EDAW | AECOM

Norwich Growth Area – Infrastructure Need and Funding Study

Final Report

December 2007

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Section 1

INTRODUCTION

1. INTRODUCTION

1.1. In April 2007 EDAW were commissioned to undertake an Infrastructure Needs and Funding Study on behalf of the Greater Norwich Development Partnership (GNDP). The GNDP brings together Norwich City Council, Broadland District Council, South Norfolk District Council, and Norfolk County Council. The Broads Authority and the East of England Development Agency also provide support to the Partnership and GO-East act as advisors.

1.2. The extent of proposed change in the Norwich area is exciting and challenging. This commission is essential to ensure that the growth is planned and managed in a sustainable way, achieving the objectives of 'Smart Growth'. Taking a holistic view of the potential of growth in the Norwich area the study provide a strategic assessment of the infrastructure needs, both social and physical, in light of strategic predefined growth scenarios. The study then explores potential models for delivering and funding that required infrastructure.

1.3. There is no definitive boundary for the Norwich area, and for modelling purposes in this study, the Norwich Policy Area has been assumed as the study area. The Norwich Policy Area is the urban area of Norwich, the first ring of surrounding villages, the market town of Wymondham and the town of Long Stratton.

1.4. This report is structured as follows:

SECTION 1 Introduction

- This section identifies the hypothetical Growth Scenarios identified by the Greater Norwich Development Partnership, the level of housing growth across the Norwich Policy Area and the consequent population growth

SECTION 2 Infrastructure Requirements

- The housing and population growth across the study area will place significant pressure on existing infrastructure. This section identifies the future demand for transport, social, economic and utilities 'hard' and 'soft' infrastructure and the phasing necessary to ensure that development is delivered adequately and on time.

SECTION 3 Housing Growth Trajectory and Risk Analysis

- Following the housing growth assumptions initially supplied by the GNDP at the outset of this study, the GNDP decided that definitive housing trajectories should be developed to inform their Programme of Development. During this process and from the consequent risk analysis, it became clear that Growth Scenario 2 was not deliverable as identified in Sections 1 and 2 of this report. The analysis identified that the total quantum of housing growth in Growth Scenario 1 was achievable, but not with the large

growth locations as originally identified. This chapter identifies a deliverable Housing Trajectory and identifies why Growth Scenario 2 is undeliverable in the given timescales.

SECTION 4 Funding and Delivery

- The final section of the report primarily focuses on Growth Scenario 1, as the more deliverable of the two Growth Scenarios. Using EDAW's Infrastructure Delivery Model, the anticipated total cost of additional strategic and local infrastructure is calculated, as well as potential funding sources and the resulting funding gap. Potential Delivery Vehicles to help close this gap are explored.

CONTEXT FOR GROWTH

1.5. Forming the regional administrative centre and county town of Norfolk, Norwich has by far the greatest economic, social and cultural assets in Norfolk and exerts considerable influence over the surrounding settlements. Norwich supports 43% of the county's jobs, daily commuting increases the population by 133% and Norwich has the highest density of jobs per working age population of any local authority in the UK that is not in Greater London. Reflecting the continued recent growth of Norwich, it has been appointed New Growth Point status and identified as a regional focus for housing, employment, retail, leisure, cultural and educational development.

1.6. Norwich is ranked 8th as a UK shopping destination and is now the most advanced leisure destination in the region. The city has a thriving evening economy, arts and visitor attractions, and its historic centre is an attractive hotspot for tourists. The environmental assets of the area surrounding Norwich are great as it lies at the gateway to the Broads, a unique wetland asset that contributes to the area's recreational offer. Cumulatively these assets help underpin sustainable growth and increase the demand for housing and jobs.

1.7. Norwich has a much younger population than the rest of Norfolk which, in part, reflects the large influx of students to the academically acclaimed University of East Anglia. This should be attractive to potential inward investors and is indicative of economic development and change.

1.8. The future picture for Greater Norwich is bright, as is the potential for sustainable change. Social and physical infrastructure is the framework through which sustainable development occurs. Successful growth of Norwich relies heavily on the careful planning and timely delivery of its infrastructure needs.

Growth Point Status

1.9. Growth in Norwich is a well established policy objective. Norwich has been identified by Communities and Local Government as one of 29 New Growth Point areas across England. This means that aside from the Sustainable Communities Plan Growth Areas, Norwich will become one of the fastest growing areas in the East of England and the fastest growing in Norfolk. National New Growth Point status should also attract significant levels of grant and regeneration funding from Central Government and support the funding case for delivering the Norwich Area Transportation Strategy. This growth, including 33,000 new residential

dwellings and 35,000 new jobs in the period 2001–2021 as set out in the East of England Plan, will generate a sizeable amount of developer contributions for infrastructure and services allowing for an innovative pooling of contributions and a well planned programme of infrastructure delivery.

Regional Spatial Strategy (RSS): Draft East of England Plan

1.10. Regional Spatial Strategies set out the Government's planning and transport policy for each region for a 15-20 year period. The RSS provides a framework for determining planning applications, as well as both Local Development Documents and Local Transport Plans.

1.11. The East of England Regional Assembly (EERA) prepared a draft revision to the first East of England Plan (RSS14) for consultation in December 2004. An Examination in Public (EIP) was held between November 2005 and March 2006 to assess the robustness of the Draft Strategy. The independent panel that conducted the EIP reported its recommendations for improvement in June 2006. The Secretary of State from Communities and Local Government has since reviewed the panel report and published proposed changes. A review of consultation changes was completed at the end of March 2007 and the finalised RSS14 is expected to be published in early 2008.

1.12. The East of England Plan identifies Norwich as a New Growth Point and the Norwich Policy Area as a Key Centre for Development and Change, building on its existing strengths. The Norwich area benefits from the city's status as a major economic driver for the county, and a visitor destination of international importance. The Plan puts forward the key principles to be taken forward as part of a joint LDD process prepared by Norwich, South Norfolk and Broadland Councils:

- To increase the number of dwellings in the Norwich Policy Area by 33,000 net additional dwellings in the period 2001-2021
- To achieve a major shift in emphasis across the Norwich area towards travel by public transport;
- To support and enhance the retail, leisure and cultural role of Norwich and its image as a "contemporary medieval city";
- To promote the city as a destination for tourists and visitors as a gateway to the wider rural and coastal areas of the county and the Broads; and,
- To address the deprivation concentrated in parts of the urban area.

1.13. The Plan also sets out guidelines for employment growth in the Norwich Policy Area, which should focus on:

- The city centre, particularly media and creative industries, finance and insurance, and information communication technologies;
- Thorpe St. Andrew and Longwater, Costessy (business park use);
- Colney/Cringleford (significant expansion of the research park reserved for research and development, higher education, and hospital/health related uses);
- Norwich Airport (uses benefiting from an airport-related location); and,
- Wymondham/A11 corridor (high-tech development and rail-related uses).

1.14. RSS14 identifies Norwich City as the major focus for retail, culture, leisure and education in Greater Norwich and accordingly, expects growth in these sectors to focus on the city centre. Outside of the strategic sites highlighted above, smaller scale employment sites should focus in the surrounding market towns to support local employment and cluster development.

Regional Economic Strategy for the East of England

1.15. A Regional Economic Strategy (RES) sets out the Regional Development Agency's (RDA) long-term vision for the sustainable economic development of the region over a 15-20 year period. The RES provides a framework for different organisations to work with businesses, communities and individuals to improve the region's economic performance and local quality of life. The strategies adopt a strategic approach and make choices about the most important economic development issues facing each region.

1.16. The East of England Development Agency (EEDA) produced the first RES for the East of England in 1999. The initial revision of the strategy was completed in 2001 and a second revision was completed in November 2004, following consultation during the previous summer. The latest strategy was published in December 2004, alongside supporting documentation on the implications of the strategy on rural communities, Growth Areas and the public, private and voluntary sectors.

1.17. Greater Norwich has a diverse economic base and strong presence of such sectors as biotechnology, food processing and specialised engineering. It also has a strong network of service-based activities for example in finance, insurance and business services. The area is vibrant and attractive location for business and its reach in terms of retail, historic and heritage attractions is of regional significance. Norwich International Airport is an important driver for local business development. The Strategy puts forward the following key principles to be taken forward as part of a joint LDD process prepared by Norwich, South Norfolk and Broadland Councils:

- Reinforce the role of Norwich city as a regional centre by supporting its service-based sectors, redeveloping brownfield opportunities and supporting links to its rural hinterland;
- Strengthen productive interaction between research institutes and business through the availability of business land and premises, for example at Norwich Research Park;
- Realise the potential of cluster development along the A11 corridor, particularly the biotechnology sector, with links with the Cambridge sub-region;
- Support the urban renaissance of the city and develop the economic potential of the rural hinterland through workspace creation and re-use;
- Tackle the issues caused by the concentration of deprivation in Norwich and harness the economic growth potential of its deprived urban neighbourhoods;
- Facilitate the sustainable expansion of Norwich International Airport and work in conjunction with the airport operator on route development options; and,
- Establish appropriate sub-regional partnership mechanisms, based upon existing networks and examining the advantages of partnership links to Great Yarmouth and Lowestoft.

THE GROWTH SCENARIOS

1.18. The objective of this study is to identify the infrastructure required as a result of development set out in the draft East of England Plan (RSS14). To facilitate this, the Greater Norwich Development Partnership (GNDP) have identified a series of hypothetical growth options which accept the growth assumptions identified in the RSS and seek to allow the residential and employment growth targets to 2021 to be achieved.

1.19. At present a high level of urban brownfield growth is being achieved and urban brownfield sites will continue to play a key role in the future growth of the Norwich area. The development of brownfield sites is the first priority in all development, including the potential growth scenarios defined below. Maintaining growth in the Norwich area on brownfield sites as far as practicable will consequently require a strong claim on funding and resources in the future.

Future Development Patterns

1.20. For the purposes of this study only, the two Growth Scenarios are major development areas that accommodate a significant proportion of the housing target set out in the RSS. These growth scenarios are proposed alongside existing completions since 2001, sites with existing planning permissions, sites allocated in the adopted Local Plans, and other sites with potential for residential development. These sources of housing growth outside of the two growth scenarios make up the majority of the RSS housing target.

1.21. It is important to note that there is no commitment to a particular development pattern at present and it is envisaged that this study, along with others commissioned as a result of the designation of Norwich as a New Growth Point, will help inform potential development patterns. Therefore this study will assess social

and physical infrastructure in a sufficiently generic way that it can be adapted to apply to any relevant development, residential or commercial, above a certain threshold. In order to apply the study to a real situation though, two growth scenarios have been set by the GNDP. It should be noted that the use of these scenarios are solely for the purpose of adding value to the study and do not imply a policy commitment by any of the Local Planning Authorities to this pattern of development.

Growth Scenario One

1.22. Growth scenario One suggests the following broad pattern of development to 2021:

- A major development of around 7,500 dwellings in the form of an Urban Extension to the north east of Norwich in Broadland. For the purposes of this study, the development is assumed to be bounded to the east by the railway line to Wroxham and to the west by North Walsham Road; and,
- An extension to Wymondham in South Norfolk, consisting of 3,500 dwellings.

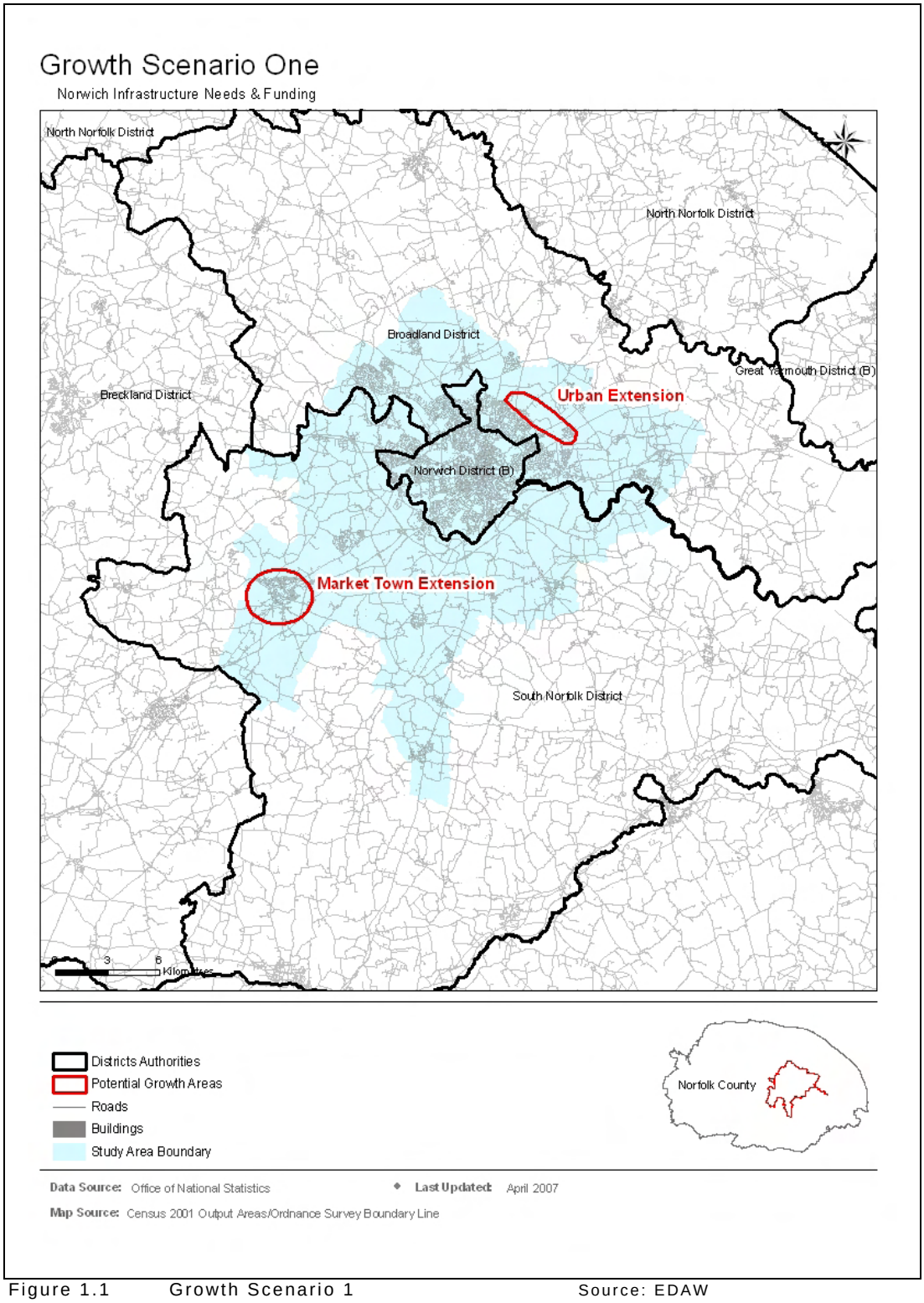


Figure 1.1 Growth Scenario 1 Source: EDAW

Growth Scenario Two

1.23. Growth scenario two suggests the following broad pattern of development to 2021:

- A new village of 10,000 dwellings to the west of Stoke Holy Cross and north east of Mulbarton in the South Norfolk District.

1.24. For the purposes of this study, Growth Scenario 2 has been purposefully located in an area with negligible amounts of existing infrastructure. This allows a useful comparison to be made with growth scenario 1, which has existing infrastructure located in the local area.

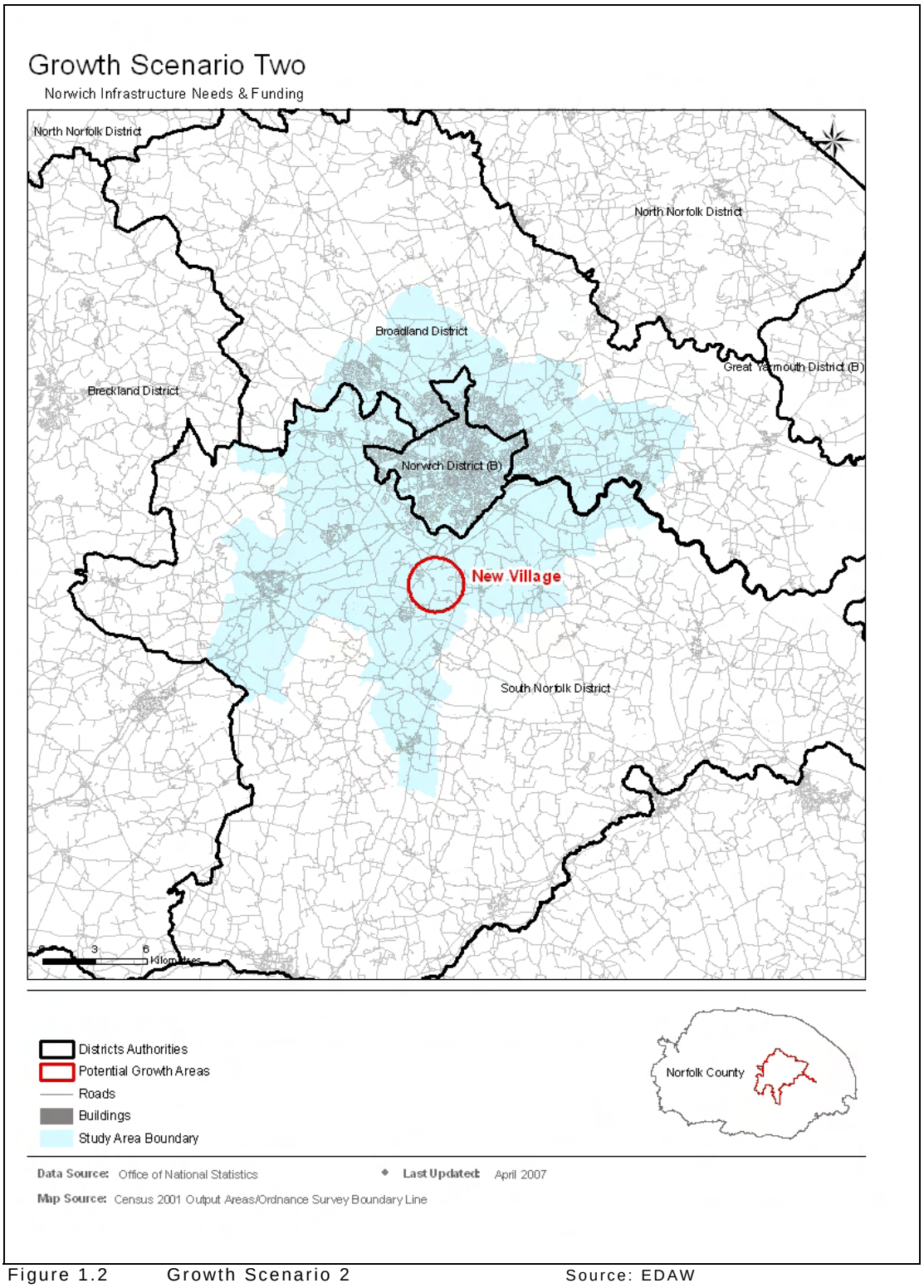


Figure 1.2 Growth Scenario 2 Source: EDAW

HOUSING GROWTH

1.25. The focus of this study is to assess in detail the infrastructure and delivery need to support planned growth to 2021, assuming current RSS growth rates are reached. The minimum housing target for the Norwich Policy Area is 33,000 dwellings. Given the high level of land either allocated or identified as suitable for residential development in the study area, the RSS target has been exceeded in the instance of both Scenarios. This approach is also well advised, given the recent proposals in the Housing Green Paper (July, 2007) to increase the growth rate of homes in the UK, which will be partly achieved through higher housing targets in New Growth Points like Norwich.

1.26. Scenario 1 assumes the extension of Wymondham in South Norfolk by 3,500 additional dwellings to 2021, and the extension of the urban area of Norwich by 7,500 additional dwellings in Broadland. The residential growth for Scenario 1 to 2021 is assumed to be as follows:

District	Completions 2001-06	Existing Commitments 2007 - 2021	Urban Capacity 2007 - 2021	Growth Extensions 2007 - 2021	Total Units 2001 - 2021
Broadland NPA	1,093	1,725	344	7,500	**11,362**
Norwich	3,490	5,987	5,000	0	**15,177**
South Norfolk NPA	1,639	4,543	691	3,500	**11,073**
TOTAL	**6,222**	**12,255**	**6,035**	**11,000**	**35,512**

Table 1.1: Breakdown of new housing development to 2021: Scenario 1 Source: GNDP

1.27. Scenario 2 assumes the construction of 10,000 additional dwellings in South Norfolk in the form of a new stand-alone village. The residential growth for Scenario 2 to 2021 is assumed to be as follows:

District	Completions 2001-06	Existing Commitments 2007 - 2021	Urban Capacity 2007 - 2021	Growth Extensions 2007 - 2021	Total Units 2001 - 2021
Broadland NPA	1,093	1,725	344	0	**3,862**
Norwich	3,490	5,987	5,000	0	**15,177**
South Norfolk NPA	1,639	4,543	691	10,000	**17,573**
TOTAL	**6,222**	**12,255**	**6,035**	**10,000**	**34,512**

Table 1.2: Breakdown of new housing development to 2021: Scenario 2 Source: GNDP

1.28. This study will also take an outline view of infrastructure and delivery need looking beyond the EEP to 2031, based on anticipation of an early review of the EEP and in view of PPS3. The following development is assumed between 2021 and 2031:

District	Planned Growth 2021 - 2031
Broadland NPA	8,000
Norwich	2,000
South Norfolk NPA	8,000
TOTAL	**18,000**

Table 1.3: Breakdown of new housing development 2021-2031 Source: GNDP

POPULATION GROWTH

1.29. The housing data identified above sets out the assigned housing growth to 2021 and 2031. From this data the population change analysis identifies the future population characteristics within the Norwich Policy Area arising from both changes in the existing population and the nature of new populations moving into the area. Accounting for demographic change in the existing population helps to ensure that investment resulting from growth reinforces and enhances the prosperity of existing urban areas.

1.30. The population levels across the Norwich Policy Area districts in 2006 are anticipated to be as follows:

Anticipated Population in 2006	Broadland	Norwich	South Norfolk
Total Population	**81,853**	**125,273**	**54,187**
Total Children	15,292	20,378	10,636
Early Year Aged (0 - 3)	3,148	4,695	2,031
Primary School Aged (4 - 10)	6,293	8,388	4,329
Secondary School Aged (11 - 16)	5,851	7,294	4,277

Table 1.4: Anticipated Total Population in 2006 Source: Norfolk County Council

Population Projections to 2021

1.31. Population forecasts for the Norwich Policy Area have been generated from Chelmer model outputs for the local authority areas of Broadland, Norwich and South Norfolk to 2021 provided by Anglia Ruskin University. It was agreed that the Chelmer outputs would be used for this purpose as they encompass population, households and dwellings and are consistent with the dwelling requirements as set out in the RSS. While the Chelmer figures are the most recent comprehensive projections available they are somewhat dated – they are 2001-based and take no account of known demographic change to 2006. These particular outputs were originally produced in order to illustrate the broad demographic effects of the RSS dwelling requirements for all local authorities in the Region up to 2021 rather than being intended as a basis for detailed service planning.

1.32. These population forecasts have been used as a basis for apportioning demographic change in the Broadland and South Norfolk parts of the Policy Area, fitted to the future dwelling numbers of each of the Growth Scenarios, and extended to 2031. This work was carried out by the Demography and Information Team at Norfolk County Council. An explanation of the methodology is included in the Appendix of this report, setting out in detail how the population figures in the following tables have been calculated.

Anticipated Population Outputs to 2021	Scenario 1	Scenario 2
Total Population	**299,332**	**298,030**
Total Children	46,113	45,978
Early Year Aged (0 - 3)	10,546	10,502
Primary School Aged (4 - 10)	18,987	18,920
Secondary School Aged (11 - 16)	16,580	16,556

Table 1.5: Anticipated Total Population following new housing development to 2021

Source: Norfolk County Council

1.33. Tables 1.6 and 1.7 show the population projections to 2021 for Scenario 1 and 2 by District:

Scenario 1			
Anticipated Population Outputs to 2021	**Broadland**	**Norwich**	**South Norfolk**
Total Population	**96,320**	**134,802**	**68,210**
Total Children	15,147	19,637	11,330
Early Year Aged (0 - 3)	3,186	5,119	2,242
Primary School Aged (4 - 10)	6,152	8,338	4,497
Secondary School Aged (11 - 16)	5,809	6,180	4,591

Table 1.6: Anticipated Total Population following new housing development to 2021: Scenario 1

Source: Norfolk County Council

Scenario 2			
Anticipated Population Outputs to 2021	**Broadland**	**Norwich**	**South Norfolk**
Total Population	**87,202**	**134,802**	**76,025**
Total Children	13,713	19,637	12,628
Early Year Aged (0 - 3)	2,884	5,119	2,499
Primary School Aged (4 - 10)	5,570	8,338	5,012
Secondary School Aged (11 - 16)	5,259	6,180	5,117

Table 1.7: Anticipated Total Population following new housing development to 2021: Scenario 2

Source: Norfolk County Council

Population Projections to 2031

1.34. Although the focus of this report is the development of homes between 2001 and 2021, proposals for additional dwellings to 2031 have relevance in relation to social infrastructure. Consideration of the long-

term development scenario (i.e. development between 2001 and 2031) enables a full appreciation of the quantum of demand arising at different stages and therefore, an understanding as to where the appropriate trigger point for a new facility might occur. The likely total population to 2031 is set out below:

Anticipated Population Outputs to 2031	Scenario 1	Scenario 2
Total Population	**323,963**	**322,670**
Total Children	50,056	49,925
Early Year Aged (0 - 3)	11,370	11,326
Primary School Aged (4 - 10)	20,578	20,512
Secondary School Aged (11 - 16)	18,108	18,087

Table 1.8: Anticipated Total Population following new housing development to 2031

Source: Norfolk County Council

1.35. Tables 1.9 and 1.10 show the population projections to 2031 for Scenario 1 and 2 by District:

Scenario 1			
Anticipated Population Outputs to 2031	**Broadland**	**Norwich**	**South Norfolk**
Total Population	**107,682**	**137,143**	**79,138**
Total Children	16,933	19,977	13,145
Early Year Aged (0 - 3)	3,561	5,207	2,601
Primary School Aged (4 - 10)	6,878	8,483	5,218
Secondary School Aged (11 - 16)	6,494	6,287	5,326

Table 1.9: Anticipated Total Population following new housing development to 2031: Scenario 1

Source: Norfolk County Council

Scenario 2			
Anticipated Population Outputs to 2031	**Broadland**	**Norwich**	**South Norfolk**
Total Population	**98,352**	**137,143**	**87,175**
Total Children	15,467	19,977	14,479
Early Year Aged (0 - 3)	3,253	5,207	2,865
Primary School Aged (4 - 10)	6,282	8,483	5,747
Secondary School Aged (11 - 16)	5,932	6,287	5,867

Table 1.10: Anticipated Total Population following new housing development to 2031: Scenario 2

Source: Norfolk County Council

Section 2

INFRASTRUCTURE REQUIREMENTS

2. SOCIAL INFRASTRUCTURE

2.1. The level of growth planned for Norwich places enormous pressure on the existing area, both in terms of natural and manmade resources. One element of ensuring that the level of housing planned for the area is delivered in the form of healthy and sustainable communities is to making sure that the right quantity, quality and type of social infrastructure is planned from the outset. Communities with insufficient schools or other facilities will not be self sufficient and successful places to live or work. Equally, an over provision may lead to empty or underused facilities that are a drain on funding and impair the perception of a thriving and vibrant local community.

2.2. This report uses the EDAW Social Infrastructure Framework Model (EDAW SIF Model) to calculate the emerging demands for a range of social infrastructure types. For the purpose of this exercise, social infrastructure is defined as the following services and facilities:

- Education: Early Years Facilities; Primary Schools; Secondary Schools.
- HealthCare: GPs; Dentists; Acute Care; Mental Health Care.
- Community Facilities: Community Centres; Libraries.
- Leisure and Recreation: Sports Courts; Swimming Pools.
- Open Space: Allotments; Informal and Formal Open Space, Children's Play Space;
- Emergency and Essential Services: Police Officers; Fire Stations; Ambulance services.

2.3. Norwich benefits from a reasonably good level of social infrastructure which will provide a strong base on which to serve the new population. Deficits in provision do exist in some services and the new provision that will need to be made to serve the new communities provides an opportunity to address any current issues of quality and/or access.

2.4. Given the emerging focus that is being placed upon providing 'joined up' facilities and also an increased emphasis on preventative rather than a reactive emergency services with more direct community involvement, it is likely that the distinction between the separate social infrastructure components will become increasingly blurred.

CALCULATING SOCIAL INFRASTRUCTURE DEMAND

2.5. To inform this analysis, a number of assumptions on standards have been made from a review of local/strategic policy and from best practice guidance. These assumptions are summarised in Appendix D.

2.6. The assessment assumes that the population outputs identified earlier in this report are delivered in full. The EDAW SIF Model details the total predicted social infrastructure demand for both existing and new populations at 2021 and 2031. The actual, or where necessary modelled, existing supply of social

infrastructure at 2007 is then discounted from the total infrastructure demand to calculate the net additional demand arising from the population changes for the period 2007 – 2021 and from 2021 – 2031.

LOCAL AND REGIONAL GUIDANCE

2.7. Before identifying the social infrastructure demand at 2021 and 2031 it is useful to briefly highlight the level of local and regional consensus for achieving high social infrastructure standards. There are a multitude of local and strategic documents that promote the creation and protection of a sustainable community across the Norwich Policy Area, through the high provision of social infrastructure. At the county level, the Norfolk Community Strategy for 2023 recognises the importance of making Norfolk a place:

- Where individuals enjoy healthy lifestyles and have equitable access to high standards of health and social care;
- Where individuals in communities feel safe;
- With excellent educational attainment and opportunities for learning at all stages throughout life;
- Where individuals from all backgrounds can play an active part in community life; and,
- That is renowned for its culture, creativity and spirituality.

2.8. At the local level, the South Norfolk Community Strategy (2004 – 2007) sets the following targets for the future of South Norfolk:

- Where public services are excellent and provide good value for money;
- A healthier and even safer place to live where the crime levels and 'fear of crime' are low;
- An area of high learning expectations and achievement, meeting the needs of individuals and the economy;
- A place where the environment is protected and respected, quality housing is available to all and it is possible to travel around using varied forms of transport; and,
- An area that provides cultural and leisure opportunities that improve the life and well being of residents and visitors.

2.9. The Sustainable Community Strategy for Norwich highlights a number of themes to help guide future development in the city towards sustainable levels of social infrastructure. These include developing Norwich to create a city of:

- Safe and Strong Communities;
- Health and Well-being;
- Learning and Personal Development;
- Culture and Creativity; and,
- Environmental Excellence.

2.10. The Broadland Community Action Plan 2006 – 2009 emphasises the importance of feeling safe, having easy access to facilities and services, enjoying good health and living in an area where the natural environment is celebrated. The importance of adequate social infrastructure that is of a high quality and highly accessible to local populations in achieving these aims can therefore not be underestimated.

