructure planning and does not take into account infrastructure assessments that would need to be carried out on individual sites as they come forward. Both Options 2 and 3 assume that after the initial completions of 100 per annum between 2012/13 and 2016/17 there would be a build up of completions on new sites to peaks in 2021/22 with 200 dwellings completed in Option 3. The levels would then step down towards the end of the period. The figure below illustrates the Whittlesey housing trajectory with windfalls and capacity sites included.

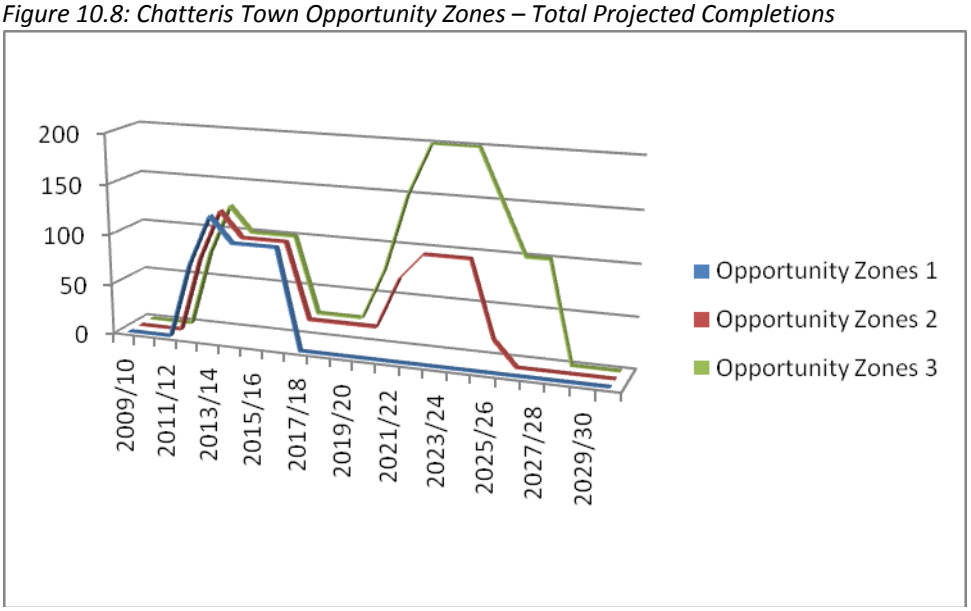
Figure 10.7: Whittlesey Infrastructure Cluster – Total Projected Completions



Source: AECOM

Chatteris

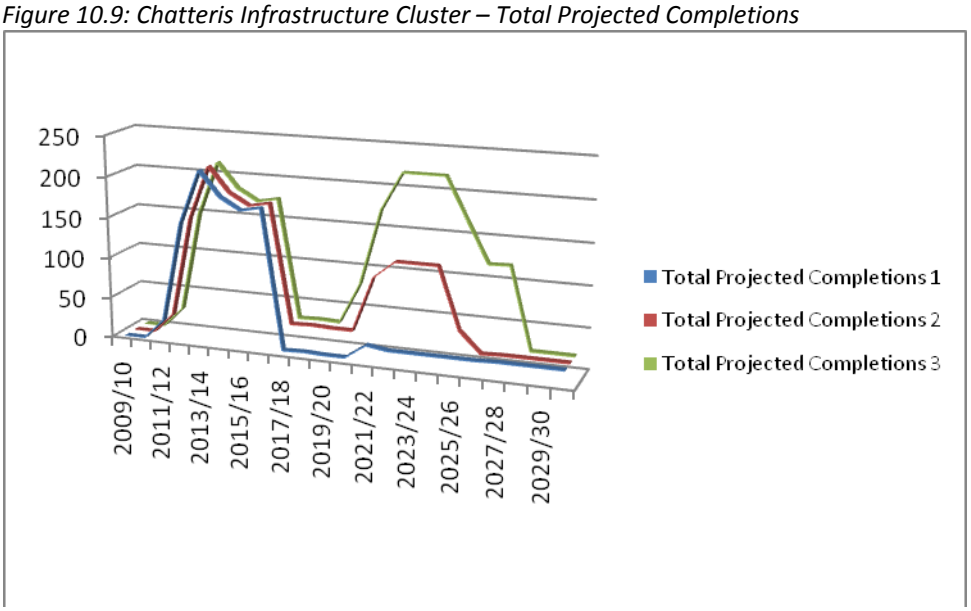
Figure 10.8: Chatteris Town Opportunity Zones – Total Projected Completions



Source: AECOM

10.28 The housing trajectory for Chatteris assumes the first opportunity zone (Option 1: 500 homes) comes forward to be delivered by 2016/17 given the relative strength of the market in this location. It is then assumed that there would be a build up to the peak completion of further units in Chatteris for both Options 2 and Option 3 which would occur in the latter part of the period. Option 3 would require the completion of 200 units per annum from 2022/23 to 2024/5. The following figure (10.11) illustrates the completion trajectory for Chatteris including capacity sites and windfall.

Figure 10.9: Chatteris Infrastructure Cluster – Total Projected Completions



Source: AECOM

Growth Associated Population

10.29 In order to estimate the population associated with housing growth assumptions have been developed based on the Average Household Size (AHS) and average child yield per dwelling, adjusted for tenure and size mix. The ASH for private housing is taken from the 2001 Census which provides the average characteristics of households which recently moved into or within Fenland in the previous 12 months. This approach recognises that the characteristics of households that have recently moved may differ from the characteristics of households in general.

10.30 While the Census data was undertaken in 2001, and is now several years old, it provides the most comprehensive review of recently moving households and is sensitive to the local conditions within Fenland.

10.31 AHS information for affordable housing can be taken from the CORE data (Continuous Recording System) which provides up to date AHS information on recently constructed affordable homes. This system is used to record information on Registered Social Landlord (RSL) lettings across local authorities (including Fenland) and provides a sound evidence base regarding the profile of new occupiers across a range of different affordable housing typologies. Where the total sample size is small for CORE data, it is possible to take an average of developments that have occurred over several years.

10.32 The following tables provide details of the assumptions made in relation to household characteristics, by tenure and dwelling type. All assumptions in this study are made at the district level.

Table 10.6: Average Household Size

	Private (Census 2001)	Affordable: Intermediate (Census 2001)	Affordable: Rented (CORE data)
1 bed	1.49	1.49	1.27
2 bed	1.72	1.72	2.01
3 bed	2.42	2.42	3.28
4 bed +	2.89	2.89	4.00

Source: Census 2001 / CORE data

Understanding when housing development might come forward in each location, along with the AHS assumptions, it is possible to estimate the population associated with housing growth in each of the clusters, as shown in the table below.

Table 10.7: Growth Associated Population Change by Phase

	Phase 1	Phase 2	Phase 3	Phase 4
	2011 - 2016	2016 - 2021	2021 - 2026	2026 - 2031
Wisbech				
Opportunity Zones 1	844	2701	4501	4501
Opportunity Zones 2	0	563	1575	1575
Opportunity Zones 3	0	0	1801	7877
Capacities and windfalls	2482	3799	4567	5239
Total	3326	7063	12444	19193
March				
Opportunity Zones 1	957	3488	4951	4951
Opportunity Zones 2	0	0	2588	4614
Opportunity Zones 3	0	0	0	2026
Capacities and windfalls	1231	1805	2264	2690
Total	2188	5294	9804	14280
Whittlesey				
Opportunity Zones 1	900	1125	1125	1125
Opportunity Zones 2	0	957	1575	1575
Opportunity Zones 3	0	0	619	1125
Capacities and windfalls	810	844	1258	1643
Total	1710	2926	4578	5469
Chatteris				
Opportunity Zones 1	900	1125	1125	1125
Opportunity Zones 2	0	338	1125	1125
Opportunity Zones 3	0	0	1238	1688
Capacities and windfalls	767	975	1186	1398
Total	1668	2437	4675	5336
Parsons Drove / Wisbech St Mary				
Capacities and windfalls	347	394	549	695
Infrastructure led growth	0	180	360	542
Total	347	574	909	1238
Manea				
Capacities and windfalls	207	275	320	365
Infrastructure led growth	0	79	164	254
Total	207	353	484	619
Wimblington / Doddington				
Capacities and windfalls	117	164	275	383
Infrastructure led growth	0	218	437	655
Total	117	383	711	1038
Total (assuming high growth)				
Total (assuming high growth)	**9563**	**19029**	**33604**	**47173**

10.33 The growth associated population is generated from the strategic sites and the known capacities / windfall assumptions. The tables below show the difference in population generated in the strategic growth locations being tested and what is likely to come forward outside these areas.

Table 10.8 Growth from Strategic Sites Associated Population Change (cumulative)

	Phase 1	Phase 2	Phase 3	Phase 4
	2011 - 2016	2016 - 2021	2021 - 2026	2026 - 2031
Option 1 (Opportunity Zones 1)	3601	8440	11703	11703
Option 2 (Opportunity Zones 2)	3601	10297	18568	20593
Option 3 (Opportunity Zones 3 and infrastructure led growth)	3601	10774	23186	34761

Table 10.9: Total Growth Population Change – including capacities and windfalls (cumulative)

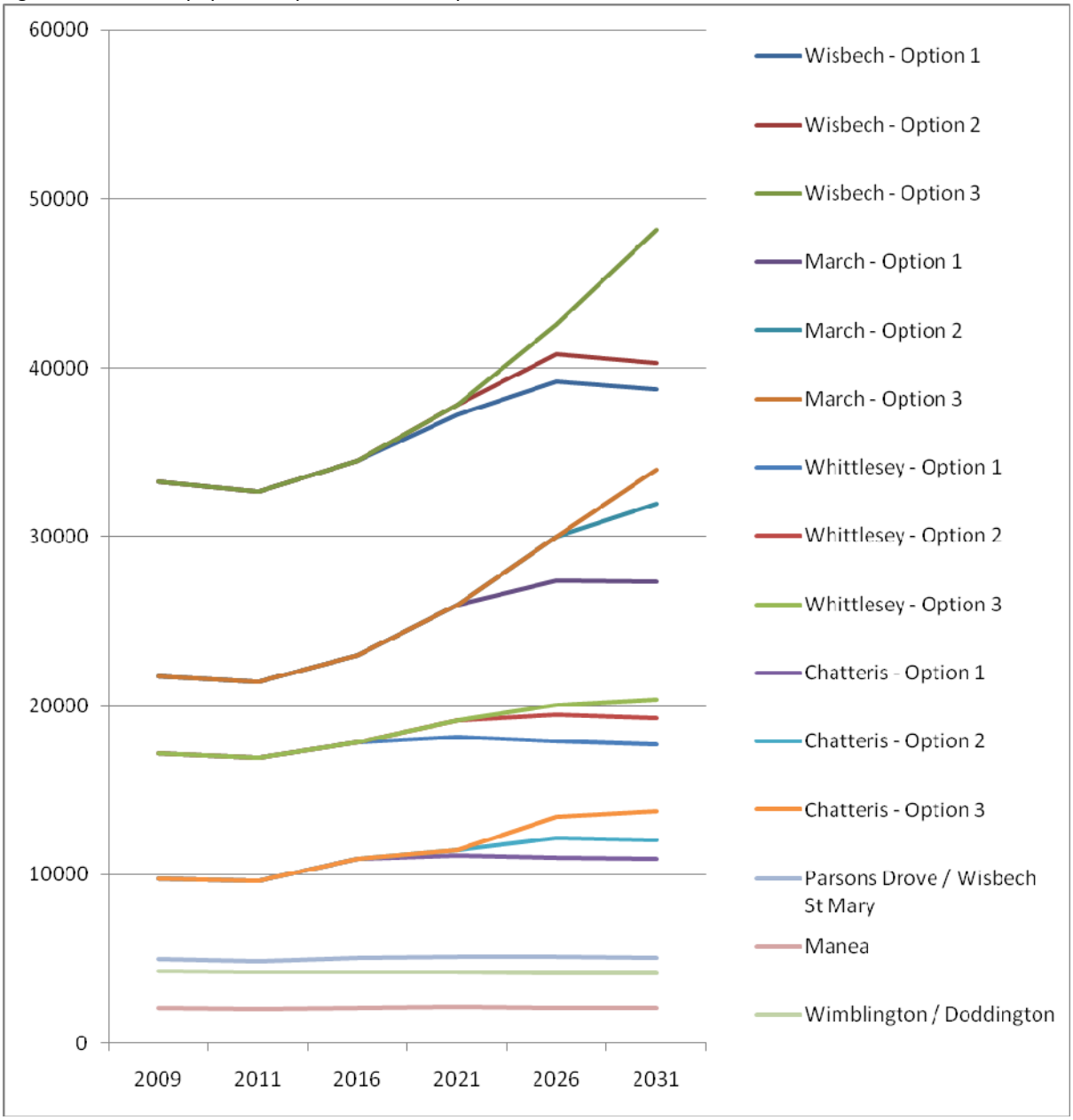
	Phase 1	Phase 2	Phase 3	Phase 4
	2011 - 2016	2016 - 2021	2021 - 2026	2026 - 2031
Total population growth - Option 1	9563	16695	22122	24116
Total population growth - Option 2	9563	18552	28986	33006
Total population growth - Option 3	9563	19029	33604	47173

10.34 Combining the no housing growth population projections with the growth associated population changes generate an overall picture of population change across Fenland. The table and figure below shows how the total population might change with the different levels of strategic growth.

Table 10.10: Total population per cluster and option

	Phase 1	Phase 2	Phase 3	Phase 4
	2011 - 2016	2016 - 2021	2021 - 2026	2026 - 2031
Wisbech				
Option 1	1906	4290	6178	6161
Option 2	1906	4853	7753	7736
Option 3	1906	4853	9554	15613
March				
Option 1	1498	4204	5806	6001
Option 2	1498	4204	8394	10615
Option 3	1498	4204	8394	12640
Whittlesey				
Option 1	950	769	833	798
Option 2	950	1726	2409	2374
Option 3	950	1726	3028	3499
Chatteris				
Option 1	1138	1360	1311	1353
Option 2	1138	1697	2437	2478
Option 3	1138	1697	3675	4166
Parsons Drove / Wisbech St Mary				
Option 1	127	74	119	125
Option 3	127	254	479	668
Manea				
Option 1	77	85	80	55
Option 3	77	163	244	309
Wimblington / Doddington				
Option 1	-73	-126	-125	-87
Option 3	-73	93	311	568
Total population change				
Option 1	5623	10655	14202	14406
Option 2 (assumes Option 1 for Local Service Clusters	5623	12512	21066	23296
Option 3	5623	12989	25684	37463

Figure 10.10: Total population per cluster and option



11. Setting strategic growth targets – employment land and jobs

11.1 Understanding the scale and nature of employment space and jobs is an important consideration for the FNPV work. The nature of Fenland's employment needs can be considered in the following ways:

- Journey to Work Destinations of Fenland residents – to understand at what spatial scale to consider employment opportunities
- The requirement for allocated employment land (typically offices, R&D, light industry, general industry and storage & distribution)
- The opportunity for increasing retail space and other town centre uses
- Independent employment forecasting based on trends and job projections
- Job projections based on FNPV growth options and employment rate

11.2 By considering all these different economic viewpoints it is possible to establish a fuller picture of the opportunity for employment growth over the plan period.

11.3 It should be noted that the FDC Planning Team are undertaking an Employment Land Review in parallel with SFF. This chapter is intended to inform further work by FDC in this area. As such, the amount of employment allocation and its location could change.

The critical link between housing growth and job creation

Such are the high levels of out-commuting, as set out below, along with the relatively poor road and rail connections in some areas, that the need to bring forward jobs with new homes is critical. This chapter sets out the latest evidence base for economic growth in Fenland. It demonstrates that economic growth is possible and could be of the level required to support housing growth and address the declining levels of economic activity amongst the existing ageing population. However, this evidence base is based on past trends and future projections and as such, careful monitoring will need to be undertaken over the plan period to ensure that the adequate supply of jobs is coming through to support housing growth.

Journey to Work Destinations of Fenland residents

11.4 Such is the relative proximity of the four key settlements to one another, employment opportunities need to be considered as part of a much wider functional economic area. Analysis of 2001 journey to work data of the resident population in Fenland summarises the pattern of commuting within and external to the district.

Table 11.1: Journey to Work Destinations by District

	Town			
Destination District	**Wisbech**	**March**	**Whittlesey**	**Chatteris**
Fenland	73%	72%	40%	49%
Peterborough	6%	8%	44%	4%
Huntingdonshire	1%	5%	6%	18%
East Cambridgeshire	1%	2%	0%	7%
South Cambridgeshire	0%	2%	1%	7%
Cambridgeshire	1%	3%	1%	7%

Kings Lynn and West Norfolk	10%	2%	0%	1%
Forest Heath	1%	0%	0%	0%
South Holland	2%	0%	0%	0%
Other	4%	6%	7%	6%

11.5 A large proportion of journeys to work from Wisbech and March remain within Fenland. However, for both Whittlesey and Chatteris over 50% of these journeys are to destinations outside the district.

11.6 The patterns of movement between the four main centres are illustrated in the following plans, which indicate that the transport demand on these towns is therefore greatest, as is the demand for capacity on the A47(T) and the A141 corridors.

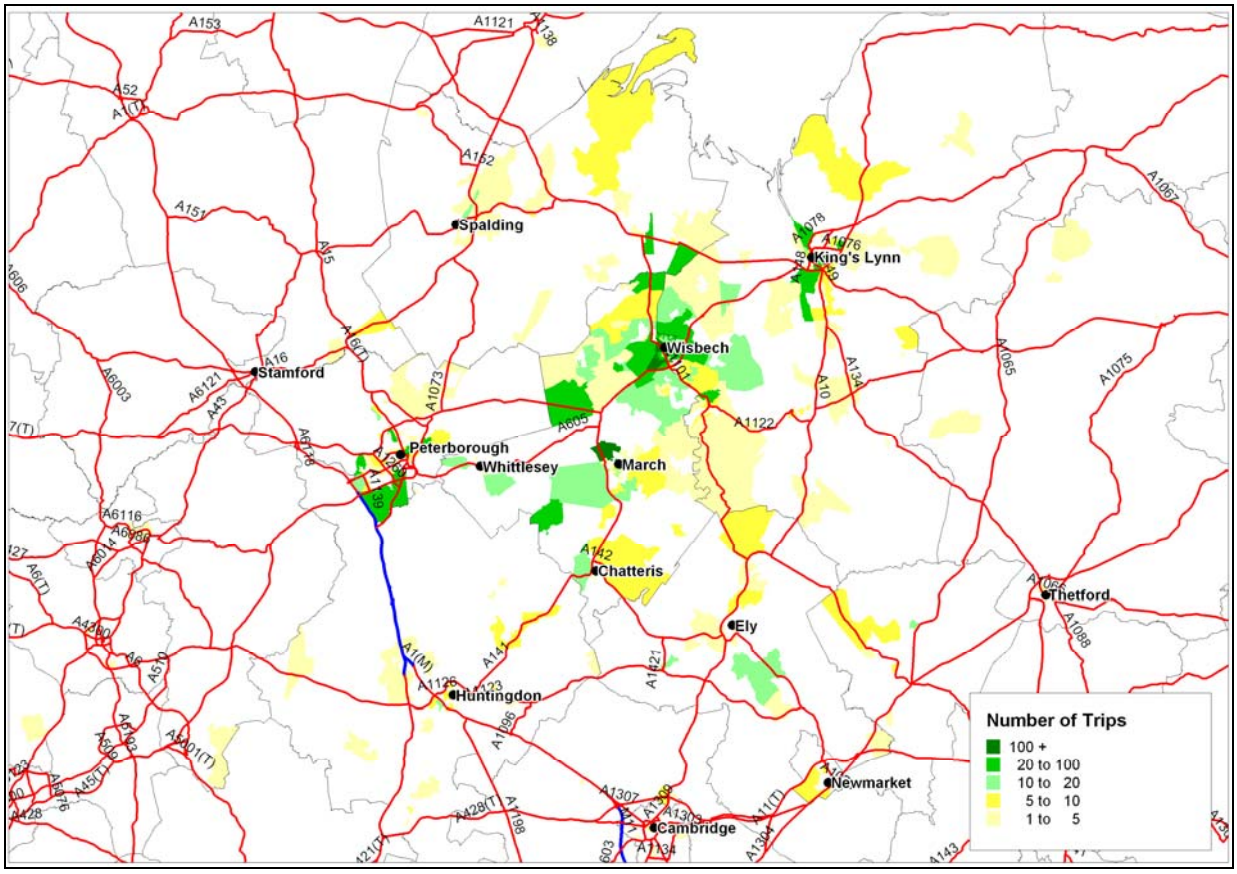


Figure 11.1: Wisbech Journey to Work Destinations

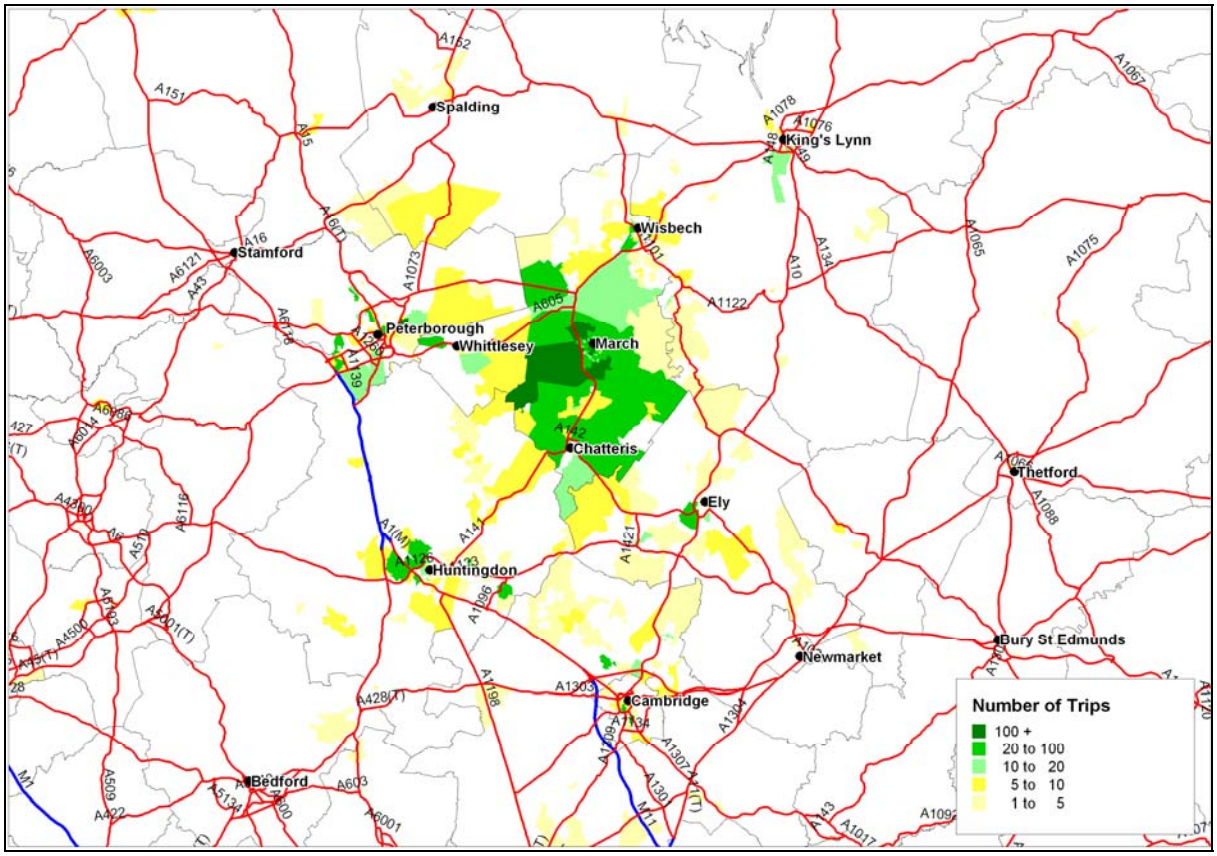


Figure 11.2: March Journey to Work Destinations

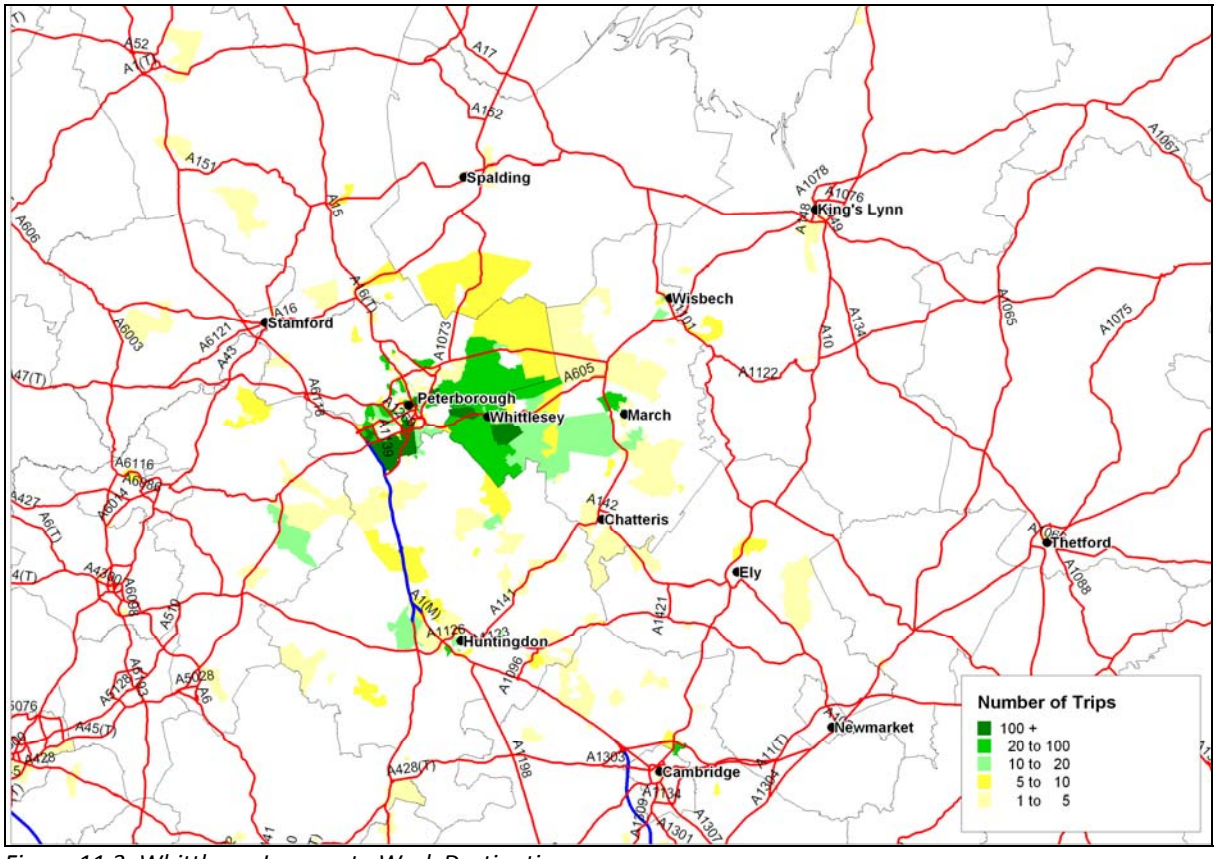


Figure 11.3: Whittlesey Journey to Work Destinations

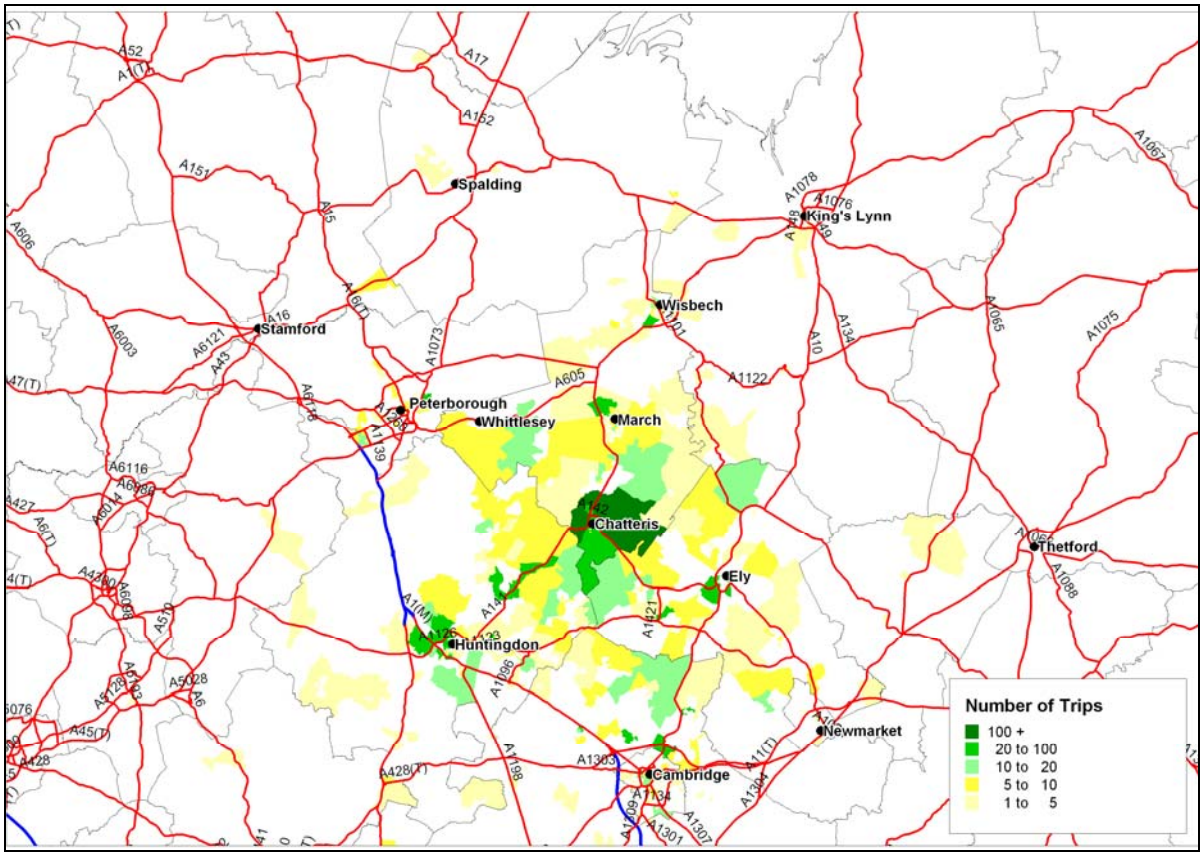


Figure 11.4: Chatteris Journey to Work Destinations

11.7 As such, it is clear that employment growth for the FNPV work should be considered at the district scale, taking into consideration out-community patterns. However, based on congestion levels and wider sustainability objectives, a reduction in commuting between settlements in the district should also be encouraged where practical.

Establishing the demand for employment land in Fenland

11.8 In understanding the nature of employment growth, the scale and location of future employment land is a critical consideration. FDC are currently undertaking an updated Employment Land Review to inform the requirement for employment floorspace across the district. As this work is on-going, based on agreement with FDC officers, the FNPV work uses work undertaken to support the earlier FDC Employment Land Review (2007), using update data where available. While the current review is on-going, it is not possible to make final conclusions about the most appropriate spatial distribution of new employment land. However, the FNPV work should be used to inform this further work.

11.9 The 2007 Employment Land Review does not rely on economic forecasts to assess its future employment land allocation needs. This is because there is not a direct relationship between job growth and employment land take up due to the following factors:

- Many new jobs are not on allocated land, for example schools, shops, offices
- Many companies move onto allocated land from existing sites
- Job densities can vary hugely, especially where there may be a high proportion of low density activities
- Jobs are not the same as people in employment

11.10 As such, it concludes that the Cambridgeshire Business Summary Completions and Commitments dataset provides a more robust way to identify future need. For the FNPV work, the Fenland specific element of this dataset between 1999 and 2010 has been used. This looks backwards at previous trends, but provides a useful understanding of the Fenland commercial market over a period that has seen both a strong and weak economy in the district.

11.11 The 2007 review highlights existing vacant allocated employment sites that it deems no longer be appropriate for industrial / business development due to the location of the site, poor transport links or lack of demand. Based on this assessment it removes land that it does not consider to be adequate and concludes that the district currently has 86 hectares of existing, fit for purpose land allocated for employment purposes. This is a mapped for the key settlements Figures 11.5 – 11.8: Potential Employment Land Allocations.

Table 11.2: Vacant retained employment land by cluster

Settlement clusters	**Vacant retained employment land**
Chatteris	9.32
March	31.6
Whittlesey	0.59
Wisbech (including Newton and Tydd St Mary settlements as part of the Infrastructure Cluster)	41.77
Wimblington/Doddington	2.68
Manea	0.26
Total	86.22

11.12 The net employment land completions (1999-2010) in Fenland are on average 5.6 ha per annum. This works out as 113ha over the plan period (2011-2031). Based on the 2007 conclusion that there is 86 hectare of existing allocated (but vacant) space, there is a need to allocate an additional 27.3 hectares of additional floorspace across the district over the plan period to 113ha.

11.13 The key settlements capacity assessment (Chapter 8) sets out a number of sites where the 27.3 hectares could be located across the district based on spatial analysis of opportunities and constraints. The Employment Land Review will need to consider these to inform exact locations for the final allocations. Figures 11.5 – 11.8: Potential Employment Land Allocations set out the potential sites for each key settlement.

