

EDAW | AECOM

Norwich Growth Area – Infrastructure Need and Funding Study

Final Report

Appendices

December 2007

Appendices

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Appendix - A

CHELMER MODEL METHODOLOGY NOTE

The following methodology was written by Norfolk County Council Demography and Information team.

Summary

Projections from mid-2001 to mid-2031 (excluding 2006) were made of dwellings, population, (age 0-3, 4-10 and 11-16), household population (age 0-3, 4-10 and 11-16), and households for Norwich and the Broadland and South Norfolk parts of the Norwich Policy Area (NPA). Although the latest Chelmer/RSS dwelling-led projections were used at local authority level as a control, excluding windfall, their interpretation in terms of the NPA, extension to 2031 and for alternative age groups was entirely our responsibility.

Projections were made for two housing growth scenarios using housing change figures for the NPA provided by EDAW. Essentially the dwelling change drove the projection model. Dwelling change for each projection period was modelled in proportion to the corresponding District dwelling change in the Chelmer results, and windfall dwellings added. To run population projections, the Chelmer population projections for 2001-2021 for the three Districts and our estimated mid-2001 base population figures for Broadland NPA and South Norfolk NPA were input: population, including population attributable to windfall dwellings, was calculated in proportion to dwelling change. The model was re-run twice with input of population in households, and with households.

Ultimately a simple method was adopted to produce age structure projections, to ensure consistency with the different dwelling numbers of each scenario. These are necessarily subject to a wider margin of error than projections of the total population.

Introduction

This note describes how the projections made by Norfolk County Council (Demography & Information team) for the Norwich Infrastructure Need and Funding Study (August 2007) were produced. Projections from 2001 to 2031 (excluding 2006) were made of **dwellings**, **population**, **population in households** (in both cases for totals, age 0-3, age 4-10 and age 11-16), and **households**. The resultant figures of **average household size** (population in households divided by households, AHS) were also provided. Projections were made for Broadland and South Norfolk (in each case for the Norwich Policy Area and rural remainder separately) and for Norwich. This gave results for the NPA and its three District components.

It was agreed that the RSS dwelling-led projections for Districts would be taken as the basis for a derived set of projections for the component parts of the NPA.

Note that the interpretation we have made of the Chelmer projections (only available at local authority level) in terms of the NPA, extension beyond 2021 and the alternative age groups was entirely our own.

Housing growth scenarios

EDAW supplied two housing growth scenarios, which were to form the basis for the total new dwelling units (with an allowance for windfall applications to 2026) from 2001-2021 and 2021-2031. Scenario 1 assumed new dwellings from 2007-2021 in growth extensions of 7,500 in Broadland NPA and 3,500 in South Norfolk NPA, while Scenario 2 assumed zero in Broadland NPA and 10,000 in South Norfolk NPA. In both scenarios an assumption of 5,000 urban capacity dwellings was made for Norwich. The full figures are detailed at the end of Appendix A.

The use of Chelmer projections

It was agreed on 27 July that the projections of population and population in households from the Chelmer model ('Group 3 RSS dwelling-led' to reflect proposed changes to the Plan – the Regional Spatial Strategy -, December 2006) would be used by Demography & Information to produce, for the NPA, the inputs needed for the EDAW Social Infrastructure Planning Model. The detailed Chelmer projections are those commissioned by EERA from the Population and Housing Research Group at Anglia Ruskin University and supplied to the Demography Sub-group of EERA's Regional Research and Monitoring Group. They form a comprehensive set of projections at local authority level, including economically active population, to 2021. The RSS dwelling numbers do not include any windfall allowance.

The structure of the model

(a) Dwelling assumptions

Dwelling projections for the three Districts from 2001 to 2021 were taken from the Chelmer output, and 2001 dwelling estimates for the Broadland and South Norfolk parts of the NPA were made by applying the ratio between Census dwellings in the NPA part and the District. This was, in effect, to convert from Census date to mid-year.

The rural parts of Broadland and South Norfolk were modelled in the spreadsheet as residuals (in other words Broadland Rural was found by subtracting Broadland NPA from Broadland District) but were suppressed in the output as results were not required and they were included only to facilitate checks and calculations.

Census 2001 base figures for Norwich, Broadland NPA and South Norfolk NPA were taken from Tables UV01 (all people; all people resident in households), UV65 (all dwellings) and UV 67 (all households). As part of this process a small adjustment was made to South Norfolk NPA to deduct figures (estimated in the case of dwellings) for the parishes of Hellington and Holverston, that could not otherwise be separated from Bramerton parish.

For **Scenario 1**, for 2001-2021, the dwelling change (excluding windfall) was set as follows:

- Broadland NPA 10,662
- South Norfolk NPA 10,373
- Norwich 14,110 (in order to reconcile with the Chelmer/RSS figure: the extra 367 dwellings were added to the Norwich windfall for 2011-21)
- The Norwich Policy Area total was 35,145.

These figures were distributed to the ten-year interval 2001-11 and five-year intervals 2011-21 using the 2001 NPA to District ratios.

For 2021-31 the dwelling change (excluding windfall) was set as follows:

- Broadland NPA 8,000
- South Norfolk NPA 8,000
- Norwich 2,000
- The Norwich Policy Area total was 18,000.

These figures were split equally between 2021-26 and 2026-31. The windfall assumptions provided for 2011-2026 were then added, to give total dwellings including windfall.

For **Scenario 2**, for 2001-2021, the dwelling change (excluding windfall) was set as follows:

- Broadland NPA 3,162
- South Norfolk NPA had to be modelled jointly with Broadland NPA (3,162+16,873) as the assumed number of new dwellings in South Norfolk NPA, 16,873, exceeded the RSS control figure of 11,193 for South Norfolk District. The figures were later disaggregated in the summary sheet – see below.
- Norwich was as in Scenario 1
- The Norwich Policy Area total was 34,145 (1,000 less than Scenario 1).

These figures were distributed to the ten-year interval 2001-11 and five-year intervals 2011-21 using the 2001 NPA to District ratios.

For 2021-31 the dwelling change (excluding windfall) was the same as Scenario 1 and the Broadland and South Norfolk NPA were modelled in combination as above.

These figures were split equally between 2021-26 and 2026-31. The windfall assumptions provided for 2011-2026 were then added, to give total dwellings including windfall.

(b) Projected population

Total population was modelled for both scenarios in a separate worksheet. The only input required was the Chelmer population projection for the three Districts for 2001 and 2011-2021; and Broadland and South Norfolk NPA for 2001. The District figures were taken directly from the Chelmer output. The NPA figures were from our own mid-2001 small area population estimates.

Projections to 2021 were made as follows:

- For the three Districts the population attributable to windfall dwellings was calculated as $(\text{RSS population for the year} / \text{RSS dwellings for the year} * \text{windfall dwellings})$. This was added to the RSS/Chelmer population projected for the year and the results copied to the summary worksheet.
- For the Broadland and South Norfolk NPA combined area, the share of the District projected population increase was estimated from the share of the dwelling increase and added to the previous year's population. Population attributable to windfall was estimated from the share of the windfall dwellings and the results copied to the summary worksheet.

Projections for 2026 and 2031 were made as follows:

- For the three Districts and for the Broadland and South Norfolk NPA the projected population increase was estimated from the share of the previous five year dwelling increase and added to the previous year's population.

The final population figures (including population attributed to windfall) for 2001-2031 for both scenarios were copied into a summary worksheet, along with all the dwelling figures.

The summary worksheet disaggregated the projections for the Broadland and South Norfolk parts of the NPA. The additional dwellings for the two areas were already known, and each area's share of the total was applied to the projected population change for the combined area and added to the population from the previous projection year. This ensured that the population change was directly proportional to the dwelling change.

Additional dwellings	2001 to 2011	2011 to 2016 and 2016-2021	2021 to 2031
Broadland NPA	1,344	1,259	8,350
South Norfolk NPA	7,594	4,989	8,350
Total	8,938	6,248	16,700
Calculated ratios			
Broadland NPA	0.1503	0.2015	0.5
South Norfolk NPA	0.8497	0.7985	0.5

Producing figures for household population, households and average household size

The projections of population in households and households were made in exactly the same way as the projections of total population. The Chelmer projections of household population and the Broadland and South Norfolk NPA estimated mid-2001 figures were entered into a copy of the spreadsheet in place of population figures, to give projections of household population. The process was then repeated using households.

Average household size was calculated from the end results by dividing the population in households by the number of households.

Producing figures for population and household population by age

Projections were required for the age ranges 0-3 (broken down into 0, 1, 2 and 3), 4-10, 11 to 16 and 17 and over. A different approach was required here because

- primarily, an increase in dwellings could not be used in the same way to model population age groups which were largely declining (in this case, the child age groups). Initial attempts to run the model in this way led to illogical results under scenario 2, where despite a larger dwelling increase in South Norfolk NPA than under Scenario 1 the population in the younger age groups declined more;
- although the Chelmer quinary age projections gave a reasonable basis for estimating change in the EDAW age groups 0-3, 4-10, 11-16 and 17-plus, clearly they could not provide a basis for single year of age projections.

The alternative adopted was as follows.

The first stage was to convert the Chelmer projections to estimates for the EDAW age groups. To do this the ratios of (a) age 0-3 to 0-4, (b) 4-10 to 5-9 and (c) 11-16 to 10-14 from the 2001 Census were applied to the Chelmer quinary age group projections.

The second stage was to calculate for each District the number of children in each age group per Chelmer dwelling (e.g. 0.0693 children in Broadland aged 0-3 in 2021 per dwelling), and apply the appropriate factors to the Scenario 1 and Scenario 2 dwellings in the NPA (e.g. under Scenario 1 in Broadland NPA, 46,595 dwellings including windfall in 2021, multiplied by

0.0693, gives 3,231 children aged 0-3). Children per Chelmer dwelling ratios for 2021 were assumed to be constant to 2026 and 2031. This process was repeated for each of the four EDAW age groups, for the three parts of the NPA, for the two scenarios.

Thirdly, these age group projections were then summed to all ages and the results compared with the all ages projections already produced. The differences were distributed pro rata in order to give final age group projections consistent with the all ages projections. The result of this stage was therefore

- Projections for age groups 0-3, 4-10, 11-16 and 17+ for 2001 by five-year intervals to 2031, for Scenarios 1 and 2 for Broadland NPA, Norwich and South Norfolk NPA.

In order to produce projections for **single years of age from 0 to 3** we used the Government Actuary Department (GAD)'s principal projection for England, 2004-based, which included projections of population by single years of age to 2044. Our projections of 0-3 year olds were estimated down to single years of age by applying the same proportions as in the GAD projections for the appropriate year. For 2001 we used the Census figures for single year of age, adjusted to mid-year on the same basis as the 0-3 age group as a whole.

The same procedure was used for making estimates of the total population and of the household population.

The following Table sets out the dwelling assumptions adopted for the NPA.

Projections for 2006

Population figures for 2006, by age group, were subsequently requested by EDAW. As we had not included any 2006 data in our model, and in view of the urgent need for figures, we had insufficient time to make modifications. Instead we produced these using the Chelmer District controls at 2006, estimating the NPA totals as the same share of the relevant District as at 2001. It was assumed that the NPA/District ratios also held true across the age groups.

It needs to be borne in mind that the 2006 figures here are constrained by the 2001-based Chelmer District projections, but we now have current ONS population estimates for mid-2006 (and other sources, such as health authority patient register data, to estimate the population of the NPA), so we can see how far adrift the Chelmer projections are. Hence our figures are not the best estimates of the actual population in mid-2006.

Appendix Table 1: Housing growth assumed for each scenario

Scenario 1				
	Broadland NPA	Norwich	South Norfolk NPA	Total
2001 to 2021				
Completions 2001-04	853	2,337	1,094	4,284
Completions 2004-06	240	1,153	545	1,938
Existing commitments 2006-2021	1,725	5,987	4,543	12,255
Urban capacity 2007-2021	344	5,000	691	6,035
Growth extensions 2007-2021	7,500	0	3,500	11,000
Windfall assumption 2011-2021	700	700	700	2,100
Total units 2001-2021	11,362	15,177	11,073	37,612
Total units 2001-2021 excl. windfall	10,662	14,477	10,373	35,512
2021 to 2031				
Windfall assumption 2021-2026	350	350	350	1,050
Housing growth 2021-2031	8,000	2,000	8,000	18,000
2001 to 2031				
Total units 2001-2031	19,362	17,177	19,073	55,612

Scenario 2				
	Broadland NPA	Norwich	South Norfolk NPA	Total
2001 to 2021				
Completions 2001-04	853	2,337	1,094	4,284
Completions 2004-06	240	1,153	545	1,938
Existing commitments 2006-2021	1,725	5,987	4,543	12,255
Urban capacity 2007-2021	344	5,000	691	6,035
Growth extensions 2007-2021	0	0	10,000	10,000
Windfall assumption 2011-2021	700	700	700	2,100
Total units 2001-2021	3,862	15,177	17,573	36,612
Total units 2001-2021 excl. windfall	3,162	14,477	16,873	34,512
2021 to 2031				
Windfall assumption 2021-2026	350	350	350	1,050
Housing growth 2021-2031	8,000	2,000	8,000	18,000
2001 to 2031				
Total units 2001-2031	11,862	17,177	25,573	54,612

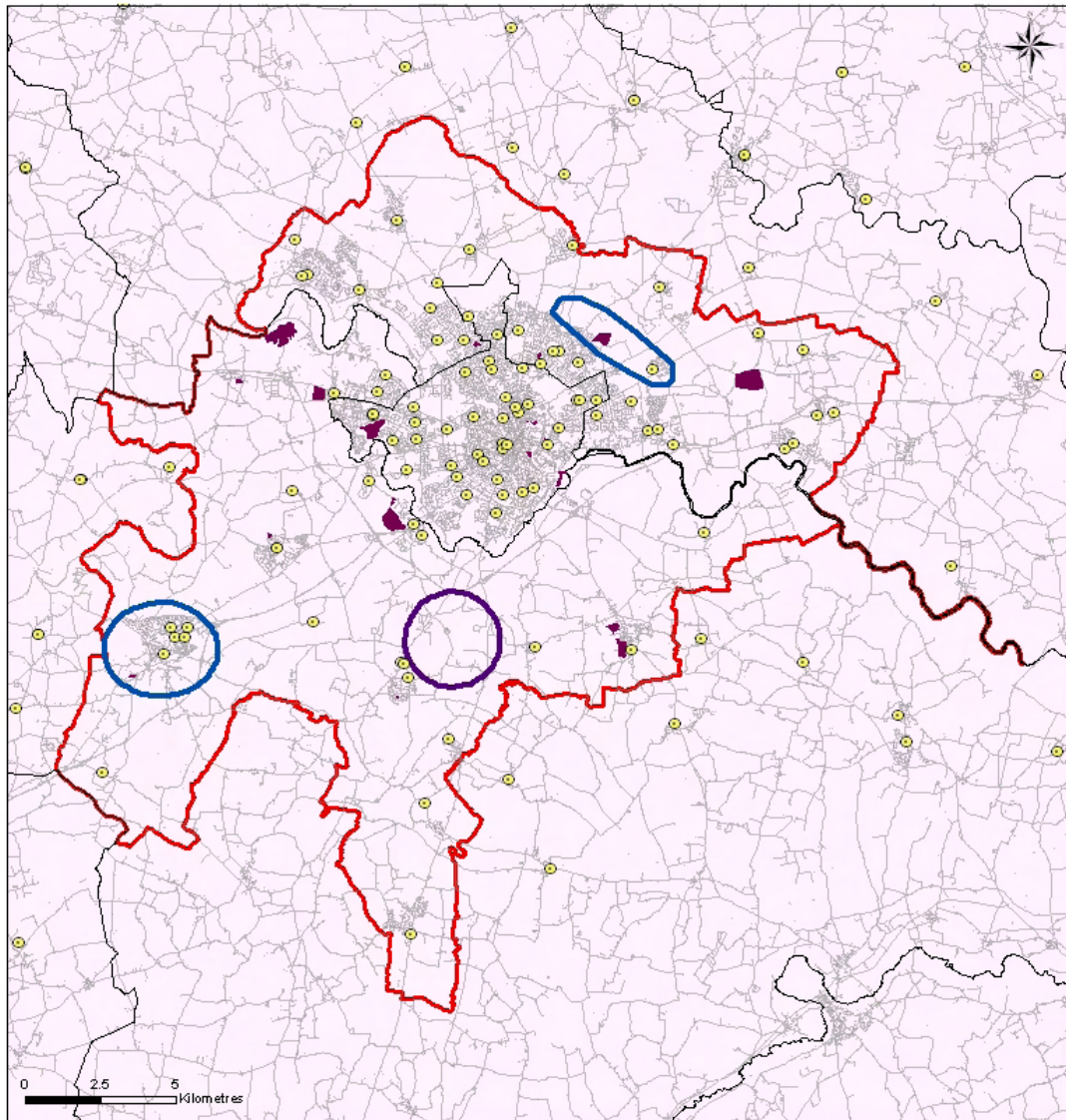
Source: EDAW, 7 August 2007

Appendix - B

MAPPING OF EXISTING SOCIAL INFRASTRUCTURE

Childcare Facilities

Norwich Infrastructure Needs & Funding



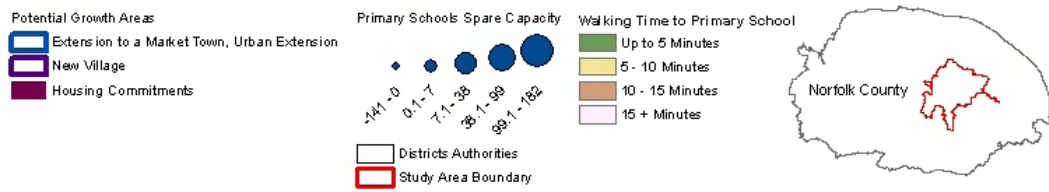
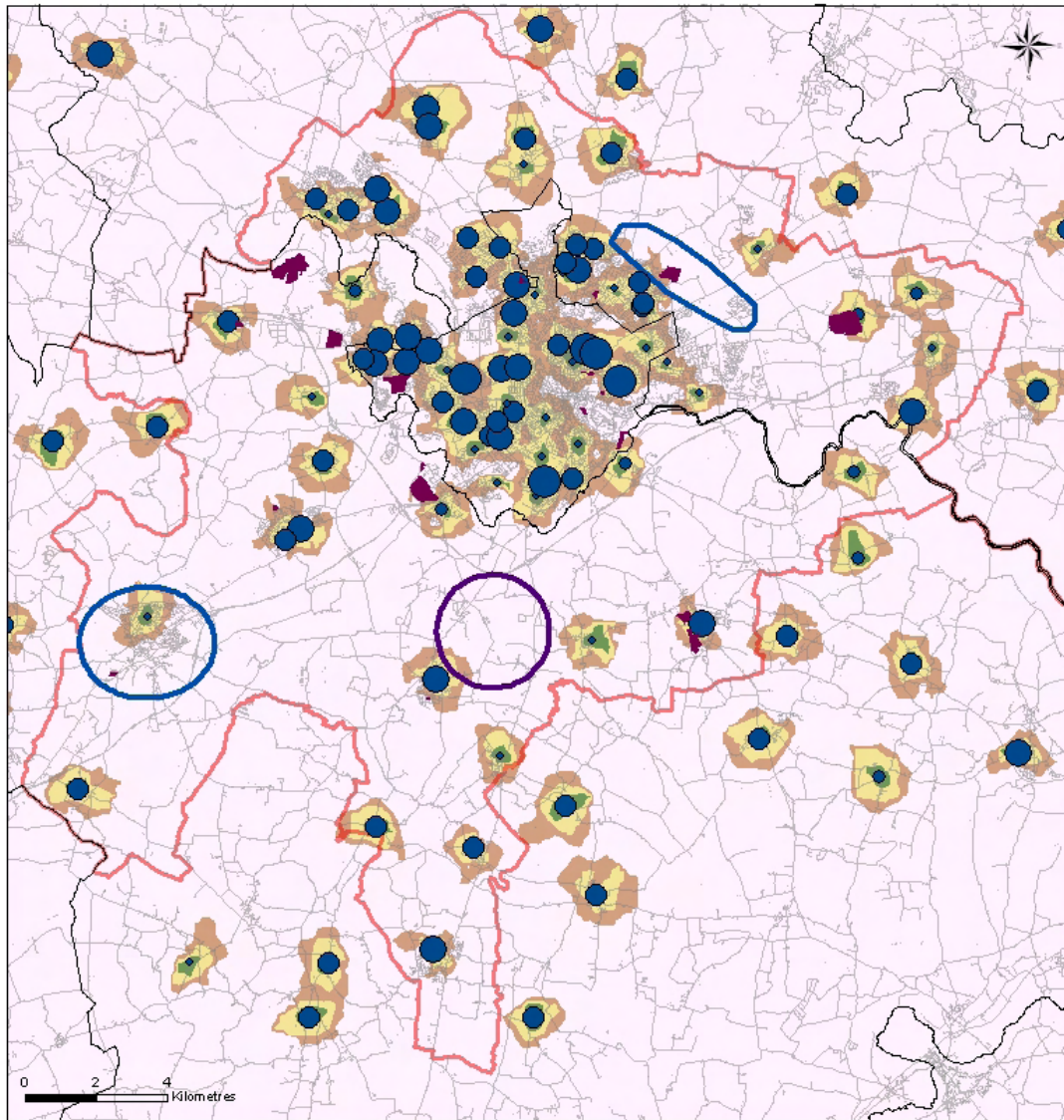
Data Source: Norfolk CC ♦ Last Updated: April 2007