APPROACH

Education

2.11. Population forecasts for the Norwich Policy Area have been generated from Chelmer model outputs for the local authority areas of Broadland, Norwich and South Norfolk. These have been used, in conjunction with 2001 Census data, as a basis for apportioning demographic change in the parts of Broadland and South Norfolk that are in the Norwich Policy Area, fitted to the future dwelling numbers in each of the Growth Scenarios, and extended to 2031.

2.12. The Chelmer outputs do not take account of subsequent information about demographic change between the base year (2001) and 2006. Norfolk County Council's recent detailed shorter term school age forecasts to 2012 suggest that the Chelmer-based outputs underestimate school age children in this area. For further information on the Chelmer Model, refer to paragraph 1.31.

2.13. NCC school pupil forecasts take account of more recent base data, including the numbers of children actually in school, local knowledge and detailed house building assumptions not tied to RSS targets. We strongly suggest that more work needs to be done in this area to identify the reasons for the differences between these two sets of figures and produce a robust set of long-term projections. We understand that Norfolk County Council are currently in the process of revising long-term population projections, and this will give a firm basis for more detailed work on school age forecasts. For further information on the Chelmer Model, refer to paragraph 1.31.

2.14. The Chelmer derived child yield analysis allows an approximate broad estimate of education demand to be calculated by taking the currently estimated child population and applying further assumptions, such as a detailed age breakdown and the size of year-groups. Given the uncertainties this should probably be considered as a low level scenario for education demand. It should also be noted that our analysis provides a global picture across the area and across district components of the area rather than a detailed assessment of need related to particular growth locations

Early Years and Primary School Requirements

2.15. Since the age ranges for each type of Early Years and Primary School facility differ from those followed by the EDAW SIF Model, a revised approach has been taken. The recommended quanta of Early Years and Primary School places in 2007 have been calculated based on Chelmer Model child yield estimates. The actual level of current capacity is then added to supply in both cases. This allows us to identify the

equivalent net additional demand for Early Years and Primary School facilities by 2021 and 2031, in light of current capacity levels.

2.16. Accessibility is a key factor in Primary School and Early Years provision and so the local sensitivity analysis in this report takes the district-wide outputs of the EDAW SIF Model and tests key expected areas of growth within each district and Growth Scenario. The current target of a 5-10 minute walking time between schools and residential areas will mean that new facilities will need to be provided in locations currently lacking any existing schools, regardless of capacity at other schools in neighbouring areas.

2.17. Many schools will be amalgamated in late 2007 and in these cases the schools that will soon cease to exist have not been included as part of this study. All other schools (except special schools and private schools) have been included. Individual school details, including their locations, may be found in Appendices B and C.

Secondary School Requirements

2.18. The current School Re-Organisation Strategy outlined above also involves the re-organisation of all Secondary Schools in the Norwich Policy Area. It has therefore been advised by Norfolk County Council that until the impact of re-organisation has been fully assessed it is to be assumed that all Secondary/High Schools within the Norwich Policy Area are operating at full capacity. Individual school details, including their locations, may be found in Appendices B and C.

2.19. The following education assumptions have been adopted in this study:

Type of Service	Ratio
Early Years Facilities	56 Places per facility
Primary Schools	30 pupils per form. Two forms of Entry.
Secondary Schools	30 pupils per form. Six forms of entry.

Table 2.1: Education Assumptions

2.20. The Government has a vision to increase the access, quality and range of childcare, which Norfolk County Council endorses and is fully committed to. Additionally, the Government's Extended Schools policy, further promoted through the White Paper on Education[1], aims to maximise the potential of schools and their community settings by providing a range of services and activities outside of the statutory school day to serve pupils, their families and the wider community; including the co-location of social infrastructure

[1] 'Higher Standards, Better Schools for All: More Choice for Parents and Pupils' (DfES, October 2005)

provision and incorporating flexibility for future expansion (or restructuring) to meet the changing needs of future populations.

Planning of School Places

2.21. DCSF criteria assume secondary school students normally live within three miles of their school and it is imperative the demand for school places is planned from a local perspective. The provision of new school and nursery facilities should be planned to promote sustainability, reduce car use and promote walking and cycling to school for both primary and secondary phases. Where motor transport to school is unavoidable public transport services should be provided and distances should be kept to a minimum. School buildings should be located to engender community identity and facilitate community use.

2.22. While the current demand forecasting model used in this study might suggest there is no significant net demand for additional school places across the NPA as a whole, there will clearly be a need to ensure sufficient quantity and quality of locally accessible educational provision to serve the new developments. This will be particularly important in the context of the Government's agenda for Children's Services and extended schools which is challenging local authorities to develop localised community focussed services – often located in schools – which provide for children and families from birth to secondary ages and envisages local schools and other services working in closer partnership too meet local needs.

2.23. As the future location of developments becomes clearer, it may be necessary for the local authority to undertake a detailed review of school provision, especially in the secondary sector, so that it can fulfil its statutory responsibility to plan the right number of school places for the right localities. This review should look closely at more refined datasets that will more accurately predict the local need for educational provision in relation to the emerging range of development options.

HEALTHCARE

2.24. Health Care services have a fundamental role in the development of healthy sustainable communities and this area of social infrastructure will play an increasingly important role in the provision of neighbourhood-focussed healthcare services through facilities such as the new wave of Primary Care Centres and in light of an increasingly joined up and integrated approach to community services. Current Government Policy[2] promotes a range of new types of NHS facilities, bringing primary and community services, and where possible social services, together under one roof to make access more convenient for patients. Primary Care Centres can also accommodate a number of diagnostic and treatment services and therefore, reduce the level of demand for acute services.

2.25. In the context of the Norwich area, a 'hub and spoke' model of provision may prove to be the most feasible with a number of larger Primary Care Centres in central urban areas supported by several smaller centres located in periphery residential areas.

[2] The NHS Plan: A Plan for Investment. A Plan for Reform (Department of Health; 2000)

2.26. Table 2.2 sets out the assumptions adopted to forecast future healthcare requirements.

Type of Service	Ratio	Sources
No. of GPs	Broadland = 1 per 1,524 pop Norwich = 1 per 1,362 pop South Norfolk = 1 per 1,482 pop	Department of Health, "General Medical Services Statistics, Primary Care Trusts", 2004
Dentists	1 per 2,000 pop	Traffic light "maps of dentists distribution in England and Wales." - May 2004 - School for Health, University of Bath
Acute Beds	1 per 480 people	Strategic Health Authority
Mental Health Beds	1 per 1,430 people	Strategic Health Authority

Table 2.2: Health Care Requirement Assumptions

2.27. The standards for dentists identified in Table 2.2 have recently changed and strictly speaking dentistry facilities no longer have a target list of 2,000 people per dentist. The public are now free to visit a dentist on a 'course of treatment basis' and this is how activity is commissioned. It is anticipated that the ability of dentists to take on patients over and above the 2,000 threshold is limited though and therefore the standard has been upheld in this report.

2.28. In the cases of acute beds and mental health beds the catchment area goes significantly beyond the study area. Consequently for the purposes of this study, the additional demand arising over the periods 2021 and 2031 have been calculated based on the recommended provision for the current population. This is calculated using the standards identified in Table 2.2 and the baseline population levels identified in Table 1.5. The total demand at 2021 and 2031 is then calculated using the same method but with the projected populations identified in Tables 1.5 – 1.8. The net additional demands are then calculated by subtracting the 2006 demand. Given the threat of an ageing population based on current population projections, demand may rise above the stated level for healthcare, although this level of age structure detail is not picked up in the modelling process.

2.29. GP list sizes are based on current patterns of provision across the three districts. Full details of GPs, dentists, acute beds and mental health beds, including their locations, may be found in Appendices B and C.

COMMUNITY

2.30. National, regional and sub-regional policy seeks to ensure that adequate weight is given to the need for community open space and community facilities in each locality. Local policy, in particular, places emphasis on ensuring increased provision of community & social facilities / public and private sector amenities in the

principle towns & villages; and to provide cultural and leisure opportunities that improve the lives and well-being of all residents and visitors.

2.31. In the absence of an official definition, a Community Centre has been defined as a centre that includes facilities such as, for example, meeting rooms, a kitchen area, facilities for youth and pre-school children, as well as a regular program of activities for the community. These may include an after school club and exercise classes, for example. It is important to note that there are also many other facilities across the Norwich Policy Area that provide a community function, such as Village Halls, Parish Halls and schools (where school facilities are made available to the public) and this has been taken into account when assessing future demand.

2.32. The presence of 6 mobile library units that operate across the more rural parts of the Norwich Policy Area has also been qualitatively taken into account in the analysis of future library demand. Full details of Community Centres and Libraries, including their locations, may be found in Appendices B and C. The following community facility assumptions have been adopted in this study:

Type	Space per 1000 persons	Sources
Community Space	61 sq.m	Milton Keynes SPG – Social Infrastructure Planning obligations
Library Space	26.5 sq.m	DCMS 2000 Standard (23sq.m) with EDAW assumption to uplift

Table 2.3: Community Requirement Assumptions

2.33. As mentioned within the analysis of education provision, community and library space should, where possible, be co-located with extended school facilities or at the very least, community space should be co-located with library space. These facilities should ideally be located in central areas to make them as accessible as possible. Norfolk County Council particularly identify the scope to develop joint library provision alongside other community facilities such as health centres, community centres and police stations.

LEISURE AND RECREATION

2.34. EDAW has defined leisure and recreation facilities as swimming pools and sports/leisure centres. In Broadland the presence of private sector leisure facilities is strong and there are no public sector leisure centres. In conjunction with the Greater Norwich Development Partnership, the decision was taken to include facilities provided by the private sector in this analysis of future demand. Continued monitoring should be given to the accessibility and affordability of these facilities to the end users, particularly where local analysis identifies deprived areas or less affluent areas. Full details of local authority owned swimming pools and sports centres, including their locations, may be found in Appendices B and C.

The assumptions shown below are based upon standards set by Sport England:

Type	Space per 1000 persons	Sources
Swimming Pool Water	10.22 sq.m of water 1 lane = 25m by 2.12m (53sq.m)	Sports England Facility Counter
Leisure Centre Courts	0.29 Courts Typical centre contains 4 courts	Sports England Facility Counter

Table 2.4: Leisure and Recreation Requirement Assumptions

OPEN SPACE

2.35. The importance of open space is recognised at all levels of policy ensuring that new development both maintains existing open space and makes further provision where a shortfall is identified. The assumptions outlined below are based upon the following local and national policy/standards:

National Playing Field Open Space Standards		Source	Sq.m per person
Allotments		NPFA Open Space standards	2.5
Informal and Formal Open Space	Playing Pitches	South Norfolk Local Plan	12
	Informal Open Space	South Norfolk Local Plan	4
Children's Play Space		Norwich Local Plan	7.5
Total Open Space		South Norfolk Local Plan	24.0

Table 2.5: Open Space Requirement Assumptions

2.36. There is no consistent approach to the categorisation of open space across the Norwich Policy Area, as Norwich is currently using a breakdown of open space types that differs from that used by South Norfolk and Broadland. Private land, woodland and golf courses have been discounted from the supply calculations of current open space where detail has provided sufficient information.

2.37. In order to align the open space types with Planning Policy Guidance note 17: Sport and Recreation (PPG17) and the EDAW SIF Model, certain categories have been grouped together. The definitions used by each local authority have been re-categorised as follows:

South Norfolk and Broadland Definition	EDAW Definition
Allotments	Allotments
Children's Play Area	Children's Play Space
Amenity Green Space	Informal and Formal Open Space
Bowling Green	
Common	
Pitches / Playing Field	
Recreation Ground	
Norwich Definition	**EDAW Definition**
Allotments	Allotments
Play Areas	Children's Play Space
Teenage Recreation Areas	
Open Space	Informal and Formal Open Space
Parks	

Table 2.6: Open Space Categories

2.38. Full details of open spaces, including their locations, may be found in Appendices B and C.

EMERGENCY AND ESSENTIAL SERVICES

2.39. The emergency services have recently begun reviewing the way they provide their services, focusing more on preventative rather than reactionary approaches, creating more localised facilities and providing a more visible and approachable service.

2.40. It is not possible to identify whether future police provision will be provided via centralised or decentralised facilities in the Norwich area, as this analysis is currently being undertaken via the Organisational Development Review. This Review looks at the way police resources are structured and the way future infrastructure will be changed, in terms of what their future estates will look like. The outcomes of this report and further information on the service delivery profile are due in early 2008.

2.41. The following assumptions on the provision of Emergency Services have been adopted in this study:

Type	Required	Sources
Police Officers	1 officer per 697 persons – to maintain Norfolk Central Area average.	Norfolk Central Area Policing Plan
	1 Safer Neighbourhood Team per 6 officers	Planning for Future Police Estate Development - 2005

Fire Stations	Three appliance station per 64,000 people.	Costs to Social Infrastructure Works in the Thames Gateway - Gardiner & Theobold - 2003
Ambulance Call Demand	1 additional call per 8 people.	East of England Ambulance Service NHS Trust

Table 2.7: Emergency and Essential Service Requirement Assumptions

2.42. In all cases for Emergency Services, the catchment area goes significantly beyond the study area. Consequently for the purposes of this study, the net demand arising over the periods 2021 and 2031 have been calculated based on the recommended provision for the current population. Full details of existing Police Stations, Neighbourhood Police Units and Fire Stations, including their locations, may be found in Appendices B and C.

SOCIAL INFRASTRUCTURE DEMAND

2.43. The conclusions reached for social infrastructure are based on two stages of analysis. The first stage makes use of the EDAW SIF Model and identifies the net additional demand for each social infrastructure type at 2021 and 2031 based purely on supply versus demand at the district level. The second stage of analysis takes the outputs of the EDAW SIF Model and tests the likely demand for social infrastructure based on local sensitivity. At all times, certain types of infrastructure must be highly accessible at the local level and the second stage of analysis helps to ensure predicted local need will be met.

2.44. The tables outlined in this chapter set out Stage 1 (Net Demand) and Stage 2 (Facilities) of the demand analysis, as identified above.

Scenario 1

2.45. The demand for social infrastructure arising from the population output detailed earlier in this report is given below, based on the realisation of the full 35,512 homes by 2021, and the potential for a cumulative total of 53,512 homes by 2031. Section 4 identifies the predicted costs of such facilities.

Summary Requirements by 2021 and 2031: Scenario 1

Service/Facility	Requirement bv 2021		Requirement by 2031	
	Net Demand	Facilities	Net Demand	Facilities
Education				
Early Years Places	-168	*2 x Early Years Facilities*	185	*9 x Early Years Facilities*
Primary Schools	-12 FE	*2 x 2 FE Schools*	-6 FE	*4 x 2 FE Schools*
Secondary Schools	0 FE		10 FE	*2 x 6 FE School*
Health				
GPs	12	*3 x PCC* *2 x GP Surgery*	29	*3 x PCC* *6 x GP Surgery*
Dentist	21		33	
Acute Hospital Bed	74		125	
Other Hospital Bed	24		42	
Leisure				
Swimming Pools	13	*2 x Pool Centres*	14	*3 x Pool Centres*
Sports Centres	17	*2 x Sports Courts*	19	*4 x Sports Courts*
Community				
Community Centre/Hall Space	2,155 sq. m	*2 x Community Centres plus 2 x extensions*	3,658 sq. m	*5 x Community Centres*
Library Space	934 sq. m	*2 x Libraries plus 2 x extensions*	1,586 sq. m	*5 x Libraries*
Open Space				
Allotments	9.5 ha	*9.5 ha*	15.7 ha	*9.5 ha*
Informal and Formal Outdoor Space	60.8 ha	*60.8 ha*	100.2 ha	*60.8 ha*
Children's Playspace	0 ha	*3 ha*	2.8 ha	*6 ha*
Essential/Emergency Services				
Police Officers	50	*8 x S.N/hood Teams*	84	*15 x S.N/hood Teams*
Fire Stations	1	*1 x Station*	1	*1 x Station*
Increase in Ambulance Calls	4,417		7,334	

Table 2.8: Summary Requirements by 2021 and 2031: Scenario 1

Detailed Requirements arising by 2021
Early Years Facilities
• Surplus capacity exists across the Norwich area but focussed development will result in the need for 2 additional Early Years facility due to localised demand. These facilities should be co-located with a new Primary School and be built in South Norfolk and Broadland in the Market Town Extension and Urban Expansion. • No other Early Years facilities are required across the Norwich area but existing facilities should be reviewed and re-concentrated where necessary to account for the remaining, more dispersed, housing growth.
Primary Schools
• Despite falling child yields and a net surplus in primary school capacity, given substantial growth in focussed areas, Broadland and South Norfolk will each require 1 additional primary school. These Primary Schools should be co-located with the 2 Early Years Facilities identified above. • There is significant supply within 1km to the south west of the Urban Extension identified in Broadland, implying that early development should ideally be as accessible as possible to these sources. The additional combined Primary School / Early Years Facility in Broadland will be required by 2015. • Although currently operating at full capacity, forecasts suggest that Robert Kett Junior School in the Market Town Extension may in future have a small amount of spare capacity. The one additional combined Primary School / Early Years Facility should therefore be provided by 2015. • This study highlights that there is little demand for additional education facilities at the district level, but it is important to note that this study was not commissioned to identify potential demand hotspots at the local level. It is fundamental that sufficient primary schools are provided at the local level and it is therefore recommended that further analysis is undertaken as more detailed child yield forecasts are calculated and more is known about the pattern of housing growth at the local level.
Secondary Schools
• The current demographic model indicates that overall there is no additional demand for Secondary Schools across the Norwich Policy Area and around the areas of significant growth. The analysis also estimates that child population levels will be such that the key growth locations identified in Figure 1.1 will have sufficient capacity in existing facilities, although this is largely dependent on the location of other housing growth throughout the district and should be examined further as more detailed growth locations emerge.
Health and Social Care
• 2 new GP surgeries and a Primary Care Centre (PCC) will be required in Broadland. The GP surgeries should act as spokes to the PCC hub. A PCC will also be required in both South Norfolk and Norwich. The PCCs should also include dentistry provision. Alternatively, further dentistry facilities may suit Town Centre locations. Additional acute and mental health care facilities are unlikely to be needed due to the trend of transferring care services into the community. • The 2 GP Surgeries in Broadland will be required by 2010 and 2013 and the Primary Care Centres (PCC) in all districts will be required by 2016. It is expected that the 2 GP surgeries in Broadland will

act as spokes to an alternative PCC in the Norwich area until the local PCC is delivered.
Leisure Facilities
• The provision of public and private owned swimming pool and sports court facilities are strong across the Norwich area. In addition to this, Broadland and Norwich will both require an additional swimming pool and sports court facility. Private sector services should be monitored for accessibility and affordability. • The Norwich facility should be delivered by 2011 and the Broadland facility should be delivered by 2017
Community & Libraries
• A combined Library, Community and Police Centre will be required in Broadland and South Norfolk. • Whilst the equivalent capacity of a new combined library and community facility is also required in Norwich, it is more appropriate to extend 2 existing library facilities due to the relatively dispersed nature of development in the district. These extensions should be developed by 2010 to allow the large existing population to make use of the centres. It is also the most accessible of the three districts. • The 2 centres across Broadland and South Norfolk should be developed slightly later as the local population rises, by 2012
Open Space
• Improve the quality and accessibility of open space and maximise the use of green infrastructure. • Additional open space, including children's play space and allotments should be integrated into new developments as quantified in Table 2.8. Despite the quantitative analysis highlighting no extra children's playspace is needed due to the negligible rise in child population, 3 ha have been recommended to ensure that all local children retain good access to a local facility.
Emergency & Essential Services
• Broadland, Norwich and South Norfolk will require 3, 2 and 3 Safer Neighbourhood Teams respectively in town centre or accessible locations. 1 of these Teams in Broadland and South Norfolk should be combined with the Library, Community and Police Centres as noted above. The phasing of these developments should correlate with local population rises. • More ambulance resources are required (likely to need more staff rather than more facilities) • A new or extended fire station will be required and should be delivered towards the end of the time period (by 2021), as existing supply is sufficient in the short – medium term.

Table 2.9: Detailed Requirements by 2021: Scenario 1

Detailed Requirements arising by 2031
Early Years Facilities
• A total of 9 Early Years Facilities will be required across the Norwich Policy Area by 2031, 7 of which will be required after 2021. • The total requirement is broken down across Broadland, Norwich and South Norfolk into 4, 1 and 4 Early Years facilities respectively. • 1 Early Years Facility in Broadland and South Norfolk should be co-located with a new Primary

School. Existing facilities across the districts should be reviewed and re-concentrated where necessary.
Primary Schools
• A total of 4 Primary Schools will be required across the Norwich Policy Area by 2031, 2 of which will be required after 2021. • These additional schools will be required in South Norfolk and Broadland and should each be co-located with an Early Years facility as identified above. • Whilst the above quantum of additional facilities are required at the district level, the locations of existing facilities at the local level may not be appropriate and this should be analysed further as more information regarding child yield projections and housing growth patterns becomes available.
Secondary Schools
• 2 Extended Secondary Schools will be required across the Norwich Policy Area by 2031, which will be required after 2021 in Broadland and Norwich. • The Broadland facility should be co-located with a Library and Community Centre.
Health and Social Care
• A total of 3 Primary Care Centres and 6 GP Surgeries will be required across the Norwich Policy Area by 2031. Of these, 4 GP Surgeries will be required after 2021. • The facilities required after 2021 are apportioned between districts as follows: 2 GP surgeries each in Broadland and South Norfolk.
Leisure Facilities
• A total of 4 Swimming Pool and Sports Court Facilities will be required across the Norwich Policy Area by 2031. Of these, 2 will be required after 2021, in Broadland and South Norfolk.
Community & Libraries
• A total of 5 combined Library and Community Centres will be required across the Norwich Policy Area by 2031. Of these, 2 will be required after 2021, in Broadland and South Norfolk. • One combined Library and Community Centre will be required in Broadland and should be co-located with an Extended Secondary School as identified above • One combined Library and Community Centre will be required in South Norfolk and should be co-located with a Safer Neighbourhood Team.
Open Space
• Improve the quality and accessibility of open space and maximise the use of green infrastructure. • Additional open space, including children's play space and allotments should be integrated into new developments as quantified in Table 2.8. Despite the quantitative analysis highlighting 2.8 ha of extra children's playspace is needed, 6 ha have been recommended to ensure that all local children retain good access to a local facility.
Emergency & Essential Services
• A total of 15 Safer Neighbourhood Teams will be required across the Norwich Policy Area by 2031. Of

these, 7 Safer Neighbourhood Teams will be required after 2021.

- The Teams required after 2021 are apportioned between districts as follows: 3 in Broadland, 1 in Norwich and 3 in South Norfolk. 1 Team in South Norfolk should be combined with the Library and Community Centre identified above.
- More ambulance resources are required (likely to need more staff rather than more facilities)

Table 2.10: Detailed Requirements by 2031: Scenario 1

Scenario 2

2.46. The demand for social infrastructure arising from the population output detailed earlier in this report is given below, based on the realisation of the full 34,512 homes by 2021, and the potential for a cumulative total of 52,512 homes by 2031.

Summary Requirements by 2021 and 2031: Scenario 2

Service/Facility	Requirement by 2021		Requirement by 2031	
	Net Demand	Facilities	Net Demand	Facilities
Education				
Early Years Places	-187	*4 x Early Years Facilities*	168	*10 x Early Years Facilities*
Primary Schools	-12 FE	*1 x 2 FE School*	-6 FE	*3 x 2 FE School*
Secondary Schools	-1 FE		10 FE	*2 x 6 FE School*
Health				
GPs	11	*3 x PCC* *1 x GP*	28	*3 x PCC* *4 x GP*
Dentist	20		32	
Acute Hospital Bed	71		122	
Other Hospital Bed	23		41	
Leisure				
Swimming Pools	13	*2 x Pool Centres*	14	*3 x Pool Centres*
Sports Centres	17	*2 x Sports Courts*	18	*3 x Sports Courts*
Community				
Community Centre/Hall Space	2,076 sq. m	*2 x Community Centres plus 2 x extensions*	3,579 sq. m	*5 x Community Centres*
Library Space	900 sq. m	*2 x Libraries plus 2 x extensions*	1,552 sq. m	*5 x Libraries*

Open Space				
Allotments	9.2 ha	*9.2 ha*	15.4 ha	*15.4 ha*
Informal and Formal Outdoor Space	58.7 ha	*58.7 ha*	98.2 ha	*98.2 ha*
Children's Playspace	0 ha	*3 ha*	2.7 ha	*2.7 ha*
Essential/Emergency Services				
Police Officers	49	*8 x S.N/hood Teams*	84	*14 x S.N/hood Teams*
Fire Stations	1	*1 x Station*	1	*1 x Station*
Increase in Ambulance Calls	4,254		7,334	

Table 2.11: Summary Requirements by 2021 and 2031: Scenario 2

Detailed Requirements arising by 2021

Early Years Facilities

- Surplus capacity exists across the Norwich area but focussed development will result in the need for 4 additional Early Years facility due to localised demand. All of these facilities will be required in the New Village in South Norfolk. The first of these facilities should be delivered in 2012 and co-located with the new Primary School identified below. 1 new Early Years Facility will be required every 2 years from 2012 to 2018.
- No other Early Years facilities are required across the Norwich area but existing facilities should be reviewed and re-concentrated where necessary to account for the remaining, more dispersed, housing growth.

Primary Schools

- Despite falling child yields and a net surplus in primary school capacity, given substantial growth in the New Village, South Norfolk will require 1 additional primary school at the district level. This Primary School should be co-located with an Early Years Facility as identified above.
- There is no supply in the immediate vicinity of the New Village, meaning that the additional combined Primary School / Early Years Facility will be required by 2012.
- As noted in Table 2.9, this study was not commissioned to identify potential demand hotspots at the local level and it is therefore recommended that further analysis is undertaken as more detailed child yield forecasts are calculated and more is known about the pattern of housing growth at the local level. For example, a stand alone new settlement of 10,000 dwellings may require up to 12 additional primary schools, although this is dependent on child yield projections.

Secondary Schools

- The current demographic model indicates that there is no additional demand for Secondary Schools across the Norwich area and around the key growth location identified in Figure 1.2, although this is largely dependent on the location of other housing growth throughout the districts and should be

examined further as more detailed growth locations emerge.

- Furthermore, in terms of sustainable development and minimising the need to travel unnecessary distances, it may be preferable to build a secondary school to serve the stand alone new village, although this is predicted to not be strictly necessary based on current population projections.

Health and Social Care

- 1 new GP Surgery and 1 new Primary Care Centre (PCC) will be required in South Norfolk. The GP surgery should act as a spoke to the PCC hub. A new Primary Care Centre (PCC) will also be required in both Broadland and Norwich. The Primary Care Centres should also include dentistry provision. Alternatively, further dentistry facilities may suit Town Centre locations. Additional acute and mental health care facilities are unlikely to be needed due to the trend of transferring care services into the community.
- The GP Surgery in South Norfolk will be required by 2012 and the Primary Care Centres (PCC) in all districts will be required by 2016. It is expected that the GP Surgery in South Norfolk will act as a spoke to an alternative PCC in the South Norfolk area until the local PCC is delivered. It is likely that this existing PCC would be the Wymondham Medical Practice.

Leisure Facilities

- The provision of public and private owned swimming pool and sports court facilities are strong across the Norwich area. In addition to this, Broadland and Norwich will both require an additional swimming pool and sports court facility. Private sector services should be monitored for accessibility and affordability.
- The Norwich facility should be delivered by 2011 and the Broadland facility should be delivered by 2021

Community & Libraries

- 2 combined Library, Community and Police Centres will be required in South Norfolk.
- Whilst the equivalent capacity of a new combined library and community facility is also required in Norwich, it is more appropriate to extend 2 existing library facilities due to the relatively dispersed nature of development in the district. These extensions should be developed by 2010 to allow the large existing population to make use of the centres. It is also the most accessible of the three districts.
- The 2 centres in South Norfolk should be developed slightly later as the local population rises, by 2013 and 2017.

Open Space

- Improve the quality and accessibility of open space and maximise the use of green infrastructure.
- Additional open space, including children's play space and allotments should be integrated into new developments as quantified in Table 2.11. Despite the quantitative analysis highlighting no extra children's playspace is needed due to negligible changes in overall child population, 3 ha have been recommended to ensure that all children retain good access to a local facility.

Emergency & Essential Services

- Broadland, Norwich and South Norfolk will require 1, 2 and 5 Safer Neighbourhood Teams respectively in town centre or accessible locations. 2 of the Teams in South Norfolk should be combined with the Library, Community and Police Centres as noted above. The phasing of these developments should correlate with local population rises.

• More ambulance resources are required (likely to need more staff rather than more facilities) • A new or extended fire station will be required and should be delivered towards the end of the time period (by 2021), as existing supply is sufficient in the short – medium term.

Table 2.12: Detailed Requirements by 2021: Scenario 2

Detailed Requirements arising by 2031
Early Years Facilities
• A total of 14 Early Years Facilities will be required across the Norwich Policy Area by 2031, 6 of which will be required after 2021. • The total requirement is broken down across Broadland, Norwich and South Norfolk into 2, 1 and 3 Early Years facilities respectively. • 2 Early Years Facility in South Norfolk should be co-located with a new Primary School. Existing facilities across the districts should be reviewed and re-concentrated where necessary.
Primary Schools
• The total requirement is broken down across Broadland, Norwich and South Norfolk into 2, 1 and 3 Early Years facilities respectively. • A total of 3 Primary Schools will be required across the Norwich Policy Area by 2031, 2 of which will be required after 2021. • These additional schools will be required in South Norfolk and should each be co-located with an Early Years facility as identified above. • Whilst the above quantum of additional facilities are required at the district level, the locations of existing facilities at the local level may not be appropriate and this should be analysed further as more information regarding child yield projections and housing growth patterns becomes available.
Secondary Schools
• 2 Extended Secondary Schools will be required across the Norwich Policy Area by 2031, which will be required after 2021 in Broadland and South Norfolk. • The South Norfolk facility should be co-located with a Library and Community Centre.
Health and Social Care
• A total of 3 Primary Care Centres and 4 GP Surgeries will be required across the Norwich Policy Area by 2031. Of these, 3 GP Surgeries will be required after 2021. • The facilities required after 2021 are apportioned between districts as follows: 2 GP surgeries in Broadland and 1 GP Surgery in South Norfolk.
Leisure Facilities
• A total of 3 Swimming Pool and Sports Court Facilities will be required across the Norwich Policy Area by 2031. Of these, 1 will be required after 2021, in Broadland.
Community & Libraries
• A total of 5 combined Library and Community Centres will be required across the Norwich Policy Area by

2031. Of these, 2 will be required after 2021, in Broadland and South Norfolk. • One combined Library and Community Centre will be required in South Norfolk and should be co-located with an Extended Secondary School as identified above • One combined Library and Community Centre will be required in Broadland and should be co-located with a Safer Neighbourhood Team.
Open Space
• Improve the quality and accessibility of open space and maximise the use of green infrastructure. • Additional open space, including children's play space and allotments should be integrated into new developments as quantified in Table 2.11. Despite the quantitative analysis highlighting 2.7 ha extra children's playspace is needed, 6 ha have been recommended to ensure that all children retain good access to a local facility.
Emergency & Essential Services
• A total of 15 Safer Neighbourhood Teams will be required across the Norwich Policy Area by 2031. Of these, 7 Safer Neighbourhood Teams will be required after 2021. • The Teams required after 2021 are apportioned between districts as follows: 2 in Broadland, 1 in Norwich and 4 in South Norfolk. 1 Team in Broadland should be combined with the Library and Community Centre identified above. • More ambulance resources are required (likely to need more staff rather than more facilities)

Table 2.13: Detailed Requirements by 2031: Scenario 2

3. TRANSPORT

3.1. Peter Brett Associates (PBA) has examined the strategic transport implications of the two Growth Scenarios. The level of growth planned for the Norwich area will place considerable pressure on the transport infrastructure within this area. Subsequently, it is essential that appropriate transport improvements are introduced in order to ensure that the level of housing and employment planned for the area can be accommodated without having an unacceptable impact on highway safety and capacity.