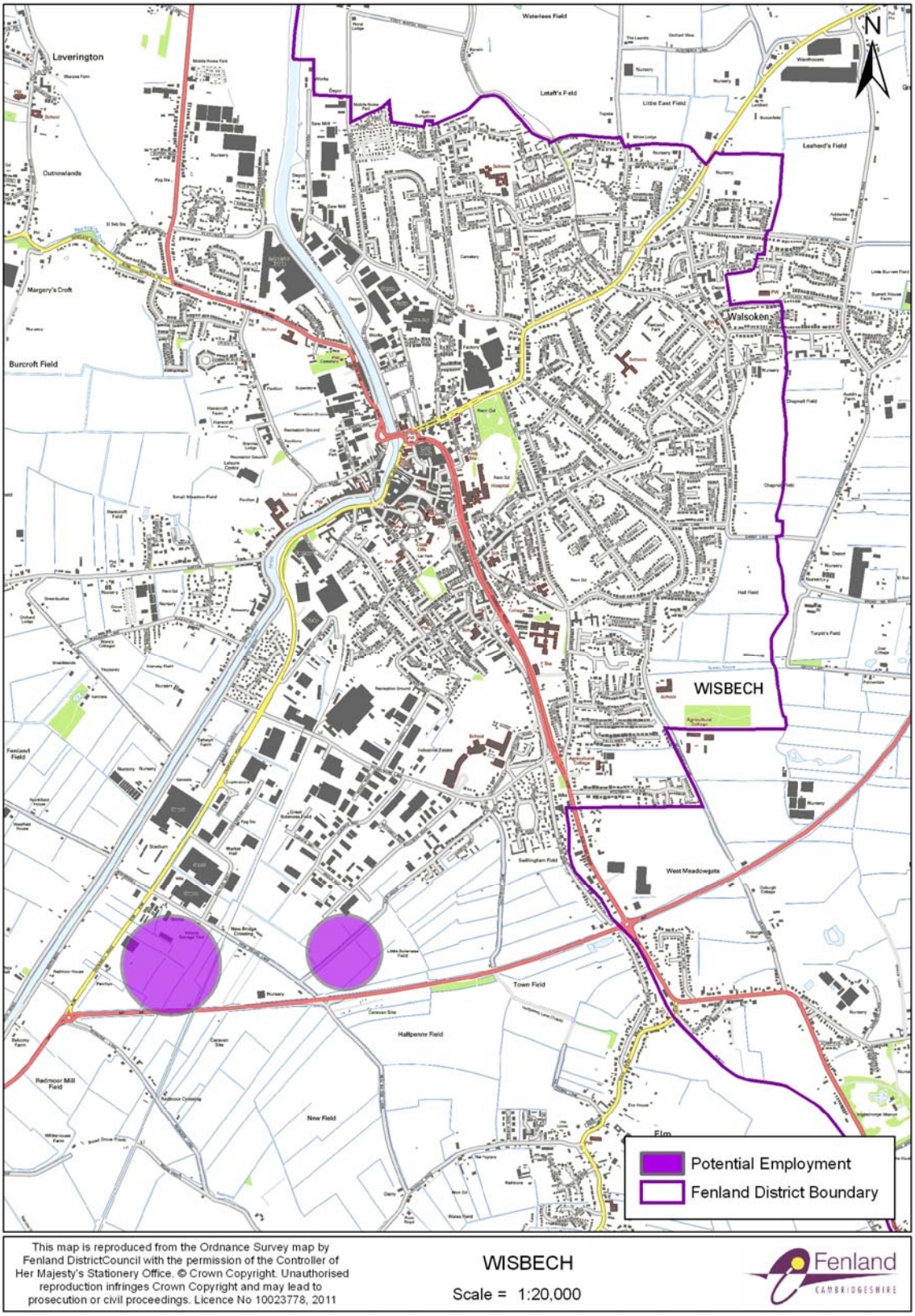


Figure 11.5: Wisbech Potential Employment Land Allocations

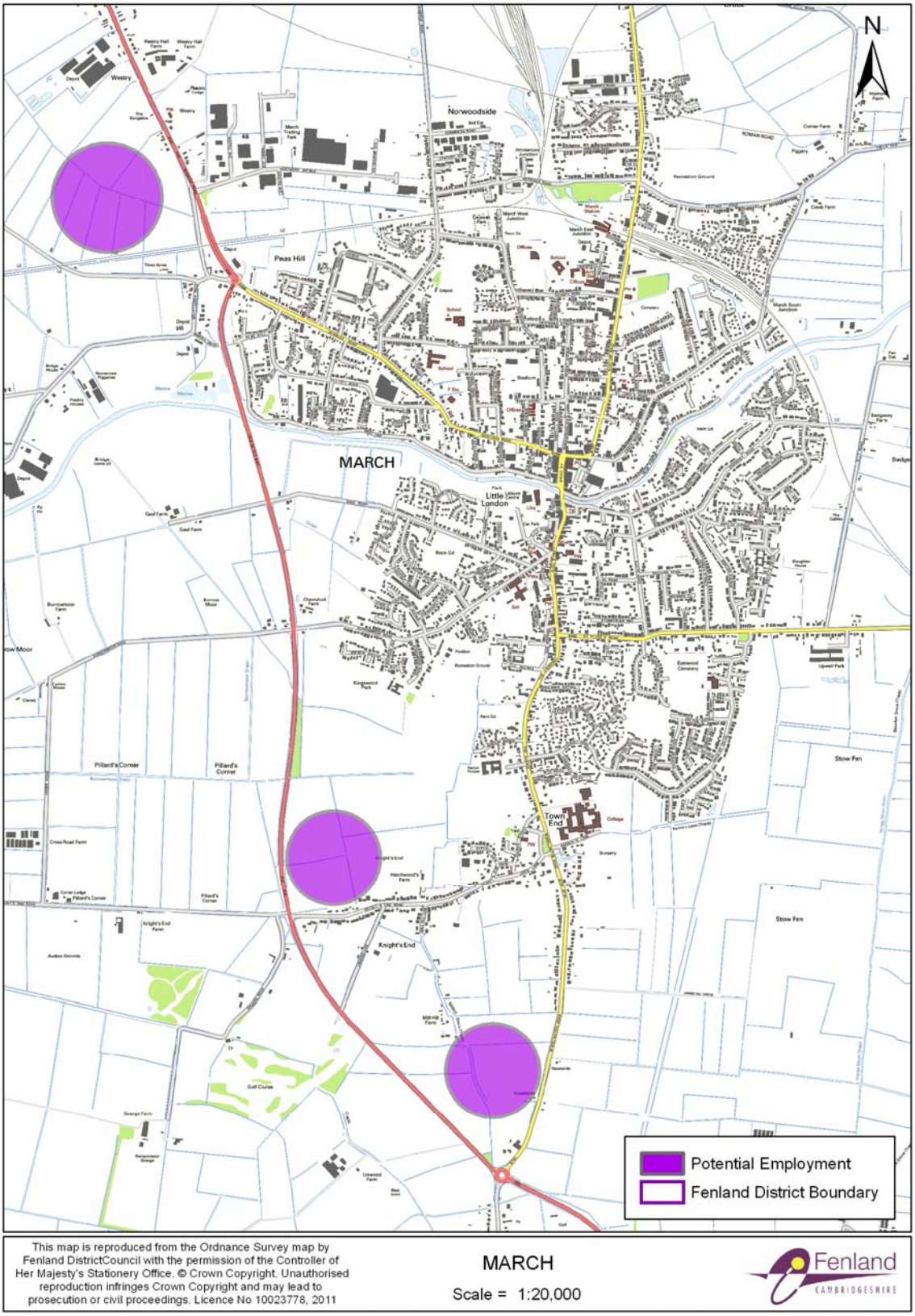


Figure 11.6: March Potential Employment Land Allocations

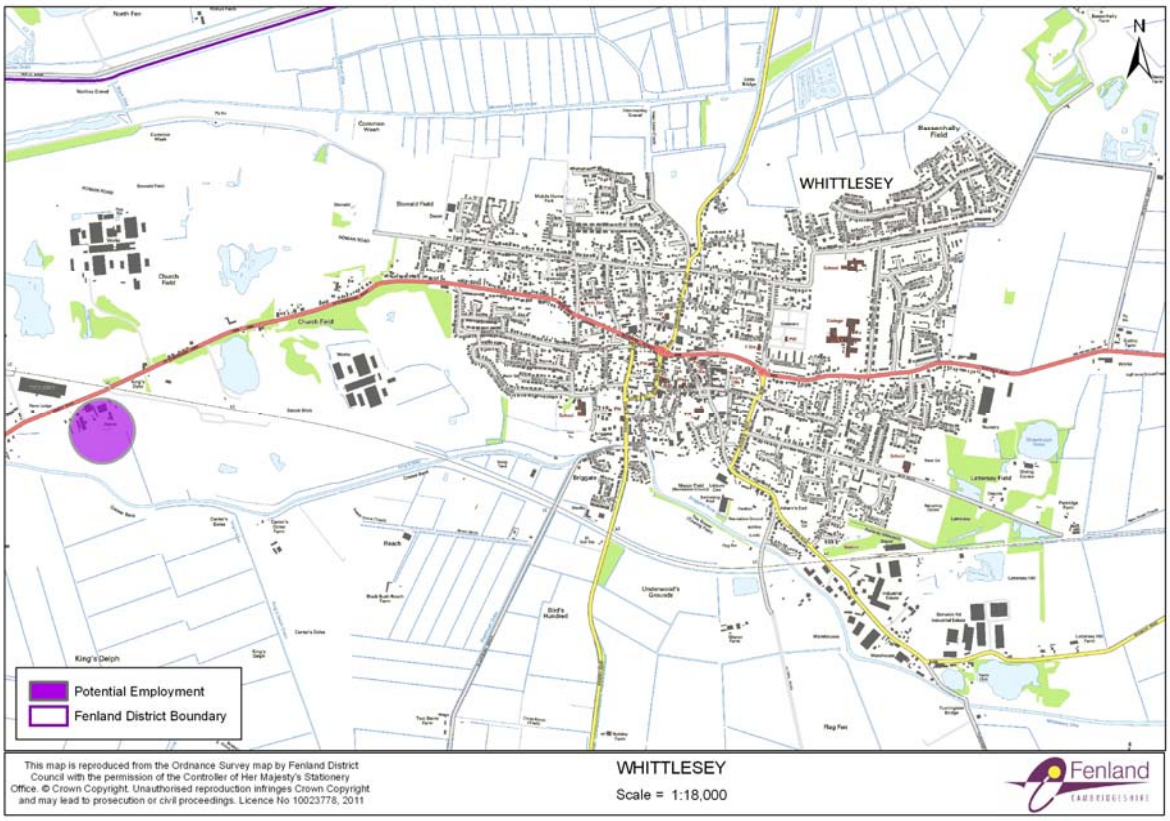


Figure 11.7: Whittlesey Potential Employment Land Allocations

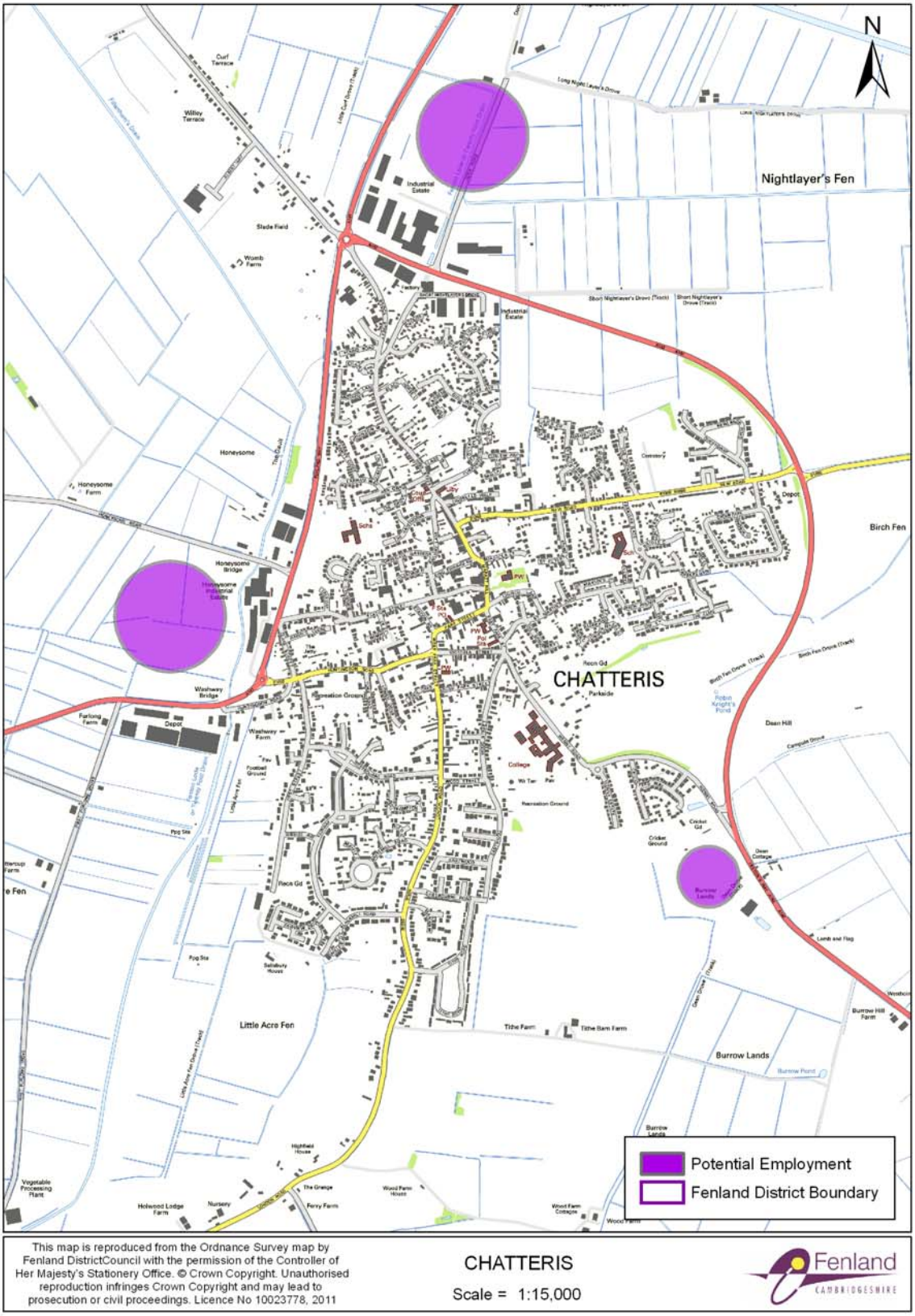


Figure 11.8: Chatteris Potential Employment Land Allocations

11.14 It is also possible to consider the net change in employment use class completions over the same period (1999-2010) to provide an estimate what employment floorspace could come forward as over the plan period.

Table 11.3: Employment Land Use class completions

Use class	Net change in use class completions	If applied to 113ha requirement over plan period
B1a (business)	11%	12
B1b (R&D)	0%	0
B1c (Light industry)	8%	9
B2 (General industry)	23%	26
B8 (Storage & distribution)	59%	66
Total	100.0%	113ha

11.15 An assessment will need to be made through the forthcoming employment land review as to whether this land is still suitable for retention as employment land. This should inform the amount of additional employment land is allocated based on the settlement capacity assessment in Chapter 8.

11.16 The Employment Land Review notes that Fenland is attracting interest from local and national developers who have recognised the shortage of quality office space available for professional service providers (solicitors, accountants, surgeries, brokers) in the main conurbations of the district. The traditional location of 'chambers' for these providers is rapidly being eschewed in favour of more modern, image-conscious premises that offer up-to-date technology infrastructures. The success of South Fens Business Centre, in Chatteris, which is 60% full (based of its floor occupancy of almost 15,000 square feet) within eight months of its official opening has prompted several speculative developers to embark on similar state-of-the-art projects in Wisbech and March.

11.17 The review also notes that while out-of-town retail and leisure development continues to attract investment and that the subject is emotive – on one hand, smaller businesses located in the town centres can be affected by a loss in trade, however, a counterpoint is that without the new investment the money might otherwise be spent in the larger shopping centres of King's Lynn and Peterborough. Careful land allocation and appropriate business use classification is important to ensure that retail and leisure sector gaps can be plugged by attracting suitable amenities. The FNPV work points to the need for town centre masterplans to maximise the opportunities within the town centres and increase their standing as competitive economic locations within the wider area.

11.18 Once FDC have updated their employment land review to support the emerging Core Strategy it will be possible to make an updated assessment of the level of employment land available in each key settlement and to understand the requirement for any additional allocation of employment land in each settlement.

Town centre employment uses

11.19 The Cambridgeshire Business Summary Completions and Commitments dataset covers some town centre employment uses, including office space (B1a). However, it does not consider retail space, which will be an important employer (to varying degrees) in each town centre. A Retail Study Update 2009 has been undertaken based on available data on projected available expenditure and population using multipliers for Fenland, East Cambridgeshire, Huntingdonshire and Peterborough derived from Cambridgeshire County Council Dwelling-led Population Forecasts (which are mid-2007-based).

11.20 The Retail Study Update considers an Overall Catchment Area for Fenland residents, which covers a wider area than the district boundaries to account for cross-border trips (known as 'leakage'). This is set out as Figure 11.9: Retail Study Update 2009 Overall Catchment Area

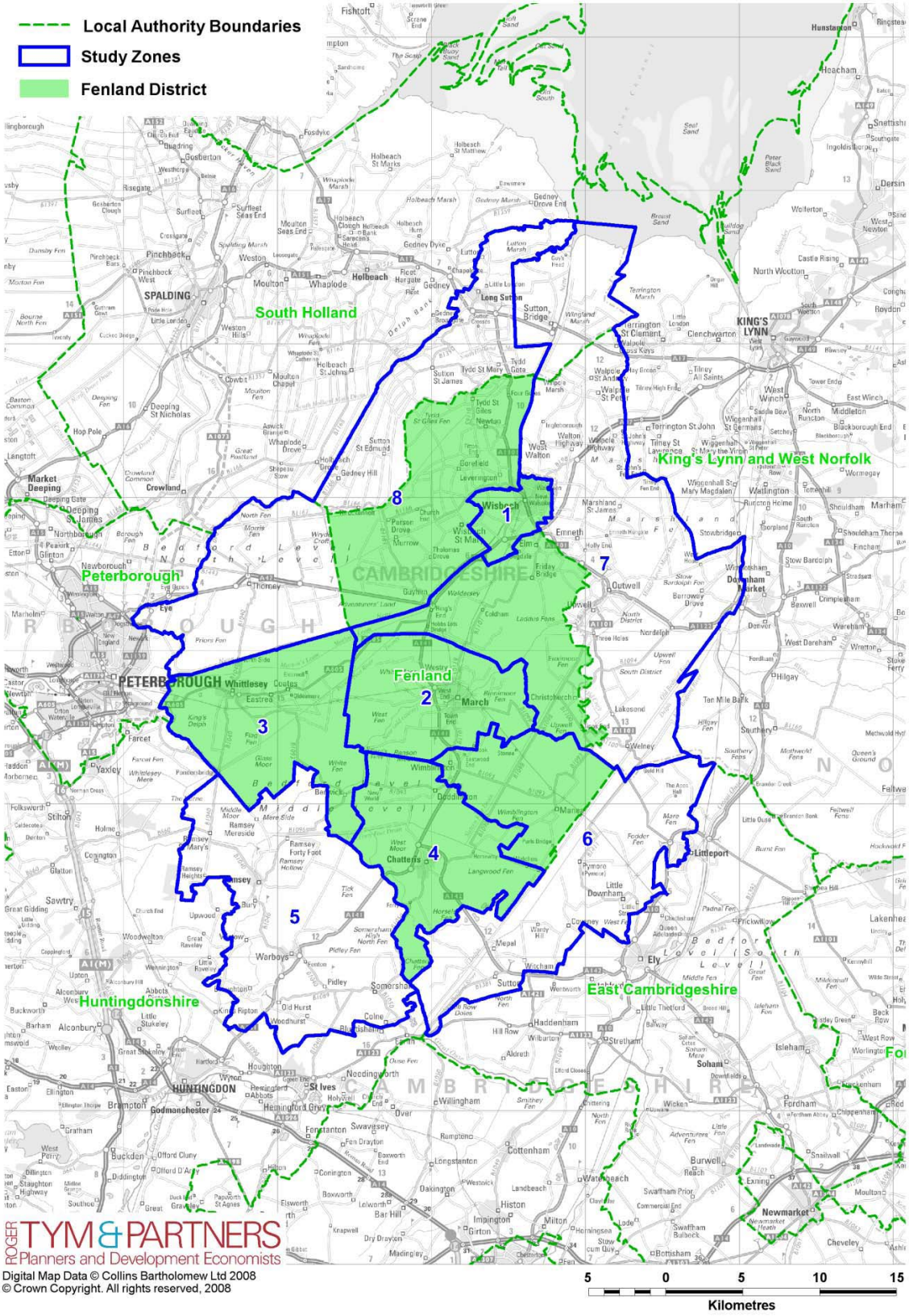


Figure 11.9: Retail Study Update 2009 Overall Catchment Area

11.21 It should be noted that the population projections are based on population forecasts established using the then current planning policy in 2007 (Policy H1, 11,000 homes in Fenland to 2021) and as such, it may be necessary to undertake a further work based on the FNPV work to understand the potential for retail floorspace across the key settlements. Tables 11.4 and 11.5 are extracted from the Retail Study Update and set out possible district wide scenarios for comparison and convenience goods sectors. The different scenarios are based on different levels of leakage/retention of Fenland resident's consumer spend within the district.

Table 11.4: Comparison goods sector projections (sq.m)

		2009-13	2009-16	2009-21	2009-26
Scenario A: Declining Retention	Net	-13,014	-12,403	-6,430	-908
	Gross	-18,592	-17,718	-9,186	-1,298
Scenario B: Static Retention	Net	-12,418	-10,469	-2,498	5,598
	Gross	-17,739	-14,956	-3,569	7,997
Scenario C: Moderately Increasing Retention	Net	-11,779	-8,491	697	10,300
	Gross	-16,826	-12,130	996	14,714
Scenario D: Significantly Increasing Retention	Net	-10,543	-5,883	4,657	15,904
	Gross	-15,061	-8,404	6,653	22,721

Source: Retail Study Update 2009

Table 11.5 Convenience goods sectors projections (sq.m)

		2009-13	2009-16	2009-21	2009-26
Scenario A: Static Retention	Net	-3,103	-2,747	-2,211	-1,457
	Gross	-4,774	-4,227	-3,402	-2,242
Scenario B: Increasing Retention	Net	-2,534	-1,630	-504	902
	Gross	-3,898	-2,508	-776	1,388

Source: Retail Study Update 2009

11.22 The tables indicate that there is a need for additional comparison goods spend up to 2026, with a potential smaller requirement for convenience goods space over the same period. Current national planning policy supports a town centre first approach to retail land allocation and the potential requirement for up to 22,721 (gross) provides a basis to support masterplanning work across one or more of the key settlements.

Wider employment forecasting based on trends and projections

11.23 In order to understand the spatial pattern of employment growth in Fenland it is possible to use the latest economic forecasting, the Oxford Economics Regional Forecast Model using the Autumn 2010 data run. This is a regional model and as such considering its implications and a sub-district scale should only be done to provide an indicative perspective of changing patterns within employment sectors over the plan period.

11.24 For the purposes of analysis, each market town and its hinterland is identified as a functional economic area. This is broadly based on the grouping of wards from the 7 infrastructure clusters used above, but with the Wisbech St Mary cluster merging into the Wisbech economic area, the Doddington and Wimblington cluster merging into the March economic area and Manea joining the Chatteris economic area. Whittlesey remains as per the infrastructure cluster. Figure 11.10: Fenland economic areas, sets this out.

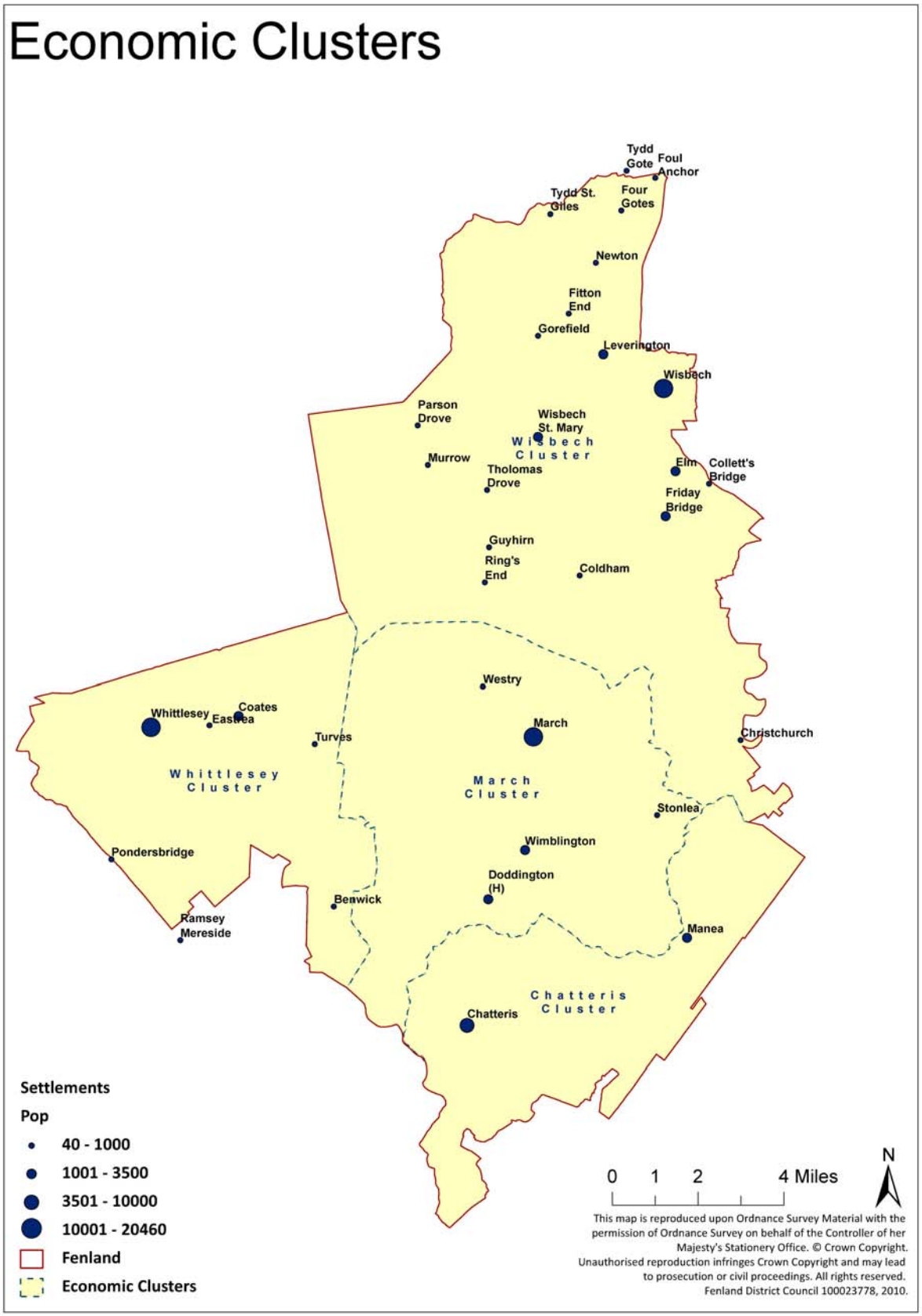


Figure 11.10: Fenland economic areas

11.25 The following text box sets out a series of assumptions taken directly from the Technical Report for the Oxford Economics Report. In summary, the forecasts were developed to support development of Regional Economic Strategy and Regional Spatial Strategy. However it provides a 'policy-off' scenario. It does not consider new infrastructure or policy changes (except where they have already started or have some impact on the baseline data) and household estimates are based on the ONS population projections (not projected housing development). Commuting patterns are assumed to be consistent with the 2001 Census. It therefore provides a good basis to interrogate and compare the Fenland Neighbourhood Planning Vision options against.

Oxford Economics Key Assumptions:

The East of England Forecasting Model (EEFM) was originally developed by Oxford Economics to project economic, demographic and housing trends in a consistent fashion and in a way that would help in the development of both the Regional Economic Strategy and the Regional Spatial Strategy for the East of England.

Past trends reflect past infrastructure and policy environments. Even where major new investments or policy changes are known and have actually started, they can only affect EEFM forecasts to the extent that they are reflected in the currently available data. If they have not yet impacted on the available data, they will not be reflected in the forecasts.

The forecasts are unconstrained. This means that the forecast numbers do not take into account any policy or other constraints that might prevent their actual realisation on the ground. Forecasts of the demand for dwellings, for example, are the outcome of projected changes in employment, population, etc. If in reality planning constraints were to prevent this demand being satisfied, the associated forecast levels of GVA, employment, population, etc, would be less likely to materialise.

Residence employment is based on a commuting matrix taken from the 2001 Census. This matrix tells us, for any given area, where its residents work. Using this information, each available job is allocated to a resident of one of the authorities with which the area has commuting links, in proportion to the strength of that link. This method assumes that commuting patterns do not change over time.

Net Commuting: Our broad assumption is that commuting flows over the forecast period are in line with past trends. Major changes in transport infrastructure, or significant new housebuilding in an area, may bring about changes in commuting patterns, but the EEFM can only take account of such changes if they are reflected in the available data.

All population data is taken from ONS's midyear estimates (MYE). Population at regional level is forecast using official projections of natural increase, plus Oxford's projected numbers of migrants (broken down by domestic and international). At local level, total population is forecast as last year's population plus natural increase plus net migration (domestic and international).

Having calculated occupied dwellings, we use a ratio of total to occupied dwellings (calculated by Oxford Economics from the most recent data available) in order to project total dwelling stock. We call this "demand for dwellings." It is intended to proxy dwelling stock, but it is not a conventional stock or supply figure. Rather it tries to estimate what stock might be needed to maintain current occupation ratios in the context of a higher population.

Meanwhile, to produce household forecasts, we divide the forecast numbers of occupied dwellings by Chelmer estimates of the ratio of occupied dwellings to households. (Note that although there is a separate Chelmer estimate for each local authority, it is a constant, so will not capture possible changes locally over time.)

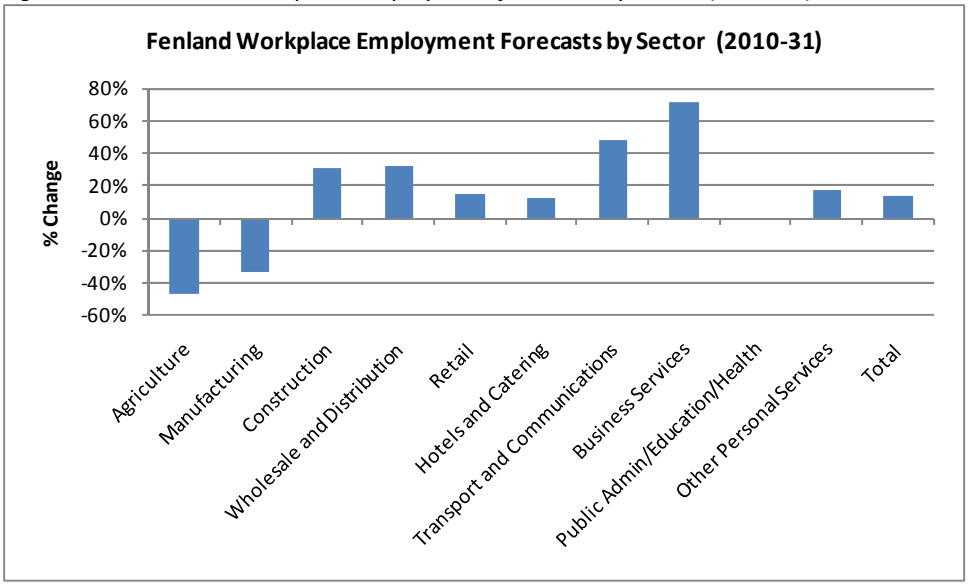
Forecast Employment Growth by Sector

11.26 The approach taken throughout this assessment is based on analysing the proportionate sector shift highlighted through the Oxford Economics work.

11.27 The figure below presents the employment growth projections for Fenland for each of the broad employment sectors. Industrial and manufacturing sectors are on the left of the graph, whereas the service sectors are to the right. Overall, significant decline is suggested as possible within the agriculture (47%) and manufacturing (33%) sectors1. Construction is the only 'industrial' sector which is suggested could grow – with forecast growth of 900 31%.

11.28 All of the service sectors besides Public Admin, Education, and Health, are forecast to grow (n.b. public admin is only forecast to decline by 1%. However, a much more significant cut given the recent cuts to public sector spending which will impact from 2011 could be assumed. Clearly the strongest sectors suggested by the model are Business Services (71%) and Transport and Communications (48%).

Figure 11.11: Fenland workplace employment forecasts by sector (2010-31)



Source: Oxford Economics, Autumn 2010

11.29 The table below compares the same employment trends to the regional and national projections. The forecasts for Fenland are broadly in line with the regional and national trends in terms of the direction of change, however there are some key variations:

- Agriculture is suggested to decline more in Fenland than elsewhere (however, this may reflect the greater concentration of agriculture in Fenland compared to the East of England and UK).
- Despite the decline in manufacturing forecast for Fenland, this is less severe than elsewhere.
- The projected growth of wholesale and distribution and transport and communications in Fenland is far greater than that suggested by the model at the regional and national level (forecast growth of more than three and five times the national level respectively).

[1] Note. We have excluded extraction and utilities. These have large percentage drops in employment, but together only employ 12 people – so the graph would be misleading

- It is suggested that Business Services could also significantly outpace the national and regional averages – although to a lesser degree than communications and logistics.

Table 11.6: Workplace Employment Growth, by Sector (2010-31)

	Fenland	East of England	UK
Agriculture	-47%	-28%	-34%
Manufacturing	-33%	-37%	-37%
Construction	31%	21%	17%
Wholesale and Distribution	32%	9%	7%
Retail	15%	15%	12%
Hotels and Catering	12%	10%	12%
Transport and Communications	48%	8%	11%
Business Services	71%	40%	43%
Public Admin/Education/Health	-1%	4%	1%
Other Personal Services	18%	28%	25%
Total	14%	12%	10%

Source: Oxford Economics, Spring 2010

Sub-Sector Analysis

11.30 The preceding section presented an overview of the key sector trends by broad employment sector. However, the Oxford Economics forecasts provide a greater level of sub-sector analysis. This section does not present the findings for all sub-sectors; however it presents the key findings for sub-sectors that provide the greatest opportunities for, or threats to, growth. These figures are provided in the context of the broad growth forecast for Fenland, presented above, rather than in the context of the regional and national averages. Sectors with fewer than 100 employees have been excluded and consequently the tables may not add exactly to the column totals.

Table 11.7: Fenland Sub-Sector Employment Forecasts, 2010-31

	2010	2031	Change	%
Agriculture	3,045	1,614	-1,431	-47%
Manufacturing - food, drink & tobacco	2,838	1,930	-908	-32%
Manufacturing - other low tech	729	412	-317	-44%
Manufacturing - metals & engineering	1,134	732	-403	-35%
Manufacturing - chemicals & process industries	608	412	-196	-32%
Manufacturing - other & recycling	213	200	-13	-6%
Construction	3,000	3,934	934	31%
Wholesale & distribution	3,893	5,127	1,234	32%
Retail	3,444	3,964	521	15%
Hotels & catering	1,584	1,781	197	12%
Communications	279	233	-45	-16%
Land and other transport	1,776	2,816	1,041	59%
Finance	434	500	66	15%
Business services - computer related	235	339	104	44%
Business services - labour recruitment, security & cleaning	2,675	5,819	3,143	117%

Business services - other including call centres	1,063	1,253	190	18%
Business services - R&D, technical testing	183	241	57	31%
Business services - real estate & renting	724	1,299	576	80%
Business services - other tradable	1,430	2,096	666	47%
Public admin & defence	1,799	1,700	-99	-6%
Education	2,683	2,483	-200	-7%
Health	4,752	4,995	243	5%
Other personal services – miscellaneous	1,503	1,840	337	22%
Total	**40,023**	**45,719**	**5,696**	**14%**

Source: Oxford Economics, Spring 2010

11.31 In term of absolute employment change, the greatest employment growth is expected to be in business services sub-sectors, notably the lower value business service sub-sectors of labour recruitment, security and cleaning (i.e. professional services to the business service sector). The higher value sub-sectors (R&D, computer related) are identified in the model to growth more modestly and from very small bases.

11.32 Strong growth is also forecast for wholesale & distribution and land and other transport, with more modest growth forecast for retail and other personal services.

11.33 All of the manufacturing sub-sectors are forecast to decline (between 32% and 44%), however this reflects a national trend however it is clear from the local economic assessment and discussion with employers and economic development staff that there are opportunities for employment growth in higher value niche manufacturing sectors. This is discussed further later in this chapter.

11.34 The overall sub-sector forecasts reiterate the forecasts of general decline among the manufacturing and agricultural sectors and growth of transport, logistics, and lower value business services. However this is a policy-off forecast and there is the opportunity to improve the competitiveness of Fenland by supporting employment growth among higher value employment sectors.

11.35 It is highly unlikely that it will possible to counter the decline of manufacturing, which reflects long term national trends, and so some structural changes in employment is inevitable. However, from the supporting baseline research it is clear that Fenland has number of key strengths in higher value niche sectors (particularly within the metals and food and drink sub-sectors) and some higher value employment opportunities will continue within these sectors despite overall employment decline. The challenge for Fenland is to retain the higher value opportunities within these sectors whilst ensuring that Fenland residents are able to access these opportunities.

11.36 Similarly, the Oxford Economic Forecasts imply that growth of business services is driven in the main by growth in the lower value sub-sectors including labour recruitment (largely agency work) and industrial cleaning. The high value business services sub-sectors represent a very small proportion of Fenland's employment base and the policy-off projections are for these sectors to grow modestly. However, these sector present considerable opportunity for further employment growth within Fenland, which should be reinforced by Fenland's proximity to higher value employment areas at Cambridge, Peterborough and Huntingdon. Economic development within Fenland should focus on developing strategic links between these areas to exploit the district's land and labour costs which are lower than these more competitive areas. This should be supported by the overall effort to tackle skills levels across Fenland. The emerging

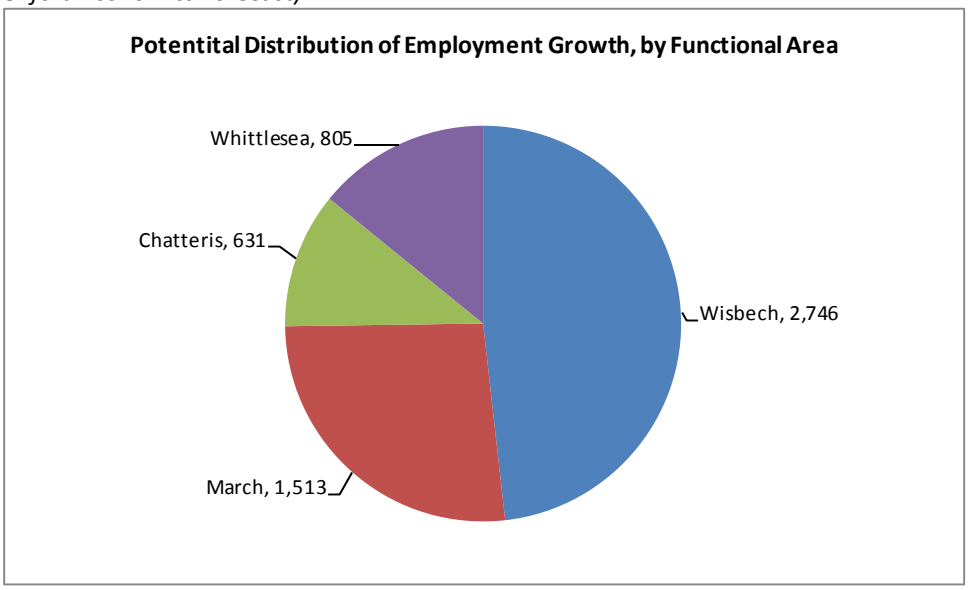
Greater Cambridge Greater Peterborough LEP is the natural body to drive this agenda, considering skills requirement and training and suitability of employment locations to support businesses and identify Fenland's role, or entry point within the economic area.

11.37 The projected fall in agricultural jobs (-1,431) and also the projected rise in "Business services – labour recruitment, security & cleaning" (+3,143) should be caveated, CCC are aware that many people working in agriculture are now technically employed by agencies rather than farmers or agricultural employers directly. This effect can be seen when looking at Worker Registration Scheme data by industry. The trends shown here may, to some extent at least, reflect changing employer structure and employment practices, rather than a decline in actual agricultural work.

Geographical Distribution of Employment Gains and Loses

11.38 Using the current distribution of employment by sector, the following section sets out how the employment pattern may be distributed across Fenland in 2031, based on the Oxford Economics growth assumption. **This section sets out how the employment patterns might be distributed across Fenland in 2031 using the current distribution of employment by sector as a base. While this is not the same as sub-local authority projections, it should provide an indication of the areas that are most at risk of experiencing job losses and those areas where employment space may be increasingly demanded.** It also presents a baseline against which employment and land use policies may attempt to influence the spatial pattern of employment growth across the district.

Figure 11.12: potential distribution of employment growth by function area (based on sector projections in Oxford Economics Forecast)



Source: AECOM, 2010

11.39 It is clear that the vast majority of growth is due to the sectors that are most heavily concentrated in Wisbech and March. However, as a proportion of the existing employment base, Chatteris, it is suggested, could experience the strongest rate of growth.

