Bromley Infrastructure Delivery Plan – Update

Final Report

Project Number VN50015 | July 2012

SKM COLIN BUCHANAN

Bromley Infrastructure Delivery Plan

Document Title:	**Bromley Infrastructure Delivery Plan**
Version:	Final Report
Date:	July 2012
Prepared by:	Roland Brass, Jon Hale, Shaun Letchford, John Pounder
Approved by:	Hugh Roberts

SKM Colin Buchanan

New City Court
20 St Thomas Street
London
SE1 9RS

Tel: +44 (0) 207 939 6100
Fax: +44 (0) 207 939 6103
Web: www.skmcolinbuchanan.com

Document history and status

Revision	Date issued	Reviewed by	Approved by	Date approved	Revision type
1.1	26/03/12	JP	JP	26/03/12	Draft
1.2	16/04/12	JP	JP	16/04/12	Draft
1.3	30/04/12	HR	JP		Draft
1.4	31/05/12	JP	JP		Draft
1.5	01/06/12	JH	JP	01/06/12	Pre Final
1.6	23/06/12	HR	HR	26/06/12	Final
1.7	23/08/12	Jp	JP	23/08/12	Revised Final

Distribution of copies

Revision	Copy no	Quantity	Issued to
1.5			Client (London Borough of Bromley)
1.6			LB Bromley
1.7			LB Bromley

Printed:	23 August 2012
Last saved:	23 August 2012 11:15 AM
File name:	VN50015_Bromley IDP Draft Report
Author:	Roland Brass, Jon Hale, Sean Letchford
Project manager:	John Pounder
Name of organisation:	London Borough of Bromley
Name of project:	Bromley Infrastructure Delivery Plan
Name of document:	Final Report
Document version:	1.7
Project number:	VN50015

Contents

1 Introduction 1
1.1 Overview 1
1.2 Methodology 1
2 Transport 5
2.2 Baseline - Roads 5
2.3 Baseline - Public Transport 7
2.4 Implications of Future Growth 13
2.5 Planned and Committed Investment 14
2.6 Implications for the Local Plan 15
3 Education 18
3.1 Introduction 18
3.2 Baseline 18
3.3 Implications for Future Growth 24
3.4 Planned and Committed Investment 26
3.5 Implications for the Local Plan 28
4 Primary Healthcare 29
4.1 Introduction 29
4.2 Baseline 29
4.3 Implications of Future Growth 32
4.4 Planned and Committed Investment 34
4.5 Implications for the Local Plan 35
5 Utilities 36
5.2 Electrical power supply 36
5.3 Gas 37
5.4 Sewerage and Sewage Treatment 38
5.5 Water Supply 38
5.6 Flooding 39
5.7 Implications for the Local Plan 40
6 Other Infrastructure 41
6.1 General Observations 41
6.2 Specific Issues 42
7 Key Implications for the Draft Plan 43
7.2 Next Steps 44

Appendix 1: Briefing Note 45
Appendix 2: Infrastructure Schedules 52
Appendix 3: References 62

Figures and Tables

Figure 1.1: Housing Anticipated in the Bromley Housing Trajectory 2012/13 to 2016/17 and Town Centre AAP....4
Figure 2.1: Average weekday AM peak road network delay 2009/10....6
Figure 2.2: Public Transport Accessibility Levels (PTAL) in Bromley, 2010....8
Figure 2.3: National Rail station usage in Bromley (2009/10)....9
Figure 2.4: National Rail station usage in the TfL South sub-region by borough (2009/10)....10
Table 2.1: Top 10 busiest stations in the TfL South sub-region (2009/10)....10
Figure 2.5: Morning Peak Over-crowding on the Rail Network in South London....11
Figure 2.6: Highway congestion in London, 2006 and 2031....14
Figure 2.7: Forecast Rail Crowding in London by 2026....16
Figure 3.1: Location of Primary Schools....20
Figure 3.2: Increase in Pupils of Primary School Age, 2010/11 to 2015/16....22
Figure 3.3: Location of Secondary Schools / Colleges....23
Figure 3.4: School age population projections, LB Bromley....25
Figure 4.1: Location and size of GP Surgeries....30
Table 1: Transport Infrastructure Schedule – Roads....53
Table 2: Transport Infrastructure Schedule – Walking, Cycling and Public Realm....55
Table 3: Transport Infrastructure Schedule – Rail....57
Table 4: Education Infrastructure Schedule....60
Table 5: Primary Healthcare Infrastructure Schedule....61
Table 6: Utilities Infrastructure Schedule....61

1 Introduction

1.1 Overview

1.1.1 SKM Colin Buchanan (SKM CB) was commissioned by the London Borough of Bromley (LBB) to provide advice on, and assistance with, the preparation of an *Infrastructure Delivery Plan (IDP*). The objective of the study was to provide a selective update to the working draft IDP which was prepared by the Council in late 2011 / early 2012.

1.1.2 The scope of this assessment was limited to the following infrastructure types:

- Transport – road, rail and public transport (see chapter 2);
- Education – Early Years, primary, and secondary schools (see chapter 3);
- Primary healthcare (see chapter 4); and,
- Utilities – electricity, gas, waste water treatment, water supply and flood defence (see chapter 5).

1.1.3 The study has critically assessed infrastructure requirements taking into account the implications of potential future development and forecast demographic change in order to help inform the preparation of the emerging Local Plan for the Borough. This report provides some baseline capacity data where readily available from published sources but does not provide comprehensive analyses of these baselines and datasets to establish existing infrastructure deficits provided.

1.1.4 Further work required on other types of infrastructure requirements (for example, green infrastructure) to inform the emerging IDP is outside the scope of this study, although we have made some observations on priorities in chapter 6.

1.2 Methodology

1.2.1 The infrastructure assessment required three main tasks:

1.2.2 **Task1: Desk-based review of evidence and business plans** provided by the Council enabled an initial understanding of key issues prior to liaison with service providers.

1.2.3 **Task 2: Stakeholder interviews** were undertaken with each service provider to develop an understanding of the range of issues which will impact on infrastructure delivery as a result of future development and growth. Key issues addressed relate to capacity of services, planned schemes and other factors affecting the ability of services to meet the needs of existing and future residents. Each service provider was sent a copy of the Briefing Note which is set out in Appendix 1. This note explains that Bromley is required to accommodate, on average, 500 new homes per annum (as set out in the *London Plan, 2011*). It also includes information on committed and planned development, especially housing distribution in Bromley town centre and the rest of the Borough, as well as

anticipated demographic change over the Plan period. A map was included in the Briefing Note illustrating anticipated housing development. This has subsequently been updated to include an additional 305 dwellings following receipt of updated information from LBB. The revised version is Figure 1.1 overleaf.

1.2.4 The following service providers were consulted in March 2012:

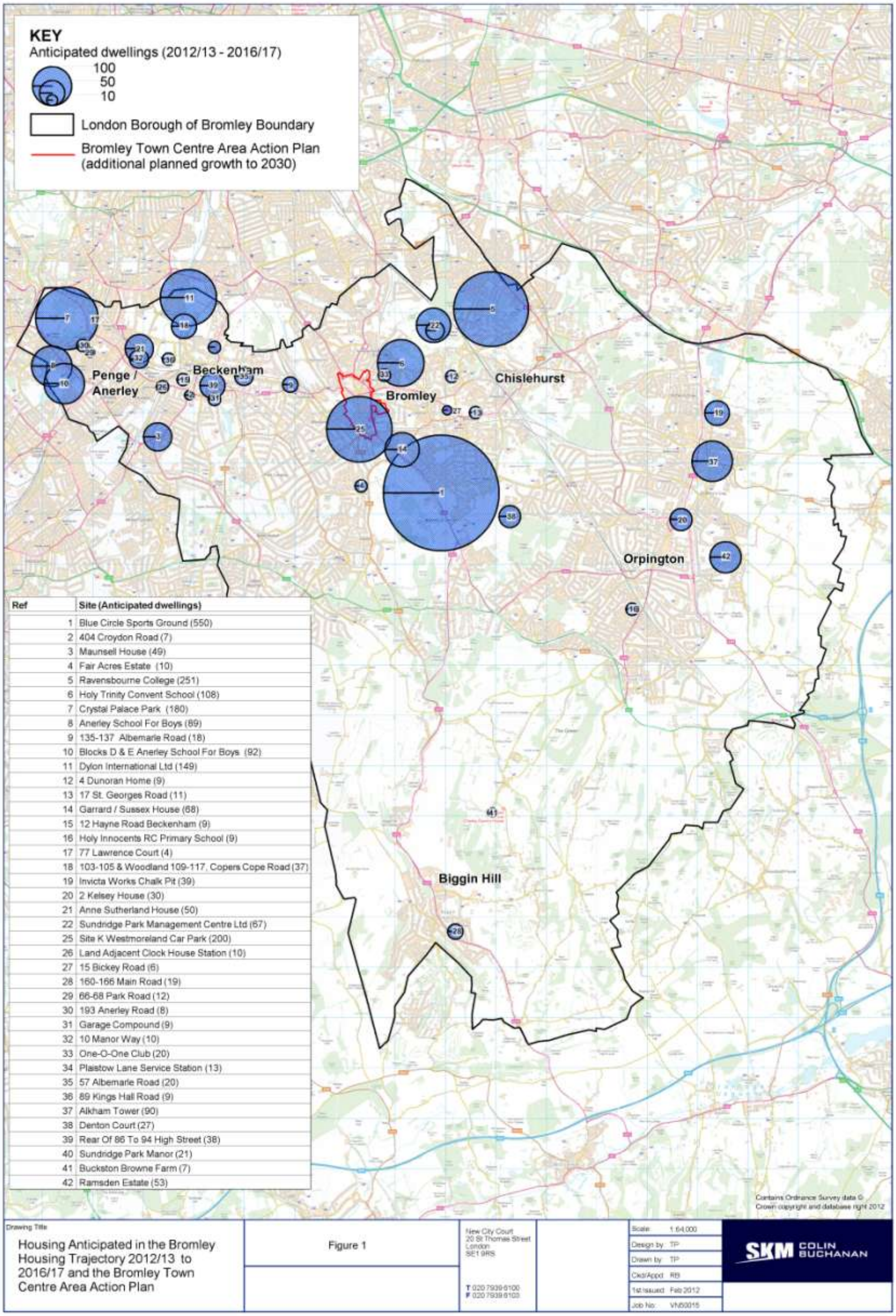
- London Borough of Bromley Transport Planning Team – Iain Forbes (Head of Transport Strategy) and Chris Cole (Transport Project and Programme Manager);
- Network Rail – David Hignett (South-East Strategy Team);
- Transport for London – Peter McBride (South Region Borough Programme Manager);
- London Borough of Bromley Children and Young People Service – Mike Barnes (Head of Access and Admissions) Nina Newell (Early Years and Childcare Services Manager) and Max Winters (Principal Research & Statistics Officer);
- NHS Bromley – Jill Webb (Assistant Director of Primary Care);
- National Grid – Ross McGhin and Paul Cudby;
- UK Power Networks – Glyn Jones;
- Southern Gas Networks – network planning department; and,
- Thames Water – Carmelle Bell.

1.2.5 **Task 3: Updating the IDP**. A consistent approach has been adopted for the assessment and presentation of each infrastructure type in the IDP as follows:

- **Baseline Information** sets out existing conditions of services including existing capacities, any gaps in provision and explains how services are planned. This is based on a review of documentation provided (see Appendix 3).
- **Implications of Future Growth** considers the impact that housing and population growth is expected to have on services. Critical infrastructure requirements are identified, in addition to main pressure points and any spatial variations in service capacity and delivery.
- **Planned and Committed Investment** relates to capital investment schemes which are programmed to take place and may impact upon overall service delivery by, for example, mitigating current and projected future shortfalls in provision. These schemes are set out in a supporting appendix, Infrastructure Schedules (Appendix 2) which contains details relating to: project description; status (aspirational, planned or committed); rationale; funding; cost; delivery; risks, and timeframe.
- **Implications for the Local Plan** represents key findings from the assessment and important factors to consider in the preparation of the Council's emerging Local Plan.

1.2.6 Chapters 2 to 5 of this report individually address each of the four infrastructure categories which fall within the scope of the study. Chapter 6 provides a short commentary on key issues to be addressed in taking forward the remainder of the IDP, and Chapter 7 sets out key findings by summarising the implications for the emerging Local Plan. The Appendices include the stakeholder Briefing Note, draft infrastructure schedules and a list of reference documents.