3.2. In order to sustain the level of growth planned for the Norwich area it is clear that a significant change in travel patterns will need to be undertaken, not just for the new residential population and employment workforce, but also for the existing residents of Norwich, Broadland and South Norfolk.

3.3. The encouragement of the use of alternative modes of transport to the car is already an important part of national and local policy to help reduce congestion and pollution levels. Therefore, it is essential to look at ways in which growth can be accommodated, but car use reduced. The current car use levels for many new developments situated in locations on the edge of urban areas have a tendency to a high level of car ownership and car reliance. It is therefore imperative to consider ways to reduce traffic from new residential and commercial developments.

3.4. In order to achieve the necessary transport objectives which are set out in the Norwich Area Transportation Strategy and the Norfolk County Council Local Transport Plan considerable investment in transport infrastructure improvements will be required. This chapter sets out a high level analysis of the improvements that will be required in the Norwich area to accommodate the anticipated levels of growth. The recommended improvements are based upon an analysis of transport related information supplied by Norfolk County Council and the three District Councils, together with relevant transport policy documents. An assessment has then been made of the likely impact of the scheme on the surrounding transport network, and the improvements necessary to accommodate growth. It should be noted that in order to assess the transport requirements of the development areas it has also been necessary to review existing issues within the city centre and recommend any changes that will assist with the development proposals in achieving sustainable objectives.

3.5. The transport section concludes with the level of transport infrastructure likely to be required to support the development of the two Growth Scenarios.

LOCAL AND REGIONAL GUIDANCE

3.6. Projections to 2025 based on the lower rate of growth in the original draft RSS indicate that 35 links on the inner ring road and approaches, and 50 links on the outer ring road and approaches will reach capacity. Compared to the links, number of roads and approaches that are currently congested (see earlier section:

Norwich Highway Network), this represents an increase of 84% on the inner ring roads and 61% on the outer ring roads, with the northern part of the network heavily congested.

3.7. It should be noted that these considerations do not take into account the implementation of NATS and of the future Northern Distributor Road (NDR). The NDR, together with complimentary NATS measures is intended to remove traffic from the city centre with forecasted traffic reductions up to 90% for the northern suburbs (source: Northern Distributor Road, Statement on Justification of Need, Norwich Area Transport, 2005). This will therefore relieve the existing network of additional trips created by the planned growth. Moreover, the planned growth provides an opportunity to enhance and extend the transport networks, while providing greater choice of transport mode and ensuring that a sustainable approach is adopted to transport provision in the Norwich Policy Area.

3.8. The latest version of the RSS, the Secretary of State's Proposed Change of December 2005 provides the following policy guidance:

- Widen travel choice: increasing and promoting opportunities for travel by means other than the private car, particularly walking, cycling and public transport, improving seamless travel through the provision of quality interchange facilities and raising travel awareness;
- Promote the carriage of freight by rail and water
- Stimulate efficient use of the existing transport infrastructure, efficiently maintaining and managing existing road, rail, port and airport infrastructure.

3.9. Locally, the Norfolk County Council has also revised the Norwich Area Transport Strategy (NATS) and adopted it in 2004. This document looks forward to 2025. It will form the framework for making future decisions about all aspects of transport in the Norwich area. Its key principles are to:

- Sustain and develop the regional role of Norwich, ensuring it realises its full growth potential;
- Provide a coherent basis for a sustainable transport strategy to benefit access by all modes of transport; and,
- Promote the development of Norwich Airport as a regional airport and international gateway with better surface transport links to the rest of the region.

3.10. Public transport has a significant potential role to serve the Greater Norwich area. However the majority of bus services run on radial routes into the city centre and out to provide cross-city links (Source: Norwich Bus Strategy, November 2006). The Norwich 'Overground' consists of seven radial services (see Table 3) which in capacity terms would need to be supplemented to provide for significant growth of the area. Furthermore, the bus network does not cater satisfactorily for orbital movements. NATS already focuses on public transport, but further measures will be required to supplement it.

CURRENT TRANSPORT SITUATION

3.11. The following analysis of the current transport situation highlights that the Greater Norwich transportation network must be improved to support the planned growth in population and jobs and to allow sustainable development of this area. Further implementation of the Norwich Area Transportation Strategy (NATS) will partly help to provide for the increasing trips arising from growth, but it will be necessary to consider further transport interventions, otherwise the levels of congestion will rise impacting both on the economy and the environment of the city.

3.12. Table 3.1 highlights the travel patterns of the Norwich Area compared to the rest of East England and England as a whole. It should be noted that people who are not currently working have been removed from the table.

Mode	Norwich Area	East of England	England
Walking	13%	10%	10%
Bike	9%	4%	3%
Bus/coach	8%	4%	8%
Underground, light rail/tram, rail	1%	2%	7%
Taxi	1%	0%	1%
Car/van	54%	62%	55%
Passenger	6%	6%	6%
Motorbike	2%	1%	1%
Homeworking	5%	10%	9%
TOTAL	100%	100%	100%

Table 3.1: Norwich Residents' Journeys by Mode, compared to East of England and England

Source: Norfolk County Council mode sharing monitoring 2000/2001 and Census 2001

3.13. The table above demonstrates that the predominant mode of travel for people in 2000/2001 travelling to and from work within the Norwich Area is by car/van (54%), this is slightly less than the average for England as a whole, and significantly less than the East of England proportion. In terms of movements by foot and bike, a higher proportion is recorded in the Norwich Area (13% and 9% respectively) compared to the East of England and England. The proportion of bus use is equal to the national average and is double that for East of England. Rail use has a very low mode share that mirrors the proportion for East of England and is significantly less than the national average.

Links to the Wider Area

Strategic Roads

3.14. Norwich has numerous road links with the rest of the country, such as the A140 (north - south), A47 (east - west), A17 (to the west) and A11 (to Cambridge and London). However, it should be noted that traffic congestion is apparent on the strategic roads serving Norwich, with the majority of the network containing

insufficient capacity for the flows they carry (source: TIF Bid for Pump-priming funds, Norfolk County Council, 16 June 06).

3.15. The A140 is almost entirely single carriageway and subject to speed restrictions along much of its length. The A47 and A17 links are also largely single carriageway. The A11 is mostly dual carriageway (following the dualling of the Attleborough bypass), however, one section still remains as a single carriage way between Thetford and Mildenhall.

3.16. Where highway capacity does not meet demand, this can cause traffic delays and lead to unreliable journey times. For example, although the A47 and the A11 are crucial links to Cambridge, Newmarket, Great Yarmouth and Lowesoft, they regularly experience traffic congestion and resultant delays. As a consequence, the performance of the highway network could be a barrier to future development of Norwich Policy Area (See Figure 1. Strategic Highway Network).

Rail Connections

3.17. Norwich has local rail connections to the surrounding villages and towns as well as connections to the coastal towns of Great Yarmouth and Lowestoft. The train destinations and their corresponding frequencies and journey times are summarised in Table 3.2.

Destination	Frequency	Duration (minutes)
Cromer	1 every hour	44-45
North Walsham	1 every hour	25-26
Sheringham	1 every hour	56
Great Yarmouth	1 every hour	31-37
Lowestoft	1 every hour	35-43
Wymondham	1 every hour	15-17

Table 3.2: Train destinations, frequencies and duration

3.18. Norwich is served by a number of strategic services. The Norwich – Cambridge link, has trains every 43 minutes to Cambridge. There are direct rail routes to the Midlands and the North West. Another key rail connection is the direct line to London. The journey takes almost 2 hours which is considered slow for a distance of 185 kilometres (115 miles). A key issue is to reduce train journey times on the Norwich-London line and it is understood that all local authorities are seeking support for improvements to be made.

3.19. The main contribution of the railway network in the NPA is for movement to destinations outside of the area over longer distances. Spatially dispersed in the NPA there are only 6 railway stations - Spooner Row, Wymondham, Norwich, Salhouse, Brundall and Brundall Gardens (see Figure 3. Bus and Rail Network). Measures to improve the rail network are supported and outlined in NATS.

Airport

3.20. Norwich's international airport has daily connections to a range of overseas destinations. This airport will benefit from the better access provided by the future Northern Distributor Road, which will serve the airport and link it to the trunk road network and other strategic roads such as the A1067, A140, A1151 and A47. In addition, a masterplan for airport expansion is currently being prepared and surface access is therefore crucial.

Norwich Highway Network

3.21. Traffic in and around Norwich is increasing due to a number of factors such as the growth in housing, jobs, car use and economic activity. A total of 500,000 daily trips has been recorded within the Norwich area in 2002 (source: TIF Bid for Pump-priming funds, Norfolk County Council, 16 June 06). As a consequence, congestion around the junctions where the radial routes cross the inner and outer ring roads is rising. In total, 19 links on the inner ring road and 31 roads and approaches on the outer ring road of the Norwich Area are congested (a road is considered congested when functioning in excess of 90% of its capacity) (source: TIF Bid for Pump-priming funds, Norfolk County Council, 16 June 06).

3.22. However, although traffic is generally increasing on the network, flows across the inner ring road and out of the city centre have reduced slightly as a consequence of the Norwich Area Transportation Strategy (NATS) implementation, particularly the Park and Ride schemes. The overall contribution that NATS could provide in assisting the growth of the NPA is discussed later in this chapter.

3.23. As noted in NATS, traffic congestion is a serious issue within the Norwich Area. NATS states that Norwich has some of the slowest journey speeds in the country. NATS also refers to Department for Transport surveys, which notes that congestion (as measured by average traffic speeds in urban areas) is worse in Norwich than any other similar sized area, such as Peterborough or Oxford. Improvements have been made with the introduction of six Park and Ride sites which offer 4857 parking spaces. The Park and Ride schemes are aimed at discouraging cars from entering the centre of Norwich. This measure is aligned with a general improvement of bus services. The package of measures, described later in this chapter, are in accordance with NATS and have succeeded in reducing the rate of traffic growth, although traffic continues to increase at a rate of 2.3% (refer to Figure 2. Park and Ride Location).

Bus Network

3.24. The 2000/2001 mode share data (see Table 3.1), indicates that 8% of journeys made in the Norwich Area are by bus. However, it should be noted that access to public transport is poor outside Norwich City Centre (see Figure 6 that shows the extent of the area where walk times to a public transport stop exceeds 10 minutes) and added to that, orbital bus services are non existent. The existing Norwich 'overground' services which provide the primary radial services across Norwich are given in Table 3.3 below:

Route	Destinations	Peak Frequency	Off- Peak Frequency
16	Old Catton- City Centre- Costessey	Every 15 minutes	Every 60 minutes
19 20	Heartsease- City Centre-Costessey	Every 15 minutes	Every 30 minutes
21 22	University- Sprowston	Every 5-10 minutes	Every 30 minutes
25	University- Riverside and Rail Station	Every 10 minutes	Every 30 minutes
26	University- Horsford	Every 20 minutes	Every 60 minutes
27	University- Airport	Every 20 minutes	Every 60 minutes
28	City Centre- Drayton- Thorpe Marriott	Every 15 minutes	Every 60 minutes

Table 3.3: Existing Over Ground Bus Services

3.25. The result of a public transport accessibility study is discussed later in this chapter. The measures considered in NATS aim to improve bus frequencies and provide new bus priority routes. Further improvements to the bus network could significantly increase bus patronage in the Norwich Urban Area.

3.26. In summary, the Greater Norwich public transportation network must be improved to support the planned growth in population and jobs and to allow a sustainable development of this area. Further implementation of NATS will partly help to provide for the increasing trips arising from growth, but it will be necessary to consider further transport interventions, otherwise the levels of highway congestion will rise impacting both on the economy and the environment of the city.

Walking and Cycle Network

3.27. The existing cycle conditions suggest that the area is not well served, with few cycle links that connect Norwich City Centre to the surrounding areas within the NPA. There are provisional cycle routes to the south west, however, cycle routes in other areas are generally poor. The National Cycle Route 1 that crosses the NPA south-east to north-west and runs through Norwich City Centre, consists of both on-road provision and traffic-free routes. However generally there is considerable scope in enhancing the coverage of the cycle network within the NPA. Figure 4 shows the existing cycle network.

3.28. In contrast the conditions for walking, particularly in the city centre with a pedestrianised and car free area are to a high standard. This is evidenced by walking having a higher mode share (13%) compared with the

National and East of England proportion (10%). This should provide a good base for encouraging walking as a prime transport mode for new developments.

EXISTING COMMITMENTS

Norwich Area Transportation Strategy (NATS)

3.29. NATS is included in the Norwich City Council's 2006-2021 LTP and looks forward to 2025. It is a key document that provides a long term strategy in accordance with the national and regional policies and builds on the successful elements of former transport strategies in Norwich. The primary aim of NATS is to reduce traffic congestion in Norwich by encouraging alternative modes of transport to the car. It was also linked up with the land-use plans for the area, as stated in the draft Regional Spatial Strategy for East of England. It should however be noted that the RSS projected growth is exceeded by the levels being considered for the NPA.

3.30. NATS includes proposals for the following transport initiatives to be taken forward:

Northern Distributor Road

- To reduce congestion on other parts of the network including the ring roads and radial routes;
- To assist the delivery improvements to public transport;
- To improve strategic access to Norwich International Airport; and proposed developments north of the city centre linking to the highways A47, A140 and A1067.

Public Transport

- Bus priority measures on core public transport routes;
- Quality bus corridor;
- Orbital bus journeys (to enhance the experimental Norwich Orbital bus) to link the major development areas and surrounding villages;
- Frequency of bus services, especially between major employment places and residential areas;
- Improved public transport ticketing; and
- Extension of the Park and Ride network and facilities (10,000 spaces created), for example at Taverham.

Cycling and Walking Modes

- Completion of the core cycling network in the city centre;
- Creation of a core cycling network in the major development areas, linked with public transport stations;
- Stop lines for cyclists at traffic lights junctions;
- Off-road cycle route(s);
- improved pedestrian facilities and priority, especially at junctions and in present and future residential areas; and,
- Extending the pedestrian area in the city centre.

Soft Measures

- Good information about public transport;
- To improve transport interchanges; and,
- Review of the amount of car parking required for the city centre and limitation of spaces.

3.31. NATS, which forms an overall strategy with policies that complement each other, should provide a sound basis for supporting growth in the NPA. Further longer term measures promoting alternative modes include:

- Light Rapid Transit system; and,
- Congestion charging as a possible measure for consideration.

Strategic Network Improvements

3.32. A programme of improvements to strategic infrastructure was announced in 2004 by the Department of Transport. However, the programmed improvements to A11 Fiveways to Thetford, and A47 Blofield to Burlingham, due for completion in 2008, will not start before 2008. Indeed, in 2004, the strategic road network was divided in two categories of roads; those of 'national importance', and those of 'regional importance'. Although all decisions on improvement schemes remain with the Secretary of State, decisions with regard to the former must be informed on the basis of national priorities, but decisions with regard to the 'regional' schemes are to be made by Regional Transport Boards. The boards are now considering strategic road schemes of regional importance alongside proposed major schemes submitted through local authorities' Local Transport Plans. These changes have affected all strategic road improvements planned in Norfolk as none of the strategic roads in the County have been classed as of 'national' strategic importance. The start of the dualling of the A11 Fiveways to Thetford and A47 Blofield to Burlingham, is therefore unlikely to commence prior to 2011.

3.33. In addition to the baseline and policy reviews identified earlier in this section, the assessment on future transport infrastructure demand is also based on two other major considerations. These are the effect of housing growth and employment growth on the quantity of vehicle trips that could potentially be generated and the accessibility of the proposed Growth Scenarios to public transport. Full details of these aspects of the analysis can be found below.

SCENARIO GROWTH

Housing

3.34. The residential growth planned for the Norwich is described elsewhere in this report. Details are also given of the additional numbers of households to be considered for the three districts in the NPA which form Development Scenario 1 and Scenario 2. The assessment below considers the impact of the planned growth in housing on the transport networks within the NPA across the whole study area. The assessment of improvements needed to provide for growth at particular locations within Scenario 1 and Scenario 2 is considered later in this section as part of the public transport accessibility review.

3.35. A key aspect of this assessment involves the determination of trip numbers to be accommodated by the transport networks. Household numbers multiplied by representative trip rates per households give vehicle trip numbers to and from the developments. Tables 3.4 and 3.5 give a general idea of the vehicle trips that could potentially be generated by the proposed development.

3.36. The following tables demonstrate the potential increase in trip demand that would result from the proposed development growth. Trip rates have been obtained from the TRICS database which have been derived from larger housing estates across the United Kingdom. These trip projections are representative of the modal characteristics of the recent past rather than what could be achieved by adopting more sustainable policies. Furthermore the impact of NATS on vehicular generation is not taken into account.

	Daily Two Ways Vehicle Trips				Additional Trips (%)			
	in 2001	in 2011	in 2021	in 2031	2001-2011	2011-2021	2021-2031	2001-2031
District								
Broadland NPA	110,489	124,697	146,121	172,306				
Norwich NPA	179,251	201,297	226,846	234,215				
South Norfolk NPA	73,125	88,389	107,850	134,036				
TOTAL NPA	362,865	414,382	480,817	540,557	51517 (14.2%)	66435 (16.0%)	59740 (12.4%)	177692 (49.0%)

Table 3.4. Daily Home Based Vehicular Two Way Trips Increases from 2001 to 2031, Scenario 1

*Daily two ways trip rate = 3.136 per household, Source: TRICS

	Daily Two Ways Trips				Additional Trips (%)			
	in 2001	in 2011	in 2021	in 2031	2001-2011	2011-2021	2021-2031	2001-2031
District								
Broadland NPA	110,489	114,703	122,601	148,786				
Norwich NPA	179,251	201,297	226,846	234,215				
South Norfolk NPA	73,125	96,941	128,234	154,420				
TOTAL NPA	362,865	412,941	477,681	537,421	50076 (13.8%)	64740 (15.6%)	59740 (12.5%)	174556 (48.1%)

Table 3.5. Daily Home Based Vehicular Two Way Trips Increases from 2001 to 2031, Scenario 2

*Daily two ways trip rate = 3.136 per household, Source: TRICS

3.37. As can be seen from the tables, using modal characteristics from the recent past, the development of residential areas could lead to approximately 52,000 for Scenario 1, or 50,000 for Scenario 2, additional

daily two-way vehicle trips between 2001 and 2011 within the whole of the NPA, representing a 14% increase. Repeating the calculation for between 2011 and 2021 shows 66, 000 or 65,000 additional daily two-way vehicle trips, which corresponds to a further 16% increase. From 2021 to 2031, there is a further 60,000 additional trips equivalent to a 12% increase. In total between 2001 and 2031 there could be around a 50% increase in home based trips. As noted earlier in this Chapter, the highway network in Norwich currently carries 500,000 daily trips and this level of increase would have a significant impact. To avoid such an increase would require a change in travel patterns to more sustainable modes.

3.38. Tables 3.6 and 3.7 below provide a summary of the total number of residential people peak hour trips for each mode. Modal splits were derived from the 2001 Census data for the Norwich area (shown in table 3.1 above).

3.39. Tables 3.6 and 3.7 also provide a summary of the total number of residential people peak hour trips for each mode for the NPA and their corresponding mode share for scenario 1 (the scenario 2 totals would be similar). The peak PM hour was chosen because it represents a slightly worst case assessment compared with an AM hour, although the difference between the two is only 4%. The peak two trip rate was again obtained from TRICS. A sensitivity check was also made using the TRAVL database which provides trip rates for sites in London. For outer London sites with moderate public transport accessibility a peak hour trip rate of 0.34 was obtained which provides a reasonable correlation with the 0.358 trip rate from TRICS. The values given in table 3.6 were derived by first calculating the car or van vehicle trip numbers by multiplying the trip rate by the total number of household numbers in the study area for the year being considered. The vehicle trip number is equal to the number of person trips undertaken by the driver of the vehicles and corresponds to 54% current mode share. The trips for the other modes was then calculated using the respective modal splits obtained from the 2001 National Census data (shown in table 3.1 above). For example car passengers account for 6% mode share which would be equivalent to 4603 person trips in 2001 (41424 x 6%/ 54% = 4603).

Mode / Year	Additional Trips				
	2001	2011	2021	2031	Mode Share (%)
Walking and Cycling	16876	19272	22362	25141	22
Bus	6137	7008	8132	9142	8
Home Working	3836	4380	5083	5714	5
Taxi, Motorbike and Train	3835	4380	5082	5714	5
Car or Van Driver	41424	47305	54889	61709	54
Car Passenger	4603	5256	6099	6857	6
Total	76711	87602	101646	114276	100

Table 3.6 Peak Hour Home Based Trips Person Trips from 2001-2031, Scenario 1

Peak hour (PM) two way trip rates= 0.358, Source: TRICS

Mode / Year	Increase in peak hour people trips		
	2001-2011	2011-2021	2021-2031
Walking and Cycling	2396	3090	2779
Bus	871	1124	1010
Home Working	544	702	631
Taxi, Motorbike and Train	545	702	632
Car or Van Driver	5881	7584	6820
Car Passenger	653	843	758
Total	**10891**	**14044**	**11872**
% Increase	**14%**	**16%**	**12%**

Table 3.7 Increase in Peak Hour Home Based Trips Person Trips from 2001-2031,Scenario 1

3.40. The above tables show that based on current modal share percentages, the total number of car trips would increase by 16% above 2011 levels by 2021 with a further 12% increase up to 2031. These levels of increase would lead to further delays and a worsening of congestion on the highway network.

3.41. In order to avoid this degree of growth in car traffic, there will be a need to look towards placing a cap on the number of car driver/ passenger trips on the road network. It is proposed that the cap on the total number of car driver/ passenger trips should be the level that would be reached in 2011 with no change in mode share. This 2011 cap has been chosen on the basis that current proposals and targets in NATS and LTP should ensure that the transportation network would be able to cope with the level of development proposed up to 2011 (NATS and the LTP targets are discussed below).The total number of car driver/ passenger trips in 2011 on this basis is 52561. Keeping this number roughly constant for 2021 and 2031 would mean that the car driver/ passenger mode share would need to reduce from the current level of 60% to 52% and 46% respectively.

3.42. For 2021 the reduction of 8% in car driver/ passenger mode share would need to be taken up by other modes. By 2031 a reduction of 14% in car driver/ passenger from current mode share levels would need to be shared by other modes. The proposed changes in modal share is summarised in table 5 below.

Mode / Year	Current mode share (%)	Predicted Trips based on Current Mode Share			Proposed Modal Share (2021)	Predicted Trips (2021 Revised Modal Share)	Proposed Modal Share (2031)	Predicted Trips (2031 Revised Modal Share)
		2011	2021	2031				
Walking and Cycling	22	19272	22362	25141	23	23379	24	27426
Bus	8	7008	8132	9142	13	13214	15	17141
Home Working	5	4380	5083	5714	7	7115	10	11428
Taxi, Motorbike and Train	5	4380	5082	5714	5	5082	5	5713
Car Driver / Passenger	60	52561	60988	68566	52	52856	46	52567
Total	**100**	**87602**	**101646**	**114276**	**100**	**101646**	**100**	**114276**

Table 3.8. Predicted trips for 2021 and 2031 based on revised modal shares, Scenario 1.

3.43. The revisions to the mode shares are based on the following assumptions:

- A steady increase of 1% for each of the two time periods for walking and cycling;
- For buses an increase in modal share by 5% by 2021 and a further 2% by 2031;
- Home working to increase by 2% up to 2021 and a further 3% up to 2031 when it would equal the current East of England average mode share; and,
- Train, Taxi and Motorbike modal shares do not change.

3.44. Utilising the revised modal share percentages table 3.8 demonstrates that with an 8% reduction in car driver/ passenger modal share between 2011- 2021, compared with maintaining the current mode share, there will be a need to accommodate a further 8427 (60988 – 52561) peak hour person trips by non-car modes. This will be in addition to the growth in trips for the non-car modes that would take place even if their modal share did not change. Between 2021–2031 there would be a further 7572 trips to be accommodated by non – car modes.

3.45. The overall level of increase in walking and cycling will need to be facilitated by providing excellent links within the new developments and improved networks across the NPA. Home working would be assisted by broadband access. Planning policies should aim to ensure that generally homes and jobs are located in close proximity to further enhance these modes.

3.46. Buses will play an essential role in securing the proposed level of mode shift. Between 2011 and 2021 the projected increase in peak hour patronage will increase by 1124 (8132 – 7008), if the current mode share is

maintained, and by 6206 (13214 – 7008), to facilitate the proposed level of mode shift. Between 2021 and 2031 the increase is a further 1010 peak hour trips with current mode share and 3927 with mode shift.

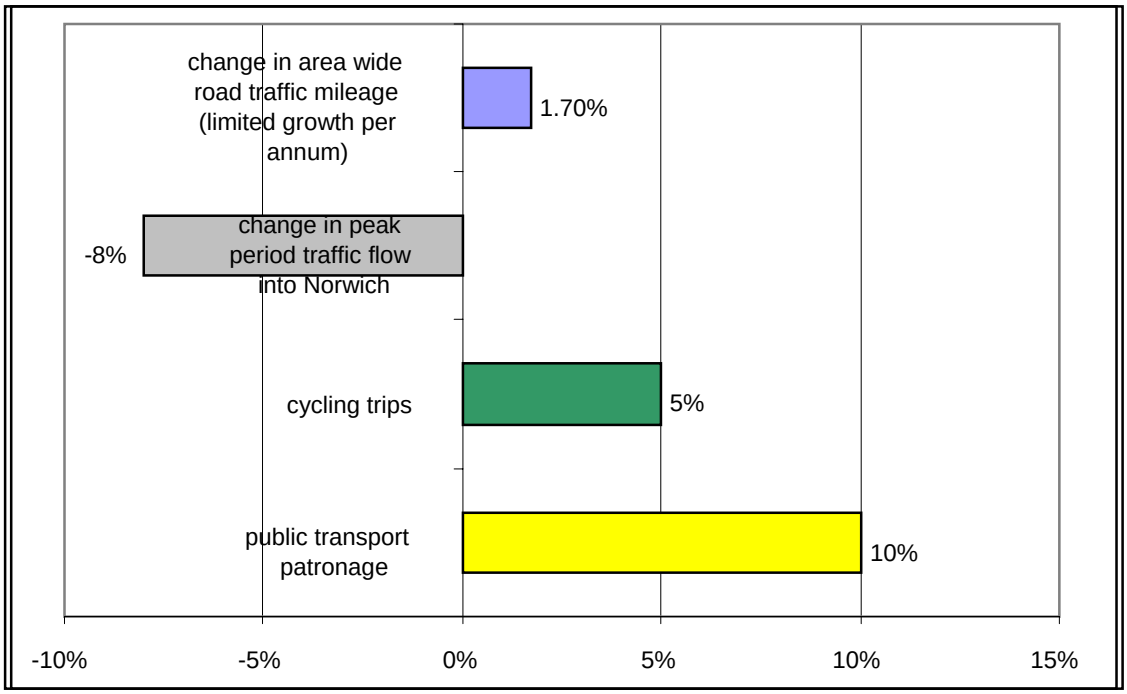
3.47. Based on a 'Turn up and go' (i.e. a bus every 10 minutes – this type of service is discussed further below) scenario and the carrying capacity of a double deck bus is around 90 passengers, the capacity of a bus service is around 540 people per hour. This capacity measure can be used to provide an indication of the number of new services needed to carry the additional peak hour bus trips (when the proposed mode shift is taken into account:

- 2011 to 2021 – based on 6206 additional peak hour bus trips, a further 12 turn up go services (using double deck buses) will be required.
- 2021 to 2031 – based on 3927 additional peak hour bus trips, a further 7 turn up go services (using double deck buses) will be required.

3.48. These services will be in addition to the services being provided in 2011. Table 3.3 provides a list of current bus services – the Norwich Over Ground services – which currently offers services on 7 routes. The peak services on these routes vary between 5 and 20 minute frequency. The new services would therefore need to supplement existing services as well as the introduction of new routes in order that the NPA is provided with a comprehensive bus network with frequent services,

3.49. In summary, to adopt sustainable travel patterns, a significant proportion of these trips would need to be undertaken by alternative modes of transport to the private car. But not only should the population in the new residential areas travel by alternative modes, but also the existing population in the established residential areas should be encouraged to do the same.

3.50. The implementation of NATS measures will help to provide for the growth up until 2011. Modal shift targets are already an important part of national and local policy to help reduce congestion, and are reflected in the Local Transport Plan's targets. The LTP's modal shift targets, from 2003 to 2011 are shown in the diagram below:



Modal Shift Targets identified in the Local Transport Plan

(source: TIF Bid for Pump-priming funds, Norfolk County Council, 16 June 06).

3.51. The successful implementation of NATS would help reduce traffic growth, by offering alternative modes of transport to new and existing householders. Taking into account the different base year, the target 8% reduction in peak period traffic flow should help mitigate the potential 14% increase projected between 2001 and 2011 (see Table 3.7), if these policies continue to be implemented over the period. This is mirrored by the target increase in bus patronage of 10% between 2006 and 2011; this roughly equates to the 14% increase in daily bus trips forecast between 2001 and 2011 (see Table 3.8).

3.52. For future growth beyond 2011 (i.e. from 2011 to 2021 and 2031), a sustainable programme of infrastructure improvement and policy intervention building on NATS will be needed. The growth in additional trips by car will need to be compensated for through the provision of alternative modes of transport. The use of other modes should be encouraged by use of travel planning and other soft measures as described in the main report.

Employment

3.53. Ten Strategic Employment Sites are located within the NPA, as shown in Figure 5, which is located in the Appendix of this report.

3.54. Daily two way trips based on the number of employees associated with the Strategic Employment Sites have been calculated. The trips have been derived using rates determined from the TRICS database. It should be noted that the propensity of workplace car trips is highly dependant on the intended use of the employment sites, number of employees, parking provisions, and building gross floor areas etc which has yet to be defined. In common with the calculations for home based trips, the trip rates used are representative of the recent past rather than what could be achieved by adopting sustainable policies.

3.55. It should also be noted that the home based trips considered earlier would encompass many of the trips to work in the NPA. The calculations have therefore only been undertaken to gain an understanding of the potential magnitude of car based trip making to the employment sites. From table 3.9, it can be seen that for all land uses, by 2021 the total two way trip rates by car associated with the growth in jobs is 10034 during 8.00am and 9.00am and 8026 during 5.00pm and 6.00pm. This is similar in magnitude to the additional 13465 car trips between 2001 and projected to 2021 made by residents during the peak PM hour only (see Table 3.6: 5881+7584 = 13465 trips).