Table 11.8: Change on 2008 Employment Base

	2031	% Change on 2008
Wisbech economic area	2,746	19%
March economic area	1,513	16%
Chatteris economic area	631	25%
Whittlesey economic area	805	19%
Total	5,696	19%

Source: AECOM, 2010 (note percentage growth is different as the base is 2008, not 2010)

Table 11.9: Estimated Employment Change, by Functional Area (2010-31) as percentages

	Wisbech	March	Chatteris	Whittlesey	District wide
Agriculture	-4%	-3%	-2%	-3%	-4%
Extraction	0%	0%	0%	0%	0%
Food, drink & tobacco	-4%	0%	0%	-3%	-2%
Other low tech	-1%	-1%	-1%	0%	-1%
Metals & engineering	-1%	-1%	-2%	-1%	-1%
Chemicals & process industries	0%	0%	0%	-2%	0%
Other Manu' & recycling	0%	0%	0%	0%	0%
Construction	2%	2%	3%	3%	2%
Wholesale & distribution	2%	3%	7%	4%	3%
Retail	1%	1%	1%	1%	1%
Hotels & catering	0%	1%	0%	0%	0%
Communications	0%	0%	0%	0%	0%
Land and other transport	3%	2%	2%	4%	3%
Finance	0%	0%	0%	0%	0%
Computer related	0%	0%	0%	0%	0%
Labour recruitment, security & cleaning	13%	3%	5%	3%	8%
Other Bus' including call centres	0%	1%	1%	0%	0%
R&D, technical testing	0%	0%	2%	0%	0%
Real estate & renting	1%	2%	1%	2%	1%
Other tradable Business Services	1%	1%	1%	3%	2%
Public admin & defence	0%	-1%	0%	0%	0%
Education	-1%	0%	0%	0%	0%
Health	0%	1%	0%	1%	1%
Other personal services	1%	1%	1%	1%	1%
Estimated 2010	15%	12%	19%	15%	14%

Figure 11.13: Fenland- Estimated Employment Change (2010-31) as percentages

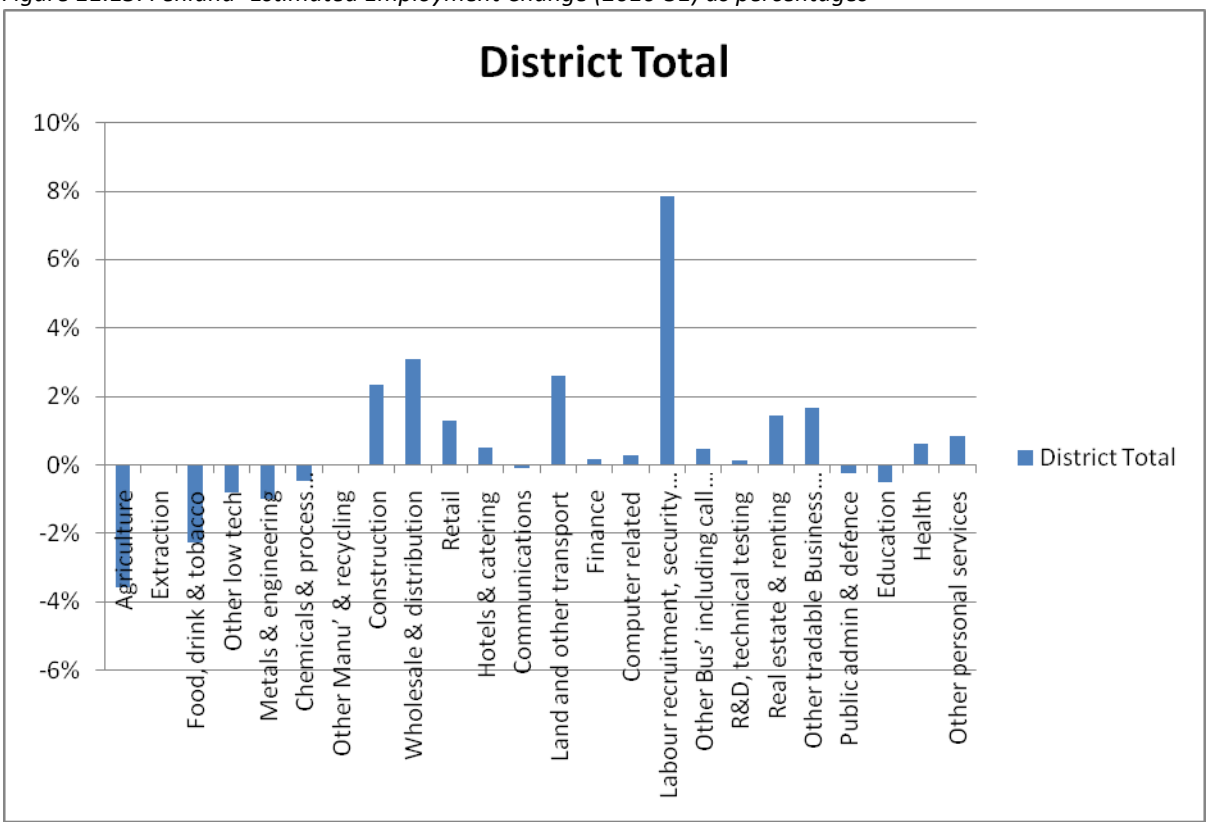


Figure 11.14: Wisbech - Estimated Employment Change (2010-31) as percentages

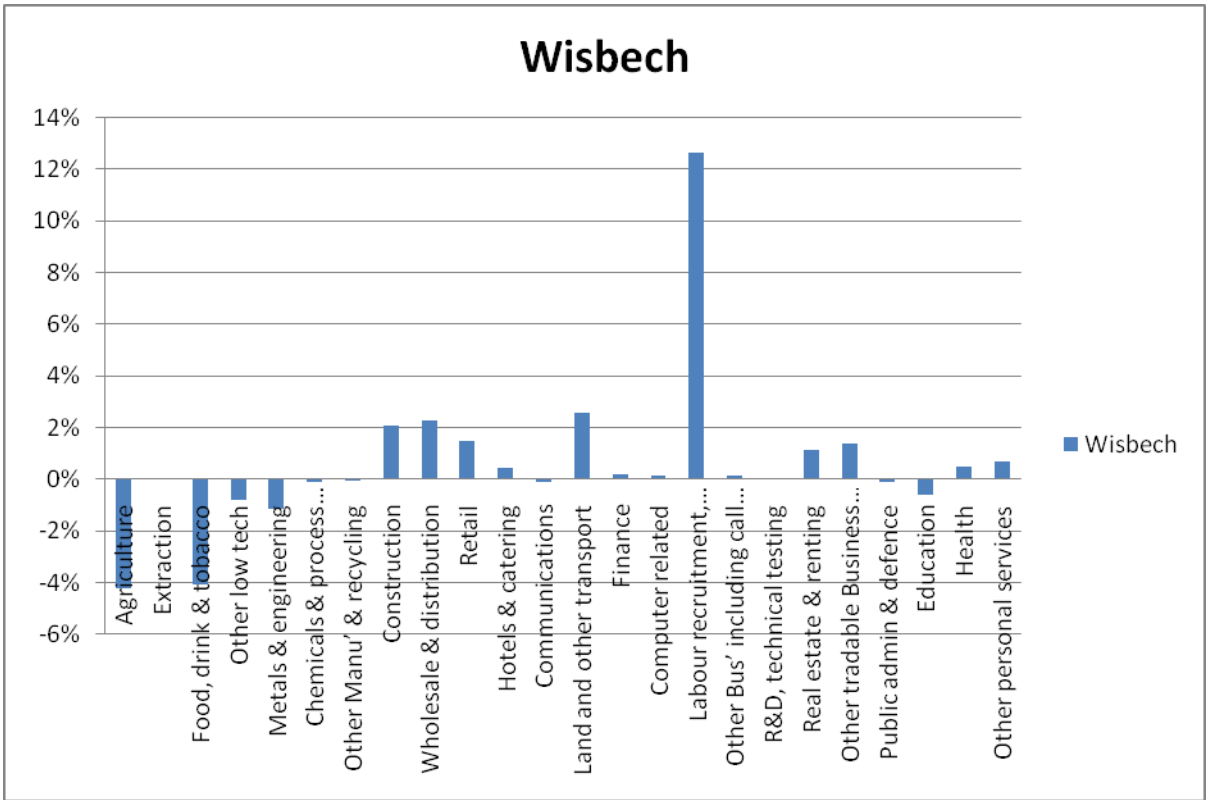


Figure 11.15: March - Estimated Employment Change (2010-31) as percentages

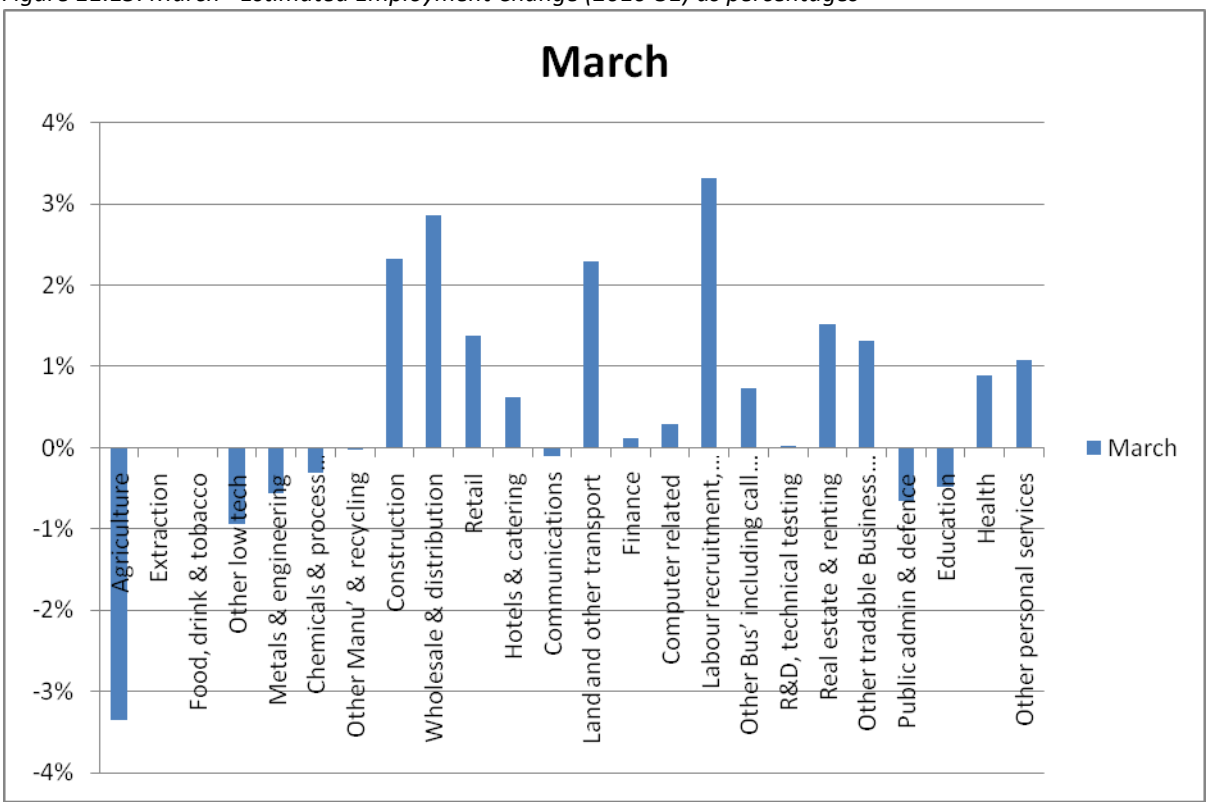


Figure 11.16: Chatteris- Estimated Employment Change (2010-31) as percentages

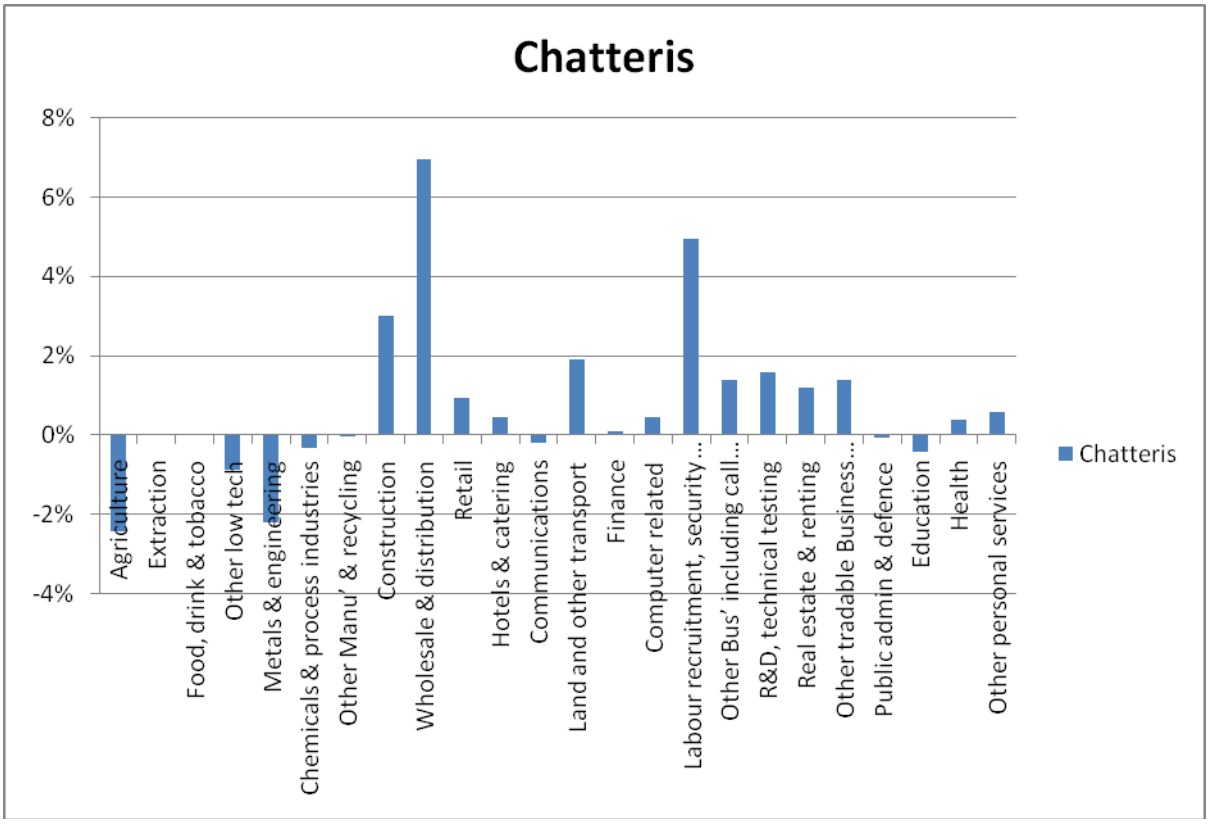
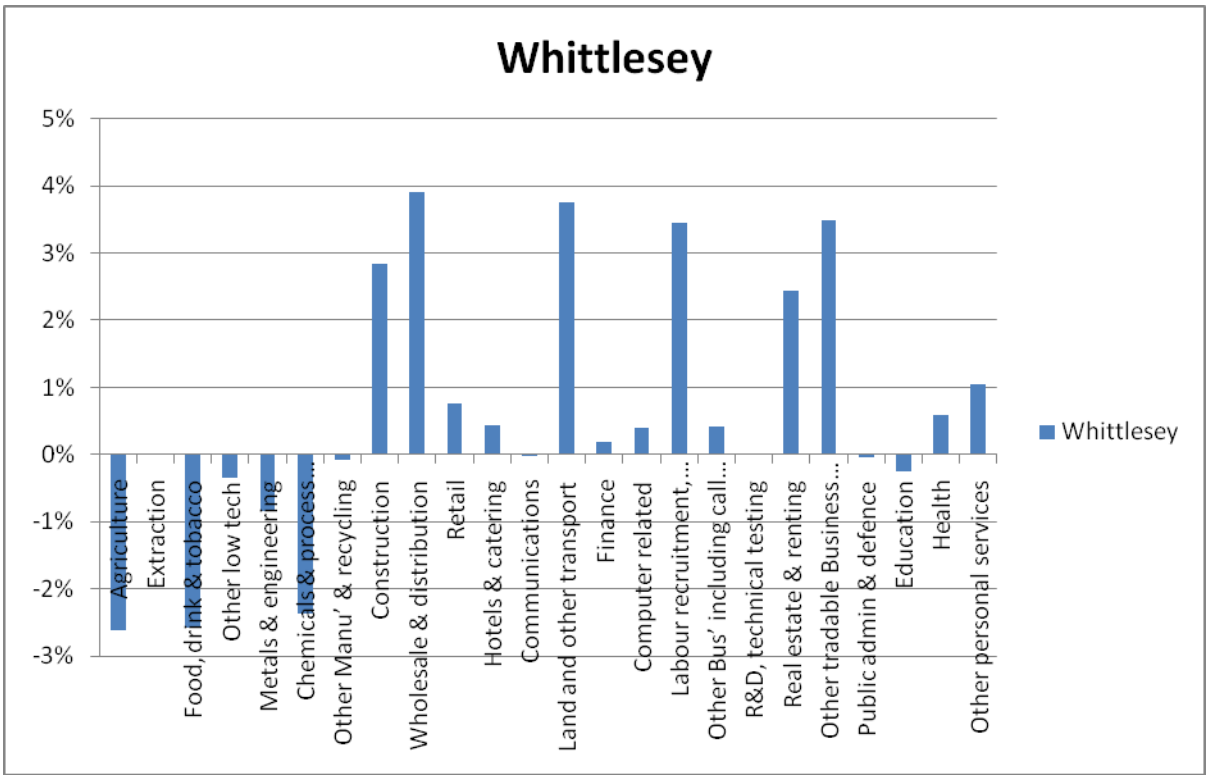


Figure 11.17: Whittlesey- Estimated Employment Change (2010-31) as percentages



11.40 Overall, the model suggests that between 2010 and 2031 (broadly the plan period) employment growth in Fenland could increase by 14%, based on ONS projections of growth, which would be a rise of just under 5,700 new jobs.

11.41 From the above table and diagrams it can be seen that growth in Wisbech would be driven by its existing strengths in business services (notably labour recruitment) which accounts for 86% of the net employment growth in that area. However, despite its strong net employment growth, it also is suggested that this area could experience heavy losses in manufacturing (notably food and drink), so significant structural change could be expected within that labour market over the next 20 years. Wisbech also experiences significant losses in agriculture – explained by the broad rural hinterland which falls within this boundary.

11.42 While net employment growth in March is likely to be smaller, this is due to its smaller business services base. The OEF model suggests that it could experience far smaller decreases in manufacturing employment as it is not exposed to the forecast losses in food and drink.

11.43 In terms of distribution and logistics, growth of the wholesale and distribution sector is more evenly spread, broadly reflecting each areas share of total employment. By contrast, growth of the land and other transport sector is suggested to be more heavily concentrated in Wisbech.

Fenland Neighbourhood Planning Vision's economic drivers on the ground

11.44 The previous section looked at what current forecasts say about the likely drivers of future employment growth in Fenland. When undertaking work like this it is often necessary to use nationally recognised economic forecast models as a base position from which to estimate, anticipate and plan change. These models, whilst useful as a credible fall-back position, have a number of draw backs. In particular they become less reliable as the geography in question becomes smaller, for example they are less reliable at the District level than the regional level,

they are certainly less reliable at the sub-district level and must be interpreted carefully as we have done here.

11.45 The Oxford Economic Model forecasts changes in employment in a broad range of sectors to 2031. This is a very useful starting point but is based on wider national and historic trends. In order to get the best possible picture of what is likely to drive employment growth across Fenland it is necessary to augment the statistical position with our knowledge from on the ground. As part of the Fenland Neighbourhood Planning Vision project we have spoken to various local employers and economic development intermediaries etc and whilst the information does not conflict with the broad trends outlined in the forecast model it does give interesting insight into what sectors might drive growth locally. The table below summarises this position:

Table 11.10: Economic drivers

Mature Clusters	**Potential Emerging Clusters**
• **Agri-food cluster** 1. Food production/processing/distribution/ cold storage and related manufacturing & packaging 2. Food related distribution, wholesaling and retail 3. Food related business and support services • **Specialist engineering and manufacturing** (metal components manufacture, equipment manufacturing, electrical engineering, rail engineering, marine engineering) • **The logistics cluster** (port, rail, off-road freight, transport large wholesale, warehousing and distribution)	• **Renewable energy and green technology** (wind, wave, bio-fuels – Resource efficient Fenland) • **Environmental services** (emissions control, water management and treatment and the management of energy resources) • **High quality food** consumption/education (Eat fenland) • **Marine Leisure (Wisbech focus)**
Potential for Strong Growth	**Potential for modest growth**
• Business Services (R&D, accountancy, recruitment, professional services, IT services, financial services, security, office support services) • Health and care sectors/care for elderly • Logistics and Wholesale and Distribution	• Construction (sustainable construction specialism) • Transport & Communications • Education, • Retail and leisure • Hotels, restaurants, catering hospitality • High tech manufacturing (overall sector decline) • Creative and digital industries

[1] **The mature clusters** (agri-food, engineering, niche manufacturing and logistics) will continue to drive employment growth as they are built on longstanding expertise, assets and resources. They are also essential for driving high value jobs especially in specialist engineering and manufacturing.

[2] **The Potential emerging clusters**, represent sectors where Fenland has some competitive advantages through location or proximity and is therefore well placed to position itself to develop new specialisms and attract some key employers in growth sectors. Tactics here should include targeting sectors such as green technology (a Peterborough Strategy Priority sector) or wind farms recently announced in the Wash through the LEP. A partnership approach would enable Fenland to compete on its particular competitive strengths and tailor its skills/sites and premises offer to meet emerging sector requirements in key locations, March and Chatteris having been already identified as possible locations for emerging clusters related to locations outside Fenland.

[3] **Potential for strong growth** are sectors where Fenland is currently underrepresented and where there is strong forecast growth nationally. In business and professional services the forecasts for Fenland identify the strongest growth in low-value back office services. Whilst this is not necessarily a bad thing as any new employment is to be welcomed the forecasts do not take account of Fenland Neighbourhood Planning Vision and strategies to improve the skills base and target higher value sectors. There is clearly a major opportunity as the service sector strengthens after recession to target higher value services in key locations March/Wisbech/Chatteris. This targeting would include professions such as IT, accountancy, property services, consultancy etc. The tactics for encouraging the growth of these clusters over the long-term have as much to do with 'place making', social infrastructure provision and a strong residential offer as providing the right sites and premises. All these factors are essential in attracting and retaining talent in the area. Other sectors such as health and care for the elderly will grow nationally by virtue of the aging population and will continue to provide employment.

[4] **Sectors with the 'potential for modest growth'** are sectors with an established presence in Fenland and which are predicted to grow across the region in the period to 2031. For example, whilst manufacturing is predicted to decline in overall terms there is an opportunity for some employment growth in niche specialisms- particularly in relation to the mature clusters i.e. food processing, metal components manufacture, equipment manufacturing, electrical engineering, rail engineering, marine engineering. There may also be some growth opportunities within the emerging clusters in green tech and renewables.

If the economy is to grow and prosper then other support sectors will also need to expand, in particular retail, hospitality and food and drink and leisure. These are the sectors which not only help support the economy but create the vibrancy and offer, particularly in the ,market towns, that will help to attract the talent and investment that is vital for the growth sectors and emerging clusters.

Assessing the impact of FNPV growth options on jobs

11.46 In order to understand the potential for economic growth in Fenland through the FNPV options, a methodology has been established that creates an indication of the number of jobs that would be required for each proposed housing option. This can then be compared with the economic forecasting data for the district. A qualitative assessment based on the risks and opportunities for each market town is then made, based on the town-wide objectives for shaping growth, but also against the evidence of projected growth.

Employment requirement for each option

11.47 Table 11.11: FNPV employment growth options (net), sets out the potential level of employment that could come forward as a result of the housing growth scenarios set out above.

As noted earlier in this chapter the most appropriate scale to consider employment growth is at the district level, due to the nature of commuting between settlements. However, each of the key settlements have different levels of out-commuting by Fenland residents outside the district and as such it is useful to disaggregate down the functional economic areas for each of the key settlements to arrive at an overall figure for the district, based on a series of assumption.

11.48 These assumptions include an assessment of the potential change in working age population in each economic area between 2011 and 2031, using demographic modelling for the working age population under a no housing growth scenario and then applying the new population projected for each option. From this baseline, an aspirational employment rate of the average rate found in the 72 rural districts in England (75%) is applied (Fenland's rate currently sits at 72%) before finally the rate of employees working and living in Fenland is applied (from Census 2001).

Table 11.11: FNPV employment growth options (net)

Wisbech	Working age population with no housing growth	Working age population change	Rural district employment rate	Sub total	Those living & working in district	Total projected jobs
Option 1	-5,490	903	75%	677	73%	495
Option 2		1,907	75%	1430	73%	1044
Option 3		7,471	75%	5603	73%	4091
March						
Option 1	-3,630	1,097	75%	822	72%	592
Option 2		4,037	75%	3027	72%	2180
Option 3		5,986	75%	4489	72%	3232
Whittlesey						
Option 1	-2,890	-796	75%	-597	40%	-239
Option 2		208	75%	156	40%	62
Option 3		925	75%	694	40%	277
Chatteris						
Option 1	-1,480	-68	75%	-51	49%	-25
Option 2		649	75%	487	49%	239
Option 3		1,977	75%	1483	49%	727
Total						
Option 1						**823**
Option 2						**3525**
Option 3						**8327**

Sources: Nomis (ONS), 2010 and Census 2001

11.49 As can be seen, the significant projected demographic trend of an ageing population means that in-migration, most likely through housing growth, is essential for all economic areas to even stand still in terms of number of working age people living and working in Fenland.

11.50 Moreover, that across all options, even with growth as identified in option 1 within each economic area, there is a limited growth in the working age population. This is particularly acute

in Whittlesey, with the maximum growth (Option 3) is the only one where uplift in an economic active population within the resident population is projected. As such, Option 2 represents the status quo in this regard.

11.51 It should be noted that this projection is based on demographic projections and uses the proportion of projected economically active people to make an assessment of potential employment levels retained in the district. It does assume an uplift in the employment rate to the average of all rural districts (from 72% to 75%) in order to account for an improvement in job opportunities in the district due to identified opportunities to improve skills and availability of employment land. However, other variables, such as a reduction in the level of out-community are not factored in. This is on the basis that locations outside of the district are expected and forecast to retain their economic strength and pull on the Fenland workforce. Moreover, such is the location of the key settlements, with 3 located close to a key economic driver outside of the district (Wisbech – Kings Lynn, Whittlesey – Peterborough, Chatteris – Huntingdon) and with March on a regular train route between Peterborough and Cambridge it is unlikely that the proportion of the workforce working elsewhere will reduce significantly.

11.52 If demographic projections are removed and the method for projected employment rates is applied solely to new housing growth, the gross job projections increase. This is set out in Table 11.12: FNPV employment growth options (gross).

Table 11.12: FNPV employment growth options (gross).

Wisbech	Working age population change	Rural district employment rate	Sub total	Those living & working in district	Total projected jobs (gross)
Option 1	6,393	75%	4795	73%	3500
Option 2	7,397	75%	5548	73%	4050
Option 3	12,961	75%	9721	73%	7096
March					
Option 1	4,727	75%	3545	72%	2552
Option 2	7,667	75%	5750	72%	4140
Option 3	9,616	75%	7212	72%	5192
Whittlesey					
Option 1	2,094	75%	1570	40%	628
Option 2	3,098	75%	2323	40%	929
Option 3	3,815	75%	2861	40%	1144
Chatteris					
Option 1	1,412	75%	1059	49%	519
Option 2	2,129	75%	1597	49%	783
Option 3	3,457	75%	2593	49%	1270
Total					
Option 1					**7200**
Option 2					**9902**
Option 3					**14704**

Sources: Nomis (ONS), 2010 and Census 2001

11.53 Clearly demographics are significant in influencing the level of projected Fenland residents in work. However, it is important that this trend is taking into account when considering growth aspirations for the district and the key settlements as growth in both population and employment opportunities look to be important in helping to address some of the economic effects of an ageing population.

11.54 As noted at the start of this chapter, the link between job creation and housing growth is important. It, along with the fact that demographic trends point to a decrease in the economically active, are the two vital ingredients to achieving housing growth. As such, both require careful monitoring at regular intervals throughout the plan period to inform the target for housing growth.

Section 3 – Assessing the impact of growth

12. Economic impact assessment of options

12.1 Overall, a qualitative conclusion must be drawn for each functional economic area. This is informed by the changing structure of the Fenland economy based on independent economic forecasts and our assessment of the potential of each area to grow in line with the projections set out within the Fenland Neighbourhood Planning Vision options. This will provide a platform for economic growth linked to housing growth and the strengthening of the skills base should come with it.

12.2 The detail of the Oxford Economics model is set out in Chapter 11 above.

Figure 12.1: Oxford Economics and AECOM FNPV approaches

1

12.3 It should be noted that the Oxford Economics work is based on 'policy-off' assumptions and ONS projected population growth. The Fenland Neighbourhood Planning Vision options would be coupled with policy (i.e. intervention strategies) to support growth and are based on population assumption linked to the housing growth set out in each option. As such, the analysis of each town uses the projections to establish the ability of each economic area to manage change over the plan period and uses the assumed growth derived from the Oxford Economic sector analysis as a sense check from a credible external source.

Overall district-wide assessment

12.4 As noted earlier, such are the economic flows within this district, consideration of the impact of each FNPV growth option in terms of economic impact is most appropriate at the district scale. The Oxford Economics forecast projects an estimate of around 5,700 net additional jobs. This sits in between the net projection for Option 2 and 3, through the FNPV growth options assessment of jobs based on demographic change and an uplift in the employment rate.

Wisbech economic area

12.5 The Wisbech economic area currently acts as the main employment location within Fenland and on this basis is expected to account for almost half of the total employment growth within the policy-off Oxford Economics Forecast scenario. However, the project suggest this is largely accounted for by growth in low value services such as labour recruitment, security & cleaning and other business services sub-sectors, of relatively low value. The area could also experience significant job loses within the manufacturing sector, suggesting that there will be considerable structural change in the local economy and labour market. Consequently, support should be provided to local residents to assist them in retraining and up-skilling so that they can access the emerging employment opportunities as set out in the twin track strategy.

12.6 In terms of local policy objectives, these should be focused around retaining the higher value elements of the manufacturing employment base and driving up the value of the business services sector. Much of Wisbech is in the bottom quarter IMD for education, suggesting that one of the main challenges will be driving up the local skills base to attract higher value employment opportunities. This is consistent with the town wide objectives for Wisbech, which describe the need to accommodate a range of business space products and locations to diversify the economic base, create a range of new employment opportunities across a range of sectors and to capture some higher value employment.

12.7 Much of the area also underperforms in the Employment domain of the IMD (falling within the bottom half or bottom quarter) and these issues may be exacerbated by the structural change suggested by the employment projections. This reiterates the need to ensure that local people are provided with the appropriate support to access the emerging employment opportunities and to ensure that proposed employment locations are strategically located on key transport routes to allow skilled people to access higher value employment opportunities within the area.

12.8 The analysis above suggests that in terms of higher value employment, Wisbech has the furthest to travel, when compared to the other economic functional areas. Moreover, it is likely to go through significant structural change over the plan period, which will present significant challenges. With this change up-skilling the local population will be essential and challenging. As such, economic growth in this area should be tempered to provide net employment growth at a realistic level. Here then it is useful to compare the Fenland Neighbourhood Planning Vision options against the ONS growth option used by Oxford Economics. This suggests Option 2 (1044 jobs) provides the more realistic level of growth than Option 3 (4091), based on the analysis of growth in sectors against ONS growth, which suggest growth of 2746 jobs. Fenland Neighbourhood Planning Vision Option 1 (495 net additional jobs) appears to under represent the opportunity in the area.

March economic area

12.9 Based on the Oxford Economics growth assumption, the March economic area is expected to receive a smaller share of Fenland's employment growth in the policy-off scenario, although

in many respects it is on a stronger footing than Wisbech and there are greater opportunities to support higher value employment growth within this area.

12.10 The economic forecasts suggest that the extent of the decline of the manufacturing sector will be smaller within March, suggesting that the challenges associated with local structural change of the employment base will be less severe compared to Wisbech, and the area is still expected to benefit from significant employment growth within transport, logistics, and business services. Furthermore, unlike Wisbech, while growth of the Business Services sector is still dependent on lower value sub-sectors, business services growth is more balanced across high and low value sectors than Wisbech suggesting that there may be greater opportunities for moving up the value chain in this location.

12.11 This scenario is further supported by the local IMD scores. While the March hinterland still scores poorly in relation to education, these issues are less severe within the market town itself (although the town still performs below the national average). March also performs more strongly in relation to the employment domain, suggesting that a greater proportion of the local workforce is currently accessing employment and this provides greater opportunities for up-skilling the existing workforce (as a greater proportion of people are already within work). Furthermore, the area also performs more strongly in the living environment domain, suggesting that it may be easier to attract households seeking higher value employment opportunities into the area.

In terms of shaping growth in Fenland, March seems better placed to accommodate additional growth across the sectors. As such, the assumed level of 2180 jobs projected in Option 2 of the Fenland Neighbourhood Planning Vision options appears the most reasonable level of growth. While this is more than the projected 1513 jobs derived from the ONS growth assumptions in the Oxford Economics work, the structure of the economy and its sounder economic base to move forward from provides the basis to plan for more housing to support further economic growth in this functional economic area. Fenland Neighbourhood Planning Vision Option 1 (592 net additional jobs) appears to under represent the opportunity in the area.

12.12 This option is consistent with the town-wide objectives set out for March which proposes that March capitalises on its excellent location and connectivity to become a highly competitive business location driving up values in manufacturing, logistics and business services, whilst providing space for new entrepreneurs and lifestyle businesses.

Whittlesey economic area

12.13 Like Wisbech, Whittlesey is expected to be hit by the loss of jobs in the food and drink sub-sector and the chemicals and industrial processes. The strongest growing employment sectors are forecast to be land and other transport and more general business services.

12.14 The Whittlesey economic area includes some of the strongest performing areas nationally for education, employment, and living environment. However, as it predominantly acts as a dormitory location for Peterborough many of these strengths do not benefit the broader Fenland economy and labour market. One of the key opportunities moving forward is to improve the economic linkages between the labour market within this area and the employment opportunities in other parts of the district.

12.15 Based on the ONS growth assumptions and Oxford Economics sector analysis, 800 additional jobs could be assumed by 2031 in this area. However, when compared to the Fenland

Neighbourhood Planning Vision options this appears difficult to achieve in terms of related housing to meet these jobs. In economic terms, based on the assumptions in this chapter, there is a strong case for Option 3 of the Fenland Neighbourhood Planning Vision options (277 jobs). It should be noted that as with all economic areas, this is based on a 10% reduction in out-commuting. If this was reduced further, then more jobs would be projected in the economic area. This would need to be based on a policy and strategic direction of encouraging more employers to link in with the skills base of the town's existing and future residents. As noted above, Fenland Neighbourhood Planning Vision Option 1 and 2 are projected to represent a reduction in the proportion of economically active residents and only a minor increase respectively. In economic terms then, Option 2 is required simply for Whittlesey to retain its current position.

12.16 In overall terms the strategy in Whittlesey should be about extracting more economic value from a relatively affluent population through an improved town centre offer to capture more spend and also by promoting the strong local skills base as an incentive to prospective employers.

Chatteris economic area

12.17 Within the Chatteris economic area there is clearly strength in wholesale and distribution, which provides the greatest employment opportunities for the area. Moreover, the area has the largest projected growth in R&D and research, clearly linked to the South Fens Business Park. Like Whittlesey, the economic area contains areas that are ranked among the top quarter nationally for employment, education, and living environment and there may be opportunities for linking its stronger labour market to the emerging higher value business sectors in March. As such, in economic terms Fenland Neighbourhood Planning Vision Option 3 (727 net additional jobs) looks reasonable, with Option 1 resulting in a loss of 25 jobs and Option 2 (239 jobs) under representing the economic opportunity in the area. This approach is broadly supported by the Oxford Economics sector analysis and ONS based growth assumptions, which indicated 631 jobs.

12.18 The town wide objectives for Chatteris set out an economic rationale based on building on the high value engineering and metal craft skills, whilst creating a competitive location for knowledge 'overspill'. The option testing supports this approach.

13. Social infrastructure impact assessment of options

Introduction

13.1 A Key Assumptions paper was agreed with FDC and its partners as part of Stage 1 and the early part of Stage 2. These assumptions are included within Appendix E and have informed the development of demand for key areas of social infrastructure. The assumptions are fed into AECOM's Social Infrastructure Framework (SIF) model, which provides demand based projections based on population assumptions for each housing growth option. The assessment of the options in relation to social infrastructure is set out against the following areas:

- Education
- Healthcare
- Sports space and facilities
- Open space and green infrastructure
- Community facilities
- Emergency services

13.2 This report will be used as the basis for further engagement with FDC and its partners in relation to the impact of population growth on existing and future service provision. Where demand is projected to be at a level commensurate with an expansion of an existing facility, rather than the provision of a new one, assumptions have been made about which facility this could be.

13.3 The demand for each different type of social infrastructure is set out against the hypothetical scenario of no housing growth (extremely unlikely in reality, but provides a useful understanding of the impact of demographic change on services and the benefits of growth) and the Fenland Neighbourhood Planning Vision growth options. The Fenland Neighbourhood Planning Vision options are based on low growth (Option 1), medium growth (Option 2) and high growth (Option 3). Where an option includes two Opportunity Zones, these are set out as A and B to enable spatial analysis of each one to be undertaken.

13.4 Appendix E sets out the detailed quantitative demand for each social infrastructure type that arises from each opportunity zone.

Education

Introduction

13.5 Statutory education services within Fenland are provided by Cambridgeshire County Council, whose responsibilities include:

- Making sure that the number, size and age range of schools in the county are appropriate to meet the changing needs of Cambridgeshire's communities
- Monitoring the quality of education in the county

- Implement strategies to support the continued improvement in educational standards across the county and when to intervene to address weaknesses in individual schools or areas of the curriculum;
- Working with other partner organisations to develop community strategies, coordinate 'out- of-school' and early years provision and contribute to the well-being of children and young people across the county.

13.6 This chapter provides an overview of the existing range of educational facilities in Fenland. The population projections set out in Chapter 5 are used to assess the additional demand for educational facilities that is likely to arise from the proposed housing developments, taking into account predicted changes in the current population. These calculations are located in Appendix E and have been used to inform recommendations on the additional level of educational infrastructure that is necessary to support the changing population, which were developed in partnership with Cambridgeshire County Council. The child yield assumptions used for predicting demand for educational infrastructure are stipulated by Cambridgeshire County Council and are consistent across the county. The remainder of social infrastructure identified within this chapter has been calculated based on Fenland-specific UK Census and CORE data.

Early years

Existing provision

13.7 Table 13.1 sets out the existing capacity of each pre-school facility and their location by cluster. Appendix D contains maps showing their location.

Table 13.1: Existing early years capacity

Wisbech			
Type of provision	No. of settings	Reg'd places	Vacancies
Day Nursery	5	172	20
Pre-School Playgroup	10	235	5
March and Chatteris			
Type of provision	No. of settings	Reg'd places	Vacancies
Day Nursery	4	115	29
Pre-School Playgroup	14	375	10
Whittlesey			
Type of provision	No. of settings	Reg'd places	Vacancies
Day Nursery	2	78	10
Pre-School Playgroup	2	64	10

Table 13.2 - Facilities recommendations

Wisbech cluster	
Low growth	• 1 pre-school playgroup • 2 childminders
Medium Growth	• 1 pre-school playgroup • 2 childminders
High Growth	• 3 pre-school playgroups • 5 childminders
March cluster	
Low Growth	• 1 pre-school playgroup • 2 childminders
Medium Growth	• 2 pre-school playgroups • 3 childminders
High Growth	• 2 pre-school playgroups • 4 childminders
Whittlesey cluster	
Low growth	• No additions
Medium Growth	• 1 childminder
High Growth	• 1 childminder
Chatteris cluster	
Low growth	• No additions
Medium Growth	• 1 childminder
High Growth	• 1 pre-school playgroup • 1 childminder
Parsons Drove / Wisbech St Mary cluster	
Low Growth	• No additions
High Growth	• No additions
Manea cluster	
Low Growth	• No additions
High Growth	• No additions

Wimblington / Doddington cluster	
Low Growth	• No additions
High Growth	• No additions

Primary schools

Existing provision

13.8 There are a total of 32 infant, junior and primary schools located within Fenland and Appendix D shows their locations. All facilities currently have some capacity except for Elm Road Primary School in the Wisbech Cluster. Across the whole district a total of 717 surplus places are currently available, representing 9.4% of total school capacity. However the Department of Education recommends that 10% of educational capacity be held back to provide flexibility in managing the delivery of education and to allow for parental preference. As the level of available places is below this threshold, the existing capacity will not be discounted from the primary education requirements identified below. It is important to note that primary school capacity data is updated regularly and so this information represents the capacity position at the current point in time only.

13.9 It should also be noted that as many of the young people currently living in the area of Kings Lynn and Norfolk adjacent to Wisbech attend school with the town and therefore within Fenland, the impact of planed growth in this part of Kings Lynn and West Norfolk should be assessed as part of Fenland's education planning. As such, the allocation of 500 homes in Kings Lynn and West Norfolk is included in all options tested for Wisbech.

Table 13.3: Facilities recommendations

Wisbech cluster	
Low growth	1FE Primary School
Medium Growth	2FE primary school
High Growth	3FE primary school and 3FE primary school
March cluster	
Low growth	2FE Primary School
Medium Growth	2 x 2FE Primary School
High Growth	3FE primary school and 2FE primary school
Whittlesey cluster	
Low growth	No additions
Medium Growth	
High Growth	1FE primary school
Chatteris cluster	
Low growth	No additions
Medium Growth	1FE primary school
High Growth	2FE primary school
Parsons Drove / Wisbech St Mary cluster	
Low growth	No additions
High Growth	
Manea cluster	
Low growth	No additions
High Growth	
Wimblington / Doddington cluster	
Low growth	No additions
High Growth	

Secondary schools

Existing provision

13.10 There are a total of 4 secondary schools located within Fenland. Table 1.2 sets out the existing capacity of each school and their location by cluster(s). All facilities have some capacity except. Across the whole district a total of 445 surplus places are currently available, representing 7.8% of total secondary school capacity. However the Department for Education recommends that 10% of educational capacity be held back to provide flexibility in managing the delivery of education and to allow for parental preference. As the level of available places is below this threshold, the existing capacity will not be discounted from the secondary education requirements identified below.