Figure 1.1: Housing Anticipated in the Bromley Housing Trajectory 2012/13 to 2016/17 and Town Centre AAP



Ref	Site (Anticipated dwellings)
1	Blue Circle Sports Ground (550)
2	404 Croydon Road (7)
3	Maunsell House (49)
4	Fair Acres Estate (10)
5	Ravensbourne College (251)
6	Holy Trinity Convent School (108)
7	Crystal Palace Park (180)
8	Anerley School For Boys (89)
9	135-137 Albemarle Road (18)
10	Blocks D & E Anerley School For Boys (92)
11	Dylon International Ltd (149)
12	4 Dunoran Home (9)
13	17 St. Georges Road (11)
14	Garrard / Sussex House (68)
15	12 Hayne Road Beckenham (9)
16	Holy Innocents RC Primary School (9)
17	77 Lawrence Court (4)
18	103-105 & Woodland 109-117, Copers Cope Road (37)
19	Invicta Works Chalk Pit (39)
20	2 Kelsey House (30)
21	Anne Sutherland House (50)
22	Sundridge Park Management Centre Ltd (67)
25	Site K Westmoreland Car Park (200)
26	Land Adjacent Clock House Station (10)
27	15 Bickey Road (6)
28	160-166 Main Road (19)
29	66-68 Park Road (12)
30	193 Anerley Road (8)
31	Garage Compound (9)
32	10 Manor Way (10)
33	One-O-One Club (20)
34	Plaistow Lane Service Station (13)
35	57 Albemarle Road (20)
36	89 Kings Hall Road (9)
37	Alkham Tower (90)
38	Denton Court (27)
39	Rear Of 86 To 94 High Street (38)
40	Sundridge Park Manor (21)
41	Buckston Browne Farm (7)
42	Ramsden Estate (53)

Drawing Title: Housing Anticipated in the Bromley Housing Trajectory 2012/13 to 2016/17 and the Bromley Town Centre Area Action Plan

Figure 1

New City Court
20 St Thomas Street
London
SE1 9RS

T 020 7939 6100
F 020 7939 6103

Scale: 1:64,000
Design by: TP
Drawn by: TP
Ckd/Appd: RB
1st issued: Feb 2012
Job No: VN50015

SKM COLIN BUCHANAN

2 Transport

2.1.1 Current transport conditions in the London Borough of Bromley (LBB) have been considered by mode, relating to roads,; and public transport, including rail, trams and buses; together with walking and cycling.

2.2 Baseline - Roads

2.2.1 The current conditions on the road network in LBB are relatively good compared with many other Boroughs in London. The Council's *Local Implementation Plan (LIP2)* document notes that the 2009 Transport for London (TfL) report *'Travel in London – Key Trends and Developments'* indicated that, on average, Bromley had the lowest level of vehicle delay per km on main roads of any London Borough.

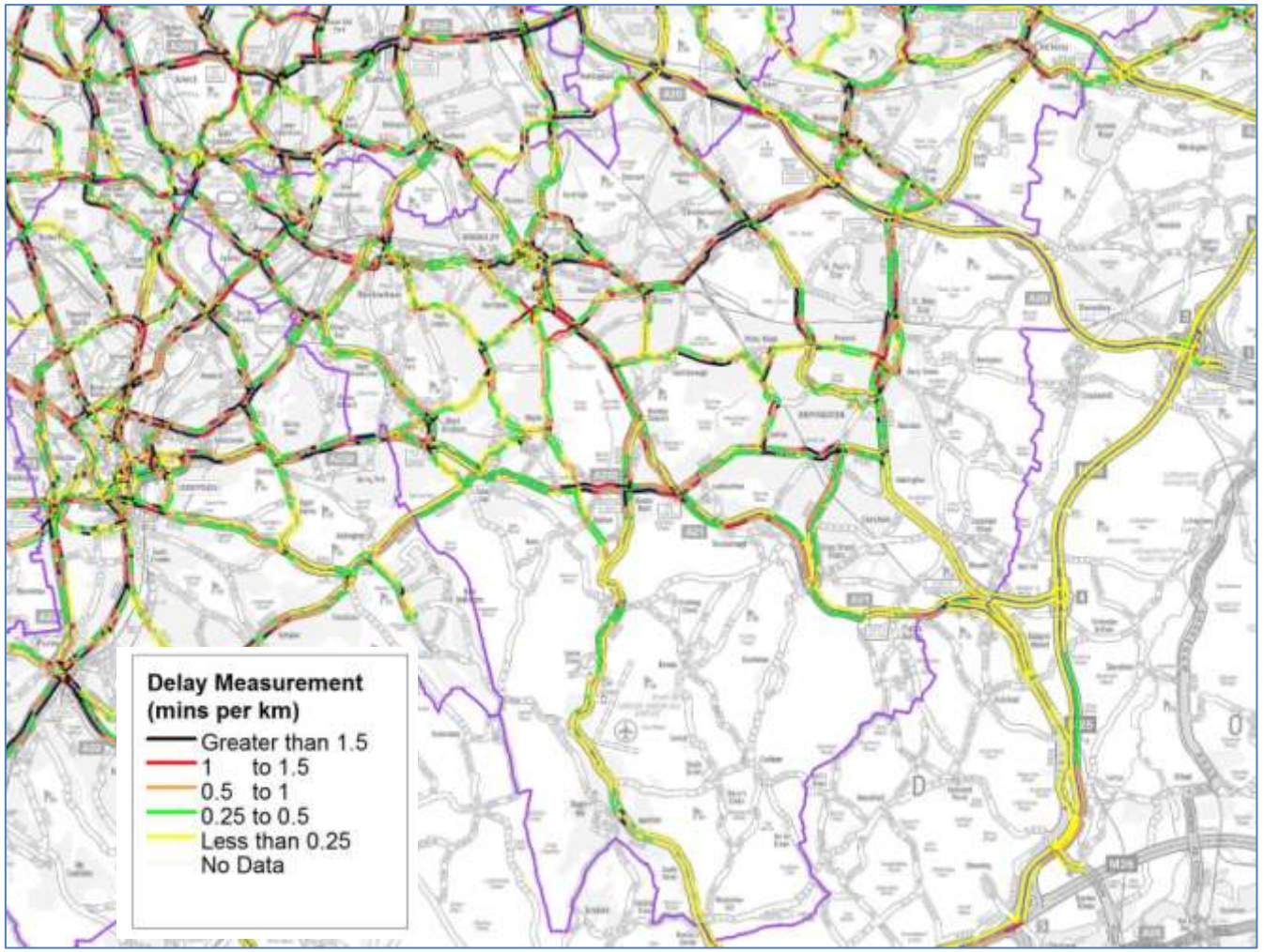
2.2.2 Despite this, there are currently some localised issues with peak traffic congestion associated with work and education trips, focussed particularly on the approach roads into Bromley town centre, including the A21, which is part of the Transport for London Road Network (TLRN) and is managed by TfL.

2.2.3 In addition, Bromley Council commissioned a study undertaken by SKM CB in June 2010 that identified a number of pinch points on the road network that caused traffic congestion issues. The study was commissioned to assist Bromley with its LIP2 bid to TfL for funding during 2011/2 and subsequent years. The following locations were identified as priorities:

- Junctions on the A224 Court Road/Cray Avenue/Sevenoaks Way – effectively the Orpington bypass;
- Junctions on the A222 Widmore Road/Bickley Road/Bromley Road – between Bromley town centre and the A20 Sidcup Bypass;
- Junctions on the A234 Bromley Road/Beckenham Road/Penge High Street – between Bromley town centre and Crystal Palace Park; and,
- A number of additional junctions near Anerley, West Wickham, Petts Wood, Orpington, and Keston.

TfL data indicating average excess delay on the main road network during weekday AM peak periods in 2009/10 is shown in Figure 2.1. Excess delay is measured in minutes per km in excess of unconstrained night-time traffic speeds, and the map shows the worst 'blackspots' (those stretches of road where excess delay exceeds 1.5 minutes per km during the AM peak) on radial routes into Bromley town centre.

Figure 2.1: Average weekday AM peak road network delay 2009/10



Source: Transport for London (data supplied by TrafficMaster)

2.2.4 Despite relatively low levels of traffic congestion, in 2009 Bromley had the ninth highest level of ground transport-generated CO_2 emissions of all 33 London Boroughs. This can be linked in part to the two inter-related factors of a high level of car-ownership and the geographical area of the Borough, (which is the largest in London).

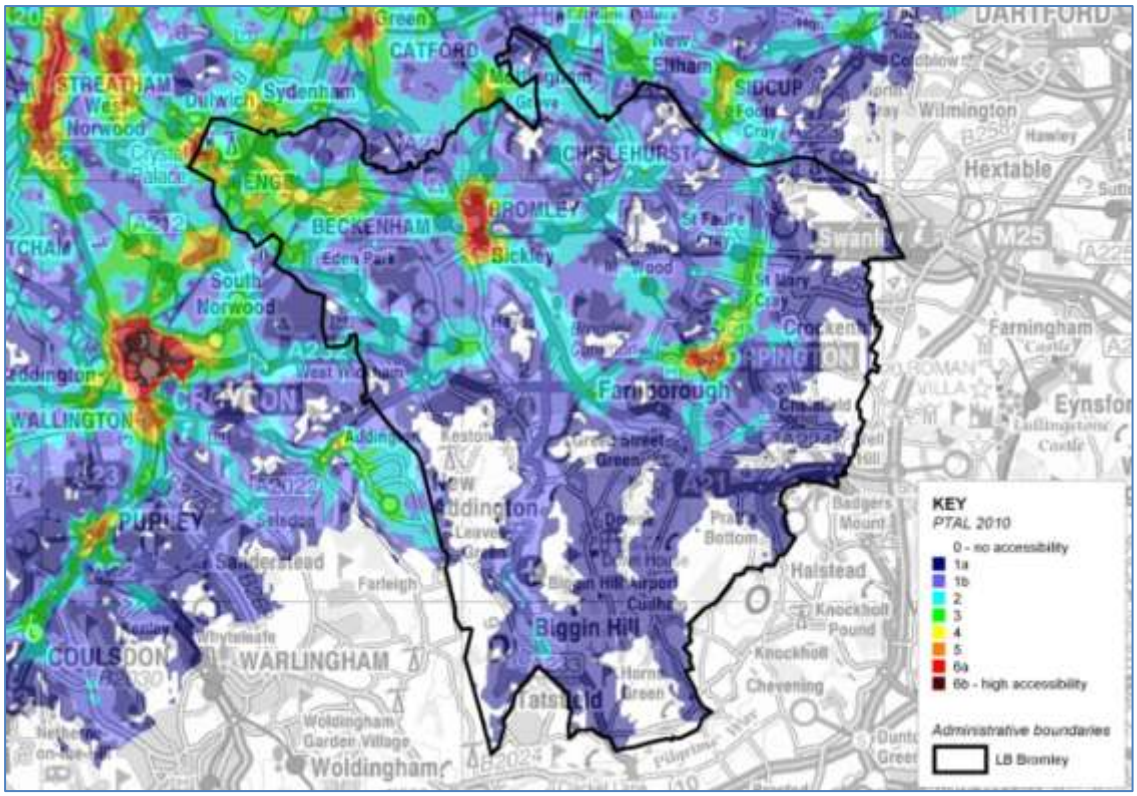
2.2.5 In terms of condition, only 4% of the principal road network in the Borough required consideration for structural repairs in 2010 (the last year for which this national indicator was collected). This was the equal lowest percentage for all London Boroughs; the highest being 17% for LB Camden,

2.3 Baseline - Public Transport

2.3.1 Compared to the rest of London, public transport provision in LBB is relatively poor in terms of frequency of service, and there are a number of areas in the borough which have limited public transport accessibility, although these tend to be the more rural areas in the south and east. Figure 2.2 below indicates that aside from a few accessibility hotspots (Bromley town centre, Orpington and to a lesser extent parts of Penge and Beckenham), most of the Borough has a low level of accessibility to the bus or rail network, and large areas, particularly in the south of the Borough have no accessibility at all. Areas with no accessibility are allocated a PTAL score of 0 and are not shaded on the map shown below[1].

[1] PTAL (Public Transport Accessibility Level) is a measurement of the accessibility of a location to the public transport network, taking into account walk time and service availability.