3.56. Taking due account of the caveats associated with these calculations, it can be argued that without policy intervention the level of trips to the employment sites is likely to be substantially vehicle based with a high proportion of trips from home to work being undertaken by car .

3.57. It is therefore essential to encourage employees to use alternative modes of transport, to reduce these projected additional car trips. Public transport must be promoted and provide good services for employees.

Land Use	AM Two Way Trips (Based on Car Usage of 60%)	PM Two Way Trips (Based on Car Usage of 60%)	Total Daily Two Way Trips (All Modes)
Office	3628	3078	53315
Industrial Units	463	263	8686
Industrial Estate	3191	2445	54925
Business Park	2751	2240	31127
Total	**10034**	**8026**	**148054**

Table 3.9. Additional Employment based Two Way Vehicle Trips by 2021

(source: TRICS)

3.58. Currently, the Strategic Employment Sites are unequally served by public transport, and walk time from the sites to access public transport stations varies considerably. (See Figure 6. Walk Time from Public Transport Stations)

- Strategic Employment Sites situated in Norwich District lie within 5 minutes by foot from public transport services, with the exception of Norwich Airport site;

- Salhouse Road site (Sprowston), Gateway 11 site (Wymondham) and Norwich Airport site are within 5 – 10 minutes from public transport services, but walk time increases rapidly away from the sites, which could hinder their expansion;
- From Ipswich Road site (Long Stratton) and Longwater site (Costessey), walk time to public transport services exceeds 15 minutes;
- It should be noted that PT services are growing around the Longwater housing and employment growth. If there are poor services now then these will improve as part of the package of travel measures for housing.

3.59. There is therefore a need to extend the public transport network to ensure employment sites are adequately served. Moreover, even if walk times to public transport services are not excessive, this will not necessarily be matched by high frequency public transport services. For example, to travel from one of the proposed new residential areas to Norwich Research Centre Strategic Employment Site would take more than 40 minutes, although the site lies within 5 minutes by foot from the public transport services and the distance to the proposed residential areas does not exceed 10 km.

3.60. Indeed, the existing bus network does not always provide good connections with either new or existing residential areas, as underlined in the following public transport accessibility study. Added to that, bus services suffer from delays caused by the current level of congestion on some routes. Furthermore, bus routes providing good services may not have the capacity to cope with the additional users and could be overcrowded. Consequently, an extended and improved bus network should be implemented, with comprehensive bus priority measures such as dedicated bus routes between key sites within the NPA.

3.61. The public transport accessibility study has considered the public transport connectivity between strategic employment sites and new residential areas, as well as other key destinations within the NPA and Norwich City Centre. The results of the study are given in the next section.

3.62. In addition, there is a National Cycle Route that serves the strategic employment sites of Livestock Market, Norwich Utilities and Whitefriars. Apart from the National Cycle Network, cycle routes within the NPA do not form a comprehensive network connected to key locations in the NPA, such as strategic employment locations and Norwich City Centre. To encourage people to use this alternative mode of transport and reduce car use within the NPA, there is a need to extend and connect local cycle routes. (See Figure 4. Existing Cycle Network).

PUBLIC TRANSPORT ACCESSIBILITY

3.63. The public transport accessibility has been studied for each of the three residential growth areas considered within two scenarios. This is intended to provide an indication of the impact of growth in three different types of location. They have be used to help gain an understanding of how transport infrastructure would need to

be improved to serve these locations and provide good links with key destinations in the NPA such as Norwich City Centre and the Strategic Employment Sites (SES).

3.64. Public transport accessibility maps have been produced for each proposed location and help inform the required transport improvements, if that type of location was chosen, to accommodate the growth in the NPA.

3.65. Generally the maps have shown that locations on the fringes of the Norwich urban area are satisfactorily connected to Norwich City Centre but away from it, public transport accessibility rapidly decreases. Indeed there are few direct connections to surrounding locations and hence there is a need to interchange between services in the City Centre. There is hence a likelihood of experiencing both an interchange time penalty and further delays caused by congestion around the City Centre. The overall need for a comprehensive network of bus services to ensure there are improved connections to destinations in the Norwich urban area is discussed later in this section. The following discussion of the development scenarios focuses on the level of new bus route provision required for direct connection to the improved network.

3.66. Furthermore, villages within the NPA are insufficiently served by public transport when targeted destinations are not located within the Norwich City Centre. There is a need to provide faster links to locations in the urban areas surrounding Norwich City Centre and to strategic employment locations, and new links to the locations in outer Norwich, especially destinations to the north, without a need to cross the City Centre.

Journey Time (minutes)	From Urban Extension to:
0 – 15	- Salhouse Road SES
15 – 30	- Norwich City Centre - Livestock Market SES - Whitefriars SES - Broadland Business Park SES
31 – 40	- Norwich Utilities SES - Norwich Airport
41 – 60	- Norwich Research Centre SES - Gateway 11 SES - Wymondham Centre
Beyond 60 minutes	- Ipswich Road SES - Longwater SES - New Village - Wymondham

Table 3.10. Public Transport Accessibility from the proposed Urban Extension

3.67. The table above shows that Urban Extension is currently satisfactorily well served by public transport for destinations within Norwich City Centre or between the Urban Extension and Norwich City Centre. Public transport accessibility levels decrease away from this central area and journey time to the south of the NPA exceeds 40 minutes. (See Figure 7. Public Transport Accessibility from the Proposed Urban Extension).

3.68. In terms of bus service capacity it is envisaged that the equivalent of 3 single decker (1 double decker) bus service /s (turn up and go) will be needed to provide the necessary conditions for less car use, by providing alternative bus services, linking the Urban Extension to the improved Norwich bus network.

Journey Time (minutes)	From Market Town Extension to:
0 – 15	- Gateway 11 SES
16 – 30	- Norwich City Centre - Livestock Market SES
31 – 40	- Norwich Utilities SES - Whitefriars SES - Norwich Research Centre SES
41 – 60	- Broadland Business Park - Salhouse SES - New Village
Beyond 60 minutes	- Ipswich Road SES - Longwater SES - Norwich Airport SES - Urban Extension

Table 3.11. Public Transport Accessibility from the proposed Market Town Extension

3.69. The Market Town Extension is poorly served by public transport, with the exception of its immediate surroundings. Norwich City Centre and Livestock Market SES can be reached within 30 minutes, and the SESs within urban areas surrounding Norwich City Centre are within 40 minutes from Market Town Extension. Other destinations demand a long journey. Added to that, the strategic Norwich Airport Site is more than one hour away from Market Town Extension. (See Figure 8. Public Transport Accessibility from the Proposed Market Town Extension).

3.70. In terms of bus service capacity it is envisaged that the equivalent of 1 single decker (1 double decker) bus service (turn up and go) will be needed to provide the necessary conditions for less car use, by providing alternative bus services, linking to the improved Norwich bus network.

3.71.

3.72. The expansion of provision of new bus services will need to be considered jointly with the improvements to the rail services from Wymondham and the Norwich City Centre.

Journey Time (minutes)	From New Village to:
15 – 20	- Norwich City Centre
31 – 40	- Whitefriars SES - Norwich Utilities SES
41 – 60	- Broadland Business Park SES - Norwich Research Centre SES

	- Norwich Utilities SES - Norwich Airport SES - Salhouse Road SES - Gateway 11 SES - Urban Extension - Market Town Extension
Beyond 60 minutes	- Ipswich Road SES - Longwater SES

Table 3.12. Public Transport Accessibility from the proposed New Village

3.73. The New Village location is well connected to Norwich City Centre and areas immediately surrounding the centre. Otherwise, there are bus connections to other locations, but journeys take more than 40 minutes for distances which are sometimes less than 7 km, e.g.. from the New Village to Norwich Research Centre. (See Figure 9. Public Transport Accessibility from the Proposed New Village).

3.74. In terms of bus service capacity it is envisaged that the equivalent of 3 single decker (2 double decker) bus service (turn up and go) will be needed to provide the necessary conditions for less car use, by providing alternative bus services, linking to the improved Norwich bus network.

3.75. Any of the development scenarios would therefore require the implementation of a set of new bus routes linking to an improved public transport network serving the NPA. For all scenarios, the new public transport services need to link directly to and penetrate the new developments. The services would need to form an integral part of the improved network required to service the development expansion across the whole Norwich urban area. Good quality interchange will form an essential component of the network to ensure that efficient transfer can take place between services.

3.76. As a conclusion, satisfactory connections between some of the key destinations of Norwich Policy Area are provided, but, as noted in the Current Transport Situation section, the network is insufficient and incomplete. Indeed, the public transport network consists largely of radial bus routes converging on Norwich City Centre that do not provide direct connections between other locations. This can result in long journeys with interchange required. It is necessary to improve links between residential areas and strategic employment sites, by fast and, when possible, direct public transport; a full set of public transport options should be made available, supported by soft measures such as Workplace Travel Plans, to encourage people to use public transport rather than their car, car sharing and car club options should be taken forward. Journey times could be considerably decreased with the implementation of dedicated bus lanes on major bus routes. These improvements would be beneficial if they were also to be implemented across the existing public transport network.

3.77. Public transport links from the Park and Ride sites to the strategic employment locations should also be reviewed, to enable the sites to build on their current role of intercepting people travelling by car into the

city. However, although the interception of people travelling to work can be beneficial it is important to ensure this will provide real benefits in reducing length of car journeys within the NPA, rather than just diverting car traffic. It is also essential to confirm that this will not have a detrimental impact on other users. The schemes must show that there is a benefit for people travelling to work, which does not have an adverse impact on the overall policy for those travelling to the city centre.

3.78. It should be noted however, that the measures and policies outlined in NATS will help to improve some of the existing transport issues described above. In addition, it is proposed that traffic congestion will be eased following the implementation of the NDR. These strategies therefore will help to provide a better transport network and aid in supporting the growth of the Norwich Area.

3.79. To provide for the additional demands that are likely to be generated by the growth of Norwich, and to attract users from the car to alternative modes of transport, strategies can be implemented to improve the quality of bus services. For example, an increase in 'Turn up and go' daytime services. This will provide a service where buses will run frequently (generally one bus at least every 10 minutes) throughout the core daytime hours (i.e 7am-7pm Monday to Friday), allowing users to use the service without having to plan their journey. Additional strategies also include fast, direct journeys that are competitive with the private car and the provision of real time information systems to provide information on actual bus running and details of next bus arrivals. In due course further upgrading of the more popular bus routes to bus rapid transit (BRT) provision will need to be implemented if patronage levels warrant such improvements.

3.80. A further key issue that should be considered is to ensure that as many new homes as possible are located close to employment sites. This would help ensure that the need to travel longer distances is minimised and that car travel is reduced with walking and cycling modes increased.

TRANSPORT INFRASTRUCTURE DEMAND

3.81. The transport assessment has underlined significant gaps in the NPA's transport infrastructure. The transport network must be improved to cope with the planned growth of residential areas and significant employment locations. There is also a need to change the pattern of travelling, by encouraging the use of alternative modes of transport. It is therefore important to adopt mixed land use planning policies that place homes close to employment sites thereby avoiding the need to travel long distances to work by car, and encourage walking and cycling.

3.82. The following tables list the improvements required and their phasing. The growth of residential areas is not yet defined spatially. Consequently, detailed scheme proposals cannot be given for particular locations. The aim of these tables is to help inform the improvement and enhancement of transport to support the planned growth in the NPA.

NATS significantly contribute to the package of measures proposed below. Looking forward to 2021, NATS has been designed 'to help deliver the growth that will happen within the Norwich Area'. NATS was developed to meet the transport needs of a lesser degree of development than is now being considered for the Greater Norwich area, however the measures implemented will still contribute to relieving congestion and support growth in Norwich. NATS is based on the draft RSS for East of England published in 2004 and policy NSR4 of the draft RSS states that local development documents will provide for 29,500 net additional dwellings in the Norwich Policy Area between 2001 and 2021. The new projections therefore represent a further 7% increase over 2001 levels when compared with the RSS projections, as given in Table 3.13 below:

	Number of Dwellings		Additional Dwellings	Increase (%)
	2001	2021	2001 - 2021	2001 - 2021
RSS	115,710	145,210	29,500	25.5
New Projections	115,710	153,322	37,612	32.5

Table 3.13. RSS projections for additional dwellings and current projections

3.83. Consequently, although NATS can generally improve the transport network within the NPA, measures will need to be considered which build upon those implemented through NATS to support an increase in growth (in households) above RSS levels. These measures will also need to provide for significant growth proposed for employment in the NPA, including people accessing new jobs from homes outside the NPA area, and the specific requirement to provide links between new homes and new jobs will need to be addressed.

3.84. In determining the need for and phasing for transport infrastructure it has been assumed that car usage up to 2031 does not exceed the level of trip making at 2011 based on current mode share. With the planned growth this will mean that the mode share for car based trips will progressively decrease, assisted by the implementation of sustainable transport policies and strategies.

3.85. The measures phased between 2007 and 2011 represent those interventions considered in NATS and the Highways Agency (unless stated otherwise). These aim to reduce the current congestion on the road network and encourage the use of public transport up until 2011. They represent a first and necessary step before the implementation and delivery of the strategic network improvements that will provide significant improvements in the NPA and from the NPA to the wider area. Preparatory work on Strategic Network Improvements (i.e NDR, A11 Fiveways to Thetford and A47 Blofield to Burlington) should therefore continue up to 2011 to ensure that the Strategic Network Improvements can be delivered as soon as possible in the medium term period (between 2011- and 2021). These schemes are important to provide better accessibility to the employment locations that are currently hindered by long journeys on a congested highway network and are not well served by public transport. The A11 improvements will assist the overall requirements of the growth corridor extending south west from Norwich. The NDR is needed to ensure that

traffic in the northern part of the NPA can be removed from unsuitable local roads and thereby provide efficient access and movement, including meeting the needs of planned development over the wider area.

3.86. The measures considered for projects between 2011 and 2021 represent a continuation and expansion of the NATS policies required to deliver growth. The tables highlight separately 'Common Requirements' necessary for both Growth Scenarios and 'Specific Requirements' that relate to a particular Scenario.

Common Requirements by 2021

Common Transport Infrastructure Needs Arising by 2021
Walking
Phasing 2007 – 2011 • Implementation of improvements in Norwich City Centre by enhancing pedestrian priority, pedestrian crossing, pedestrian environment and street light schemes. **Phasing 2011 – 2021** • Implementation of pedestrian improvement schemes in new residential areas.
Cycle Network
Phasing 2007 – 2011 • Implementation of a dense cycle network in Norwich City Centre, with cycle lanes on-road and dedicated direct routes away from main roads. • Implementation of Cycling Parking at interchanges. **Phasing 2011 – 2021** • Implementation of a dense cycle network in new residential areas with cycle lanes on-road and dedicated direct routes away from main streets. • Implementation of cycle routes linked to the existing network and linked to the Strategic Employment Sites, with cycle parking provision. • Implementation of cycle routes linked to the existing network, providing links between the residential areas and from each new residential area to Norwich City Centre.
Bus

Phasing 2007 – 2011
• Bus Network Improvement with:
  • Bus Priority on current bus routes in Greater Norwich
  • Dedicated Orbital Bus Route along or adjacent to the Norwich outer ring road to serve outer Norwich and new residential areas and Strategic Employment Sites
  • Bus Frequency: increase bus frequency on existing routes from new residential areas linking to Norwich City Centre and Strategic Employment Sites (10 minutes frequency).
  • Bus Quality Improvements (accessible bus stops, new shelters, improved bus service information including Variable Message Signs displaying real time information, new bus fleet)

Phasing 2011 – 2021

- Implementation of Bus Rapid Transit (BRT) as an upgrade to previously improved bus routes (7 routes), with dedicated road space provided at congested points. Provision of 12 new routes (10 minute frequencies) across the NPA area, linking existing and new residential areas to Norwich city Centre and Strategic Employment Sites. Priority to be given to links to Norwich Airport, Norwich Research Park and Broadland Business Park;

- High Quality Bus Services between P&R sites and key Strategic Employment Sites (but only where the case can be made that the routes offer overall transport benefit), Longwater Costessey and Norwich Research Park; between Airport P&R and Norwich Airport Employment Site; between Sprowstone P&R and Salhouse Road Employment Site and Broadland Business Park; between Postwich P&R and Broadland Business Park; between Thickthorne P&R and Norwich Research Park.
- Expansion of Bus Network, providing new orbital bus routes to link with the current predominantly radial service.

Train

- No interventions common to both Growth Scenarios

Light Rapid Transit (LRT)

Phasing 2011 – 2021

- Review Potential for Upgrade of LRT on improved bus services from Bus Rapid Transit (BRT). Pilot Routes implemented towards end of the period.

Interchanges

Phasing 2007 – 2011

- Interchange enhancement for all stations (bus, and train) in Norwich

Phasing 2011 – 2021

- Enhancement bus to bus (and BRT) Interchange Provision
- Interchange enhancement for all stations (bus, BRT, train and LRT) in Norwich and along the growth corridor (see above)

Soft Measures

Phasing 2007 – 2011 & 2011 – 2021

- Better information on Public Transport
    - Workplace and School Travel Plans

- Personalised Travel Planning and Individualised Marketing
- Travel Awareness Campaigns
- Car Clubs and Car Sharing Schemes
- Area wide Travel Planning

Parking

Phasing 2007 – 2011

- Review the amount of on-street and public and private off-street parking provision required for the City Centre and determine a parking strategy and whether adjustment to provision is needed.
- Review need for improvements for on-street parking and loading/unloading provision on distributor roads as part of strategy and traffic management initiative.
- Determine Parking Policy and Standards for residential new developments and employment locations.
- Commence implementation of programme improvements.

Phasing 2011 – 2021

- Implementation of a Parking Strategy.
- Implementation New parking Policies.
- Review Parking Standards of New Developments.

Park and Ride

Phasing 2007 – 2011

- Increase capacity of existing Park and Ride Sites, where appropriate.

Phasing 2011 – 2021

- Continue Expansion of Existing Capacity.
- New Park and Ride Site on the A146, where the A146 crosses the A47

Local Road Network and Private Car Use

Phasing 2007 – 2011

- Traffic Management.
- Junctions with Strategic Roads Enhancement, where links are congested.

Strategic Road Network and Private Car Use

Phasing 2007 – 2011

- Commence Programme of Limited Dualling of Single Carriage Highways and Capacity

Improvements at Junctions at Congested Locations.

- Establish programme of Traffic Management on Strategic and Distributor Roads within Greater Norwich.
- General Enhancement and Dualling of Single carriage Highways on the growth corridor.

Phasing 2011 – 2021

- Northern Distributor Road.

Freight and Other Traffic

Phasing 2007 – 2011

- To be considered as part as the Road Network Improvements listed above.

Specific Requirements by 2021: Scenario 1

Scenario 1 Specific - Transport Infrastructure Needs Arising by 2021
Bus
Phasing 2011 – 2021 • The Market Town Extension and Urban Extension (Scenario 1) will require 4 new services. These must be of a 10 minute frequency and single decker. • Where appropriate, extend the P&R Bus Shuttle routes to serve the Urban Extension.
Train
Phasing 2011 – 2021 • Increase of train frequency between Wymondham and Norwich. New frequency would be one train each 15 minutes in peak time and 30 minutes for inter peak time. • New Station (or if required two new stations) on the Norwich to Cromer line to serve the Urban Extension and Broadland Business Park.
Local Road Network and Private Car Use
Phasing 2011 – 2021 • New Junctions to A11 from the Market Town Extension and to A1151 and future Northern Distributor Road from the Urban Extension.
Strategic Road Network and Private Car Use
Phasing 2011 – 2021 • Complete Programme of Limited Dualling of Single Carriage Highways and Capacity

Improvements at Junctions at Congested Locations.

- Complete Programme of Traffic Management on Strategic and Distributor Roads with Greater Norwich.

Specific Requirements by 2021: Scenario 2

Scenario 2 Specific - Transport Infrastructure Needs Arising by 2021
Bus
Phasing 2011 – 2021 • The New Village will require 3 new services. These must be of a 10 minute frequency and single decker. • Where appropriate, extend the P&R Bus Shuttle routes to serve the New Village.
Local Road Network and Private Car Use
Phasing 2011 – 2021 • New Junctions to the A140 from the New Village.

Common Requirements 2021 – 2031

Transport Infrastructure Needs Arising 2021 – 2031
Walking
• Further Implementation of Pedestrian Improvement Schemes in new residential areas.
Cycle Network
• Expansion of the Cycle Network • Further Implementation of cycle routes linked to the existing network and linking the residential areas one to another and each new residential area to Norwich City Centre.
Bus
• A further 7 new bus routes; • Expansion of Bus Rapid Transit Network.
Train
• Further Enhancement to Journey Times from Norwich to London.
Light Rapid Transit
• Subject to results of the review recommended during the period 2011 – 2021:   • LRT implementation from Norwich City Centre to the main Strategic Employment

Locations (Longwater Costessey, Norwich Airport, Broadland Business Park and Norwich Research Park).
Interchanges
• Develop all main interchanges as major hubs, providing access to different types of public transport. Incorporate with Park and Ride arrangements.
Soft Measures

• Better information on Public Transport:
  • Workplace and School Travel Plans;
  • Personalised Travel Planning and Individualised Marketing;
  • Travel Awareness Campaigns;
  • Car Clubs and Car Sharing Schemes; and,
  • Area wide Travel Planning.

Parking
• Further implementation of Parking Strategy
Park and Ride
• Expansion of Park and Ride Capacity, if required
Local Road Network and Private Car Use
• Consider the possibility of a Congestion Charge system

Specific Requirements 2021 – 2031: Scenario 1

Transport Infrastructure Needs Arising by 2021
Light Rapid Transit
• Light Rapid Transit (LRT) implementation between the Market Town Extension and Norwich City Centre

Specific Requirements 2021 – 2031: Scenario 2

Transport Infrastructure Needs Arising by 2021
Light Rapid Transit
• Light Rapid Transit (LRT) implementation between the New Village and Norwich City Centre.

4. ECONOMIC DEVELOPMENT AND RETAIL

INTRODUCTION

4.1. Economic and Employment Growth in the Norwich Policy Area are key policy objectives of each of the organisations represented on the Greater Norwich Development Partnership (GNDP). Achieving the jobs growth targets set out in the Regional Spatial Strategy for the East of England is critical to the wider sustainable development objectives of growth. It is essential therefore that the economic and retail infrastructure required to unlock growth is identified at an early stage and included within the Partnerships Programme of Development.

4.2. In order to do this the GNDP have commissioned two studies which will inform the future development of policy (including the Joint Core Strategy) relating to economic and retail infrastructure. They are;

- The Employment Growth and Employment Sites and Premises Study. This is intended to establish a strategic vision and direction for employment growth across the Norwich Policy Area, based on a comprehensive analysis of the spatial capabilities of the area to facilitate, support and sustain such growth. The analysis of existing employment sites and premises aligned with the projections for future economic and related employment growth should lead to a prioritised list of sites and premises for intervention and investment. This study is not likely to be completed until early summer 2008.
- Norwich Sub Region: Retail and Town Centres Study. This study identifies the current role, attraction and performance of each main centre and shopping location. It also assesses the broad quantitative and qualitative need for new retail and leisure floorspace up to 2021. This is about to be completed and the findings from a final draft have been considered in our assessment below.

4.3. Both these studies will address the issues set out in this report in much more depth and allow the recommendations we have made to be developed further. To make an initial strategic assessment of what economic and retail infrastructure is required we have undertaken a review of existing economic policy and research and the final draft of the Retail and Town Centres study, and taken on board the comments of key economic stakeholders at the infrastructure workshop held on 29th June 2007 at the Assembly House, Norwich.. In particular we have tried to identify issues that require action in the short term as with most infrastructure projects, the time between project inception and delivery can be significant so it is essential that investment takes place now.

4.4. Unlike our assessment of Social, Transport and Utility infrastructure, Economic Infrastructure is less affected by the location of residential growth so this review identifies economic infrastructure issues across the NPA with a focus on any specific requirements associated with the two Growth Scenarios. We first consider economic and employment infrastructure requirements and then retail infrastructure requirements.

ECONOMIC AND EMPLOYMENT INFRASTRUCTURE

4.5. The definition of Economic and Employment Infrastructure can be divided into two broad types, hard infrastructure, e.g commercial premises and soft infrastructure e.g training provision or inward investment activities. We have structured our assessment around these two broad infrastructure types.

Commercial Property

4.6. The Mori research, commissioned to support the 2006 LEGI bid, identified the availability and quality of premises for businesses as a key concern. Anecdotal evidence also suggests that the quality of some of the older commercial office space in Norwich City Centre is deemed to be less than adequate and one of the key factors driving business to city fringe sites. To allow employment growth targets to be reached it is important to identify and deliver the quantum, quality and type of commercial space that is required.

4.7. To identify the quantum of B use class business space required, the largest likely use class order, we applied a set of assumptions to the regional employment forecasts. Although this approach does not take into account all variables and sensitivities it does provide a upper end estimate of the amount of B1 space required to support the increase in jobs.

4.8. Using the sectoral employment forecasts from the NEGs study and from our experience elsewhere we assumed that of the 35,000 jobs target for the NPA, 60%, 21,000 of the jobs will be in sectors requiring B use class employment space with 20% or 7000, in retail and leisure and the final 20%, 7000 in employment associated with the new social infrastructure

4.9. To translate employment forecasts into floorspace requirements we applied English Partnerships approved employment density ratios[3]. The approach taken was to multiply the B Use Class target of 21,000 jobs (2001 – 2021) by the average number of square metres occupied per worker.

4.10. Based on these assumptions the table below sets out the maximum B use class employment land required.

[3] These densities are the average densities used by English Partnerships and in reality to comply with planning policy it is expected that office provision in Norwich City Centre will be at far higher densities than set out above. However this is likely to be balanced by the lower densities of developments in the urban fringe and particularly B2 and B8 use classes which have significantly lower densities.

Commercial Space	2021 %Industry Sector	Employee Equivalent	(EP) Gross internal sqm per workspace	Workspace Requirement (gross internal sqm)	Plot Coverage	Gross to Net	No. Storeys	Workspace Requirement (gross ha)
B1,B2,B8	60%	21,000	19	399,000	40%	85%	2	58.7

Table 4.1: Maximum B use class employment land required

4.11. The table shows that for B use class space, assuming an average of two storeys and 40% plot coverage, approximately 58.7ha of land is required.

4.12. In Broadland and South Norfolk this will represent a significant increase in employment floorspace and in those districts the above forecasts will have to be accommodated predominantly in newly constructed space. However, in Norwich where a large proportion of the growth is anticipated there are some key sites for redevelopment in the City Centre which can contribute to the enabling regeneration and increased employment floorspace. Some of these are being brought forward through an Area Action Plan for the Northern City Centre. Others will involve redevelopment of previous employment uses – both outworn offices and industries less suited to a city centre location. The City Council recognises that much of the City's stock is outdated and needs major refurbishment or replacement. Reprovision in modern, purpose built office buildings is a key aim of the Area Action Plan and other proposals being developed in the centre (e.g. Whitefriars/Barrack Street).

Existing Strategic Employment Sites in the NPA

4.13. To understand the likely distribution of this new space and to ensure that there is sufficient employment land allocated to facilitate growth we have identified the strategic employment sites in the NPA. It is not the purpose of this study to undertake a detailed assessment of existing employment sites, this will be undertaken as part of the Employment Land Review, but we have reviewed the NCC Strategic Study 2005 and the Norwich Strategic Sites Study 2005 and made an assessment of which sites are likely to come forward in the short to medium term. This has allowed us to identify is there are sufficient sites available. Using the information contained in these studies and from consultation with the GNDP we have identified the barriers to bringing those sites to the commercial market and where possible the costs of overcoming those barriers.

4.14. The table below identifies the strategic employment sites across the NPA . Although the table shows that there is a sufficient amount of employment land allocated to deliver the employment growth targets the majority of these sites have significant development constraints which in most cases require some form of subsidy to make them viable. The sites in the table below are those over three hectares but there are also a

significant amount of sites smaller than 3 hectares that for the purposes of this assessment have been amalgamated and identified in the table as spaceless growth.

Strategic Employment Sites – Land Allocation		
Employment Site	**Total Site Area**	**Potential Land Use**
Broadland		
Broadland Business Park, Thorpe St Andrew	25.8 ha	- Speculative office development (strategic sites 2005) or business park use (RES) - Norwich Union Pre-let (RT&P)
Salhouse Road, Sprowston	3.1 ha	
Spaceless Growth	24.5 ha	
Norwich		
Deal Ground	Mixed use 8.2ha	- 291 residential units plus 7,246m2 (78,000 sq.ft.) of commercial / office accommodation (managed workspace). - (strategic sites 2005)
Utilities Site	Mixed use 6.9ha	- Subject to constraints there is potential to accommodate 466 residential units. Plus 11,600m2 (125,000 sq.ft.) of commercial office floorspace (managed workspace). - (strategic sites 2005)
Whitefriars/Barrack Street	Mixed use 3.5ha	- Office floorspace
Livestock Market, Hall Road	9.7 ha	
Norwich Airport (Hurricane Way + additional space)	35 ha	- Creation of a 'business village' (mix of uses; primarily office and workshop space) (strategic sites 2005)
Spaceless Growth	73.7 ha	
South Norfolk		
Norwich Research Park, Colney	36ha	- Research park facilities to include R&D, higher education and hospital related uses. (RES)
Longwater, Costessey	28.1 ha	- B1,B2,B8 Business park use (RES)
Gateway 11, Wymondham	8.54 ha	- D&B office and industrial sales (RT&P)
Ipswich Road, Long Stratton	5 ha	
Spaceless Growth	27.4 ha	
TOTAL	**295.5ha**	

Table 4.2: Strategic Employment Sites: Land Allocation

4.15. Of the sites identified above several have been prioritised by GNDP for development, they are identified below with details of known barriers to development.

Broadland Business Park

4.16. The Broadland Business Park is a 25.8 ha site providing a mix of B1, B2 and B8 uses. Development is planned in two phases with phase 1 being about 75% built. Development for Phase 2 is being considered with options specifically exploring low traffic generation characteristics. At the present time permission to develop Phase 2 is unlikely due to capacity and access issues to the A47 trunk road.

4.17. The infrastructure costs associated with developing the trunk road range from £2m to £6m but the improvements are complicated further by plans to improve the Northern Distributor Road which would require the provision of a more elaborate junction.

Longwater

4.18. The site at Longwater Costessey, in South Norfolk is a 28.1ha site identified for B1, B2 and B8 Business Park and residential uses. The main constraints for the development of the site are major junction improvement requirements at the A47 and electricity supply. In 2005 costs of £2m -£3m were quoted to in order to provide electricity to the site. The estimated cost of the junction upgrade is estimated at £12m (GNDP Programme of Development, 2008-11). Limited capacity was available at the time to deliver up to 380 houses. Further investigations are required to identify whether EDF have carried out the necessary infrastructure improvements required to supply the site.