13.11 Appendix D contains maps showing the location of the secondary schools shown in Table 13.5.

Table 13.5: Existing secondary school capacity

SECONDARY SCHOOL	Net Capacity	2010/11 Forecast Pupil Numbers	Estimated Surplus Places	FE equivalent
Wisbech and Wisbech St Mary Clusters				
Thomas Clarkson CC	1,623	1,363	260	
TOTAL	**1,623**	**1,363**	**260**	**1.73**
March Cluster				
Neale-Wade CC	1,758	1,685	73	
TOTAL	**1,758**	**1,685**	**73**	**0.49**
Whittlesey Cluster				
Sir Harry Smith CC	1,131	1,057	74	
TOTAL	**1,131**	**1,057**	**74**	**0.49**
Chatteris, Manea and Doddington / Wimblington Clusters				
Cromwell CC	1,174	1,136	38	
TOTAL	**1,174**	**1,136**	**38**	**0.25**

Fenland Building Schools for the Future (BSF)

13.12 Despite a recent Government announcement to review the overall approach to capital expenditure on the nation's schools, the BSF projects in Fenland are set to proceed.

Table 13.6: BSF Timetable

School	Construction Start	Final Completion
Phase 1		
Thomas Clarkson Community College	Jul 2010	Dec 2012
Neale-Wade Community College	Jul 2010	Feb 2013
Phase 2		
Cromwell Community College	Apr 2012	tbc
Sir Harry Smith Community College	Apr 2012	tbc
Meadowgate School	Apr 2012	tbc
Fenland Junction PRU	Oct 2012	tbc

School	Scope of works	Capacity
Thomas Clarkson Community College, Wisbech	Construction: 84% New build 16% remodel	1950 1650 11-16 300 16+
Neale-Wade Community College, March	Construction: 55% new build 45% remodel	1780 1500 11-16 280 16+

Table 13.7: Facilities recommendations

Wisbech and Wisbech St Mary's Clusters	
Low growth	No additions
Medium Growth	
High Growth	3FE expansion to the existing secondary school, although this takes the total size beyond the Council's preference of 11FE
March cluster	
Low Growth	No additions
Medium Growth	2FE expansion to the existing secondary school, although this takes the total size beyond the Council's preference of 11FE
High Growth	3FE expansion to the existing secondary school, although this takes the total size beyond the Council's preference of 11FE
Whittlesey cluster	
Low growth	No additions
Medium Growth	
High growth	
Chatteris, Manea and Doddington / Wimblington Clusters	
Low growth	No additions
Medium Growth	
High growth	

Further and Higher education

13.13 There is no Higher Education facility in Fenland. The College of West Anglia is the main 16-19 education provider for an area that includes Fenland, King's Lynn and West Norfolk and Breckland. Although in Fenland this is supplemented by the existing and expanding post 16 offer in the Community Colleges. The College brings approximately £30m of central government funding into the region for training annually. Ofsted judge the College to be "Outstanding" and overall FE and Train to Gain success rates are in excess of 80% and over 70% for apprenticeships.

An economic impact study carried out in 2008 identified that the College contributes £228m to the regional economy.

13.14 The COWA buildings on the Isle campus are recognised to be in extremely poor condition. It had previously been intended that COWA would relocate the Wisbech campus to a site near March. However, despite the project being well advanced it had to be cancelled as a result of the withdrawal of previously approved capital funding from the Learning and Skills Council. This has left the College with a building stock that is in poor condition and increasingly costly to maintain. This is not sustainable. Without improvement the College would have to consider the rationalisation of its estate. The proposed investment in the engineering block would provide considerable benefit to the local community, alleviate some of the pressures facing COWA and make a powerful statement as to COWA's long term investment in Wisbech.

13.15 In addition to the £6.5M investment from Cambridgeshire County Council (CCC) to develop an office facility within Wisbech, a £5M grant from CCC to COWA was approved by the County Council Cabinet on 14th December 2010 as a contribution to the construction of an engineering block on the Wisbech site, replacing the existing block (block H), that fronts Ramnoth Road. This is being combined with £1.5M investment from Fenland District Council (FDC) Cabinet and additional funding from COWA.

13.16 In terms of additional impact of growth, based on the levels of housing growth shown in this report, and the consequent changes in population, there is negligible demand for additional further and higher education facilities across Fenland. Should all growth in all options be realised, there would be an increase in demand for 0.1 Further Education facilities and 0.1 Higher Education facilities. This does not imply that there is no need for continued improvement and expansion of the FE offer, but that in terms of growth this does not create significant additional demand. *Cambridgeshire County Council is currently undertaking a strategic review of post-16 education, which is due to be completed by autumn 2011.*

Healthcare

Introduction

13.17 Healthcare incorporates a broad range of social infrastructure, including GP surgeries, dentists, pharmacies and hospitals. Healthcare also includes care homes, although future predicted demand is not set out in this report as this service will be provided on an individual case by case basis.

13.18 Healthcare facilities can play a central role in creating social and economic regeneration – building healthy cohesive communities of the future and linking existing residents with new arrivals. It is the responsibility of local authorities to ensure that adequate land is safeguarded for the provision of healthcare with the local healthcare authorities and Primary Care Trusts (PCTs) being responsible for bringing these sites into active use.

13.19 Health policy at a regional or Strategic Health Authority (SHA) level also promotes a significant expansion in the range of primary care and community facilities, as shown below:

13.20 Key Healthcare Development Principles:

- The One Stop Primary Care Centre (OSPCC) is the core of the basic primary care model and incorporates core GP, specialist local health services and community outreach, potentially also incorporating activities such as dentistry and pharmacies.

- Primary care and community facilities are also being promoted at the regional level through Primary Care Diagnostic and Treatment Centres (PCDTCs) which combine the above facilities with outpatient, clinical and diagnostic services, offering walk-in and minor treatment.

- Similar to other social infrastructure providers, health policies promote the combining of health facilities with other community facilities where possible. For example, 'healthy living centres' combine educational, health and community services.

13.21 It is noted that the demographic trends in this study indicate that the average age of residents in Fenland may continue to increase over the study period. Conventional wisdom suggests that the requirement of older people for healthcare is typically higher than that of a younger population, however no adjustments have been made to this section due to the lack of quantitative standards to support more detailed modelling. This approach has been agreed with NHS Cambridgeshire and the use of the nationally recognised NHS standard is agreed to be appropriate.

Primary care (GPs), dental surgeries and pharmacies

Existing provision

13.22 There are a total of 13 Doctor's surgeries and 12 dental surgeries located within Fenland. Table 13.8 sets out the number of facilities per cluster. Appendix D contains maps showing the location of the facilities shown in this table.

Table 13.8: Number of primary care and dental facilities by Cluster

Cluster	Doctor's surgeries	Dental surgeries
Wisbech Cluster	3	4
March Cluster	3	3
Whittlesey Cluster	2	2
Chatteris Cluster	1	3
Parsons Drove / Wisbech St Mary cluster	1	0
Manea Cluster	1	0
Doddington/Wimblington Cluster	2	0
Total	**13**	**12**

Table 13.9: Facilities recommendations

Wisbech Cluster	
Low growth	• 1 GP expansion of an existing surgery • 2 GP Surgery • Additional dental provision (3 dentists)

	• 1 Pharmacy within new developments
Medium Growth	• 1 GP expansion of an existing surgery • 3 GP Surgery • Additional dental provision (4 dentists) • 2 Pharmacies within new developments
High Growth	• 1 GP expansion of an existing surgery • 8GP Primary Care Centre (PCC) • Additional dental provision (8 dentists) • 3 Pharmacies within new developments
March cluster	
Low growth	• 3 GP Surgery • Additional dental provision (3 dentists) • 1 Pharmacy within new development
Medium Growth	• 6GP Primary Care Centre (PCC) • Additional dental provision (5 dentists) • 2 Pharmacies within new developments
High Growth	• 7GP Primary Care Centre (PCC) • Additional dental provision (6 dentists) • 3 Pharmacies within new developments
Whittlesey cluster	
Low growth	• No additions
Medium Growth	• 1GP expansion of an existing surgery • Expand dental provision in town (1 dentist) • 1 Pharmacy within new development
High Growth	• 2GP expansion of an existing surgery • Expand dental provision in town (2 dentists) • 1 Pharmacy within new development
Chatteris Cluster	
Low growth	• 1GP expansion of an existing surgery • Expand dental provision in town (1 dentist)

Medium Growth	• 1GP expansion of an existing surgery • Expand dental provision in town (1 dentist) • 1 Pharmacy within new development
High Growth	• 2GP expansion of an existing surgery • Expand dental provision in town (2 dentists) • 1 Pharmacy within new development
Parsons Drove / Wisbech St Mary Cluster	
Low Growth	• No additions
High Growth	
Manea Cluster	
Low Growth	• No additions
High Growth	
Wimblington / Doddington Cluster	
Low Growth	• No additions
High Growth	

Acute care

13.23 Given the shift in provision of NHS care towards a more personalised, easy to access and community based approach, the housing growth within Fenland is not expected to generate the need for any additional bed space within the county's hospitals. Whilst capital costs will therefore be minimal, there will be revenue costs for acute care and care homes.

13.24 There will be a need to provide improved health infrastructure within the community, however this investment is associated with the move to community based care for all communities. It would not arise as a direct consequence of the proposed housing growth.

13.25 NHS Cambridgeshire state that modelling of acute care demand should not form part of this study and notes that any future modelling would need to take place at a wider scale than Fenland alone. Whilst it is not possible at this stage to determine the precise investments that would be required to serve the new communities that would develop within Fenland. However, the need to provide such community based care should be considered as part of the design of community spaces and health facilities recommended elsewhere in this report.

13.26 Examples of appropriate space for community provision of acute care include the all-purpose Primary Care Centre facilities recommended under the High Growth scenarios for March and Wisbech (see section above). It is also noted that 10 community care beds are already planned in Doddington. The value of community and home-based care is acknowledged as they can enable elderly residents to retain greater independence outside of formal care homes for a longer period. Other facilities such as the following hospitals may also provide such care:

- Doddington Hospital
- North Cambridgeshire Hospital

Sports space and facilities

Introduction

13.27 Sport and recreation is an important part of local community life with clearly recognised benefits across other social infrastructure themes, such as improving general health and well-being. The Rural White Paper Our Countryside: the Future – A Fair Deal for Rural England highlights that access to cultural and sporting activity helps to provide an increased quality of life for rural communities and encourages all local authorities to develop local cultural strategies which are based on a partnership approach and encompass sport, countryside, parks and tourism as well as arts, cultural heritage and libraries.

13.28 Sports and recreation facilities can assist in creating sustainable communities by making an important contribution to the physical infrastructure of communities. They can provide a social focus and positively influence people's perception of their neighbourhood.

13.29 Priorities established by Sport England for the future provision of sport include:

- Preventing the loss of facilities or natural resources or replacing equivalently, or better, in a suitable location
- Maintaining current and future demand for local, quality playing fields (i.e. no loss in supply or quality should occur because of development)
- Promoting shared use sites to increase provision in appropriate locations
- Utilise the urban fringe for sporting opportunities requiring larger areas such as golf courses and pitches and for built facilities which helps to maintain the identity of this resource
- Promoting floodlit synthetic turf pitches and hard-surfaced multi-use games areas as an integral part of community sports provision

Existing provision

13.30 There are a wide range of sports facilities available within Fenland, including facilities for: Bowling; Cricket; Tennis; Hockey; Rugby; Football; Fishing; Golf; Paintballing; Shooting; Quad biking; Microlights; Parachuting. There are also 3 leisure centres – Manor (Whittlesey); Hudson (Wisbech); George Campbell (March). The total number of sports facilities is shown in Table 13.10. Appendix D contains maps showing the location of sports facilities shown below.

Table 13.10: Number of sports facilities by Cluster

Cluster	Sports facilities
Wisbech Cluster	20
March Cluster	16
Whittlesey Cluster	8
Chatteris Cluster	10
Parsons Drove / Wisbech St Mary cluster	0
Manea	1
Doddington/Wimblington Cluster	6
Wisbech St. Mary Cluster	5
Total	**66**

13.31 Sports halls

- There are currently 12 sports courts (4 court halls+) that are accessible to the community
- There is a lack of 4 court halls in the west and south of the district, and the halls in Whittlesey and Chatteris are currently only 3 court.

13.32 Synthetic turf pitches

- There are twice as many pitches per 10,000 people in Fenland than the regional and national average and the personal share of local people for pitches (reflecting their availability and capacity) is only 1.5 times the national average. Supply is therefore good.
- Capacity easily exceeds demand at national participation rates.

13.33 Indoor tennis

There are no indoor tennis centres in Fenland, the nearest being:

- Huntingdon 41 minutes from the middle of Fenland
- Peterborough 43 minutes
- Cambridge 57 minutes
- Newmarket 59 minutes

13.34 Athletics

There are no permanent athletics tracks in Fenland, the nearest being:

- Peterborough 33 minutes from the middle of Fenland
- Lynnsport, Kings Lynn 38 minutes
- St Ivo Centre, St. Ives 45 minutes
- Spalding 47 minutes

13.35 Swimming pools

There are currently the following levels of swimming pool supply:

- Current level of provision (25m pools) 850 m2
- Current level of provision (25m pools, incl. learner pools) 987 m2

The whole population was estimated to be within a 20 minute drive of a pool, although walking accessibility was restricted to the three main towns. Our assessment excludes the small private pool in Chatteris.

13.36 Health and fitness centres

There are currently 457 health and fitness stations at 10 sites in Fenland, with the following availability to the public:

- Local authority pay and play 135 stations, 3 venues
- Commercial pay and play 181 stations, 4 venues
- Commercial registered membership 120 stations, 1 venue
- School pay and play 12 stations, 1 venue
- School private use 9 stations, 1 venue

13.37 Accessibility is measured by the proportion of the population that live within 20 minutes by car. The current situation is:

- 95% of the population lives within 20 minutes drive of a centre
- Residents of all the main towns, except Chatteris, live within easy walking distance, with the poorest driving accessibility also in the Chatteris area.

Table 13.11: Facilities recommendations

Wisbech Cluster	
Low growth	• No additions
Medium Growth	• 1 health and fitness centre (50 fitness stations) • 1 indoor tennis centre serving the whole district
High Growth	• A 6-court sports hall • 1 health and fitness centre (90 fitness stations) • 1 indoor tennis centre serving the whole district
March cluster	
Low growth	• A sports court located in a primary school hall or community hall
Medium Growth	• 1 health and fitness centre (60 fitness stations) • A 4-court sports hall
High Growth	• A 4-court sports hall • 1 health and fitness centre (70 fitness stations)

Whittlesey cluster	
Low growth	• Provision of mobile gym to rural population
Medium Growth	• Provision of mobile gym to rural population • A sports court located in a primary school hall or community hall
High Growth	
Chatteris Cluster	
Low growth	• Provision of mobile gym to rural population
Medium Growth	
High Growth	• A sports court located in a primary school hall or community hall • Provision of mobile gym to rural population

Parsons Drove / Wisbech St Mary Cluster	
Low growth	• Provision of mobile gym to rural population
Infrastructure led growth	• Provision of mobile gym to rural population
Manea Cluster	
Low growth	• Provision of mobile gym to rural population
Infrastructure led growth	• Provision of mobile gym to rural population
Wimblington / Doddington Cluster	
Low growth	• Provision of mobile gym to rural population
Infrastructure led growth	• Provision of mobile gym to rural population

Open space and green infrastructure

Introduction

13.38 The importance of open space is recognised by national government. In addition to creating desirable places to live, the appropriate provision of open space supports a broad range of policy objectives. Like sports facilities, the "Rural White Paper Our Countryside: the Future – A Fair Deal for Rural England" identifies the role of open space in improving quality of life for local communities.

13.39 Through Planning Policy Guidance 17: Sports and Recreation (PPG17; ODPM, 2002) the Government recognises the importance of open space in:

Supporting an urban renaissance

13.40 Local networks of high quality and well managed and maintained open spaces, sports and recreational facilities help create urban environments that are attractive, clean and safe. Green spaces in urban areas perform vital functions as areas for nature conservation and biodiversity and by acting as 'green lungs' can assist in meeting objectives to improve air quality

Promotion of social inclusion and community cohesion

13.41 Well planned and maintained open spaces and good quality sports and recreational facilities can play a major part in improving peoples' sense of well being in the place they live. As a focal point for community activities, they can bring together members of deprived communities and provide opportunities for social interaction

Health and well being

13.42 Open spaces, sports and recreational facilities have a vital role to play in promoting healthy living and preventing illness. They aid the social development of children of all ages through play, sporting activities and interaction with others

Promoting more sustainable development

13.43 By ensuring that open space, sports and recreational facilities (particularly in urban areas) are easily accessible by walking and cycling. More heavily used or intensive sports and recreational facilities should be planned for locations well-served by public transport.

13.44 While this chapter provides overall recommendations for open space, the manner in which this is delivered will be subject to more detailed analysis. Some of the requirement will be required within the developments whereas the remainder may be provided at strategic locations elsewhere in the district or associated with improving the accessibility and uses of existing areas of open space.

Existing provision

13.45 The Draft Fenland Natural Greenspace Study, Open Spaces Study and Strategy are currently being reviewed prior to formal adoption by the Council. Specific proposals may emerge from ongoing workstreams, including the Draft Cambridgeshire Green Infrastructure Strategy review and The Wash and Fens Green Infrastructure Masterplan. The latter covers only the northern portion of Fenland District Council area.

13.46 In addition to the general standards in Appendix E, the Cambridgeshire Strategic Open Space Study 2004 and emerging Draft Cambridgeshire Green Infrastructure Strategy identified the need and potential locations for country parks within Fenland. The latter identifies March, Wisbech and Chatteris as appropriate locations for country parks in response to identified open space deficiencies. AECOM will need to develop an approach to incorporating Country Park assumptions into the Fenland Neighbourhood Planning Vision project.

13.47 The Public Open Space Study (2009) found that In Fenland there is:

- 133 ha of Outdoor Sport and 55 ha of Children's Playspace;
- 27 ha of Park and Garden (including 8 ha having the potential to achieve such a categorisation);
- 20 ha of Amenity Space within Fenland's settlements;
- 50 ha of Educational Playspace which would be available and accessible to organised groups and events;
- 13 official allotments totalling 33 ha;

- 28 cemeteries and churchyards in Fenland covering 32.5 ha;
- 7 civic areas totalling 1ha in size.

13.48 Appendix D contains maps showing the location of open spaces within Fenland.

Table 13.12: Facilities recommendations

Wisbech Cluster	
Low growth	• 2.5 ha of Parks and Garden space • 12.3 ha of Outdoor Sport space • 1.2 ha of Formal playspace • 3.1 ha of Natural playspace • 2.2 ha of Allotment space
Medium Growth	• 3.1 ha of Parks and Garden space • 15.5 ha of Outdoor Sport space • 1.5 ha of Formal playspace • 3.9 ha of Natural playspace • 2.7 ha of Allotment space
High Growth	• 6.2 ha of Parks and Garden space • 31.2 ha of Outdoor Sport space • 3.1 ha of Formal playspace • 7.8 ha of Natural playspace • 5.5 ha of Allotment space
March cluster	
Low growth	• 2.4 ha of Parks and Garden space • 12.0 ha of Outdoor Sport space • 1.2 ha of Formal playspace • 3.0 ha of Natural playspace • 2.1 ha of Allotment space
Medium Growth	• 4.2 ha of Parks and Garden space • 21.2 ha of Outdoor Sport space • 2.1 ha of Formal playspace • 5.3 ha of Natural playspace • 3.7 ha of Allotment space
High Growth	• 5.1 ha of Parks and Garden space • 25.3 ha of Outdoor Sport space • 2.5 ha of Formal playspace • 6.3 ha of Natural playspace • 4.4 ha of Allotment space

Whittlesey cluster	
Low growth	• 0.3 ha of Parks and Garden space • 1.6 ha of Outdoor Sport space • 0.2 ha of Formal playspace • 0.4 ha of Natural playspace • 0.3 ha of Allotment space
Medium Growth	• 0.9 ha of Parks and Garden space • 4.7 ha of Outdoor Sport space • 0.5 ha of Formal playspace • 1.2 ha of Natural playspace • 0.8 ha of Allotment space
High Growth	• 1.4 ha of Parks and Garden space • 7.0 ha of Outdoor Sport space • 0.7 ha of Formal playspace • 1.7 ha of Natural playspace • 1.2 ha of Allotment space
Chatteris Cluster	
Low growth	• 0.5 ha of Parks and Garden space • 2.7 ha of Outdoor Sport space • 0.3 ha of Formal playspace • 0.7 ha of Natural playspace • 0.5 ha of Allotment space
Medium Growth	• 1.0 ha of Parks and Garden space • 5.0 ha of Outdoor Sport space • 0.5 ha of Formal playspace • 1.2 ha of Natural playspace • 0.9 ha of Allotment space
High Growth	• 1.7 ha of Parks and Garden space • 8.3 ha of Outdoor Sport space • 0.8 ha of Formal playspace • 2.1 ha of Natural playspace • 1.5 ha of Allotment space

Parsons Drove / Wisbech St Mary Cluster	
Low growth	• 0.3 ha of Outdoor Sport space • 0.1 ha of Natural playspace
Infrastructure led growth	• 1.3 ha of Outdoor Sport space • 0.3 ha of Natural playspace • 0.1 ha of Formal playspace • 0.2 ha of Allotment space
Manea Cluster	
Low growth	• 0.1 ha of Outdoor Sport space
Infrastructure led growth	• 0.6 ha of Outdoor Sport space • 0.2 ha of Natural playspace • 0.1 ha of Formal playspace • 0.1 ha of Allotment space
Wimblington / Doddington Cluster	
Low growth	• No additions
Infrastructure led growth	• 1.1 ha of Outdoor Sport space • 0.1 ha of Formal playspace • 0.2 ha of Natural playspace • 0.2 ha of Allotment space

Community facilities

Introduction

13.49 This study recognises the importance of community facilities in the development of sustainable communities. Community facilities create opportunities for community interaction and help build a sense of place. They can inspire learning, support skills, and personal development as well as promote health and mental wellbeing.

13.50 Community spaces can be used for a wide range of facilities, which the public can use, including community centres, venues for community and adult learning, performance and creative spaces, etc. For the purposes of forecasting potential infrastructure requirements, this study examines the demand for libraries and community centres as these spaces provide for a variety of public needs.

Table 13.13: Number of community facilities by Cluster

Cluster	Public, village and church halls	Libraries
Wisbech Cluster	20	1
March Cluster	6	1
Whittlesey Cluster	4	1
Chatteris Cluster	5	1
Parsons Drove / Wisbech St Mary cluster	0	0
Manea	2	0
Doddington/Wimblington Cluster	3	0
Wisbech St. Mary Cluster	5	0
Total	**20**	**1**

Table 13.14: Facilities recommendations

Wisbech Cluster	
Low growth	• Community Library (300sq.m) • Community space (430sq.m)
Medium Growth	• Key Library (400sq.m) • Community space (540sq.m)
High Growth	• Key Library (800sq.m) • Community space (1,100sq.m)
March cluster	
Low Growth	• Community Library (300sq.m) • Community space (420sq.m)
Medium Growth	• Key Library (550sq.m) • Community space (740sq.m)
High Growth	• Key Library (650sq.m) • Community space (880sq.m)
Whittlesey cluster	
Low growth	• Extension of Mobile Library service
Medium Growth	• Community Library (150sq.m) • Community space (170sq.m)
High Growth	• Community Library (200sq.m) • Community space (250sq.m)

Chatteris Cluster	
Low growth	• Extension of Mobile Library service • Community space (100sq.m)
Medium Growth	• Community Library (150sq.m) • Community space (170sq.m)
High Growth	• Community Library (200sq.m) • Community space (290sq.m)
Parsons Drove / Wisbech St Mary Cluster	
Low growth	• Extension of Mobile Library service
Infrastructure led growth	
Manea Cluster	
Low growth	• Extension of Mobile Library service
Infrastructure led growth	
Wimblington / Doddington Cluster	
Low growth	• None
Infrastructure led growth)	• Extension of Mobile Library service

Emergency services

Introduction

13.51 The need to ensure that housing development promotes community cohesion and creates safe neighbourhoods and environments is a central consideration of a broad range of emergency services. This report looks at the potential requirements for additional:

- Police services
- Fire services
- Ambulance services

Existing provision

Police

13.52 There are three police stations in Fenland which are located in March, Chatteris and Wisbech.

Fire Service

13.53 There are four fire stations in Fenland. These are distributed throughout the four market towns.

Ambulance Service

13.54 There are two Ambulance Stations in Fenland, which are located in Wisbech and March. The strategic location of ambulances means that they are able to answer emergency calls within a specified period. The East of England Ambulance Service aims to respond to 75% of potentially life-threatening calls within 8 minutes and 95% within 19 minutes. For non-life threatening calls, 95% must be responded to within 19 minutes and for minor problems these are sometimes dealt with by giving telephone advice or by sending an ambulance under normal driving conditions.

13.55 Appendix D contains maps showing the location of emergency services.

Facilities recommendations

13.56 Cambridgeshire Police confirm that it is more appropriate to describe infrastructure requirements at the district level rather than at settlement level. They are also keen to explore opportunities for co-location with other facilities, such as doctor's surgeries, where appropriate.

13.57 There is no capital requirements for ambulance or fire provision associated with the growth scenarios. However, while the magnitude of growth is not sufficient enough to trigger new fire and ambulance capital requirements, it is possible that the distribution of growth may require these services to reorganise their operations within the district to ensure that statutory response times are met.

13.58 In the case of the ambulance services, the level of proposed development is unlikely to require additional infrastructure, as individual ambulances are not permanently stationed in stations or depots. They may be located at strategic sites across the district to ensure that the appropriate response times are met.

13.59

Table 13.15: Facilities recommendations

All clusters	
Low Growth	27 additional Police officers across district (low capital costs)
Medium Growth	43 additional Police officers across district (low capital costs)
High Growth	70 additional Police officers across district (low capital costs)

Summary of infrastructure recommendations

13.60 This section of the chapter summarises the infrastructure recommendations shown above by Cluster instead of by Theme for ease of reference. The final table in this section sets out the other infrastructure recommendations that cannot be ascribed to a particular cluster as they would serve the entire district.

Table 13.16: Wisbech Cluster – Summary of recommendations

Low Growth	
Low growth	• 1 pre-school playgroup • 2 childminders • 2FE Primary School • 1 GP expansion of an existing surgery • 2 GP Surgery • Additional dental provision (3 dentists) • 1 Pharmacy within new developments • 2.5 ha of Parks and Garden space • 12.3 ha of Outdoor Sport space • 1.2 ha of Formal playspace • 3.1 ha of Natural playspace • 2.2 ha of Allotment space • Community Library (300sq.m) • Community space (430sq.m)
Medium Growth	
Medium Growth	• 1 pre-school playgroup • 2 childminders • 1FE primary school • 1 GP expansion of an existing surgery • 3 GP Surgery • Additional dental provision (4 dentists) • 2 Pharmacies within new developments • 1 health and fitness centre (50 fitness stations) • 1 indoor tennis centre serving the whole district • 3.1 ha of Parks and Garden space • 15.5 ha of Outdoor Sport space • 1.5 ha of Formal playspace • 3.9 ha of Natural playspace • 2.7 ha of Allotment space • Key Library (400sq.m) • Community space (540sq.m)

High Growth	
High Growth	• 3 pre-school playgroups • 5 childminders • 3FE primary school and 2FE primary school • 3FE expansion to the existing secondary school, although this takes the total size beyond the Council's preference of 11FE (shared with Wisbech St Mary cluster) • 1 GP expansion of an existing surgery • 8GP Primary Care Centre (PCC) • Additional dental provision (8 dentists) • 3 Pharmacies within new developments • A 6-court sports hall • 1 health and fitness centre (90 fitness stations) • 1 indoor tennis centre serving the whole district • 6.2 ha of Parks and Garden space • 31.2 ha of Outdoor Sport space • 3.1 ha of Formal playspace • 7.8 ha of Natural playspace • 5.5 ha of Allotment space • Key Library (800sq.m) • Community space (1,100sq.m)

Table 13.17: March Cluster – Summary of recommendations

Low Growth	
Low growth	• 1 pre-school playgroup • 2 childminders • 3 GP Surgery • Additional dental provision (3 dentists) • 1 Pharmacy within new development • A sports court located in a primary school hall or community hall • 2.4 ha of Parks and Garden space • 12.0 ha of Outdoor Sport space • 1.2 ha of Formal playspace • 3.0 ha of Natural playspace • 2.1 ha of Allotment space • Community Library (300sq.m) • Community space (420sq.m)

Medium Growth	
Medium Growth	• 2 pre-school playgroups • 3 childminders • 2 x 2FE Primary School • 2FE expansion to the existing secondary school, although this takes the total size beyond the Council's preference of 11FE • 6GP Primary Care Centre (PCC) • Additional dental provision (5 dentists) • 2 Pharmacies within new developments • 1 health and fitness centre (60 fitness stations) • A 4-court sports hall • 4.2 ha of Parks and Garden space • 21.2 ha of Outdoor Sport space • 2.1 ha of Formal playspace • 5.3 ha of Natural playspace • 3.7 ha of Allotment space • Key Library (550sq.m) • Community space (740sq.m)
High Growth	
High Growth	• 2 pre-school playgroups • 4 childminders • 3FE primary school and 2FE primary school • 3FE expansion to the existing secondary school, although this takes the total size beyond the Council's preference of 11FE • 7GP Primary Care Centre (PCC) • Additional dental provision (6 dentists) • 3 Pharmacies within new developments • A 4-court sports hall • 1 health and fitness centre (70 fitness stations) • 5.1 ha of Parks and Garden space • 25.3 ha of Outdoor Sport space • 2.5 ha of Formal playspace • 6.3 ha of Natural playspace • 4.4 ha of Allotment space • Key Library (650sq.m) • Community space (880sq.m)

Table 13.18: Whittlesey Cluster – Summary of recommendations

Low Growth	
Low growth	• Extension of Mobile Library service • Provision of mobile gym to rural population • 0.3 ha of Parks and Garden space • 1.6 ha of Outdoor Sport space • 0.2 ha of Formal playspace • 0.4 ha of Natural playspace • 0.3 ha of Allotment space
Medium Growth	
Medium Growth	• 1 childminder • Community Library (150sq.m) • Community space (170sq.m) • 1GP expansion of an existing surgery • Expand dental provision in town (1 dentist) • 1 Pharmacy within new development • Provision of mobile gym to rural population • A sports court located in a primary school hall or community hall • 0.9 ha of Parks and Garden space • 4.7 ha of Outdoor Sport space • 0.5 ha of Formal playspace • 1.2 ha of Natural playspace • 0.8 ha of Allotment space
High Growth	
High Growth	• 1 childminder • Community Library (200sq.m) • 1FE primary school • Community space (250sq.m) • 2GP expansion of an existing surgery • Expand dental provision in town (2 dentists) • 1 Pharmacy within new development • Provision of mobile gym to rural population • A sports court located in a primary school hall or community hall • 1.4 ha of Parks and Garden space • 7.0 ha of Outdoor Sport space • 0.7 ha of Formal playspace • 1.7 ha of Natural playspace • 1.2 ha of Allotment space •

Table 13.19: Chatteris Cluster – Summary of recommendations

Low Growth	
Low growth	• 1GP expansion of an existing surgery • Expand dental provision in town (1 dentist) • Provision of mobile gym to rural population • 0.5 ha of Parks and Garden space • 2.7 ha of Outdoor Sport space • 0.3 ha of Formal playspace • 0.7 ha of Natural playspace • 0.5 ha of Allotment space • Extension of Mobile Library service • Community space (100sq.m)
Medium Growth	
Medium Growth	• 1 childminder • 1FE primary school • 1GP expansion of an existing surgery • Expand dental provision in town (1 dentist) • 1 Pharmacy within new development • Provision of mobile gym to rural population • 1.0 ha of Parks and Garden space • 5.0 ha of Outdoor Sport space • 0.5 ha of Formal playspace • 1.2 ha of Natural playspace • 0.9 ha of Allotment space • Community Library (150sq.m) • Community space (170sq.m)
High Growth	
High Growth	• 1 pre-school playgroup • 1 childminder • 2FE primary school • 2GP expansion of an existing surgery • Expand dental provision in town (2 dentists) • 1 Pharmacy within new development • A sports court located in a primary school hall or community hall • Provision of mobile gym to rural population • 1.7 ha of Parks and Garden space • 8.3 ha of Outdoor Sport space • 0.8 ha of Formal playspace • 2.1 ha of Natural playspace • 1.5 ha of Allotment space • Community Library (200sq.m) • Community space (290sq.m)

Table 13.20: Parsons Drove / Wisbech St Mary Cluster – Summary of recommendations

Low Growth	
Low growth	• Provision of mobile gym to rural population • 0.3 ha of Outdoor Sport space • 0.1 ha of Natural playspace • Extension of Mobile Library service
Infrastructure led growth	
Infrastructure led growth	• Provision of mobile gym to rural population • 1.3 ha of Outdoor Sport space • 0.3 ha of Natural playspace • 0.1 ha of Formal playspace • 0.2 ha of Allotment space • Extension of Mobile Library service • 3FE expansion to the existing secondary school, although this takes the total size beyond the Council's preference of 11FE (shared with Wisbech cluster)

Table 13.21: Manea Cluster – Summary of recommendations

Low Growth	
Low growth	• Provision of mobile gym to rural population • 0.1 ha of Outdoor Sport space • Extension of Mobile Library service
Infrastructure led growth	
Infrastructure led growth	• Provision of mobile gym to rural population • 0.6 ha of Outdoor Sport space • 0.2 ha of Natural playspace • 0.1 ha of Formal playspace • 0.1 ha of Allotment space • Extension of Mobile Library service

Table 13.22: Wimblington / Doddington cluster – Summary of recommendations

Low Growth	
Low growth	• Provision of mobile gym to rural population
Infrastructure led growth	
Infrastructure led growth	• Provision of mobile gym to rural population • 1.1 ha of Outdoor Sport space • 0.1 ha of Formal playspace • 0.2 ha of Natural playspace • 0.2 ha of Allotment space • Extension of Mobile Library service

Conclusions

13.61 This chapter set out the potential impacts of growth in terms of social infrastructure. The information modelled within this chapter identifies the infrastructure requirements based on given housing growth scenarios. As the study moves forward, the information will be inputted to AECOM's Infrastructure Delivery Model, which will add an additional detail to the analysis. This model will allow the team to correlate infrastructure demand with housing growth levels more efficiently and identify the financial cost of different growth levels.

13.62 This chapter has identified that there are growth levels within the clusters that are insufficiently large to trigger additional social infrastructure facilities. The population associated with this growth will however still require community facilities. Therefore it is clear that growth that is too small to trigger additional facilities, such as a school or GP surgery, will add further strain to existing facilities.

Wisbech cluster

13.63 The town-wide objectives for Wisbech include the need to tackle deprivation and worklessness, improve education and skills and reduce health inequalities.

13.64 High level growth in the Wisbech cluster could require the local secondary school to expand beyond Cambridgeshire Council's preferred upper limit of 11 Forms of Entry (FE). Therefore in terms of social infrastructure a lower level of growth may be more appropriate and it may be more appropriate to bring forward Option 2 growth plus development of only one Option 3 site.

March cluster

13.65 The town-wide objectives for March include the need to tackle deprivation and worklessness in March East, improve education and skills, reduce health inequalities in the east and west of town and possible redevelopment of George Campbell leisure centre.

13.66 A medium level of growth in the cluster would provide community benefits in the town without expansion of the local Secondary school beyond the recommended upper size set by the County Council.

13.67 Further work as part of Stage 3 will need to consider the costs of redeveloping the George Campbell Leisure Centre and whether growth could support this.

Whittlesey cluster

13.68 The town-wide objectives for Whittlesey include a need for improved education and skills. In social infrastructure terms, a higher level of growth is more likely to facilitate a new 1FE primary school. All growth scenarios are predicted to result in a reduction in secondary school demand. Growth at a lower level poses a potential issue in relation to increasing spare capacity at Sir Harry Smith Community College.

Chatteris cluster

13.69 Key town-wide objectives for Chatteris based on the evidence base are to improve education and skills and improve leisure facilities.

13.70 The high growth option is the only option that is predicted to sustain the current level of demand at the local secondary school, which should allow the current education levels to be maintained. This growth level may also allow a new 2FE primary school to be built which would offer opportunities for improved education.

13.71 The higher growth option would deliver a requirement for 8.3 ha of Outdoor Sport space, a sports court and potentially a mobile gym, which would all have town-wide benefits.

The Local Service Centres and Clusters

13.72 The high growth options for each of the remaining clusters set out the level of growth that could be required, subject to further testing and discussions with the appropriate stakeholders, to counteract the effect of natural population decline in local Primary Schools.

14. Transport and movement infrastructure impact assessment of options

Strategic Infrastructure Impact Assessment of Options

14.1 An infrastructure assessment has been undertaken for the market town and cluster settlement options considering growth in the context of current transport policy for Fenland, and the local and district wide infrastructure requirements as a result of the impacts. The assessments incorporate stakeholder feedback at the Fenland Neighbourhood Planning Vision Spatial Growth Options Workshop held in September 2010 received from Sustrans, Cambridgeshire County Council (CCC) and Highways Agency (HA) representatives, liaison with Network Rail and National Express East Anglia and information from relevant Local Development Framework (LDF) transport studies.

14.2 The site infrastructure assessments for the four market town and their cluster settlements do not consider development growth outside the three options identified in the Broad Location analysis, as there is insufficient information available in terms of locations in order to accurately determine access requirements. With regard to the town wide infrastructure assessments, these are not location specific and apply to all the identified growth in each town.

Fenland Area Location and Description

14.3 Fenland is situated in the northeast of Cambridgeshire, and the key roads within the District are the A47 Trunk Road, A141, A142, A605 and A1101. These are predominantly single carriageway roads, with the strategic A47 (T) crossing the district, linking Fenland to King's Lynn and Norfolk to the west and Peterborough, the A1 (which in turn provides a route to London and the north) and the East Midlands to the east. The A1101, A141 and A142 local authority roads form the main north-south route through Fenland, linking Wisbech, March and Chatteris, and cross boundary connections into Lincolnshire to the north, Huntingdonshire to the southwest (Huntington) and East Cambridgeshire to the southeast (Ely).

14.4 With regard to public transport, March has its own rail station located to the north of the town centre. There are direct services to London Liverpool Street, however the more frequent indirect services are to London King's Cross via Cambridge, Peterborough or Ely, which provide the most likely option for accessing ,London by rail from Fenland. The stations at Whittlesey and particularly Manea are poorly served with limited stopping services. The closest station to Chatteris and Wisbech is in March. Bus services are concentrated on the main road corridors between Wisbech, March and Chatteris, with limited services in more rural areas. There are good cross boundary services from Wisbech to King's Lynn and from Peterborough to Whittlesey and Wisbech.

14.5 Three of the National Cycle Network (NCN) routes run through Fenland as follows: NCN1 runs through Wisbech and into Lincolnshire; NCN11 runs from Kings Lynn on the east side of Fenland through to Ely; and NCN63 runs from Burton-on-Trent to Wisbech. There are public rights of way and other promoted walking and cycling routes within Fenland, however there are gaps in the local walking and cycling network.