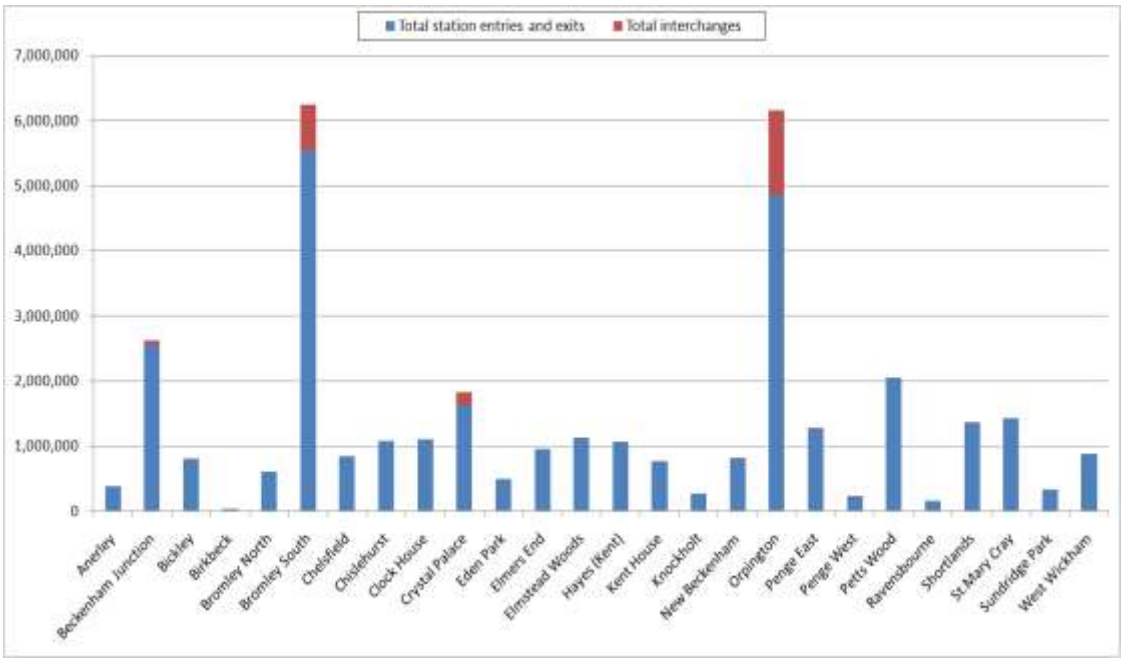
Figure 2.2: Public Transport Accessibility Levels (PTAL) in Bromley, 2010



2.3.2 In terms of rail services, there are 26 national rail stations and five Croydon Tramlink stops in the Borough. Bromley South and Orpington are by far the busiest national rail stations, with the Office of Rail Regulation (ORR) station usage data indicating that there were 5.5m annual entries and exits and an additional 700,000 interchange movements at Bromley South in 2009/10[2]. At Orpington, the comparable figures were 4.9m entries and exits and 1.3m interchange movements. ORR data for all 26 stations in Bromley is illustrated in Figure 2.3 below. The predominance of Bromley South and Orpington can be explained by the frequency of train services at these stations when compared to others in the borough, and the availability of fast services to central London. Both these factors attract rail-heading passengers who may live closer to other stations, and drive to Bromley to board faster services.

[2] ORR station usage data consists of estimates of the total numbers of people who are travelling from or to stations (entries & exits) and interchanging at stations (interchange movements) in England, Scotland and Wales. Station usage data is based on origin-destination matrices derived from a national rail model – MOIRA – used by the rail industry as a planning tool. In addition to ticket sales, estimates of journeys made on zonal products sold by Passenger Transport Executives (PTEs) are included to provide a more complete representation of travel on the national rail network.

Figure 2.3: National Rail station usage in Bromley (2009/10)



2.3.3 In total in 2009/10, there were 32.6m entries and exits, and 2.3m interchange movements at rail stations in Bromley. Figure 2.4 shows comparable totals for the other six boroughs in TfL's South sub-region, indicating that Bromley had the third highest number of rail movements in the sub-region behind Wandsworth and Croydon.

2.3.4 Table 2.1 provides an explanation for this, indicating that Clapham Junction (in Wandsworth) and East Croydon (in Croydon) are the busiest stations in the sub-region by a considerable margin. Bromley South and Orpington were ranked the eighth and ninth busiest stations.

Figure 2.4: National Rail station usage in the TfL South sub-region by borough (2009/10)

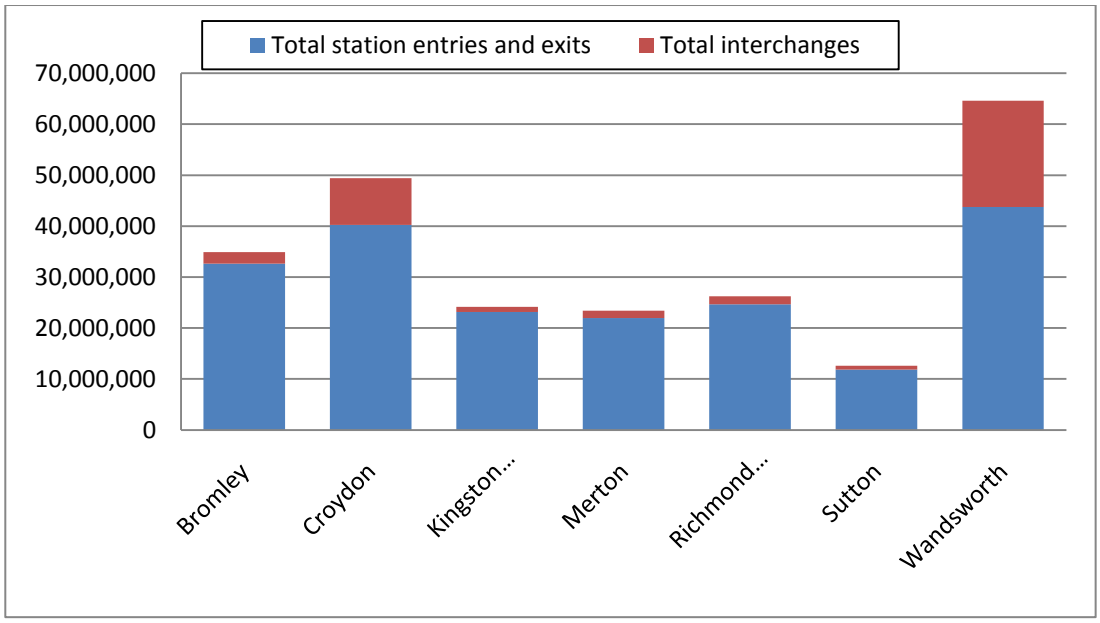


Table 2.1: Top 10 busiest stations in the TfL South sub-region (2009/10)

Rank	Station	Borough	Entries and exits	Interchange movements	All movements
1	Clapham Junction	Wandsworth	17,758,808	20,520,598	38,279,406
2	East Croydon	Croydon	19,881,243	7,120,189	27,001,432
3	Wimbledon	Merton	14,539,490	1,138,544	15,678,034
4	Surbiton	Kingston Upon Thames	8,033,770	936,772	8,970,542
5	Putney	Wandsworth	8,908,578	0	8,908,578
6	Richmond	Richmond Upon Thames	6,661,394	1,016,190	7,677,584
7	Sutton (Surrey)	Sutton	5,687,112	741,451	6,428,563
8	Bromley South	Bromley	5,537,642	704,493	6,242,135
9	Orpington	Bromley	4,867,836	1,292,215	6,160,051
10	Balham	Wandsworth	5,052,242	243,431	5,295,673

2.3.5 In terms of conditions on the current rail network in the Borough, most rail routes in Bromley are relatively good when compared to other areas in London, although frequent over-crowding is evident on certain services, notably the fast services in the morning peak between Bromley South and central London (see Figure 2.5).

Figure 2.5: Morning Peak Over-crowding on the Rail Network in South London

Source: Network Rail RUS for South London, published in March 2008)

2.3.6 Since 2008, a number of improvements have been made to rail services in Bromley, including:

- Services on the Sydenham South Central line, stopping at Penge West and Anerley, have been extended to 12-car capacity;
- Services on the Hayes Line, via Lower Sydenham and New Beckenham, have been extended to 12-car capacity; and,
- Services on the Sevenoaks Line, via Grove Park and Orpington, have been extended to 12-car capacity.

2.3.7 Capacity enhancements on the Sevenoaks line have had some positive benefits in relieving overcrowding on routes coming into Orpington, leaving crowding on fast services through Bromley South as the major current issue with the performance of the rail network in the Borough.

2.3.8 In terms of bus services, there are 61 London Bus routes in Bromley, providing for most of the orbital public transport journeys in the Borough, and some 90% of Bromley's population live within 400m of a bus stop. However, given the relatively large area of the Borough and the high level of private car ownership, the bus remains a poor second to the car for making many journeys.

2.3.9 The Council's Transport Team has flagged a number of particular concerns with regard to the bus network in the Borough, as follows:

- Bus interchange with rail is poor in a number of key locations, including Bromley, Beckenham and Orpington. With the exception of Orpington, there is no dedicated bus drop-off at any rail stations in these locations;
- Current bus-standing facilities in Bromley town centre (particularly around Bromley North station and also in Simpson's Road near Bromley South station) are at capacity and there is limited space within the town centre to accommodate additional standing space – this is a concern for future operations because of the number of services that terminate within the town centre;
- The Princess Royal University Hospital site at Locksbottom near Orpington suffers from poor bus linkages, which are compounded by inadequate parking facilities;
- There are only two direct bus services between Biggin Hill and Bromley town centre, and no direct high frequency services between Biggin Hill and New Addington, which has been raised by residents as a gap in bus network provision; and,
- Bus connections in the rural parts of the Borough are generally poor – for example, Down House (the former home of Charles Darwin that recently applied for World Heritage status) is not well served by buses and has no bus service at all on Sunday.

2.4 Implications of Future Growth

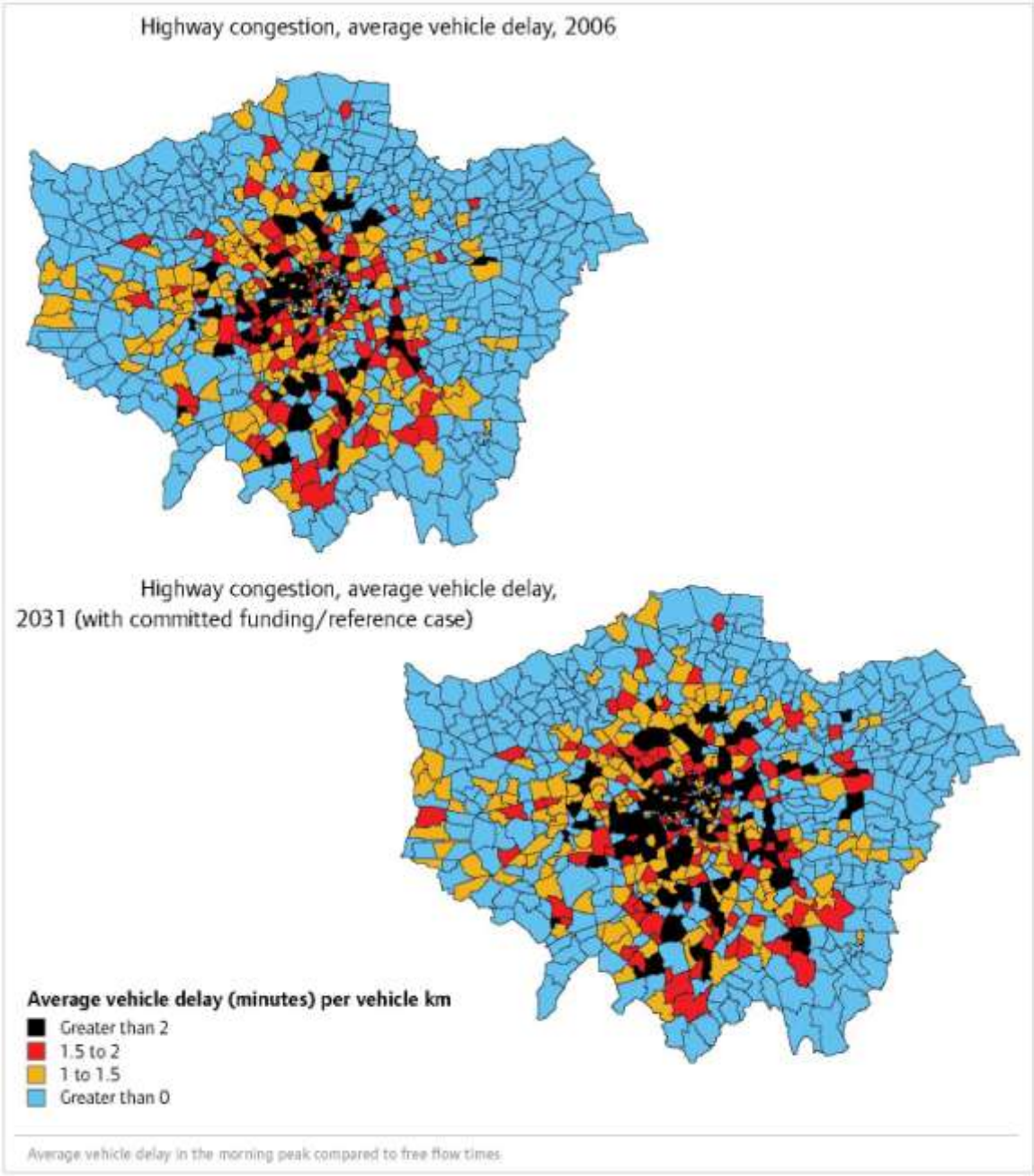
2.4.1 As set out in Appendix 1, Bromley is required to accommodate an average of 500 new homes a year. The distribution of anticipated housing up to 2017 as illustrated in Figure 1.1 above, is split into two broad clusters, around Bromley town centre and Chislehurst, and in the north-west around Crystal Palace and Penge. These locations, combined with the focus of growth in Bromley town centre, mean that the most obvious transport implications for planned future development relate to increasing pressure on the road network and public transport services in Bromley town centre. This is particularly the case taking into account the fact that most of the worst current congestion hotspots on the road and rail networks are focused on the town centre.