Map Source: Census 2001 Output Areas/Ordnance Survey Boundary Line

Map B.1: Childcare Facilities

Primary Schools Supply, Demand & Accessibility

Norwich Infrastructure Needs & Funding

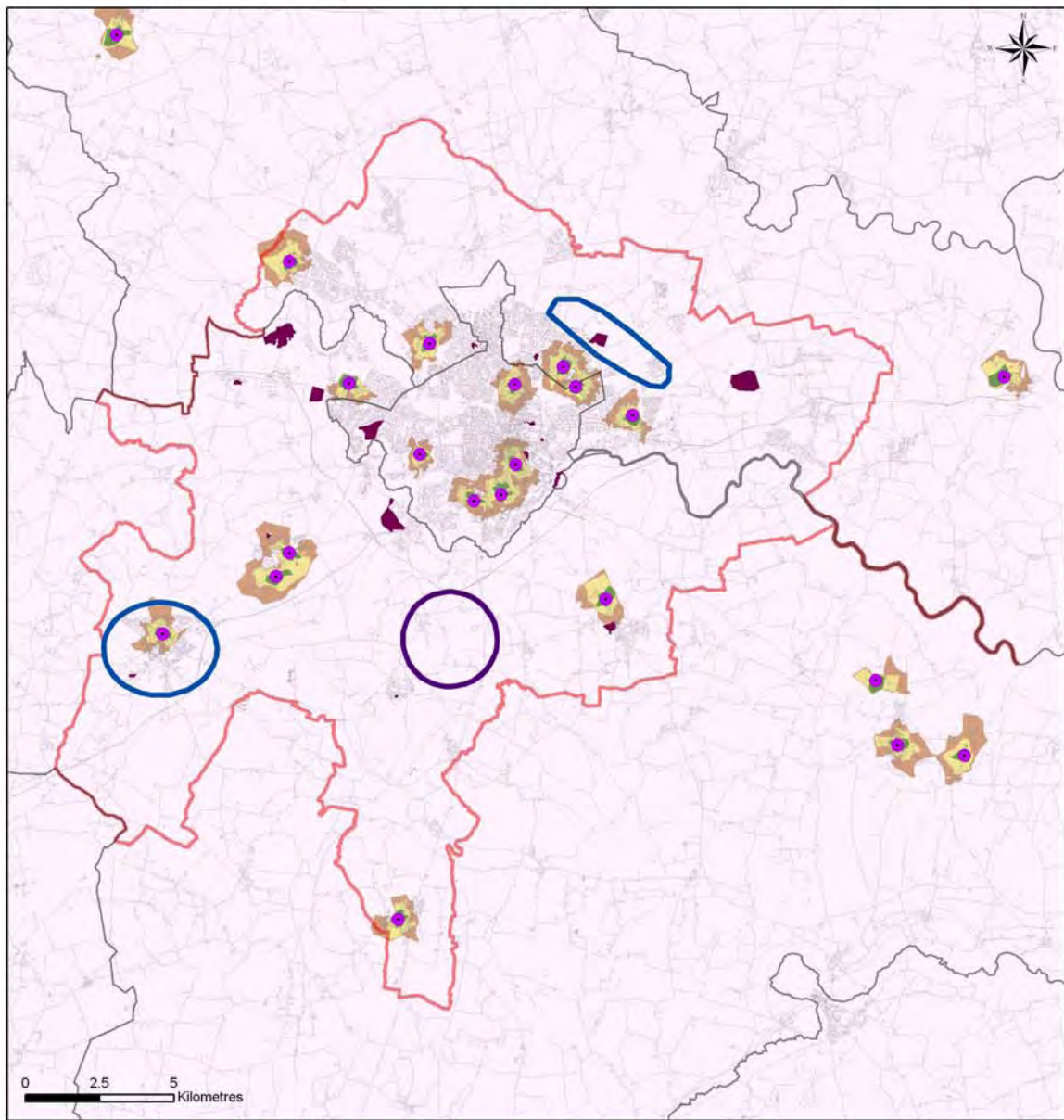


Data Source: Norfolk CC/EDAW ♦ Last Updated: June 2007
 Map Source: ©OS Crown copyright. All rights reserved (100019340) 2007

Map B.2: Primary Schools

Secondary Schools Supply, Demand & Accessibility

Norwich Infrastructure Needs & Funding



- | | | |
|---------------------|---|---|
| ● Secondary Schools | Potential Growth Areas | Walking Time to Secondary School |
| | ■ Extension to a Market Town, Urban Extension | ■ Up to 5 Minutes |
| | ■ New Village | ■ 5 - 10 Minutes |
| | ■ Housing Commitments | ■ 10 - 15 Minutes |
| | □ Districts Authorities | □ 15 + Minutes |
| | ■ Study Area Boundary | |



Data Source: Norfolk CC/EDAW

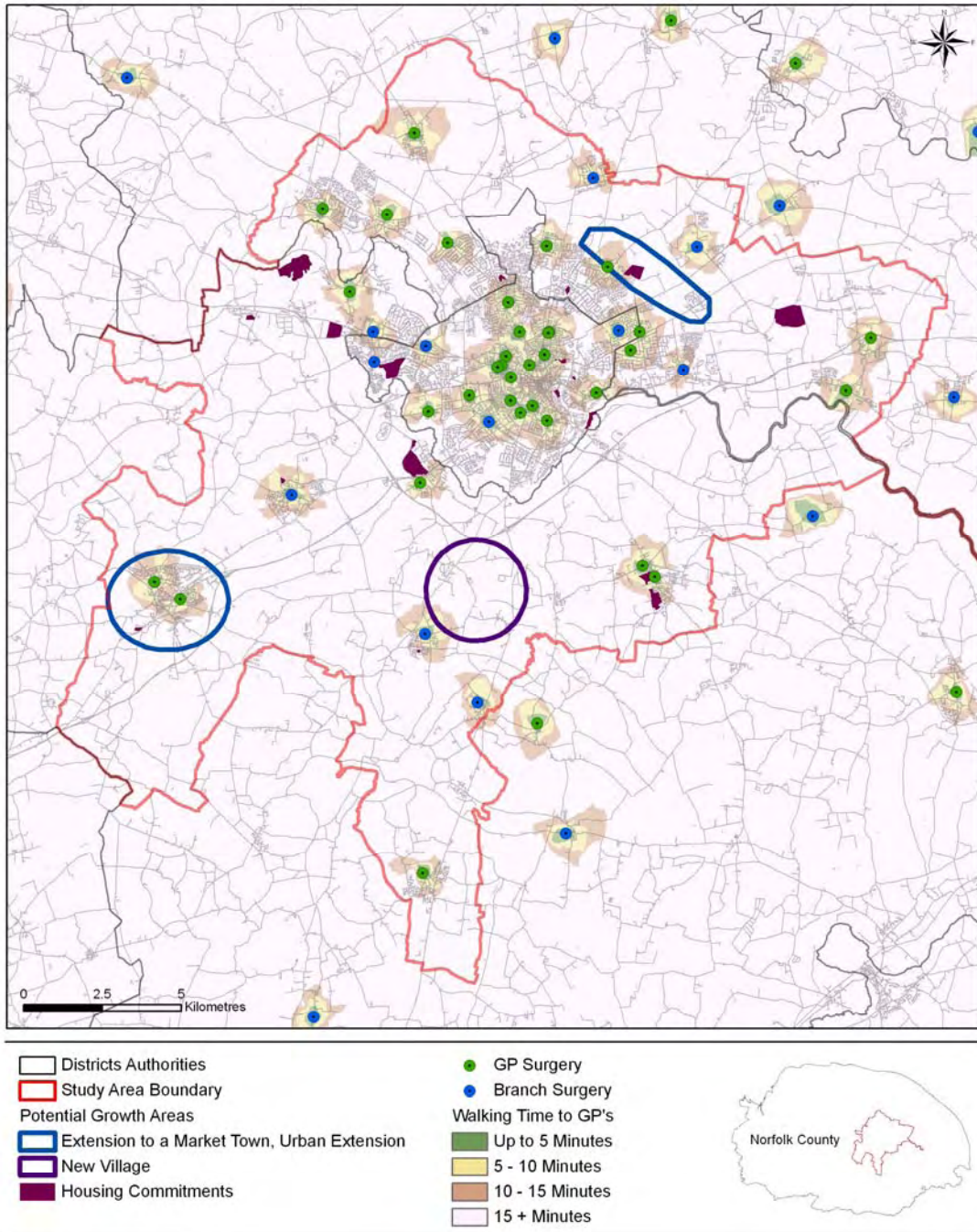
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Map B.3: Secondary Schools

GP Access

Norwich Infrastructure Needs & Funding



Data Source: Norfolk CC/EDAW

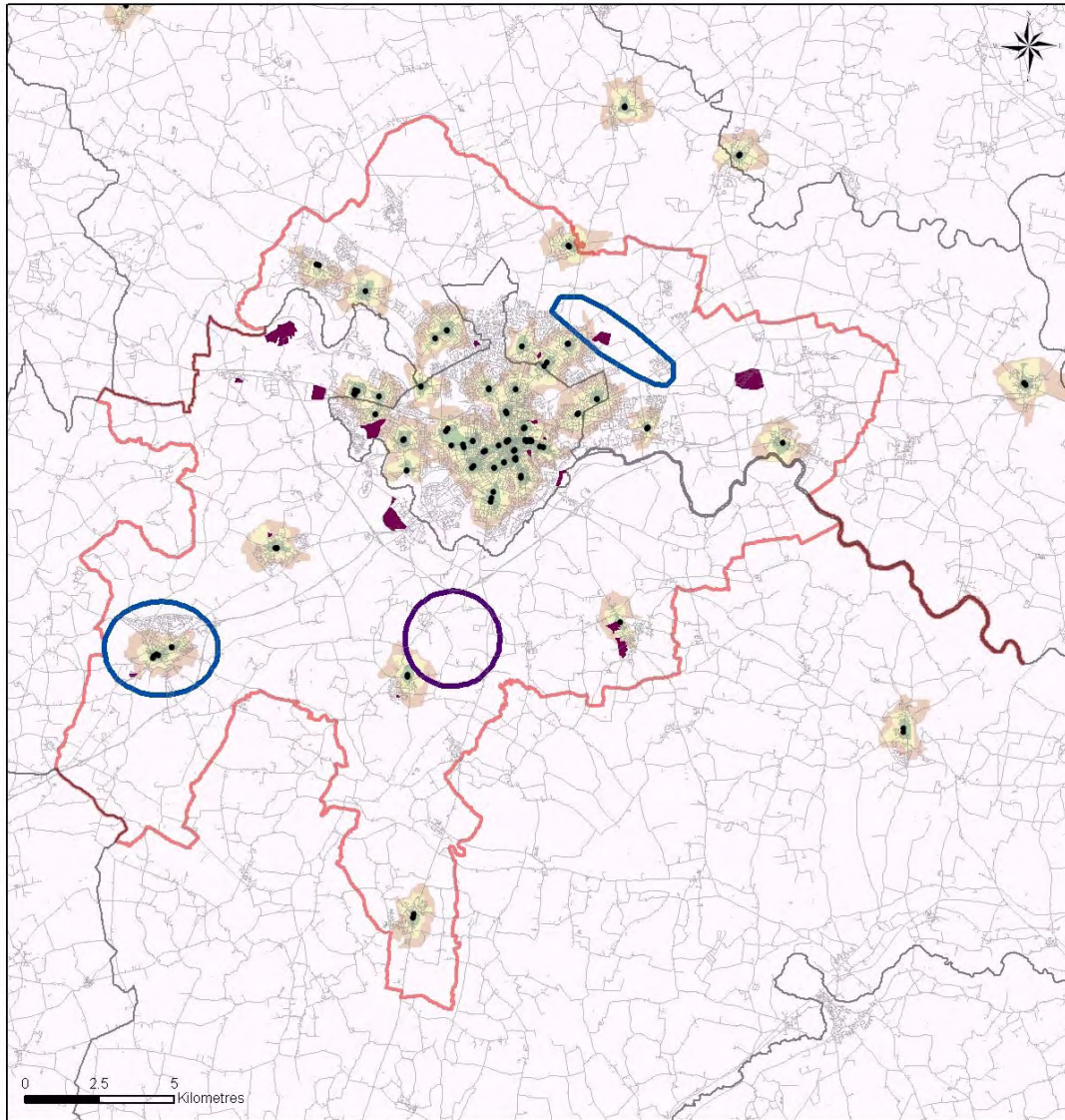
• Last Updated: June 2007

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Map B.4: GP Surgeries and Branch GP Surgeries

Dentist Access

Norwich Infrastructure Needs & Funding



- Study Area Boundary
- Districts Authorities
- Potential Growth Areas**
- Extension to a Market Town, Urban Extension
- New Village
- Housing Commitments
- Dentists
- Walking Time To Dentist**
- Up to 5 Minutes
- 5 - 10 Minutes
- 10 - 15 Minutes
- 15 + Minutes

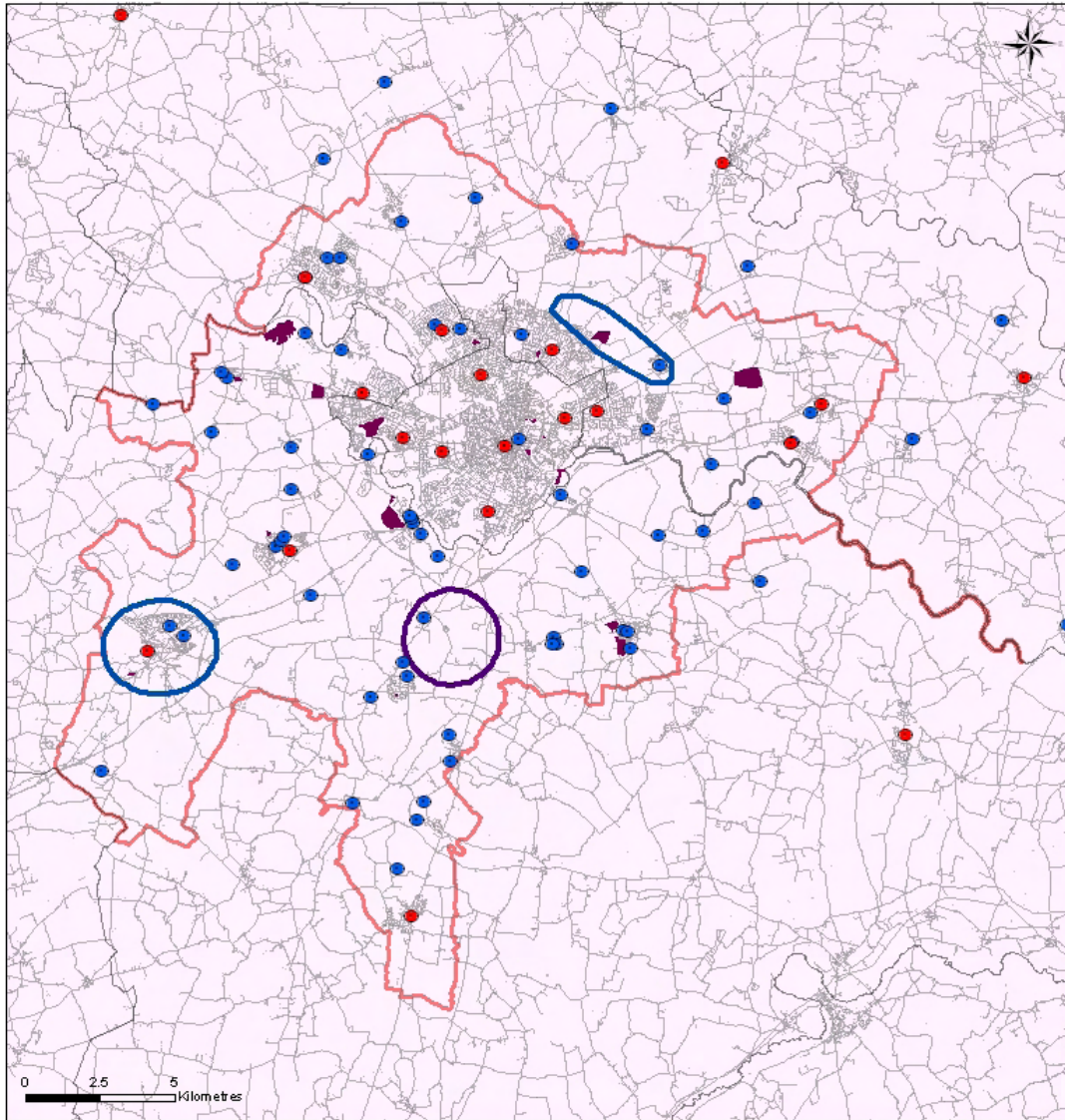


Data Source: Norfolk PCT/EDAW ● Last Updated: June 2007
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Map B.5: Dentist Surgeries

Community Facilities

Norwich Infrastructure Needs & Funding



- Libraries
- Community Centres

- Potential Growth Areas
- ▭ Extension to a Market Town, Urban Extension
 - ▭ New Village
 - ▭ Housing Commitments
 - ▭ Districts Authorities
 - ▭ Study Area Boundary



Data Source: Norfolk CC/EDAW

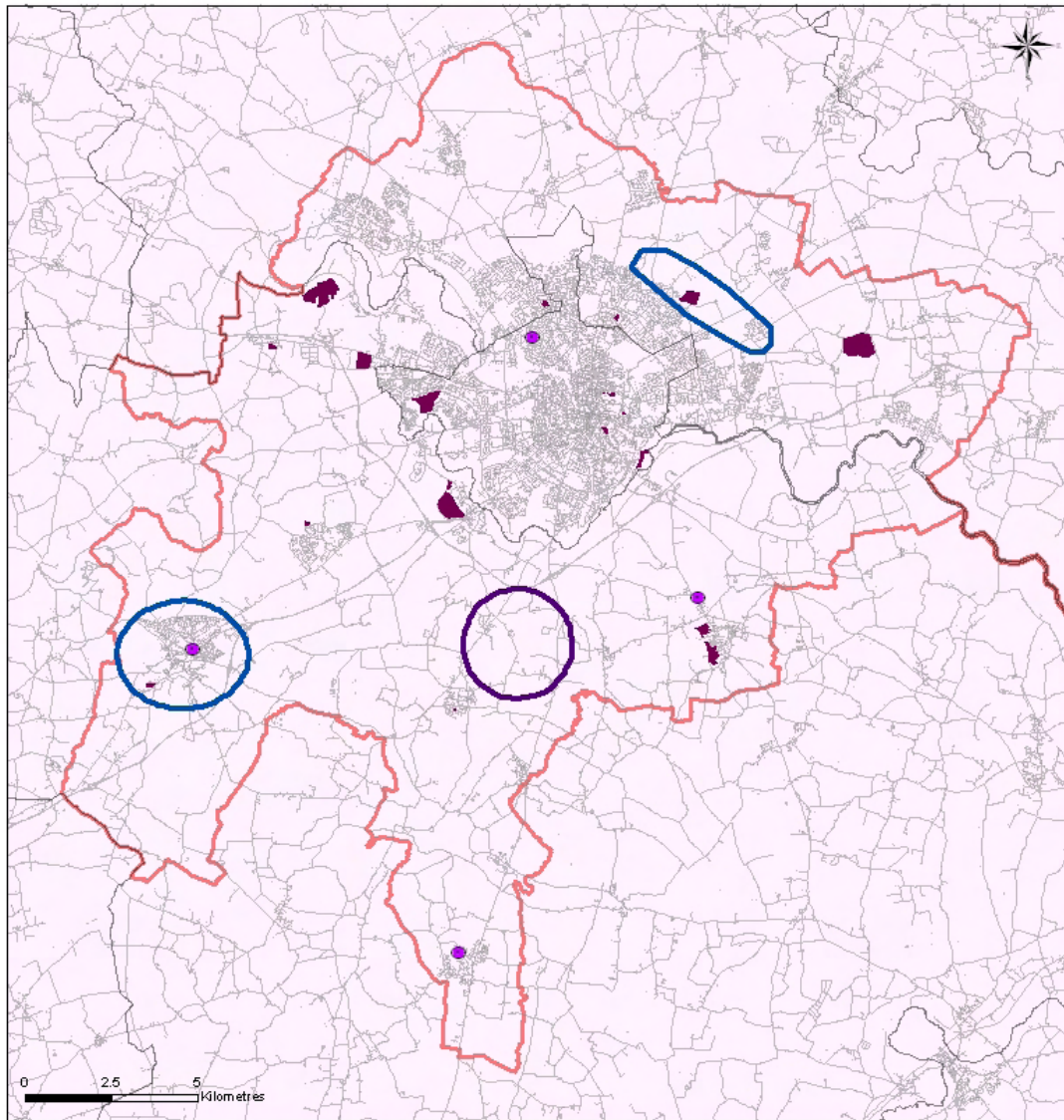
Last Updated: June 2007

Map Source: Census 2001 Output Areas/Ordnance Survey Boundary Line

Map B.6: Community Facilities

Leisure Centres

Norwich Infrastructure Needs & Funding



- Leisure Centres
- Potential Growth Areas**
 - Extension to a Market Town, Urban Extension
 - New Village
 - Housing Commitments
 - Districts Authorities
 - Study Area Boundary

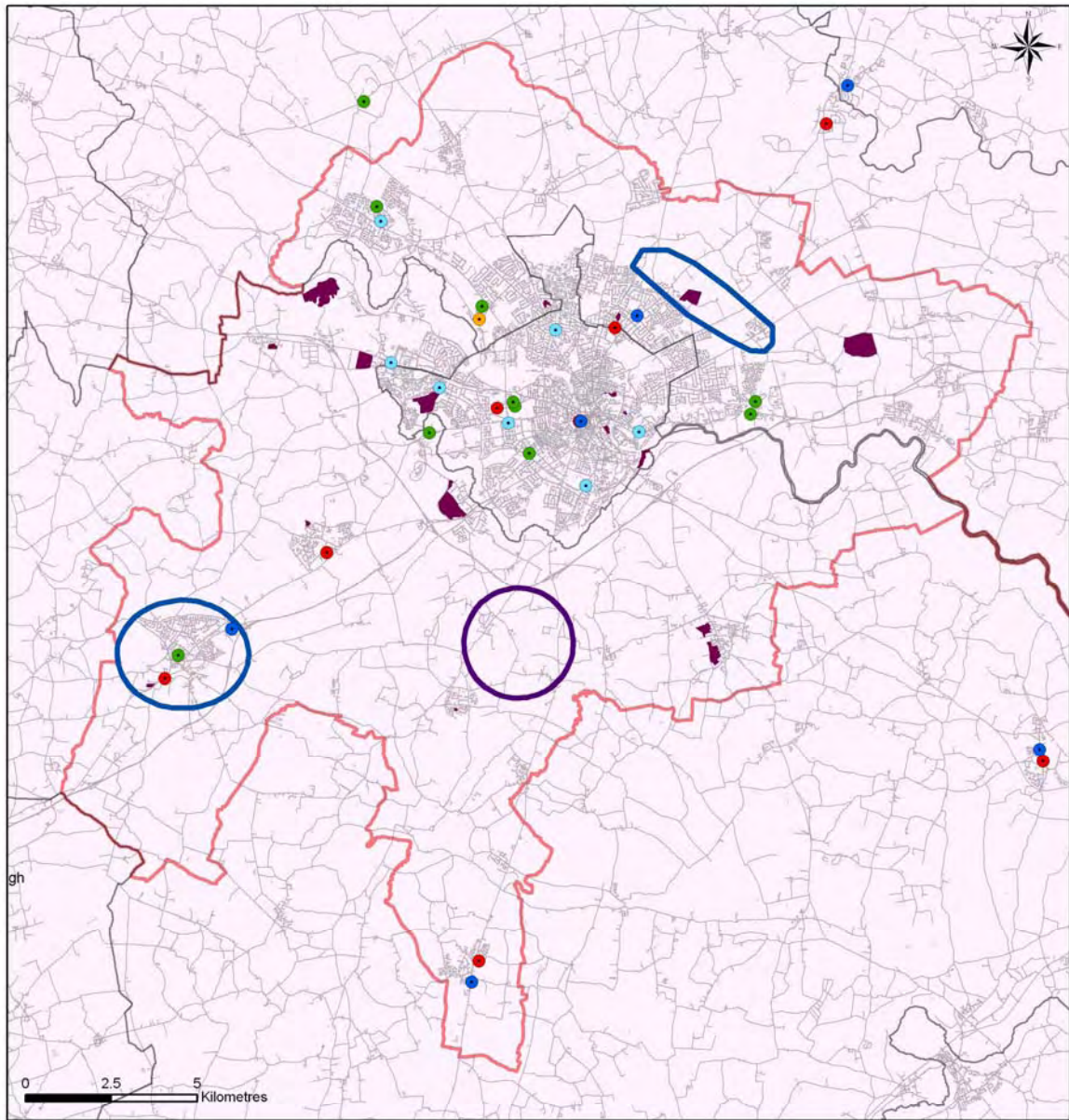


Data Source: Norfolk CC/EDAW ♦ Last Updated: June 2007
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Map B.7: Leisure and Recreation Facilities