Chatteris

Transport Policy

Chatteris Market Town Transport Strategy

14.6 Chatteris Market Town Transport Strategy (MTTS) was adopted in 2010 and the strategy sets out transport improvements for the town to be implemented over the medium to long term. Public transport, road safety and walking and cycling are the key areas that the strategy seeks to address. The schemes proposed can be supported by, and will be a requirement of growth. Opportunities including a new public transport interchange in the town centre, improvements at key junctions and new pedestrian / cycle links across the A142 and A141 to enhance connectivity between Chatteris and the employment areas to the north and west of the town have been identified in this assessment.

Town Wide Infrastructure Impact

Sustainable Access

14.7 The South Fens Business Park in the north of the town is well occupied with further expansion potential. Better sustainable access for pedestrians and cyclists in addition to a bus service linking the three areas with the main employment sites is likely to be a key infrastructure requirement. There is a risk that CCC will not accept at-grade crossing facilities on the A141 and A142 for safety reasons, and if this is the case then pedestrian footbridges / underpasses across the roads should be considered to improve connectivity to the employment areas. One main bus interchange in the town centre where all the routes serving Chatteris converge could be an option, and an appropriate location for this facility would need to be investigated. To link in with the on-site pedestrian and cycle facilities, improvements should be considered along key routes to local amenities such as schools, shops and healthcare facilities.

Road Infrastructure

14.8 Off-site road improvements to mitigate the impact of development car trips are likely to be required for all of the three growth options, although traffic data in the 2009 CCC Traffic Monitoring Report shows that the least busy cordon roads surround Chatteris, which could indicate that the local road network has spare capacity.

14.9 There is likely to be a material impact at the A142 / Wenny Road junction. Other principal junctions in Chatteris where mitigation requirements will need to be assessed include, but is not limited to:

- A141 / A142 / Doddington Road / Bridge Street roundabout, however this junction is tightly constrained and scope for improvements is likely to be limited.
- A141 / B1050 roundabout.

14.10 As shown by screen line data in the 2009 CCC Traffic Report, both the A141 and A142 are well trafficked routes to the south of Chatteris that provide access to other large centres in the county including Ely and Huntington. The southern location of the growth options may result in a significant volume of external car trips routing to the south of Chatteris that will impact on these routes. The level and form of transport infrastructure associated with future development / planning applications in Chatteris would need to be agreed with the Local Highway Authority.

Opportunity Zone Infrastructure Impact

14.11 The Broad Location analysis has identified three options:

- Option 1 – East Chatteris (500 dwellings).
- Option 2 – East Chatteris (1,000 dwellings).
- Option 3 – East and Southeast Chatteris (1,750 dwellings).
- Additional employment land – at least 9.3 hectares plus a proportion of the further 27.3 hectares to be distributed within the Fenland area.

Sustainable Access

14.12 There would be an internal network of pedestrian and cycle facilities that link in with existing off-site infrastructure. Depending on the layout and extent of the frontage, it may be desirable to divert some existing bus services from Wenny Road into the option 1 area via a main access junction and separate a bus gate along the frontage, with bus stops at regular intervals to maximise the number of dwellings within 400m (5 minute walk time) of a stop. The full development build out in option 3 could support a superior improvement to the bus network, and a new service that links the area with the town centre, South Fens Business Park to the north and the employment area to the west of the A141 may be feasible. Diverting existing bus services will need agreement from the bus operators, and extra funding may be required to increase the size of the fleet to maintain / improve service frequency. New bus services will require "pump prime funding" from developers.

Road Infrastructure

14.13 Option 1 would need at least one vehicle access junction off Wenny Road. The additional development of 1,250 dwellings in options 2 and 3 would need at least two vehicle access junctions, one with the B1050 and one with the A142 connected by a loop road. Direct access via the B1050 is likely to require a new road link. At the A142 end it would be desirable for the access junction to form the fourth arm of a new roundabout junction with the A142 and Wenny Road, however following a desk top review of this proposal it would appear to be cost prohibitive given the land and engineering constraints. The alternative option would be a new access junction with the A142 to the south of Wenny Road, however the Local Highway Authority, Cambridgeshire County Council (CCC), are unlikely to be supportive of a direct access onto the A142 given the strategic nature of the route and that the national speed limit applies in this location.

Conclusions

Growth in Chatteris would be beneficial to the Fenland Neighbourhood Planning Vision objectives for the town and in helping to deliver the MTTS. New development should result in financial contributions becoming available, some of which could fund improvements to the transport network proposed by the MTTS, and additional town wide infrastructure identified in this assessment. In terms of providing satisfactory access arrangements, it is considered that option 1 is likely to be achievable, however bringing options 2 and 3 forward will be difficult. The additional employment land will generally be accommodated through the expansion of existing sites or linked to new residential development in opportunity zones, so the identified infrastructure impacts are considered appropriate.

In certain circumstances, the level of growth may trigger requirements for major transport infrastructure that will be beyond the capacity of the development to support in terms of viability. This may be the case in terms of delivering the walking and cycling improvements desirable, given the likely cost constraints associated with the type of the pedestrian crossing facilities likely to be needed on the A141 and A142.

Currently, there is no transport modelling evidence available to assess both the existing and future performance of the transport network in Chatteris to understand the impacts of growth, and trigger

points for infrastructure. It is recommended that access feasibility studies are undertaken to consider options 2 and 3. Therefore, further work is required to inform the preferred option.

Whittlesey

Transport Policy

Whittlesey Market Town Transport Strategy

14.14 Whittlesey MTTS is currently being written and is not likely to be adopted until 2012. In the absence of a specific strategy for the town, the transport policy context for Whittlesey comes from existing MTTS's and the general aim to provide for growth through the provision of integrated transport networks, and recognising the need to create strong public transport connections within and between the market towns and to the larger cities and towns, as well as to railheads in order to encourage growth.

Town Wide Infrastructure Impact

Sustainable Access

14.15 The employment area on Station Road adjacent to Whittlesey Rail Station is well occupied with further expansion potential. Better sustainable transport infrastructure in addition to a bus service linking the three areas is likely to be a key infrastructure requirement. The rail station does not relate well to the town. If there is more rail passenger demand created by new development in the area, then the transport facilities at Whittlesey Station could be improved to provide better interchange between sustainable modes with a significant uplift in cycle parking provision to try and foster a 'park and cycle' mentality amongst new users. In addition, a large increase in passenger demand could provide a stronger business case for TOC to increase the service frequency at Whittlesey Station, which has a train stop approximately every 2 hours on the Ipswich- Peterborough route, currently operated by National Express.

14.16 Surfacing and layout improvements to the existing car parking area are required and there is vacant land to the north of the station that may become available to provide additional facilities. The platforms are two car and this requires selective door opening and the current pedestrian route to the northern platform is very poor. If there was an opportunity to significantly improve the station facilities the relocation of the northern platform west so both platforms can be accessed from the B1093 Station Road, and the extension of both platforms should be priorities.

14.17 Data from the 2009 CCC Traffic Report show that there is a high proportion of heavy goods vehicles in Whittlesey and nearly 70% of journeys in the town centre were by car, which impacts on the environment for pedestrians and cyclists. Traffic calming measures on the A605 between the development area East of Whittlesey and the town centre could help deter through traffic (all vehicle types) from using the A605. Improving the local cycle route to the east of Whittlesey that connects the A605 to the National Cycle Network (NCN) 63 route would also be desirable. To link in with the on-site pedestrian and cycle facilities, improvements should be considered along key routes to local amenities such as schools, shops and healthcare facilities.

Road Infrastructure

14.18 Off-site road improvements to mitigate the impact of development car trips are likely to be required for all three growth options, and traffic data in the 2009 CCC Traffic Report shows that over 31,000 vehicles enter and leave Whittlesey during the day (7am-7pm), which is a similar number to the larger town of March, and could indicate that the road network already experiences congestion problems.

14.19 There is likely to be a material impact at the A605 / B1040 Broad Street roundabout in the town centre where the four main routes into Whittlesey converge, however this junction is

tightly constrained and scope for improvements is likely to be limited. Other locations in Whittlesey where mitigation requirements will need to be assessed include, but is not limited to:

- A605 / B1040 Church Street priority T-junction.
- A605 / B1093 roundabout.

14.20 The level crossings to the west and east of Whittlesey cause appreciable disruption and delay whilst the barriers are down. The frequency and duration of the barrier down time may increase through forecast years if either the passenger or freight rail service frequencies increase. Additional development traffic on the road network in Whittlesey will result in more queuing and congestion when the level crossings on the A605 and B1093 are down, and this will require significant mitigation if CCC object to the level of impact, and an acceptable impact on the road network whilst the level crossings are in place is likely to prohibitive significant growth in Whittlesey.

14.21 Removing level crossings is a priority for Network Rail and significant growth in traffic will hasten the need to remove crossings, and when bridges are required in these locations the cost associated with this infrastructure is likely to be prohibitive to further development in Whittlesey.

14.22 Recent traffic data collected by the Local Authorities in Whittlesey provides evidence to suggest that:

- Whittlesey is an important origin and destination for car traffic and that the proportion of through traffic on the A605 is small, at approximately 30% of movements.
- A fair proportion of the traffic movements in Whittlesey may actually be internal movements that do not venture onto the A605.
- A significant proportion of vehicles routing to / from Peterborough (large employment site to the east of the city) travel along North Bank via the B1040 from Whittlesey.
- Traffic approaching from the south of Whittlesey heading towards Peterborough is likely to use the B1095 from Pondersbridge, hence would not have any need to access the A605 unless they are heading into the town.

14.23 The level and form of transport infrastructure associated with future development / planning applications in Whittlesey would need to be agreed with the Local Highway Authority.

Opportunity Zone Infrastructure Impact

14.24 The Broad Location analysis has identified three opportunity zones:

- Option 1, zones 1a and 1a – North and South Whittlesey (combined 500 dwellings).
- Option 2 – North, South and East Whittlesey (1,200 dwellings).
- Option 3 – North, South and East Whittlesey (1,700 dwellings).
- Additional employment land – at least 0.59 hectares plus a proportion of the further 27.3 hectares to be distributed within the Fenland area.

Sustainable Access

14.25 There would be an internal network of pedestrian and cycle facilities that link in with existing off-site infrastructure. In terms of bus access, it may be desirable to divert some existing bus services from the A605 Eastrea Road into the East Whittlesey zones with bus stops at regular intervals internally. New bus stops, crossing facilities and a southern footway along the A605 would cater for development south of the road. The full development build out in option 3 could potentially support more substantial improvements to the bus network, and a new service

that links all the zones with the town centre, Whittlesey Rail Station and the adjacent employment area on Station Road may be feasible. Diverting existing bus services will need agreement from the bus operators, and extra funding may be required to increase the size of the fleet to maintain / improve service frequency. New bus services will require "pump prime funding" from developers.

Vehicle Access

14.26 The vehicle access strategy for option 1, zone 1a would be junctions either side of the B1040 East Delph. The options for a vehicle access to serve option 1, zone 1b are a junction with Priors Road to the north or B1040 Church Street to the east. Providing vehicle access arrangements to serve option 1, zone 1b is likely to be cost prohibitive as the northern and eastern options would require acquisition of third party land. The additional development of 700 dwellings in option 2 would need at least one vehicle access junction with the A605, and 1,200 dwellings in East Whittlesey is likely to need two access junctions with the A605, connected by a spine or loop road.

Conclusions

Growth in Whittlesey would be beneficial to the Fenland Neighbourhood Planning Vision objectives for the town will result in financial contributions becoming available, some of which could fund improvements to the transport network. In terms of providing satisfactory access arrangements, it is considered that the north and east zones are likely to be achievable, however bringing option 1, zone 1b in the south forward will be difficult. The additional employment land will generally be accommodated through the expansion of existing sites or linked to new residential development in opportunity zones, so the identified infrastructure impacts are considered appropriate. Traffic data for Whittlesey provides evidence to suggest that only a small proportion of movements on the A605 is through traffic, and that the dominant origin and destination routings are either internal car trips or between Whittlesey and Peterborough along the A605 and North Bank. This would suggest that an east-west Bypass around Whittlesey would not significantly alleviate current traffic levels on the A605 in the town, and that targeted sustainable transport improvements / connections between the right areas of the town would help reduce local car trips.

In certain circumstances, the level of growth may trigger requirements for major transport infrastructure that will be beyond the capacity of the development to support in terms of viability. This may be the case in terms of delivering the road and sustainable transport improvements desirable, given the significant investment required at Whittlesey Station to deliver a noticeable change in its prominence within the town, and the engineering and cost constraints associated with the provision of road bridges on the A605 and B1093 likely to be needed at some stage to replace existing level crossings. Funding from development alone is unlikely to be sufficient to deliver these changes.

Currently, there is no transport modelling evidence available to assess both the existing and future performance of the transport network in Whittlesey to understand the impacts of growth, and trigger points for infrastructure. Given the initial findings from the analysis of the recent traffic data collection exercise, further investigation would be needed to determine identify what / if any measures can be introduced along routes of the road network. It is recommended that an access feasibility study is undertaken to consider option 1, zone 1b. Therefore, further work is required to inform the preferred option.

March

Transport Policy

March Market Town Transport Strategy

14.27 March MTTS provides a programme of integrated transport initiatives that support the Local Transport Plan objectives and contribute towards the prosperity and well-being of the town. Enhancing public transport connections between March and the main employment area to the north of the town, improving road safety, removing "inappropriate" traffic from the town centre and providing better public realm for pedestrians are the key areas that the strategy seeks to address. The schemes proposed can be supported by, and will be a requirement of growth. Opportunities including improvements at key junctions in the town, upgrading bus stops, a new north-south cycle route on the B1101 and additional north-south routes either side of the B1101 with new / improved bridges across the river and the completion of Phase 2 of the Industrial Link Road have been identified in this assessment.

Town Wide Infrastructure Impact

Sustainable Access

14.28 The rail station is not well connected to the town. Better sustainable transport infrastructure in addition to a bus service linking the development in the south and southwest of March is likely to be a key infrastructure requirement. The option 1 zone in northeast March would be an opportunity to target improvements to bus links between the site, the rail station and the town centre. There are bus stops located adjacent to the station entrance so there is the opportunity for passenger interchange with buses, however this transfer is limited because the timing of bus arrivals / departures does not match the rail timetable, due to the timings and local congestion issues. Additional traffic as a result of future growth in the town will exacerbate the congestion on the road network, and impact on bus services connecting to the station due to the increase in down time of the level crossing to the north of the station with the increase in rail traffic (passenger and freight service proposals). This will encourage out commuters to drive instead of using the train and connecting to the station by bus. Providing better quality public transport interchange between modes at March Station is a priority, including upgrading the bus stop facilities, and a potential access improvement could be a bus route that enters the station forecourt and loops back onto the B1101 through the vacant land to the south of the station. There is no guarantee that improvements to the interchange between public transport modes at March Station can be achieved given the significant constraints with town centre network and rail infrastructure. In addition, the current car park layout is not efficient and surfacing and layout improvements are required.

14.29 Data from the 2009 CCC Traffic Report shows that nearly 30% of journeys in the town centre were on foot and cycling, and new development should contribute towards the infrastructure in the town and improving the environment for walking and cycling. Improving the pedestrian /cycle route between the option 1 zone in the northeast and March Station should be a priority, including footway improvements and new crossing facilities. The two pedestrian / cycle bridges over the River Nene would also benefit from upgrades, as would the cycle route north of the town to Elm Bridge. A potential new section of cycle way on the eastside of the A141 to connect NCN 63 with the development in southwest and south March would be desirable. Public realm / traffic calming improvements on Burrowmoor Road, B1101, B1099 and Knight's End Road would enhance the environment for pedestrians and cyclists. To link in with the on-site pedestrian and cycle facilities, improvements should be considered along key routes to local amenities such as schools, shops and healthcare facilities.

Road Infrastructure

14.30 Off-site road improvements to mitigate the impact of development car trips are likely to be required for all three growth options, as the road network already experiences congestion problems. Recent surveys carried out by the Local Authorities show that the two-way traffic flow for B1101 Broad Street in the centre of March is around 14,000 vehicles over a 12-hour period, which is a similar level to the A141 to the west of the town. The queue length and journey time data shows that the stretch of B1101 High Street between B1099 St Peters Road and B1099 Dartford Road is the most congested section of road in March. The data shows that the majority of the trips in March are internal movements.

14.31 Locations in March where mitigation requirements will need to be assessed include, but is not limited to:

- B1101 Elm Road / Estover Road / Norwood Road double mini-roundabout junction. This junction is likely to require the implementation of a significant improvement scheme to mitigate the impact of development traffic.
- B1101 Wimblington Road / A141 roundabout.
- A141 / Knight's End Road junction.
- A141 / Burrowmoor Road junction.
- B1101 Broad Street / B1099 Dartford Road junction.
- A141 / Whittlesey Road / Wisbech Road roundabout.

14.32 It is understood that the Phase 2 March Industrial Link road scheme linking Hundred Road to Elm Road is an aspiration, and there are no plans or funding to progress the scheme or build it at present. Phase 1 linking March Trading Estate via Melbourne Avenue to Hundred Road has successfully removed traffic from the centre of March, however significant additional development around the town (particularly in the northeast of March) will impact the B1101 Elm Road / Estover Road / Norwood Road double mini-roundabout junction, which will need to be improved. The completion of the Phase 2 scheme is dependent on Network Rail reserving a strip of land to the north of the rail station, feasibility work and agreement from the Prison and the Home Office would also be required. The benefits of the full scheme being implemented are that it would help reduce congestion coursed by the level crossing and also remove traffic from the junction and potentially reduce the level of mitigation required at this location.

14.33 It is not considered feasible to look at a bridge replacement for the level crossing on the B1101 given the significant cost, engineering and existing infrastructure constraints.

14.34 The level and form of transport infrastructure associated with future development / planning applications in March would need to be agreed with the Local Highway Authority.

Opportunity Zone Infrastructure Impact

14.35 The Broad Location analysis has identified three options:

- Option 1 – Northeast March and Southwest March (combined 2,200 dwellings).
- Option 2 – Northeast, Southwest and South March (4,250 dwellings).
- Option 3 – Northeast, Southwest, South and East March (5,150 dwellings).
- Additional employment land – at least 31.6 hectares plus a proportion of the further 27.3 hectares to be distributed within the Fenland area.

Sustainable Access

14.36 There would be an internal network of pedestrian and cycle facilities that link in with existing off-site infrastructure. In terms of bus access, for option 1 in the northeast of March it would be desirable to divert some existing bus services from Elm Road into the zone via two access junctions, one on the B1101 Elm Road and one on Estover Road with bus stops at regular intervals internally along a spine road. A full build out in the southwest and south of March could support significant improvements to the bus network, and a new service that links these zones with the main employment area to the northwest of the town, March Rail Station and the town centre may be feasible, with regular provision of internal bus stops and associated infrastructure requirements, such as a bus gate (with pedestrian and cycle access) on the B1101. The development in the East of March would not support a new bus service, and therefore options for additional provision could include linking it to a new service associated with development in south and southwest March or diverting the existing 33 service into the areas from the adjacent housing estate. Diverting existing bus services will need agreement from the bus operators, and extra funding may be required to increase the size of the fleet to maintain / improve service frequency. New bus services will require "pump prime funding" from developers.

Vehicle Access

14.37 Option 1 in northeast March would need at least one vehicle access junction off Estover Road and a spine road running through the site. Option 1 in southwest March would need at least two vehicle access junctions, with potential options including Burrowmoor Road, Knight's End Road, connected by a spine road.

14.38 CCC are unlikely to be supportive of a direct access onto the A141, and connections with local distributor roads would be preferable. The development in the southwest and south of March would need at least one vehicle junction serving each parcel either side of the B1101 Wimblington Road, with potential additional access points on Knight's End Road and the B1101 to spread demand on the network if required. Spine and / or loop roads could run through both areas either side of the B1101. The vehicle access strategy for the zone in the East of March would be junctions either side of the B1099 Upwell Road. Providing vehicle access arrangements to serve option 1 zone in southwest March and the zone in east March (to the south of the B1099) are likely to require acquisition of third party land.

Conclusions

Growth in March would be beneficial to the Fenland Neighbourhood Planning Vision objectives for the town and in helping to deliver the MTTS. New development should result in financial contributions becoming available, some of which could fund improvements to the transport network proposed by the MTTS, and additional town wide infrastructure identified in this assessment. In terms of providing satisfactory access arrangements, it is considered that option 1 in southwest March with option 2 could be achievable, however development in the east of March for option 3 is the least attractive in terms of sustainable accessibility. The additional employment land will generally be accommodated through the expansion of existing sites or linked to new residential development in opportunity zones, so the identified infrastructure impacts are considered appropriate.

Traffic data for March provides evidence to suggest that the majority of the trips within March are internal movements, and therefore targeted sustainable transport improvements / connections between the right areas of the town could help reduce local car trips.

In certain circumstances, the level of growth may trigger requirements for major transport infrastructure that will be beyond the capacity of the development to support in terms of viability.

This may be the case in terms of delivering the transport improvements desirable, given the problems associated with the B1101 Elm Road / Estover Road / Norwood Road double mini-roundabout junction and whether there is an acceptable mitigation scheme that could accommodate the demand of all road users in this location.

Currently, there is no transport modelling evidence available to assess both the existing and future performance of the transport network in March to understand the impacts of growth, and trigger points for infrastructure. It is recommended that access feasibility studies are undertaken to consider option 1 in the northeast of March and the option 3 zone. Therefore, further work is required to inform the preferred option.

Wisbech

Transport Policy

Wisbech Market Town Transport Strategy

Wisbech MTTS provides a programme of integrated transport initiatives that support the Local Transport Plan objectives and contribute towards the prosperity and well-being of the town. It is important that transport and access to and within the town are improved. There are a number of key transport issues that the strategy aims to address by providing specific schemes and measures for implementation. Enhancing sustainable links to the main employment areas, easing town centre congestion at Freedom Bridge Roundabout, providing more off-street cycle routes and improving the public realm for pedestrians with dedicated routes and bridges are the key areas that the strategy seeks to address. The schemes proposed can be supported by, and will be a requirement of growth. Opportunities including improvements at key junctions in the town, corridor enhancements on the A1101 Churchill Road, new pedestrian-cycle bridges to provide better connectivity to the area west of the River Nene, new bus services to better penetrate additional residential areas and potential improvements to the bus station in the town centre have been identified in this assessment.

Town Wide Infrastructure Impact

Sustainable Access

14.39 In addition to the commercial bus services associated with the opportunity zones (see below), consideration should be given to providing dial-a-ride services for town centre and edge of town retail connections (off-peak). In terms of bus infrastructure, an inbound bus lane on the A1101 Churchill Road could deliver service journey time improvements. This road is currently a dual carriageway and there may be enough space in this area for a bus lane, and this space could be jointly used by cyclists. Improvements to the access / egress arrangements of the bus station in relation to the Freedom Bridge Roundabout would be desirable.

14.40 Data from the 2009 CCC Traffic Report show that nearly 20% of journeys in the town centre were on foot and cycling, and new development should contribute towards the infrastructure in the town and improving the environment for walking and cycling. Schemes for consideration should include:

- Pedestrian /cycle route along the west of the River Nene from the north of Wisbech to West Walton.
- Inbound bus / cycle lane on the A1101 Churchill Road.
- Although within close proximity to the town for walking and cycling, the River Nene separates the zone 3 areas west of Wisbech from the town. The possibility of a new dedicated pedestrian and cycle bridge to address this severance issue needs to be

considered alongside the potential reallocation of road space to pedestrians and cyclists around Town Bridge, once it is understood the extent of the improvements that can be delivered at Town Bridge.

- Public realm improvements on B1169, Barton Road, New Bridge Road and Weasenham Lane.
- New crossing facilities at locations where there are gaps in the existing network.
- New / improved pedestrian cycle route from A47 into town along the River Nene.

14.41 To link in with the on-site pedestrian and cycle facilities, improvements should be considered along key routes to local amenities such as schools, shops and healthcare facilities.

14.42 The possibility of rail serving Wisbech again has been discussed with rail stakeholders. The former track from March ends where it is bisected by the A47, and significant infrastructure investment and acquisition of third party land would be required. The other major constraint relates to routing – if the service ran through to Peterborough it would undermine the existing routes and operators on the corridor (revenue abstraction), so it could probably only run as far as March, where a platform would need to be reinstated to provide sufficient capacity at the station.

Road Infrastructure

14.43 The Wisbech Area Transport Study (WATS) is assessing a number of different scenarios for LDF development in Wisbech to help inform the spatial options in the study. The latest assessments consider the levels of traffic currently using Freedom Bridge or Town Bridge that may transfer to a Western Relief Road.

14.44 The proportion of traffic transferring from Freedom Bridge is significantly lower than for Town Bridge with a Western Relief Road in place. This may suggest that there are high levels of local traffic using Freedom Bridge, and there may be potential opportunities to improve facilities for pedestrians and cyclists in this area with a Western Relief Road in place. In addition, targeted sustainable transport improvements / connections between the right areas of the town may be the catalyst reducing the local car trips routing through this congested part of the network.

14.45 The assessments also consider the routing of traffic from developments on the east and the west of Wisbech. The scenarios tested include 2,000 homes in the west of Wisbech and 1,900 homes in the east of Wisbech (1,500 in Fenland District Council area, 400 in Kings Lynn and West Norfolk Area plus 3.7 acres of employment land). The modelling outputs would appear to indicate that the Western Relief Road would only deliver moderate benefits in terms of relieving congestion on the town centre network in Wisbech in terms of the routing of development traffic. Northeast bound A47 traffic associated with the zones in west Wisbech is more likely to travel through the town via Freedom Bridge and the B198, even though parts of this route are severely congested, and it is mainly southbound A47 traffic that uses the alternative route to avoid the town centre.

14.46 With regard to the Trunk Road network, it is understood that the assessments predict there will be around an increase of 20% traffic on the A47. If development in Wisbech makes conditions on the A47 worse, then the HA will expect appropriate mitigation measures to bring the road and it junctions back to no worse off with development traffic on the network.

14.47 Off-site road improvements to mitigate the impact of development car trips are likely to be required for all three growth options, and traffic data in the 2009 CCC Traffic Report shows that over 59,000 vehicles enter and leave Wisbech during the day (7am – 7pm), and indicates that

the road network already experiences congestion problems, which is the case in the town centre at the Freedom Bridge roundabout junction (66% of the journeys into the town centre were by car).

14.48 Locations in Wisbech where mitigation requirements will need to be assessed include, but is not limited to:

- A47 / B198 / Redmoor Lane roundabout.
- A47 / A1101 roundabout.
- A47 / Broad End Road junction.
- A47 / B198 Lynn Road / St Paul's Road (S) roundabout.
- B198 / New Bridge Lane junction.
- A1101 / Weasenham Lane junction.
- A1101 / Norwich Road junction.
- A1101 Leverington Road / A1101 Sutton Road / B1169 Dowgate Road junction.
- Freedom Bridge Roundabout (A1101 / B198).

14.49 The HA will expect to see a nil-detriment impact on the Trunk Road network i.e. the A47 and its junctions operating no worse off with development traffic on the network, and this may be difficult to achieve without major road infrastructure schemes.

14.50 The level and form of transport infrastructure associated with future development / planning applications in Wisbech would need to be agreed with the Local Highway Authority.

Opportunity Zone Infrastructure Impact

14.51 The Broad Location analysis has identified three options:

- Option 1 – East Wisbech (2,000 dwellings including 500 homes allocated in the King's Lynn and West Norfolk Core Strategy).
- Option 2 – East and South Wisbech (3,500 dwellings).
- Option 3 – East, South and West Wisbech (6,200 dwellings).
- Additional employment land – at least 41.77 hectares plus a proportion of the further 27.3 hectares to be distributed within the Fenland area.

Sustainable Access

14.52 There would be an internal network of pedestrian and cycle facilities that link in with existing off-site infrastructure.

14.53 In terms of bus provision for option 1 east of Wisbech, two potential options to consider are:

- Buses entering the site from Orchard Drive (bus gate) via the A1101 and Elizabeth Terrace, completing a circuit of the development and heading along Money Bank, Ramnoth Road, Weasenham Lane / Boleness Road and onto B198 Cromwell Road into town.
- Buses entering the site from Orchard Drive, completing a circuit of the development and routing west along new roads that will form part of the future South West Wisbech development (employment), and joining the B198 Cromwell Road to route back into town. This option would also serve zone 2.

14.54 The bus service option for the zones in west Wisbech is via New Bridge Lane at its junction with the B198 and through the site along a spine road, into the town centre along the B1169 and the A1101, and then using Weasenham Lane / Boleness Road to join the B198. New bus services will require "pump prime funding" from developers.

Vehicle Access

14.55 Option 1 in east Wisbech would need a series of access junctions with surrounding local roads connected by a spine road running through the site, with no direct access onto the A47. The access strategy is potentially heavily constrained in terms of feasibility and cost, given the standard of the surrounding road infrastructure, and direct access via a more appropriate distributor road like the A1101 is likely to require a new road link. It should be noted that the King Lynn and West Norfolk Area development area has recently been refused planning permission for housing.

14.56 The southwest Wisbech development new internal roads could feed into the existing local area roads serving the area (New Bridge Lane and Weasenham Lane), and these join the B198 Cromwell Road and the A1101. Zones in west Wisbech would need a north-south spine road implemented in phases from the B198 / New Bridge Lane to the B1169 Dowgate Road (bus gate only), with a new bridge (including pedestrian and cycle facilities) over the River Nene to provide the connection with New Bridge Road. A new bridge over the River Nene to provide the connection with New Bridge Road, and this is likely to have significant cost implications. Severing Barton Road could help minimise additional development traffic routing to Town Bridge. An option to continue the spine road north to link to the A1101 Sutton Road to form a Western Relief Road should be separate from the development proposals.

Conclusions

14.57 Growth in Wisbech would be beneficial to the Fenland Neighbourhood Planning Vision objectives for the town and in helping to deliver the MTTS. New development should result in financial contributions becoming available, some of which could fund improvements to the transport network proposed by the MTTS, and additional town wide infrastructure identified in this assessment. In terms of providing satisfactory access arrangements, it is considered that the zone in South Wisbech in option 2 could connect into the existing network and option 3 in West Wisbech could be achievable, however option 1 is likely to be the most constrained. The additional employment land will generally be accommodated through the expansion of existing sites or linked to new residential development in opportunity zones, so the identified infrastructure impacts are considered appropriate. The WATS study provides evidence to suggest that there is large proportion of local traffic using Freedom Bridge Roundabout, and therefore targeted sustainable transport improvements / connections between the right areas of the town could help reduce local car trips. The WATS study also indicates that a full Western Relief Road connecting to the A1101 to the northwest will result in the majority of development traffic still routing via Freedom Bridge Roundabout and further exacerbate town centre congestion.

14.58 In certain circumstances, the level of growth may trigger requirements for major transport infrastructure that will be beyond the capacity of the development to support in terms of viability, and this may be the case depending on the scale of mitigation improvements required for the A47 junctions. The overall scale of development proposed will result in significant additional traffic on the Wisbech transport network, which will need an appropriate package of improvements to mitigate the impacts

14.59 Further work is required to inform the preferred option. The performance of the transport network in Wisbech needs more assessment. Access feasibility studies need to be undertaken to consider the zones in east and west Wisbech.

Wisbech St Mary

14.60 This area includes a number of smaller settlements and villages to the west of Wisbech, and this assessment focuses on the Wisbech St Mary area and Guyhirn.

14.61 Wisbech St Mary is formed around a number of minor routes, one being Barton Road which goes into Wisbech. To the north the B1169 also goes to Wisbech. There is no train station, however there are reasonable bus connections to Wisbech with journey times of around 10 minutes. There are also two rural services that run occasional services between Wisbech St Mary and surrounding rural settlements to the north and northwest of Wisbech.

14.62 Guyhirn is located to the southwest of Wisbech and north of March around where the A47 and A141 routes converge, so in terms of road access there are good connections to strategic routes to the main market towns in Fenland and Peterborough. There is no train station, however there is reasonable bus connectivity to a range of destinations including one service to March, three to Peterborough, four to Wisbech (two of these via Wisbech St Mary) and three to Kings Lynn.

14.63 Wisbech St Mary and Guyhirn are part of the Dial-a-Ride northwest Fenland network, which provides three return services a week (Monday-Saturday) to smaller rural settlements including Murrow, Parson Drove, Gorefield and Leverington.

14.64 There are a number of community car schemes for those with mobility difficulties that provide additional facilities to support the public transport coverage. The current community car scheme network serving the area is as follows:

- Wisbech St Mary & Area Community Car Scheme – for social and medical purposes. Only available to residents of certain parishes; and

14.65 There is no traffic survey data or transport modelling studies of the Wisbech St Mary area to indicate how the existing transport network currently operates and the standard of the existing infrastructure, however it is considered that the accessibility attributes of both areas provide the opportunity for some new development.

Doddington and Wimblington

14.66 These two small settlements are located to the south of March and are accessed by road from the A141 Wimblington Bypass, which runs around the eastern side and provides access to March and Chatteris in the north and south respectively. There is no train station, however both settlements benefit from reasonable bus links. There are four bus services that connect the two areas and the wider connectivity of the bus routes extends to March, Chatteris, Ely and Manea amongst other areas. In addition, Doddington and Wimblington are part of the Dial-a-Ride central Fenland network, which provides three return services a day (Monday-Saturday) to destinations including Welney, Christchurch, Manea, Chatteris and March.

14.67 The current community car scheme network serving the area is as follows:

- Doddington & Benwick Car Scheme – travel for medical appointments and visiting family / friends in hospital.
- Wimblington Social Car Scheme – for social and medical purposes.

14.68 There is no traffic survey data or transport modelling studies of the area to indicate how the existing transport network currently operates and the standard of the existing infrastructure,

however based on the accessibility characteristics it is considered that this would be an appropriate location for an amount of new development.

Manea

14.69 Manea is a small settlement located to the east of Doddington and Wimblington. In terms of road access, the B1093 / B1098 runs southwest to Chatteris and the B1093 runs into Doddington and Wimblington and provides a link to the A141. There is a rail station in Manea, however it does not relate well to the area as it is situated at its northern end and Manea is a linear development along the B1093 meaning a significant number of the dwellings are a considerable distance from the station. In addition the current frequency of service is very poor, with only a few trains stopping on the Birmingham-Stansted Airport route, currently operated by Cross Country Trains, which would be unlikely to change unless there is significant rail passenger demand created by new development in the area. The bus provision serving Manea is poor, with only two hourly services during the day running to Wisbech via March, Wimblington and Doddington. However, Manea is part of the Dial-a-Ride central Fenland network, which provides three return services a day (Monday-Saturday) to destinations including Welney, Christchurch, Doddington, Wimblington, Chatteris and March, which helps to supplement the limited bus offer.

14.70 There is no traffic survey data or transport modelling studies of the area to indicate how the existing transport network currently operates and the standard of the existing infrastructure, however based on the accessibility characteristics it is considered that this location could support a small level of new development, preferably at the northern end of the town in close proximity to the rail station. If rail access were to improve, then additional growth in this settlement could be considered.

Car Parking

14.71 Car parking in Fenland is predominantly focused in the town centres of the four market towns. There are approximately 2,484 public car parking spaces within the four market towns. The overall figures break down into two car parks in Chatteris (127 spaces), seven in March (656 spaces), five in Whittlesey (293 spaces) and nine in Wisbech (1,408 spaces). FDC manages and maintains most of the above mentioned car parking, and they do not operate any pay parking facilities at present.

14.72 Growth in Fenland would be beneficial to the economic vitality of the market towns in that more shoppers will be attracted to the area, and therefore it is essential that the car parking strategy should focus on maximising efficient use of parking space for retail users. Financial contributions as a result of new development could be invested in better signage to car parks, particularly those that are less well used, to increase the efficiency of use of parking spaces, and to introduce measures to improve the environment for pedestrians and cyclists, allowing car park users to move easily between the car parks and the attractions in the town.

14.73 As there is no pay parking, FDC do not benefit from the revenue associated with charging for parking, although this means that less enforcement is required. If FDC decide to introduce parking charges, there is the risk that shoppers would transfer to competing centres where free parking is available, therefore FDC would need to enforce such a regime across the whole District, and with regard to neighbouring Council's, the parking charges would need to align to those in surrounding large centres like King's Lynn and Peterborough.

14.74 Some initial suggestions with regard to the potential introduction of a parking regime include:

- **Provide the right balance of dedicated short and long stay car parks.** This would help maximise the efficient use of short stay car parks and help distinguish between retail and employee / business related parking uses, with long stay parking concentrated in more peripheral, underutilised car parks.
- **Implement a one hour tariff band in the short stay car parks**. This would help encourage the use of on-street provision for very short stays.
- **Maximum length of stay in short stay car parks three hours**. Based on experience in other town centres with similar characteristics, this is likely to represent the maximum length of a short stay visit.
- **Free parking in the evenings and on Sundays**. This will help encourage the night time economy in the town centre.

14.75 Growth will generate more shopping trips by car in the market towns, so combined with investment in the sustainable transport network to encourage the use of non-car modes, there may also be benefits in consolidating at-grade parking with the provision of decked car parking. This will make the distribution of cars travelling to / from decked car parks and the associated road capacity issues easier to manage / control. In addition, consolidation of parking facilities will free up prominent sites in the town centres that may have redevelopment potential, and with decked facilities there may be the opportunity to increase the parking capacities in the towns to cater for the additional demand as a result of future growth.

Supporting Transport Studies

14.76 There are a number of separate studies currently in progress that will compliment the Fenland Neighbourhood Planning Vision work and help assess the growth options. AECOM are aware of the following commissions:

- March Area Transport Study.
- Review of March MTTS.
- Whittlesey MTTS.
- Whittlesey Traffic Desktop Study.
- Wisbech Area Transport Study.
- Review of Wisbech MTTS.

14.77 The MTTS's aim to provide an efficient, sustainable transport system, which will offer a realistic choice of transport modes within Fenland and thus enhance the vitality and viability of the town centres. The schemes set out wide ranging proposals based on the views and comments of the public and local stakeholders. Types of projects to be included are improved accessibility, pedestrian and cycling schemes and public transport facilities. Smaller road safety issues can also be included. The strategy will also aim to encourage modal shift. Each strategy includes a 5 – 10 year programme of improvements. These strategies will help to assist with future growth if the towns by providing an enhanced and integrated programme of transport improvements. Each strategy will form part of the Local Transport Plan for Cambridgeshire.

14.78 The March and Wisbech Area Transport Studies are evidence base studies for the LDF. These studies are hugely significant as they will provide evidence to assist with transport and land use planning decisions. The studies comprise of survey work so we can assess the current transport situation in each town. The surveys include assessing traffic volumes on key bypasses or routes into town, use of buses and numbers of pedestrians and cyclists. The completion of

the survey information will also enable the development of a traffic model to conduct testing and analysis of the impacts of future proposed development. This will enable Fenland District Council to assess if there will be transport problems as a result of the levels and location of new development.

Committed Transport Infrastructure Projects

14.79 There are a number of planned / funded transport infrastructure schemes in Fenland and neighbouring districts that will improve accessibility around and to the District. CCC and the HA are being consulted to understand relevant major scheme proposals so they can be considered in the overall transport assessment of strategic infrastructure requirements.