2.4.2 Development in the town centre is likely to lead to an increase in demand for car trips on major routes such as the A21 and the A222, and an increase in demand for rail services to and from central London. TfL's *South Sub-Regional Transport Plan* indicates that without further investment in new capacity beyond Network Rail's *High Level Output Specification 1 (HLOS1* – essentially committed schemes up to 2014), the Bromley South to Victoria rail corridor becomes highly stressed by 2031.

2.4.3 Figure 2.6 below (sourced from the Mayor's *Transport Strategy)* indicates forecast traffic congestion across London by 2031 taking into account the impact of TfL's *Business Plan, Crossrail and Network Rail's HLOS1 programme*. As the figure shows, the worst traffic congestion in Bromley is expected to be focussed on the ward covering the town centre area, with excess delays of over 2 minutes per vehicle/ km when compared to unconstrained night-time average speeds.

2.4.4 Pressure on the road network will also increase the likelihood of bus services becoming more delayed and less reliable, which has a knock-on impact for accessibility to the town centre by public transport.

Figure 2.6: Highway congestion in London, 2006 and 2031



Source: Mayor of London's Transport Strategy (2010)

2.5 Planned and Committed Investment

2.5.1 Infrastructure schedules showing committed, planned, and aspirational schemes for road, walking, cycling and public realm, and rail are set out in Appendix 2. In addition to these, there are also a range of ongoing programmes in Bromley that are primarily funded through the Borough's LIP2 allocation from TfL, including:

- Road, bridge, cycle route and footway maintenance;

- School and Workplace Travel Planning support and activities;
- Road Safety Education;
- Cycle training and promotion - range of schemes to provide training and promote cycle safety for children and adults;
- Introduction of pedestrian crossings and minor walking schemes;
- Street de-cluttering – currently a 5-year programme to rationalise street furniture and signs in town centres/shopping areas across the Borough; and,
- Light Against Crime - programme to improve street lighting across the Borough to improve security.

2.5.2 These programmes have not been included in the infrastructure schedules (Appendix 2) as they do not impact directly on the extent or capacity of the transport network within the Borough. However, it should be emphasised that these programmes are critical to maintaining conditions on the network and also in the case of Smarter Travel initiatives, to promoting modal shift that may release additional capacity on the transport network in future years.

2.6 Implications for the Local Plan

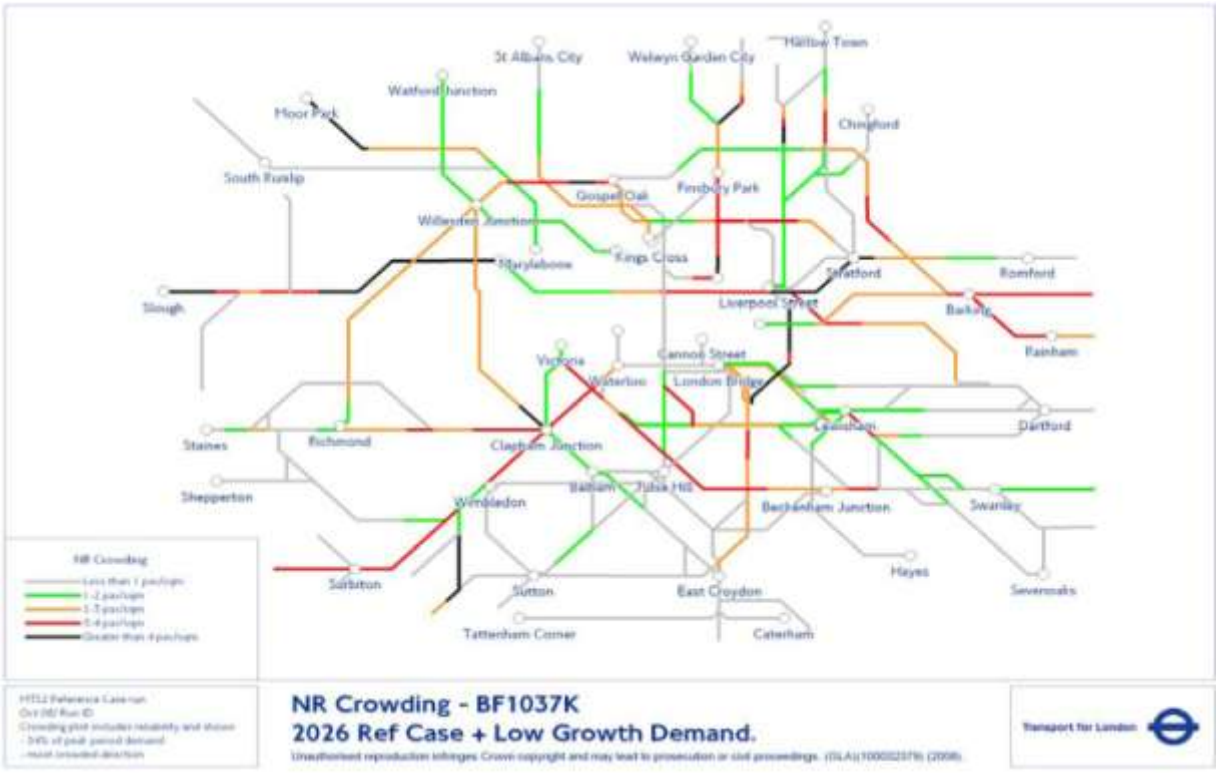
2.6.1 The committed and planned schemes set out in Infrastructure Schedules will contribute towards addressing some of the current and expected future gaps in network provision in LBB, based on current assumptions about growth. However, there are a number of key issues with regard to transport that should be assessed before the Council can be fully confident that Local Plan growth can be adequately accommodated on the transport network.

Rail Network Capacity

2.6.2 The main issues with rail services (based on 2008 data) were peak over-crowding on fast services from Bromley South and Orpington into central London. However, since that data was published, Sevenoaks services through Orpington have been extended to 12-car, which has contributed positively to mitigating over-crowding. In addition, Thameslink services were introduced from Bromley South station in 2009 and the Thameslink programme will introduce new services from this station by 2018. However, Network Rail forecasts for the Kent area suggest a growth in passenger numbers of 30% on mainline and outer suburban routes between 2010 and 2022, which is likely to make further intervention to increase rail capacity in Bromley a necessity over this period.

2.6.3 Network Rail's *Route Utilisation Strategy for London and the South-East (2011)* does not highlight any further planned increases to capacity on routes from Bromley South, primarily because of very high forecast growth on routes elsewhere in the region. However, TfL modelling published in a report produced by the London Assembly (2009) indicated that even when major rail infrastructure schemes such as Crossrail, the East London Line extension (now fully operational) and the Thameslink programme were taken into account, over-crowding on services through Bromley South and Beckenham Junction was expected to reach very high levels by 2026, even when low growth scenarios were modelled. This is illustrated in Figure 2.7 below, and is referenced in TfL's *South Sub-Regional Transport Plan*.

Figure 2.7: Forecast Rail Crowding in London by 2026



Source: London Assembly Transport Committee report 'The Big Squeeze – rail overcrowding in London' (2009)

2.6.4 DLR/Tramlink extensions may provide some capacity relief for rail services from Bromley South in future but both these schemes are currently aspirational, and would not provide direct alternatives for many commuters who wish to travel into Central London from Bromley. TfL have already raised the requirement for additional capacity from Bromley South but plans are currently aspirational and as a result, it is important that the Council promotes the need for improved rail services with Network Rail, in light of the focus of Borough growth on the town centre over the Local Plan period.

Road Network Capacity

2.6.5 The focus of growth on Bromley town centre and current conditions on the road network mean that a variety of interventions may be required to increase road capacity in the long-term, unless schemes and programmes designed to promote modal shift have a start to impact on reducing car trips. A number of road schemes are already earmarked for this purpose, such as the widening of the A21 Masons Hill approach from the south-east.

2.6.6 In late April 2012, the Council's Transport Team were in the process of modelling the impact of forecast growth on the road network, but it is likely that a scheme to widen the A21 Masons Hill approach to the town centre will be required to release development sites within the town centre. Land is currently safe-guarded for such a purpose, but the route is part of the Transport for

London Road Network (TLRN)[3] and a Business Case would need to be established for such a scheme before TfL could consider funding it.

Reducing Car Use and Achieving Mode Shift

2.6.7 The Council's programmes to promote walking and cycling should at the very least be maintained in order to encourage more trips to be made by non-car modes. LBB should also work with TfL to explore ways of improving the bus network in the Borough. There are currently no specific schemes in place to deal with many of the current issues with the bus service. In addition, proposed TfL schemes to improve bus services on corridors between Bromley and Canary Wharf and Bromley and Croydon are currently aspirational, and the Council should lobby TfL to programme such improvements, as these interventions would all help to encourage a shift away from private car use on major routes into the town centre.

[3] The Transport for London Road Network (TLRN) comprises the key routes and arterial roads in Greater London. It makes up about 5% of the road network but carries about a third of the traffic.

3 Education

3.1 Introduction

3.1.1 This chapter considers education in relation to Early Years, primary schools and secondary schools. Early Years relates to ages two to four years, primary schools four to 11 years and secondary 11 to 16 years.

3.1.2 For the purposes of education planning the Borough is divided into nine areas, as set out in the *Children and Young People's Plan 2011 – 2014: Need Analysis 2010 (London Borough of Bromley).* These are based on amalgamations of wards because planning for school rolls is based on GLA ward projections. They do not reflect school catchment areas, as these no longer exist and choice of institution to attend is broadly determined by availability, proximity and parental choice.

3.1.3 GLA population projections are used to calculate pupil projections[4]. These are based on two methodologies. The first is the '*Replacement Method*' simply assumes, for example, that the number of pupils in the Reception Year will be in secondary schools in Bromley seven years later. The second method is known as the "*Catchment method"* and is based on population projections that take into account projected fertility rates, changes to dwelling stock, and rates of occupation, as well as indicators of movement between geographical areas. Projections for Bromley are based on a combination of these two methods. The outcome projects figures for each planning area, which are then subject to adjustments based on local knowledge.

3.2 Baseline

Early Years

3.2.1 Under the Childcare Act 2006, local authorities have a duty to secure the provision of childcare sufficient to meet the requirements of parents in their area. The Council is also required to provide sufficient free places for three and four year olds, either by direct provision, or by commissioning places. The role of LBB, with regard to increases in provision of Early Years facilities, is to stimulate the market to encourage investment by the private and voluntary sectors which provide the service. The Council is able to commission places (as a statutory duty) but does not receive any additional capital funding for Early Years provision. Actions undertaken include promoting potential opportunities for new premises, involvement in development projects, liaison with other Council departments and service providers and engagement with the private sector to set out future needs and demand for facilities.