Emergency & Essential Services

Norwich Infrastructure Needs & Funding



- | | |
|---|----------------------------|
| Districts Authorities | Police Station |
| Study Area Boundary | Neighbourhood Police Units |
| Potential Growth Areas | |
| Extension to a Market Town, Urban Extension | Hospitals |
| New Village | Fire Stations |
| Housing Commitments | Ambulance Station |



Data Source: Norfolk CC/EDAW

Last Updated: June 2007

Map Source: Census 2001 Output Areas/Ordnance Survey Boundary Line

Map B.8: Essential and Emergency Services

Appendix - C

TABLES OF EXISTING SOCIAL INFRASTRUCTURE

EDUCATION

Early Years Education Facilities – Broadland

Childcare Facilities	Address	Registered Places	Vacancies
Acorn Playgroup	Thorpe St Andrew, Longfields, NR7 0NB	15	4
Arden Grove Pre-School	Arden Grove, NR6 6QA	20	0
Blofield Day Nursery	Hobsons Fox Lane, NR13 4LW	26	8
Blofield Pre-school Playgroup	Yarmouth Road, NR13 4JU	26	0
Busy Beavers Playgroup	Church Hall, 12 Blacksmiths Way, NR6 7DT	26	0
Busy Bees Playgroup, Wymondham	10 Browick Road, Wymondham, NR18 0QW	26	0
Drayton Village Pre-School	Pond Lane, NR8 6PP	26	3
Fairview Kindergarten And Nursery School	31 Corner Lane, NR10 3DG	57	10
Hellesdon Community Pre-School	Kinsale Avenue, NR6 5SG	24	4
Hemblington Pre-school	Woodbastwick Road, NR13 4QH	26	0
Hillbillies Playhouse	Nursery Bungalow Fir Covert Road, NR8 6HT	40	0
Horsford Pre-school Playgroup	Village Hall Holt Road, NR10 3AQ	34	2
Just Learning Nursery	Northside, St Andrews Business Park, NR7 0HT	72	12
Just Learning Nursery - Meridian Way	5 Meridian Way, NR7 0TA	112	45
Leapfrog Nursery	Taverham Village Hall Sandy Lane, NR8 6JS	26	0
Little Nightingales	Nightingale Drive, Taverham, NR8 6LA	54	0
Little Plumstead Pre-School Group	Village Hall Crowes Loke, NR13 5JB	24	0
Once Upon A Time Nursery School	Falcon Road West, NR7 8NZ	24	0
Rackheath Bombers Playgroup	Rackheath Village Hall Green Lane West, NR13 6LT	26	9
Raschools Brundall Playgroup	Brundall Memorial Hall Links Avenue, NR13 5LL	17	5
School Lane Pre-School	Sprowston Youth Centre School Lane, NR7 8TR	26	2
Spixworth Pre-School Group	Spixworth Village Hall Crostwick Lane, NR10 3NQ	34	0
Spooner Row Acorns	Spooner Row, Wymondham, NR18 9JR	11	0
Sprowston Nursery Playgroup	Wroxham Road, NR7 8AD	35	18
Sprowston Pavillion Pre-School Playgroup	Recreation Ground Road, NR7 8EW	26	11
St Faiths Pre-School	Church Street, Horsham St Faith, NR10 3JJ	12	0
St Laurence Nursery Group	Brundall Church Rooms Church Lane, NR13 5JZ	24	11
The Heathers Nursery	Heather's Nursery Bracken Avenue, NR6 6LS	22	2
Thorpe End Teddies Playgroup	St Davids Church Hall St Davids Drive, NR13 5HR	26	0
Thorpe Pavilion Nursery	Fitzmaurice Pavilion Pound Lane, NR7 0SR	26	2

Table C.1: Early Years Education Facilities – Broadland, 2007

Early Years Education Facilities – Norwich

Childcare Facilities	Address	Registered Places	Vacancies
Catton Grove First School & Nursery School	Hunter Road, NR3 3PZ	24	0
Catton Grove Playgroup	Community Centre, Jewson Road, NR3 3RD	25	7
Chapel Break Pre-School	Village Hall Humbleyard, NR5 9BN	47	0
Chapelfield Childrens Day Nursery Ltd	Chapel Field East, NR2 1SF	38	0
City College Nursery	Ipswich Road, NR2 2LJ	55	0
Clover Hill Preschool	Village Hall, Humbleyard, NR5 9BN	46	20
Earlham Early Years Centre	Cadge Road, NR5 8DB	27	0
Family Life Centre Pre-School	Heartsease Lane, NR7 9NT	26	20
Fledglings - Nhs Nursery	Bowthorpe Road, NR2 3TU	60	1
Footsteps Day Nursery N.N.I	20 Humbleyard, NR5 9BN	42	15
Greenfields Playgroup	Community Centre Ives Road, NR6 6DY	0	0
Hamlet Centre Playgroup	Hamlet Centre Ella Road, NR1 4BP	12	2
Heartsease First School Playgroup	Rider Haggard Road, NR7 9UE	26	12
Holy Trinity Playgroup	Church Hall, Cambridge Street, NR2 2BB	26	0
Jessopp Road Playgroup	United Reformed Church Jessopp Road, NR2 3QA	26	0
Jigsaw Nursery School	15a Constitution Hill, NR3 4HA	50	17
Just Learning Nursery Ltd - Airport	Norwich Airport Delft Way, NR6 6BB	112	10
Kidease Day Nursery	41 Harriet Court, NR1 2DG	61	15
Lakenham Preschool (jubilee Jellies)	Jubilee Community Centre Long John Hill, NR1 2EX	48	0
Leeway Womens Aid	City Hall, St Peters Street, NR2 1NH	8	0
Little Peoples Montessori Nursery	St Pauls Mission Hall Magdalen Road, NR3 4LN	30	0
Little Sparks Playgroup	Hellesdon Road, NR6 5EG	26	0
Magdalen Gates Pre-School	Bull Close Road, NR3 1NG	24	0
Milestones Day Nursery	Norman Community Centre Bignold Road, NR3 2QZ	50	6
Nelson Pre-school	Nelson First School Nelson Street, NR2 4DR	40	0
Nightingales Day Nursery	382 Bowthorpe Road, NR5 8AG	32	9
Patchwork Childcare	St Mary Magdalene Church Silver Road, NR3 4TF	26	1
Pavilion Playschool	Waterloo Park Entrance Angel Road, NR3 3HR	26	0
St Giles Nursery School	38a St Giles Street, NR2 1LL	59	9
St Peters Pre-School	St Peters Methodist Church Park Lane, NR2 3EQ	26	1
Starting Out Day Nursery	Sure Start Centre 63 Wolfe Road, NR1 4HT	29	0
The Beehive Childcare Group	Eaton Parish Hall Colman Road, NR4 7AW	26	8
The Hewett School, Norwich	Hewett School, Cecil Road, NR1 2PL	32	5
Treehouse Children's Centre	30 Chatham Street, NR3 3DN	34	0
Tuckswood Pre-school	Tuckswood First School Allanadale Road, NR4 6BP	26	0
University Of East Anglia Day Nursery	University Of East Anglia Earlham Road, NR4 7TJ	106	20
West Earlham Playgroup	Community Centre Wilberforce Road, NR5 8ND	26	2
Woodside Nursery Community School	Witard Road, NR7 9XD	44	12

Table C.2: Early Years Education Facilities - Norwich, 2007

Early Years Education Facilities – South Norfolk

Childcare Facilities	Address	Registered Places	Vacancies
Abbey Kindergarten Pre-School	Kett's Park Centre The Loke, NR18 0UR	26	0
Bouncing Beans	197 Norwich Road, NR18 0SJ	27	0
Busy Bees	Busy Bees Nursery Colney Lane, NR4 7UX	102	2
Cleverclogs Nursery	30 Oakfields Road, NR4 6XF	38	4
Cringleford Crackerjacks	St Peters Church Hall Newmarket Road, NR4 6UE	30	0
Hethersett Pre-School Playgroup	Great Melton Road, NR9 3AB	25	10
Ladybird Playgroup - Wymondham	Community Centre Lime Tree Avenue, NR18 0EL	26	0
Long Stratton Pre-School	The Village Hall Ipswich Road, NR15 2TB	25	0
Mulbarton Children's Centre	Mulbarton Village Hall The Common, NR14 8AE	26	4
Newton Flotman Pre-school	Grove Close, NR15 1QF	26	7
Orchard Nursery School	Ketteringham Hall Church Road, NR18 9RS	40	7
Poringland Playgroup	The Village Hall The Street, NR14 7LD	21	7
Puddleducks Playgroup	The Scout Headquarters The Common, NR14 8JS	20	3
Rockinghorse Day Nursery	6-8 Great Melton Road, Hethersett, NR9 3AB	45	3
St Helens Pre-school	St Helens Church Hall Gurney Road, NR5 0HH	26	16
Stepping Stones Pre-School	Catholic Church Hall Norwich Road, NR18 0SH	26	8
Stoke Holy Cross Pre-School	The Pavilion Long Lane, NR14 8LY	18	0
Sunbeams Pre-school	Bramerton Village Hall East Hill Lane, NR14 7EQ	18	7
Sunshine Family Centre	441 Dereham Road, New Costessey, NR5 0SG	44	2
Tas Valley Pre-School And Playgroup	Tasburgh Village Hall Grove Lane, NR15 1LR	26	5

Table C.3: Early Years Education Facilities – South Norfolk, 2007

Primary Schools – Broadland

Primary Schools	Address	Planned Capacity	Spare Capacity
Arden Grove First & Nursery School	Arden Grove Hellesdon, Norwich, NR6 6QA	165	20
Blofield Primary	North Street, Blofield, Norwich, NR13 4RH	205	-5
Brundall Primary	Braydeston Avenue, Brundall, Norwich, NR13 5JX	385	63
Cecil Gowing First School	Falcon Road West, Sprowston, Norwich. NR7 8NZ	180	21
Drayton CE VC Middle	School Road, Drayton, Norwich, NR8 6EF	360	44
Drayton Community First School	School Road, Drayton, Norwich, NR8 6EP	270	56
Falcon Middle	Falcon Road West, Sprowston, Norwich, NR7 8NT	360	17
Firside Middle	Middleton's Lane, Hellesdon, Norwich, NR6 5NF	320	32
Garrick Green First School, Norwich	Garrick Green, Old Catton, Norwich, NR6 7AL	150	33
Heather Avenue First School	Heather Avenue, Hellesdon, Norwich, NR6 6LT	120	32
Hemblington Primary	Mill Road, Blofield Heath, Norwich	124	6
Hillside Avenue Primary	Hillside Avenue, Thorpe St. Andrew, Norwich, NR7 0QW	420	-83
Horsford All Saints CoE Middle	Mill Lane, Horsford, Norwich	300	42
Horsford CoE First School	Holt Road, Norwich, NR10 3DN	225	72
Horsham St. Faith First School	25 Manor Road, Horsham St. Faith, Norwich, NR10 3LF	119	37
Kinsale First School	Kinsale Avenue, Hellesdon, Norwich, NR6 5SG	150	33
Kinsale Middle	Kinsale Avenue, Hellesdon, Norwich, NR6 5SG	200	-20
Little Plumstead CoE Primary	Witton Lane, Little Plumstead	171	7
Lodge Lane First School	Lodge Lane, Norwich, NR6 7HL	225	27
Nightingale First School, Taverham	Nightingale Drive, Taverham, Norwich, NR8 6LA	180	16
Old Catton CoE Middle	Church Street, Old Catton, Norwich, NR6 7DS	200	53
Rackheath Primary	Willoughby Way, Rackheath	136	-4
Sparhawk First School & Nursery	Sparhawk Avenue, Sprowston, Norwich, NR7 8BU	90	23
Spixworth First School	Ivy Road, Spixworth, Norwich, NR10 3PX	150	30
Sprowston Middle	Recreation Ground Road, Sprowston, Norwich, NR7 8EW	240	-5
St Williams Primary	Williams Loke, St. Williams's Way, Thorpe St. Andrew, Norwich, NR7 0AJ	420	-141
Taverham Middle	Taverham Road, Taverham, Norwich, NR8 6SX	480	-24
Taverham, Ghost Hill First and Nursery	Eastfield, Taverham, Norwich, NR8 6PJ	180	16
White Woman Lane Middle	White Woman Lane, Sprowston, Norwich, NR6 7JA	300	26
Woodland View Middle	Ivy Road, Spixworth, Norwich, NR10 3PY	180	-39

Table C.4: Primary Schools - Broadland, 2007

Primary Schools – Norwich

Primary Schools	Address	Planned Capacity	Spare Capacity
Angel Road Middle	Angel Road, Norwich, NR3 3HS	360	38
Avenue Middle	Avenue Road, Norwich, NR2 3HP	420	32
Bignold Primary	Wessex Street, Norwich, NR2 2SP	420	69
Bluebell Primary School	Lovelace Road, Norwich, NR4 7DS	210	59
Catton Grove Primary	Weston Road, Norwich, NR3 3TP	525	142
Cavell First & Nursery School	Duckett Cl, Norwich, NR1 2LR	210	38
Chapel Break First School	Thurlby Road, Chapel Break, Norwich, NR5 9LU	180	30
Clover Hill First School & Nursery	Rawley Road, Bowthorpe, Norwich, NR5 9AP	180	84
Colman First School	Colman Rd, Norwich, NR4 7AW	180	49
Colman Middle	South Park Avenue, Norwich, NR4 7AU	250	20
George White Middle	Silver Road, Norwich, NR3 4RG	360	148
Heartsease Primary	Rider Haggard Road, Norwich, NR7 9UE	420	38
Lakenham Primary	Hospital Lane, Norwich, NR1 2HW	420	164
Larkman Primary	Clarkson Road, Norwich, NR5 8ED	420	130
Lionwood Infant And Nursery School	Telegraph Lane East, Norwich, NR1 9UE	270	103
Magdalen Gates First School	Bull Close Rd, Norwich, NR3 1NG	210	-42
Mousehold First School & Nursery	Mousehold Avenue, Norwich, NR3 4RS	270	109
Nelson First School	Northumberland Street, Norwich, NR2 4DR	180	48
Norman Primary School	Brasier Road, Norwich, NR3 2QU	420	51
Ranworth First School	Irstead Road, Norwich, NR5 8DZ	182	109
Recreation Road Infant School	Recreation Road, Norwich, NR2 3PA	315	-16
St Michaels VA Middle	Astley Road, Chapel Break, Bowthorpe, Norwich, NR5 9LA	360	70
St. Thomas More RC Middle School	Jessopp Rd, Norwich, NR2 3QB	360	12
Thorpe Hamlet Middle	Wolfe Road, Norwich, NR1 4HT	360	182
Tuckswood Primary School	Allandale Rd, Norwich, NR4 6BP	315	112
Valley Primary School	Knowland Grove, Norwich, NR5 8YD	315	72
Wensum Middle	Turner Road, Norwich, NR2 4HB	240	99
West Earlham Community First School	Scarnell Rd, Norwich, NR5 8HT	180	18
West Earlham Middle	Scarnell Road, Norwich, NR5 8HT	240	35

Table C.5: Primary Schools - Norwich, 2007

Primary Schools – South Norfolk

Primary Schools	Address	Planned Capacity	Spare Capacity
Costessey Infant School	Beaumont Road, Costessey, Norwich, NR5 0HG	210	56
Costessey Junior	Three Mile Lane, Costessey, Norwich, NR5 0RR	373	75
Cringleford VA CoE First & Middle	Cantley Lane, Cringleford, Norwich, NR4 6UG	210	6
Hapton CoE VC Primary	The Street, Hapton, Norwich, NR15 1AD	49	23
Hethersett VC Middle	22 Queen's Road, Hethersett, Norwich, NR9 3DB	300	44
Hethersett Woodside First & Nursery School	Firs Rd, Hethersett, Norwich, NR9 3EQ	180	26
Little Melton First	School Lane, Little Melton, Norwich, NR9 3AD	88	21
Mulbarton Community First School	The Common, Mulbarton, Norwich, NR14 8JG	180	54
Mulbarton Middle	The Common, Mulbarton, Norwich, NR14 8JG	220	50
Newton Flotman CoE VC Primary	School Road, Newton Flotman, Norwich, NR15 1PR	105	-13
Poringland Primary School	The Footpath, Poringland, Norwich, NR14 7RF	324	53
Preston CoE Primary	Henry Preston Road, Tasburgh, NR15 1NU	119	11
Robert Kett Junior	Hewitts Lane, Wymondham, NR18 0LS	540	-31
Spooner Row Primary	Spooner Row, Wymondham, NR18 9JR	91	12
St Augustine's Catholic Primary	West End, Old Costessey, Norwich, NR8 5AG	210	4
St Mary's VC Middle	Swan Lane, Long Stratton, NR15 2UY	332	86
St Peter's CoE VC Primary	Marlingford Road, Easton, Norwich, NR9 5AD	105	13
Stoke Holy Cross Primary	Long Lane, Stoke Holy Cross, NR14 8LY	189	-11
Surlingham Community Primary	Walnut Hill, Surlingham, NR14 7DQ	91	4
The Bawburgh	Hockering Lane, Bawburgh, Norwich, NR9 3LR	105	9
Trowse Primary	Dell Loke, Trowse, Norwich, NR14 8TH	105	6

Table C.6: Primary Schools – South Norfolk, 2007

Secondary Schools – Broadland

Secondary Schools	Address	Total no. of pupils on roll	Spare Capacity
Hellesdon High	187 Middletons Lane, Hellesdon, Norwich, NR6 5SB	1,154	0
Sprowston Community High	Cannerby Lane, Sprowston, Norwich, NR7 8NE	1,454	0
Taverham High	Beech Avenue, Taverham, Norwich, NR8 6HP	868	0
Thorpe St Andrew	Laundry Lane, Thorpe St. Andrew, Norwich, NR7 0XS	1,711	0

Table C.7: Secondary Schools– Broadland, 2007

Secondary Schools – Norwich

Secondary Schools	Address	Total no. of pupils on roll	Spare Capacity
City of Norwich School	Eaton Road, Norwich, NR4 6PP	1,356	0
Earlham High School	Earlham Road, Norwich, NR4 7NU	854	0
Heartsease High	Marryat Road, Norwich, NR7 9DF	393	0
Notre Dame High	Surrey Street, Norwich, NR1 3PB	1,276	0
The Blyth-Jex School	St. Clement's Hill, Norwich, NR3 4BX	871	0
The Hewett School	Cecil Road, Norwich, NR1 2PL	1,160	0

Table C.8: Secondary Schools– Norwich, 2007

Secondary Schools – South Norfolk

Secondary Schools	Address	Total no. of pupils on roll	Spare Capacity
Costessey High	Middleton Crescent, Norwich, NR5 0PX	1,000	0
Framingham Earl High	Norwich Road, Framingham Earl, Norwich, NR14 7QP	751	0
Hethersett High	Queen's Road, Hethersett, Norwich, NR9 3DB	631	0
Long Stratton High	Manor Road, Long Stratton, Norwich, NR15 2XR	603	0
Wymondham College	Golf Links Road, Wymondham, NR18 9SZ	1,026	0
Wymondham High	Folly Road, Wymondham, NR18 0QT	1,386	0

Table C.9: Secondary Schools– South Norfolk, 2007

- HEALTHCARE GP Surgeries

GP Surgeries	GPs	Address	District
Brundall Medical Centre	5	The Dales, Brundall, NR13 5RP	Broadland
Dr Miller & Partners	4	Plantation Road, Blofield, NR13 4PL	Broadland
Dr Rivett & Partners	7	20 Norwich Road, NR10 3LB	Broadland
Hellesdon Medical Practice	4	343 Reepham Road, NR6 5QJ	Broadland
Horsford Medical Centre	3	205 Holt Road, Horsford, NR10 3DX	Broadland
Old Catton Surgery	5	55 Lodge Lane, NR6 7HQ	Broadland
The Taverham Partnership	8	Sandy Lane, Taverham, NR8 6JR	Broadland
Thorpe Health Centre	6	Williams Loke, St. Williams Way, NR7 0AJ	Broadland
Willow Wood Surgery	5	Aslake Close, NR7 8TT	Broadland

Table C.10: GP Surgeries – Broadland

GP Surgeries	GPs	Address	District
Bacon Road Medical Centre	3	16 Bacon Road, NR2 3QX	Norwich
Castle Partnership Tuckswold Surgery	13	Hall Road, Norwich, NR4 6NE	Norwich
Lawson Road Surgery	4	Lawson Road, NR3 4LE	Norwich
Newmarket Road Surgery	4	7 Newmarket Road, NR2 2HL	Norwich
Oak Street Medical Practice	6	Oak Street, NR3 3DL	Norwich
Old Palace Medical Practice	1	148 Old Palace Road, NR2 4JA	Norwich
Prospect Medical Practice	2	95 Aylsham Road, NR3 2HW	Norwich
St Stephen's Gate Medical Practice	10	1 Victoria Street, NR1 3QX	Norwich
The Gurney Surgery	13	Magdalen Street, NR3 1LN	Norwich
The Health Centre	2	West Pottergate, NR2 4BX	Norwich
The Health Centre - UEA	10	Earlham Road, NR4 7TJ	Norwich
The Lakenham Surgery	5	1 Ninham Street, NR1 3JJ	Norwich
The Magdalen Medical Practice	9	Lawson Road, NR3 4LF	Norwich
The Surgery	5	1 Trinity Street, NR2 2BG	Norwich
The Surgery	4	29 Woodcock Road, NR3 3UA	Norwich
Thorpewood Medical Group	8	Woodside Road, Thorpe St Andrew, NR7 9QL	Norwich
Yare Valley Medical Practice	7	202 Thorpe Road, NR1 1TJ	Norwich