District Wide Infrastructure Impact

14.80 The transport assessment of the growth options has considered the infrastructure requirements at opportunity zone and town wide levels. Further work outside of the Fenland Neighbourhood Planning Vision study commission will be needed to assess the strategic infrastructure requirements of different growth scenarios to help inform a delivery plan for the preferred option, which would involve the consideration of cumulative development impacts across Fenland (and adjacent districts) on the transport network. A number of models could be considered here including the application of the Development Impact Assessment Model Of Network Demand (DIAMOND) could be applied. The DIAMOND tool has the capability to consistently consider the cumulative impacts of growth. This allows multiple development options, covering both the allocation and quantum within Fenland to be fully considered as well as the associated impacts of development in adjacent Counties and Districts, such as West Norfolk and Kings Lynn. DIAMOND will help inform the likely impacts of development, the key resulting congestion hotspots as well as comparative scenario analysis. Using this information, it will be possible to make a preliminary assessment with regard to the scale of investment required at the different locations on the road network to input into the delivery plan.

Other additional considerations include:

- Growth must be supported by strong Travel Planning and consideration should be given to linking performance of Travel Plans to the delivery of development to incentivise take up of travel planning measures by developers.
- Growth must provide investment in school travel planning across the District, including measures to target providing safer routes to local schools for pedestrians and cyclists and rolling out cycle training in schools.

15. Utilities infrastructure impact assessment of options

15.1 Three residential growth scenarios are currently being considered as part of this assessment: low, medium and high growth. Residential growth trajectories have been provided for each growth scenario for the seven infrastructure clusters which make up the Fenland District.

15.2 While each growth scenario has been assessed for each cluster, it should be noted that the final mix of growth across the District is likely include some areas of low, some of medium and some of high growth.

15.3 In order to identify tipping points in the services provision, the growth trajectories have been split into five year bands, as summarised in Tables 15.1, 15.2 and 15.3 below.

Table 15.1 – Option 1 (Low Growth) – residential dwellings

	Up to 2011	2011-2016	2016-2021	2021-2026	2026-2031	Total
Wisbech	0	1478	1410	991	449	**4328**
March	0	922	1180	704	589	**3395**
Whittlesey	0	760	115	184	171	**1230**
Chatteris	0	741	192	94	94	**1121**
Wisbech St Mary	0	154	21	69	65	**309**
Manea	0	92	30	20	20	**162**
Doddington/ Wimblington	0	52	21	49	48	**170**

Table 15.2 – Option 2 (Medium Growth) – residential dwellings

	Up to 2011	2011-2016	2016-2021	2021-2026	2026-2031	Total
Wisbech	0	1478	1410	1066	1074	**5028**
March	0	922	1180	1554	1789	**5445**
Whittlesey	0	760	465	534	171	**1930**
Chatteris	0	741	292	494	94	**1621**
Wisbech St Mary	0	154	21	69	65	**309**
Manea	0	92	30	20	20	**162**
Doddington/ Wimblington	0	52	21	49	48	**170**

Table 15.3 – Option 3 (High Growth) – residential dwellings

	Up to 2011	2011-2016	2016-2021	2021-2026	2026-2031	Total
Wisbech	0	1478	1660	2391	2999	**8528**
March	0	972	1380	2004	1989	**6345**
Whittlesey	0	760	540	734	396	**2430**
Chatteris	0	741	342	994	294	**2371**
Wisbech St Mary	0	154	101	149	146	**550**
Manea	0	92	65	58	60	**275**

Doddington/ Wimblington	0	52	116	145	148	**461**

15.4 Within the larger settlements, a number of Opportunity Zones have been identified that could potentially be developed for residential use. These have been considered in further detail in the Surface Water Drainage and Flooding section below.

15.5 In addition to the residential growth, an estimate has been made as to the likely employment growth in the District over the same period. Again, three scenarios are considered which correlate to the low, medium and high growth residential growth. The employment growth is based on the need for additional floorspace as set out earlier in this report, and this requirement is split between the settlements of Wisbech, March, Whittlesey and Chatteris. Existing retained employment land that is currently vacant is also considered in this study, totalling a further 86ha across the District. Within each scenario, an assumption has been made as to the land use split. For the purposes of this assessment, the following split has been used:

B1 18.6%
B2 22.7%
B8 58.7%

15.6 Employment densities for B1 land use has been estimated at 20%, while for B2 and B8 land uses, a density of 40% has been assumed. Additionally, the employment growth has been spread across the growth period to 2031 in the same proportions as the corresponding residential growth detailed in Tables 15.1, 15.2 and 15.3 above.

15.7 A summary of the employment growth figures are provided in Tables 15.4, 15.5 and 15.6 below:

Table 15.3 – Option 1 (Low Growth) – employment space (sqm)

	Land Use	Up to 2011	2011-2016	2016-2021	2021-2026	2026-2031	Total
Wisbech	B1	0	7,136	6,807	4,784	2,168	**20,895**
	B2	0	17,417	16,616	11,678	5,291	**51,002**
	B8	0	45,039	42,967	30,199	13,682	**131,887**
March	B1	0	4,970	6,361	3,795	3,175	**18,302**
	B2	0	12,132	15,527	9,264	7,750	**44,674**
	B8	0	31,373	40,152	23,955	20,042	**115,522**
Whittlesey	B1	0	-1,060	-160	-257	-238	**-1,715**
	B2	0	-2,586	-391	-626	-582	**-4,186**
	B8	0	-6,688	-1,012	-1,619	-1,505	**-10,824**
Chatteris	B1	0	2,415	626	306	306	**3,653**
	B2	0	5,894	1,527	748	748	**8,917**
	B8	0	15,241	3,949	1,933	1,933	**23,057**
Wisbech St Mary	B1	0	0	0	0	0	**0**
	B2	0	0	0	0	0	**0**
	B8	0	0	0	0	0	**0**
Manea	B1	0	55	18	12	12	**97**
	B2	0	134	44	29	29	**236**

	B8	0	347	113	75	75	**610**
Doddington/ Wimblington	B1	0	305	123	287	281	**997**
	B2	0	744	301	701	687	**2,433**
	B8	0	1,925	777	1,814	1,777	**6,293**

Table 15.4 – Option 2 (Medium Growth) – employment space (sqm)

	Land Use	Up to 2011	2011-2016	2016-2021	2021-2026	2026-2031	Total
Wisbech	B1	0	5,475	5,223	3,949	3,979	**18,626**
	B2	0	13,364	12,749	9,639	9,711	**45,464**
	B8	0	34,558	32,969	24,925	25,112	**117,564**
March	B1	0	3,024	3,870	5,096	5,867	**17,856**
	B2	0	7,380	9,445	12,439	14,320	**43,584**
	B8	0	19,084	24,424	32,166	37,030	**112,704**
Whittlesey	B1	0	174	107	122	39	**443**
	B2	0	425	260	299	96	**1,081**
	B8	0	1,100	673	773	248	**2,794**
Chatteris	B1	0	1,925	759	1,283	244	**4,211**
	B2	0	4,699	1,852	3,132	596	**10,279**
	B8	0	12,150	4,788	8,100	1,541	**26,579**
Wisbech St Mary	B1	0	0	0	0	0	**0**
	B2	0	0	0	0	0	**0**
	B8	0	0	0	0	0	**0**
Manea	B1	0	55	18	12	12	**97**
	B2	0	134	44	29	29	**236**
	B8	0	347	113	75	75	**610**
Doddington/ Wimblington	B1	0	305	123	287	281	**997**
	B2	0	744	301	701	687	**2,433**
	B8	0	1,925	777	1,814	1,777	**6,293**

Table 15.5 – Option 3 (High Growth) – employment space (sqm)

	Land Use	Up to 2011	2011-2016	2016-2021	2021-2026	2026-2031	Total
Wisbech	B1	0	3,546	3,983	5,736	7,195	**20,460**
	B2	0	8,655	9,721	14,002	17,562	**49,940**
	B8	0	22,381	25,137	36,207	45,414	**129,140**
March	B1	0	2,399	3,406	4,946	4,909	**15,661**
	B2	0	5,856	8,314	12,074	11,983	**38,227**
	B8	0	15,143	21,499	31,221	30,987	**98,851**
Whittlesey	B1	0	197	140	190	102	**629**
	B2	0	480	341	464	250	**1,535**
	B8	0	1,241	882	1,199	647	**3,968**
Chatteris	B1	0	1,363	629	1,828	541	**4,360**
	B2	0	3,326	1,535	4,461	1,320	**10,642**
	B8	0	8,600	3,969	11,537	3,412	**27,519**
Wisbech St Mary	B1	0	0	0	0	0	**0**
	B2	0	0	0	0	0	**0**
	B8	0	0	0	0	0	**0**
Manea	B1	0	32	23	20	21	**97**
	B2	0	79	56	50	52	**236**
	B8	0	204	144	129	133	**610**

Doddington/ Wimblington	B1	0	112	251	314	320	**997**
	B2	0	274	612	765	781	**2,433**
	B8	0	710	1,583	1,979	2,020	**6,293**

Electricity and Gas

15.8 The residential and employment growth trajectories in Tables 15.4, 15.5 and 15.6 were used to estimate future gas and electricity demand for each infrastructure cluster. A summary of the loading demands are provided in Appendix F. These figures include the following assumptions:

- average occupancy of residential units is 2.5;
- the electricity figures assume that the housing is gas centrally heated, with a diversification factor applied. No diversification has been applied to employment figures due to the small scale of the proposed developments;
- the gas figures include diversification in the annual demand calculation (0.33 for residential, 0.5 for industrial/employment).

15.9 Initial gas and electricity loading estimates were forwarded to National Grid and UK Power Networks (formerly EDF Energy) respectively on 13 December 2010. These included only the residential figures. Further information was then forwarded to each party on 20 January 2011 which provided full details of the residential and employment loadings. Additional revised loadings, that took account of adjustments to the employment figures, as well as minor adjustments to the high growth housing figures, were subsequently forwarded on 9 March 2011 and 28 April.

Water and Wastewater

15.10 The water and wastewater provision for the proposed growth in Fenland is considered in the East Cambridgeshire and Fenland Water Outline Cycle Study (WCS), prepared by Scott Wilson. The Final issue of this report, dated April 2010, has been interrogated to obtain some high level insight into potential issues for each infrastructure cluster.

Electricity Supply

15.11 Electricity in the Fenland District is distributed by UK Power Networks (formerly EDF Energy Networks). Two power stations are located just beyond the Fenland District Boundary in Kings Lynn and Peterborough, but the area is supplied from the Walpole Grid, to the north of Wisbech. Further substations are found in the District as follows:

Table 15.6– Existing electricity infrastructure

	Substation name	**Infrastructure Cluster**
Primary Substations (132kV)	Walsoken (east of Wisbech)	Wisbech
	March	March Doddington/Wimblington
	West March	March
Primary Substations (33kV)	Leverington	Wisbech
	Wisbech Railway	Wisbech

	Guyhirn	Wisbech St Mary
	Chatteris	Chatteris Manea Doddington/Wimblington
	Whittlesey	Whittlesey

15.12 While these substations are supplied from the grid, four wind farms are also connected to the distribution network in the Fenland area which have the potential to supply up to 90% of the power for the District. These are at the following locations:

- Glassmoor;
- Ranson Moor;
- Stags Holt; and,
- Coldham.

15.13 There is the potential for much of the power in the area to be supplied from wind farms, but in order to secure the supply to customers, the distribution company must ensure that the traditional network has sufficient capacity to supply the area. Any energy that is generated from renewable sources will simply reduce the need to utilise the full capacity in the traditional system. It should be noted that this is the current stance of the industry, but as the planning period progresses, there is the potential for this to change.

15.14 As detailed above, the demand loading figures for the residential and employment growth proposals were forwarded to UK Power Networks on 20 January 2011 to assess the likely impact on the electricity network. A contact made through the infrastructure workshop in September 2010 has provided assistance with the request.

15.15 A response was received from UK Power Networks on 26 January 2011, with a further response provided on 24 March 2011.

15.16 No feedback was received to our correspondence dated 28 April 2011, which included minor adjustments to the growth trajectories. As such, the information provided previously by UK Power Networks has been used as a basis to provide comments on these latest growth figures.

15.17 The full responses received from UK Power Networks are provided in Appendix F, but the findings are summarised in Table 15.7 below.

Table 15.7 – Summary of Electricity Infrastructure Requirements (Source: UK Power Networks)

Cluster	Existing Primary Substation(s)	Comments
Wisbech	Walsoken Leverington Wisbech Railway	As area is currently served by 3 primary substations, the exact location of the proposed growth will affect where the capacity is required. Already proposals to upgrade Walsoken substation to cater for development in immediate future. However, taking account of growth from existing customers, further upgrades will be required for all options. These will be at the Wisbech Railway substation. Option 1 – 2020 Option 2 – 2022 Option 3 – 2021
March	March West March	March substation is already close to capacity. All three growth options will require additional capacity circa 2016.
Whittlesey	Whittlesey	Option 1 has no upgrade requirement. Options 2 and 3 will require upgrades to the Primary substation around 2020.
Chatteris	Chatteris	The proposed additional demand should be accommodated within the rating of the existing substation equipment in the short term. However, upgrades to the existing 33kV network would be needed around 2016 - 2020. Upgrades to the substation are likely to be needed circa 2030.
Wisbech St Mary	Guyhirn	Relatively low additional demand should not require any significant network upgrades.
Manea	Chatteris	Relatively low additional demand should not require any significant network upgrades.
Doddington/ Wimblington	Chatteris March	Options 1 and 2 are likely to be accommodated within the existing infrastructure. Option 3 will increase the effects on the Chatteris and March substations and is may result in the need for upgrading works towards the end of the planning period.

15.18 Further points to note in the UK Power Networks response are as follows:

- The areas that will see the most significant problems with regard to the electricity infrastructure are March and Wisbech.
- Only upgrades to the Primary substations in each area can be estimated at this stage. Reinforcement of the 11kV or 400V networks may also be required but until more specific development proposals are available, this cannot be assessed.
- The upgrade requirements detailed in Table 15.7 assume that there are no significant load increases from UK Power Networks' existing customers within the same period. If there were to be significant increases, this would utilise any spare capacity within the network sooner which could result in the estimated dates for upgrades being brought forward.

- The UK Power Networks business plan has recognised the likely need for reinforcement in the problem areas of March and Wisbech by 2020, but new developments may still be required to contribute towards the costs of these upgrades.

- Dependent on the nature of the development, the party responsible for funding the upgrades could vary. If the total increase in demand is as a result of a number of smaller developments, each with only a minor demand, this cost would usually fall on UK Power Networks. However, if the increase in demand is due to a single large development, any upgrading works are likely to be partially funded by the developer.

- The upgrade of Primary substations can take around 3 years from project inception to completion, with an associated cost of a least £2-3M. As such, upgrading works will only usually be carried out to accommodate load growth that has already occurred or guaranteed future growth, e.g. for sites with detailed planning permission.

Gas supply

15.19 The distribution of gas in the Fenland District is the responsibility of National Grid Gas Distribution.

15.20 The residential gas demand estimates were forwarded to National Grid on 13 December 2010, via their Land and Development Policy Manager. As with the electricity supply, further details including the employment demand estimates were forwarded on 20 January and 9 March 2011.

15.21 Responses were received from National Grid on 25 January and 11 March 2011. Copies of the correspondence are provided in Appendix F but is summarised in below.

15.22 Due to the high level of the information received previously from National Grid, no revised demand details were forwarded in April 2011. Instead, the information that had already been supplied was reviewed in relation to the revised figures.

15.23 The Network Analysis models held by National Grid for the Fenland District are very sensitive to medium and large load growth on both the distribution system and also the transmission system. The initial analysis indicates that there are some supply constraints on the Low Pressure (LP) and Medium Pressure (MP) systems throughout the District. This means that upgrading works to these systems are likely in order to accommodate the growth proposals. However, at this stage, the proposals are not sufficiently progressed to allow any further detail to be provided.

15.24 Existing supply constraints have been identified for Wisbech St Mary and Doddington/Wimblington. Additionally, there is no existing gas supply infrastructure in Manea.

15.25 Once further details are known as to the size and location of each development, National Grid will be able to relate the additional demand to a particular discrete area of their network and advise on the upgrade requirements for that site.

15.26 It is recommended that as the development sites are progressed, the developers liaise with National Grid throughout the process. The introduction of new gas supply infrastructure in the District does not necessarily need to adversely impact the programme for each development, provided that National Grid are kept informed at every stage of the process. Without this level of communication, the lead in times for this infrastructure work could potentially delay the construction programmes.

Water Supply

Background

15.27 The Fenland District sees the majority of its demand for water come from residential, light industry and food processing land uses, as well as for agricultural uses. Anglian Water is responsible for supplying water to the District, which extends across two of their Water Resource Zones (WRZs):

- WRZ 5 Fenland – this supplies the northern part of the District around Wisbech; and,
- WRZ 11 Ruthamford – this supplies the southern part of the District around March, Whittlesey and Chatteris.

15.28 In addition to the conventional demand for water, Fenland District also sees a significant demand from the Middle Level Commissioners (MLC) to maintain navigation levels within the Middle Levels system.

15.29 The Water Cycle Study considers potential growth in the main settlements of:

- Chatteris;
- Doddington;
- Manea;
- March;
- Whittlesey;
- Wimblington;
- Wisbech; and,
- Wisbech St Mary.

15.30 Potential development in the rural areas beyond these main settlements is not considered in detail, although the total numbers of new dwellings are given. It should be noted that in comparing the latest growth figures with those in the WCS, which were based on the Regional Spatial Strategy forecast at the beginning of the WCS process, it can be seen that the growth trajectory has increased significantly in some areas. This is particularly noticeable in Wisbech, Whittlesey and March. In other areas, such as Chatteris and Manea, the latest proposals have

slightly reduced from the RSS figures. As such, the high level conclusions drawn from this outline report should be treated with caution until more accurate information is available from the Stage 2 WCS.

Water Resources

15.31 The WCS has established five water demand projections, ranging from Anglian Water's current metered consumption values (142 l/h/d) to the Code for Sustainable Homes (CfSH) Level 5/6 rating (80 l/h/d).

15.32 In Fenland District, the consideration of these different water demand projections gives the following water demand ranges for each growth scenario:

Table 15.8 – Fenland additional future water demand ranges

Growth Scenario	Future Demand Max (Ml/d) (based on metered consumption)	Future Demand Min (Ml/d) (based on CfSH Level 5/6)
Option 1 – Low growth	3.55	2.09
Option 2 – Medium growth	3.81	2.23
Option 3 – High growth	4.82	2.80

(Source: East Cambs and Fenland Outline Water Cycle Study, Scott Wilson, April 2011, Table 5-2)

15.33 The overall Anglian area has been assessed by the Environment Agency as an area in "extreme water stress", where water abstraction has almost reached it limits and where water efficiency is key to providing a sustainable solution to accommodate the expected growth. As such, the availability of additional water resources is limited.

15.34 However, the WCS indicates that by 2035, based on the above range of potential future water demand, the Fenland WRZ and the Ruthamford WRZ have no forecast deficit, ie. water resources are sufficient to serve the proposed level of growth. It should be noted that Anglian Water carried out this assessment based on the RSS growth trajectories. Further work is required to determine whether this conclusion is still valid for the latest growth proposals, which will be carried out as part of the Stage 2 WCS.

15.35 Based on the information in the current WCS, the following conclusions can be drawn for each infrastructure cluster. This information relates primarily to the main settlement in each cluster, as the WCS does not consider the smaller settlements in detail.

Table 15.9 – Water Resource implications

Infrastructure Cluster	Anglian Water's Water Resource Planning Zone	Comments
Wisbech Wisbech St Mary	Wisbech PZ	Forecast surplus water resources until last five years of planning period; Solutions are proposed to deal with any deficit; Medium and high growth scenarios would need stringent water use standards towards end of planning period.
March Chatteris Manea Doddington/Wimblington	March PZ	Forecast surplus water resources until last five years of planning period; Solutions are proposed to deal with any deficit; Medium and high growth scenarios would need stringent water use standards towards end of planning period.
Whittlesey	Peterborough PZ	Forecast surplus water resources; Medium and high growth scenarios would need stringent water use standards to maintain this position.

(Source: East Cambs and Fenland Outline Water Cycle Study, Scott Wilson, April 2011, Chapter 8.4)

Water Supply Infrastructure

15.36 The WCS indicates that Anglian Water has no concerns over the provision of water supply infrastructure to serve the proposed growth. Enhancements will inevitably be required to accommodate the additional demand, but the level of new infrastructure required would be dealt with on a site by site basis with the relevant developers and would be no more onerous than any other standard development. It is noted that this is also the case if the growth is higher than that assessed in the WCS, so should be true for the new proposals.

15.37 The full impact of the updated development proposals is to be considered in the detailed Stage 2 WCS, which is to be commissioned shortly.

Water Efficiency

15.38 The issue of water efficiency and water neutrality is also considered in the WCS, with potential options being outlined that could be introduced in new and existing homes to reduce potable water consumption. Water neutrality is a concept where the total demand for water within a planning area after development is the same or less than it was pre-development.

15.39 For new homes, the Code for Sustainable Homes has set the requirement that post-2016, all new dwellings should achieve Code Level 5 or 6. Potable water consumption forms part of the assessment criteria and at Code Levels 5 and 6, water consumption has been set at 80 l/h/d. As detailed above, the current metered water consumption in the Anglian Water area is 143 l/h/d.

15.40 If this reduction in mains water demand is to be achieved, a non-potable water supply will need to be incorporated into each household, potentially including wastewater or greywater recycling and rainwater harvesting. As the majority of water used in the home does not need to be drinking water quality, this could have a significant impact on household potable water demand. Other smaller measures could be employed to reduce water usage generally, such as low-flush toilets, low-flow showers or aerating taps.

15.41 Table 15.10 is an extract from the Government's water strategy for England, "Future Water". It clearly shows that the CfSH Level 5/6 requirements could only be achieved by water reuse.

Table 15.10 – Water Use – Standard and Sustainable Homes

	Standard new built house (150 l/p/d) (Source: BRE)		House meeting Code for Sustainable Homes Level 5 (80 l/p/d) (Source: CSH)		
Appliance/ Fitting	**Specification**	**Contribution to daily use (l)**	**Specification**	**Water Reuse (litres)**	**Contribution to daily use (l)**
WC	6 litre single flush	28.8	4/2.6 litre dual flush (6.33 + 8.36)	14.69	14.69
Wash Basin Taps	4 litres/min	14.11	6 litres/min		15.87
Shower	10 litres/min	30	7.75 litres/min		23.25
Bath	180 litres/min	28.8	120 litre		19.2
Sink Taps	8 litres/min	28.22	7 litres/min		18.52
Washing Machine	49 litre	16.66	40 litre	13.6	13.6
Dishwasher	13 litre	3.9	10 litre		3
Water Reuse System	-	0	100sqm roof, 0.6m ann. rainfall, 0.6 efficient, 3 persons. Water butts could also meet a significant proportion of garden watering demand	Collected 32.88 WC and washing machine use = 28.29 Max benefit = 28.29	28.29
TOTAL		**150.49**			**79.84**

(Source: Future Water)

15.42 In existing homes, there a number of retrofitting options that can reduce water consumption. These include water efficient fixtures and fittings, low or dual flush toilets, water efficient dishwashers and washing machines, and water butts for garden use. Water meters can also be installed in existing homes, and these have been shown to provide an average water use saving of 12 l/p/d. A combination of these measures is likely to give the best overall results.

15.43 In Fenland, only 60% of existing homes are currently metered. However, the WCS analysis has shown that even if all existing properties in the District were metered, this would not offer sufficient savings alone to achieve water neutrality. Therefore, some of the additional measures outlined above will also need to be implemented to achieve this target.

Wastewater

Wastewater Treatment

15.44 Anglian Water is the service provider for wastewater within the Fenland District, and they operate a total of 8 Wastewater Treatment Works (WwTW) within the District. These are:

- Benwick WwTW;
- Chatteris (Nightlayer Fen) WwTW;
- Christchurch (Fen View) WwTW – this WwTW was not considered in detail in the WCS;
- Doddington WwTW;
- Manea – Town Lots WwTW;
- March WwTW;
- Parson Drove WwTW; and,
- Whittlesey WwTW.

15.45 In addition, the Wisbech (West Walton) WwTW is located just outside the Fenland District boundary to the east of Wisbech, but serves Fenland as well as areas of the neighbouring King's Lynn Borough.

15.46 Each WwTW has been assessed based on current flows and the potential future flows determined for each of the three growth scenarios; low, medium and high growth.

15.47 The following WwTW were identified as having little or no capacity to accommodate increased flows:

- Doddington WwTW
- March WwTW;
- Whittlesey WwTW; and,
- Wisbech (West Walton) WwTW.

15.48 Summarised details of the issues at each WwTW are provided in Table 15.11 below.

15.49 The WwTW at Whittlesey has been identified as having particular issues, and a "Position Statement" was prepared in April 2011 which looked into these works in more details, and considers the latest growth trajectories. The details of this "Position Statement" are also included in Table 15.11.

Wastewater Network

15.50 The existing wastewater network in each settlement has been assessed as part of the WCS, and the results are provided in Table 15.11 below.

Summary

15.51 Table 15.11 summarises the potential wastewater treatment and network constraints for each infrastructure cluster.

Table 15.11 – Wastewater network assessment summary

Cluster	Wastewater Treatment	Wastewater Network
Wisbech	*Wisbech (West Walton) WwTW* Forecast capacity shortfall following proposed growth. Improvements are achievable. Additional flow will require tighter consent.	Large, combined system, covering Wisbech and surrounding settlements, with network of wastewater pumping stations; Some growth may be possible within existing network capacity, but majority of growth will require new strategic infrastructure.
March	*March WwTW* AWS has indicated that there is DWF capacity, but there are no figures to confirm this. MLC have stated that there should be no increase in flow to their watercourses. Water quality targets may not be achievable.	Large, combined system dependent on network of wastewater pumping stations; A number of recorded sewer flooding incidents and combined sewer overflows (CSOs); Strategic sewer and pumping station upgrades are likely to be required to accommodate growth – further modelling is required to identify the location and timing of upgrades.
Whittlesey	*Whittlesey WwTW* Forecast capacity shortfall following proposed growth. Water quality targets may not be achievable. MLC have stated that there should be no increase in flow to Whittlesey WwTW due to capacity concerns in the receiving Whittlesey Dyke. Significant additional work required to identify solution to these volume constraints. Options include modelling incremental spare capacity resulting from water efficiency; the potential use of Flag Fen WwTW in Peterborough; or transferring the treated wastewater from to an alternative receiving watercourse. Some of this work may not be funded until the next AMP period, so would not be in place until 2020, providing a constraint to growth in Whittlesey. Onsite wastewater treatment has been ruled out as a potential option. *Benwick WwTW* Growth can be accommodated within available headroom.	Combined system, covering Whittlesey, Coates and Eastrea. Separate combined system serving Benwick. Both are dependent on network of wastewater pumping stations; Growth is likely to be accommodated in existing infrastructure, however this would need to be reviewed on a site-by-site basis.
Chatteris	*Chatteris Nightlayer Fen WwTW* Growth can be accommodated within available headroom.	Combined system, dependent on network of wastewater pumping stations; Limited network model information; A number of CSOs in catchment; Some growth may be possible within existing network capacity, but the majority will require new strategic infrastructure.

Wisbech St Mary	*Wisbech (West Walton) WwTW* See Wisbech above *Parson Drove WwTW* Forecast capacity shortfall following proposed growth. Improvements are achievable. Additional flow will require tighter consent.	For Wisbech St Mary, see Wisbech above. For Parson Drove, small existing combined system with network of pumping stations; New infrastructure and upgrades to pumping stations may be required to accommodate growth. This should be reviewed when development sites are known.
Manea	*Manea Town Lots WwTW* Growth can be accommodated within available headroom.	Small, combined system, dependent on series of wastewater pumping stations; New infrastructure or upgrades to pumping station capacity may be required to accommodate growth. This should be reviewed when development sites are known.
Doddington/ Wimblington	*Doddington WwTW* Forecast capacity shortfall following proposed growth. Water quality targets unlikely to be achievable. MLC have stated that there should be no increase in flow from WwTW to their watercourses.	Primarily combined system, covering Doddington and Wimblington, with series of wastewater pumping stations; Known existing hydraulic, structural and flooding issues; Unlikely to accommodate any growth within existing infrastructure. Modelling is required to identify location and timing of new trunk sewers.

(Source: East Cambs and Fenland Outline Water Cycle Study, Scott Wilson, April 2011, Chapter 8.4, and Fenland Stage 2a WCS - Whittlesey WwTW Position Statement, Scott Wilson, April 2011)

15.52 At this stage, there is no detail available about the likely improvement works required at each WwTW. Further modelling work and liaison with Anglian Water will be required to establish these details, which will all be considered as part of the Stage 2 WCS.

15.53 Similarly, the potential impact of the growth proposals on the wastewater network will be investigated in further detail as part of the Stage 2 WCS. This new study will include the latest growth proposals, which will provide a more accurate picture of the likely infrastructure requirements. The more detailed network modelling will take into account surface water flows as well as wastewater, as the majority of the existing drainage systems are combined.

Surface Water Drainage and Flooding

Flooding

15.54 A Level 1 SFRA covering East Cambridgeshire and Fenland Districts has been undertaken in parallel with the Outline WCS. The Final Draft of this document is dated December 2010 and has been provided by Fenland District Council.

15.55 The following key issues are noted:

- Fenland District has significant areas which are at risk from fluvial and/or tidal flooding.
- Fluvial flooding is the most likely, with potential sources being the Great Ouse/Bedford River systems (southern part of District), the Middle Level drainage network and the North Level drainage system (northern part of District).
- Tidal flood risk is seen along the corridor of the tidal River Nene.
- The major towns of Wisbech, Chatteris, March, Whittlesey and other established urban areas are located on "islands" of high ground above the flood plain (approx 4 to 10mAOD), reducing the flood risk in these isolated areas.
- The district is predominantly pump drained and relies of flood defences to minimise flood risk.
- The channels of the Middle Level system are at a higher level than the surrounding land and the topography is relatively flat, so if the flood defences along these channels are breached, the risk of significant flooding could extend to a wide area.
- On a smaller scale, the drains in the low lying areas, which are maintained by the Internal Drainage Boards (IDBs), do not have embankments, so if these are overtopped, the water spreads slowly over a large area. With the exception of ponding at local low spots, this is more likely to cause waterlogging rather than serious inundation.

15.56 The opportunity zones, which help make up the different growth scenarios, can be assessed in terms of their flood zone and therefore their potential to be developed for residential use. PPS25 indicates in Table D3 that less vulnerable land uses, such as offices, general industry, shops and storage and distribution are appropriate in Flood Zones 1, 2 and 3a. However, more vulnerable land uses, including residential dwellings, are only appropriate in Flood Zones 1 and 2, or Flood Zone 3 with the application of an exception test. The exception test should demonstrate that the benefits of the development in Flood Zone 3 outweigh the flood risk, and that the development will be safe and will not increase flood risk elsewhere.

15.57 Referring to the Level 1 SFRA, the flood zones for each opportunity zone have been assessed as detailed in Table 15.12 below, with the implications of these flood zone classifications summarised. The smaller development clusters are also considered in Table 15.12.

Table 15.12 – Summary of Flood Risk Issues for Development Clusters

Cluster	Opportunity Zone	Flood Zone Comments (based on Level 1 SFRA)	Implications
Wisbech	Z1	Mainly FZ1 with small pockets of FZ2 on south eastern boundary	No restrictions on development for residential use. FZ2 areas cannot be used for Highly Vulnerable uses such as police or fire stations or basement dwellings without application of exception test.
	Z2	FZ1	No restrictions on development
	Z3a	Almost entirely FZ3a	Exception test required for residential use.
	Z3b	Almost entirely FZ3a, with very small pocket of FZ1 in north western corner	Exception text required for FZ3a. Area of FZ1 could only accommodate a small number of dwellings.
March	Z1a	FZ1 to west and south. FZ2 and FZ3a to north eastern quadrant	Development should be directed towards FZ1. FZ3a would require exception test. Could consider FZ3a for Less Vulnerable uses such as shops or offices, or for open space.
	Z1b	FZ1	No restrictions on development
	Z2a	Large area of FZ1 in north western corner close to existing settlement. FZ2 and FZ3a to eastern and southern boundaries.	Development should be directed towards FZ1. FZ3a would require exception test. Could consider FZ3a for Less Vulnerable uses such as shops or offices, or for open space.
	Z2b	Predominantly FZ1 with small pocket of FZ2 adjacent to Wimblington Road	No restrictions on development of residential area. FZ2 areas cannot be used for “Highly Vulnerable” uses such as police or fire stations or basement dwellings without application of exception test.
	Z3a	FZ1 in southern half adjacent to Upwell Road. Remainder in FZ2 and FZ3a.	Development should be directed towards FZ1. FZ3a would require exception test. Could consider FZ3a for Less Vulnerable uses such as shops or offices, or for open space.
	Z3b	Mainly FZ1 adjacent to existing settlement in north and west. FZ2 and FZ3a in south eastern quadrant.	Development should be directed towards FZ1. FZ3a would require exception test. Could consider FZ3a for Less Vulnerable uses such as shops or offices, or for open space.
Whittlesey	Z1a	Mainly FZ1. Small area of FZ3a on northern boundary.	Development should be directed towards FZ1. FZ3a would require exception test. Could consider FZ3a for Less Vulnerable uses such as shops or offices, or for open space.
	Z1b	FZ1	No restrictions on development
	Z2	FZ1	No restrictions on development
	Z3	FZ1	No restrictions on development
Chatteris	Z1	FZ1	No restrictions on development

	Z2	FZ1	No restrictions on development
	Z3	FZ1	No restrictions on development
Wisbech St Mary	-	Wisbech St Mary and small pockets of the surrounding settlements are FZ1, but the area is mainly FZ2 and FZ3a.	Sequential test required. Development should be directed towards FZ1.
Manea	-	Manea in FZ1 but immediately surrounded by FZ2 and FZ3a.	Sequential test required. Development should be directed towards FZ1.
Doddington/ Wimblington	-	Area is largely in FZ1, so flood risk is relatively low. Southern extents are in FZ3a.	Development should be directed towards FZ1. Site specific FRA required for each site.

15.58 Where it is noted that the sequential test should be applied, this is in accordance with PPS25 – Flood Risk and Planning. A sequential test is intended to direct new development to areas of low flood risk, i.e.ie Flood Zone 1. Where this is not possible, and depending on the vulnerability classification of the proposed land use, it may be acceptable to develop on land in Flood Zone 2 and finally Flood Zone 3.

15.59 Where developments are located in Flood Zone 1 but as part of an island raised above the surrounding flood plain, it will be necessary to consider emergency measures in the event of a flood. The flood may result in the area becoming cut off from emergency services and other services, so this should be considered on a site by site basis.

Surface Water Drainage

15.60 With regard to surface water drainage, the Fenland District is primarily pump drained, discharging to the Middle Levels drainage system or other watercourses via series of pumping stations, although large areas of Whittlesey do drain by gravity. While gravity drainage may be appear feasible in some other areas, this can be inhibited by the high tide in the receiving River Nene, which results in the surface water again being pumped.

15.61 The solid geology in the District comprises Oxford Clay, which is overlain by the West Walton Formation (mudstone and siltstone) and the West Walton and Apthill Clay Formations (undifferentiated). These rocks are unlikely to store or convey large amounts of groundwater, thereby effectively ruling out infiltration as a feasible form of drainage in these areas. This is further reinforced by the impermeable superficial geology which varies from alluvium in the north of the District to peat and till in the south. There are, however, areas of sand and gravel and till deposits around Whittlesey, March, Doddington and Chatteris that could offer suitable conditions for infiltration.

15.62 In accordance with PPS25, new developments should not increase flood risk elsewhere. Therefore, the additional surface water runoff from the previously greenfield sites will need to utilise SUDS to limit the surface water discharge from the site to pre-development levels. Dependent on the exact location of the proposed developments, the underlying geology may steer any new developments towards attenuation as a form of SUDS for the management of surface water. This could include techniques such as green roofs on buildings, lined permeable paving and swales or larger features such as ponds and detention basins. However, the summary

in Table 15.13 below gives a broad assessment of the potential SUDS features in each of the main growth areas.

Table 15.13 – Summary of Surface Water Management Issues

Cluster	Surface Water Drainage and SUDS comments
Wisbech	Wisbech is in Groundwater Source Protection Zone 3. Underlying geology is impermeable. Retention SUDS (e.g. swales and ponds) would be suitable, but not infiltration techniques. Surface water runoff will need to discharge to closest watercourse. Discharge rates to be agreed with IDB and on-site attenuation provided.
March	March is in Groundwater Source Protection Zone 3. Underlying geology is permeable, therefore may be suitable for infiltration SUDS techniques, particularly to the north of the town. Other areas would need to discharge to closest watercourse. Discharge rates to be agreed with IDB and on site attenuation provided.
Whittlesey	Whittlesey is in Groundwater Source Protection Zone 3. Large areas of permeable geology, therefore may be suitable for infiltration SUDS techniques, particularly around Whittlesey, Coates and Eastrea. Southern areas of Pondersbridge and Benwick are impermeable, so surface water runoff will need to discharge to closest watercourse. Discharge rates to be agreed with IDB and on site attenuation provided.
Chatteris	Chatteris is in Groundwater Source Protection Zone 3. Underlying geology is permeable in a central north-south strip, therefore may be suitable for infiltration SUDS techniques, subject to soakaway tests. Other areas would need to discharge to closest watercourse. Discharge rates to be agreed with IDB and on site attenuation provided.
Wisbech St Mary	See Wisbech above.
Manea	Underlying geology is impermeable. Surface water runoff will need to discharge to closest watercourse. Discharge rates to be agreed with IDB and on site attenuation provided.
Doddington/ Wimblington	Area is in Groundwater Source Protection Zone 3. Underlying geology is largely permeable, therefore may be suitable for infiltration SUDS techniques, subject to soakaway tests.

15.63 In areas where infiltration techniques may be possible, soakaway tests should ultimately be carried out to determine an accurate infiltration rate and allow any soakaway features to be sized. As ponds and infiltration basins have the potential to utilise significant areas of land on new developments, this information should be obtained at an early stage to allow the features to be included in the masterplanning process.

Further Work

15.64 The detail contained within the Outline WCS is limited, and the report provides recommendations for the scope of the subsequent Phase 2 WCS. This next stage of the WCS process will utilise the updated growth figures used in this study and will aim to provide more detail on the wastewater treatment options and implications and the SUDS requirements for each proposed site. Infrastructure phasing timelines will be produced which will identify how the infrastructure improvements relate to the housing delivery. It is understood that this work is to be commissioned shortly and as such, will not be available to inform this assessment.

15.65 Once the updated WCS is made available, this should be reviewed to establish any updates to the information detailed above with regard to water and wastewater. Anglian Water will also be contacted to provide any additional information based on the latest growth trajectories.

Summary

15.66 Based on the information detailed above, certain conclusions can be drawn for each development cluster regarding potential constraints on development and potential issues that will need to be considered. These are summarised in Table 15.14 below.