3.2.2 At present the Local Authority runs two day-care nurseries and there are 11 nurseries within maintained Primary Schools. The remaining provision is delivered in the Private, Voluntary and Independent sector, which includes some primary schools which have become Academies, as well as Childminders. At present there are approximately 170 Providers and around 20 networked childminders.

[4] For Early Years provision (children up to 4 years) projections now also take account of child benefit and GP registration

3.2.3 The Bromley Childcare Sufficiency Report 2011 includes data for each electoral ward in relation the total percentage of places per 100 children provided by childminders, day nursery or pre-school. Rates of provision vary dramatically from 70% in Hayes and Coney Hall to below 30% in Cray Valley West (23%), Mottingham and Chislehurst (24%) and Crystal Palace (25%).

Primary Schools

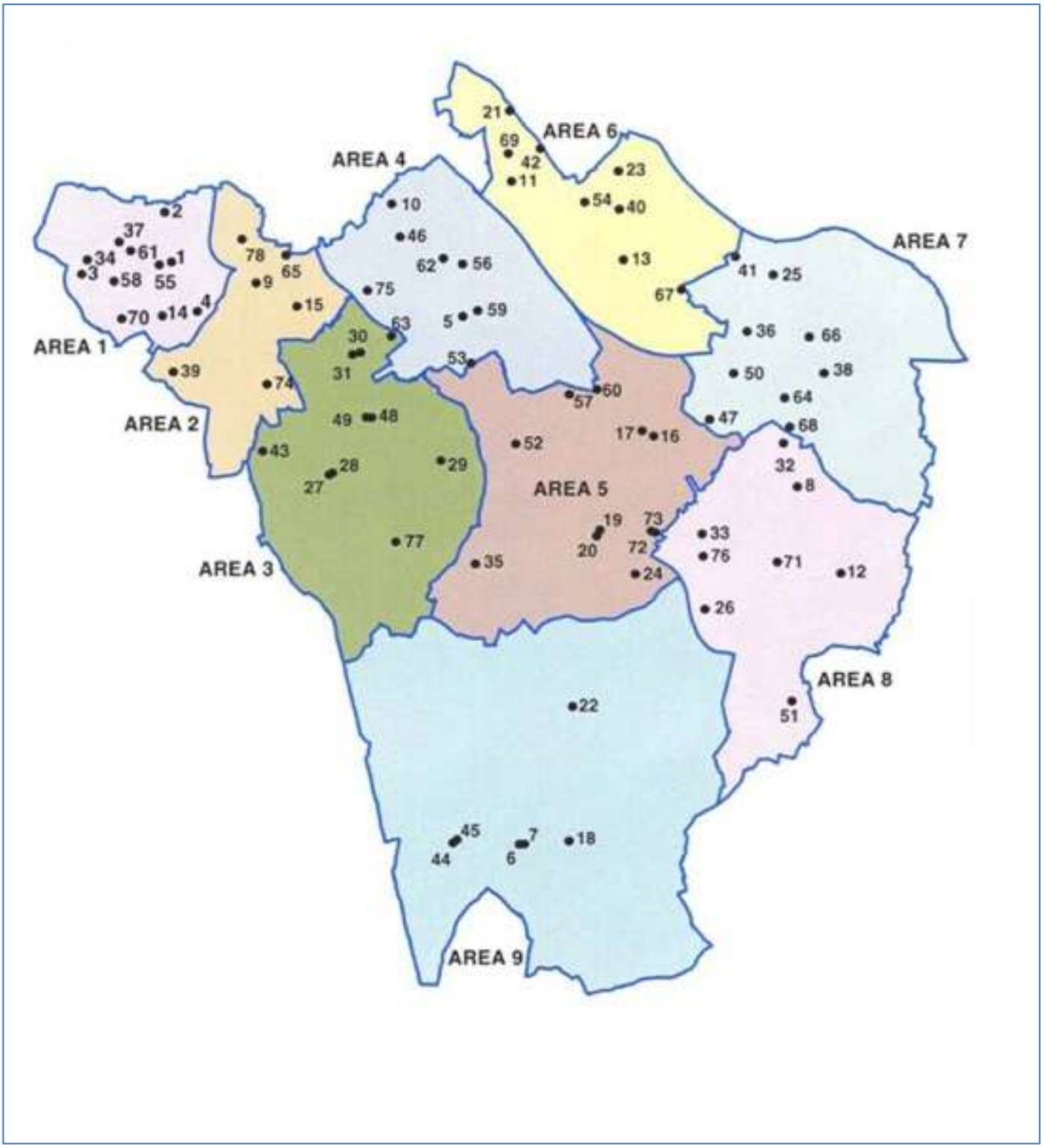
3.2.4 There are 74 state primary schools in Bromley and there are four special schools. The location of existing primary schools, in relation to school planning areas, is set out in Figure 3.1 which has been provided by LBB. The current published admissions limit capacity in the Borough is 3,575. However there are a total of 3,725 reception places if temporary school expansions are included. The number of reception pupils in Bromley schools has risen from 3,165 in January 2007 to 3,435 in January 2011, and 3,626 pupils have accepted a reception place for admission in 2011-12.

3.2.5 The strategic planning of primary school places and school organisation in the Borough is driven through the *Primary Schools' Development Plan*, which is reviewed on an annual basis to respond to changes in population and local needs. Key factors which influence the review and planning of primary school places include pupil projections, school capacity and housing development.

3.2.6 The *Primary Schools' Development Plan* seeks to ensure that Council assets are fit for purpose whereby premises are judged against three key measures: condition, sufficiency and suitability. The Council has been investing heavily in meeting sufficiency and previous rounds of the plan provided additional places at a total cost of £15 million.

3.2.7 The reviews in 2009 and 2010 led to a permanent increase of 75 Reception class places (30 places at Bickley and Unicorn Primary Schools and 15 places at Princes Plain Primary School) and a temporary increase of an additional 150 Reception class places (30 temporary places each at Churchfields, Malcolm, Royston, Valley and Parish Primary Schools).

Figure 3.1: Location of Primary Schools



(see key to figure overleaf)

Key to Figure 3.1

Planning Area 1	Map no
Alexandra Infants' School	1
Alexandra Junior School	2
Balgowan Primary School	4
Churchfields Primary School	14
James Dixon Primary School	3
Malcolm Primary School	37
Royston Primary School	55
St Anthony's RC Primary School	58
St John's CE Primary School	61
Stewart Fleming Primary School	70

Planning Area 2	Map no
Bromley Road Infant School	9
Clare House Primary School	15
Marian Vian Primary School	39
St Mary's Catholic Primary School	65
Unicorn Primary School	74
Worsley Bridge Junior School	78

Planning Area 3	Map no
Hawes Down Infant School	27
Hawes Down Junior School	28
Hayes Primary School	29
Highfield Infant School	30
Highfield Junior School	31
Oak Lodge Primary School	43
Pickhurst Infant School	48
Pickhurst Junior School	49
St Mark's CE Primary School	63
Wickham Common Primary School	77

Planning Area 4	Map no
Bickley Primary School	5
Burnt Ash Primary School	10
Parish CE Primary School	46
Raglan Primary School	53
Scotts Park Primary School	56
St George's, Bickley, CE Primary School	59
St Joseph's RC Primary School	62
Valley Primary School	75

Planning Area 5	Map no
Crofton Infant School	16
Crofton Junior School	17
Darrick Wood Infant School	19
Darrick Wood Junior School	20
Farnborough Primary School	24
Keston CE Primary School	35
Princes Plain Primary School	52
Southborough Primary School	57
St James' RC Primary School	60
Tubbenden Primary School	72

Planning Area 6	Map no
Castlecombe Primary School	11
Chislehurst (St Nicholas) CE Aided Primary School	13
Dorset Road Infant School	21
Edgebury Primary School	23
Mead Road Infant School	40
Mottingham Primary School	42
Red Hill Primary School	54
St Peter and St Paul Catholic Primary School	67
St Vincent's Catholic Primary School	69

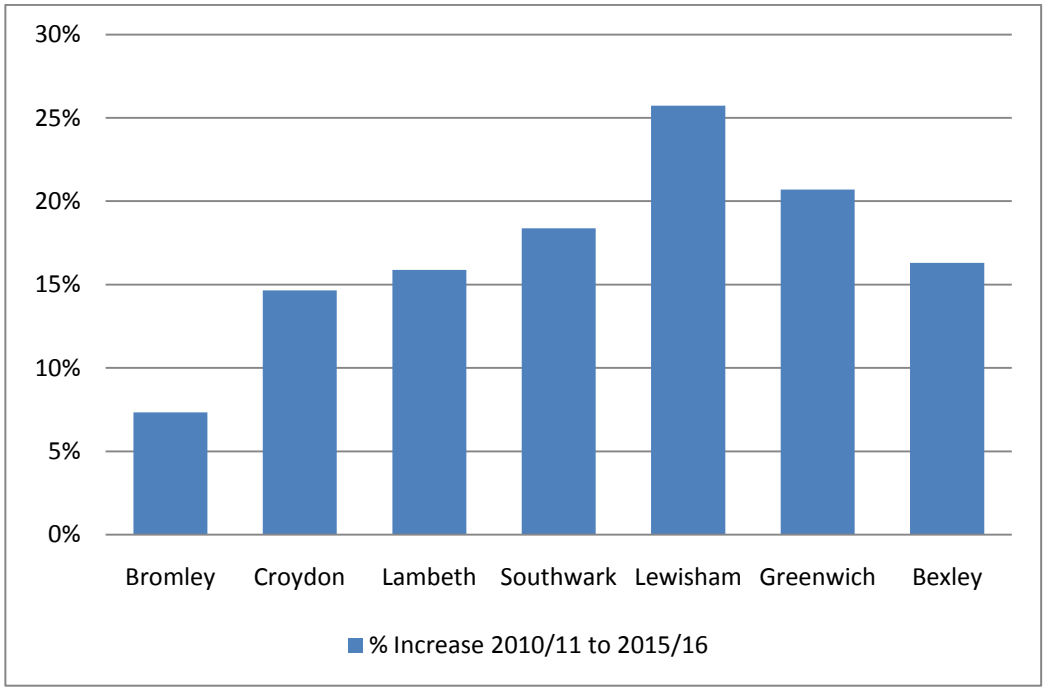
Planning Area 7	Map no
Gray's Farm Primary School	25
Leesons Primary School	36
Manor Oak Primary School	38
Midfield Primary School	41
Perry Hall Primary School	47
Poverest Primary School	50
St Mary Cray Primary School	64
St Paul's Cray CE Primary School	66
St Philomena's RC Primary School	68

Planning Area 8	Map no
Blenheim Primary School	8
Chelsfield Primary School	12
Green Street Green Primary School	26
Hillside Primary School	32
Holy Innocents Catholic Primary School	33
Pratts Bottom Primary School	51
The Highway Primary School	71
Warren Road Primary School	76

Planning Area 9	Map no
Biggin Hill Primary	6
Cudham CE Primary School	18
Downe Primary School	22
Oaklands Primary School	44

3.2.8 Over the period to 2015/2016, data from the Department for Education (shown in Figure 3.2) suggests that in terms of primary places there will be greater growth in London Boroughs which border Bromley. These include Croydon, Lambeth, Southwark, Lewisham, Greenwich and Bexley. LBB Education anticipates that this will further increase pressure in those areas of the borough where there is greatest cross borough movement such as Beckenham and West Wickham.