Table C.11: GP Surgeries – Norwich

GP Surgeries	GPs	Address	District
Heathgate Surgery	5	The Street, Poringland, NR14 7JT	South Norfolk
Long Stratton Medical Partnership	5	Swan Lane, Long Stratton, NR15 2UY	South Norfolk
Old Mill Surgery	3	Stoke Road, Poringland, NR14 7JL	South Norfolk
The Humbleyard Practice	7	Cantley Lane, Cringleford, NR4 6TA	South Norfolk
The Medical Centre	4	Longwater Lane, Old Costessey, NR8 5AH	South Norfolk
Windmill Surgery	3	30 Melton Road, Wymondham, NR18 0DB	South Norfolk
Wymondham Medical Partnership	12	Postmill Close, Wymondham, NR18 0RF	South Norfolk

Table C.12: GP Surgeries – South Norfolk

Branch GP Surgeries

Branch GP Surgeries	Additional GPs	Address	District
Dr Hunter & Partners	0	Newman Road, Rackheath, NR13 6PN	Broadland
Dr Malpas & Partners	0	20 St Peters Way, Spixworth, NR10 3NS	Broadland
Drayton & St. Faith's Medical Practice	0	Manor Farm Close, Drayton, NR8 6EE	Broadland
Dr Thompson & Partners	0	Pound Lane, Thorpe St Andrew, NR7 0SR	Broadland
Sprowston Primary Care Centre	0	Aslake Close, NR7 8DG	Broadland
Bates Green Health Centre	0	8a Bates Green, NR5 8YT	Norwich
Dr Okoro & Partners	0	Rider Haggard Road, NR7 9UQ	Norwich
Mile End Road Surgery	0	29 Mile End Road, NR4 7QX	Norwich
The Health Centre	0	Adelaide Street, NR2 4JL	Norwich
The Trinity & Bowthorpe Medical Practice	0	Bowthorpe Health Centre, Wendene, NR5 9HA	Norwich
Dr Beeby & Partners	0	The Common, Mulbarton, NR14 8JG	South Norfolk
Dr Beeby & Partners	0	Great Melton Road, Hethersett, NR9 3AB	South Norfolk
Dr Gibson	0	St. Mary's Close, Newton Flotman, NR15 1AH	South Norfolk
Dr Lockett & Partners	0	Beechcroft, NR5 0RS	South Norfolk

Table C.13: Branch GP Surgeries

* Note - Branch GP Surgeries are subsidiaries of GP Surgeries. They share staff and therefore offer no additional GPs to the NPA

Hospitals

Hospitals	Address	District
Hellesdon Hospital	Drayton High Road, Norwich, NR6 5BE	Broadland
Meadowlands	214 Yarmouth Road, Norwich, NR7 0SN	Broadland
Norvic Clinic	Northside, St Andrews Business Park, Norwich, NR7 0HT	Broadland
Taverham	156 Kingswood Avenue, Taverham, Norwich, NR8 6UR	Broadland
Colman Hospital	Unthank Road, Norwich, NR2 2PJ	Norwich
Julian Hospital	Bowthorpe Road, Norwich, NR2 3TD	Norwich
Norwich Community Hospital	Bowthorpe Road, Norwich, NR2 3TU	Norwich
Ogden Court	Ogden Close, Wymondham, NR18 0PE	South Norfolk
Norfolk and Norwich University Hospital	Colney Lane, Colney, Norwich, NR4 7UY	South Norfolk

Table C.14: Hospitals

Dentists

Dentist Surgery Name	Dentists	Address	District
Friends Dental Practice	3	185 Wroxham Road, Norwich, Norfolk, NR7 8AG	Broadland
Hellesdon House	1	28 Hellesdon Mill Lane, Hellesdon, Norwich, NR6 5AY	Broadland
John G Plummer & Associates	17	Thorpe Dental Centre, Thorpe St Andrew, Norwich, NR7 0UD	Broadland
Miss B Wilmers & Associates	2	75 Spixworth Road, Old Catton, Norwich, Norfolk, NR6 7NQ	Broadland
P E Roos & Associates	1	183 Reepham Road, Norwich, Norfolk, NR6 5NZ	Broadland
P E Roos & Associates	3	4 Wroxham Road, Norwich, Norfolk, NR7 8TZ	Broadland
Spixworth Dental Practice	2	86 Crostwick Lane, Spixworth, Norwich, Norfolk, NR10 3AF	Broadland
Taverham Dental Health Centre	2	Fakenham Road, Taverham, Norwich, Norfolk, NR8 6QW	Broadland
All Saints Green Dental Practice	6	41 All Saints Green, Norwich, Norfolk, NR1 3LY	Norwich
Brunswick Dental Care	3	13 Brunswick Road, Norwich, Norfolk, NR2 2HA	Norwich
Corner House Dental Practice	5	31 Unthank Road, Norwich, Norfolk, NR2 2PB	Norwich
Cotman House Dental Surgery	1	7 St. Martin At Palace Plain, Norwich, NR3 1RN	Norwich
Dr J Miller	1	19 Cathedral Street, Norwich, Norfolk, NR1 1LU	Norwich
Golden Triangle Dental Practice	4	88 Earlham Road, Norwich, Norfolk, NR2 3HA	Norwich
Guildhall Dental Practice	4	9 Upper Goat Lane, Norwich, Norfolk, NR2 1EW	Norwich
Mr & Mrs Flint	2	23 Witard Road, Norwich, Norfolk, NR7 9XD	Norwich
Mr & Mrs Harris & Associates	2	50 Earlham West Centre, Norwich, NR5 8AD	Norwich
Mr G Gill	1	24 St Stephens Road, Norwich, Norfolk, NR1 3QU	Norwich
Mr J Q Peirson	1	148-150 Aylsham Road, Norwich, Norfolk, NR3 2HD	Norwich
Mr J Stokes	1	10-12 Cathedral Street, Norwich, Norfolk, NR1 1LX	Norwich
Mr L Khangura	1	49 Ipswich Road, Norwich, Norfolk, NR2 2LN	Norwich
Mr S Elphick & Associates	3	78a Hall Road, Norwich, Norfolk, NR1 3HP	Norwich
Mr S R Patel	1	177 Unthank Road, Norwich, Norfolk, NR2 2PQ	Norwich
Orford Hill Dental Surgery	1	8 Orford Hill, Norwich, Norfolk, NR1 3QD	Norwich
Palace Plain Orthodontic Practice	3	9 St. Martin At Palace Plain, Norwich, NR3 1RN	Norwich
Peacock & Fletcher Dental Practice	5	42 Prince Of Wales Road, Norwich, Norfolk, NR1 1LG	Norwich
Recreation Road Dental Practice	4	1 Recreation Road, Norwich, Norfolk, NR2 3PA	Norwich
Siskin Dental Centre	7	Bowthorpe Road, Norwich, Norfolk, NR2 3TU	Norwich
The Dental Department	2	UEA Health Centre, Norwich, Norfolk, NR4 7TJ	Norwich
The Heartsease Dental Surgery	3	199 Plumstead Road, Norwich, Norfolk, NR1 4AB	Norwich
Thorpe Road Dental Practice	13	60 Thorpe Road, Norwich, Norfolk, NR1 1RY	Norwich
Treetops Dental Practice	1	Suite 1 11 Pottergate, Norwich, NR2 1DS	Norwich
Beechcroft Dental Practice	1	Beechcroft, Norwich, Norfolk, NR5 0RS	South Norfolk
Dr M Edres	1	3 Queen Street, Wymondham, NR18 0AY	South Norfolk
Hethersett Dental Surgery	1	33a Great Melton Road, Hethersett, Norwich, NR9 3AB	South Norfolk
John G Plummer & Associates	9	5 Upper Stafford Avenue, Norwich, Norfolk, NR5 0AB	South Norfolk
John G Plummer & Associates	5	Postmill Close, Wymondham, NR18 0RF	South Norfolk
Market Place Dental Surgery	2	1 Bridewell Street, Wymondham, Norfolk, NR18 0AR	South Norfolk
Mr M Ter-Berg	3	The Street, Long Stratton, Norwich, Norfolk, NR15 2XJ	South Norfolk
Mr R Tilly	1	The Common, Mulbarton, Norwich, Norfolk, NR14 8AE	South Norfolk

Table C.15: Dentist Surgeries

- COMMUNITY FACILITIES

Community Centres

Community Centres	Address	District
Hellesdon Community Centre	Middletons Lane, NR6 5SR	Broadland
Dussindale Community Centre	Pound Lane, Thorpe St. Andrew, NR7 0SR	Broadland
Belvedere Community Centre	Belvoir Street, Norwich, NR2 3AZ	Norwich
Cadge Road Community Centre	Cadge Road, North Earlham, Norwich, NR5 8DG	Norwich
Catton Grove Community Centre	Jewson Road, NR3 3RQ	Norwich
Chapel Break Community Centre	Harpsfield, Chapel Break, Bowthorpe, Norwich NR5 9LG	Norwich
Clover Hill Community Centre	Humbleyard, Bowthorpe, Norwich NR5 9BN	Norwich
Eaton Park Neighbourhood Centre	South Park Avenue, Norwich NR4 7AZ	Norwich
Frere Road Community Centre	Frere Road, Heartsease, Norwich, NR7 9UT	Norwich
Greenfields Community Centre	Ives Road, Fiddlewood, Norwich, NR6 6DY	Norwich
Fourways Community Centre	Stevenson Road, NR5 8TN	Norwich
Gurney Centre (NELM Development Trust)	Irstead Road, NR5 8DZ	Norwich
Harford Community Centre	Peterkin Road, Tuckswood, Norwich NR4 6LQ	Norwich
Jubilee Community Centre	Jubilee Park, Long John Hill, NR1 2EX	Norwich
Marlpit Community Centre	Hellesdon Road, NR6 5EQ	Norwich
Norman Centre	Bignold Road, NR3 2QZ	Norwich
OPEN Youth venue	20 Bank Plain, NR2 4SF	Norwich
Pilling Park Community Centre	Pilling Park Road, NR1 4PA	Norwich
Russell Street Community Centre	Russell Street, Norwich NR2 4DZ	Norwich
West Earlham Community Centre	10 Wilberforce Road, NR5 8ND	Norwich
Wensum Community Centre	Hotblack Road, Norwich, NR2 4HG	Norwich
Ketts Park Community & Recreation Centre	Harts Farm Road Wymondham, NR18 0UR	South Norfolk
North Wymondham Community Centre	Lime Tree Avenue. Wymondham, NR18 0EL	South Norfolk

Table C.16: Community Centres

Libraries

Libraries	Address	District
Brundall Library	90 The Street, Brundall, NR13 5LH	Broadland
Blofield Library	The Reading Room, Blofield, NR13 4RQ	Broadland
Hellesdon Library	Woodview Road, Hellesdon, NR6 5SR	Broadland
Sprowston Library	Recreation Ground Road, Sprowston, NR7 8EW	Broadland
St Williams Way Library	Williams Loke, St Williams Way, NR7 0AJ	Broadland
Taverham Library	Sandy Lane, Taverham, NR8 6JR	Broadland
Earlham Library	Colman Road, Norwich, NR4 7HG	Norwich
Mile Cross Library	Aylsham Road, Norwich, NR3 2RJ	Norwich
Norfolk & Norwich Millenium Library	The Forum, Millenium Plain, Norwich, NR2 1AW	Norwich
Plumstead Road Library	Plumstead Road, Norwich, NR1 4JS	Norwich
Tuckswood Library	Robin Hood Road, Norwich, NR4 6BX	Norwich
West Earlham Library	17/18 Earlham West Centre, Norwich, NR5 8AD	Norwich
Costessey Library	Breckland Road, Costessey, NR5 0RW	South Norfolk
Hethersett Library	Queens Road, Hethersett, NR9 3DB	South Norfolk
Long Stratton Library	The Street, Long Stratton, NR15 2XJ	South Norfolk
Wymondham Library	2 Church Street, Wymondham, NR18 0PH	South Norfolk

Table C.17: Libraries

* Note – The Norwich Policy Area also has 6 Mobile Library Units that operate in the area

- LEISURE AND RECREATION FACILITIES

Leisure Centres

Leisure Centres	Address	District
Riverside Swimming Centre	Wherry Road, NR1 1WX	Norwich
The Norman Centre	Bignold Road, NR3 2QZ	Norwich
Framingham Earl Community Sports Centre	Framingham Earl High School, NR14 7QP	South Norfolk
Long Stratton Leisure Centre	Swan Lane, Long Stratton, NR15 2UY	South Norfolk
Wymondham Leisure Centre	Norwich Road, Wymondham, NR18 0NT	South Norfolk

Table C.18: Leisure Centres

- OPEN SPACE

Open Space – Broadland

Site Type	Area (ha)	Number of Sites
Allotments	7.48	6
Amenity greenspace	12.27	9
Bowling green	0.50	4
Children's play area	1.77	15
Common	34.25	3
Pitches/playing field	39.36	9
Recreation ground	86.19	32
Total Open Space	181.82	78

Table C.19: Open Space – Broadland

Open Space – Norwich

Site Type	Area (ha)	Number of Sites
Open Space	226.93	220
Allotments	43.19	18
Parks	125.04	21
Play areas	11.44	81
Teenage Recreation Areas	3.01	29
Total Open Space	409.61	369

Table C.20: Open Space – Norwich

Open Space – South Norfolk

Site Type	Area (ha)	Number of Sites
Allotments	5.75	10
Amenity greenspace	31.63	49
Bowling green	0.63	7
Children's play area	4.83	20
Common	60.9	9
Pitches/playing field	59.9	20
Recreation ground	46.67	16
Total Open Space	210.31	131

Table C.21: Open Space – South Norfolk

- ESSENTIAL AND EMERGENCY FACILITIES Police Stations

Police Stations	Address	District
Sprowston	107 Wroxham Road, Sprowston, NR7 8TU	Broadland
Norwich	Bethel Street, NR2 1NN	Norwich
Long Stratton	Ipswich Road, Long Stratton, NR15 2TB	South Norfolk
Operations and Communications Centre	Jubilee House, NR18 0WW	South Norfolk

Table C.22: Police Stations

Neighbourhood Police Units

Neighbourhood Police Units	Address	District
Taverham Beat Base	6 Windsor Chase, NR8 6LW	Broadland
Bowthorpe Beat base	Wendene, NR5 9AH	Norwich
Earlham Sectoin Box	Colman Road, NR4 7HQ	Norwich
Mile Cross Section Box	Woodcock Road, NR3 3TX	Norwich
Thorpe Hamlet Beat Base	63a Thrope Road, NR1 1UD	Norwich
Tuckswood Section Box	Hall Road, NR1 2SA	Norwich
Costessey Beat Base	Parish Rooms, Townhouse Road, NR5 0SJ	South Norfolk

Table C.23: Neighbourhood Police Units

Fire Stations

Fire Stations	Address	District
North Earlham	Ivy Road, North Earlham, NR5 8BQ	Norwich
Norwich	Bethel Street, Norwich, NR2 1NW	Norwich
Sprowston	Chartwell Road, Norwich, NR7 8TA	Norwich
Hethersett	Whitegates, Hethersett, NR9 3DN	South Norfolk
Long Stratton	Swan Lane, Long Stratton, NR15 2XH	South Norfolk
Wymondham	London Road, Wymondham, NR18 9AW	South Norfolk

Table C.24: Fire Stations

Ambulance Stations

Ambulance Stations	Address	District
Hellesdon Ambulance Station	Hospital Lane, Hellesdon, Norwich, Norfolk, NR6 5NA	Broadland

Table C.25: Ambulance Stations

APPENDIX - D

SOCIAL INFRASTRUCTURE DATA SOURCES AND VALIDATORS

Education			
		Age Range	% of age group
Proportion of age group requiring Nursery Provision	LLV Regeneration Strategy - SES - Social Infrastructure Paper	0-1 year olds	20%
		1-2 year olds	20%
		2-3 year olds	45%
		Age Range	Pupils per Form Entry
Primary and Secondary Form Entry Sizes	DfES	Primary Schools (4 to 10 years)	210
		Secondary Schools (11 to 15 years)	150
		Age Range	% of Pupils
Proportion of Pupils not educated by LEA	LTGSIF Research - backed up by NCC Children's Services profile	Primary Schools (4 to 10 years)	5%
		Secondary Schools (11 to 16 years)	5%
Health & Social Care			
Health Services	Source		People per GP
GP requirements	Department of Health, "General Medical Services Statistics, Primary Care Trusts", 2004		Broadland = 1,524 Norwich = 1,362 South Norfolk = 1,560
Dentist requirements	School for Health, University of Bath - May 2004		People per Dentist
			2,000
Acute Hospital bed Requirement	Thames Valley Strategic Health Authority		People per Bed
			480
Other Hospital bed Requirement (inc. Mental)	Thames Valley Strategic Health Authority		People per Bed
			1,430

Table D.1: Education Standards and Assumptions

Leisure & Recreation			
Source			Pool Lanes (size) 25m by 2.12m
Leisure facilities			
Swimming Pool	Sports England - Sports Facility Calculator		53.122
Sports Hall Courts			Units per 1000 persons
Sports England - Sports Facility Calculator		Courts	0.290
Indoor bowls rinks			Units per 1000 persons
Sports England - Sports Facility Calculator		Rinks	0.060
Community			
Source			sq.m per 1000 persons
Community Facilities			
Community Space	Milton Keynes SPG – Social Infrastructure Planning obligations		61.0
Library Space	DCMS		26.5
Open Space			
Source			sq.m per person
Open Space			
Recreational Open Space	NPFA Open Space Standards		12.00
	Playing pitches Informal open space		4.00
Children's Play Space			sq.m per person
NPFA Open Space Standards		Children's play space	7.50
Allotments			sq.m per person
NPFA Open Space Standards		Allotments	2.50
All Space required to maintain borough average			sq.m per person
LTGSIF Research = existing open space / existing population		All Open Spaces	24.0

Table D.2: Leisure & Recreation, Community and Open Space Standards and Assumptions

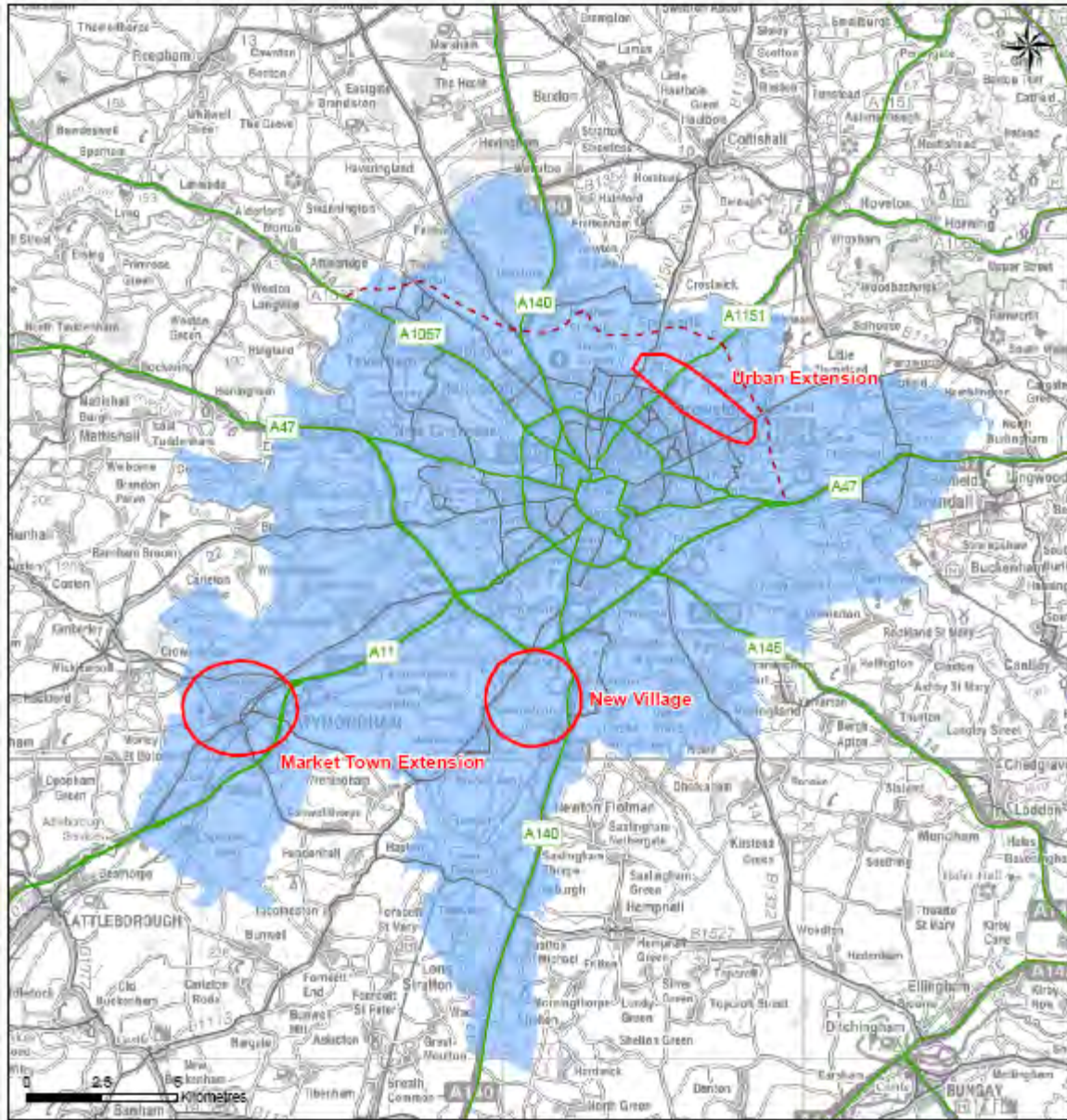
Essential and Emergency Services			
Police Service			people per officer
	Source		
Officers required to maintain average	Norfolk Police Service	- - -	697
Fire Service			Persons per Units
	Source		
Population per Fire Station	Costs to Social Infrastructure Works in the LTG - G&T - 2003		64,000
Ambulance Services			persons per additional call
	Source		
Increase in Ambulance requests	East Of England Ambulance Service NHS Trust	additional calls per annum	8

Table D.3: Essential and Emergency Services Standards and Assumptions

Appendix - E

TRANSPORT MAPPING

Figure 1: Strategic Highway Network



Legend

- Existing Strategic Roads
- - - Proposed Northern Distributor Road
- Potential Growth Areas
- Study Area