Development Cluster	Electricity	Gas	Water	Wastewater	Flooding/Surface Water
Wisbech	Walsoken Primary s/s to be upgraded to cater for immediate growth. Additional growth would be accommodated at Wisbech Railway s/s, with timescales: Low Growth – 2020 Medium Growth – 2022 High Growth - 2021	Supply constraints on Low Pressure (LP) and Medium Pressure (MP) systems throughout Fenland District. Upgrades to these systems are likely in order to accommodate all growth proposals. Further details are required for each development site in order for more detailed information to be provided by National Grid.	Lies within Anglian Water's Wisbech PZ. Forecast surplus resources until around 2026. Solutions have been proposed by AWS to deal with deficit. Stringent water use standards needed for medium and high growth. Infrastructure enhancements required on site-by-site basis.	Served by Wisbech (West Walton) WwTW, which has forecast capacity shortfall. Improvements are achievable although additional flow will require tighter consent. Majority of growth will require new strategic wastewater infrastructure.	Majority of town in FZ1, although some FZ2 & 3 to N and W. Within Groundwater SPZ3. Impermeable geology, so infiltration SUDS not suitable. Retention SUDS could be used.
March	March s/s already close to capacity. All options require additional capacity circa 2016.		Lies within Anglian Water's March PZ. Forecast surplus resources until approx 2026. Solutions have been proposed by AWS to deal with deficit. Stringent water use standards needed for medium and high growth. Infrastructure enhancements required on site-by-site basis.	Served by March WwTW. AWS has indicated that there is DWF capacity. No increase in flow will be permitted to Middle Levels system. Strategic sewer and pumping station upgrades may be required to accommodate growth – further modelling is required.	March town in FZ1 on raised island surrounded by FZ2 & 3. Within Groundwater SPZ3. Permeable geology so infiltration SUDS may be feasible, particularly in north.
Whittlesey	Low growth has no upgrade requirement. Medium and high growth will require upgrades at Whittlesey s/s around 2020.		Lies within Anglian Water's Peterborough PZ. Forecast surplus resources throughout planning period. Stringent water use standards needed for medium and high growth. Infrastructure enhancements required on site-by-site basis.	Served by Whittlesey and Benwick WwTW. Whittlesey has forecast capacity shortfall and no increase in flow from WwTW will be permitted to Middle Levels system. Significant further work is required to identify solution. Benwick can accommodate growth within existing headroom. Growth in cluster may be accommodated within existing infrastructure.	Whittlesey, Eastrea and Coates in FZ1 surrounded by FZ2 & 3. Benwick and Pondersbridge in FZ3. Within Groundwater SPZ3. Whittlesey, Eastrea and Coates have large areas of permeable geology suitable for infiltration SUDS. Other areas will require retention SUDS with agreed discharge rate.
Chatteris	No upgrades needed at Chatteris s/s to meet initial demand, but will be needed circa 2020. Upgrades to existing 33kV network required for all growth options around 2016-2020.	Existing supply constraints identified for Wisbech St Mary and Doddington/ Wimblington. No existing gas supply infrastructure in Manea. All of these smaller areas will need new infrastructure to feed proposed growth.	See March above.	Served by Chatteris Nightlayer Fen WwTW, which has sufficient headroom to cater for growth Limited network model information. Most development likely to require new strategic infrastructure.	Majority of town in FZ1, with some FZ2 & 3 to N and W. Within Groundwater SPZ3. Central strip has permeable geology, so may be suitable for infiltration. Other areas can use retention SUDS and discharge to nearest watercourse.
Wisbech St Mary	Relatively low additional demand in these areas should not necessitate any significant network upgrades.		See Wisbech above.	For Wisbech St Mary, see Wisbech above. For Parson Drove, WwTW has forecast shortfall - improvements are achievable. New infrastructure may be required to accommodate growth.	Area dominated by FZ2 & 3, with small pockets of FZ1. SUDS potential as Wisbech above.
Manea			See March above.	Served by Manea WwTW, which has capacity to cater for growth New infrastructure or pumping station upgrades may be required	Manea in FZ1 surrounded by FZ2 & 3. Impermeable geology, so infiltration SUDS not suitable. Retention SUDS could be used.
Doddington/ Wimblington	Low and Medium growth likely to be accommodated within existing infrastructure. High growth will impact Chatteris and March s/s and is likely to trigger upgrade requirements at end of planning period		See March above.	Served by Doddington WwTW, which has forecast capacity shortfall. Water quality targets may not be achievable. Also, no increase in flow will be permitted to Middle Levels system. Unlikely to accommodate any growth within existing infrastructure.	Largely in FZ1, with southern extents in FZ3. Within Groundwater SPZ3.

Table 15.14 – Summary of Utilities Requirements for Infrastructure Clusters

Updated trajectories based on the conclusion of this Stage 2 report

15.67 The conclusions set out above are based on the three options considered in this report. However, the conclusion of this report recommends that 2 options are taken forward. These options are based on a hybrid of the option considered here and as such require new trajectories, which in turn will affect when infrastructure may be needed. As such, a revised utilities note, based on the final options and their new trajectories, setting out different timescale for the delivery of the infrastructure highlighted above will be set out as an appendix to the Stage 3 report. This will in turn inform the Infrastructure Delivery Model findings set out as part of the Stage 3 work.

Renewable Technology

15.68 With an excellent renewable energy resource, and relatively small energy demands from a modest population, as a district, Fenland has a great opportunity to benefit economically from renewable energy generation while cementing a reputation as an 'environmental engine' for the UK. Climate change and the depletion of oil resources worldwide construct a dual threat to the economic prosperity of Fenland (and all other communities) in the future. Accordingly, the creation of clean energy systems is an initiative that will have a pertinent effect on the sustainability of the area, and could ensure that Fenland is resilient and more self-sufficient in the future.

15.69 The table below demonstrates that the majority of carbon emissions in the District are associated with energy use, particularly emissions from industry and commercial uses. Targeted deployment of renewable energy could significantly reduce the carbon footprint associated with the District and help make the district more resource efficient. The following sections develop a broad analysis of the energy profile of Fenland, both currently and in the future, and examines how new development will influence the profile and could potential be a catalyst for greater deployment of low carbon energy generation.

Table 15.15: CO2 emissions for Fenland for 2008 (Source: Emissions of CO2 for local authority areas DECC)

Sector	2008 Emissions (kt CO_2)
Industrial/Commercial Energy Use	473
Domestic Energy Use	223
Road Transport	189
LULUCF (emissions from land use change, forestry etc)	151

The Energy Profile in Fenland

Current Energy Demands

15.70 As indicated by the carbon emission profile, a relatively high proportion of energy demands in Fenland are due to industrial and commercial uses, with residential demands making up a smaller portion. Energy broadly consists of two types of demand; electricity and heat demands. The table below shows the breakdown of demands for types of energy in Fenland.

Table 15.16: Baseline electricity and gas demands for Fenland for 2006 (Source: Electricity and Gas Sales 2006 DECC)

	Electricity Demand (GWh)	Heat (Gas) Demand (GWh)
Industrial/Commercial	344	537
Domestic	204	547

15.71 The carbon profile of existing buildings will change over time. As a result of changes in energy demand due to energy efficiency measures, adoption of micro-generation technologies to supply homes with renewable energy, change in behaviour, and switching to fuels which emit fewer greenhouse gases. This section considers the likely change in the energy demand profile of existing buildings until 2026. The graph below shows the expected changes in energy demands from existing buildings in Fenland over a 20 year period from baseline data in 2006. This has been calculated based on improvement rates expected from current government and community energy efficiency measures, using the AECOM Green Energy Model.

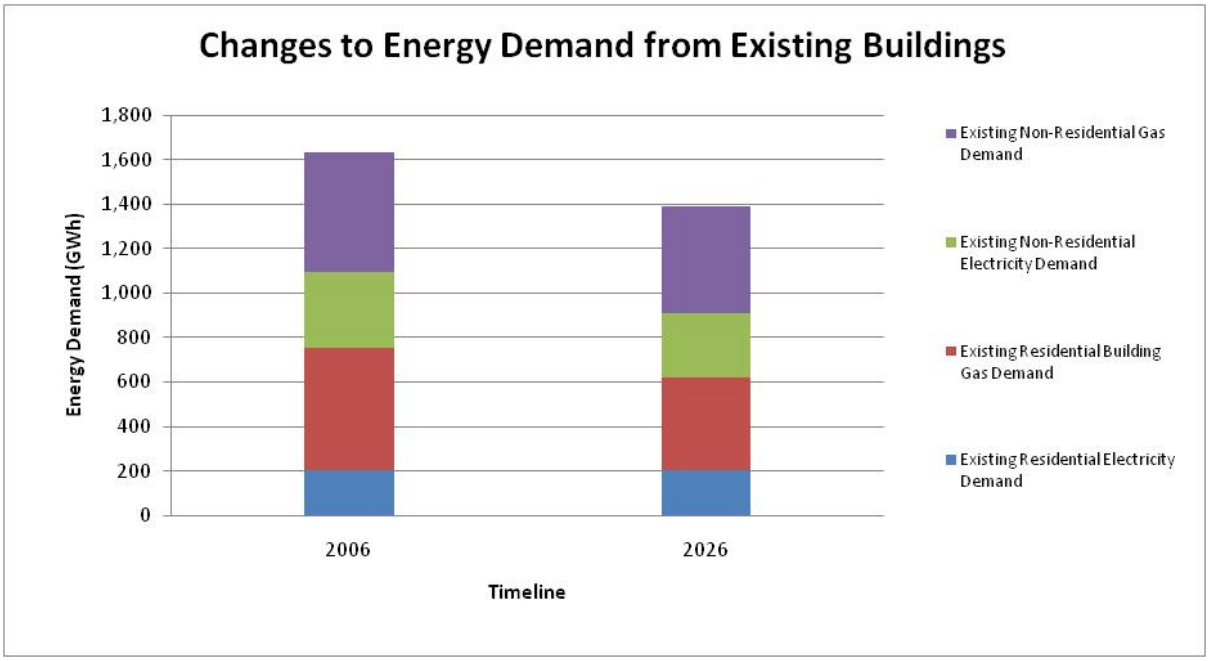


Figure 15.1: Expected changes in energy demand from existing buildings in Fenland

Future Energy Demands

15.72 New development will increase energy demands in Fenland. Part L of the Building Regulations is expected to require that buildings meet increasing minimum energy efficiency standards, so new buildings will be significantly more efficient than existing stock. These standards have been applied to the quantum and assumed a housing mix equivalent to an average density of 30 dwellings/hectare and modelled using AECOM residential profiles prepared for DCLG, and CIBSE industry benchmarks for non-residential development. In addition, increased energy performance in line with the changes to Building Regulations Part L requirements which recently changed in October 2010, and will continue to progress in 2013 and 2016 have been taken into consideration, along with the expected changes to regulations affecting non-residential buildings leading up to zero carbon in 2019. The expected additional energy demand under the three growth options is shown in the graphs below.

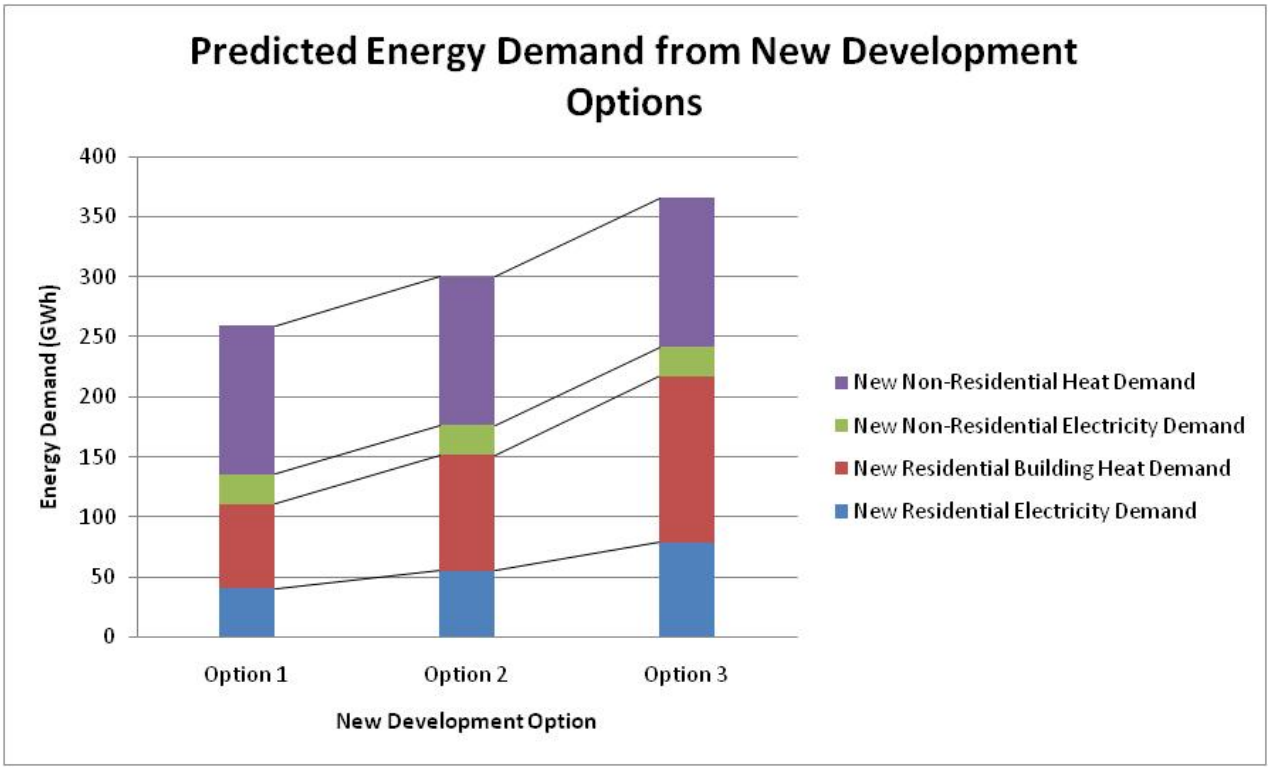


Figure 15.2: Changes in energy demand with different growth options

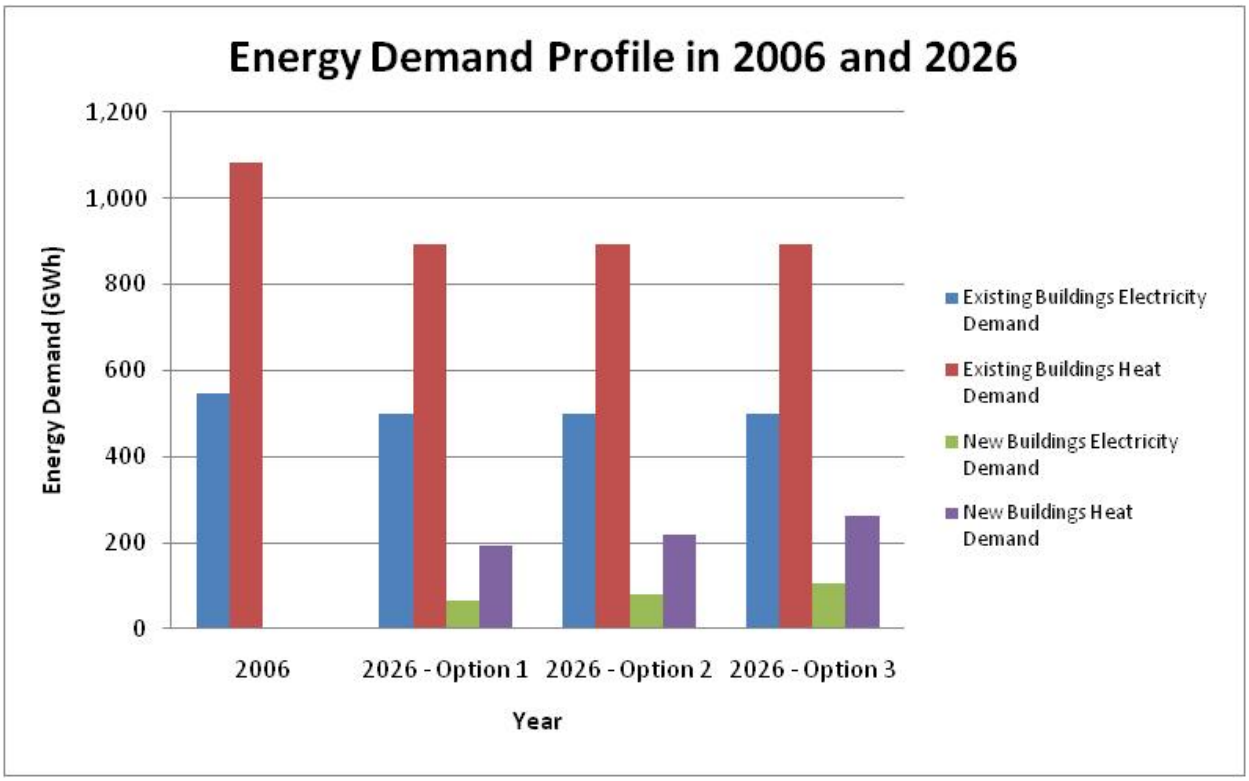


Figure 15.3: Comparison of energy demand from existing and new development options

Renewable Energy Potential in Fenland

15.73 Fenland has an excellent wind resource and has already witnessed the development of eight schemes with 35 large (1MW+) turbines and 8 smaller turbines with an installed capacity of 72MW (AMR 2008-09). This could generate as much as 189 GWh saving 80,000 tonnes of CO2e per annum (more than a third of the District's electricity demand). There are also a significant number of wind developments proposed (34 are identified in Fenland's Wind Turbine Development Policy Guidance) that if developed, will provide considerable additional resource.

15.74 The Wind Turbine Development Policy Guidance (2009) for Fenland took a landscape and visual sensitivity approach to determining capacity. It concludes that there is high capacity for single turbines across the district, and a high capacity for small to medium groups (2-11) of turbines across most of the district. There is also medium-high capacity for larger wind farms across most of the district. Once other restrictions have been applied, opportunity areas become more constrained, however overall there is potential for Fenland to become carbon neutral in electricity terms, thorough wind development. Currently wind development has been driven by commercial development. Greater community benefit could be derived from different delivery mechanisms such as community ownership schemes or the use of an ESCo model driven by the local authority or community members.

15.75 While wind development can make a very significant contribution to local generation of renewable electricity, currently there is very little production of low carbon sources of heat in Fenland. As shown by the energy profile, heat demand makes up a larger proportion of energy demand in Fenland than electricity, and hence the provision of low carbon heat should be a priority for the area. Two key sources of heat will be waste heat from Combined Heat and Power systems and heat generated by systems that utilise biomass fuel (from local waste and agricultural streams). Low carbon heat can be distributed to local communities via district heating networks. The figure below shows the UK Heat map that indicates where heat demands are dense enough to support an efficient district heating network. It indicates there is fairly good potential in the main urban areas for a network to be established, particularly in Wisbech and March. Whittlesey could potentially connect with initiatives in Peterborough. The heat map also identifies rural areas that have a significant heat demand, which may be due to the location of industry. A more detailed heat map should be produced as part of the work currently being undertaken for the East of England as a whole.

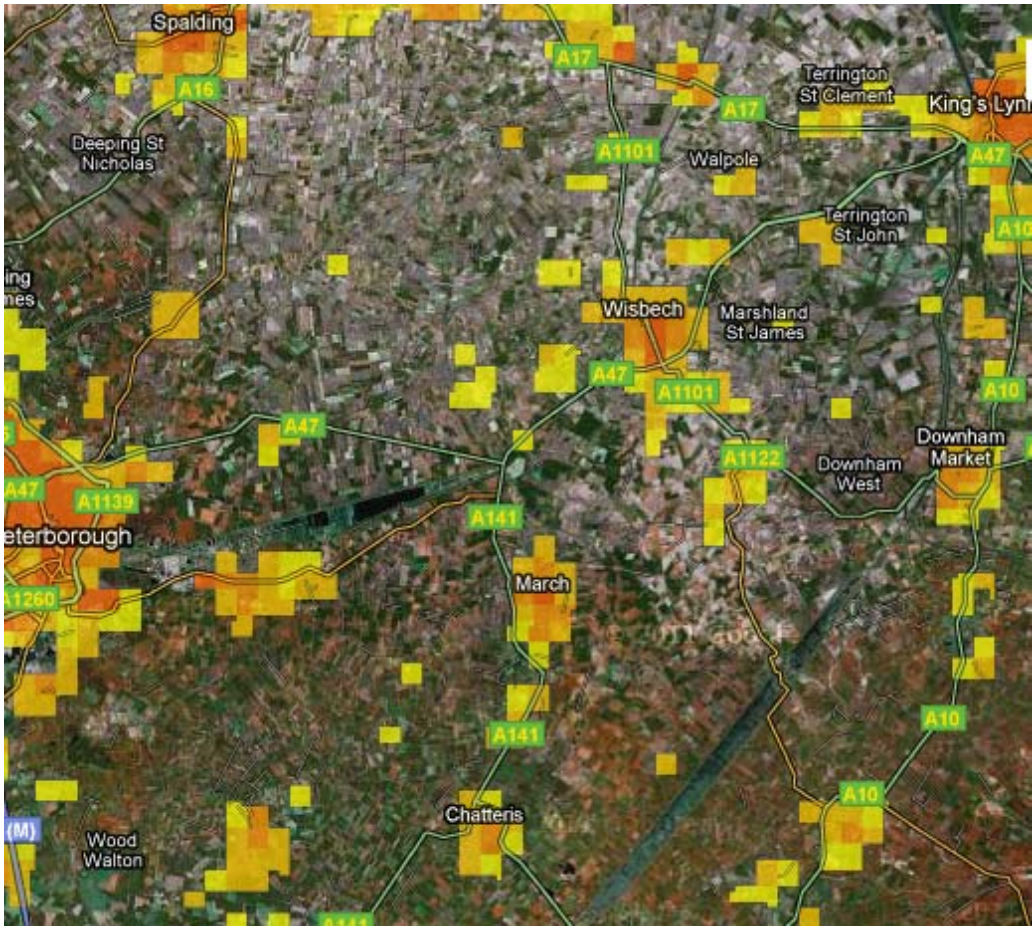


Figure 15.4: High level heat map of Fenland (UK heat map 2010)

Delivering Renewable Energy through Growth

15.76 While growth will increase energy demands in Fenland, it can also help to deliver low carbon energy in a number of ways.

- Firstly, increasingly stringent carbon reduction standards expected to be delivered through changes to the Building Regulations will drive some deployment of on-site renewable energy.
- Secondly, through a mechanism known as 'Allowable Solutions' developers can also contribute to a district wide fund to offset remaining emission requirements. This fund is likely to be administered by the local authority and can be used for carbon reduction projects elsewhere in the District. Recent announcements from the Government (Budget 2011) suggest however that contributions to Allowable Solutions will be reduced based on a weakening of the definition of 'zero carbon' requirements under proposed Building Regulations changes in 2016. Contributions to wider carbon reduction measures could also be implementable through the Community Infrastructure Levy or similar District-wide contributions.
- Thirdly, new development can trigger the delivery of low carbon energy through design. By considering energy options at the outset, particularly for large masterplanned developments, there may be opportunities to deliver large decentralised energy systems, such as CHP and district heating or a development associated wind turbine. These types of technologies should be delivered at a development wide scale to me most cost-efficient, and integration needs to be planned for the outset. Decisions surrounding layout, house types, mix of uses, density, phasing and ownership will all affect the viability of energy options.

While some developers may explore such options to find an affordable way to meet carbon reductions required by building regulations, the Local Authority can ensure that these energy options are explored and delivered by setting policy for strategic sites that requires investigations to be undertaken or advanced carbon targets to be met. These targets can be set through the development of a Fenland specific evidence base that considers carbon reduction potential associated with typical development types and strategic sites in the area, and considers any viability issues for the local market. Targets for strategic sites could be set as an increase upon building regulations or using the energy credits in Code for Sustainable Homes and BREEAM. Planning requirements can also encourage developers to explore links to heat sources and energy users near the site, in particular encouraging the extension of district heating systems into existing areas.

15.77 In terms of locating growth in Fenland, several strategic planning measures can be taken to increase the opportunity for delivery of decentralised low carbon energy in and around new developments:

- Large scale developments (which can be masterplanned) provide the opportunity to investigate and incorporate decentralised energy schemes through design. This can be driven through requirements for strategic sites.
- Developments can be located near areas of dense heat demand and potentially act as a catalyst to include and retrofit district heating systems to a wider area.
- District heating and CHP is likely to be more viable where a mix of uses exists to balance and maintain heating demands. Where residential developments can include or be located alongside significant commercial and industrial uses, including energy intensive processing industries, council buildings, schools, swimming pools and hospitals.
- Opportunities for large scale wind can be incorporated in new developments, particularly on the rural fringe where there a large buffer distance can separate turbines from housing to minimise noise and flicker effects. Alternatively, wind turbines are well suited to commercial and industrial areas.
- Developments can be clustered and phased to coordinate and connect heat networks while minimising primary infrastructure.
- There may be large infrastructure projects proposed in the area that could be designed to link to heat networks for neighbouring communities or developments, including wastewater treatment plants, energy from waste schemes, and anaerobic digestion plants.

15.78 By following these strategic planning initiatives, and developing energy policy and targets for strategic sites, Fenland can work towards becoming a resource efficient district. Growth cannot deliver this aim alone, and the Local Authority and local communities will need to push forward wider initiatives to deliver renewable energy and improve the efficiency of existing buildings.

Cost Implications of Code and BREEAM targets

15.79 Code for Sustainable Homes and BREEAM targets can be set for strategic sites to drive a higher level of carbon reduction (and other sustainability measures). Alternatively, planning can set carbon reduction targets specifically. Costs will depend on the low carbon technologies chosen for a development, and these costs can vary considerably as shown by the comparison of the per unit cost for a development of 50 units shown below, where contribution to a large on-site wind turbine is significantly cheaper than installation of biomass fuelled CHP and some photovoltaics to meet zero carbon. However, a large wind turbine will only be viable on some sites.

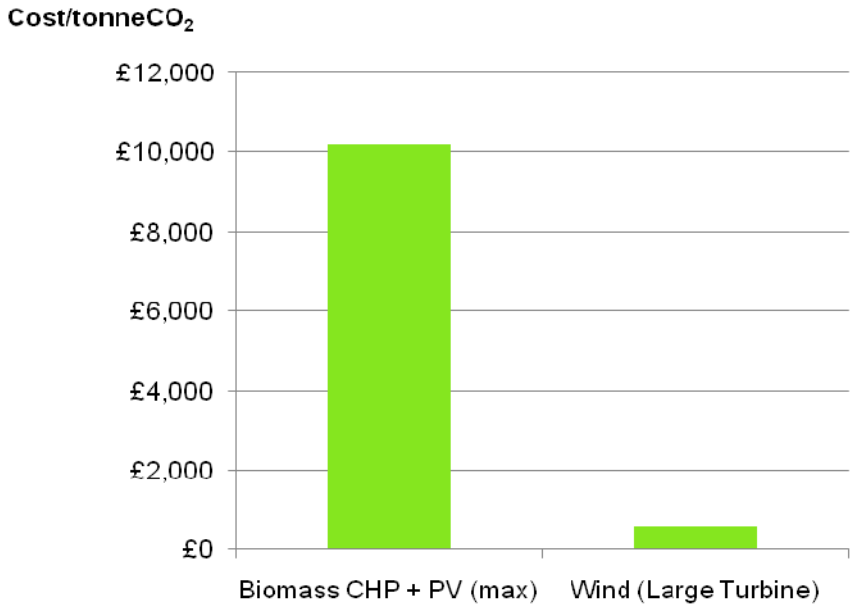


Figure 15.5: Cost per tonneCO2 saved of biomass-fuelled CHP with PV with a large scale wind turbine, for a medium sized development

15.80 Published costs for Code for Sustainable Homes and BREEAM targets provide an indication of typical costs for technologies that should be deliverable on most sites.

15.81 An industry report on the costs of building homes to full Code levels has been used to show the financial implications of achieving Code targets 2. The costs were predicted, and are not yet fully supported by the development industry. Only a handful of real Code assessments have been completed so there is not yet sufficient final cost data to establish robust cost benchmarks. An initial study was undertaken in 2008, and updated in 2010 as knowledge has progressed, but nevertheless cost estimates are still evolving.

15.82 Predicted costs show that costs associated with meeting advanced Code for Sustainable Homes levels are relatively modest for most elements. A significant proportion of the costs of delivering Code levels are in meeting the standards for CO2 emissions, which since 2010 will become necessary for meeting Building Regulations. The percentage uplift in build costs arising from the additional Code requirements (i.e. all Code criteria excluding the energy and CO2 requirement) is around 3% for flats and around 6% for houses for Code Level 4.

15.83 Current indications by the government suggest that changes to Building Regulations in 2016 will be broadly equivalent to the energy credits of Code Level 5. The graph below shows the relative cost uplift based on 2006 Building Regulations (so a portion of the cost uplift is already felt due to changes to 2010 building regulations). However, the cost per unit could be decreased significantly through the delivery of communal CHP systems or on-site wind.

[2] Code for Sustainable Homes: A Cost Review (produced for department for Communities Local Government by Davis Langdon , March 2010)

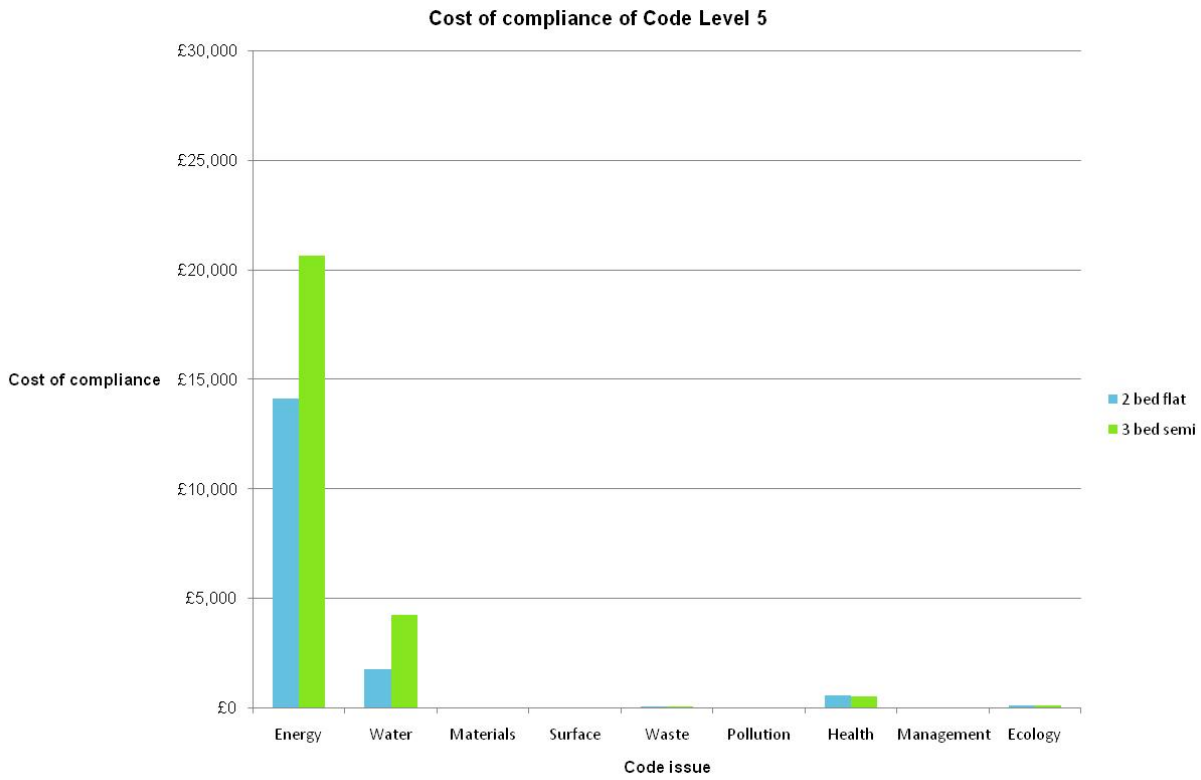


Figure 15.6: Costs (over base construction cost) for delivering Code Level 5 categories for a flat or house compared to 2006 Building Regulations

15.84 In terms of standards for non-residential developments, the figure below shows the % increase on the base build cost to deliver Good, Very Good and Excellent ratings under BREEAM Offices (2004) and BREEAM Schools. Both costing exercises were led by the BRE Trust. They were supported by Cyril Sweett for the Office costing exercise (Putting a price on sustainability, BRE Trust and Cyril Sweett, 2005) and Faithful & Gould for the Schools work (Putting a price on sustainable schools, BRE Trust and Faithful & Gould, 2008). The costs shown in the figure below under 'school' are for a secondary school block of 3,116m2.

15.85 We are not aware of any published cost data on meeting BREEAM office targets since 2004, certainly none is yet available showing the costs of delivering BREEAM Offices 2008, which contains a number of fairly significant changes, compared with earlier BREEAM versions.

15.86 The cost analysis shows that the 'Very Good' level of BREEAM is achievable with a small increase to build costs, while the costs associated with BREEAM 'excellent' are much more substantial. BREEAM 'outstanding' is a standard only intended for use on special demonstration projects, and hence also has very substantial cost implications. It should also be noted that BREEAM standards are not static, and are updated over time to ensure that the higher levels are still challenging, hence planning requirements to use higher levels of BREEAM should be treated with caution.

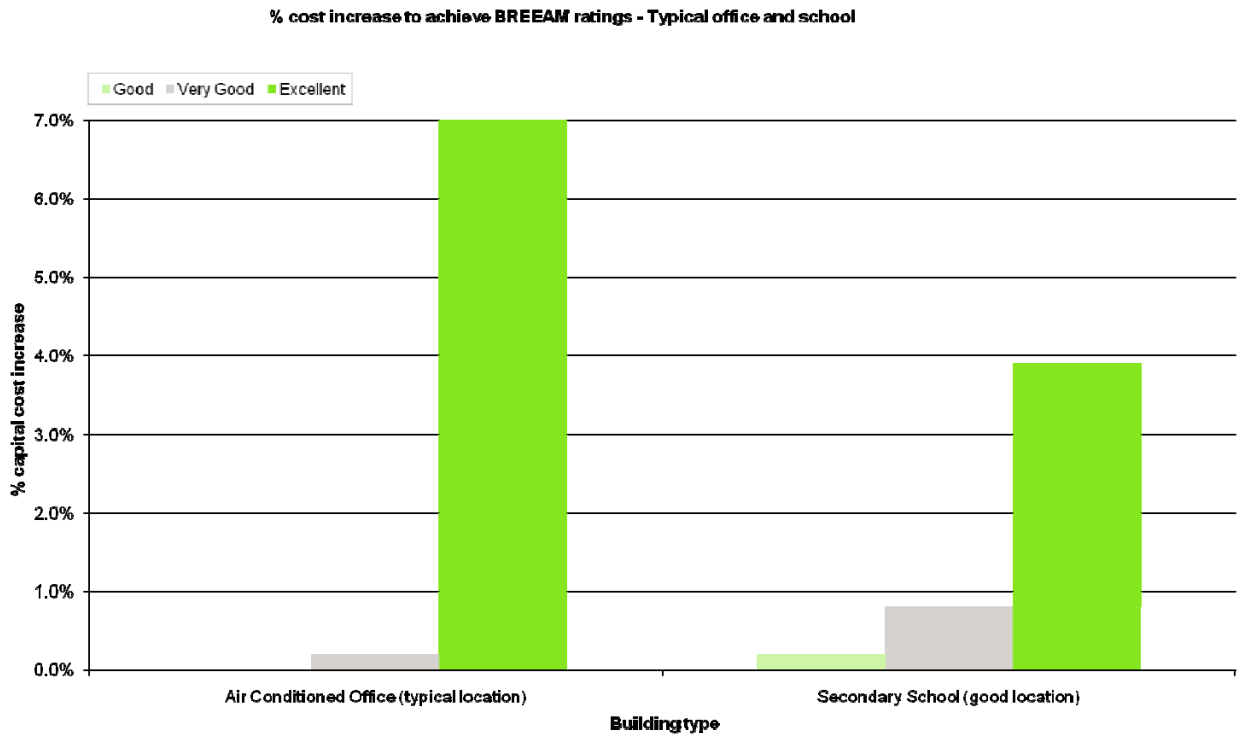


Figure 15.7: Costs (over base construction cost) for delivering BREEAM Offices (2004) and BREEAM schools ratings.

Striving Towards a resource efficient Fenland

15.87 While growth is a useful catalyst to drive delivery of renewable energy, it must be accompanied with wider initiatives across the district to make significant progress. Growth is likely to at best off set itself. To reach carbon neutrality in energy terms, broadly, the delivery of wind turbines would need to triple (although this could be delivered in part through PV, CHP and other sources) and there would need to be significant integration of renewable heat infrastructure. Importantly, these initiatives could be economically beneficial for local businesses and communities.

15.88 Government funding through the Feed-in Tariff (for electricity) and the forthcoming Renewable Heat Incentive (for heat) provide direct incentives for local communities to deliver renewable energy and profit from that delivery. There are opportunities for the local authority to take a leading role in delivering renewable energy itself by acting as an energy company and investing in schemes using its Powers of Well Being. Communities too may wish to invest in large scale wind, solar farms, or large heat network schemes and use revenue from incentives and energy sales to invest in community projects.

15.89 Building from the energy opportunity mapping currently being undertaken by AECOM for the East of England, it is recommended that Fenland undertake a district specific study to identify delivery opportunities and partners and to examine the potential of strategic sites identified through the FNPV process. This could be used to inform policy for key sites where opportunity emerges for viable delivery of sustainable infrastructure.

Rural broadband connections

15.90 Initial mapping of broadband connectivity, Figure 15.1: Broadband speed – Fenland, highlights that part of Wisbech and settlements in the Wisbech St Mary cluster suffer from relatively poor connections, along with largely rural areas without significant population. FDC are in the process of sourcing more accurate data from

15.91 The Mind the Gap: Digital England – a rural perspective (2009) report by the Commission for Rural Communities (CRC) identified that internet use and the demand for acceptable bandwidth continues to increase in rural areas faster than in urban areas. Much of the demand in rural areas is driven by the need for online shopping, banking and communication. Approximately three-quarters of rural internet users say they use the internet for transactions; this is higher than the UK average of 69%.

15.92 Those in rural areas are also more likely to watch films or television online, because other forms of entertainment such as live music, theatre and cinema are not as accessible or available. Currently, the incidence of rural home working is as much as three times greater than for urban areas. Most rural businesses are also small and medium sized enterprises (SMEs) – a key source of innovation and rural wealth creation. Many would be forced out of business or have to relocate if adequate and competitive broadband provision was not available. Many rural businesses are already adversely affected by inadequate broadband connectivity and the negative effect of the digital divide is increasing. Collectively, the greater the negative impact on rural business, the greater the impact on the country's economy as a whole.