Figure 3.2: Increase in Pupils of Primary School Age, 2010/11 to 2015/16



Source: Department for Education (2012)

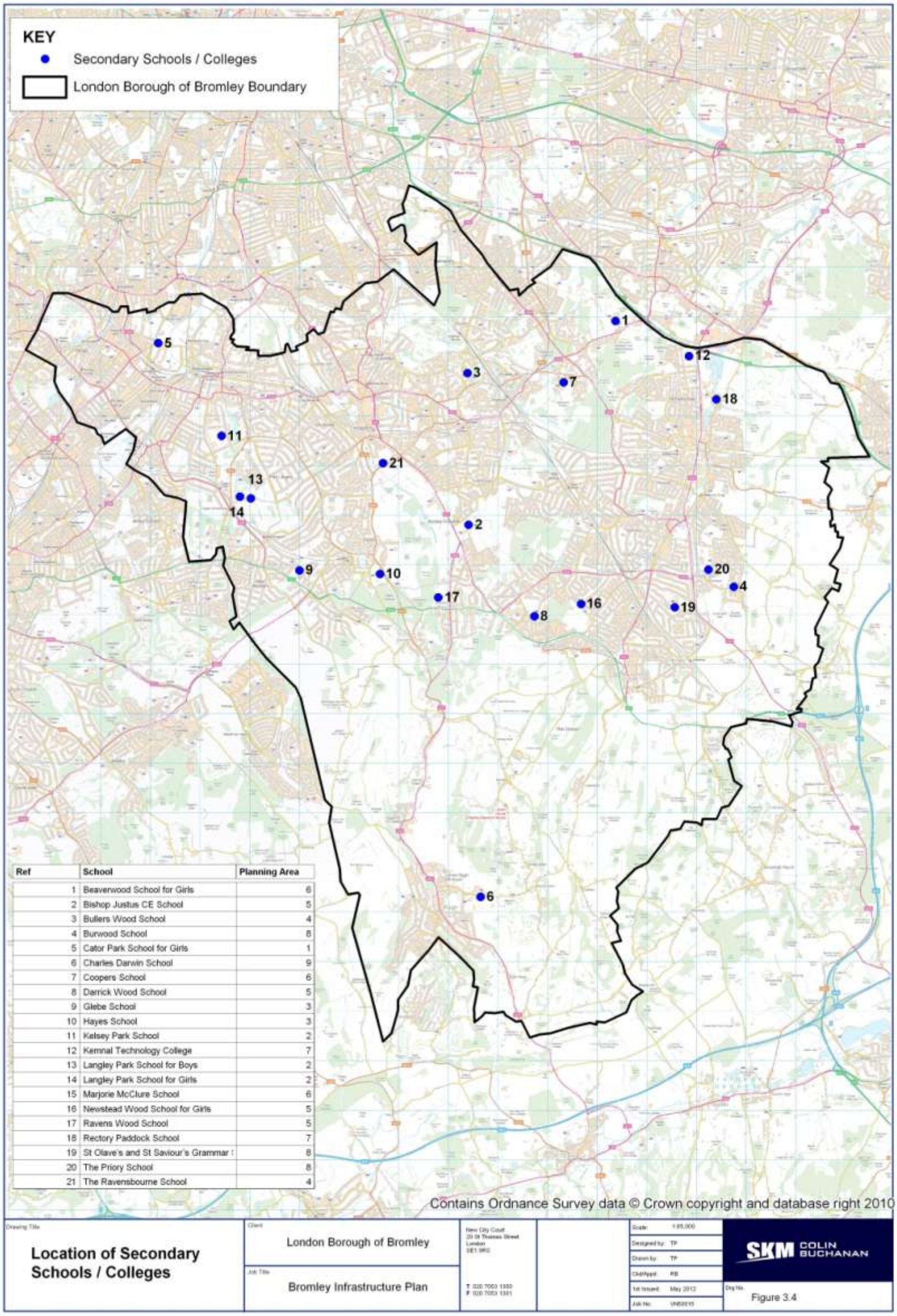
3.2.9 The lower level of population growth expected to take place in Bromley as set out in Figure 3.2 is due to a combination of factors relating to fertility rates, existing population characteristics and migration patterns.

Secondary Schools

3.2.10 There are 17 secondary schools in Bromley, of which four are additionally resourced to cater for special needs and two are faith schools. All secondary schools will be academies by the end of 2012. The location of secondary schools is shown in Figure 3.3.

3.2.11 The secondary school roll of entry is currently 3,355 (Year 7 roll entry at autumn 2011) and there is capacity for approximately 3,615 pupils. Currently 21% (approximately 700) admissions are from outside the Borough. This figure has decreased in recent years as a result of investment in schools in neighbouring Boroughs. However, Bromley exports approximately 400 pupils. Therefore the net gain is approximately 10% (300 pupils). All existing secondary schools are large, with seven or eight form of entry (FE) with school rolls per year of 180 to 240 pupils.

Figure 3.3: Location of Secondary Schools / Colleges



Ref	School	Planning Area
1	Beaverwood School for Girls	6
2	Bishop Justus CE School	5
3	Bullers Wood School	4
4	Burwood School	8
5	Cator Park School for Girls	1
6	Charles Darwin School	9
7	Coopers School	6
8	Darrick Wood School	5
9	Glebe School	3
10	Hayes School	3
11	Kelsey Park School	2
12	Kemnal Technology College	7
13	Langley Park School for Boys	2
14	Langley Park School for Girls	2
15	Marjorie McClure School	6
16	Newstead Wood School for Girls	5
17	Ravens Wood School	5
18	Rectory Paddock School	7
19	St Olave's and St Saviour's Grammar	8
20	The Priory School	8
21	The Ravensbourne School	4

Location of Secondary Schools / Colleges

Client: London Borough of Bromley

Job Title: Bromley Infrastructure Plan

SKM COLIN BUCHANAN

Figure 3.4

3.3 Implications for Future Growth

3.3.1 Despite robust forward planning, it is difficult to forecast with complete certainty as, in the end, parental preference will impact on the demand for particular schools. In spite of this, the Council estimates at a Borough-wide level that recent forecasts of pupil projections have been within 1% of actual numbers on school rolls.

3.3.2 The demand for places and capacity in primary, and, ultimately, secondary schools, is affected by the impact of recently increased birth rates. The strategy for providing new capacity has been to expand existing schools – including those which had previously contracted. Only two new schools have been built in the last 12 years.

3.3.3 In recent years most secondary schools and many primary schools have undergone some form of expansion through extensions, adapted buildings and modular classrooms. Nearly all schools have now expanded to their maximum potential and cannot be further enlarged in situ. Sites are constrained for a variety of reasons including the Green Belt, access arrangements and competing claims for land uses with greater financial means to secure possession. . Also, it is not only classrooms that need to be developed or enlarged but there is a need for increased space for other canteens and sports facilities etc.

3.3.4 The initial focus for identifying new sites is expected to be those in council ownership and currently used for education purposes. However, LBB Education department acknowledges that there are only likely to be a limited number of sites which are available and suitable for the development of new schools. No new sites have been formally identified at this stage.

Early Years

3.3.5 GLA population projections reported in the Childcare Sufficiency Report (2011) indicate an increase in the 0-4 years age group by 1.4% between 2010 and 2031, with a peak in 2012. Although this is not as high as other age cohorts (see below) there is already considerable variation in the level of provision across the borough with some areas experienced existing deficits which need to be addressed. However in many areas additional provision will be difficult to accommodate. Similarly to schools, LBB education department has commented that there are a limited number of suitable premises available for Early Years facilities. Furthermore, issues in relation to obtaining planning permission for change of use have adversely impacted on premises being capable of conversion to nurseries, including highway access and the residential amenity of neighbouring properties.

3.3.6 One option for delivery in future may be through S106 agreements for large-scale development schemes, although this is likely to be limited outside Bromley town centre, given the limited number of strategic development opportunities and thus the capacity for individual development sites to make an adequate contribution through planning gain levies. Elsewhere the Council could consider adopting more flexible planning policies towards the proposed change of use of retail or employment uses on secondary frontages or local parade to meet local demand. This may help support vitality of some local centres currently suffering from high vacancy rates.

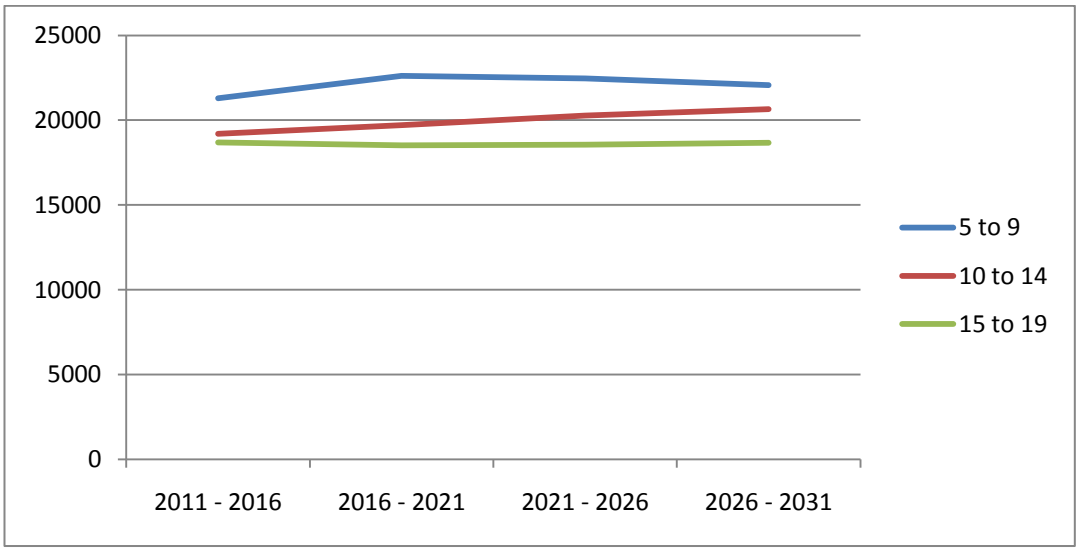
3.3.7 Competition for space issues currently exist in Bromley town centre and these are will be exacerbated in the future. There are currently long waiting lists for existing nursery places. This issue exists due to the fact that Bromley is the main employment area in the Borough, is highly accessible and people like to have childcare facilities close to work. The situation has been contributed to by the closure of the nursery at Bromley College (referred to as Goslings / Bromley Common). Although it was located outside of the town centre, it was well-used by commuters. This places even more pressure on existing facilities, however, at present, there no available premises in the town centre.

3.3.8 Also, there might be adverse impact on Early Years provision in Orpington. The nursery at the hospital was set to close, but this action has recently been postponed. If closure does go ahead there will be a lack of places in this area, especially as the hospital nursery is a large facility and is also popular with commuters due to rail links to London.

Primary

3.3.9 LBB education department advise that there is just enough capacity at present to meet demand for primary school places over the next year. Based on pupil projections which extend to 2021, from 2013/14 approximately 300 additional places will be required each year to 2021 to accommodate that number of additional reception pupils projected. Figure 3.4 below shows how the GLA population projections change overtime from 2011 to 2031 for school-aged children in Bromley. Although these are not pupil projections they serve as an indication of the likely change in demand for school places, subject to parental choice. The 5-9 cohort rise to approximately 2018 and then slowly decreases whereas the 10-14 cohort continues to steadily rise and the 15-19 cohort remains relatively stable over the 20 year period. This shows that the there will be greatest growth in demand for primary places over the next 6-7 years. This urgent need for increased capacity is identified in London Councils' Report: School Place Shortages in the Capital (2011).

Figure 3.4: School age population projections, LB Bromley



Source: GLA Population Projections (standard fertility)

3.3.10 For primary schools, Bromley, Penge and Beckenham are the urban centres under greatest pressure.

Secondary

3.3.11 In terms of secondary schools, LBB expect a shortage of places by 2018/19. Planning for secondary school places involves fewer unknowns than for primary schools. However, other variables such as cross-boundary movements from neighbouring Boroughs will impact accurate forecasting . It should also be noted that from 2014, the participation age will be raised, meaning that post Year 11 pupils must remain in education or training until 18 years of age. This will put further pressure on the capacity of the senior sections of secondary schools.

3.3.12 It is projected that the pressure for secondary schools will probably be Borough-wide rather than focussed on a particular area, but is likely to be greatest in the same areas as for primary schools, namely Bromley, Penge and Beckenham.

Academies

3.3.13 The *Academies Act (2010)* has changed the landscape of education provision. Academies are publically funded independent schools which are free from local authority and national government control. In November 2011, Bromley had the highest number of academy conversions in London. The Act also encourages the establishment of new Free Schools, which are all-ability state funded schools set up in response to parental demand.

Funding Additional Provision

3.3.14 LBB as the strategic commissioner of school places, receives capital funding and Basic Need funding for schools from Central Government. The capital funding can be directed towards academies, which receive their revenue funding directly from central government. It is then for the Council to decide where to direct resources and determine how best to expand and develop levels of provision. Basic Need funding must be spent on state funded schools. The Council's role is to work with all schools including Academies, to set out projections and discuss capacity issues and implications of future growth, to ensure that appropriate future provision is made.