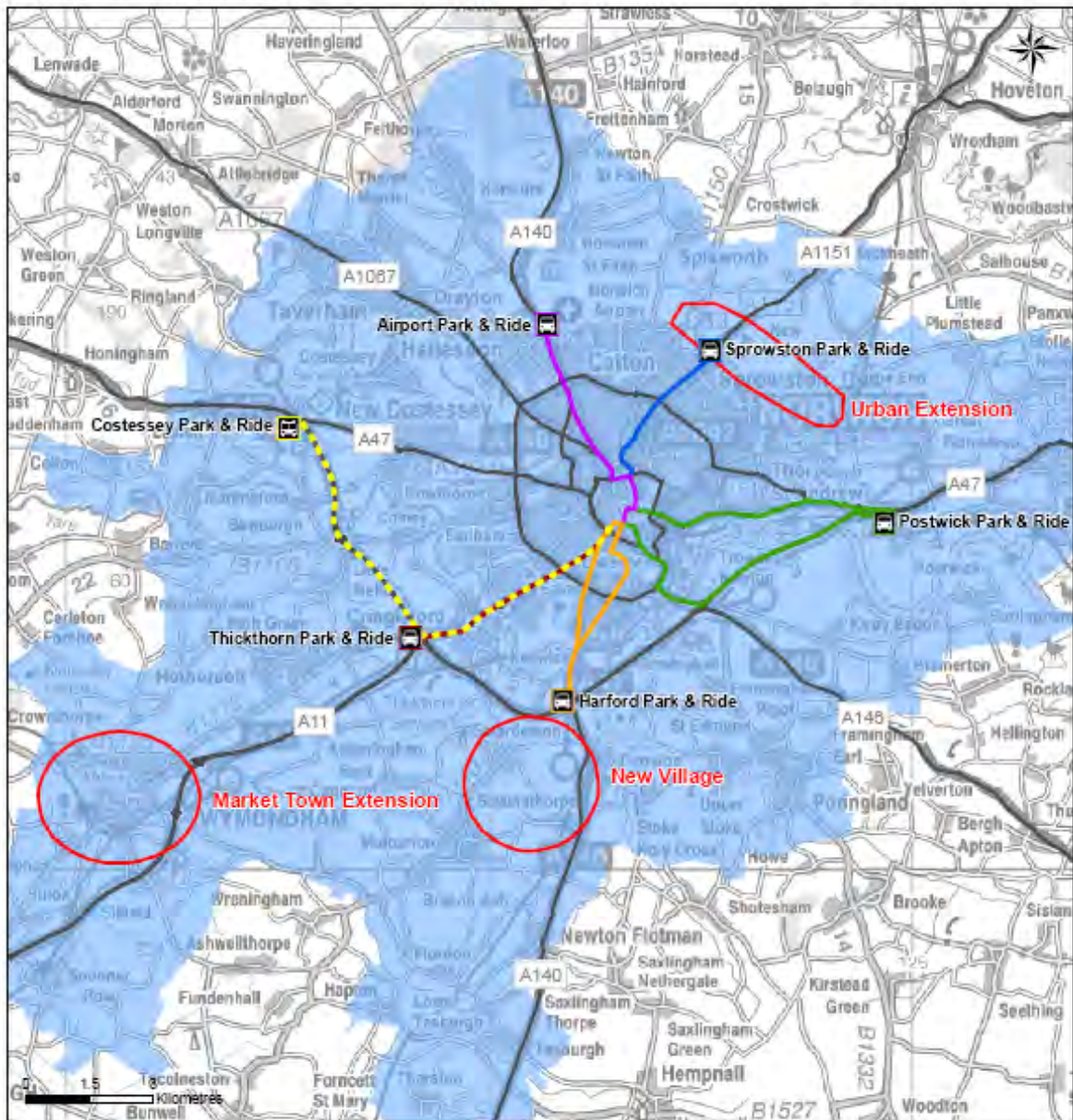
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Map Source: Ordnance Survey Mapping/Census Boundaries 2001

Figure 2: Park and Ride Location



Legend

-  Park and Ride
-  Strategic Roads
-  Potential Growth Areas
-  Study Area



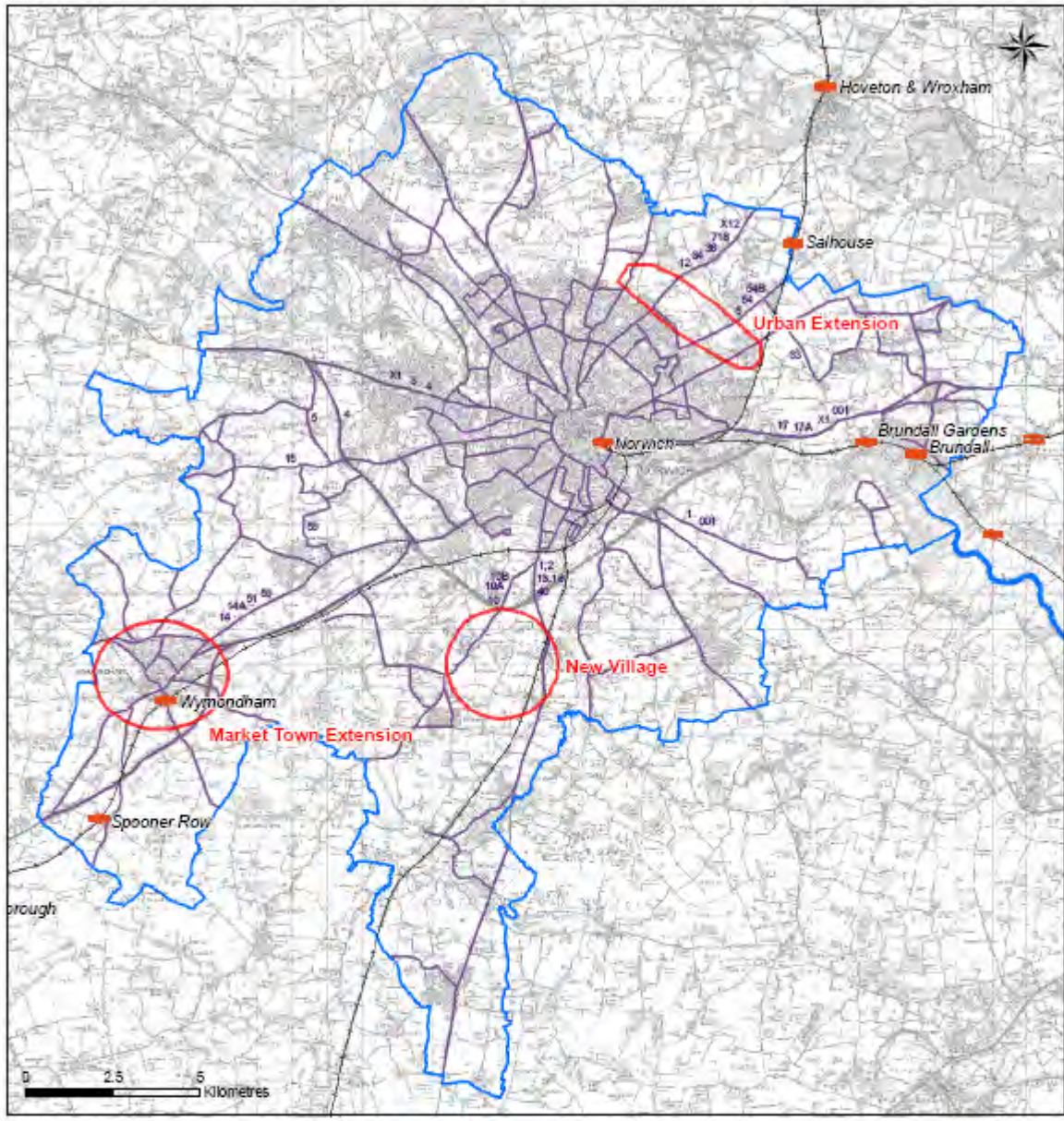
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Map Source: Ordnance Survey Mapping/Census Boundaries 2001

Figure 3: Bus and Rail Network



Legend

- Rail Station
- Potential Growth Areas
- Railway
- Study Area
- Existing Bus Routes



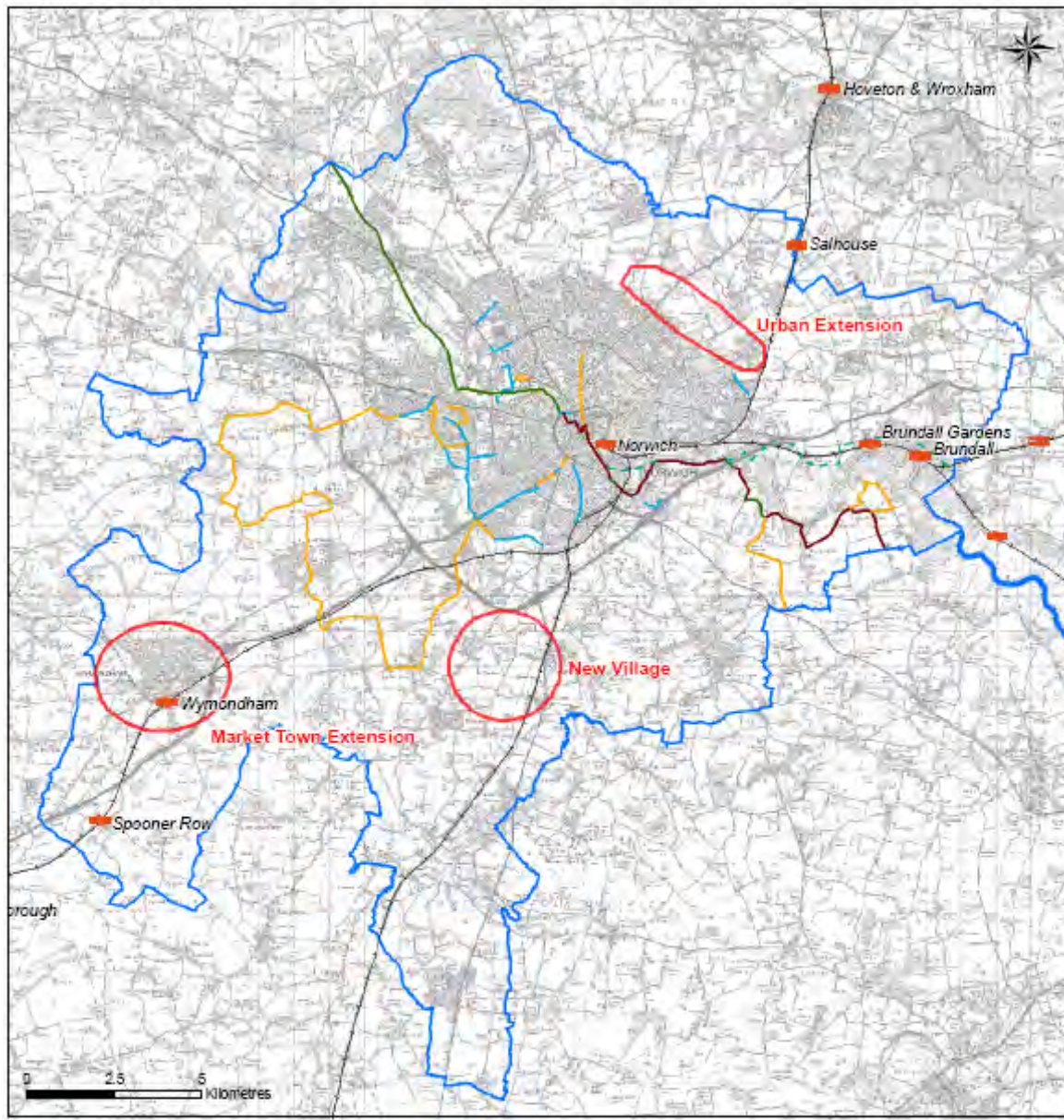
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


Figure 4: Existing Cycle Network



Legend

-  Rail Station
-  Railway
-  Potential Growth Areas
-  Study Area

Existing Cycle Network

-  National Cycle Network on-road route
-  National Cycle Network traffic-free route
-  Other signed on-road cycle route
-  Other traffic-free cycle route
-  Proposed National Cycle Network route



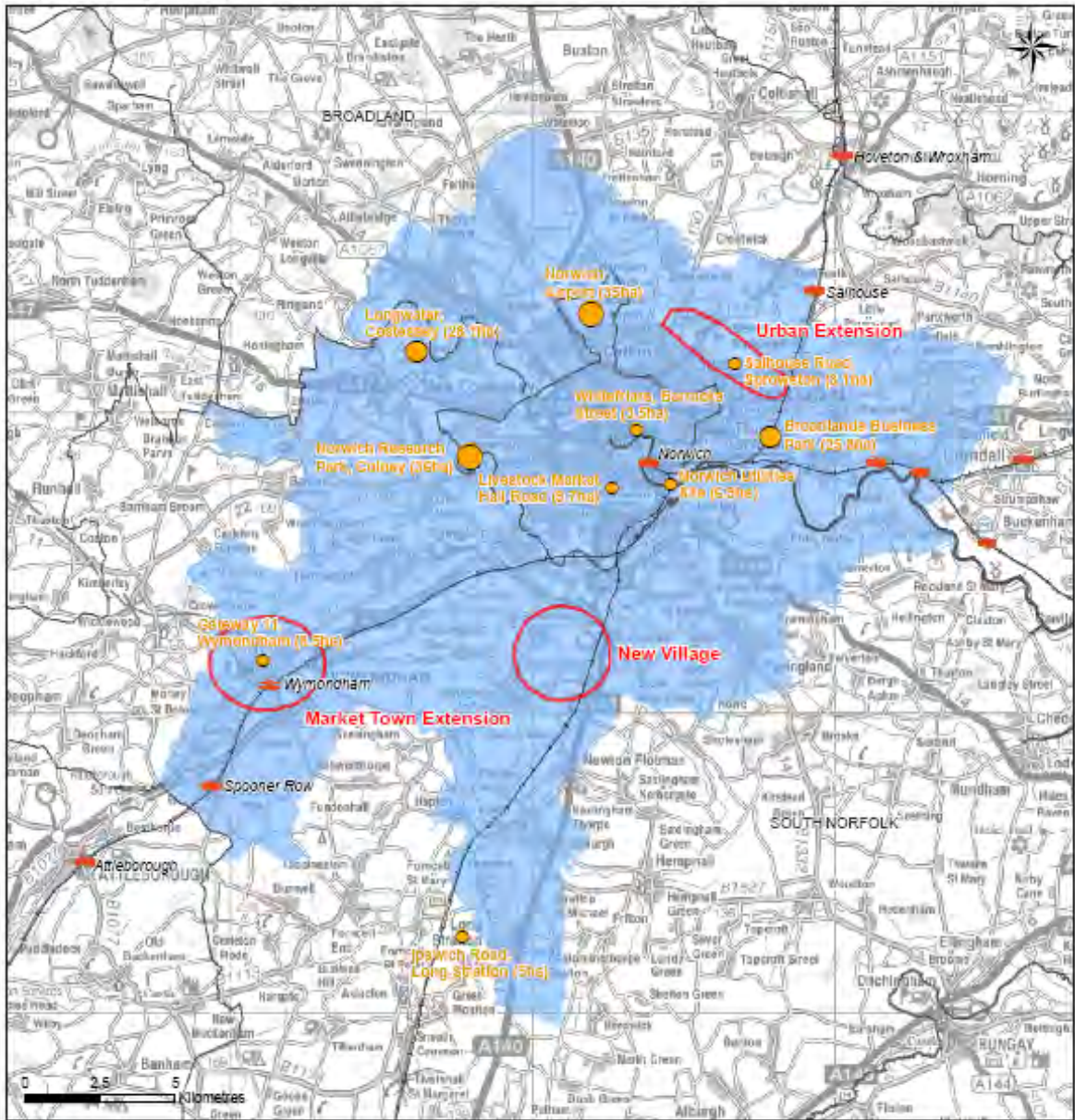
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Map Source: Ordnance Survey Mapping/Census Boundaries 2001





Figure 5: Strategic Employment Sites



Legend

-  Rail Station
-  Railway
-  Potential Growth Areas
-  District

Strategic Employment Sites (Hectare)

-  3.1 - 10
-  10 - 20
-  20 - 30
-  30 - 36



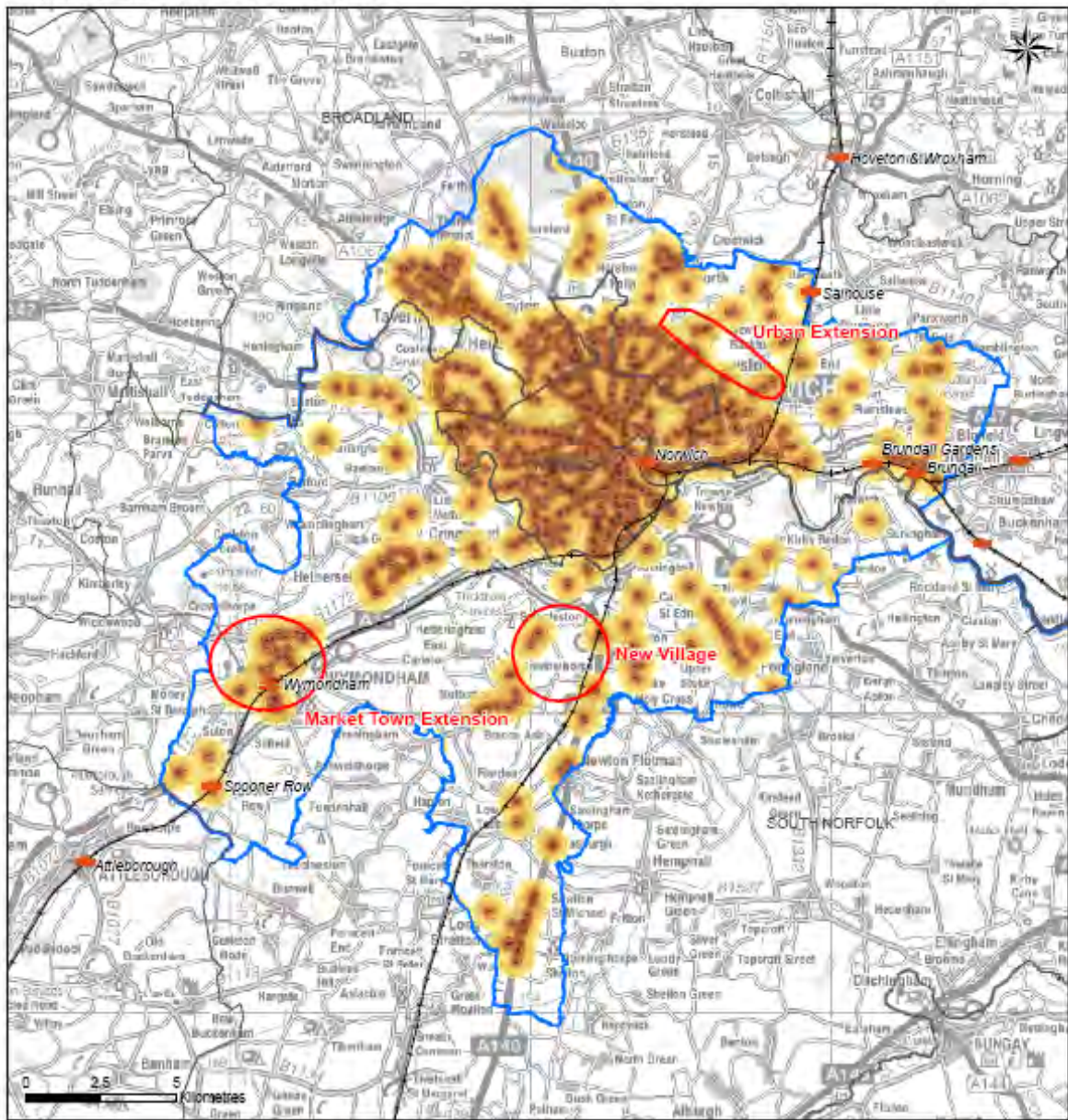
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Map Source: Ordnance Survey Mapping/Census Boundaries 2001

Figure 6: Walk Time from Public Transport Stop



Legend

- Rail Station
- Study Area
- Railway
- Potential Growth Areas
- District

Walk Time from PT Stop

- 1-2 minutes
- 3-4 minutes
- 5-8 minutes
- 7-8 minutes
- 9-10 minutes



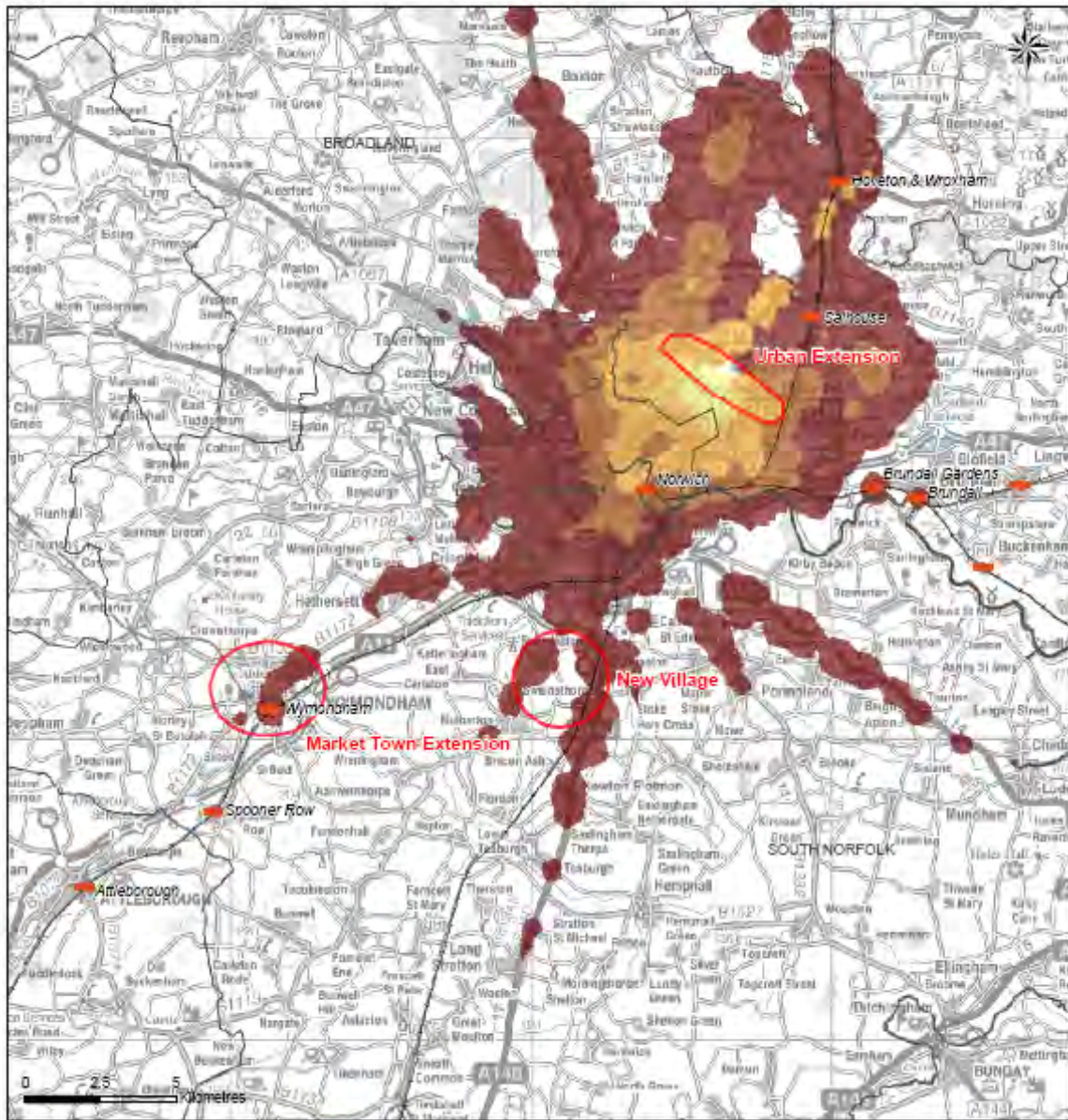
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Map Source: Ordnance Survey Mapping/Census Data 2001