15.93 Lack of access to digital technology, inadequate broadband and mobile telephone coverage combined with lack of engagement with digital technology all contribute to a complex set of issues for rural communities and lead to disadvantages including:

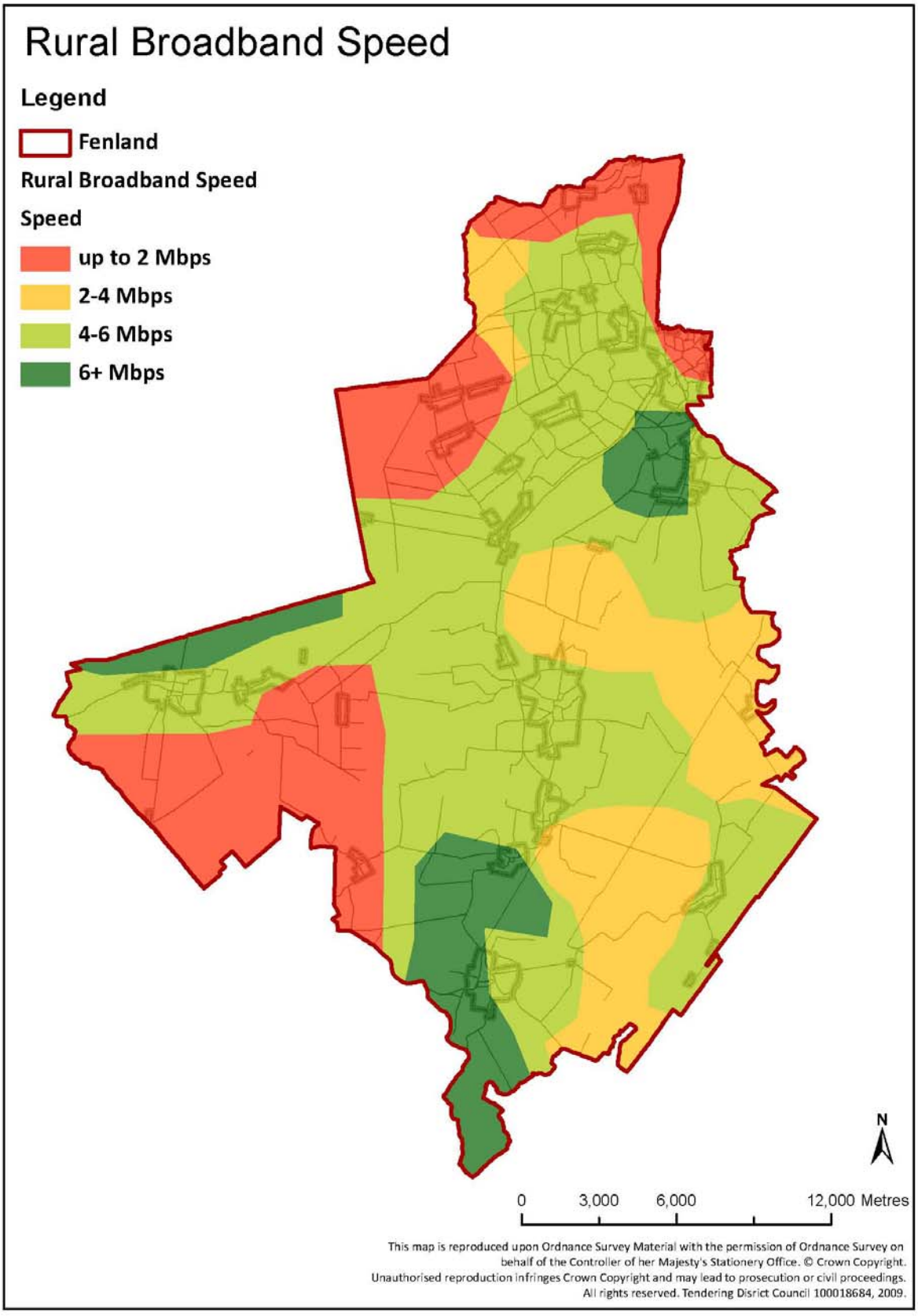
- limited access to government services, and to the full range of social benefits available through interactive services, such as cheaper bills and healthcare diagnostics;
- limited job search opportunities and options such as online training, as well as limiting the social and recreational uses of the internet;
- increased isolation felt by many older people; and
- lack of high-speed broadband coverage stifles business innovation, social opportunities and innovative and integrated service delivery.

15.94 The CRC has identified a number of key areas which we believe must be tackled as a priority:

- education and lifelong learning;
- business development;
- social and community cohesion; and
- equitable access to services.

15.95 The Government have announced four pilots for introducing high or 'super' speed broadband to rural areas. Fenland would be an attractive location for the next wave given the issues around accessibility, deprivation and rural location. The need for improved rural broadband should form a key part of discussion with central government through Cambridgeshire Horizons and the emerging LEP to make a strong case for any future funding or initiatives.

Figure 15.8: Broadband speed – Fenland (source Mind the Gap: Digital England – a rural perspective Commission for Rural Communities)



16. Market assessment and initial viability

Market Assessment and Initial Viability

16.1 The detailed work in relation to testing the viability of the options will be undertaken as part of Stage 3. However in the following section we outline the initial headlines and direction of travel with regard to the development of the options. To inform this section a detailed market review of the current market conditions in Fenland has been undertaken. This report is attached at Appendix G, a brief summary of which is provided below.

The Economy

16.2 Since 2007/08 the UK has undergone a major global recession and this has particularly affected the property market. The collapse of major banks and investment companies caused mass disruption. Significant blame for their failing, especially in the US, was due in part to insecure lending against sub prime property. This has led to very little activity over the intervening time and a number of sites have been mothballed. However, property market conditions have changed noticeably between September 2009 and March 2010. Whilst the number of investment transactions is still low by comparison with the peak of the market in 2006/7, in most sectors there has been an increase in activity as confidence returns to the market. This has been tempered slightly in the last three months as ongoing uncertainty arising around the general election and the impact of the new government structure.

16.3 It is predicted that rising unemployment will affect consumer spending, investment will remain subdued in the face of ongoing lending constraints and concern over the export markets will not provide the hoped support as international markets remain weak.

16.4 Stabilisation of the economy is likely to come from more lending to business and better performance from exports. Over the following years, growth is expected to be lower than that seen over the last ten years as consumers, the driving force over the last decade, are constrained by heavy indebtedness, lower savings rates, lower job creation and a greater tax burden. In addition, the new coalition government and the known issues arising around significant need to cut public spending are likely to ensure that there is very limited confidence and activity in the markets for some time yet.

Fenland Market Review

16.5 The market review was undertaken in autumn 2010 and covered residential new build property, employment markets including industrial and office uses and retail. The period between 2008 and the end of 2010 marked one of the most significant crashes experienced in the property sector in living memory and as at the end of the year this was still only showing slow signs of recovery. The messages of poor values and slow take up are repeated across the country especially in the secondary, less well connected areas.

16.6 The report focussed predominantly on residential development as this is typically the strongest and most active market in districts away from the centre of major cities. We have also highlighted the issues being faced at present within the employment and retail markets. However, part of the Fenland Neighbourhood Planning Vision project is to bring about a step change for Fenland and it is important to bear in mind that the market report is intended as a benchmark for the current position rather than how development will always fare in Fenland.

Residential

16.7 There is currently little residential development being brought forward in Fenland due to poor market conditions. This predominantly exists around the limitations over bank mortgage lending which has made it more difficult to purchase property. This subsequent fall in demand has had an effect on values thereby resulting in existing homeowners deciding to stay put rather than selling property due to poor values. In addition the availability of funding to first time buyers has significantly contracted directly affecting the demand for the smaller starter units.

16.8 This lack of evidence has led to limited factual knowledge when considering the current level of market values in the district. When undertaking the review DJD focused on the four main towns within the district and ranked them in terms of value accordingly. As is seen in all of the Cambridgeshire districts that we have previously reviewed there is a notable difference in value between the north and south of the district. This is further highlighted in Fenland due to the increasing in accessibility of Wisbech and March from the main regional centres of Peterborough and Cambridge which provide the primary sources of higher income employment within the area.

16.9 The following average values were reported in the four towns between July and September 2010.

	Terraced	Semi Detached	Detached	Average
Wisbech	£98,374	£119,300	£188,948	£135,540
March	£133,333	£125,577	£178,572	£145,827
Chatteris	£109,700	£137,000	£198,500	£148,400
Whittlesey	£127,159	£131,217	£210,508	£156,294

* Figures are taken from the Land Registry Data and show averages for all house sales and reflect both new and second hand stock.

16.10 As can be seen from the original table included in the market review we have removed the entry for flat sales in the table above. This is due to the fact that there were no flat sales recorded in March or Chatteris and this was skewing the comparison between the towns. The averaged values shown above are a much clearer view as to how each town rates against the others. It is apparent from this that there is a marked difference in value between Wisbech and Whittlesey and this has been further evidenced by DJDs market research of new development coming through at present in the district.

16.11 From DJDs research of new schemes coming forward in the area we consider that the average values per square metre / foot being achieved for new build properties are as follows:

	Per square metre	Per square foot
Wisbech	£1,453	£135
March	£1,505	£140
Whittlesey	£1,560	£145
Chatteris	£1,615	£150

16.12 With regards to the land market we have been unable to find much in the way of actual evidence due to the very low levels of activity within the market at present. This has led to much of the information being based on conversations with agents and developers currently

active in the area rather than specific deals. We have tried to underpin this with factual information wherever possible.

16.13 Our research suggests values between £80,000 to £125,000 per acre is being seen within the district with an average density of 10 – 12 units per acre. However there have been few sales of a significant scale and sales small sites which offer a single or a couple of plots are more common. On this basis the plots are achieving between £30,000 to £40,000 per plot.

Employment and Retail

16.14 The market for employment and retail uses within Fenland is currently very poor. Within the employment market in particular the weak economy and recent changes to empty rates has hit values and yields. On the basis of the values currently being reported we would not expect to see much in the way of new development coming forwards.

16.15 DJD's research suggests that office rents are currently between £4 - £8 per square foot depending on location, again as before the more southern towns show a higher rental value. The only exception to this is the Boathouse in Wisbech which was built speculatively to provide a new type of office accommodation in Fenland and thereby can command higher rents. We understand that the Boathouse occupation currently sits at around 45%.

16.16 With regard to the industrial markets we are seeing rental values of between £1.50 - £5.00 per square foot being achieved.

16.17 Both office and industrial markets are achieving yields of between 9% and 11% reflecting the current poor market activity and strength of covenant that is taking on space.

16.18 With regard to retail development Fenland is currently operating at the lower end of the scale in terms of quantity and quality. The town centres are showing the effects of the national economic decline and this is further heightened by the comparative strength of Cambridge and Peterborough retail centres which are both easily accessible. This is clearly seen in current rental and yield rates which are between £9 - £15 per square foot with yields of 8 – 8.5%.

Assessing Viability

16.19 The success of the proposals contained within this report will rely on a viable and deliverable option being promoted. As part of this we have undertaken some high level reviews to assess the deliverability of development. Due to the above factors resulting in a very poor market we have not sought to identify at this stage any planning obligation or Community Infrastructure Levy charges but have merely assessed whether there is currently sufficient value within development to match DJD assumptions and proposals. As identified above more detailed appraisals to assess the opportunities for development charges to be set against new development to pay for infrastructure will be undertaken as part of Stage 3 of this commission.

16.20 We have grouped the assessments of the four market towns within the district as these show individual market characteristics sufficient to separate them. These are in terms of value running lowest to highest:

- Wisbech
- March

- Whittlesey
- Chatteris

16.21 As an initial starting position to provide an indication of the potential viability of development we have used a single hectare development model to assess viability. At present this is purely focussed on residential development. From the values being reported within the employment markets we are aware that viable development in these sectors is especially difficult. However, the intention of the Fenland Neighbourhood Planning Vision project is to start a "step change" which will increase values across all use classes to enhance the anticipated improvement in the market nationally.

16.22 For residential schemes we have adopted a generic approach of 30 units per hectare and applied the standards as set out in the key assumptions paper as regards affordable housing and share between social rent and shared ownership. This sets out a split of 70% social rent and 30% shared ownership.

16.23 DJD's model is based on the following calculation:

Gross Development Value (GDV)

LESS

Cost of land

(including duty and fees)

LESS

Construction Cost

(including landscaping, contingency, professional fees)

LESS

Marketing costs for completed units (legal and agency fees)

LESS

Cost of Finance

LESS

Developers Profit

EQUALS

Development Surplus (Levy) / Deficit

16.24 The Gross Development Value (GDV) is the calculation of the total income arising from all sales. In DJD's appraisals of residential schemes this includes the sales of both the private and affordable units.

16.25 Although DJD's appraisals are theoretical we have tried to ensure they reflect reality as much as possible. We have applied market comparable rates in terms of sales values, build costs, land value and development timescales, all of which can have a significant effect on the viability

of schemes. We have also applied market standard rates in terms of profit margins and fees. We have not included any abnormal site costs such as demolition and remediation.

16.26 The initial outcomes of the appraisals are showing that due to the exceptionally poor market conditions the viability of development within Fenland at present is limited. We will develop these appraisals in the next stage of work to provide some sensitivity testing in terms of where values will need to be in terms of growth to achieve the growth that is being proposed within the Fenland Neighbourhood Planning Vision project.

Proposed Trajectory

16.27 The market conditions described above will have a direct impact on the success of the differing trajectory options. As noted clearly above the current national economic crisis within the property sector has hit development pipelines exceptionally hard and much of the trajectory planning that was done for all regions for the period 2008 – 2010 has not been achieved.

16.28 The property market however is cyclical and it is expected that a recovery will take place at some point over the next 2 to 3 years although there is little certainty as to exactly when this will happen. The current issues around the significant cuts within the public sector and the effect that this will have on a major part of the employment base within the country has led to many commentators revising their initial thoughts of recovery from 2012 to further out towards 2015 and beyond.

16.29 In many ways the development trajectory can be modelled from looking back to record the level of completions previously achieved and this is a particularly useful tool for assessing the achievability of the trajectories being described within this report. As noted earlier the period between 2001 and 2005 saw an average rate of some 668 units per annum across the whole district. In addition the completions in the year 07/08 approached nearly 1000 units although this is now recognised as the peak of the last development boom. It is considered unlikely that levels at this rate would be achievable over a sustained period of time. It is also apparent from historical evidence that the completions between 2008 and 2010 fell back significantly giving a much lower overall average rate.

16.30 All of the options described show an initial peak to reflect the current level of capacity and windfall sites. From a property market point of view we would comment that this is a fairly aggressive stance to take in the current market which will need to undergo significant improvements to meet 925 completions within the next 12 to 24 months.

16.31 Following this initial peak the trajectories all report cyclical peaks and troughs in the development model which would be in line with market standard. On the basis of the initial research of the market we would however comment that the level of development proposed within Option 3 at some 1400 completions per annum is exceptionally aggressive, even taking into account the time period prior to this (2020/21). Although it is recognised that there is a strong desire to significantly change the fortunes of Fenland District, to achieve this amount of new homes in the district would be almost impossible.

16.32 As a comparator we are currently working with Herefordshire Council with regards to their development planning. In the previous years an average of 700 completions per annum has been achieved. On the basis of the planning being undertaken at present this development trajectory has been increased to an aggressive 800 units per year. There has been discussion of aiming towards 1000 units per annum but this is generally considered to be unachievable.

17. Conclusions

17.1 This first section of this report focused on understanding the spatial implications of growth across Fenland. It sought to set out the need for growth and how growth could help achieve the FNPV emerging vision and strategic programmes. Furthermore, it identified the opportunities against which the benefits of growth should be planned. The second section looked at how growth could come forward across Fenland, focusing on employment and residential growth and the impact on Fenland's demographics. The third section considered the impact of different levels of growth on the provision of social and strategic infrastructure.

17.2 This chapter seeks to pull together the findings of the report in relation to the growth options that are recommended to be taken forward to Stage 3, where further work in relation to costs and delivery will be undertaken and an action plan setting out how FDC and its partners should move forward to deliver growth and change across the district. To this end the chapter is set out in two sections:

- District wide conclusions
- Settlement specific conclusions

17.3 The central theme throughout the report has been the need to tackle population decline and promote housing growth through the provision of suitable housing locations and the environment which supports good quality jobs for a better skilled workforce. Furthermore, that such an approach, along with better alignment of service delivery, should support improvements to other social, economic and environmental issues identified in Stage 1. This will need to be achieved through a partnership approach, across all sectors. An action plan of interventions will be set out in the Stage 3 report to indentify how this should happen.

District wide conclusions

Town centres

17.4 Based on the work on the key settlement portraits, the settlement hierarchy, the settlement capacity assessments and the economic analysis, it is clear that there is the potential for the town centres of the key settlements to accommodate change. It is clear from the analysis that moving forward plans for the town centre should be brought forward to accommodate:

- Suitable office provision, based on a potential district-wide demand for 12ha over the plan period and an assumption that town centres could accommodate a reasonable proportion of this
- The potential for medium scale additional comparison retail development (up to 22,000 across the district based on latest projections). Although this could rise if levels of growth suggest in Option 2 or above are achieved.
- An element of residential and leisure uses to help support town centre vitality and promote a wider range of cultural and evening economic activities

17.5 As such, there is a strong basis for a series of town centre masterplans to define and exploit the opportunities, particularly in Wisbech and March, where the most significant amount of growth is proposed and the most capacity identified within the centre. This approach should support a town centre first approach to retail planning across the district. Reducing leakage,

particularly from Wisbech to Kings Lynn will be important in ensuring it retains a strong and thriving centre. The FNPV work on town centre opportunities should provide a basis from which to take forward appropriate masterplans, planning briefs and/or town centre strategies.

Jobs

17.6 The supply of employment land that could be required over the plan period is identified as 113ha. This allocation will need to be supported by an uplift in skills to support the economic expansion required to stimulate demand in the district. Each of the settlements has sites that can provide appropriate space to support business growth and the employment needs of Fenland residents. Economic forecasting suggests that, while employment growth is projected for the district of around 5,700 net additional jobs, much of this could come forward as low skilled and low paid work. While it should be acknowledged that this still presents good opportunities for many residents, efforts through policy interventions to improve skills will be important in maximising opportunities and shifting the profile of new jobs coming forward towards better skilled and better paid employment. The Strategic Programmes outlined in Chapter 4 reflect the existing employment base and future opportunities inherent within these programmes that must connect with vocational training within CoWA and the community colleges.

17.7 In the short to medium term, an element of this growth will need to be supported by an in-migration of skilled labour, while continuing trends in improved educational attainment take hold. Commercial property values across the district will need to rise to make scheme more viable. Along with a skills and motivated workforce, other key structural issues will need to be addressed. Major road improvement schemes seem unlikely over the plan period and as such improvements to public transport, supported through a rise in the population, better alignment of routes to key services and jobs and opportunities to exploit existing rail stations at March, Whittlesey and Manea will be key. Cycle routes within settlements will also be an important feature in creating accessible employment locations within town centres and industrial estates alike.

17.8 Over the medium to longer term, efforts will need to address growth sectors. A key element of this will be working with the LEP to establish linkages between industries such as the environmental sustainability cluster in Peterborough and the research and development sector in Cambridge and Huntingdon. Supporting existing sectors in manufacturing and agriculture will also be vital and economic development strategies should look towards skills development and business support for such sectors, with an existing foothold in the district.

Homes

17.9 In terms of housing, it is clear that the full amount of housing proposed in Option 3 of the FNPV growth scenarios is unrealistic. However, while a scale of development more closely aligned with Option 2 may still be very optimistic, with an upturn in the market and clear strategy to address some of the structural issues in the Fenland economy, seeking to move beyond previous housing completion trajectories should not be discounted. As such, the FNPV work suggests that instead of a preferred option for growth, which sets a static housing and employment target, a more flexible approach, based between a still ambitious base level (Option 1) and a quantum that looks to extend this based on a series of assumptions about skills, infrastructure and service delivery improvements and town centre regeneration. The FNPV recommendation for the higher end option for each settlement cluster is set out in their individual sub sections later in this conclusion.

17.10 This approach allows for FDC and its partners to monitor the success of growth and respond accordingly. Housing only growth is unlikely to be overly beneficial for the district. As such, growth that comes forward with jobs and homes should be the focus. As such, housing targets through the plan period, should be monitored to ensure that an adequate level of new employment is also coming forward. Issues of water cycle management and flooding, along with other strategic and social infrastructure will also need be monitored in order to ensure housing is brought forward sustainably in Fenland.

17.11 Such an approach should also inform the skills agenda, which is vital to the growth direction encapsulated within the strategic programmes and the role of skills development in their application. Linking in with existing growth industries in neighbouring Peterborough in terms of green technologies and capitalising on opportunities for linkages between CoWA and the SMARTlife training centre in Cambridge (building on the March 2011 launch of SmartLIFE Low Carbon Skills for work) should add real economic benefits to this strategic programme. Such an approach will need to be worked through the emerging LEP to best understand Fenland's entry point, but positioning the district with an aspiration to become increasingly resource efficient, supported by a strategy, across residential, employment, community provision and skills, through the strategic programmes should be a powerful driver for change. Such a holistic approach to developing, implementing and benefiting from sustainable energy technologies could be a strong basis to support funding applications.

Social infrastructure

17.12 The majority of social infrastructure is considered at the settlement cluster level. The CoWA campus in Wisbech does have district wide significance and important links to Kings Lynn and Cambridge. Investment has been agreed to support a new engineering block, which will be vital to continued skills development among Fenland's residents. However, with skills critical to the success of Fenland's growth agenda, further opportunities to lever in investment will need to explored with partners during Stage 3.

Transport and movement

17.13 At a district scale, the impact of growth can only be considered once detailed modelling is completed. As such, understanding the 'inter-urban' requirements created by growth will need to feed into the Core Strategy and Infrastructure Delivery Plan at a later date. In terms of transportation and opportunities for movement to access employment the relationship between new housing and new employment opportunities in Wisbech and Chatteris is more critical than in March and Whittlesey due to the proximity to the rail network or Peterborough respectively. March and Whittlesey have more capacity, subject to public transport improvements, to grow economically with increased levels of out commuting.

Utilities

17.14 There is the potential for much of the power in the area to be supplied from wind farms or other renewable sources, but in order to secure the supply to customers, the distribution company must ensure that the traditional network has sufficient capacity to supply the area. Any energy that is generated from renewable sources will simply reduce the need to utilise the full capacity in the traditional system. It should be noted that this is the current stance of the industry, but as the planning period progresses, there is the potential for this to change. The areas that will see the most significant problems with regard to the electricity infrastructure are March and Wisbech. Only upgrades to the Primary substations in each area can be estimated at

this stage. Reinforcement of the 11kV or 400V networks may also be required but until more specific development proposals are available, this cannot be assessed.

17.15 At a district scale there are supply constraints on Low Pressure and Medium Pressure gas systems throughout the district, with upgrades likely to support all growth options. The introduction of new gas supply infrastructure in the District does not necessarily need to adversely impact the programme for each development, provided that National Grid are kept informed at every stage of the process. Without this level of communication, the lead in times for this infrastructure work could potentially delay the construction programmes.

17.16 Anglian Water has no concerns over the provision of water supply infrastructure to serve the proposed growth. Enhancements will inevitably be required to accommodate the additional demand, but the level of new infrastructure required would be dealt with on a site by site basis with the relevant developers and would be no more onerous than any other standard development. At this stage, there is no detail available about the likely improvement works required at each WwTW. Further modelling work and liaison with Anglian Water will be required to establish these details, which will all be considered as part of the recently commissioned Stage 2 Water Cycle Strategy.

17.17 Fenland District has significant areas which are at risk from fluvial and/or tidal flooding. Fluvial flooding is the most likely, with potential sources being the Great Ouse/Bedford River systems (southern part of District), the Middle Level drainage network and the North Level drainage system (northern part of District). However, tidal flood risk is seen along the corridor of the tidal River Nene. The major towns of Wisbech, Chatteris, March, Whittlesey and other established urban areas are located on “islands” of high ground above the flood plain (approx 4 to 10mAOD), reducing the flood risk in these isolated areas. The district is predominantly pump drained and relies of flood defences to minimise flood risk. The channels of the Middle Level system are at a higher level than the surrounding land and the topography is relatively flat, so if the flood defences along these channels are breached, the risk of significant flooding could extend to a wide area. In accordance with PPS25, new developments should not increase flood risk elsewhere. Therefore, the additional surface water runoff from the previously greenfield sites will need to utilise SUDS to limit the surface water discharge from the site to pre-development levels. Dependent on the exact location of the proposed developments, the underlying geology may steer any new developments towards attenuation as a form of SUDS for the management of surface water

Town specific conclusions and growth option rationale

17.18 The following table seeks to reflect the objectives associated with the four key settlements and set out the key reasoning for the selection of the Growth Option selected, drawing on the conclusions from the relevant chapters in this report.

Table 17.1: Wisbech conclusions

Wisbech – town-wide objectives	**Selected maximum growth option : 2**
Place making • Strengthen the town's role as key service centre • Progress development on key regeneration sites in town centre • Create a first class visitor destination building on excellent heritage assets • Make the most of distinctive town centre physical opportunities including: – Nene Waterfront – Wisbech Port	Wisbech is identified as one of the Strategic Market Towns in the district. Supporting both the greatest need, but also responding to significant potential in the town to play a key role in taking forward the strategic programmes set out in this document. The FNPV sets out some initial options for town centre redevelopment. The town is an area where masterplanning should be undertaken to assist and shape the realisation of the potential of the town.
Economic • Create a range of distinctive employment locations (waterfront /town centre / out of town) accommodating a range of business space products • Create a diverse economy by targeting new employment across a range of sectors and at different occupational levels • Build on the Port area as a hub for marine based leisure, trade and/or technology sectors • Strengthen the visitor economy and retail offer • Maximise the role of investment from MAC programme	On balance, Option 2 emerges as the preferred option. It is considered the most realistic in terms of job creation, based on analysis of the projected trend for sectors in Wisbech. Option 3 could lead to a requirement to create a level of employment opportunities that goes well beyond the latest projections. Wisbech has the furthest to travel, when compared to the other economic functional areas. Moreover, it is likely to go through significant structural change over the plan period, which will present significant challenges. With this change up-skilling the local population will be essential and challenging. As such, economic growth in this area should be tempered to provide net employment growth at a realistic level. Here then it is useful to compare the Fenland Neighbourhood Planning Vision options against the ONS growth option used by Oxford Economics. This suggests Option 2 (1044 jobs) supports a more realistic level of indicative growth than Option 3 (4091), when compared to the Oxford Economics /ONS growth projections, which suggest growth of around 2746 jobs. Option 1 (495 net additional jobs) appears to under represent the opportunity in the area. Growth should develop retail, commercial and residential capacity, along with its potential for development of its tourism and port related offers. Wisbech should also seek to enhance opportunities around inward investment through the MAC programme.
Social • Tackle deprivation and persistent worklessness in priority	An increase in jobs in Wisbech will need to be met with a focus on skills and training to ensure this ambitious target is met. In relation to the social infrastructure impacts of the growth

neighbourhoods • Improve education attainment and skills levels • Reduce health inequalities by targeting priority nieghbourhoods	options the recommendation here is that growth of the scale in Option 2, plus one of two Opportunity Zones that make up Option 3 (i.e. not both of them) works best in terms of projected capacity and demand, supporting full capacity at Thomas Clarkson and the provision of a new primary school. Option 3 is discounted, in part, as it is projected to require a 3 form entry expansion to Thomas Clarkson, which would take the total size beyond the Council's preference of 11FE (this need includes demand from the Wisbech St Mary cluster). Both Option 2 and 3 would also lead to the creation of a Primary Care Centre, which may be more suitable than expanding existing facilities. Open space requirements could be significant with this option and lead to a demonstrable improvement in the town's offer.
Environmental • Address congestion (Freedom Bridge and North/South movements) and town centre air quality • Enhancing accessible green space – Country park – Suburban parks – Formal play equipped areas – Natural greenspaces • Address flood risk • Respond positively to climate change	The transport and movement implications are less conclusive about the most suitable option. There are concerns about access arrangements to the opportunity zone at the east of the town (Option 1), as development could require significant off site access improvements. The western relief road concept would appear to offer only minor benefit to the town centre congestion, based on modelling work commissioned separately by FDC. However, in relation to surface water drainage and flooding, it is clear that Option 3, because of its location within Flood Zone 3, will require FDC to make a strong regeneration case to support an exceptions test approach with the EA. The opportunities for development set out in Option 1 and Option 2 would to need to be discounted as unsustainable, which is deemed unlikely. It is possible that a strong regeneration case can be made for development to the west of Wisbech (Option 3) after Options 1 and 2 are brought forward, based on access to the town centre, the potential role of the town centre in relation to such growth, opportunities for improving green space and opportunities to exploit the town's historic setting through the enhancement of routes to that growth.

17.19 Much will depend on the extent of the development within Options 1 and 2 coming forward and the pace of that development. The housing trajectories demonstrate that very significant and sustained levels of housing completions are required for all Wisbech opportunity zones to come forward within the plan period. It should be noted that these levels, detached as they are from any historic levels seen in Fenland are seen unlikely to be achieved even later in the plan period. As such, development to the west of Wisbech may only be possible to be commenced towards the end or beyond the plan period based on future assessments and limited availability of other suitable (less vulnerable) land for development. If Options 1 and 2 do not come forward at the levels envisaged, whether down to viability or other reasons, then the southernmost

element of Option 3 should be considered in relation to providing the housing growth required within Wisbech to bring about physical, social and economic regeneration.

Table 17.2: March conclusions

March town-wide objectives	Selected Growth Option : 2
Place Shaping • Strengthen role in settlement hierarchy as service centre for hinterland • Enhance the physical appearance of the town centre • Exploit potential of River Nene in place making • Exploit March's advantageous location at the heart of Fenland-a well connected town, with good links to Peterborough and London	March town centre is identified as having significant opportunity for change. Once a preferred option is agreed, a comprehensive town centre masterplan should be considered to maximise the potential of the town to meet what should be increased retail, employment, residential and leisure demand within the centre.
Economy • Strengthen the retail and visitor economy to capture more income • Build on existing strengths and encourage and support new rail based engineering and other advanced manufacturing/precision engineering employment • Position March as a high quality employment location driven by growth in business and professional services, ICT, Creative Industries and lifestyle business.	Growth Option 2 emerges as the preferred option for March, representing the largest scale of development in terms of homes and jobs of any settlement. In economic terms the assessment highlights March's broader sector base and good connections as key to providing a basis for employment growth linked to this housing growth. The economic forecasts suggest that the extent of the decline of the manufacturing sector will be smaller within March, suggesting that the challenges associated with local structural change of the employment base will be less severe compared to Wisbech, and the area is still expected to benefit from significant employment growth within transport, logistics, and business services. Furthermore, unlike Wisbech, while growth of the Business Services sector is still dependent on lower value sub-sectors, business services growth is more balanced across high and low value sectors than Wisbech suggesting that there may be greater opportunities for moving up the value chain in this location. This is further supported by the local IMD scores. In terms of shaping growth in Fenland, March seems better placed to accommodate additional growth across the sectors. As such, the assumed level of 2180 jobs projected in Option 2 of the Fenland Neighbourhood Planning Vision options appears the most reasonable level of growth. While this is more than the projected 1513 jobs derived from the ONS growth assumptions in the Oxford Economics work, the structure of the economy and its sounder economic base to move forward from provides the basis to plan for more housing to support further economic

	growth in this functional economic area. Fenland Neighbourhood Planning Vision Option 1 (592 net additional jobs) would under represent the opportunity in the area.
Social • Tackle deprivation and worklessness in March East • Improve education attainment and skills levels • Reduce health inequalities in east and west of town • Consider redevelopment of George Campbell leisure centre	Option 1 is supported by the social infrastructure work making efficient use of existing facilities. While Option 2 could lead to the need for a 2 form expansion of the secondary school, which would take it beyond CCCs preference of 11 forms of entry per school, Option 3 would require 3 additional forms of entry. As such, Option 2 leads to a lesser capacity issue in the town. Option 1 does not lead to capacity issues, but as noted above, may not lead to significant levels of growth, which could help drive improvements to wider deprivation and worklessness outcomes. The ability of the projected growth to support the redevelopment of the George Campbell Leisure Centre will need to be considered in Stage 3.
Environmental • Reduce heavy goods movements through town • Opportunity for enhancing accessible green space – Country park – Accessible natural greenspaces south of the town centre – Formal play equipped areas (town centre fringe & south eastern surburbs) • Respond positively to climate change	March is recommended as the location for the country park, based on the scale of proposed growth in this area and its central location within the district. Further work required in terms of feasibility and specific location. In transport and movement terms it is not possible to draw conclusive findings without more detailed modelling in relation to the housing and employment growth.

17.20 The proposed settlement hierarchy positions March, along with Wisbech, as settlements that have the potential to grow significantly to support the emerging vision for Fenland and their specific town-wide objectives. The Stage 2 work supports this approach. Specifically, March is identified as having the potential to take on the highest level of growth. However, this growth must be balanced with support for strong growth in Wisbech, which has both the need and the potential to expand in support of stated objectives.

Table 17.3: Chatteris conclusions

Chatteris town-wide objectives	**Selected Growth Option : 3**
Place Shaping • Retain existing character as small market town , with key role in settlement hierarchy • Higher-end employment location reinforced by high quality housing offer and proximity to Huntingdonshire, Ely and Cambridge	Option 3 is supported for Chatteris. It is vital that housing growth is matched with employment growth in Chatteris to check levels of out-commuting.
Economic • Location for accommodating knowledge 'overspill' • Build on the existing high value engineering (e.g. Metalcraft) and skills centre • Support South Fens Business Park expansion (Phase II) – a knowledge economy hub • Create 'talent attractor' neighbourhoods	Within the Chatteris economic area there is clearly strength in wholesale and distribution, which provides the greatest employment opportunities for the area. Moreover, the area has the largest projected growth in R&D and research, clearly linked to the South Fens Business Park. Like Whittlesey, the economic area contains areas that are ranked among the top quarter nationally for employment, education, and living environment and there may be opportunities for linking its stronger labour market to the emerging higher value business sectors in March. As such, in economic terms Fenland Neighbourhood Planning Vision Option 3 (727 net additional jobs) is selected, with Option 1 resulting in a loss of 25 jobs and Option 2 (239 jobs) under representing the economic opportunity in the area. This approach is broadly supported by the Oxford Economics sector analysis and ONS based growth assumptions, which indicated 631 jobs. The town wide objectives for Chatteris set out an economic rationale based on building on the high value engineering and metal craft skills, whilst creating a competitive location for knowledge 'overspill'. The option testing supports this approach. .
Social • Improve education and skills • Improved leisure facilities and social infrastructure	The level of growth in Option 3 also supports the most efficient use of existing facilities. The high growth option is the only option that is predicted to sustain the current level of demand at the local secondary school, which should allow the current education levels to be maintained. This growth level may also allow a new 2FE primary school to be built which would offer opportunities for improved education.

Environmental • Opportunity for enhancing accessible green space – Potential for new country park – Accessible natural greenspace – Park & Gardens – Outdoor sport facility in North • Respond to climate change	As noted in the transport analysis, ensuring good links between homes and jobs will be an important consideration. Access concerns for sites identified within Options 2 and 3 will need to be addressed. While Chatteris is not considered the most suitable site for the Country Park, there are significant opportunities with this level of growth to create and improve open space to have a town-wide significance, including outdoor recreation and sports facilities

Table 17.4: Whittlesey conclusions

Whittlesey town-wide objectives	**Selected Growth Option : 2**
Place Shaping • Retain existing character as small market town , with key role in settlement hierarchy • Strengthen role as a vibrant service centre to capture more spend from out commuters living locally	Option 2 is proposed for Whittlesey. This is based on the economic assessment assumption that this level of housing development would lead to approximately the same level of economically active population. The working assumption is that retaining a similar level of working age population would therefore not impact upon commuter based congestion at peak-times. This assumption would require further detailed assessment as it is fundamental to the selection of Option 2 which is led by concerns over the impact of growth on the current road infrastructure and connections.
Economic • Improve connections between town and employment areas • Utilise industrial land assets to provide more employment locations • Strengthen retail and amenity offer in town centre • Prioritise place making and environmental improvements to	The Whittlesey economic area includes some of the strongest performing areas for education, employment, and living environment. However, as it predominantly acts as a dormitory location for Peterborough many of these strengths do not benefit the broader Fenland economy and labour market. One of the key opportunities moving forward is to improve the economic linkages between the labour market within this area and the employment opportunities in other parts of the district. Based on the ONS growth assumptions and Oxford Economics sector analysis, 800 additional jobs could be assumed by 2031 in this area. However, when compared to the Fenland Neighbourhood Planning Vision options this appears difficult to achieve in terms of related housing to meet these jobs. In economic terms, based on

reinforce the town centre offer	the assumptions in this chapter, there is a strong case for Option 3 of the Fenland Neighbourhood Planning Vision options (277 jobs). It should be noted that as with all economic areas, this is based on a 10% reduction in out-commuting. If this was reduced further, then more jobs would be projected in the economic area. This would need to be based on a policy and strategic direction of encouraging more employers to link in with the skills base of the town's existing and future residents. Fenland Neighbourhood Planning Vision Option 1 is projected to represent a reduction in the proportion of economically active residents However, it is the existing transportation concerns that dictate the selection of Option 2 as the preferred option for Whittlesey. Option 2 is required simply for Whittlesey to retain its current position.
Social • Improve education and skills	Retaining the level of working age population in the town is important to its sustainability in terms of the economy and also the existing social infrastructure. Option 2 is more likely to support the existing primary school and GP provision in the town than Option 1, which projects an increasing level of capacity of the plan period. All growth scenarios are predicted to result in a reduction in secondary school demand. Growth at a lower level poses the greatest potential issue in relation to increasing spare capacity at Sir Harry Smith Community College.
Environmental • Localised town centre congestion • Opportunity for enhancing accessible green space – Suburban park – Outdoor sport facilities in north & east – natural playspace in town centre – formal play equipped area in north and east • Respond to climate change	The main concern is transport infrastructure, including congestion at level crossings. Furthermore, there is a clear need to support improved services from the train station to support a reduction in road use from the significant number of residents that commute out of the town.

The Local Service Centre and Clusters

17.21 Growth in the proposed Local Service Centre (Manea) and the Local Service Clusters (Doddington & Wimblington and the Wisbech St Mary cluster) is proposed at the level which supports the existing social infrastructure. For further growth to be possible in these areas, strategic infrastructure, including improved public and community transport will be vital. Increasing levels of growth in these areas then is possible, but is likely to be more challenging than in the urban areas. For Option 3 there is an additional allocation of housing that is based on the assessment of existing capacity within primary schools. This provides an indication of the level of growth required to retain a fully occupied school within the context of projected demographic change in the cluster. This reflects the need for the level of growth options not to prejudice the sustainable development of settlements outside the key settlements in order to maintain social infrastructure.

Table 17.5: Housing and employment growth for use in Stage 3

Settlement cluster	**Low growth (homes)**	**High growth (homes)**	**Low growth (jobs)**	**High growth (jobs)**
Wisbech cluster	4328	5028	495	1044
Wisbech St Mary cluster	309	550		
March cluster	3395	5445	592	2180
Doddington/ Wimblington Cluster	170	461		
Chatteris cluster	1121	2371	-25	239
Manea cluster	162	275		
Whittlesey cluster	1230	1930	-239	62
Total	**10715**	**16060**	**823**	**3525**

Next Steps

17.22 The Stage 3 work will include:

- Costing the high and low growth options
- Providing advice on approach to CIL and high level viability work in relation to CIL
- The creation of an action plan of interventions and projects to take forward the vision, based on the strategic programmes, with identified partner actions.

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The Johnson Building, 77 Hatton Garden
London EC1N 8JS United Kingdom

www.aecom.com