3.4 Planned and Committed Investment

3.4.1 The *Primary Schools Development Plan* sets out recommendations to develop primary schools. These are based upon the 2011 – 2012 review and are expected to be implemented in the short-term. These proposals are reviewed on an annual basis to meet on-going increases in the birth rate. Proposals are considered by planning area (as set out in the *Review of Primary Schools' Development Plan February 2012).*

3.4.2 Planning Area 1 (Wards: Crystal Palace, Penge and Cator, Clock House)

- The Published Admission Number for Churchfields Primary School will be increased from 30 to 60 places;
- Malcolm Primary School increases its intake temporarily from 30 to 60 places for a further year;

- St Anthony's Primary School to be approached with a view to accommodating a temporary additional form of entry at reception; and
- The Council has approached other schools in this planning area to consider the feasibility of admitting an additional form of entry, i.e. an additional 30 places in 2012 or 2013.

3.4.3 Planning Area 2 (Wards: Copers Cope, Kelsey and Eden Park)

- That the Local Authority pursues discussions with the Governors of Bromley Road Infant and Worsley Bridge Junior Schools regarding the future organisation of the two schools.

3.4.4 Planning Area 3 (Wards: Shortlands, West Wickham, Hayes and Coney Hall)

- Officers approach other schools in this planning area to consider the feasibility of admitting an additional form of entry, i.e. an additional 30 places in 2012 or 2013.

3.4.5 Planning Area 4 (Wards: Bromley Town, Plaistow and Sundridge, Bickley)

- Valley Primary School increases its intake temporarily from 60 to 90 places for a further year;
- The Published Admission Number for Parish Primary School be increased from 60 to 90; and,
- The Local Authority continues to discuss the feasibility of consolidating St George's CE Primary school to whole forms of entry.

3.4.6 Planning Area 5 (Wards: Bromley Common and Keston, Petts Wood and Knoll, Farnborough and Crofton)

- Southborough Primary School and Keston Primary Schools to be approached with a view to accommodating an extra form of entry, i.e. an additional 30 places on a temporary basis.

3.4.7 Planning Area 6 (Wards: Chislehurst, Mottingham, Chislehurst North)

- The Local Authority continues to pursue discussions with the Governors and Diocese of Rochester regarding relocation and expansion of Chislehurst Church of England School; and,
- Edgebury Primary School to be approached with a view to accommodating an extra form of entry, i.e. an additional 30 places on a temporary basis for September 2013.

3.4.8 Planning Area 7 (Wards: Cray Valley West and Cray Valley East)

- Midfield and Leesons Primary School be approached with a view to one of the schools accommodating an extra form of entry, i.e. an additional 30 places on a temporary or permanent basis, dependent on local demand.

3.4.9 No current changes to school organisation or size are planned in Planning Area 8 (Wards: Orpington, Chelsfield and Pratts Bottom) and Planning Area 9 (Wards: Biggin Hill and Darwin).

3.4.10 Given the interrelation between planning areas, the expansions will be in schools throughout all planning areas except 9.

3.4.11 There are no planned proposals for the development of new or existing secondary schools.

3.5 Implications for the Local Plan

3.5.1 Based on the above document review and consultation with service providers, initial key findings to inform the spatial strategy are set out below:

- There is a need for an increase in provision of Early Years services. This has the potential to come forward as part of new large-scale commercial or residential developments, either through embedded provision, or through s106 obligations where it meets the tests in the Community Infrastructure Levy Regulations[5]. The Council should consider how its emerging Core Strategy or associated policy documents could facilitate this.
- For primary schools, there will be an increase of 300 pupils per annum from 2013 to 2021. Existing capacity will be exhausted in the next 12 months, with the need for new provision thereafter. Initial additional provision is expected to be focussed on existing council-owned sites in education use but there is likely to be a need for more land to accommodate additional pupils before 2021. This is subject to individual site assessments by LB Bromley. If additional sites not currently in educational use are required then it would be helpful to acknowledge this in the Core Strategy, including reference to the anticipated areas of need or search.
- For secondary school, a similar increase in pupils is expected. Pupil places are forecast to become unmanageable without additional funding and infrastructure (school buildings) from 2019 onwards. Therefore sites for new development or expansion to existing secondary schools will be required. The same recommendation applies in terms of identifying the anticipated geography of this need for potential school sites in the Core Strategy. The experiences of inner London Boroughs in overcoming difficulties of finding sites for new or expanded provision will be instructive here.
- If the shortage of suitable sites becomes more acute, it may be more appropriate to consider replacing some housing allocations with sites for school provision, though the compensation to landowners might be a major constraint. As in some inner London Boroughs where shortage of sites for new capacity is more acute still innovative design to enable higher densities of provision on existing sites may be the only option.

[5] CIL Regulation 122 (2010) introduced a statutory test for the use s106 obligations.

4 Primary Healthcare

4.1 Introduction

4.1.1 Primary care covers services provided by GPs, dentists, community pharmacists, optometrists (opticians) and community services. This chapter considers GP surgeries and health centres only (referred to as General Practice and Community Health services in the *Draft Bromley IDP).*

4.1.2 The nature of delivery of primary health care services has evolved over recent years whereby a number of secondary health care services traditionally provided in hospitals are now being provided at the local level in health centres. National Guidance sets out a drive to bring 50% of outpatient and secondary care activity out of hospitals (acute care), including minor surgical procedures and treatments, therapies & diagnostic tests, and into community primary care settings.

4.1.3 Primary healthcare in Bromley is currently commissioned by Bromley Primary Care Trust (NHS Bromley) in collaboration with a transitional organisation called the SE London Cluster. "Bromley Healthcare", a recently established Social Enterprise, provides a wide range of community health services in a variety of settings primarily in GP surgeries and community clinics.

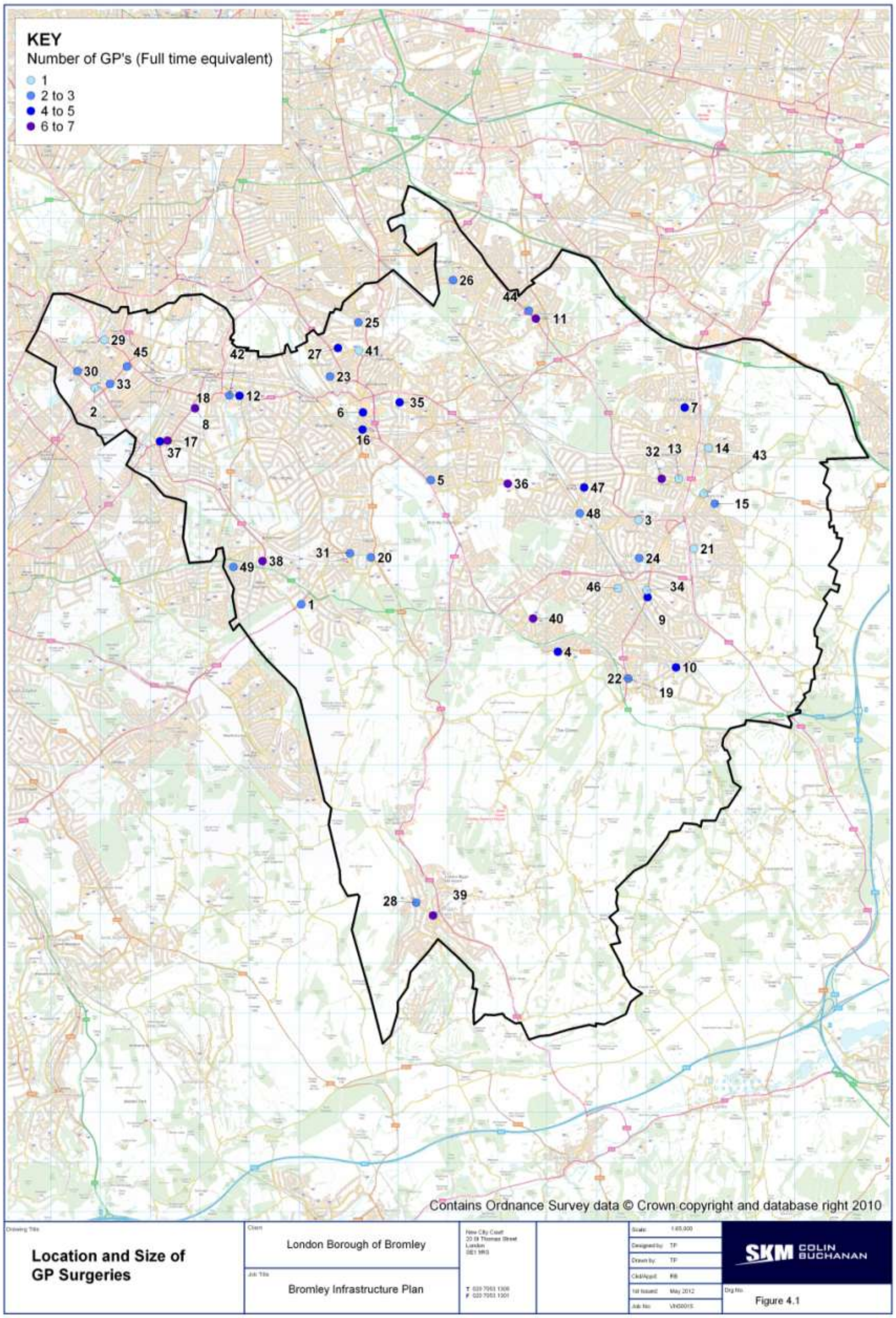
4.1.4 The way in which primary health care is delivered is changing as a result of the *Health and Social Care Act 2012*. Under the Act, PCTs will be abolished by 2013, and their functions will be taken over by GP-led groups of doctors called Clinical Commissioning Groups (CCGs) and the NHS's new National Commissioning Board (NCB). Clinical Commissioning Groups will commission acute, community and mental health services and the NHS Commissioning Board will commission GP, dental, pharmacy and optometry services. With regard to Premises, responsibility for Local Improvement Finance Trusts (LIFTs) will transfer to a new organisation called Property Co. and GPs will continue to be able to develop their own premises directly or through a third party developer, subject to there being financial and general support from the CCG and NHS Commissioning Board. In the meantime, the PCT has a statutory responsibility to commission services to meet the needs of the local population, as well as responsibility for addressing inequalities in access to necessary services.

4.2 Baseline

4.2.1 The Bromley population presents a range of challenges for health care providers. Key issues relate to pockets of deprivation, whereby 7% of residents live in areas classified as being in the most deprived fifth of areas in England, as well as areas with high numbers of single parents and of the elderly living alone. On average, life expectancy is higher than the national average, however, the difference between the most and least deprived areas is almost nine years.

4.2.2 Figure 4.1 shows the location and size of GP surgeries across the Borough. The map shows that there are concentrations of provision to the north of the Borough, focused around existing urban centres. GP surgeries range in size from one to seven GPs. The larger practices are generally well distributed throughout the urban centres in the northern half of the Borough.

Figure 4.1: Location and size of GP Surgeries



(see key to figure overleaf)

Key to Figure 4.1

Ref	GP Surgery Name	Number full time employees
1	Addington Road Surgery	2
2	Anerley Surgery	1
3	Ballater Surgery	1
4	Bank House Surgery	4
5	Bromley Common Practice	3
6	Bromley Park Surgery	4
7	Broomwood Road Surgery	5
8	Cator Medical Centre	2
9	Charterhouse Surgery	5
10	Chelsfield Surgery	4
11	Chiselhurt Medical Practice	7
12	Cornerways Surgery	4
13	Crescent Surgery	1
14	Cross Hall Surgery	1
15	Derry Downs Surgery	2
16	Dysart House Surgery	5
17	Eden Park Surgery	6
18	Elm House Surgery	7
19	Family Surgery	2
20	Forge Close Surgery	3
21	Gillmans Road Surgery	1
22	Green Street Medical Centre	3
23	Highland Road Surgery	2
24	Knoll Rise Surgery	3
25	Links Medical Centre	3
26	Links Medical Practice	3
27	London Lane Clinic	5
28	Norheads Lane Surgery	2
29	Oakfield Surgery	1
30	Park Group Practice	3
31	Pickhurst Surgery	3
32	Poverest Medical Centre	7
33	Robin Hood Surgery	2
34	Sevenoaks Road Surgery	1
35	South View Lodge	5
36	Southborough Lane Surgery	6
37	St James Practice	4
38	Station Road Surgery	7
39	Stock Hill Surgery	6
40	Summercroft Surgery	7
41	Sundridge Medical Practice	1
42	The Surgery (Manor Road)	3
43	The Surgery St Mary Cray	1
44	The Woodlands Practice	3
45	Trinity Medical Centre	2
46	Tubbenden Lane Surgery	1
47	Tudor Way Surgery	4
48	Whitehouse Surgery	2
49	Wickham Park Surgery	2

4.2.3 Bromley has almost 50 GP practices / health centres distributed around the Borough. It is important to acknowledge a range of existing challenges for primary healthcare relating to the number of GPs, capacity and condition of practices, services provided and demographic patterns of GP practices. Taken as a whole, the combination of these issues represents significant future infrastructure challenges.