4.19. Work identifying the constraints to delivering existing commitments at Longwater has been undertaken. If additional growth is recommended for this location then further analysis will be required and significant funding made available to open up the site.

Norwich Research Park

4.20. Norwich Research Park in South Norfolk is a 35ha site allocated to a range of restricted uses. An SPD is being prepared for the site which seeks to co-ordinate and develop on the allocated sites. In essence the constraints affecting the progress at the NRP are agreement on necessary highway improvements (access and B1108 enhancements); willingness of landowners to release the land and a generally slow rate of take up fro R&D uses. Investment required to provide the appropriate land and infrastructure is estimated to be in the region of £7m.

Deal Ground and Utilities Site

4.21. Deal Ground and Utilities Sites are two brownfield sites located close to the city centre which have remained vacant for many years. The sites have the potential to make a significant contribution to the housing and employment development needs of the City.

4.22. Several studies have been undertaken on the site and the primary constraints for which enabling funding will be required are;

- Access – Major investment will be necessary to provide vehicular access to the two sites , including a relatively minor river bridge over the River Yare to afford access to the Deal Ground and potentially a larger bridge over the River Wensum for road access to the Utilities site;
- Flooding – this will need to be assessed in light of climate change and flood defence measures incorporated; and,
- Contamination – the previous uses of site will have caused contamination issues and remediation will have to be carried out.

4.23. The estimated level of public financial support required to bring this site forward is in the region of £17.5m

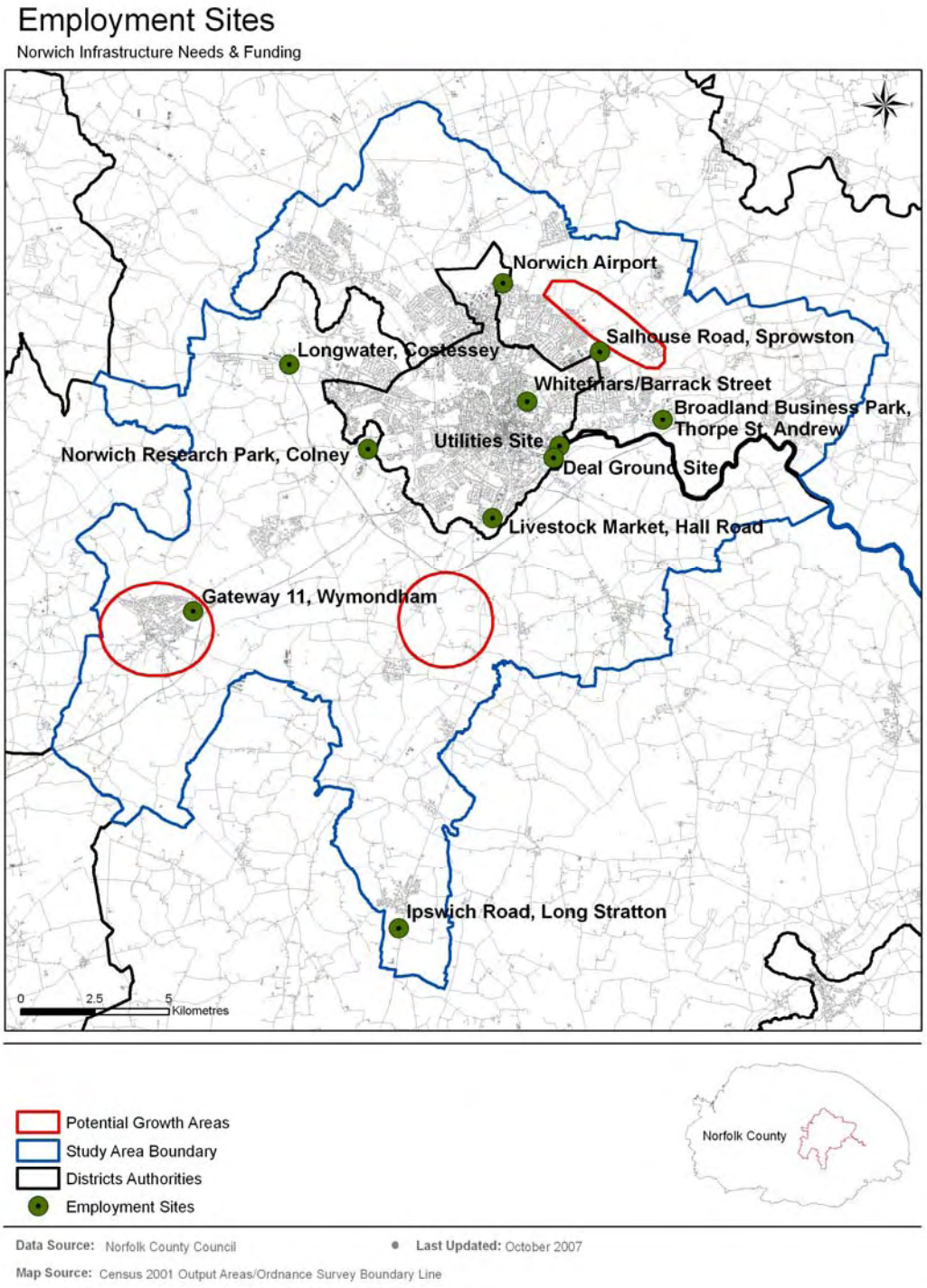
4.24. In addition to these site specific development constraints the Norfolk Employment study and the two Strategic Sites Studies identify that many sites in the area particularly our of centre smaller sites are generally not viable for commercial development. In these areas commercial development may have to be cross subsidised with either residential or retail uses. Even where rents are relatively high the speculative development of land remains an unattractive proposition for the vast majority of commercial developers and in many cases there is a strong case for public sector intervention. It is possible that development viability could improve as the region's economy grows but this is unlikely, particularly in the current economic climate. Public intervention is required to ensure these sites come on stream and are completed before the end of the plan period.

4.25. Given the significance of the constraints identified for the sites above it is clear that investment in infrastructure is required immediately if jobs growth targets are to be realised within the plan period. Given the time required to resolve these infrastructure constraints to be overcome and the sites developed action needs to be taken now

Employment Sites and the Growth Scenarios

4.26. A key element of ensuring that growth in sustainable is to provide opportunities for people to travel to work by sustainable means including public transport, foot or bicycle. A key factor in making that possible is to create employment opportunities close to where people live.

4.27. The map below shows the location of the key strategic employment sites in relation to the two growth scenarios:



Growth Scenario 1

4.28. This scenario includes the urban extension to the north east of the Norwich and the expansion of Wymondham. The north eastern extension is in close proximity to three of the strategic employment sites Norwich Airport, Salhouse Road and Broadland Business Park. Salhouse Road in Sprowston is particularly close to the southern boundary of the growth area. The growth location in the south at Wymondham benefits from having Gateway 11 within the growth area. Wymondham, as a small town provides a range of employment opportunities. It is also relatively close to Hethel – headquarters of Lotus and and home to the

new Hethel Engineering Centre. Hethel is identified as a regionally important location for cluster development.

Growth Scenario 2

4.29. The new village option to the south of Norwich is less well located to existing strategic employment sites with Livestock Market Hall Road being closest, after this the closest site is the Deal and Utilities sites but these are some distance from the new settlement and within the existing Norwich Urban area.

4.30. Growth Scenario 1 is the best located to exploit existing strategic employment sites. The urban extension to the North East of Broadland in particular is well served by several strategic employment sites and provides excellent accessibility to the other sites in the urban area. The development of these sites for employment or mixed use at the same time as residential development could help meet the employment needs of new residents while encouraging sustainable methods of transport to work including cycling and walking.

4.31. Conversely, Growth Scenario 2 the isolated settlement is relatively disconnected from any of the existing employment sites. New residents would have to travel some distance to get to the new sites. An alternative option could be to incorporate a strong commercial element into the new settlement in scenario 2 but as a new commercial location it is likely to require a significant amount of initial investment to establish it as a credible commercial location.

RETAIL INFRASTRUCTURE

4.32. GVA Grimley are in the final stages of producing a Retail and Town Centres Study for the Norwich Sub Region. This study was carried out to inform retail planning in the Norwich Sub Region and identifies the current role, attraction and performance of each main centre and shopping location. It also assesses the broad quantitative and qualitative need for new retail and commercial leisure floorspace upto 2011,2016 and 2021.

4.33. The study identifies the potential capacity for between 39,395 sqm – 52,186 sqm net of new comparison goods floorspace in the NUA at 2016, for convenience goods retailing, there is a projected capacity for 15,694 sqm net of new floorspace based on the average turnover for a smaller convenience discount store, or 5231 sqm net assuming a larger superstore format.

4.34. Although Norwich City Centre has been identified as a strong shopping and leisure destination, the study identifies several apparent weaknesses which threaten the City's retail position and should be addressed through the LDF. The city centre is clearly critical to sustainable growth and so the following weaknesses should be considered as part of the Growth Programme;

- The pedestrian linkages and integration between Chapelfield and the rest of the city centre's shopping areas could be improved.
- St Stephens street needs shop front and pedestrian improvements

- The relationship between the Riverside Retail Park and the Town Centre needs to be improved.

Potential Opportunity Sites

4.35. The study undertook a high level assessment of potential sequentially preferable sites in the city centre. This highlighted a number of potential development opportunities that could be suitable for new retail, leisure and mixed use floorspace over the LDF period to help meet some of the identified capacity. The site with the most development potential is Anglia Square which represents the most sequentially preferable site for new retail in the City Centre in terms of its availability for new development. In addition the following opportunities should be prioritised for development:

- Norwich Union Offices;
- Westlegate; and,
- Ber Street/Rouen Road

4.36. The Broadland Rural Area has been identified as having limited comparison floorspace capacity for between 209 sqm – 278 sqm. This may need to be re-evaluated to take into consideration the impact of the Growth Scenario 1.

4.37. In Wymondham the study identifies that there is a healthy small town centre with low vacancy rates and a strong service businesses account. The study identifies an underprovision of convenience floorspace and recommends that further work be undertaken to identify whether the town could support a sensitive foodstore. Any further assessment should take into account the impact of significant growth in Wymondham.

4.38. Retail infrastructure plays an important role in the development of sustainable communities. When planning for growth, the provision of a broad range of retail infrastructure should be promoted including small independent retailers as these are proven to support local economies.

4.39. Generally, the provision of retail space is provided by the market and therefore it is not considered necessary to plan financial intervention in this sector.

SOFT ECONOMIC AND EMPLOYMENT INFRASTRUCTURE

4.40. Soft Economic and Employment encompasses a broad range of services, activities and issues. For the purpose of this review we have focussed on three elements which are particularly relevant to growth, Labour Force Skills, Inward Investment and Institutional Profile.

Skills

4.41. The provision of high quality training and education will be essential in ensuring that the Labour Force is equipped to access and attract jobs to the region. This is particularly important as future employment growth is likely to be based in professional knowledge based industries which require higher skill levels than some of the declining manufacturing sectors. It is important that existing as well as new communities have access

to training allowing them to access the job market. Currently around 30% of residents in the NPA do not have a qualification. Although the skills and learning profile of the NPA is better than other parts of the County it is still comparatively weak and is holding back the potential of the economy to grow. There are several particularly acute skills shortages and skills gaps in Norwich with many businesses fulfilling their skill requirements from outside the County.

4.42. There is a requirement to go beyond standard skill delivery programmes. The building of a high calibre workforce was identified as the most critical factor in the Norfolk Employment and Growth Study.

4.43. There is a broad range of existing training and education provision in Norwich bolstered by the strong Higher and Further Education Sector. The diversity of provision ranges from the national skills academy in the financial services sector which is due to open this autumn and through to the Norwich School of Art and Design. The £5m financial services academy in Norwich aims to raise skill levels in the region's financial sector and is expected to trigger a flood of regional centre start-ups during the autumn.

4.44. The region has also been successful in obtaining European funding aimed at improving skills within deprived sections of the community. The Norfolk Learning and Skills Council (LSC) secured European funding totalling £18 million from the European Social Fund (ESF). This funding was to support education and training provision in the county. The restructuring of European funding means that funding for these types of projects could be substantially reduced in the future putting training provision at the lower skilled end of the workforce at risk.

4.45. A significant amount of work is already being undertaken to address skills gaps issues in Norwich. A lot of that work is focussed upon the very low skilled and there is the potential for more work to be undertaken at this level, as well as ensuring that the existing low skilled low paid population are retrained and upskilled to allow them access to the growing knowledge economy. In terms of encouraging employment growth both the Norfolk Employment Growth Study (NEGS) and the Ideopolis report agree that additional skills development should be focussed upon the requirements of the key growth sectors, namely the Financial Services sector, and the emerging science and creative industries sectors. There is also and appetite to develop businesses with the environmental technologies in partnership with University of East Anglia (UEA).

4.46. The GNDP should consider within its programme of delivery how address these skills issues. Generic skill development should remain the responsibility of the Learning and Skills Council, and local partners but the Partnership may want to consider additional funding to focus on high level skill development which will contribute to the high value growth sectors (similar to that secured for the financial services already).

Inward Investment

4.47. An intelligent and innovative approach to attracting inward investment is required to generate the jobs necessary to meet the jobs growth targets. In recent years the City has been successful in facilitating

significant levels of investment from several blue chip companies and is adept at working with existing companies to expand and relocate other parts of their firm to the area.

4.48. The NPA and in particular Norwich City has a number of significant strengths that can be exploited and built upon. Perhaps in economic terms its greatest asset is its financial services sector which includes several major companies such as Norwich Union, Marsh and Virgin and there are also some examples of world leading companies in other high value sectors including high value manufacturing and more recently the creative industries.

4.49. There is also evidence of significant entrepreneurial activity in particular lifestyle sectors that do not deliver growth and a good higher education offer which is not directly linked to the local economy. Development of both of these areas could contribute to growth. A good example of how the HE sector has developed links with the wider industry is the Norwich Research Park Enterprise (NRPE) located at the Norwich Research Park. This is a programme that develops relationships between research organisations and industry to create new business opportunities. The NRPE focus is on collaboration, business development, inward investment and encouraging relocation to the park. There are a number of companies and networks which support business growth. The Iceni Fund was established in 2002 and is a seed-corn investment fund of £4 million, available to a consortium made up of the University of East Anglia, the John Innes Centre, the Institute of Food Research, the Sainsbury Laboratory, PBL and the University of Essex. The fund, awarded by the DTI under its University Challenge Fund Competition, provides investment in spin-out companies resulting from research carried out by the consortium members. The NRPE also facilitate links to other sources of funding through EEDA, DTI and EU.

4.50. There appears to be the foundations in place for a range of Inward Investment development opportunities in the NPA which have not yet been fully exploited and require some strategic coordination.

Institutional Profile

4.51. Understanding and developing the institutional profile for the NPA will be critical for delivering the jobs growth targets. The Norwich Economy Round Table does in part fulfil this role and should be developed further to provide a mechanism which allows the County Council and the three district authorities, the public sector support network and the private sector to work together to achieve an agreed set of Economic Development objectives will be essential to deliver on targets and create a successful, healthy and strong economy.

4.52. The existing institutional profile for Norwich is strong but will need to be developed further to cover the wider NPA and deliver economic growth targets. Economic development in the NPA is currently generally focussed at a district level with the three districts each having their own approach to and strategy for achieving economic development. At the same time the Norwich Economy Round table contains representatives from each of the three districts and considers the economy of the wider NPA.

4.53. The Norwich Economy Round Table is part of Norwich Local Strategic Partnership. It is made up of local businesses, and economic stakeholders including, local authorities, education, training and employment providers. The aim of the round table is to provide an overview of the needs of the local economy and develop and manage the Norwich Economic Strategy and its Annual Action Plan. The round table consults regularly regarding business needs and take partnership action to address unmet needs or to add value to existing economic development activity. The economy round table currently works with the other 3 Norwich Round Tables to create a holistic approach to economic, social, cultural and environmental issues.

4.54. The Norfolk Chamber of Commerce is another key element of the institutional profile in the NPA. It encourages business enterprise and develops and assists projects which expand the local economy. The chamber of commerce informs businesses of new regulations, networking opportunities, and represents different areas through locally-led groups.

4.55. At a regional level Norwich City Council's Economic Development unit is heavily involved with Regional Cities East.

4.56. The Norwich business community is committed to regional and city growth. The Norwich Partnership works closely with the economy, social, cultural and environmental round tables in order to ensure the LSC activities support the other round table objectives. The role businesses play in the health of the city and the future aims for growth mean that the Norwich economy round table plays a key role in strengthening Norwich's business profile and economy.

4.57. The development of the Greater Norwich Development Partnership is a significant start and the partnership might wish to consider exploring the potential of developing a City Development Company to take forward and join up its Economic Development agenda. This will be explored in the context of developing delivery models for the wider delivery of growth in Section 4.

CONCLUSIONS AND RECOMMENDATIONS

4.58. It is clear from this brief assessment that investment in the range of economic infrastructure is required to provide the platform from which Economic and Employment growth targets can be achieved.

4.59. A proactive approach is required to ensure that the required amount and quality of new commercial space is developed. In the City Centre much of this space will be able to be provided through the redevelopment and refurbishment of existing sites and premises, in particular North Anglia Square and the Deal Ground and Utilities Site.

4.60. To facilitate employment growth new developments will also be required in urban fringe locations close to the new growth areas. These sites will provide significant employment opportunities but some, for example

the Norwich Airport Site, are unlikely to be developed and functional before 2021 because of utility and transport infrastructure constraints. The Partnership's approach of prioritising and supporting the development of sites which have already been subject to a significant amount of feasibility work is sensible but ensuring that constraints to sites required in the medium to longer term are addressed now is essential. A fundamental element of a successful Inward Investment strategy will be ensuring that there is a pipeline of development sites to deliver future employment growth beyond 2021.

4.61. In relation to Labour Force Skills, future investment should be focussed on providing skills specific to the growth sectors of the economy. Although it is important to ensure that existing provision continues to address social polarisation providing training for the low skilled section of the population it must be recognised that higher level support is required for those 'wealth generators' and entrepreneurs who are driving the sectors of the economy which are likely to deliver the greatest jobs growth.

4.62. Inward Investment requires a coordinated strategy that is directly linked to and exploits the growth agenda. In particular the strategy should consider and inform the phasing of the employment sites identified above and consider how the development of these sites are linked to residential development. The development of the Inward Investment strategy should be based on the findings of the Employment Growth Study and build on existing initiatives including LEGI.

4.63. Finally the key to successfully implementing all these interventions relies heavily on the Institutional Capacity and framework. It will be important for the Norwich Economy Round Table to engage with and influence the growth agenda to ensure that Economic Development is at the heart of planning for growth. Emerging models for delivery including City Development Companies rely heavily on strong governance and leadership and the buy in of local businesses. This is explored in more detail in Section 4.

Infrastructure Theme	Conclusion/Recommendation
Sites and Premises	• Significant funding is required to 'unlock' the development potential of strategic employment sites, including Norwich Research Park, Longwater and Deal Ground and the Utilities Site. GNDP should prioritise employment development sites and identify accurate required infrastructure costs.
Sills for the Knowledge Economy	• Additional Labour force skills development should focussed on high value growth sectors and develop and exploit relationships with the universities.
Inward Investment	• The development of an Inward Investment Strategy which is closely related to housing growth.

Strong Governance and Leadership	• The GNDP should consider how the development of a delivery vehicle could take overall responsibility for Economic Development across the NPA

5. UTILITIES

5.1. Peter Brett Associates (PBA) has examined the strategic utilities implications of the two Growth Scenarios. The level of growth planned for the Norwich area will place considerable pressure on the utilities infrastructure within this area. This section of the report outlines PBA's findings in terms of infrastructure demand that is required through direct liaison with the Utilities Companies, or through a review of detailed studies where applicable. Where the studies reviewed are not yet finalised, this report presents the most up-to-date findings available.

EXISTING INFRASTRUCTURE

Clean water and waste water

5.2. PBA have analysed the Water Cycle Study produced by Scott Wilson (August 2007) and made an assessment of the water infrastructure requirements for both scenarios. The Water Cycle Study is only at Stage 1 and during the 2nd and final stage of the Study further investigation / modelling and discussions with Anglian Water Services will be undertaken. Therefore the information provided below reflects the Stage 1 output only and is subject to change following the completion of the final Water Cycle Study. Additionally, the effect of employment growth on water demand has not been specifically detailed in the Water Cycle Study and so this report relates only to the housing growth identified in Section 1 of this report.

5.3. The following clean water capacity exists in the vicinity of the Growth Scenarios, based on Stage 1 of the Water Cycle Study:

Existing Clean Water Capacity
Norwich City Centre
• Heigham WTW has capacity to serve less than 1,000 new dwellings in Norwich due to existing sewage distribution infrastructure restrictions. Further investigation in the Water Cycle Study (Scott Wilson) will determine if additional dwellings can be accommodated.
Scenario 1
• Urban Extension: Heigham WTW has capacity to serve 10,000 new dwellings in Broadland;
• Market Town Extension: Groundwater Sources have capacity to serve 5,000 new dwellings.
Scenario 2
• New Village: Groundwater Sources have no spare capacity.

Table 5.1 Existing Clean Water Supply Source: Water Cycle Study

5.4. This initial assessment suggests that there are significant capacity issues in Norwich City Centre. Further investigations should be carried out as a matter of urgency to identify the specific water infrastructure requirements to increase capacity. These capacity issues could prevent City Centre housing figure targets being met. For other growth areas within Scenario 1 the situation is more favourable, there is sufficient

capacity to serve the urban extension to Broadland and the extension to Wymondham. This should be reviewed regularly during the growth period so that any future infrastructure requirements can be planned for at the earliest possible time. These reviews should consider growth post 2021. Scenario 2 is the most constrained growth area with currently no spare capacity. Allowing for the resolution of planning and funding issues water infrastructure provision is unlikely before 2013.

5.5. The following waste water capacity exists in the vicinity of the Growth Scenarios, based on Stage 1 of the Water Cycle Study:

Existing Waste Water Capacity
Scenario 1
• Urban Extension: Whitlingham STW, which has capacity for up to 20,000 new dwellings but the Pumping Mains is restricted to approximately 5,000 new dwellings; • Market Town Extension: Wymondham STW has capacity for 5,000 new dwellings.
Scenario 2
• New Village: Stoke Holy Cross STW has no spare capacity.
Norwich City Centre
• Whitlingham STW has capacity for 20,000 new dwellings in Norwich. The growth in this area will be restricted to below 10,000 new dwellings due to capacity problems with the existing sewer network. Further investigation in the Water Cycle Study (Scott Wilson) will determine if additional dwellings can be accommodated.

Table 5.2 Existing Waste Water Supply Source: Water Cycle Study

5.6. The table above shows that for Scenario 1 and growth within the City Centre there is no immediate concern in relation to waste water capacity with all the areas having sufficient capacity to serve the short to medium term levels of expected housing growth although some investment in the pumping mains is required. Towards the end of the current growth period capacity at Wymondham is likely to require improvement. There is currently no capacity to serve Scenario 2, and as with clean water supply extensive planning and funding requirements are likely to mean that the earliest date that infrastructure could be provided is by 2013.

Gas

5.7. National Grid have identified existing mains in the vicinity of Scenario 1 and 2 which have been tested based on the development proposals. National Grid, at this stage, can only identify if the proposed growth passed or failed the analysis based on their existing model. If the analysis passes the model it is deemed to have the capacity to cater for the growth and if the model fails the analysis then reinforcement is required. In order to determine what reinforcement is required National Grid will need to carry out an Economic Testing. In order to carry out the economic test specific enquiries would need to be submitted for each development

proposal. This can be through National Grid or through a Gas Transporter (GT) or a Utility Infrastructure Provider (UIP).

5.8. The following gas infrastructure exists in the vicinity of the Growth Scenarios:

Existing Gas Infrastructure
Scenario 1
• Urban Extension: Intermediate Pressure mains are located in the vicinity of the growth areas with capacity to accommodate the proposed growth; • Market Town Extension: Intermediate Pressure main is over 10km away from the growth area and a Medium Pressure main is approximately 7km away from the growth area.
Scenario 2
• New Village: Intermediate Pressure mains are located in the vicinity of the growth area with capacity to accommodate the proposed growth.
Norwich City Centre
• Analysis on Norwich City Centre could not be carried out because the housing growth data supplied was not sufficiently specific for National Grid to carry out an analysis.
Employment Sites
• Capacity is available for the majority of the proposed employment sites with the exception of Broadland Business Park and Salhouse Road which currently have no spare capacity.

Table 5.3 Existing Gas Supply Source: National Grid

5.9. Existing Gas infrastructure is sufficient across the growth area to serve the proposed dwelling growth. Broadland Business Park and Salhouse Road both have no capacity and would require significant investment .

Electricity

5.10. There are three Grid Sub-stations and approximately thirteen primary sub-stations in the vicinity of the whole growth area. Norwich City area has eight primary sub-stations within its vicinity. EDF have carried out an analysis of the existing infrastructure network based on the proposed growth scenarios and employment sites. For the purposes of the analysis the overall growth planned for Norwich has equally been divided and distributed to the eight primary sub-stations. The main factors that need to be considered for the growth areas are; proximity and capacity of existing primary/grid sub-stations; size of distribution cables between sub-stations and the capability of upgrading the existing primary sub-stations (switch gear). The detailed report on which electricity demand is assessed is located in Appendix F of this report.

5.11. In general, existing upgrade works have been proposed to Earlham Grid Station and a new Grid Station (Norwich East) will be required for both scenarios. The specific requirements for each scenario and development area are detailed below.

5.12. The following electricity infrastructure exists in the vicinity of the Growth Scenarios:

Existing Electricity Infrastructure
Scenario 1
• Urban Extension: An existing primary sub-station in Sprowston, which is located close to the proposed growth area, does not have sufficient capacity. A new primary sub-station will be required. This primary sub-station will be fed from the proposed Norwich East station; • Market Town Extension: An existing primary sub-station in Wymondham, which is located close to the proposed growth area, does not have sufficient capacity. A new primary sub-station will be required. This primary sub-station will be fed from the existing Earlham grid station.
Scenario 2
• New Village: No existing primary sub-stations are located in the vicinity of the new village development area. A new primary sub-station will be required. This primary sub-station will be fed from the existing Trowse Grid station. This will place a large demand on Trowse Grid and EDF envisage that St Stephen primary sub-station will need to be converted to a higher capacity primary sub-station.
Norwich City Centre
Eight primary sub-stations are located within the Norwich City area and the following works are required: • Tuckswood (south Norwich): No action required based on the data provided. EDF have identified possible employment growth in this area that is not shown in GNDP data which may require additional work; • St. Stephens (central/south Norwich): No immediate action is required based on the data provided. EDF have identified that this area may be regenerated which is not shown in GNDP data. This will necessitate the existing sub-station being converted to a higher capacity primary sub-station; • Barrack Street (east Norwich): No action required based on the data provided. EDF have identified a possible redevelopment of Anglian Square which is not shown in GNDP data. This would trigger a need for reinforcement; • Mousehold (northeast Norwich): No major works required but some minor works may be required.
Employment Sites
EDF have identified the following employment sites which could trigger upgrade or new infrastructure works:

- Broadland Business Park: This site is served by Peachman Way sub-station which is at capacity. A new primary sub-station will be required which is envisaged to be fed by the proposed Norwich East Grid station.
- Norwich Airport Site: EDF have proposed that a new high capacity primary sub-station and a primary sub-station will be required to accommodate this site and the other proposed growth in this area. These proposed sub-stations are envisaged to be fed by the proposed Norwich East Grid station.
- South Norwich Longwater Site: Earlham Grid is proposed to be upgraded within EDF asset management plan to accommodate this development as well as other employment sites.

Table 5.4 Existing Electricity Supply Source: EDF

UTILITIES INFRASTRUCTURE DEMAND

5.13. The table below identifies from the above analysis what utilities infrastructure is required to facilitate housing and employment development set out in Scenario 1 and 2.

Requirements by 2021

Utilities Infrastructure Needs Arising by 2021

Electricity

Scenario 1

- Urban Extension: A new primary sub-station will be required in the vicinity of this growth area. The new primary sub-station will be required between 2012 and 2021.
- Market Town Extension: A new primary sub-station will be required in the vicinity of this growth area. The new primary sub-station will be required between 2012 and 2021.

Scenario 2

- New Village: A new primary sub-station will be required in the vicinity of this growth area and reinforcement works to the existing sub-station at St Stephen. These works will be required between 2012 and 2021.

Common Requirements

- A new Grid (Norwich East) Station is required for both scenarios. This will need to be delivered for 2012. Additionally three primary sub-stations will be required. One primary sub-station will need to be delivered immediately and the other two sub-stations will need to be delivered between 2012 to 2021. EDF have identified that the cost for the new and/or upgrade work will be similar for both scenarios. Therefore cost would not be the governing criteria in determining which scenario is better. Other factors that need considering are planning, consents and land acquisition. Diversions also have to be considered.
- EDF have not identified any major works required for Norwich City. EDF have identified other development not identified in GNDP data which may trigger the requirement for reinforcement. There is not enough information available to determine any trigger dates and the work required.

Employment Sites

- Broadland Business Park: A new primary sub-station will be required in the vicinity of this growth area. The new primary sub-station will be required between 2012 to 2021.
- Norwich Airport Site: A new high capacity primary sub station and a primary sub station will be required between 2012 and 2021.
- South Norwich Longwater Site: The upgrade to Earlham Grid is proposed within EDF asset management plan in two phases. The first phase to provide additional transformer capacity is imminent. The timescales for the second phase (to construct a new (132,000/11,000) volt sub-station) will be dependant by the rate of growth in this area, although it is expected to be approximately 2012.

Gas

Scenario 1

- Urban Extension – Capacity available in existing Intermediate Pressure mains.
- Market Town Extension – Capacity available in existing Intermediate and Medium Pressure mains. The closest connection point is approximately 7km from the proposed growth area and new mains to the development will be required immediately.

Scenario 2

- New Village: Capacity available in existing Intermediate Pressure mains.

Employment Sites

- Immediate reinforcement will be required to accommodate Broadland Business Park and Salhouse Road in Sprowston.

Clean Water

Scenario 1

- Urban Extension – New infrastructure to be planned by 2011 to provide additional capacity towards the end of the growth period;
- Market Town Extension – New infrastructure to be considered for inclusion in AMP by 2010 to provide capacity towards the end of the growth period..

Scenario 2

- Immediate planning and investment required to provide capacity to meet dwellings target.

Common Requirements

- Immediate investment is required in Norwich City Centre to increase capacity.

Waste Water

Scenario 1

- Urban Extension – New infrastructure to be delivered by 2011, subject to discussion with Anglian Water Services;
- Market Town Extension – New infrastructure to be delivered for 2010, subject to discussion with Anglian Water Services;

Scenario 2

- Investment is required to upgrade facilities in Norwich City Centre

Common Requirements

- Norwich: Capacity is available but this has not yet been assessed in the Water Cycle Study.

Table 5.5 Proposed Utilities Infrastructure Demand Source: PBA

5.14. In summary, there are capacity issues and infrastructure improvement requirements for each of the utilities assessed above. The two most significant and urgent issues to be addressed relate to clean water provision in Norwich City Centre and Gas and Electricity supply to some of the key employment growth locations in particular Broadland business park and the Airport. Scenario 1 requires the least investment in utilities infrastructure because of the development's proximity to existing infrastructure networks. Scenario 2 requires significantly more investment in infrastructure, particularly clean and waste water, and would take longer to provide.