Figure 7: Public Transport Accessibility from the Proposed Urban Extension



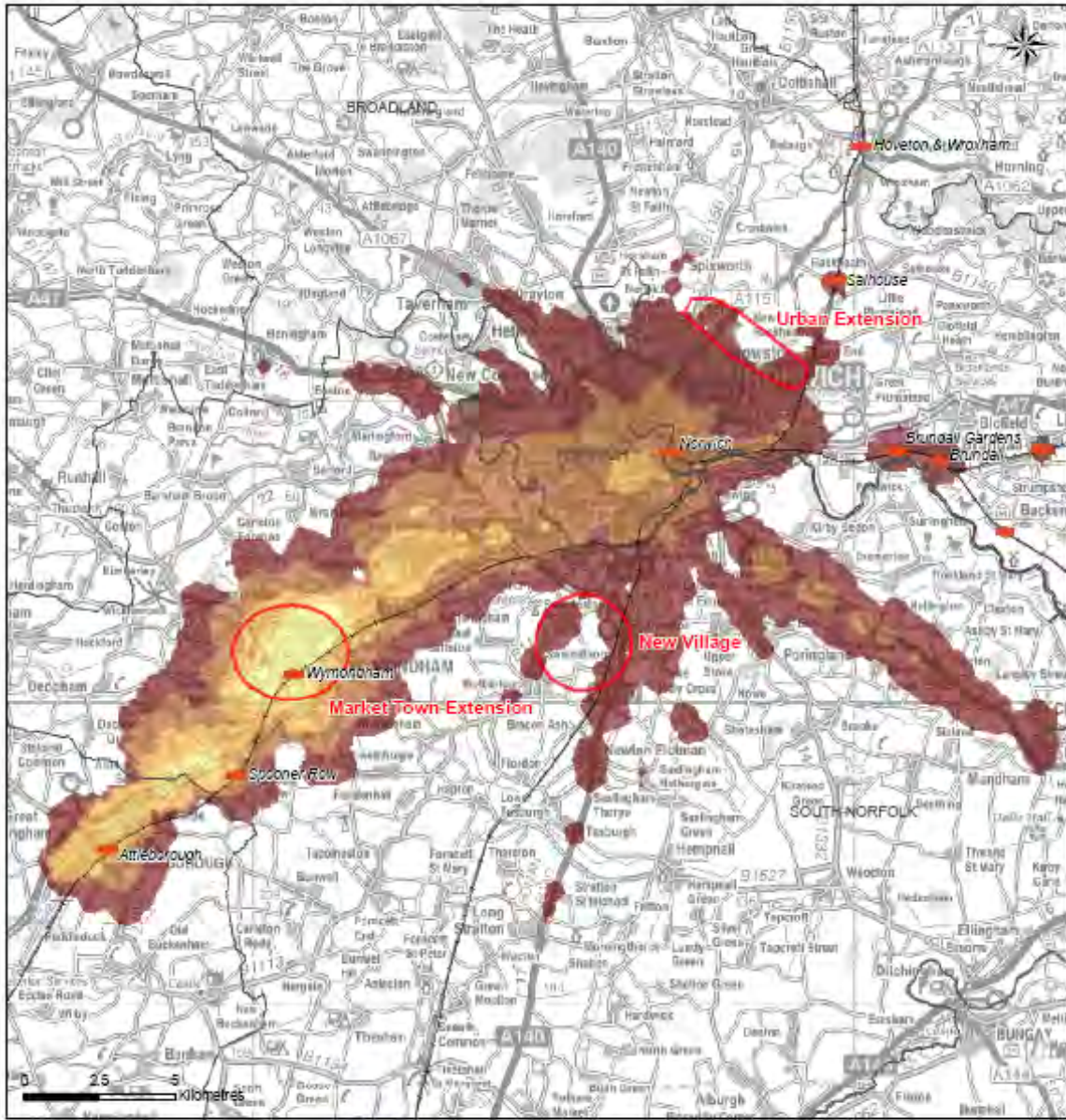
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Map Source: Ordnance Survey Mapping/Census Boundaries 2001

Figure 8: Public Transport Accessibility from the Proposed Market Town Extension



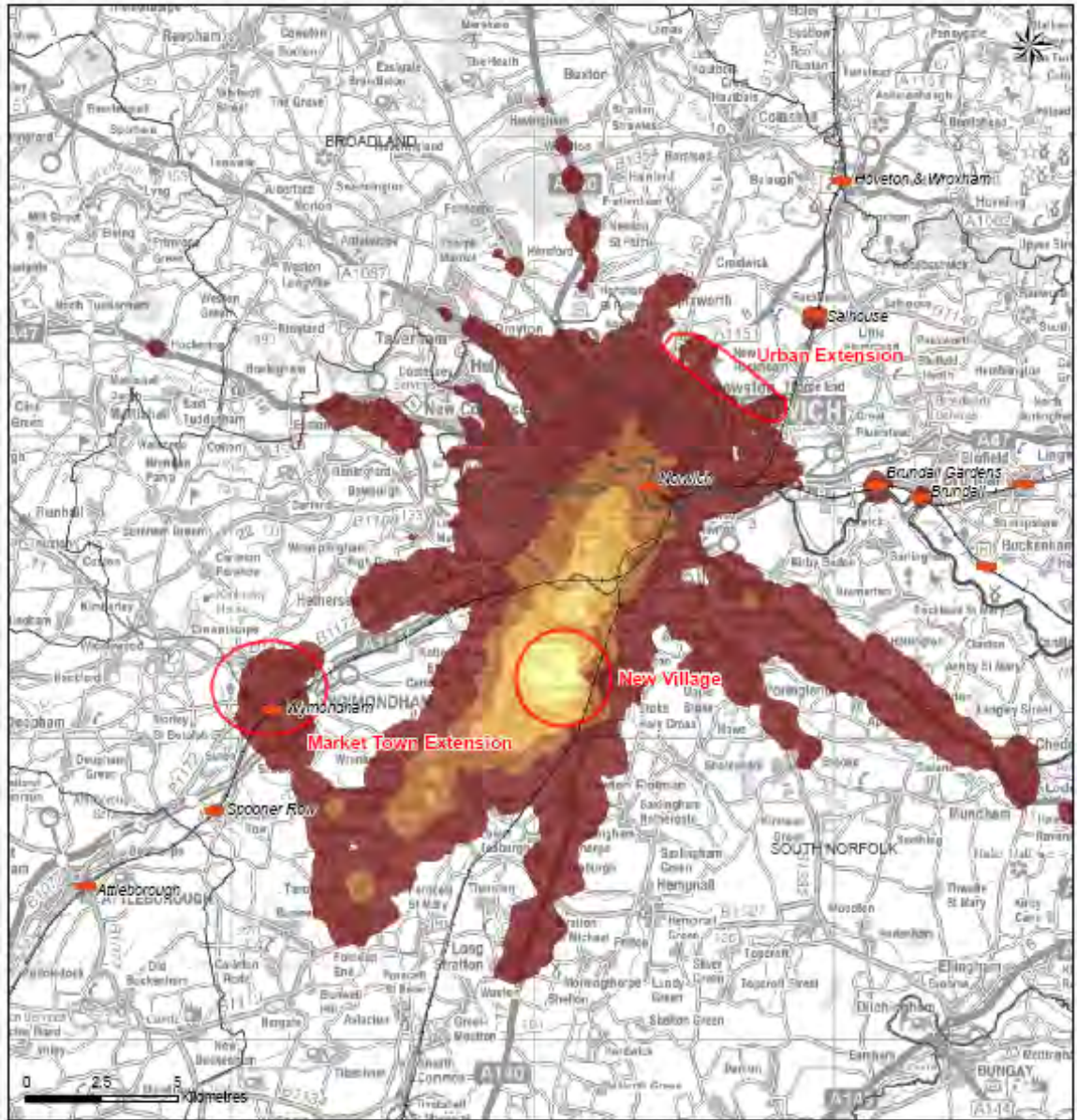
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Map Source: Ordnance Survey Mapping/Census Boundaries 2001

Figure 9: Public Transport Accessibility from the Proposed New Village



Legend		Public Transport Accessibility	
Rail Station		0 - 15 minutes	
Railway		15 - 20 minutes	
Potential Growth Areas		21 - 30 minutes	
District		31 - 40 minute	
		41 - 60 minute	



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Map Source: Ordnance Survey Mapping/Census Boundaries 2001

Appendix - F

UTILITIES INFRASTRUCTURE – EDF REPORT



**Report on Possible
Network Reinforcement
Requirements Resulting
from the Proposed
Greater Norwich Growth
Area**

Peter Simpson
Infrastructure Planning Engineer

Greater Norwich Development
Partnership
Project Number:
Document Number: 1

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Possible Network Reinforcement Needs Resulting from the GNDP Growth Proposals

1. General Observations and Disclaimers

1.1 Network Loading

The network loading and available substation capacities used to produce this document are based on a snapshot of the network at a particular time during the winter of 2006/7. There are a number of proposed developments within the Greater Norwich Development Partnership (GNDP) area which are in various stages in the connection application process. Most of these prospective demands have not been taken into account in this study as there is no certainty that these developments will proceed to final connection. There may be other applicants who have yet to make application for new demand, which may proceed to final connection before some of the prospective developments indicated by the GNDP. Any network capacity taken up by these developments will no longer be available for use by GNDP projects. For this reason, the information provided in this document must be treated as indicative of the likely solutions rather than an absolute statement that these will be the solutions which are adopted should the proposals proceed.

1.2 Time periods used in study

In order to simplify the assessments, the proposed growth scenarios have been grouped into two time slots the first being from 2007 to 2012 and the second from 2013 to 2021. There is little point in extending the projections beyond 2021 as there may be other factors or policies that will influence the likely electrical demand. The majority of the loading figures provided for the non-specific growth areas are obviously generic in nature and therefore it is very unlikely that this growth will occur in the evenly distributed manner in which it has been presented. Therefore, it is difficult to predict the precise time at which a particular network reinforcement project may be required but it is probable that they will all need to be in place before 2021.

1.3 Provision of Electricity Network Infrastructure

Every new development will require its own on-site electrical infrastructure. The cost of this infrastructure is broadly the same regardless of the site location and is not included in any figures given in this document. Any figures given relate only to the cost of and/or any contribution required towards the provision of up-stream infrastructure. The figures are generic costs based on costs of similar projects and are not derived from site-specific proposals or agreed cable routes. These costs include the provision of Primary Substations, the 33,000 volt circuits necessary to supply those Primary Substations and any additional 33,000 volt switchgear which will be required at the 132,000/33,000 volt Grid Substations in order to connect the new cables. Any figures quoted do not, therefore, give any indication of the total contribution that would be required for any

particular development, only the contribution required for off-site upstream reinforcement work down to the 11,000 volt switchgear at the primary substation. Under the connection charging policy in force at this time, the cost of establishing 132,000 volt infrastructure and 132,000/33,000 grid substations is borne by the general mass of customers through distribution use of system charges and not by individual developers. However, these policies are reviewed periodically and there is no certainty that this policy will be in force for the duration of the GNDP proposals.

1.4 Existing Network Assets

Many of the areas identified as sites for possible development are crossed by EDF Energy Networks circuits both overhead and underground at various voltages up to and including 132,000 volts. No allowance has been made for the cost of diverting these assets as it is not possible to determine this until much later in the process once site layouts have been determined.

1.5 Common Features

The two scenarios differ only in respect of the proposal to place the bulk of the residential development either at Sprowston/Rackheath and Wymondham (Scenario 1), or concentrated in a new village in the Swardeston/Mangreen area (Scenario 2). The business related developments appear to be common to both scenarios, as does a significant amount of generic domestic/residential growth, which has been distributed across the area. As a result, much of the reinforcement that will be required to enhance the electricity distribution network is common to both scenarios.

1.6 Other Local Development Frameworks

The GNDP is not the only body interested in development in Norfolk. Proposals currently being developed by North Norfolk and Breckland District Councils may have an impact on the ultimate form of the distribution network in the area. However these proposals have not been taken into account in the information presented in this document.

2. Generic Growth Areas

There are some generic growth areas that are common to both scenarios which do not have a significant impact on the primary substations from which they are supplied

2.1 Alington

No action required up to 2021.

2.2 Barrack Street

No action required up to 2021, on figures given. However, the possible redevelopment of the Anglia Square area, which is not included in the GNDP data, may trigger the need for additional reinforcement.

2.3 Cringleford

No action required up to 2021.

2.4 Hapton

No action required up to 2021, although minor 11,000 volt network transfers to adjacent substations may be required.

2.5 Mousehold

No action required up to 2021, although minor 11,000 volt network transfers to adjacent substations may be required.

2.6 St. Stephens

No action required up to 2021. However, possible regeneration of the St. Stephens Street area, not included in GNDP figures, may require upgrade of this substation to 132,000/11,000 volt working. Some of the development that is proposed under Scenario 2 may also necessitate this work, for reasons stated later in this document.

2.7 Thorpe Grid Local

No action required up to 2021, unless development around the Norwich City football ground and the St. Anne's Wharf/King Street area, neither of which are identified in the GNDP data, is greater than currently anticipated.

2.8 Tuckswood

No action required up to 2021, unless the proposed redevelopment of the adjacent former shoe factory site proceeds. Again, this proposal is not included in the GNDP estimates.

3. Specific Growth Areas

There are many development proposals common to both scenarios and therefore the solutions are the same in both; these are:

3.1 Earlham Grid Local Substation

The primary substation at the Earlham Grid site is currently being upgraded with a view to meeting anticipated growth in demand in the area, such as Longwater; Three Score, Bowthorpe and the Science Park. The work is being carried out in two phases with additional 33,000/11,000 volt transformer capacity being provided in 2007. The second phase will be the construction of a new 132,000/11,000 volt substation at the Earlham Grid Site, together with additional 132,000 volt circuit capacity from Norwich Main supergrid substation being installed at a time dictated by rate of growth in the area. The funding for this work is via a site-specific infrastructure capacity charge, which was specifically agreed with Ofgem in the absence of any lead developer who was willing to make the first application. Any subsequent applications for electricity supply in the area supplied by this substation will be subject to this capacity charge.

3.2 Hurricane Way Primary Substation

Before any significant new development can be accepted in Hellesdon; the existing Norwich Airport Industrial Estate or on the proposed site to the north east of Norwich

Airport, it will be necessary to install a new primary substation on a site owned by EDF Energy Networks at Hurricane Way, on the existing industrial estate. This site is large enough to accommodate both a grid and a primary substation. Once the primary substation is commissioned, sections of the existing 11,000 volt distribution network can be transferred to it from Boundary Park and George Hill primary substations. This will release capacity in these substations to meet generic growth in these areas, in addition to providing for additional commercial/industrial development in the vicinity of the airport. This work will need to be put in hand as soon as possible if the capacity is to be available by 2012.

3.3 Norwich Airport North

If the projected loads for the north east industrial area come to fruition, there will be a significant shortfall in supply capacity in this area between 2012 and 2021, even taking into account the additional capacity provided at Hurricane Way. The figures provided by GNDP indicate that a new high capacity (30MW) primary substation will be required in this area, in addition to the proposed Hurricane Way primary substation. However, there is neither any significant 33,000 volt network in the area to supply such a substation nor is there sufficient capacity available at either Thorpe or Trowse grid substations to meet such a demand. The likely solution to providing additional grid transformer capacity in the area would be to establish a new grid substation at a site known as Norwich East (see section 6.2 below for more detail on Norwich East)

3.4 Broadland Business Park

Broadland Business Park is currently supplied from Peachman Way primary substation, which was designed to have adequate capacity to meet the estimated demand of the park as originally proposed. Any further expansion of the Business Park will require the installation of additional primary transformer capacity in the vicinity of the proposed extension. This could be achieved by installing a new primary substation within the new park or by replacing the transformers and 11,000 volt switchgear at Peachman Way primary substation with equipment of higher capacity. The 33,000 volt cables to Peachman Way from Thorpe and Trowse Grid have only sufficient capacity to match the full rating of the equipment already installed. In addition, as with the Hurricane Way proposal above, there is insufficient capacity available at either Thorpe or Trowse grid substations to meet such a demand and the likely solution to providing additional grid transformer capacity in the area would be to establish a new grid substation at a site to the north of the business park, known as Norwich East (see section 6.2 below for more detail on Norwich East).

4. Scenario 1

4.1 Broadland Sector

The development land in the Sprowston/Rackheath area proposed under Scenario 1 would require either major reinforcement works at Sprowston primary substation to enhance it to 30MW capacity or the construction of an additional primary substation within the development area. As the existing 33,000 volt underground cables to

Sprowston primary substation are of sufficient capacity to meet existing demand only. For this reason, it is likely that an additional primary substation will be required on the development, supplied via new 33,000 volt circuits from a new Norwich East grid substation. (See section 6.2 below for more detail on Norwich East.)

4.2 South Norfolk Sector

The construction of around 4,000 additional dwellings in the Wymondham area up to 2021 with the possibility of an additional 8,000 up to 2031 will necessitate some reinforcement to the electricity network in the Wymondham area. There will not be sufficient transformer capacity available at Wymondham Primary substation to meet the whole of the possible demand. The solution could be either to replace the existing equipment at Wymondham primary substation with higher capacity (30MW) equipment or to establish an additional primary substation in the area of the new development. The latter option is the most likely solution. In either case, an additional 33kV circuit from Earham grid substation to Wymondham will be required.

5. Scenario 2

5.1 South Norfolk Sector

Because of the level of business development that is common to both scenarios, it will still be necessary to provide additional grid transformer to the north east of Norwich, even if Scenario 2 is adopted. However, the establishment of a new village in the Swardeston/Mangreen area will require the establishment of a new primary substation in the vicinity of the development. Significant lengths of 33,000 volt circuit would be required to connect this substation to the existing infrastructure at Trowse Grid. The resulting increase in demand at Trowse grid substation would trigger the need for some form of remedial action. The likely solution to providing additional grid transformer capacity in the area would be to relieve load on Trowse grid substation by transferring existing demand elsewhere. More detail on this is given in section 6.3 below.

6. Grid Substation Requirements

6.1 Hurricane Way Grid Substation

If the Norwich Airport area were to be viewed in isolation, then the solution to meeting the grid substation capacity shortfall would be, subject to obtaining Planning Permission, to establish a new grid substation at the Hurricane Way site, in addition to the new primary substation. However, the proposed extension to the existing development at Broadland Business Park will result in a further shortfall in capacity which will probably mean that the establishment of Hurricane Way Grid substation is not the optimal solution to the overall growth scenario as the development of the Norwich East site would result in a more co-ordinated 33kV network.

6.2 Norwich East Grid Substation

EDF Energy Networks owns a site off Green Lane, to the north of Broadland Business Park. This site was purchased some time ago with the intention that it could be used to establish a new 132,000 volt grid substation to the north east of Norwich. Subject to Planning Consent, this site could be used for this purpose and new 33,000 volt cable circuits installed to the new substations which would be required at Norwich Airport North and Broadland Park East. In addition, for the Scenario 1 proposals, additional circuits could be provided to Sprowston primary substation and/or a new primary substation in the Rackheath area.

6.3 Trowse Grid Substation

The 132,000/33,000 volt grid transformers at Trowse grid substation are already very well utilised and there is insufficient capacity remaining to cater for the demand created by the new village proposed in Scenario 2. There is insufficient land available at the Trowse site to install additional 132,000/33,000 volt grid transformer capacity. The only practicable way of making capacity available for the Swardeston/Mangreen area would be to transfer some demand from Trowse Grid 33,000 volt network to elsewhere on the system.

The most expedient way of achieving this transfer would be to convert the St. Stephens Substation, located in the Chapelfield shopping development, to 132,000/11,000 volt operation. However, this would entail the installation of new 132,000 volt underground cables from Trowse grid, in White Horse Lane, via the Martineau Lane roundabout, Bracondale and Queen Road to the substation which is located near the St. Stephens roundabout. It would also require the removal of relatively new 33,000/11,000 volt transformers and the installation of new 132,000/11,000 volt units. EDF Energy would not normally wish to carry out such a project until such time as the existing 33,000 volt underground cables, which are laid on a similar route, require replacement under the asset replacement programme.

7. Conclusions

- Both scenarios will necessitate major construction works in and around the city of Norwich.
- Both will require the establishment of a new grid substation to the East of Norwich. There will be a requirement for the construction or reconstruction of up to five primary substations in the case of Scenario 1 or four primary substations in the case of Scenario 2.
- Both scenarios will require the installation of significant lengths of 132,000 volt and 33,000 volt underground cables which will inevitably lead to some disruption to traffic and residents.
- The costs of the projects and the contribution required from developers are broadly similar and the differences in cost are unlikely to become a major factor when decisions are being made on the relative merits of the two scenarios.
- As noted in section 6.3, the work at St. Stephens substation and, more particularly, the associated 33,000 volt cable laying works would be particularly disruptive and could be deferred if Scenario 1 were to be adopted.

8. Table of Costs

The following table is a guide to the approximate level of costs and contributions:

Scenario Number	Substation Name	Work Required	Overall Cost (£k)	Developer's Contribution	Time Scale
S1 and S2	Hurricane Way Primary (Section 3.2)	New Primary Substation on existing site	2,880	1,260	Before 2012
S1 and S2	Norwich Airport North (Section 3.3)	New Primary Substation on new site + 33kV circuits	6,320	6,320	2012 - 2021
S1 and S2	Broadland Park No. 2 (Section 3.4)	New Primary Substation on new site + 33kV circuits	3,050	3,050	2012 - 2021
Scenario 1 only	Wymondham No. 2 (Section 3.2)	New Primary Substation on new site + 33kV circuits	5,340	1,900	2012 - 2021
Scenario 1 only	Sprowston/Rackheath No. 2 (Section 4.1)	New Primary Substation on new site + 33kV circuits	4,313	4,313	2012 - 2021
Scenario 2 only	Swardeston Primary (Section 5.1)	New Primary Substation on new site + 33kV circuits	5,920	5,920	2012 - 2021
S1 and S2	Norwich East Grid (Section 6.2)	New Grid Substation on existing site + 132kV cables	17,060	0	2012 - 2021
Scenario 2 only	St Stephens (Section 6.3)	Reinforcement of existing substation + 132kV cables	10,750	0	2012 - 2021

From this table it can be derived:

- Scenario 1 will cost around £46,833,000 in total and will attract a developer's contribution of around £16,843,000
- Scenario 2 will cost around £45,980,000 in total and will attract a developer's contribution of around £16,550,000

It should be noted that these costs are purely indicative and have been derived from minimal desk-top studies of possible cable routes. No on-site investigations or route feasibility studies have been carried out.

The costs are based on current 2007 material prices and labour costs. There is likely to be considerable variation in these costs by the time the projects are actually carried out.



APPENDIX - G

HOUSING TRAJECTORY DATA TABLES Housing Trajectory – Growth Scenario 1

	Total Number of Units per Year																			
	2001/ 02	2002/ 03	2003/ 04	2004/ 05	2005/ 06	2006/ 07	2007/ 08	2008/ 09	2009/ 10	2010/ 11	2011/ 12	2012/ 13	2013/ 14	2014/ 15	2015/ 16	2016/ 17	2017/ 18	2018/ 19	2019/ 20	2020/ 21
Past Completions	1,342	1,265	1,261	1,200	1,154	1,410	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Existing Commitments	-	-	-	-	-	-	2,006	1,437	1,664	1,642	1,280	869	804	625	485	395	375	375	375	375
Urban Capacity + Other Strategic Sites	-	-	-	-	-	-	-	413	443	487	497	487	509	709	633	608	508	508	408	408
Growth Scenario One	-	-	-	-	-	-	-	-	-	-	-	250	500	650	750	750	750	750	750	750
Total Past Completions	1,342	1,265	1,261	1,200	1,154	1,410														
Total Projected Completions							2,006	1,850	2,107	2,129	1,777	1,606	1,813	1,984	1,868	1,753	1,633	1,633	1,533	1,533
Cumulative Completions	1,342	2,607	3,868	5,068	6,222	7,632	9,638	11,488	13,595	15,724	17,501	19,107	20,920	22,904	24,772	26,525	28,158	29,791	31,324	32,857
PLAN - Strategic Allocation (annualised)	1,650	1,650	1,650	1,650	1,650	1,650	1,650	1,650	1,650	1,650	1,650	1,650	1,650	1,650	1,650	1,650	1,650	1,650	1,650	1,650
MONITOR - No dwellings above or below cumulative allocation	-308	-693	-1,082	-1,532	-2,028	-2,268	-1,912	-1,712	-1,255	-776	-649	-693	-530	-196	22	125	108	91	-26	-143
MANAGE - annual requirement tacking account of past-projected completions	1,650	1,666	1,689	1,714	1,746	1,785	1,812	1,797	1,793	1,764	1,728	1,722	1,737	1,726	1,683	1,646	1,619	1,614	1,605	1,676

Housing Trajectory – Growth Scenario 2

	Total Number of Units per Year																			
	2001/ 02	2002/ 03	2003/ 04	2004/ 05	2005/ 06	2006/ 07	2007/ 08	2008/ 09	2009/ 10	2010/ 11	2011/ 12	2012/ 13	2013/ 14	2014/ 15	2015/ 16	2016/ 17	2017/ 18	2018/ 19	2019/ 20	2020/ 21
Past Completions	1,342	1,265	1,261	1,200	1,154	1,410	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Commitments	-	-	-	-	-	-	2,006	1,437	1,664	1,642	1,280	869	804	625	485	395	375	375	375	375
Urban Capacity	-	-	-	-	-	-	-	413	443	487	497	487	509	709	633	608	508	508	408	408
Growth Scenario Two	-	-	-	-	-	-	-	-	-	-	-	-	-	-	300	400	500	600	600	600
Total Past Completions	1,342	1,265	1,261	1,200	1,154	1,410														
Total Projected Completions							2,006	1,850	2,107	2,129	1,777	1,356	1,313	1,334	1,418	1,403	1,383	1,483	1,383	1,383
Cumulative Completions	1,342	2,607	3,868	5,068	6,222	7,632	9,638	11,488	13,595	15,724	17,501	18,857	20,170	21,504	22,922	24,325	25,708	27,191	28,574	29,957
PLAN - Strategic Allocation (annualised)	1,650	1,650	1,650	1,650	1,650	1,650	1,650	1,650	1,650	1,650	1,650	1,650	1,650	1,650	1,650	1,650	1,650	1,650	1,650	1,650
MONITOR - No dwellings above or below cumulative allocation	-308	-693	-1,082	-1,532	-2,028	-2,268	-1,912	-1,712	-1,255	-776	-649	-943	-1,280	-1,596	-1,828	-2,075	-2,342	-2,509	-2,776	-3,043
MANAGE - annual requirement tacking account of past-projected completions	1,650	1,666	1,689	1,714	1,746	1,785	1,812	1,797	1,793	1,764	1,728	1,722	1,768	1,833	1,916	2,016	2,169	2,431	2,905	4,426

Past Completions

Site Name	Total Number of Units per Year						Total Units
	2001/ 02	2002/ 03	2003/ 04	2004/ 05	2005/ 06	2006/ 07	
Broadland	322	265	266	182	58	161	1,254
Norwich	599	629	693	690	879	950	4,440
South Norfolk	421	371	302	328	217	299	1,938
TOTAL	1,342	1,265	1,261	1,200	1,154	1,410	7,632

Existing Commitments – Broadland

Site Name	Total Number of Units per Year															Total Units
	2006/ 07	2007/ 08	2008/ 09	2009/ 10	2010/ 11	2011/ 12	2012/ 13	2013/ 14	2014/ 15	2015/ 16	2016/ 17	2017/ 18	2018/ 19	2019/ 20	2020/ 21	
Horsbeck Way	-	-	-	-	35	-	-	-	-	-	-	-	-	-	-	35
Home Farm, Blue Boar Lane	-	25	75	75	75	-	-	-	-	-	-	-	-	-	-	250
White House Farm, Blue Boar Lane	-	0	85	130	130	150	150	150	150	35	20	-	-	-	-	1,000
School Lane, Sprowston	-	-	-	35	40	-	-	-	-	-	-	-	-	-	-	75
Eversley Road, Hellesdon	-	-	-	25	50	25	-	-	-	-	-	-	-	-	-	100
Plumstead Hospital East	-	100	50	50	-	-	-	-	-	-	-	-	-	-	-	200
Plumstead Hospital West	-	-	-	25	50	25	-	-	-	-	-	-	-	-	-	100
Sites below 10 Units	-	38	38	37	37	37	-	-	-	-	-	-	-	-	-	187
TOTAL	0	163	248	377	417	237	150	150	150	35	20	0	0	0	0	1,947

Existing Commitments – Norwich

Site Name	Total Number of Units per Year															Total Units
	2006/ 07	2007/ 08	2008/ 09	2009/ 10	2010/ 11	2011/ 12	2012/ 13	2013/ 14	2014/ 15	2015/ 16	2016/ 17	2017/ 18	2018/ 19	2019/ 20	2020/ 21	
	-	1200	375	375	375	375	375	375	375	375	375	375	375	375	375	6,075
TOTAL	-	1,200	375	375	375	375	375	375	375	375	375	375	375	375	375	6,075

Existing Commitments – South Norfolk

Site Name	Total Number of Units per Year															Total Units
	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	
Mulbarton: Cuckoofield Lane	-	50	50	50	41	-	-	-	-	-	-	-	-	-	-	191
Easton: Bawburgh Road	-	32	-	-	-	-	-	-	-	-	-	-	-	-	-	32
Hethersett: Myrtle Road	-	42	-	-	-	-	-	-	-	-	-	-	-	-	-	42
Poringland: The Street	-	75	50	100	150	100	100	100	100	75	-	-	-	-	-	850
Wymondham: Greenland Avenue	-	72	72	72	72	72	-	-	-	-	-	-	-	-	-	360
Costessey: Lodge Farm	-	60	120	120	120	68	-	-	-	-	-	-	-	-	-	488
Costessey: North of the RiverTud / Queens Hill	-	194	200	215	200	200	200	179	-	-	-	-	-	-	-	1,388
Cringleford: North of the A11	-	64	175	175	175	161	-	-	-	-	-	-	-	-	-	750
Wymondham, Park Lane	-	-	14	-	-	-	-	-	-	-	-	-	-	-	-	14
Costessey, Bridge Farm, Norwich Road	-	-	9	13	-	-	-	-	-	-	-	-	-	-	-	22
Wymondham: Sale Ground	-	-	26	27	-	-	-	-	-	-	-	-	-	-	-	53
Hethersett, Lyngate Farm	-	-	11	7	-	-	-	-	-	-	-	-	-	-	-	18
Hethersett, Great Melton Road	-	2	15	-	-	-	-	-	-	-	-	-	-	-	-	17
Wymondham, BOCM Paul, Rightup Lane	-	-	-	-	-	-	14	-	-	-	-	-	-	-	-	14
Wymondham: Silfield Road	-	-	-	20	30	15	-	-	-	-	-	-	-	-	-	65
Long Stratton: Lime Tree Avenue	-	-	20	30	10	-	-	-	-	-	-	-	-	-	-	60
Wymondham: Friarscroft Lane	-	-	-	31	-	-	-	-	-	-	-	-	-	-	-	31
Costessey: Dereham Road	-	-	-	-	-	-	30	-	-	-	-	-	-	-	-	30
Sites below 10 Units	-	52	52	52	52	52	-	-	-	-	-	-	-	-	-	260
TOTAL	0	643	814	912	850	668	344	279	100	75	0	0	0	0	0	4,685

Urban Capacity and Other Strategic Sites

District	Total Number of Units per Year															Total Units
	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	
Broadland	-	-	26	56	100	110	100	100	300	225	200	100	100	-	-	1,417
Norwich	-	-	375	375	375	375	375	375	375	375	375	375	375	375	375	4,875
South Norfolk	-	-	12	12	12	12	12	34	34	33	33	33	33	33	33	326
TOTAL	0	0	413	443	487	497	487	509	709	633	608	508	508	408	408	6,618

Detailed Data – South Norfolk

Settlement	Completions
Settlement A	169
Settlement B	37
Settlement C	39
Settlement D	81
TOTAL	326

*Settlement A phasing delayed to 2013/14 onwards

Detailed Data – Broadland

Site Name	Total Number of Units per Year															Total Units
	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	
Sector 1	0	0	11	11	15	15	0	100	200	200	200	100	0	0	0	852
Sector 2	0	5	10	35	30	20	0	0	0	0	0	0	0	0	0	100
Sector 3	0	0	0	50	90	100	100	100	25	0	0	0	0	0	0	465
TOTAL	0	5	21	96	135	135	100	200	225	200	200	100	0	0	0	1,417

Growth Scenario 1

District	Total Number of Units per Year															Total Units
	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	
Broadland	-	-	-	-	-	-	150	250	350	450	450	450	450	450	450	3,450
Norwich	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
South Norfolk	-	-	-	-	-	-	100	250	300	300	300	300	300	300	300	2,450
TOTAL	0	0	0	0	0	0	250	500	650	750	750	750	750	750	750	5,900

Growth Scenario 2

District	Total Number of Units per Year															Total Units
	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	
Broadland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Norwich	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
South Norfolk	-	-	-	-	-	-	-	-	-	300	400	500	600	600	600	3,000
TOTAL	0	0	0	0	0	0	0	0	0	300	400	500	600	600	600	3,000

Appendix - H

INFRASTRUCTURE COST REPORT

**NORWICH GROWTH AREA
INDICATIVE CONSTRUCTION COST ESTIMATE
SCENARIO
OVERALL SUMMARY**



Project No. JWN

Issued : September 2007

	<u>Required by 2021</u> (37,612 dwellings)	<u>Required by 2031</u> (56,662 dwellings)
	<u>£m</u>	<u>£m</u>
<u>Strategic Infrastructure</u>		
Transport Initiatives	517.590	
Social Infrastructure Works	30.040	
Other Services	38.000	
Green Infrastructure	-	
Economic Development	784.431	
Mains Services/Utilities	74.600	
Sub Total £	1,444.661	
<u>Local Infrastructure Projects</u>		
Education	81.050	
Health	6.800	
Leisure	76.250	
Community	5.747	
Open Space	58.636	
	1,673.144	
Contingency @ 10%	167.356	
TOTAL TO OVERALL SUMMARY		
Cost current as at September 2007 price base date	1,840.500	

**NORWICH GROWTH AREA
INDICATIVE CONSTRUCTION COST ESTIMATE
SCENARIO**



Project No. JWN

Issued : September 2007

	<u>Required by 2021</u> (37,612 dwellings)	<u>Required by 2031</u> (56,662 dwellings)
	<u>£m</u>	<u>£m</u>
<u>Transport Initiatives</u>		
Scope of works: Key Initiatives	113.000	
Scope to be determined:		
Sheet 1	133.590	
Sheet 2	213.000	
Sheet 3	58.000	
TOTAL TO OVERALL SUMMARY	517.590	
Cost current as at September 2007 price base date	517.590	

**NORWICH GROWTH AREA
INDICATIVE CONSTRUCTION COST ESTIMATE
SCENARIO**



Project No. JWN

Issued : September 2007

					<u>Required by 2021</u> (37,612 dwellings)	<u>Required by 2031</u> (56,662 dwellings)
					<u>£m</u>	<u>£m</u>
<u>Transport Initiatives</u>						
<u>Scope of works: Key Initiatives</u>						
(NATS) Enhanced Public Transport Provision:						
Bus Fleet Upgrade						
100	No	@	£250,000	£25m		
Extra depot				£5m	<u>30.000</u>	
City Centre Spatial Strategy Transport Recommendations:						
Interchange						
24	Stands	@	£250	£6m		
Bus box work				£3m	<u>9.000</u>	
Implementation of Bus Rapid Transit System:						
Dedicated routes:						
Rural:-						
20,000	m	@	£2,000	£40m		
Urban:-						
5,000	No	@	£5,000	£25m	<u>65.000</u>	
Cycling Infrastructure Improvements						
See later					-	
New Station at Broadland Business Park						
See later					-	
Light Rapid Transit Review					-	
Park and Ride Expansion						
5000	Spaces	@	£1,800	£9m	9.000	
TOTAL TO OVERALL SUMMARY					<u>113.000</u>	<u>-</u>
Cost current as at September 2007 price base date					<u>113.000</u>	<u>-</u>

**NORWICH GROWTH AREA
INDICATIVE CONSTRUCTION COST ESTIMATE
SCENARIO**



Project No. JWN

Issued : September 2007

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				<u>£m</u>	<u>£m</u>
<u>Transport Initiatives</u>					
<u>Scope to be Determined (1)</u>					
(NATS) Development of Bus Priority Schemes					
<u>Bus Priority Schemes</u>					
1) Current Bus Routes					
9 key routes x 4 per route					
Bus Gates:	36	No	@	£45,000	1.620
2) Dedicated Orbital Bus Route					
Bus Gates:	16	No	@	£45,000	0.720
3) White lining and signage					
	91,000	m	@	£50	4.550
4) New Interchange Facility					
		Item			3.000
5) Bus Stops: every 400 metres					
Stops	2k	}			
Shelter	10k				
VMS					
Real Time	10k				
CCTV	8k				
				£30k	
Each bus route say 10km x 9m = 90 km/0.4 km					
	225	No Bus Stops	@	£30k	6.75
TOTAL TO OVERALL SUMMARY				<u>16.640</u>	
Cost current as at September 2007 price base date				<u><u>16.640</u></u>	

**NORWICH GROWTH AREA
INDICATIVE CONSTRUCTION COST ESTIMATE
SCENARIO**



Project No. JWN

Issued : September 2007

		<u>Required by 2021</u> (37,612 dwellings)	<u>Required by 2031</u> (56,662 dwellings)
		<u>£m</u>	<u>£m</u>
<u>Transport Initiatives Continued</u>			
(NATS) Development of Walking and Cycling Strategies (Urban Area Movement Strategy)			
	<u>Cycle Routes</u> (3m wide)		<u>Footways</u> (2m wide)
Outer Connections: 52km @ £500/m	£26.000m	52km@£350/m	£18.200m
Central linkage: 28 km @ £300/m	£8.400m	28km@£200/m	£5.600m
	<u>£34.400m</u>		<u>£23.800m</u>
COMBINED TOTAL			<u>£58.200</u>
<u>£m</u>			
Norwich Southern Bypass Junctions			
Current	Inner Ring Road: 19 No @ £250k		4.750m
	Outer Ring Road: 31 No @ £500k		15.500m
2021 Projection:	Inner Ring Road: 16 No @ £250k		4.000m
	Outer Ring Road: 19 No @ £500k		9.500m
			<u>£33.750m</u>
Dualling A47 Blofield to North Burlingham 3 miles: 5km @ £5,000/m			25.000
TOTAL TO OVERALL SUMMARY		<u>133.590</u>	
Cost current as at September 2007 price base date		<u>133.590</u>	

**NORWICH GROWTH AREA
INDICATIVE CONSTRUCTION COST ESTIMATE
SCENARIO**



Project No. JWN

Issued : September 2007

				<u>Required by 2021</u> (37,612 dwellings)	<u>Required by 2031</u> (56,662 dwellings)
				<u>£m</u>	<u>£m</u>
<u>Transport Initiatives</u>					
<u>Scope to be Determined (2)</u>					
Development of Northern Distributor Road					
22,000	m	@	£4,300	£94.600m	
Connections				£ 0.400m	95.000
Improvements to A47 Longwater Junction:					
Major grade separated junction					3.000
Development of A140 Long Stratton Bypass -					
4 miles: 7km					
7,000	m	@	£5,000		35.000
Dualling of All Fiveways to Thetford					
10 miles: 16km					
16,000	m	@	£5,000		80.000
TOTAL TO OVERALL SUMMARY				213.000	
Cost current as at September 2007 price base date					

**NORWICH GROWTH AREA
INDICATIVE CONSTRUCTION COST ESTIMATE
SCENARIO**



Project No. JWN

Issued : September 2007

	<u>Required by 2021</u> (37,612 dwellings)	<u>Required by 2031</u> (56,662 dwellings)
	<u>£m</u>	<u>£m</u>
<u>Transport Initiatives</u>		
<u>Scope to be Determined (3)</u>		
A47 Prestwick Junction Improvements Major junction/interchange	3.000	
Improvements to Norwich Airport:		
Enlarged Terminal Building	£20m	
Road Junctions	£5m	
Airside Improvements	<u>£5m</u>	30.000
Strategic Rail Improvements		
Improvements to journey times: signalisation at key points		10.000
Local Rail Improvements		
Norwich to Cromer line:		
Station:	£8.00m	
Signalisation:	£2.00m	
Whymondham to Norwich: increased frequency:		
Signalisation/layby:	£5.00m	
TOTAL TO OVERALL SUMMARY	<u>58.000</u>	
Cost current as at September 2007 price base date	<u>58.000</u>	

**NORWICH GROWTH AREA
INDICATIVE CONSTRUCTION COST ESTIMATE
SCENARIO**



Project No. JWN

Issued : September 2007

Required by 2021
(37,612 dwellings)

Required by 2031
(56,662 dwellings)

£m

£m

Strategic: Social Infrastructure Works

New Acute Beds Hospital: 125 Beds

Based upon 80m² per bed space and £2500/m²

125	No	@	£200,000	25.000
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New Mental Health Facility: 42 Beds

Based upon 60m² per bed space and £2000/m²

42	No	@	£120,000	5.040
----	----	---	----------	-------

	30.040	
TOTAL TO OVERALL SUMMARY	30.040	
Cost current as at September 2007 price base date	30.040	

**NORWICH GROWTH AREA
INDICATIVE CONSTRUCTION COST ESTIMATE
SCENARIO**



Project No. JWN

Issued : September 2007

				<u>Required by 2021</u> (37,612 dwellings)	<u>Required by 2031</u> (56,662 dwellings)
				<u>£m</u>	<u>£m</u>
<u>Strategic: Other Services</u>					
Police Officers (15 New Safer Neighbourhood Teams)					
15	No	@	£2.00m	30.000	
New Fire Station					
	Item			8.000	
TOTAL TO OVERALL SUMMARY				<u>38.000</u>	
Cost current as at September 2007 price base date				<u><u>38.000</u></u>	

**NORWICH GROWTH AREA
INDICATIVE CONSTRUCTION COST ESTIMATE
SCENARIO**



Project No. JWN

Issued : September 2007

Required by 2021
(37,612 dwellings)

Required by 2031
(56,662 dwellings)

£m

£m

Strategic: Green Infrastructure

None identified beyond building best practice provisions included in key unit rates

	Carried Forward	_____
	TOTAL TO OVERALL SUMMARY	_____
	Cost current as at September 2007 price base date	=====

**NORWICH GROWTH AREA
INDICATIVE CONSTRUCTION COST ESTIMATE
SCENARIO**



Project No. JWN

Issued : September 2007

	<u>Required by 2021</u> (37,612 dwellings)	<u>Required by 2031</u> (56,662 dwellings)
	<u>£m</u>	<u>£m</u>
<u>Economic Development (1)</u>		
Opening up of Deal Ground/Utilities Site (sum as given)	12.500	
Northern City Centre/Anglian Square (sum as given)	1.500	
Norwich City Centre Airport		
Employment Land Infrastructure Fund (including Norwich Research Park)		
See later		
TOTAL TO OVERALL SUMMARY	14.000	
Cost current as at September 2007 price base date	14.000	

**NORWICH GROWTH AREA
INDICATIVE CONSTRUCTION COST ESTIMATE
SCENARIO**



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	<u>Required by 2021</u> (37,612 dwellings)	<u>Required by 2031</u> (56,662 dwellings)
	<u>£m</u>	<u>£m</u>
<u>Economic Development (2)</u>		
Total Brought Forward	14.000	
Longwater Employment Area		
Support for Further Key Educational Establishment		
-As before Education/Labour Initiative	18.000	
City Growth Strategy		
<u>Generally</u>		
Commercial Spaces		
As attached build up	551.590	
Retail Spaces		
As attached build up	161.841	
Associated Infrastructure		
As attached build up	39.000	
	784.431	
TOTAL TO OVERALL SUMMARY	784.431	
Cost current as at September 2007 price base date	784.431	

**NORWICH GROWTH AREA
INDICATIVE CONSTRUCTION COST ESTIMATE
SCENARIO**



Project No. JWN

Issued : September 2007

Commercial Offices

Assumptions: 21,000 employees: 19m² per employee
Plot coverage 40%: net to gross efficiency 85%: 2 storeys