5.15. All infrastructure will require some form of improvement or upgrading during the growth period. When considering upgrades, utilities providers should consider growth post 2021 and plan accordingly.

Section 3

HOUSING GROWTH TRAJECTORY AND RISK ANALYSIS

6. HOUSING GROWTH TRAJECTORY AND RISK ANALYSIS

6.1. The original housing growth data supplied by GNDP at the outset of this study was based on individual housing trajectories from the adopted and emerging Annual Monitoring Reports of the three Local Planning Authorities, and from the two Growth Scenario assumptions identified in Section 1 of this report. Based on Communities for Local Government's (CLG) request (as part of the Programme of Development) for a combined Housing Trajectory of the three districts together, it has become clear that the data upon which Section 1 and 2 of this report is based does not wholly reflect a feasible projection of development to 2021.

6.2. During the development of this combined Housing Trajectory and from the consequent risk analysis, it became clear based on our assessment that Growth Scenario 2 could not achieve the policy based housing growth target as identified in Sections 1 and 2 of this report. As well as identifying a deliverable Housing Trajectory, this section also identifies why Growth Scenario 2 is undeliverable in the given timescales and how Growth Scenario 1 is deliverable, given a reduced number of dwellings in the hypothetical market town extension and urban extension.

6.3. This Housing Trajectory is a forward planning tool, designed to support the plan, monitor and manage approach to housing delivery by monitoring both past and anticipated completions between 2001 and 2021. This is in line with the draft East of England Plan (EEP) timeframe, which sets a target growth of 33,000 homes in the Norwich Policy Area. This section (and the Housing Trajectory Model supplied separately) satisfies the requirement set out in PPS12 for Local Planning Authorities to provide information on housing policy and performance, including the preparation of a housing trajectory.

6.4. Housing Growth Trajectories are seen as a central element to developing a robust business case for housing delivery, as they enable key infrastructure dependencies and delivery responsibilities of partner organisations to be set out. This is fundamental in reducing the risk of future delays to the delivery of housing through, for example, a failure for infrastructure to keep pace with housing growth. They also prove a useful project management tool and can become the focus for engaging various local agencies.

6.5. It is not expected by CLG that this housing trajectory produces a perfect forecast of the future, nor necessarily absolute answers to the past and present. In this sense, the trajectory is expected to remain a 'living document' which adapts to local circumstances and priorities over time. It is important therefore that the housing trajectory should be regularly checked and updated as often as appropriate. Importantly, the planning authorities will not be held to account if the delivery of housing slips from the trajectory forecast. It is a management tool designed to enable a strategic overlook of housing supply to be taken locally and risks to the delivery of housing easily identified and mitigated against.

6.6. The housing trajectory enables a full assessment of the likely phasing of infrastructure requirements via an Infrastructure Delivery Model, which links the housing trajectory to the delivery of infrastructure. Any pinchpoints in infrastructure provision and lead in times for project build out are identified in the subsequent section, which in turn forms the basis of an infrastructure delivery programme.

DETAILED HOUSING TRAJECTORIES

6.7. The following two Housing Trajectories are based upon levels of development to 2021 that is mutually deemed deliverable by both EDAW and GNDP. An analysis on the effect of these trajectories on the infrastructure requirements identified in Section 2 of this report can be found in the subsequent section, entitled Scenario Risk Analysis.

6.8. Each housing trajectory shows Plan, Monitor and Manage lines, as well as total past and projected completions by year. The total completions have been calculated from the categories identified below. Tables identifying the detailed inputs from the below categories may be found in the Appendix:

- **Past Completions** – Net additional dwellings completed year on year from the start of the EEP period (2001). This allows for comparison of past and projected completion rates;

- **Existing Commitments** – Projected net additional dwellings to be completed year on year until the end of the EEP period (2021) from sites with either full or outline planning permission, or sites allocated for residential development in the adopted Local Plan. In the instance of South Norfolk, sites not originally included in the above categories where the development decision is dependent on the successful development of a site in the above category have also been included. This is to ensure that these sites are phased after the original development. A 10% fall out rate has been assumed on all development.

- **Urban Capacity and Other Strategic Sites** – Projected net additional dwellings to be completed year on year until the end of the EEP period (2021) from sites that do not have planning permission and are not allocated in the Local Plan, but have been noted as having potential for residential development. Only sites predicted to have 10 or more units have been included.

- **Growth Scenarios** - Projected net additional dwellings to be completed year on year until the end of the EEP period (2021) from two pre-defined Growth Scenarios of major growth locations. Growth Scenario 1 involves a 7,500-dwelling Urban Extension in Broadland and a 3,500-dwelling Market Town Extension in South Norfolk. Growth Scenario 2 involves the development of a 10,000-dwelling New Village in South Norfolk. These scenarios do not represent a commitment to a particular development pattern as identified in Section 1.

6.9. The Plan, Monitor and Manage lines show the following:

- The green **Plan** lines shown in figures 2.1 and 2.2 shows the annualised average housing delivery rate across the whole 20 year RSS plan period (2001 – 2021).

- The orange **Monitor** lines shown in figures 2.1 and 2.2 shows how many dwellings above or below the planned rate the housing trajectory is at any given point in time. This information is calculated be adding up completions over time and comparing it to the planned rate. The monitor line provides an early warning if a strategy is likely to deviate from delivery of the annualised requirement over the period. If the trend line on the graph is above 0, a strategy is ahead of the annualised delivery of its requirement. If the trend line moves below 0, the strategy is under-delivering relative to its requirement.

- The red **Manage** lines shown in figures 2.1 and 2.2 shows the annual number of completions needed per year to meet the strategic plan total, taking into account any shortfalls or surpluses from previous years. This is the key measure in ensuring the RSS minimum target is met because it represents the number of completions needed to get the strategy back on track at any point in time. Once the line reaches zero dwellings, the RSS target has been met.

Figure 2.1: Scenario 1 Housing Trajectory – Plan, Monitor and Manage

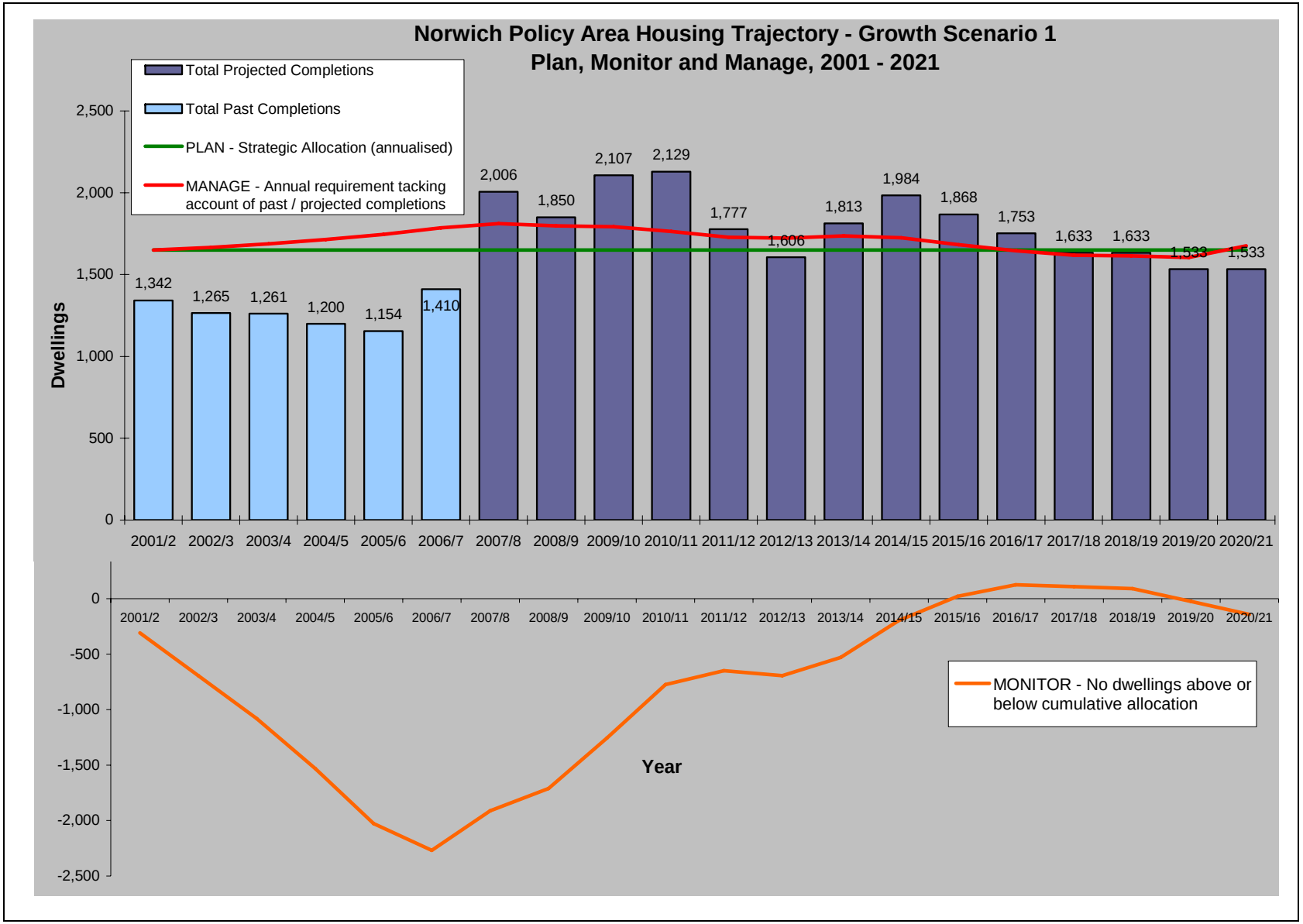
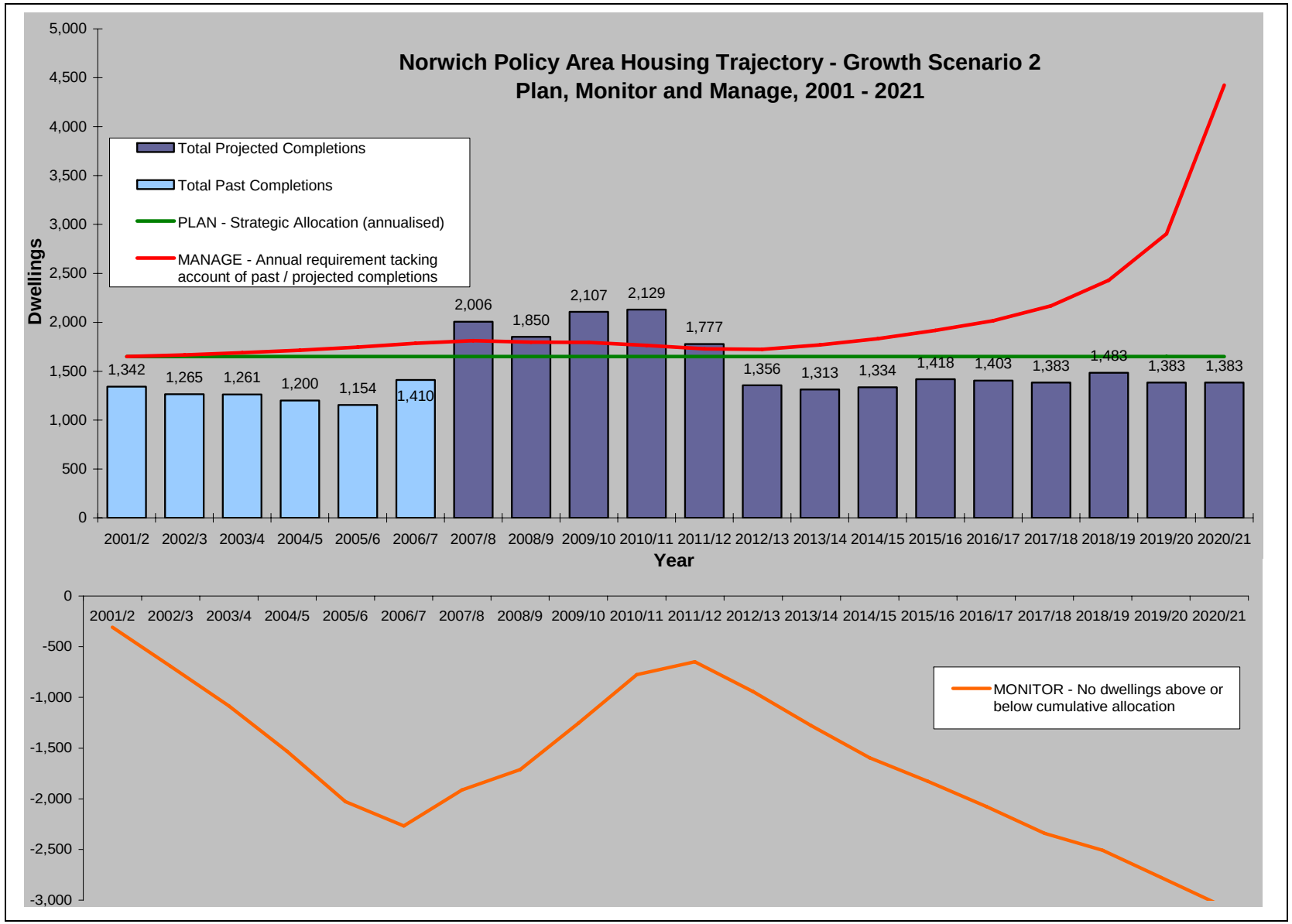


Figure 2.2: Scenario 2 Housing Trajectory – Plan, Monitor and Manage



HOUSING TRAJECTORY ANALYSIS

6.10. The following two Housing Trajectories are based upon levels of development to 2021 that is mutually deemed deliverable by both EDAW and GNDP. An analysis on the effect of these trajectories on the infrastructure requirements identified in Section 2 of this report can be found in the subsequent section, entitled Scenario Risk Analysis.

6.11. Following a slow start from 2001, development in the short term is looking much more encouraging. In the period 2007-11, the Norwich area should deliver significantly more units than required to meet its RSS allocation. This improvement will be sufficient to counteract the lower level of development in the period 2001-2006 and will bring the housing trajectory back on track by 2011. Thereafter, the existing urban area alone will only be able to deliver capacity at a much slower rate than is required by the RSS Plan line in figures **2.1 and 2.2**. It is around this point in time that the growth identified from the two growth scenarios will need to begin to be delivered.

Progress made by individual districts

6.12. The two trajectories show very different circumstances from 2011 onwards. Scenario 1 continues to progress evenly towards the RSS target, but Scenario 2 continually fails to meet the annual target allocation and will fall significantly short of the 2021 target. As the annual completion rates in the stand alon development are constrained by market conditions. Further analysis on scenario-specific growth is found in the next subsection.

6.13. Norwich City Council are predicted to deliver significant levels of development over the period 2007-12 through a combination of using a strategic City Council-owned site (1,200 dwellings at Bowthorpe), brownfield development for mixed use schemes on former employment land, increased densities, and a focus on flats rather than houses. The allocated sites are intended to come forward by 2011 and additional sites will come forward through the emerging Local Development Framework ‘Site Allocations Plan’. The quantum of development proposed in the Urban Capacity and other Strategic Sites category is indeed widely viewed as a conservative figure that may well be exceeded, although there is not sufficient information to feed this into the trajectory at present. The rate of brownfield development in the urban area is expected to slow down markedly though as available brownfield sites are developed and as the remaining demand for small units is satisfied.

6.14. South Norfolk has seen a low rate of completions in recent years due to the dependence on a few large sites in the Norwich Policy Area, which have taken longer than expected to be delivered. Work has now begun on the three sites and question, which should result in South Norfolk being ahead of the required trajectory by 2012. Similarly to Norwich City, a shortage of land allocation will also cause the completion rates in South Norfolk to slow down considerably. The growth of a market town and/or new village as identified in this report will then need to be delivered to continue the rate of growth towards the RSS target.

6.15. The picture is very different in Broadland though, which currently has allocations in the 2006 Local Plan of just over 300 dwellings per year (based on Structure Plan requirements), whereas the draft RSS requires development in the order of 700 dwellings per year. The local completion rate is predictied to improve in the short-term to 2012 although an urban extension, such as the one upon which this report is partly based, will be required.

SCENARIO RISK ANALYSIS

6.16. The major finding of these trajectories is that Scenario 1 can deliver approximately 33,000 dwellings by 2021, which is the RSS minimum dwelling target, but Scenario 2 can only deliver approximately 30,000 dwellings in the same timeframe. We have therefore used Scenario 1 to test the infrastructure delivery requirements in the next section of the report. For comparison, tables 6.1 and 6.2 show the growth identified in the original housing data that was used in Section 1 and 2, and the deliverable growth identified subsequently:

	Completions 2001-06	Existing Commitments 2007 - 2021	Urban Capacity + Other Strategic Sites 2007 - 2021	Growth Extensions 2007 - 2021	Total Units 2001 - 2021
Scenario 1	**6,222**	**12,255**	**6,035**	**11,000**	**35,512**
Scenario 2	**6,222**	**12,255**	**6,035**	**10,000**	**34,512**

Table **6.1**: Original breakdown of new housing development to 2021 Source: GNDP

	Completions 2001-07	Existing Commitments 2007 - 2021	Urban Capacity + Other Strateigic Sites 2007 - 2021	Growth Extensions 2007 - 2021	Total Units 2001 - 2021
Scenario 1	**7,632**	**12,707**	**6,618**	**5,900**	**32,857**
Scenario 2	**7,632**	**12,707**	**6,618**	**3,000**	**29,957**

Table 6.**2**: Revised breakdown of new housing development to 2021 Source: GNDP

6.17. The tables above show that the common components between the growth scenarios have changed little after the revision, but the growth extensions that define each scenario have reduced in size significantly. The main reason being that the lead in time, including planning means that the development cannot start until 2012/2013 for Scenario 1and 2015/16 for Scenario 2.

6.18. Scenario 1 originally identified a 7,500-dwelling urban extension and a 3,500-dwelling market town extension. Given that that the Joint Core Strategy is unlikely to be adopted until 2009 the planning framework will limit the potential of these growth areas to come forward quickly added to this the length of time necessary for a site to progress from aspiration to occupied homes, it is unlikely that any dwellings on these sites could be occupied before 2012/13 at the earliest, when 250 dwellings may be delivered. Development could then be assumed to increase annually up to 750 dwellings per year by 2015/16. This would deliver 5,900 homes by 2021 between the two sites.

6.19. Scenario 2 originally identified a 10,000-dwelling stand-alone village. This development would need significant transport and utilities infrastructure to be front-loaded before homes could be realistically occupied. Added to this the time it takes for the proposals to be developed and granted planning permission, it is unlikely that development on a new village could occur before 2015/16. During 2015/16, 300 dwellings could be delivered and this could increase annually to a regular completion rate of 600 units per year by 2018/19. This would deliver 3,000 homes by 2021, 7,000 less than originally predicted.

6.20. Alongside the problems faced with the delivery of housing under Scenario 2, the nature of development will also create much higher demand for all types of infrastructure, as identified in Section 2 of this report. Sites that expand from existing areas, or increase the density of an existing area, can make relatively sustainable use of the existing transport, utitlities, social and economic infrastructure in place and help create a local critical mass to sustain greater public transport, and other, facilities.

6.21. The higher demand for infrastructure under Scenario 2 will consequently generate significantly greater costs compared with an extension / intensification of an existing area. A portion of the infrastructure will also need to be delivered before any homes are occupied as the occupants will need to make use of local facilities. By comparison, it is highly unlikely that an extension to existing development will require new strategic infrastructure from the outset.

SUMMARY

6.22. The figures provided include an assumed 10% fallout rate on all existing commitments at the suggestion of the suggestion of the steering group as it is unlikely that all commitments will come forward. This implies that roughly 1,300 additional dwellings could be delivered should all existing commitments be developed as currently anticipated, there remains minimal room for error in reaching the RSS target. Given that a number of sites identified will depend on the timely delivery of infrastructure to release the land, it is a high risk to assume that the 33,000 dwellings identified in Scenario 1 will all come forward exactly as expected.

6.23. Consequently, despite its feasibility, Scenario 1 still represents a high risk and it is recommended that future studies for identifying the spatial growth solution are based upon a combination of Scenario 1 and Scenario 2 or another major growth location. By identifying a spatial scenario that involves an urban extension, market town extension and a new village, there will be less uncertainty that the RSS target will be met, this is particularly important as land will need to be identified for growth post 2021.

Section 4

Delivering Infrastructure for Growth

7. DELIVERING INFRASTRUCTURE FOR GROWTH

INTRODUCTION

7.1. The successful delivery of the infrastructure required to reach growth targets is dependent on the creation of a robust development framework based on a strategic and inclusive process for planning and committing expenditure by all relevant public organisations and private investors.

7.2. The framework therefore needs to be based upon and include:

- An accurate housing growth trajectory;
- A cost plan of infrastructure required to deliver the policy-driven level of sustainable growth;
- A funding plan, including all public and private sector funding sources;
- A robust approach to capturing developer/landowner contributions;
- Organisational arrangements amongst the various Local and District Authorities and public sector agencies; and
- A detailed Business Plan/Prospectus setting out the strategic approach to financial planning to deliver a spatial plan for the Norwich Policy Area.

7.3. A detailed housing trajectory is included in the previous section of the report. In this section we identify the costs of the infrastructure requirements of Growth Scenario 1 and then provide an overview of funding options available to meet those costs. We have developed an Excel based infrastructure delivery model which provides you with a management tool with which you can monitor housing growth trajectories, infrastructure requirements, phasing, funding, and costs. The model also allows the identification of the overall funding gap for delivery of the necessary infrastructure.

7.4. It should be stressed that this is a tool for assisting in the timely delivery of the growth agenda. As the actual spatial option for growth emerges this will need to relate to specific the infrastructure requirements and timing. Similarly as fuller information becomes available funding sources should be updated in the model.

7.5. Finally, we look at the organisational arrangements amongst other growth areas and make suggestions on how the current arrangements in the NPA could be strengthened.

PHASING AND COSTS

7.6. The early identification of when infrastructure is required is fundamental to ensuring growth targets are met. Our strategic analysis of infrastructure phasing is directly linked to the housing trajectory for Growth Scenario 1.

7.7. The phasing programme set out below identifies when each of the pieces of infrastructure required, to facilitate the development of Growth Scenario 1, will need to be developed often over more than one year to allow for funding packages and programme management to be established and for the construction to be undertaken.

7.8. We have categorised or prioritised the different elements of infrastructure relative to its importance in delivering growth. The three categories we have identified are critical, essential and necessary.

7.9. **Critical** infrastructure is infrastructure that this study has identified must happen to enable growth. These infrastructure items are known as 'blockers' or 'showstoppers' and are most common in relation to transport and utilities infrastructure when, for example sewerage systems are at capacity, therefore preventing the development of homes until substantial upgrades in the sewerage system have been completed. This infrastructure is highlighted in red in the phasing programme.

7.10. In other growth areas 'showstoppers' have resulted in development being held up for in excess of five years. This can have serious implications for meeting residential dwelling growth targets. Showstoppers are identified by the use of red blocks in the phasing programme set out below. The only piece of infrastructure identified at this stage as a potential showstopper is the development of the Northern Distributor Road. This has been identified as a critical piece of infrastructure. Failure to provide this piece of infrastructure could result in significant delays in the development associated with Scenario 1.

7.11. **Essential** infrastructure is infrastructure that is required if growth is to be achieved in a timely and sustainable manner. Although infrastructure in this category is unlikely to prevent development in the short term failure to invest in it, as suggested below, could result in delays in development in the medium term. As developments are completed and pressure increases on the various elements of infrastructure, further development could be deemed inappropriate and unsustainable by planning authorities, resulting in the refusal of planning permission for later phases of development. This infrastructure is highlighted in amber in the phasing programme.

7.12. Finally, infrastructure identified as **necessary** infrastructure is infrastructure that is required for sustainable growth but is unlikely to prevent development in the short to medium term. This infrastructure is highlighted in green in the phasing programme.

7.13. It should be stressed that this assessment has been made on the information that was available during the study. As part of managing the growth agenda the recommendations should be monitored and updated when new information becomes available or as external factors change.

COSTS

7.14. In addition to phasing, the early identification of the costs of providing the infrastructure is an essential element of preparing and planning for growth, not least as this will form an evidence base when bidding for government funding.

7.15. It can be difficult to ascertain accurate costs across such large pieces and different types of infrastructure and any assessment is clearly a snap shot of costs at one particular time. Costs can change quickly and significantly in response to things such as fluctuations in the cost of raw materials or labour. In many instances the infrastructure recommendations we have made will require further detailed feasibility studies to be undertaken including a detailed assessment of individual project costs. We have prepared a strategic cost assessment to provide a credible indication of the total infrastructure costs required to deliver growth.

7.16. The cost assessment was undertaken by cost consultants Gardiner and Theobald (G&T) who have used detailed information from Spons to identify the current costs associated with the delivery of each piece of infrastructure. The costs relate directly to the infrastructure required to deliver Growth Scenario 1,and are calculated using the assumptions set out in Appendix H.

7.17. During the study it became apparent that several of the infrastructure projects identified had already undergone additional detailed feasibility assessments, and in some cases were included in the GNDP Programme of Development. Where additional information was available, this was cross referenced with the findings of the G&T report to ensure that there were no significant differences. In most cases the findings were very similar, but in the few instances where there were differences the higher costs were used in the delivery model..

7.18. For the purposes of capturing developer contributions is it necessary to separate costs which are strategic i.e. Regional Transport Infrastructure from those which are Local, i.e. Local Social Infrastructure such as provision of primary schools or GPs surgeries. The rationale for this is explained in more detail later.

7.19. The costs detailed below are the estimated capital costs for the provision on infrastructure required to deliver Growth Scenario 1 as set out in Section 2. The full cost report can be found in the Appendix H.

	Total Infrastructure Costs (£ million)								
	2007/8	2008/9	2009/10	2010/11	2011/12	2012/13	2013/4 - 2020/1	Phasing TBA	Total
Transport Initiatives	£15,044,657	£39,244,657	£44,744,657	£44,744,657	£51,261,324	£33,859,524	£69,159,524	£98,750,000	£396,809,000
Social Infrastructure Works	£311,429	£311,429	£1,561,429	£311,429	£1,561,429	£2,811,429	£15,491,429	£0	£22,360,000
Green Infrastructure	£2,241,875	£2,241,875	£2,241,875	£2,241,875	£263,750	£263,750	£2,110,000	£0	£11,605,000
Economic Development	£7,540,000	£10,290,000	£10,250,000	£10,250,000	£9,750,000	£7,000,000	£10,000,000	£0	£65,080,000
Main Services / Utilities	£6,550,000	£8,750,000	£5,950,000	£4,850,000	£3,441,650	£13,266,600	£44,024,750	£0	£86,833,000
TOTAL	**£31,687,961**	**£60,837,961**	**£64,747,961**	**£62,397,961**	**£66,278,152**	**£57,201,302**	**£140,785,702**	**£98,750,000**	£582,687,000

Table 7.1 Strategic Infrastructure Delivery Costs

	Total Infrastructure Costs (£ million)								
	2007/8	2008/9	2009/10	2010/11	2011/12	2012/13	2013/4 - 2020/1	Phasing TBA	Total
Education	£0	£0	£0	£0	£0	£0	£9,000,000	£0	£9,000,000
Health	£0	£175,000	£175,000	£0	£175,000	£175,000	£7,000,000	£0	£7,700,000
Other Facilities	£0	£3,500,000	£7,415,667	£3,500,000	£7,831,333	£0	£0	£0	£22,247,000
Open Space	£0	£378,860	£431,491	£435,996	£363,910	£328,891	£2,815,851	£0	£4,755,000
TOTAL	**£0**	**£4,053,860**	**£8,022,157**	**£3,935,996**	**£8,370,244**	**£503,891**	**£18,815,851**	**£0**	**£43,702,000**

Table 7.1 Local Infrastructure Delivery Costs

FUNDING

7.20. The identification of existing and future funding sources is also essential to ensure the timely delivery of infrastructure. Infrastructure providers have notoriously complex financial planning approaches to funding and in the majority of cases bids need to be made many years in advance.

7.21. Another issue with funding is that the requirement for funding is significantly front loaded. This means the funding is usually required during the early years of growth when the infrastructure is required to be developed in advance or in tandem with development. This is problematic in cash flow terms in that returns on investment are not likely to be realised until much later.

7.22. For each of the infrastructure elements, we have a made a broad assessment of the level of mainstream public funding or in the case of utilities, AMP funding that is likely to be committed. These assessments are based on discussions with the service and utilities providers during the study period and from our experience of work in the other growth areas. It should be noted that detailed further investigation of public funding sources will be required as part of the ongoing infrastructure planning process.

TRANSPORT

7.23. The funding required for transport infrastructure makes up the greatest proportion of funding required. There are three key types of government transport funding:

1. Regional Funding Allocations – These bring together capital financing for major transport schemes under the Local Transport Plan system and major schemes on about two-thirds of the trunk road a network managed by the Highways agency. These allocations cover schemes that cost more than £5m and Council's have to make a major scheme bid to the government to access them. In 2006 bids were made for funding for amongst other projects the A47 Blofield Dualling and the Norwich Northern Distributor Road. The A47 Blofield Dualling has been approved for development between 2009/10-2015/16 but the funding for construction of the Northern Distributor Road, has yet to be approved. It is expected to be added to the programme in the next ten years.

2. Integrated Transport Block Allocations – These are made to implement projects below £5m that are set out in Local Transport Plans. Norfolk's delivery of it's first transport plan was assessed as being excellent and therefore has received an uplift of 12.5% for its 2007/08 allocation with around £11m a year for the following three years.

3. Maintenance Allocations – The highway maintenance funding allocation for Norfolk for 2007/08 is £21.273m.

7.24. For the purposes of this study we have assumed that the majority of funding for transportation will come from the LTP but other funding sources include County Council's own resources. In Norfolk parking revenue is a significant source of funding of around £4m - £5m pa and if congestion charging was implemented this could be another significant source of funding. Clearly, developer contributions should also be considered but our assessment of these will be dealt with under a standard charge approach detailed below.

SOCIAL INFRASTRUCTURE

7.25. In most cases the capital costs associated with social infrastructure required to mitigate the impacts of development are borne by the developer who will provide a facility to shell and core standard or will contribute to a pooling arrangement to provide such a facility. In some cases there may be potential for additional public sector funding, particularly in relation to areas such as education that are currently experiencing significant capital investment.

7.26. Initial discussions with the Norfolk County Council education authority suggest that there is potentially funding available through the Building Schools for the future and the Academies programme. There may also be funding available from the SHA/PCT, Council's library or leisure service, and the emergency service providers, where provision of additional facilities to mitigate development coincide with service provider plans to re-provide, extend or enhance existing facilities. This does not reduce the requirement on the developer to mitigate the impact of development, but may indicate different delivery solutions. This should be considered as part of the ongoing development of the delivery framework and as the actual spatial option for growth is confirmed.

UTILITIES

7.27. The funding for utilities provision at a strategic level is usually paid for by the respective utilities company through their asset management plans or AMPs. All Incumbent utility undertakers are obliged to submit Asset Management Plans (AMPs) to their Regulator, which identify the capital investment that the undertaker has committed to, over the next 5 or 10 years. This investment is sourced from the company's revenue and covers expansion or enhancement of the strategic utility network against projected growth in demand. AMPs are reviewed and approved by the regulating authorities that protect the interests of the customers.

7.28. Typically, AMPs use revenue from customer charges to fund the provision of the following strategic elements;

- Electricity: Grid sub-stations
- Gas: Reinforcement to the high/intermediate mains
- Water: New abstraction points and treatment works
- Waste Water: New or upgrade works to treatment works

7.29. Connection of developments to the non-strategic mains is not included in AMP's. All strategic AMP works can only be undertaken by the incumbent and as such, are known as non-contestable works. Prediction of the growth in demand is notoriously difficult as the planning process can only give one or two years notice of significant additions to urban centres. It is therefore that planned growth is identified as early as possible and utilities providers notified so that it can be taken into account when preparing their AMPs.

Specific Developments

7.30. The actual extent of development and consequently demand often differs from the projection made by the incumbent undertaker in the AMP. AMPs do not therefore always cater for growth. Where significant development creates a demand for a utility in excess of the system's existing strategic capacity, or the projected capacity of the AMP, the development is expected to partially fund the capital expenditure required to meet the demand, be it off site reinforcement of mains or a new reservoir. The degree of developer funding is calculated by offsetting capital expenditure against long term revenue to the incumbent, generated by the new development.

7.31. At the site specific level, the cost of connections to non-strategic mains are borne by the developer but again offset against potential revenue. The formulae used by the Utility Companies to calculate contributions are transparent and a matter of public record.

7.32. Diversions of strategic or non-strategic mains are non-contestable works, that is, work that only the incumbent can undertake. As such, the developer is expected to bear the cost of the any diversion works that a development incurs, which are then undertaken by the Incumbent. In instances where more than one development is creating the utility demand, then relative proportions of partial funding are calculated depending on relative demands and timing.

Contestable works

7.33. Any new utility supply works are known as contestable works, that is, works that can be undertaken by any suitably registered utility undertaker, not just the incumbent. For instance, the following is a list of contestable works:

- Electricity: New sub-stations and new distribution network cabling.
- Gas: Low pressure mains
- Water: New distribution water mains (not trunk mains)
- Waste Water: New sewers up to the treatment works

Competition

7.34. The Competition Act (2000) opened up the utility market and allows 'out of area' (or utility companies other than the incumbents) to construct and operate utility networks. Consequently, developers can shop around for competitive quotes for developer contributions for new networks to meet the demand of new development.

Grants

7.35. Various European monies are available to fund the early stages of utility innovation (such as Concerto Funding) which can incentivise developers to incorporate privately owned and energy saving systems.

8. DEVELOPER CONTRIBUTIONS

8.1. The current approach to capturing developer contributions within the NPA is piecemeal with the system operating on an ad hoc basis where developments are individually negotiated, but there are a limited number of infrastructure elements that do attract standard charges including Education, Libraries and Fire Hydrants, these are set out in Norfolk County Council's development contributions standards paper 1.

8.2. As is widely known, a standard charge approach is being developed in Milton Keynes, Peterborough, Bedford and Ashford to capture increases in land value to contribute to the funding of the infrastructure to support growth. Each of the approaches being brought forward in these growth areas is based around a standard charge (principally attracting contributions from residential development), and a detailed business plan which identifies the medium to long-term infrastructure requirements. Associated funding requirements are 'cash flowed' against possible future public sector receipts and private land owner contributions.

8.3. It is important to recognise that this approach, which is compliant with the guidance in ODPM Circular 05/2005 'Planning Obligations', can help fund a fuller range of infrastructure elements than is currently required by the planning authorities within the Norwich Policy Area.

8.4. Although Government put forward proposals for an alternative system to that espoused in the Circular (Planning Gain Supplement of 05/12/2005, building on Kate Barker's original proposals), this has recently been ruled out by the Government in favour of a tariff-based approach, based on the total cost of providing infrastructure for an area in addition to traditional s106 negotiations for site-specific cases. Statutory planning charges will be introduced in the forthcoming Planning Reform Bill.

8.5. Although the detail of the Reform Bill has not yet been decided according to the House of Commons Written Ministerial Statement (9 Oct 2007), the main features of the planning charge will be as follows:

- Subject to low de minimis thresholds, residential and commercial development will be liable to pay the planning charge.
- Where appropriate, local authorities will be able to use planning charges to supplement a negotiated agreement. Negotiated agreements will still be necessary to secure affordable housing and to address costs related to the specific development site.
- Planning charges should be based on a costed assessment of the infrastructure requirements arising specifically out of the development contemplated by the development plan for the area (which comprises the regional spatial strategy and the local development framework), taking account of land values.

- Planning charges should include contributions towards the costs of infrastructure of sub-regional and regional importance identified in development plans.

8.6. The current consensus is that the operation of this new approach is likely to be similar to that being used at present. We believe the principles detailed in Circular 05/2005 will be simplified in the new reform bill but the general thinking will remain the same. Prior to the new bill, which is likely to be brought forward in the spring of 2008, CLG is encouraging local authorities and LDVs to continue to bring forward tariff proposals.

8.7. Circular 05/2005 emphasises the importance of predictability and transparency in identifying the need for obligations as part of the Development Planning process. This guidance also stresses the need for the system to become more straightforward, both in terms of obligations expected and in terms of what infrastructure projects the payments will be funding.

8.8. The Circular states that any obligations sought must conform to the following 'five tests', i.e. when obligations are:

- Relevant to the planning process;
- Necessary and acceptable;
- Directly related to the development proposals;
- Fairly and reasonably related in scale and kind; and
- Reasonable in all other respects.

8.9. The circular requires a direct link between level of obligations and infrastructure required to be made to justify contributions and this will undoubtedly be carried forward in the new reform bill. Similarly the requirement that the approach to planning obligations must be described in the Joint Core Strategy (i.e. be enshrined in policy) to ensure that obligations are considered 'necessary and acceptable' in particular, will be maintained.

8.10. Circular 05/2005 further describes how planning obligations may be 'pooled' if it can be reasonably justified that the cumulative impact of development merits the improvement or construction of infrastructure projects. Pooling, which can occur between developers and local planning authorities, requires contributions to be detailed in the LDF. A direct relationship between the charges and infrastructure costs must be established, ensuring that the requirements are reasonable in scale. In particular, the Circular recognises that this approach is appropriate when the cumulative impact of development generates the need for strategic infrastructure, with this need identified in advance through the Joint Core Strategy. To facilitate this, the Circular supports the principles of formulae and standard charges as quantitative indicators of the required level of contributions brought forward as part of a planning contributions policy framework. It is stipulated, however, that standard charges should not be:

- Binding (but rather still subject to negotiation); and or
- Blanket charges (but rather still related in scale and kind to developments).

8.11. Clarification and a simpler approach to pooling via tariffs is expected to be developed in the reform bill.

8.12. Though not tested through the courts, it appears the principle of a single standard pooled contribution sits more easily with strategic infrastructure projects, as it would be relatively straightforward to justify the cumulative impact of schemes on major works such as highways and hospitals. At the local level, as local infrastructure projects are by nature smaller and more directly related in scale and kind to particular developments to keep within the spirit of the 'five tests' for planning obligations in Circular 05/2005 it would seem appropriate to develop a menu based approach.

8.13. The following describes the broad principles on how standardised charges could be applied in the NPA to help pay for local and strategic infrastructure, through a 'menu' of standard charges, and strategic infrastructure, through a single, all-encompassing standard charge. These broad principles could provide the basis for preparing an Obligations SPD which building on the Joint Core Strategy would outline the detailed implementation and administrative process.

8.14. A possible approach could be the separation of the strategic and local charge elements. The strategic charge would make a contribution to key sub-regional infrastructure elements which could be expressed as a single charge and the local charges could be addressed separately to maintain flexibility.

STANDARD CHARGES

8.15. Pooled contributions could be collected in the form of a standard charge to help pay for strategic and local infrastructure provision. This requirement for a developer / landowner contribution in the form of a standard charge would be consistent with the current Circular 05/2005, as the infrastructure would be:

- Necessary due to developments' combined / cumulative impact;
- Required as a result of developments that have a cross-authority impact;
- Of a scale which would not warrant full funding by individual developments; and
- Due to its size and complexity, likely to require forward-funding by local authorities or other bodies and thus necessitate later developers to contribute a proportion of the costs.

LOCAL CHARGES

8.16. To streamline the process and provide greater transparency, a menu of charges for local infrastructure (i.e. a series of local standard charges for infrastructure costs) is recommended to be developed as a starting point for negotiation. This menu-based approach to standard charges for

local infrastructure would be intended to offer both flexibility and guidance in establishing basic levels of funding required to bring forward new sustainable communities. It would therefore be used by the LPA (Local Planning Authority) as a menu which could then either be applied to residential development, as a single local standard charge in the S106 or as a matrix of individual mitigation measures applied appropriately to the development proposals.

8.17. Standard charges for local infrastructure such as primary and secondary education, GP practices, local parks and emergency services can be calculated using multipliers, local triggers etc., in conjunction with advice from local service providers and officers within the Council. Moreover, any SPGs (Supplementary Planning Guidance) / SPDs (Supplementary Planning Document) which have been drafted should be the starting point in establishing these charges.

8.18. Greater predictability and efficiency would be derived through applying a single local charge which could be defined in terms of a list of included elements which make up the charge. Consequently if some of these were provided on site then the charge would be reduced accordingly. As necessary if landowners or developers felt that extraordinary site specific costs needed to be taken into account, it would be incumbent on them, through an open book appraisal, to demonstrate their specific case for amending the charges

SCALE OF DEVELOPER CONTRIBUTIONS

8.19. In order to identify the level of potential developer contributions it is necessary to understand the local land a property market context. Elsewhere contributions have principally been obtained from residential sales although contributions may also be sought from commercial and retail developments.

8.20. For residential development we have undertaken a broad assessment of recent land transactions in the Norwich Policy Area and compared those with recent property market appraisals for areas with similar market characteristics. Our assessment has identified that current land values are averaging approximately £2.5m per hectare for an urban fringe greenfield serviced site. From experience in other areas with similar land and home sale values and assuming a policy based affordable housing provision with Housing Corporation funding support, an initial indicative view of developer contributions would be in the region of £23,000 - £27,000 per sale housing unit.

8.21. If however, the affordable housing proportions are based on a response the Housing Need and Sock Condition Survey and the starting position of 40% for qualifying sites is taken forward, this will systematically impact on the level of contribution per sale house. Experience from elsewhere indicates that this could reduce the scale of contributions from sale houses between £10,000 to £15,000 per unit, depending on the level of Housing Corporation support. Based on these assumptions the total level of developer contribution support could decrease from £165m to £99m

(given a £10,000 reduction per sale housing unit) or £66m (given a £15,000 reduction per sale housing unit).

8.22. In establishing the tariff arrangements detailed financial modelling will have to be undertaken for a range of land uses. However to provide an initial view of future funding streams from standard charges we have made an initial assessment of likely future contributions from the projected residential development. In undertaking this analysis we have assumed, given the need to establish a policy position only developments coming forward after 2011/12 will pay a standard charge. Developments undertaken before this date will continue to contribute using existing S106 processes.

8.23. Based on these assumptions the amount of likely developer contributions to 2021 are:

Growth Scenario 1	2012-2016	2017-2021	Total
	£90,613,000	£74,896,000	£165,509,000

Table 8.1 Developer Contributions

FUTURE FUNDING SOURCES

8.24. Our assessment has shown that even taking into account the full range of funding sources set out above there is still likely to be a significant funding gap that will not be met by Growth Area Funding (GAF) alone. It is likely that the funding settlement will be below that set out in the bid and therefore prioritisation will be required.

8.25. In light of this and in response to the Local Government White Paper which envisages that devolution of power to the regions may allow more financial freedoms, Norfolk County Council and Government Office East (GOE) have been working with PricewaterhouseCoopers (PwC) to explore and consider alternative solutions to funding the required infrastructure.

8.26. They recognise that the current system fails to deliver sufficient investment up-front and warn that this could significantly impede the Government's agenda for housing growth.

8.27. Recognising that Local Authorities are ready to embrace innovative funding arrangements they have started to explore potential options for raising funds, their key messages from their early assessment are;

- Local Authorities should have greater borrowing freedoms against new revenue streams, such as congestion charging and developers tariffs. This is particulary important in addressing the issue of front loading of infrastructure costs. Allowing Local Authoritites to borrow to pay for up front

infrastructure costs, knowing that developer contributions and other income streams are likely to be forthcoming later would address this.

- Revolving infrastructure funds are based on the idea that Government puts up the initial funding, which can be spent at a sub-Regional level on infrastructure related to growth, but which can be replenished later by tariffs and S106 contributions. This approach basically recognises that Government support is required most at the beginning of the growth period before the other income streams are available. This approach ensures longer term sustainability of funding.
- Tax Increment Financing is an option that is available to Local Authorities in the US. It basically allows Local Authorities to borrow against the expectation of higher property tax incomes generated by the increase in households and the added value created by improvements in infrastructure.
- Discretionary Government funding for infrastructure should be allocated on a competition basis with key selection criteria being that Local Authorities that have demonstrated innovative approaches to finance and good coordination of smaller funding opportunities should be rewarded.

8.28. Each of these approaches to increasing the investment available to fund infrastructure are at this stage just concepts that would require further development and in some cases changes in law to make possible. Despite this, discussions are taking place within the Treasury and the levels of growth planned in the NPA and wider East of England mean that the area is a perfect candidate for a pilot projects that may come forward.

		(£ million)								
		2007/8	2008 / 09	2009 / 10	2010 / 11	2011 / 12	2012 / 13	2013/14 - 2020/21	Phasing TBA	Total (2007/8-2020/21)
Strategic	Transport Initiatives	£15,044,657	£39,244,657	£44,744,657	£44,744,657	£51,261,324	£33,859,524	£69,159,524	£98,750,000	£396,809,000
	Social Infrastructure Works	£311,429	£311,429	£1,561,429	£311,429	£1,561,429	£2,811,429	£15,491,429	£0	£22,360,000
	Green Infrastructure	£2,241,875	£2,241,875	£2,241,875	£2,241,875	£263,750	£263,750	£2,110,000	£0	£11,605,000
	Economic Development	£7,540,000	£10,290,000	£10,250,000	£10,250,000	£9,750,000	£7,000,000	£10,000,000	£0	£65,080,000
	Main Services / Utilities	£6,550,000	£8,750,000	£5,950,000	£4,850,000	£3,441,650	£13,266,600	£44,024,750	£0	£86,833,000
Local	Education	£0	£0	£0	£0	£0	£0	£9,000,000	£0	£9,000,000
	Health	£0	£175,000	£175,000	£0	£175,000	£175,000	£7,000,000	£0	£7,700,000
	Other Facilities	£0	£3,500,000	£7,415,667	£3,500,000	£7,831,333	£0	£0	£0	£22,247,000
	Open Space	£0	£378,860	£431,491	£435,996	£363,910	£328,891	£2,815,851	£0	£4,755,000
	Total Infrastructure Costs	£31,687,961	£64,891,821	£72,770,118	£66,333,957	£74,648,396	£57,705,194	£159,601,554	£98,750,000	£626,389,000
	Total Public / Private Fund	£5,567,500	£5,567,500	£7,187,500	£7,187,500	£5,170,825	£11,063,300	£34,322,375	£0	£76,066,500
	Funding GAP	-£26,120,461	-£59,324,321	-£65,582,618	-£59,146,457	-£69,477,571	-£46,641,894	-£125,279,179	-£98,750,000	-£550,322,500
	LVC	£0	£0	£0	£0	£0	£11,423,500	£154,085,500	£0	£165,509,000
	Total Funding GAP after LV	-£26,120,461	-£59,324,321	-£65,582,618	-£59,146,457	-£69,477,571	-£35,218,394	£28,806,321	-£98,750,000	-£384,813,500

Table 8.2 Summary Funding Position

9. CO-ORDINATION AND MANAGEMENT

9.1. The scale of growth planned for the NPA will generate a series of complex organisational challenges that the Local Authorities and infrastructure providers will need to address. Experience from other growth areas suggests that well developed and defined mechanisms for decision making and delivery are critical in demonstrating to DCLG that the growth targets can be met and therefore justify growth area funding.

9.2. The current governance and support arrangements in the NPA are based around a voluntary partnership arrangement, the emerging Greater Norwich Development Partnership structure is set out in the diagram below,

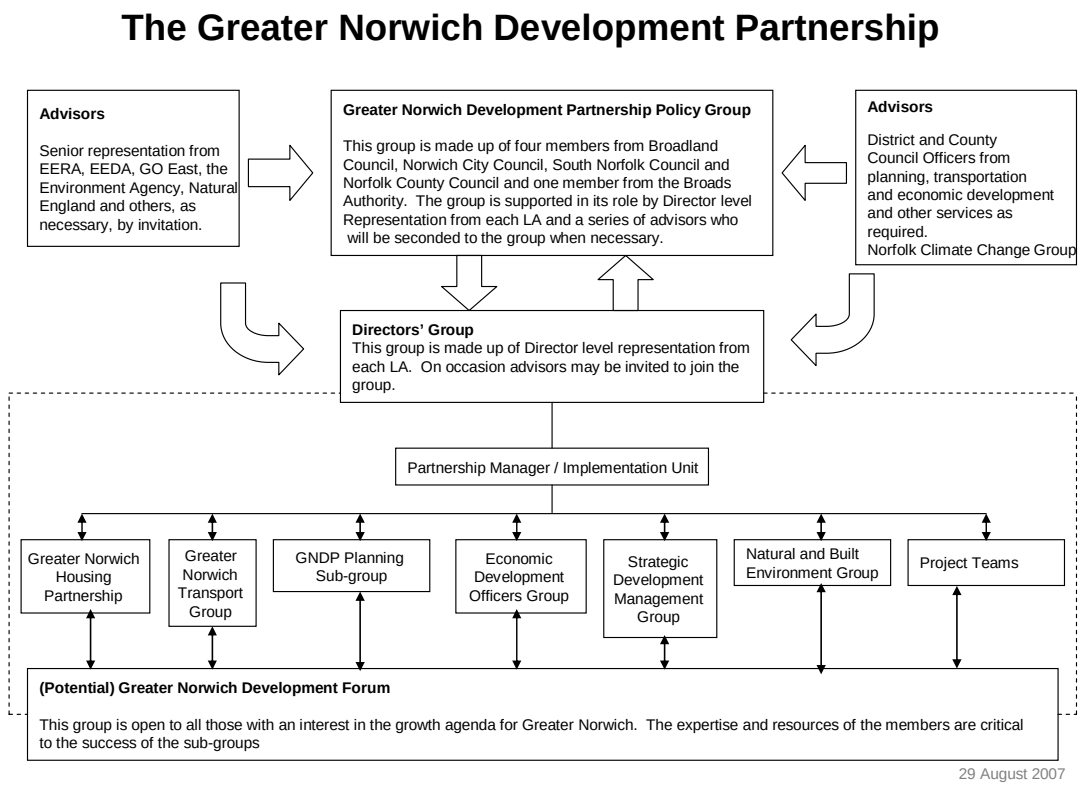


Figure 8.2 Greater Norwich Development Partnership Structure

9.3. In developing a subregional approach to delivering the growth agenda, the organisational arrangements to date work through a structure of a Partnership Manager working alongside local authority colleagues co-ordinating a large number of projects related to growth. To date, activities have involved a number of studies which have been commissioned to inform decisions on the location and scale of growth and ultimately the contents of the Joint Core Strategy. More recently, the emphasis has been on this preparation of the Programme of Development (PoD) which outlines the next round of growth area projects and the level of CLG funding support to deliver these projects. The Partnership Management along with local authority colleagues works

to the Directors Group who in turn report through the Greater Norwich Development Partnership. In parallel an informal officers group has been progressing the Core Spatial Strategy, the project manager has been part of this group.

9.4. Although it is estimated that there are in excess of fifty officers working on elements of the growth programme the GNDP Partnership Manager and her assistant are the only members of full time staff committed to the growth studies. They are responsible for developing and drawing together the Programme of Development and coordinating the collation of funding submissions

9.5. The Partnership Manager also works closely with the GNDP project leads who are responsible for planning and managing the individual projects e.g. the green infrastructure study within the GNDP programme.

THE GNDP DIRECTORS GROUP

9.6. The Directors Group plays a fundamental role in delivery of the growth programme, this is the key forum where discussions take place and recommendation made for consideration by the Policy Group. The Directors Group meets monthly and as necessary.

9.7. The Directors Group responsibilities include; management of the GNDP programme reporting to and taking direction from the Policy Group; identification and approval of bid and funding requests; owning and championing the vision for the GNDP and provide leadership to make it happen; ensuring outside advisors and bodies e.g. Go-East and EEDA are fully involved; ensuring that links are maintained with the Regional Spatial Strategy and Joint Core Strategy; Define key programme activities targets and ensure achievable plans are in place for delivery; agreeing the scope of projects between the GNDP and the sub groups; monitoring the achievements of the Programmes objective: ensuring that sufficient resources are secured to deliver the programme; Communicate with all stakeholders as required the framework of the Programme Communication Plan; Identify and advise on the handling of Programme risks and issues; Receive and Make reports regarding progress on the GNDP Programme.

THE GNDP POLICY GROUP

9.8. The work of the partnership is overseen by the Greater Norwich Development Partnership Policy Group which is made up from four members of each of the following Councils; Broadland, Norwich, South Norfolk, Norfolk County and one member of the Broads Authority. Meetings are held quarterly with a joint meeting with the Greater Norwich Housing Partnership Policy Group twice a year. Officer representation on the policy group is confined to the Lead Directors, although representatives of the sub regional bodies can attend as required.

9.9. The policy group are tasked with preparing a joint Local Development Framework Core Strategy for the three district local planning authorities including integrated land-use and transport policies;

make recommendations to the Councils on any regional planning matters: advise on the development of the Local Transport Plan strategies; and facilitate joint working between the local planning and transportation authorities.

9.10. In response to the need to provide a co-ordinated cross boundary response to the growth agenda, the emerging GNDP structure reflects the current administrative and political realities faced within the Greater Norwich sub region,

EXAMPLES FROM ELSEWHERE

9.11. The challenge to adopt a co-ordinated and phased approach to infrastructure provision and growth trajectories are being addresed by local authorities in all the growth areas and growth point towns and the emerging solutions have varied depending on the different set of issues and objectives and they operate within range of political frameworks. Consequently although there are no ‘one size fits all’ approaches to the management and coordination of growth delivery, there are common challenges. Below we look at the mechanisms and approach that other growth areas have adopted to meet the challenges posed.

CAMBRIDGESHIRE

- Growth in Cambridgeshire is co-ordinated by Cambridge Horizons a non-profit making company set up by the Cambridgeshire Local Authorities to drive forward the development of new communities and infrastructure in the Cambridgeshire Sub-region, in accordance with the approved Structure Plan.

- Late in 2006 DCLG expressed concern about the capacity and mechanisms for delivering growth given what minister described as 'a major increase in the complexity and size of the task'. The Secretary of State initiated a review of structures, capacity and a shared leadership agenda which would be linked to a greater willingness by Government to provide infrastructure funding.

- The current position in Cambridgeshire (covering Cambridge City and South Cambridgeshire is as follows:

Spatial Panning

- Plan making remains within the control of the separate local authorities but there has been joint working on specific growth areas on the development of cross boundary AAPs including the North West Cambridgeshire Areas Action Plan..The terms of reference are currently being developed for the establishment of a joint planning policy committee under section 29 of the compulsory Purchase Act 2004 for consideration by the constituent authorities. Although no decision has yet been taken this would allow the constituent authorities to produce plans under Section 28 of the act without need for County Council involvement. This was a key recommendation from DCLG and it has £700.000 attached to its successful establishment.

- In direct response to concerns over delivery expressed by DCLG two joint development control committees have been proposed and are currently being established to cover the growth areas of Northstowe and the Cambridge Fringes.

- The three local authorities will delegate their statutory development control functions to the committees which are made up members from local authorities affected and the County Council.

- Cambridgeshire Horizons staff are responsible for all matters connected with the administration of the committee.

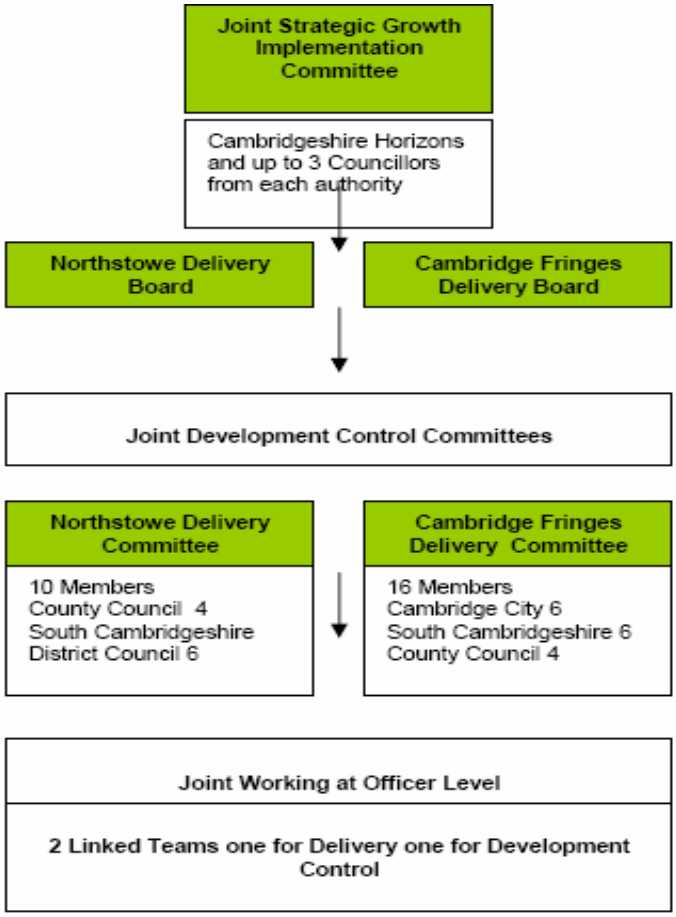


Figure 9.1 Cambridgeshire Horizons structure

Delivery

- Cambridgeshire Horizons is responsible with coordinating delivery of the growth agenda and its role is to take ownership of and drive forward the implementation of the major developments at Northstowe and Cambridge Fringes Sites.

- To ensure that the growth is driven forward in an integrated, coherent and consistent manner a Joint Strategic Growth Implementation Committee has been established. A standing committee of Cambridgeshire Horizons, the Joint Strategic Growth Implementation Committee provides a strategic mechanism for each authority and Cambridgeshire Horizons to explore the issues relating to growth.

- The Joint Strategic Implementation Committee is made up of three councillors from each the constituent local authorities. Cambridgeshire Horizons is represented by its Chairman, Chief Executive and Director of Development implementation on the developments. The boards will approve delivery plans that contain a detailed delivery programme, risk assessment and clear allocation of responsibility tasks to be completed.

- Joint working at officer level is proposed through the creation on two extended teams which include officers from the constituent authorities working on growth related projects and staff from the Core Horizons team.

- The Delivery Team will be led and managed by the Cambridgeshire Horizons Director for Development accountable to the Senior Officer Board and responsible on a day to day basis to the Chief Executive of Cambridgeshire Horizons.

- Cambridgeshire Horizons Director for Sustainable Communities will take overall responsibility for the leadership and management of the development control team. He will be responsible solely for the reports/recommendations to the joint Development Control Committees accountable to the Senior Office Board and the Chief Executive.

Key Messages

- Strong cross authority coordination and organisation has a positive and direct effect on the ability to attract Government Funding. The restructuring of working practises was a key condition of attracting additional funding.

- The physical co-location of staff from the different constituent authorities is seen as being very important to successful delivery.

- There has been recognition that delegated development control powers are required to deliver growth and by pursuing the development of a section 29 committee so that they can take on Plan Making powers the partners are acknowledging the need for a sub regional approach for planning for growth.

- The approach adopted of creating Delivery Boards which are made up of the key delivery agencies and infrastructure providers has been successful in ensuring that all stakeholders take ownership for delivering growth.

OLYMPIC DELIVERY AUTHORITY

- The Olympic Delivery Authority (ODA) is the public body responsible for developing and building the new venues and infrastructure for the Games and their use post 2012.

- The ODA was established by the London Olympic Games and Paralympic Games Act, which received Royal Assent in March 2006. The Government decided that the London 2012 programme needed a dedicated planning team, which could take into account the need to deliver the venues and infrastructure for London 2012 on time. The Act was passed to ensure the necessary planning and preparation for the Games can take place. It allows the ODA to:
  - Buy, sell and hold land;
  - Make arrangements for building works and develop transport and other infrastructure;
  - Develop a Transport Plan for the Games, with which other agencies must co-operate, and make orders regulating traffic on the Olympic Road Network; and
  - Be the local planning authority for The Olympic Park area.

- As a public body, the ODA is accountable to Government, the GLA and other stakeholders for its work.

Spatial Panning

- Plan making remains within the control of the separate local authorities;

- From 7 September 2006, any planning application relating to land within the ODA Planning Area must be submitted to the ODA, rather than to the local borough.

- The Olympic Delivery Authority Planning Decisions Team (ODA PDT) supports the work of the Planning Committee. It is a dedicated team of town planners that is drawn from the ODA's own staff and staff on loan from the local boroughs.

- The ODA Board has appointed a Planning Committee to ensure that decisions are made by the ODA in an open, transparent and impartial manner. The Planning Committee will either make the decisions on the applications submitted to the ODA or delegate the decision to either the ODA Planning Decisions Team (PDT) officers or, in cases where the applications are not connected with the Games or legacy proposals, the relevant Boroughs (Hackney, Newham, Tower Hamlets and Waltham Forest) or the London Thames Gateway Development Corporation. The Planning Committee comprises two ODA board members, four councillors recommended by the four boroughs directly affected by the Olympic Park and five independent members appointed following an external advertisement.

- The ODA Planning Decisions Team (ODA PDT) maintains a Planning Register.

- In determining planning applications the ODA will consult with a wide range of people and organisations. The ODA Planning Committee has adopted a Consultation Strategy which sets out how the team will engage with the community and other stakeholders on planning applications, along with the Development Control Manual. The PDT will carry out public consultations in accordance with statutory requirements.

- The ODA is also responsible for dealing with breaches of planning control and enforcement cases within the ODA planning area.