Buildings

Net floor area: 399,000m² at 85% efficiency
469,400m² Gross Building Area
Site Area 587,000m² (58.7ha)

Indicative Costs

Buildings: Assumed Mix

				£
R & D Buildings (20%)	93,880m ²	@	£950	89,186,000
B1 (30%)	140,820m ²	@	£1,200	168,984,000
B2 (30%)	140,820m ²	@	£1,100	154,902,000
B8 (20%)	93,880m ²	@	£650	61,022,000

External Works

Site Area: excluding footprint (587,000-234,700)

352,300m² @ £120 42,276,000

Site Preparation/Enabling Works

58.7ha @ £600,000 35,220,000

TOTAL TO SUMMARY £ 551,590,000

**NORWICH GROWTH AREA
INDICATIVE CONSTRUCTION COST ESTIMATE
SCENARIO**



Project No. JWN

Issued : September 2007

Retail Spaces

Assumptions: 7,000 employees: 20m² per employee
Plot coverage 70%: net to gross efficiency: 90%: 1 storey

Buildings

Net Floor Area: 140,000m² @ 90% efficiency
155,500m² Gross Building Area

Site Area: 22.2 hectares (222,000m²)

Indicative Costs

Buildings: Assumed Mix

					£
Convenience Goods					
21,234	m ²	@	£1,000		£21,234,000
A3/A4 Leisure					
11,625	m ²	@	£900		£10,463,000
Retail Outlets: Big Box Retail					
52,641	m ²	@	£700		£36,849,000
Food Stores					
50,000	m ²	@	£800		£40,000,000
Retail Arcades/Parades					
20,000	m ²	@	£1,500		£30,000,000

External Works

Site Area: 22,000 - 155,500
66,500 m² @ £150 £9,975,000

Site Preparation, Enabling Works

22.2 ha @ £600,000 £13,320,000

TOTAL TO SUMMARY £161,841,000

**NORWICH GROWTH AREA
INDICATIVE CONSTRUCTION COST ESTIMATE
SCENARIO**



Project No. JWN

Issued : September 2007

Economic and Retail Infrastructure Requirements

Strategic: Key Infrastructure Works

£

Broadland Business Park (25.8 ha)

Development of trunk road (A47) 6,000,000

Extra: Connection to Northern Distributor Road 2,500,000

Longwater (28.1 ha)

Major junction improvement requirements at the A47 2,000,000

Electrical supply to the site 4,000,000

Norwich Research Park (35 ha)

General infrastructure works 7,000,000

Deal Ground and Utilities Sites (2 sites)

Roads, bridges, utilities, flood defences decontamination 17,500,000

TOTAL TO SUMMARY £ 39,000,000

**NORWICH GROWTH AREA
INDICATIVE CONSTRUCTION COST ESTIMATE
SCENARIO**



Project No. JWN

Issued : September 2007

	<u>Required by 2021</u> (37,612 dwellings)	<u>Required by 2031</u> (56,662 dwellings)
	<u>£m</u>	<u>£m</u>
<u>Mains Services/Utilities</u>		
Technological Modifications to Whittingham STW		inc
Doubling Capacity of Rockheath STW		inc
MBR Treatment Plant to deal with Phosphorous Removal		
say	10.000	
Water Main		inc
Generally: All Services		
Electricity, gas, water, waste:	64.600	
All as attached build up		
TOTAL TO OVERALL SUMMARY	<u>74.600</u>	
Cost current as at September 2007 price base date	<u>74.600</u>	

**NORWICH GROWTH AREA
INDICATIVE CONSTRUCTION COST ESTIMATE
SCENARIO**



Project No. JWN

Issued : September 2007

Electricity

Housing: Broadland:	upgrade requirements to substation	£2m
	new circuits from grid station	£1m
	new grid station	£5m
South Norfolk (1):	new sub-station	£2m
	upgrade grid station	£2m
South Norfolk (2):	new grid station	£5m
	new primary sub-station	£2m
Employment	Provision only	£5m
		£24m

Gas

Broadland (1)	-	-				
Broadland (2)	<table border="0" style="display: inline-table; vertical-align: middle;"> <tr> <td style="padding-right: 10px;">10 km of main</td> <td rowspan="2" style="font-size: 2em; vertical-align: middle;">}</td> <td rowspan="2" style="padding-left: 10px;">17,000m @ £300</td> </tr> <tr> <td>7km of medium pressure</td> </tr> </table>	10 km of main	}	17,000m @ £300	7km of medium pressure	5.10m
10 km of main	}	17,000m @ £300				
7km of medium pressure						
	Additional reinforcement of grid	2.5m				
South Norfolk (2)	-	-				
Employment	Reinforcements to 2 employment sites	3.0m				
		£10.60m				

Water

Unknown	Provision only	£10.00m
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Waste Water

Broadland (1)	Upgrade existing	£5m
South Norfolk (1)	Upgrade existing	£5m
South Norfolk (2)	Upgrade	£5m
Employment	Provision only	£5m
		£20m

TOTAL TO OVERALL SUMMARY	64.600
Cost current as at September 2007 price base date	64.600

**NORWICH GROWTH AREA
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SCENARIO**



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	<u>£m</u>	<u>£m</u>
<u>Social Infrastructure Demand - Overall Summary</u>		
Education	81.050	
Health	6.800	
Leisure	76.250	
Community	5.747	
Open Space	58.636	
Essential/Emergency Services	-	
	<hr/>	<hr/>
TOTAL TO OVERALL SUMMARY	228.483	
Cost current as at September 2007 price base date	<hr/> <hr/>	<hr/> <hr/>

**NORWICH GROWTH AREA
INDICATIVE CONSTRUCTION COST ESTIMATE
SCENARIO**



Project No. JWN

Issued : September 2007

					<u>Required by 2021</u> (37,612 dwellings)	<u>Required by 2031</u> (56,662 dwellings)
					<u>£m</u>	<u>£m</u>
<u>Education</u>						
<u>Early Years Places</u>						
Provision for 3 No Facilities	3	No	@	£2m	6.00	
<u>Primary Schools</u>						
Expansion of 1 No Primary School					2.75	
New Primary School	2	No	@	£4.5m	9.00	
					11.75	
<u>Secondary Schools</u>						
New Extended School	2	No	@	£30m	60.00	
Library	Item				1.50	
Community Centre	1,000	m ²	@	£1,800	1.80	
					63.30	
TOTAL TO OVERALL SUMMARY					81.05	
Cost current as at September 2007 price base date					81.05	

**NORWICH GROWTH AREA
INDICATIVE CONSTRUCTION COST ESTIMATE
SCENARIO**



Project No. JWN

Issued : September 2007

					<u>Required by 2021</u> (37,612 dwellings)	<u>Required by 2031</u> (56,662 dwellings)
					<u>£m</u>	<u>£m</u>
<u>Health</u>						
<u>GPs</u>						
New Small PCC	1	No	@	£1.90m	1.900	
New Large PCC	1	No	@	£3.50m	3.500	
Small Surgery	4	No	@	£350k	1.400	
					<u>6.800</u>	
<u>Dentists</u>						
Included						-
<u>Acute Hospital Bed (125 Beds)</u>						
See elsewhere						-
<u>Other Hospital Bed</u>						
Mental Health (see elsewhere)						-
TOTAL TO OVERALL SUMMARY					6.800	
Cost current as at September 2007 price base date					6.800	

**NORWICH GROWTH AREA
INDICATIVE CONSTRUCTION COST ESTIMATE
SCENARIO**



Project No. JWN

Issued : September 2007

				<u>Required by 2021</u> (37,612 dwellings)	<u>Required by 2031</u> (56,662 dwellings)
				<u>£m</u>	<u>£m</u>
<u>Leisure</u>					
<u>Four-Lane Swimming Pools</u>					
13	No	@	£3.25m	42.250	
<u>Four-Court Sports Centres</u>					
17	No	@	£2m	34.000	
TOTAL TO OVERALL SUMMARY				<u>76.250</u>	
Cost current as at September 2007 price base date				<u><u>76.250</u></u>	

**NORWICH GROWTH AREA
INDICATIVE CONSTRUCTION COST ESTIMATE
SCENARIO**



Project No. JWN

Issued : September 2007

				<u>Required by 2021</u> (37,612 dwellings)	<u>Required by 2031</u> (56,662 dwellings)
				<u>£m</u>	<u>£m</u>
<u>Community</u>					
<u>Community Centre/Hall Space</u>					
2155	m ²	@	£1,800	3.879	
<u>Library Space</u>					
934	m ²	@	£2,000	1.868	
TOTAL TO OVERALL SUMMARY				<u>5.747</u>	
Cost current as at September 2007 price base date				<u><u>5.747</u></u>	

**NORWICH GROWTH AREA
INDICATIVE CONSTRUCTION COST ESTIMATE
SCENARIO**



Project No. JWN

Issued : September 2007

		<u>Required by 2021</u> (37,612 dwellings)		<u>Required by 2031</u> (56,662 dwellings)	
		<u>£m</u>		<u>£m</u>	
<u>Open Space</u>					
<u>Allotments (18.4 ha)</u>					
<u>Typical Facility: 2 Hectares</u>					
Perimeter fence/hedge	565m @ £200	£113,000			
Pathways	670m @ £100	<u>£67,000</u>			
		<u>£180,000</u>		or £90,000/ha	
18.4	ha	@	£90,000	1.656	
 <u>Informal and Formal Outdoor Space</u>					
Say	Informal	£60/m ²	@ 60%	36	}
	Formal	£150/m ²	@ 25%	38	
	Hard/paved	£300/m ²	@ 15%	45	
	£119 say £120/m ²				
	334,000	@	£120	40.080	
 <u>Children's Playspace (13.6 ha)</u>					
<u>Typical Facility: 1 Hectare</u>		£/m²			
		Hard 25% @ 150 - 38			
		Soft 50% @ 60 - 30			
		Enclosed 25% @ 250 - 62			
		<u>130 /m² or £1.30m/ha</u>			
13	No (1 ha each)	@	£1.30m	16.900	
 <u>Total Open Space 65.4 Ha</u>					
TOTAL TO OVERALL SUMMARY				<u>58.636</u>	
Cost current as at September 2007 price base date				<u><u>58.636</u></u>	

NORWICH GROWTH AREA
INDICATIVE CONSTRUCTION COST ESTIMATE
SCENARIO



Project No. JWN

Issued : September 2007

	<u>Required by 2021</u> (37,612 dwellings)	<u>Required by 2031</u> (56,662 dwellings)
	<u>£m</u>	<u>£m</u>
<u>Essential/Emergency Services</u>		
<u>Police Officers</u>		
See elsewhere		
<u>Fire Stations</u>		
See elsewhere		
<u>Total Ambulance Costs per Annum</u>		
See elsewhere - nil		
	_____	_____
TOTAL TO OVERALL SUMMARY		
Cost current as at September 2007 price base date	=====	=====

Appendix - I

NORWICH GROWTH AND INFRASTRUCTURE DELIVERY MODEL – SCREEN SHOTS

Norwich Infrastructure Delivery Model

Model Version	Version 1
Developed by	EDAW
Issued to	Greater Norwich Development Partnership
Issued on	Oct-07

Section	Section Contents	Description
1	Infrastructure Delivery	
1a	Infrastructure Delivery Summary	Summarises strategic and local infrastructure costs, potential public and private funding sources, land value capture and funding gap to 2021
1b	Infrastructure Cost (%)	Identifies total strategic and local infrastructure costs by type and phased demand of funding (%)
1c	Actual Infrastructure Cost (£)	Identifies actual strategic and local infrastructure costs by type and phased demand of funding (£)
1d	Strategic Funding Sources	Identifies public and private funding sources for strategic infrastructure and potential phased supply (£)
1e	Land Value Capture	Identifies potential land value capture to 2021
1f	Output Tables 1	Output Tables showing cost analysis
1g	Output Tables 2	Output Tables showing funding requirement
1h	Phasing Chart	Bar Chart showing phasing of infrastructure demand and priority level
2	Housing Trajectory	
2a	Trajectory Summary	Summarises housing delivery to 2021 and follows plan, monitor and manage approach
2b	Existing Completions	Identifies existing completions across each district
2c	Housing Commitments	Identifies phased delivery of housing commitments across each district
2d	Urban Capacity & Other Strategic Sites	Identifies phased delivery of urban capacity & other strategic sites across each district
2e	Growth Scenarios	Identifies phased delivery of growth scenarios across each district
2f	Windfall Assumption	Identifies windfall assumptions
2g	Growth Target 2021 - 2031	Summarises housing delivery from 2021 to 2031 and follows plan, monitor and manage approach
3	Housing Trajectory Charts	
3a	Plan and Manage, Scenario 1	Charts Housing Trajectory data to 2021, showing Plan and Manage lines for Scenario 1
3b	Monitor, Scenario 1	Charts Housing Trajectory data to 2021, showing Monitor line for Scenario 1
3c	Plan and Manage, Scenario 2	Charts Housing Trajectory data to 2021, showing Plan and Manage lines for Scenario 1
3d	Monitor, Scenario 2	Charts Housing Trajectory data to 2021, showing Monitor line for Scenario 1

NOTE:

Only information within yellow tabs can be updated manually. All other information updates automatically.

Norwich Infrastructure Study Cost / Income Analysis

Note: Only information within yellow cells can be updated manually. All other information updates automatically.

STRATEGIC INFRASTRUCTURE PROJECTS				2001/2	2002/3	2003/4	2004/5	2005/6	2006/7	2007/8	2008/9	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
INFRASTRUCTURE COST ANALYSIS - %																							
Strategic Infrastructure	Priority (1 = High)	Source	Cost	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Transport Initiatives																							
Enhanced Bus Fleet	2	NATS	£25,000,000	100%						0.200	20%	20%	20%	20%									
Development of Bus Priority Schemes	2	NATS	£13,444,000	100%						20%	20%	20%	20%	20%									
Development of Walking and Cycling Strategies - Outer Areas	3	NATS	£22,000,000	100%						20%	20%	20%	20%	20%									
Norwich Southern Bypass Junctions	2	POD	£20,250,000	0%																			
Dualing A47 Blofield to North Burlingham	3	POD	£28,000,000	100%									14%	14%	14%	14%	14%	14%	14%				
Development of Northern Distributor Road	1	POD	£106,000,000	100%							20%	20%	20%	20%	20%								
Improvements to A47 Longwater Junction	2	POD	£12,000,000	100%									25%	25%	25%								
Development of A140 Long Stratton Bypass	2	POD	£26,000,000	0%																			
Support for A47 Postwick Junction Improvements	2	POD	£6,000,000	100%									25%	25%	25%	25%							
Improvements at Norwich Airport	2	POD	£5,000,000	0%																			
Strategic Rail Improvements	2	POD	£32,500,000	0%																			
Local Rail Improvements	2	POD	£15,000,000	0%																			
City Centre Spatial Strategy Transport Recommendations	3	POD	£11,365,000	100%						20%	20%	20%	20%	20%									
Implementation of Bus Rapid Transit System	3	PBA	£65,000,000	100%										10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Light Rapid Transit Review	3	PBA	£50,000,000	100%										33%	33%	33%							
Park and Ride expansion	2	PBA	£9,000,000	100%						7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%
			£396,809,000																				
Social Infrastructure Works																							
74 New Acute beds	3	EDAW	£1,480,000	100%							7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%
24 New Mental Health Beds	3	EDAW	£2,880,000	100%							7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%
Police Officers (5 x New Safer Neighbourhood Teams)	3	EDAW	£10,000,000	100%									13%	13%	13%	13%	13%	13%	13%	13%	13%	13%	13%
1 x New Fire Station	3	EDAW	£8,000,000	100%																	50%	50%	
			£22,360,000																				
Green Infrastructure																							
Green Infrastructure Study	3	SBA	£11,465,000	100%							19%	19%	19%	19%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Mapping Accessible Green Networks		SBA	£150,000	100%							25%	25%	25%	25%									
Children's Play Study		SBA	£30,000	100%							25%	25%	25%	25%									
Green Grid Strategy for Norwich		SBA	£100,000	100%							25%	25%	25%	25%									
Norwich Crossings and Bridges - Whittingham (Phase 1)		SBA	£1,750,000	100%							25%	25%	25%	25%									
Norwich Crossings and Bridges - Whittingham (Phase 2)		SBA	£1,750,000	100%							25%	25%	25%	25%	10%	10%	10%	10%	10%	10%	10%	10%	10%
The Wensum River Parkway - Norwich		SBA	£50,000	100%							25%	25%	25%	25%									
The South Norwich Cycle Loop		SBA	£50,000	100%							25%	25%	25%	25%									
City Centre Community Gardens		SBA	£200,000	100%							25%	25%	25%	25%									
Mulbarton - Sawston Green Way		SBA	£500,000	100%										10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Promoting Use of Rivers for Transport		SBA	£40,000	100%										10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Norwich Fringes Wooded Ridge Project		SBA	£250,000	100%							25%	25%	25%	25%									
Carlton Park		SBA	£285,000	100%							25%	25%	25%	25%									
Norfolk & Norwich Hospital Health Woods		SBA	£100,000	100%							25%	25%	25%	25%									
Norwich Green Gateways Project		SBA	£2,000,000	100%							25%	25%	25%	25%									
Whittington County Park Eastern Cycle Links		SBA	£100,000	100%							25%	25%	25%	25%									
The Yare River Parkway (Phase 1)		SBA	£50,000	100%							25%	25%	25%	25%									
The Yare River Parkway (Phase 2)		SBA	£2,000,000	100%							25%	25%	25%	25%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Mousehold Heath and Northeast Norwich Heathland		SBA	£1,000,000	100%							25%	25%	25%	25%									
South West Norwich Ecological Networks - Phase 1		SBA	£200,000	100%							25%	25%	25%	25%									
South West Norwich Ecological Networks - Phase 2		SBA	£300,000	100%										10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Yare and Wensum Valley Link		SBA	£200,000	100%							25%	25%	25%	25%									
Lakonham Way Enhancements		SBA	£500,000	100%							25%	25%	25%	25%									
			£11,465,000																				
Economic Development																							
Deal & Utilities Site	2	EDAW	£17,500,000	100%							25%	25%	25%	25%									
Norwich Research Park	3	EDAW	£7,000,000	100%							25%	25%	25%	25%									
Northern City Centre/Anglian Square	2	EDAW	£1,500,000	100%							25%	25%	25%	25%									
Norwich City Airport (Feasibility Study)	3	EDAW	£80,000	100%							50%	50%											
Longwater Employment Area	2	EDAW	£11,000,000	100%									25%	25%	25%	25%							
Further Key Educational Establishment FEHE	3	EDAW	£18,000,000	100%										33%	33%	33%							
Job Growth Strategy	3	EDAW	£10,000,000	100%							10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
			£65,080,000																				
Main Services / Utilities																							
Electricity	3	PBA	£46,833,000	100%										5%	20%	20%	20%	20%	20%	15%			
Gas	2	PBA	£11,000,000	100%										20%	20%	10%	10%	10%	10%				
Water	2	PBA	£14,000,000	100%										20%	20%	20%	20%	20%	20%				
Waste Water	3	PBA	£15,000,000	100%										25%	25%	25%	25%						
			£86,833,000																				
TOTAL STRATEGIC INFRASTRUCTURE COSTS			£582,687,000																				
LOCAL INFRASTRUCTURE PROJECTS																							
INFRASTRUCTURE COST ANALYSIS - %				2001/2	2002/3	2003/4	2004/5	2005/6	2006/7	2007/8	2008/9	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21

Norwich Infrastructure Study Cost / Income Analysis

Note: Only information within yellow cells can be updated manually. All other information updates automatically.

GROWTH SCENARIO ONE																						
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Land Value Capture																						
£25,000	Land Value Capture per dwelling																					
38%	Affordable Housing Provision																					
	Past Completions	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	
	Commitments	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	
	Urban Capacity	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£7,548,500	£7,889,500	£10,989,500	£9,811,500	£9,424,000	£7,874,000	£7,874,000	£6,324,000	£6,324,000	£74,059,000
	Growth Scenario One	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£3,875,000	£7,750,000	£10,075,000	£11,625,000	£11,625,000	£11,625,000	£11,625,000	£11,625,000	£91,450,000	
	Windfall Assumptions	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	
	Total Land Value Capture Income (Annual)	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£0	£11,423,500	£15,639,500	£21,064,500	£21,436,500	£21,049,000	£19,499,000	£19,499,000	£17,949,000	£165,509,000	

Strategic Infrastructure Requirement	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

Local Infrastructure Requirement	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 Infrastructure Delivery Costs

Cost / Income Analysis (Annual)		(£ 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 Work	£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 L	-£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 8.1 - Summary Funding Position

Norwich Infrastructure Phasing

STRATEGIC INFRASTRUCTURE PROJECTS														
<i>Infrastructure Phasing</i>	2007/8	2008/9	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
Strategic Infrastructure	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Transport Initiatives														
Enhanced Bus Fleet	Orange	Orange	Orange	Orange	Orange									
Development of Bus Priority Schemes	Orange	Orange	Orange	Orange	Orange									
Development of Walking and Cycling Strategies - Outer Areas	Green	Green	Green	Green	Green									
Norwich Southern Bypass Junctions														
Dualling A47 Blofield to North Burlingham			Green	Green	Green	Green	Green	Green	Green	Green				
Development of Northern Distributor Road		Red	Red	Red	Red	Red								
Improvements to A47 Longwater Junction		Orange	Orange	Orange	Orange									
Development of A140 Long Stratton Bypass														
Support for A47 Postwick Junction Improvements			Orange	Orange	Orange	Orange								
Improvements at Norwich Airport														
Strategic Rail Improvements														
Local Rail Improvements														
City Centre Spatial Strategy Transport Recommendations	Green	Green	Green	Green	Green									
Implementation of Bus Rapid Transit System					Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Light Rapid Transit Review					Green	Green	Green							
Park and Ride expansion	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange
Social Infrastructure Works														
74 New Acute beds	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
24 New Mental Health Beds	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Police Officers (5 x New Safer Neighbourhood Teams)			Green			Green			Green					
1 x New Fire Station												Green	Green	
Green Infrastructure														
Green Infrastructure Study	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Economic Development														
Deal & Utilities Site	Orange	Orange	Orange	Orange	Orange									
Norwich Research Park	Green	Green	Green	Green	Green									
Northern City Centre/Anglian Square	Orange	Orange	Orange	Orange	Orange									
Norwich City Airport (Feasibility Study)	Green	Green	Green											
Longwater Employment Area		Orange	Orange	Orange	Orange	Orange								
Further Key Educational Establishment FE/HE					Green	Green	Green							
Job Growth Strategy	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Main Services / Utilities														
Electricity					Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Gas		Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange
Water		Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange
Waste Water	Green	Green	Green	Green	Green									
LOCAL INFRASTRUCTURE PROJECTS														