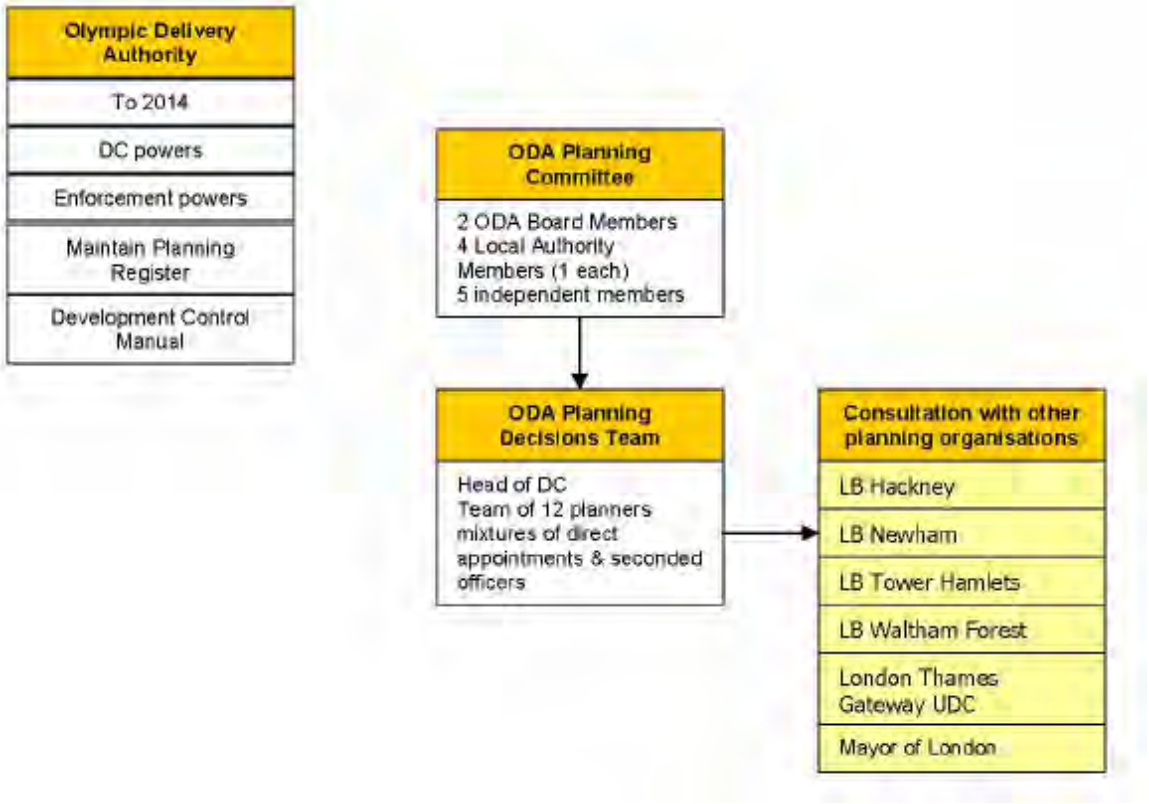


Figure 9.2 Olympic Delivery Authority Structure

Delivery

- The ODA does not tend to require S106 financial undertakings on Olympic related planning applications since these are assumed to have no positive market values. Section 106 agreements are undertaken and are signed by the ODA as local planning authority. All non-Olympic applications made within the Olympic Area are contracted back to the boroughs for determination with S106 monies collected and monitored in the usual way.

- The ODA is a time-limited organisation (with a nominal 10-year lifespan) which will ultimately need to hand back planning powers to the four Olympic boroughs once the Olympics has been delivered. All planning permissions and S106 agreements negotiated by the ODA PDT will also need to be transferred to the boroughs for monitoring and enforcement.

Key Messages

- The physical co-location of staff from the different constituent authorities is important to successful delivery of the Olympic permissions and the co-ordination of cross-boundary issues and implications.

- The approach to coordinating application reviews has been collaborative with significant and regular working between the Boroughs, Statutory Consultees and other interested parties. Clearly this working approach has been assisted by the PDT consisting partly of secondees from the boroughs which in turn builds on the previous positive relationship established by the 2004 Joint Planning Authorities Team in 2004 which consisted of secondees from the boroughs and the Mayor of London's planning decisions unit.

- The mix of seconded and directly recruited staff is important to overcome the tendency to think locally and within borough administrative boundaries rather than area-wide. Through joint working there is an emerging recognition of the need to adopt an area-wide approach to addressing a range of planning issues, although it is early days in terms of the boroughs accepting compromises at the local level in the interests of the project as a whole.

NORTH NORTHAMPTONSHIRE DEVELOPMENT CORPORATION

- The North Northants Development Company (NNDC) is a Local Delivery Vehicle charged with the co-ordination of the provision of soft and hard infrastructure throughout the growth area. Acting as a 'ringmaster' the NNDC provides the interface between the public sector and other delivery bodies, the private sector and the social sector including Housing Associations

- The current position in North Northants (covering the following four boroughs, Corby, Kettering, Wellingborough and East Northants) is as follows:

Spatial Planning

- It has been agreed that a single Core Spatial Strategy covering the whole of the sub region will be prepared by a Joint Planning Unit (JPU) whose work is approved by a Joint Planning Committee (JPC).

- The JPC which consists of an equal number of members from each local authority as well as County Council representatives has delegated powers from each of the authorities to approve the CSS and associated Supplementary Planning Documents (covering the collection of Standard Charges and Sustainability)

- The JPC is headed up by an officer from one of the four boroughs along with staff seconded by the boroughs and charged with the preparation of the cross borough CSS. The CSS allocates the direction of growth and establishes the key policies including sustainability and affordable housing which underpin its core objectives

- The CSS has been submitted to the Secretary of State and the Public Inquiry into the soundness of the plan will commence in November 2007.

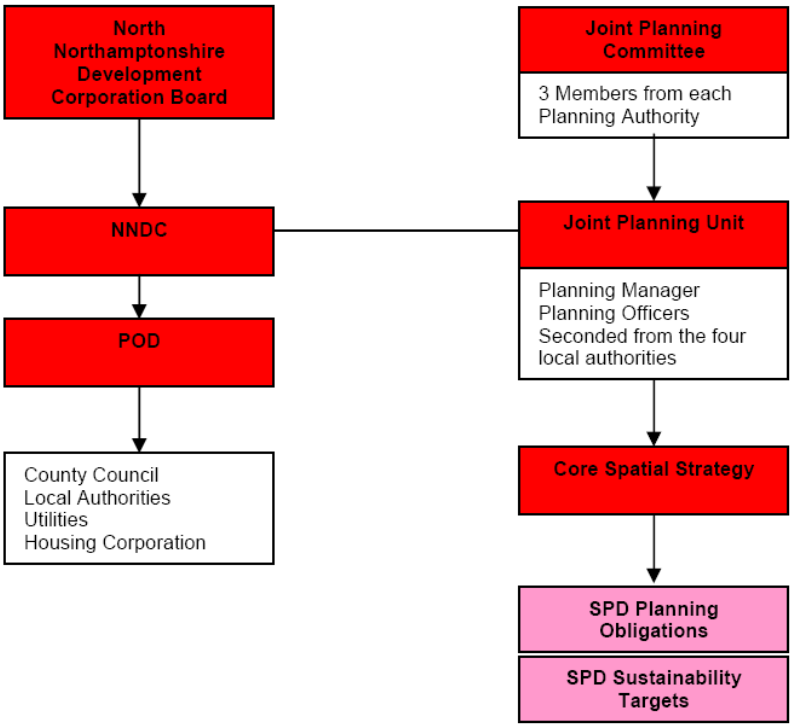


Figure 9.3 North Northamptonshire Development Corporation Structure

Delivery

- The North Northants Development Company (NNDC) was established in 2007. It operates through voluntary agreement with the local authorities, Government Office Emda, English Partnership and other key stakeholders to be the overall delivery vehicle to coordinate growth in the sub region (over 52,000 homes and 45,000 jobs by 2021).

- The principal expertise for NNDC was drawn from Catalyst Corby which was the Urban regeneration agency for the town

- NNDC executives report to a Board which contains representatives from both the public and private sectors including the local authorities. Its activities are funded through a combination of public sources including Emda, EP, LA, and the growth funds.

- In support of the CSS, NNDC have prepared a spatial investment strategy which formed the basis of their PoD submission to CLG for growth area support

- The PoD details all the infrastructure and funding requirements, including mainstream public funding and developer contributions to deliver the CSS based on detailed housing and employment growth trajectories.

- In parallel NNDC has been working alongside the JPU to develop a tariff based approach to capturing developer receipts from housing and other uses. NNDC is preparing the Tariff obligations SPD on behalf of the JPU.

- It is also advising the local authorities on the individual negotiations on planning obligations for the early large scale residential planning applications

- There is also a County wide approach to economic development through Northamptonshire Enterprise Limited (NEL), a dedicated unit with participation from both LDVs, NNDC and WNDC, and the County.

- The role of NNDC is through an informal agreement with each of the local authorities. NNDC does not have any planning or funding powers similar to the URC and its role is carried out purely on a by agreement basis by demonstrating the advantages of a cross regional approach to delivery.

Key Messages

- The co-location of the JPU with NNDC coupled with their similar objectives to establish the spatial planning policy position (JPU) and deliver the growth agenda (NNDC) has meant that a close working relationship has developed between each organisation.

- The approach to developing initiatives or policy has been collaborative with significant and regular working between these organisations and the Boroughs /County at Officer and Chief officer level. Clearly this working approach has been assisted by the JPU consisting of secondees from the boroughs and the previous positive relationship established by staff at Catalyst Corby with the public sector agencies.

- Although there is still a tendency to still think locally, through the CSS and the joint working there is an emerging recognition of the advantages of adopting a sub regional approach to addressing a range of planning community, social, economic and delivery issues generated by the growth agenda, which are by there very nature cross boundary, by the boroughs.

- The by agreement nature of the NNDC activities facilitates cross working amongst the boroughs and provides a vehicle for a more integrated approach to across boundaries issues. Furthermore in combination with the activities of the JPU this has created an organisational focus for looking from a sub regional perspective and a vehicle of the Boroughs/ County to come together at the Officer and Chief Officer level to address these aspects.

- The recognition of the need to ensure the timely delivery of hard and soft infrastructure to compliment the scale and pace of residential and economic growth has provided a further

rationale for the activities of NNDC and the JPU and the joined up working approach they have adopted.

- Although there is local authority member representation on the NNDC board to avoid a disconnect with the wider member group considerable time is required to keep the members informed with the chief officers playing a vital role in this process. This is also facilitated by Chief Officer and lead member meetings with NNDC.

- The role of and frequency of contact between the senior JPU/NNDC officers and the Chief Officers in heading off issues and "squaring off" sub regional issues should not be underestimated in making this approach work in North Northants. Nor should the support for this joined up approach from CLG, the Regional Office, Emda and EP be underestimated in making the arrangements work and maintaining the momentum to think sub regionally in properly addressing the issues raised in achieving the growth agenda by the local agencies.

- This sub regional approach has been perceived as "beneficial" in levering in additional public funds particularly by Emda and EP and was a structure and approach which was then followed by CLG in its recent growth area bidding round .

- This sub regional approach is also supported by developers and landowners who "use" the additional communication channels/ organisational structure created by NNDC and the JPU to interface with the other public sector agencies.

- In summary, the approach taken in North Northants for delivering sustainable growth has a number of similarities to the emerging approach in preparing the Core Strategy and the submission of the PoD/growth area funding bid. Following this approach will however require the reinforcement of the current joint working arrangements.

LONDON THAMES GATEWAY UDC

- In October 2005 the London Thames Gateway Development Corporation became the strategic development control authority for its areas of responsibility in the Thames Gateway. The Corporation has the power to determine certain strategic types of planning application eg those with over 50 residential units and those with over 2,500 sq m of commercial floor space. Plan making powers will stay with the local authorities but the Development Corporation will produce its own Regeneration Frameworks which will take into account local plans and the Mayor's London Plan.

- For the purpose of achieving regeneration of its area, the Development Corporation will:
  - Acquire, hold, manage, reclaim and dispose of land and other property;
  - Carry out building and other operations;
  - Seek to ensure the provision of water, electricity, gas, sewerage and other services;
  - Provide funding to organisations whose activities meet our operational objectives, and,
  - Undertake any appropriate activity which may underpin the regeneration of the London Thames Gateway area

Spatial Planning

- Applications to be decided by LTGDC will continue to be submitted to the relevant London Borough. The London Borough will deal with the validation and registration of the application. The London Borough will deal with all matters relating to the publicity of the application, the receipt of comments from interested parties and the initial procurement of specialist advice from statutory and non statutory consultees.

- Applications referred to the LTGDC will be determined by either the Corporation's Planning Committee or by the Corporation's Director of Planning acting under powers delegated to him by the Corporation.

- The LTGDC Planning Committee usually holds monthly, public meetings. The Planning Committee membership comprises a mixture of ODA Board members and independent members

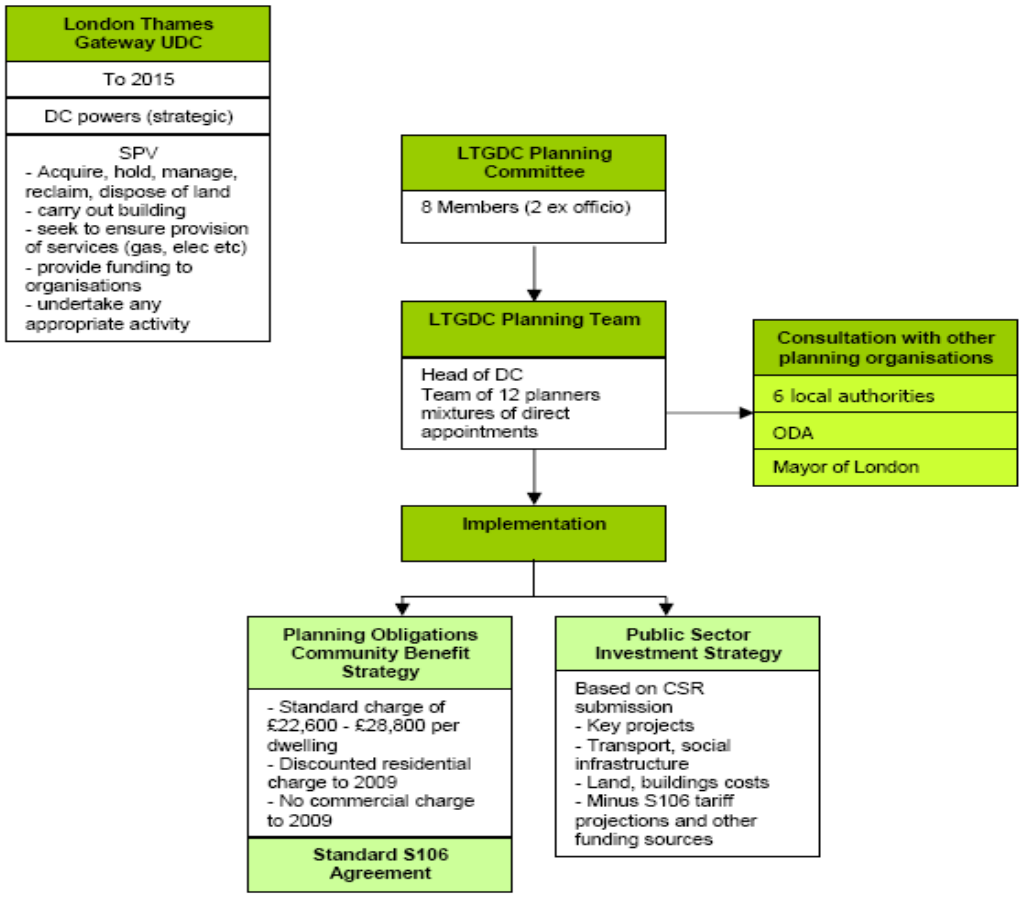


Figure 9.4 London Thames Gateway UDC Structure

Delivery

- The LTGDC has developed a Planning Obligations Community Benefit Strategy. This is to ensure that developments contribute financially and in kind towards the infrastructure that is needed in the London Thames Gateway area to support the developments that are coming forward for planning approval. These proposals have been developed in consultation with the Thames Gateway Executive at Communities and Local Government Department. As such they are part of the Department's drive to look for and develop innovative funding mechanisms.

- Where the LTGDC grants planning permission for development, all development will be required to make financial and in kind contributions towards infrastructure and community facilities. The Strategy indicates that a standard charge of £22,600 - £28,800 per dwelling would be justified as a contribution towards the significant infrastructure needs of the area. In recognition of the fact that this level of charge is currently unviable and in the interests of not inhibiting regeneration that LTGDC are offering a discount on the standard charge level to 2009. For residential developments, this contribution will be a discounted standard charge of £10,000 per unit in the Lower Lea Valley and £6000 per unit in London Riverside. For commercial development there will not be a standard charge associated with retail, office, hotel and industrial developments although it is believed that there is a proper planning justification for it. Financial and in kind contributions

will be negotiated on a site by site basis, taking into account site circumstances and the impact of the proposed development.

- The LTGDC have also prepared a standard legal agreement that it will use as a basis for section 106 agreements with applicants.

- The London Thames Gateway Development Corporation is a limited life body. This requires it to focus on achievement within a clear timescale rather than having an open ended remit. Owing to the complexities of planning issues in London, DCLG is proposing that the London Thames Gateway Development Corporation has an indicative lifespan of 10 years, with a full review after 5 years.

KEY MESSAGES

- The use of a standard charge system linked to an assessment of infrastructure needs and identified funding sources is crucial to demonstrate openness and transparency of S106 requirements and certainty that the infrastructure will be provided as the developments are built.

- As the strategic local planning authority covering three boroughs the LTGDC are able to pool the contributions arising towards infrastructure projects across the LTGDC administrative area. The LTGDC can also work with the boroughs to consider pooling with contributions arising from those proposals which are below the threshold for LTGDC referral but could/can benefit from the infrastructure provided.

SUMMARY KEY MESSAGES FROM COMPARABLE ORGANISATIONAL STRUCTURES

- The above comparable examples of organisational structures and roles & responsibilities provide clear pointers for the type of structure required for the GNDP:

1. Strong cross-authority coordination and organisation has a strong and direct effect on the ability to attract Government Funding.

2. The physical co-location of staff from the different constituent authorities is important to successful delivery.

3. A mix of seconded and directly recruited staff is important to overcome the tendency to think locally and within borough administrative boundaries rather than area-wide.

4. The approach to developing initiatives should be collaborative with significant and regular working between organisations and the Boroughs /County at Officer and Chief officer level.

The approaches allow growth issues to be approached on a sub-regional basis and encourage comprehensive solutions to move forward.

5. Considerable time is required to keep the members informed with the chief officers playing a vital role in this process and facilitated by core partnership staff.

6. The role of and frequency of contact between the senior officers and the Chief Officers in heading off issues and “squaring off” sub regional issues should not be underestimated in making this approach work.

7. The use of a standard charge system is crucial to demonstrate openness and transparency of S106 requirements and certainty that the infrastructure will be provided as the growth trajectories are delivered.

8. Delivery Boards made up of the key delivery agencies and infrastructure providers are successful in ensuring that all stakeholders take ownership for delivering growth projects and monitoring success into the future.

9. Organisational structures need to have a degree of flexibility to be able to respond to changing circumstances e.g. administrative changes, new statutory requirements and different planning mechanisms (i.e. Standard Charges instead of PGS).

10. NPA: AN EVOLVING APPROACH

10.1. The current GNDP structure has many strengths. The relatively young Partnership has been successful in developing cross boundary collaboration and intra agency working across a range of growth related issues, focussed around the Programme of Development submission and the Core Spatial Strategy. Working closely alongside the Greater Norwich Housing partnership GNDP have successfully commissioned and managed a range of consultancy projects which are essential to planning for growth. Most importantly the Partnership has overseen the preparation of the emerging Joint Core Strategy as part of the LDF which, when adopted in 2009 will provide a sub regional planning framework designed specifically to facilitate growth and engender a cross boundary approach to planning development.

10.2. The GNDP Manager has been successful in facilitating the activities of the Partnership in a non-partisan way culminating in the growth point funding bid in the Programme of Development. There appears to be strong levels of trust within the Partnership and an appetite to meet the challenges and deliver the growth targets.

10.3. Going forward therefore, the Partnership will need to demonstrate that its structures can meet the inevitable challenges that growth will create in a timely and efficient manner. Below we identify several issues that could impede the success of the Partnership in moving forward.

10.4. Firstly, is the issue of decision/recommendation making. Currently decisions have to go to the Directors Group and then periodically the Policy Group who then in turn have to take back recommendations for discussion and approval through each of their respective decision making processes. This can result in significant delays to decisions being made and also leads to considerable ‘resource calls’ on Directors time. As the Partnership matures and the rate of growth accelerates the amount of decisions that will need to be made will increase, become more complex and potentially more controversial.

10.5. This does not necessarily mean that there is a requirement for delegation of powers but it does mean that the processes and mechanisms by which decisions are made will need to be developed and refined to ensure that good, well informed decisions can be made speedily and appropriately and the proper level of resource identified to inform the Directors Group recommendation making activities.

10.6. Secondly is the issue of GNDPs identity and communication of objectives and purpose. For many, be they Developers, key stakeholders or the public, who are not directly involved with the GNDP it is difficult to understand the objectives or structure of the partnership or how to engage with it. The existence of a highly visible and accessible executive unit which is helpful and has a strong sense of purpose is important to engaging with all those involved in and affected by growth.

10.7. Thirdly is the issue of shared plan making and development control decision making. The collaboration on the Joint Core Strategy is very encouraging but going forward the Partnership may want to consider the issue of how large scale cross boundary applications are dealt with.

10.8. Fourthly, is the issue of officer resourcing of growth related projects. The programme management function currently only has two full time officers but there are many officers across the different authorities and different departments spending a proportion of their time covering growth related issues. Not only does this carry a cost which should be calculated and attributed to growth but it does suggest that there is a requirement for additional resourcing to coordinate and facilitate the partnership support, especially as the growth related work increases.

10.9. Fifthly, the receipt of Growth Area funding will significantly change the nature and role of the Partnership and will also increase the amount of resource required to facilitate the growth programme. As discussed earlier this requires a shared strategic business plan approach to collection of developer contributions which would need to be supported by revised local planning guidance.

10.10. Sixthly, as well as the significant opportunities open to the Partnership there are also some recognisable threats. One of the most significant of these is the boundary commission review. This is a threat in two ways, firstly, any boundary changes would have an effect on the exiting partnership structure and could result in different authorities having different levels of representation. This would also trickle down to officer level where boundary changes could result in changes to specific officer's areas of responsibility which could result in the collaborative working relationships that have developed being lost.

10.11. Finally, as well as an opportunity, the impending receipt of funding for the Partnership could challenge the present good collaborative approach to working. It is highly likely that funding levels will be much lower than have been requested. This will mean that the Partnership will have to work together to prioritise projects from their Programme of Development. This sort of activity can place enormous strain on Partnerships and it is advisable for the Partnership to resolve funding prioritisation in advance of any financial award being made.

TASK AND ACTIVITIES - MOVING FORWARD WITHIN THE CURRENT FRAMEWORK

10.12. In response to these issues there are a series of tasks and activities that need to be appropriately delegated, resourced and undertaken. Chief Officers and Members should, as a matter of urgency consider the best arrangements for undertaking these and ensuring they are appropriately resourced. An initial assessment identified the following tasks and activities that require imminent and ongoing resource allocation:

- Management and updating of the Growth Infrastructure Deliver Model;
- Coordination of infrastructure and service delivery organisations;
- The development of binding agreements with organisations such as the Environment Agency, PCT, & Utilities companies to ensure the required infrastructure is provided in a timely and appropriate manner;
- Management of existing growth related studies and commissioning of any future studies;
- Preparation of bids for funding, including Growth Area Funding and the distribution, monitoring and management of that funding;
- Prioritisation of Growth Area Funding;
- Management and ongoing development of the Joint Core Spatial Strategy
- Maintaining relationships with sub regional agencies to ensure the compliance with the sub-regional agenda;
- Development an implementation of tariff proposals, potentially including the preparation and implementation of tariff proposals;
- Development of the 'banker role' including the deciding which organisation will assume this position and what are the protocols surrounding it;
- The planning, monitoring and management of housing growth targets and completions sub-regionally;
- The negotiation of s106 at a sub-regional level;
- Management and facilitation of the Directors and Policy Group;
- Marketing and Communication of objectives and ideas to counter parochial thinking;
- Performing the role of honest broker in furthering the sub-regional agenda.

10.13. The full scope of each of these tasks and activities needs to be considered in more depth and an assessment should be undertaken to identify which of them can be carried out by existing staff and which require additional resources, it is likely that in most cases additional resources will be required if they are to be carried out to an appropriate standard. It is essential to ensure that they are carried out on a sub-regional basis with full buy in from all the members of the policy group. Creating an appropriate organisational structure is therefore critical to moving forward successfully.

10.14. Given the current uncertainties created by the boundary commission review and unitary status there is a need to develop an approach that works within the current organisational and political parameters, below we identify ways to strengthen the current organisational structure and improve operational mechanisms to ensure that the Partnership has better access to resources and more efficient decision making processes. This approach, illustrated in the diagram below builds on the existing GNDP structure by reinforcing and strengthening the sub regional joint working approach.

10.15. A key message from organisational models elsewhere is that managing the growth agenda in a sustainable fashion is resource intensive and the establishment of bespoke teams or organisational

working across the planning and delivery fields is essential. This challenge is no different in the NPA.

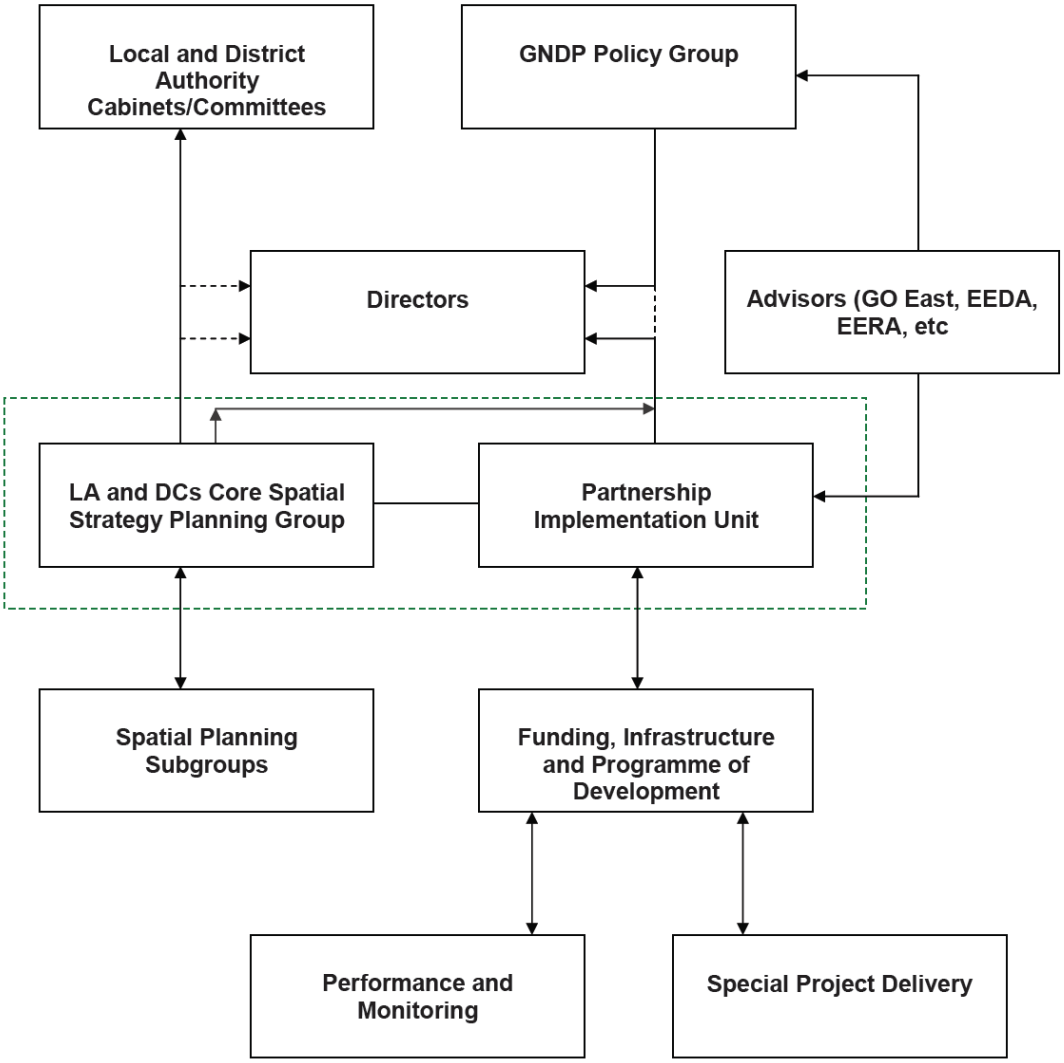


Figure 10.1 Potential Growth Delivery Organisational Structure

10.16. Central to the review of current working practices is an improved and expanded Programme Implementation Unit (PIU). The PIU should build on and develop the current role of the Partnership Manager and her assistant. The unit could be developed in such a way that it becomes a recognised growth delivery unit headed up by a Director level officer with sufficient resources to undertake the majority of tasks and activities identified above but in particular:

- Management and Coordination of the growth infrastructure model;
- Maintaining day to day contact with the individual growth area project leads;
- Coordinating the overall delivery of the infrastructure programme and seeking agreement with the key infrastructure delivery agencies.

- Activities to maintain the sub regional approach to delivery by the individual authorities
- Servicing the GNDP Policy Board and Directors Group as appropriate;
- Inputs into the Core Spatial Strategy.

10.17. As a first point of contact for Developers and Stakeholders the PIU would act as a gatekeeper for all enquiries relating to growth ensuring that the respective Directors in each of the Local Authorities are not unduly distracted from their existing portfolios of work. The PIU could be responsible for profiling and promoting the Growth Agenda and communicating the growth objectives of each of the constituent local authorities.

10.18. In delivering this role the PIU, would build on the non partisan approach taken by the existing Programme Manager and not be seen as being dominated by one Local Authority, the Director should also be independent. A good way of achieving this would be to build the team from a mixture of secondees from the different authorities and directly recruited officers. In particular by establishing a well resourced PIU it would be possible to ensure that the Policy Group and Directors are only asked to consider issues of well evidenced recommendations for decision.

10.19. In parallel we would suggest the current core officer group bringing forward the Core Spatial Strategy is forged into this dedicated unit, staffed again by a mix of permanent secondees and directly recruited staff they would be responsible for delivering the core spatial strategy. This group could work closely with the PIU and the co-location of both teams and the complementary themes of their work could have a number of benefits. This arrangement would allow both of the groups to fulfil their objectives of bringing forward spatial planning delivery through the Policy Group.

10.20. The Policy Group would become the impartial sub-regional focus for decisions on implementation and spatial planning. Its role would be to make considered recommendations on those key sub regional aspects, which would then need to be taken via the Directors Group for endorsement by the individual Councils. In evolving this process, consideration could be given to establishing what aspects of the work being taken forward by the GNDP would need to be endorsed by the individual Councils.

10.21. In summary, this approach to organisational delivery builds on existing strengths and puts in place a structure that can promote a suitable focus for spatial planning and delivery in the short term. Clearly, once the results of the boundary commission reviews and unitary status are known an alternative delivery structure could emerge. However, given the emerging choices for growth which will need to involve urban extensions as well as new free standing towns, any new structure will still need to work across the sub region, to ensure the focussed and sustainable delivery of the spatial agenda.