4.2.4 The first challenge is that in some areas, the ratio of whole time equivalent (WTE) GPs in Bromley to registered patients is greater than the average ratio which is typically 1 WTE GP: 1,800 patients. In Bromley, GPs have tended to work in smaller practices with larger list sizes, but the PCT has seen a large number of single handed GPs retiring in the last two years, which has resulted in the closure of four practices and patients needing assistance to find alternative local practices with which to register.

4.2.5 A further challenge relates to the quality of premises. The nature of primary care being delivered means that surgeries are required to provide a larger range of services, such as minor surgical procedures and treatments, therapies and diagnostic tests. GPs operate from a variety of premises, ranging from old practices and surgeries and health centres to converted houses and new developments such as the new Beckenham Beacon LIFT scheme. Overall, only 15% of premises are classified meeting all the NHS space standards. Almost 40% of GP surgeries are non *Disability Discrimination Act* compliant, of which half cannot be adapted to achieve compliance.

4.2.6 The *PCT Primary Care Strategy* was previously based on a 'polysystem' approach, as set out in *Commissioning Strategy Plan 2010 - 2015*, which developed hubs and spokes. However this strategy has been reviewed. There is no longer funding available to implement this form of development. As a result, the current strategy is to consolidate and upgrade existing facilities and where possible provide additional health services. To help achieve this, NHS Bromley uses a previous national methodology to calculate future space provision. This is based upon activity levels, patient contacts and space utilisation and intends to ensure that any new development makes the most efficient and effective use of space. The PCT has also developed a premises prioritisation process which aims to support the highest priority needs, in recognition of the prevailing financial constraints which do not enable all GPs wants or needs to be addressed.

4.3 Implications of Future Growth

4.3.1 The six main population centres in the LB Bromley have been assessed in light of their existing primary health care provision, capacity and planned development in relation to being able to meet the needs arising from housing and population growth. This exercise is intended to help inform the plan-making process to determine where new development should take place. Each population centre is discussed below.

Bromley Town Centre

4.3.2 The *Bromley Town Centre Area Action Plan (adopted 2010)* states that there will be "around 1,820" new homes in the town centre over the next 15 years. However this target is unlikely to be fully achieved as approximately 900 new homes are expected to be delivered over the next 10 years. Future residential development in the town centre is expected to predominantly comprise

flats, ranging from one to three bedrooms. This level and form of development, over the next 10 years, is expected to lead to 2,000 to 2,500 new residents. The AAP states that 1,000 sqm of additional floor space will be required for community facilities, including health care, to support growth.

4.3.3 Existing Bromley Town Centre surgeries are reaching full capacity in terms of patient numbers and beyond reasonable capacity in terms of space, especially relating to waiting and consulting rooms. Without additional provision or development to serve new patients anticipated from the 200 new homes that are expected to come forward at an early stage on Site K (Westmorland Road Car Park – see the AAP), there is expected to be considerable strain on existing resources in the short term. Without an increase in floorspace, short term solutions may involve looking at changing the operational arrangements of existing provision.

4.3.4 To effectively provide for the residential development anticipated in the AAP additional space for primary healthcare provision of at least 950 sqm needs to be developed in the town centre, including provision for an additional 1.5 GP's. Proximity to the town centre will be important, limiting the potential for primary healthcare development to a few sites. Phasing of provision will also be important as the redevelopments on the two existing healthcare locations Site G (including the Dysart Surgery) & Site A (including Bromley North Clinic) are both unlikely to come forward in the timeframes anticipated in the AAP.

4.3.5 The Trinity Village (formerly known as Blue Circle) development of approximately 550 new homes is under construction at Bromley Common. This development includes a new health centre relocating two existing surgeries (Bromley Common and Southborough Lane Surgery). Due to open in 2013 it will provide up-to-date facilities and additional services. The Bromley Common surgery move may create more pressure on the Bromley Town Centre GP services as patients living closer to the town centre may prefer to register with the Dysart surgery, rather than move to the new facility.

4.3.6 The approach of supporting the coming together of existing practices onto one site, based on practice's own wishes, has been adopted by NHS Bromley. This should lead to enhanced health facilities providing a wider and improved service. However, such infrastructure development needs to be carefully planned to ensure access to GPs remains easy for the local population. This enlarged "outer boundary catchment areas" will be in place from July 2012.

Orpington

4.3.7 Orpington will be subject to re-provision of primary health care facilities in the town centre or on the existing hospital site in the form of a large scale redevelopment. The proposal is that a range of current hospital based services will be co-located with three local practices (Knoll Rise, Sevenoaks Road and Tubbendon Lane) onto a shared site. The new facility will accommodate a minimum of seven GPs as well as diagnostic and out-patient services from the hospital. Formal consultation on this project is set to commence in April 2013. This new development will be designed to cater for existing and future needs in response to housing and population growth.

Chislehurst

4.3.8 Chislehurst currently includes two practices at Chislehurst Medical Centre and The Woodlands Surgery, following the recent retirement of a single handed GP practice who shared the Woodlands Surgery site. The area will require an expansion of primary health care facilities in the future. The reason for this is twofold as Chislehurst will be subject to large-scale growth at Ravensbourne where over 250 new homes will come forward, and as a result of patients previously registered with the single handed GP being supported to find an alternative GP practice. Both practices have plans for developing their infrastructure using existing and anticipated future section 106 receipts earmarked to support such improvements.

Beckenham

4.3.9 Beckenham provides a large health centre at Beckenham Beacon, recently opened in 2009, which currently meets existing needs. Under recent policy guidance, it is open seven days a week from 8am to 8pm, currently providing a range of services including a walk-in medical centre.

Penge / Anerley

4.3.10 Penge / Anerley currently has a larger than average ratio of patients to WTE GPs. On average there is 1 GP per 2,200+ population which is greater than the NHS recommended provision of 1GP per 1,800. This situation has recently been *exacerbated* as a single-handed practice closed and patients registered with the practice were supported to find an alternative GP practice with which to register. A proportion of the local population has chosen to register with GPs in Beckenham, which is further afield than existing oversubscribed practices in Penge / Anerley.

4.3.11 Therefore, new development is required to take place in the future. Currently two existing practices, have submitted a business case to co-locate onto the Penge Clinic site and a further proposal to redevelop the accommodation of another GP is being considered.

Biggin Hill

4.3.12 Population growth in the Biggin Hill area has changed the scale of health service needs over the last few years as a result of both green and brown field developments. Both practices in Biggin Hill have been affected by this and have initiated discussions about a potential development/closer working relationship on the Stock Hill practice site.

4.4 Planned and Committed Investment

4.4.1 The only committed primary health scheme is that forming part of the Trinity Village development (formerly known as Blue Circle). There are planned schemes in Orpington and Penge / Anerley and a proposal under investigation in Chislehurst.

4.5 Implications for the Local Plan

Initial conclusions:

- The major pressure point is Bromley town centre, where Dysart is at capacity. Future provision will be required in the short-term. The Local Plan may need to make provision for new development depending on the preferred approach to be agreed to resolve existing capacity issues.
- Existing, planned infrastructure in Orpington, Chislehurst and Beckenham are expected to adequately meet future demand.
- Penge / Anerley will require increased levels of provision to meet existing needs.

5 Utilities

5.1.1 This chapter assesses the capacity of physical utility infrastructure requirements to support development including electricity, gas, sewerage and sewage treatment, water supply and flooding alleviation.

5.2 Electrical power supply

Baseline

5.2.1 Electricity is provided through a transmission and distribution network. The transmission network provides electricity on a strategic level throughout the country and is owned and managed by National Grid. Within LBB there is a 400kv overhead cable route from Rowden substation in Bromley to Northfleet substation in Dartford as well as an underground cable from Beddington substation in Sutton to Shinglewell substation in Gravesham.

5.2.2 The distribution network provides electricity on a local level and within LBB is owned and maintained by UK Power Networks. LBB is supplied by the Beddington to Hurst 132kv cable which distributes electricity supply to local substations via the Bromley Grid 33kv route.

5.2.3 There are local main substations at Bromley (Bromley Grid 33kv), Bromley South, Chislehurst, Orpington and Petts Wood (Orpington). It is unclear if Biggin Hill is also served from this network. UK Power Networks have confirmed that these main substations are not at capacity.

5.2.4 UK Power Networks have confirmed that the network capacity for the region is adequate for meeting existing customer demand.

Implications of Future Growth

5.2.5 National Grid has confirmed that the proposed level of growth does not affect their plant and there is available capacity within the transmission network to cater for the full proposed development. They advised that discussions going forward should be with UK Power Networks.

5.2.6 UK Power Networks cannot confirm if the proposed level of growth will affect their plant or if there is available capacity. However examination of the current capacity and planned improvements for committed development suggest there would be available capacity to cope with the expected housing trajectory.

Planned and Committed Investment

5.2.7 UK Power Networks have confirmed there are no planned reinforcement schemes indentified in their Long Term Development Statement. Examination of planned infrastructure commitments to 2016 does not indicate any improvements are planned or required for the Beddington to Hurst 132kv route or downstream substations. This implies that with respect to committed development there is sufficient capacity in the existing infrastructure.

5.2.8 Planned development beyond 2016 would be incorporated in future improvement plans and therefore it is not expected to be a major constraint to development at this time. UK Power Networks have confirmed that Ofgem do not allow them to invest in infrastructure ahead of need

as such investment is viewed as risky and inefficient. Therefore when presented with new development proposals for the region UK Power Networks Projects will assess the impact and provide an economic design for connection. This may involve development costs.

5.2.9 UK Power Networks cannot confirm if there are areas more suitable for development without further strategic plans and connection details

5.3 Gas

Baseline

5.3.1 Gas is provided through a transmission and distribution network. The transmission network provides gas on a strategic level throughout the country and is owned and managed by National Grid. Within LBB National Grid has no gas transmission assets located within the administrative area.

5.3.2 The distribution network provides gas on a local level and within LBB is owned and maintained by Southern Gas Networks (SGN). SGN have confirmed that at present there are no known areas at deficit and no areas unlikely to gain a gas connection

Implications of Future Growth

5.3.3 National Grid has confirmed that the proposals do not affect their plant and there is available capacity in the transmission network to cater for the full proposed development. They advised that discussions going forward in respect of local supplies should be with SGN.

5.3.4 SGN have provided a detailed analysis of each site allocated within the initial 2500 dwellings to 2016 and stated if each site may require reinforcement or may have possible capacity issues.

5.3.5 To summarise the majority of areas have available capacity to serve the proposed developments without major implications to the network. The larger developments proposed such as Blue Circle, Ravensbourne College, Westmoreland Car Park, Crystal Palace Park, etc may require reinforcement to connect to the larger mains in the area. This would be an offsite developer contribution.

5.3.6 SGN do not consider any area to be more suitable for development and advise that applications are looked at individually rather than strategically.

Planned and Committed Investment

5.3.7 SGN have confirmed there are no planned and committed investments within the area. SGN assess developments as they come online and make provision available at that time. This may involve development contributions to overcome deficits.

5.4 Sewerage and Sewage Treatment

Baseline

5.4.1 Sewerage and sewage treatment is provided by Thames Water (TW). Water sewerage companies request funding from OFWAT for planned infrastructure improvements on five year plans known as *Asset Management Plans (AMP).* TW are currently in AMP5 which is the five year plan for 2010-2015. AMP5 would have taken into account known and committed development contained in the Local Plans.

5.4.2 Across the Borough various administration centres drain to either Crossness Sewage Treatment Works (STW) or Long Reach STW. TW has confirmed there are no known capacity constraints at the STW's.

5.4.3 LBB is served by large diameter strategic sewers, namely: Hawkwood sewer, Chislehurst sewer, Cray Valley sewer, Ravensbourne sewer and the West Kent Main sewer. There are no strategic pumping stations in the area. TW has confirmed there are no known current capacity constraints within these strategic sewers.

Implications of Future Growth

5.4.4 Committed development for 2010-2015 will already have been taken into account during AMP5. Thames Water are currently formulating AMP6 for beyond 2015 and planned and committed development known during this period will be included in these plans for funding application.

5.4.5 TW confirm they do not envisage capacity constraints at the STW's as they were both subject to large scale upgrades during AMP5.

5.4.6 TW expect there to be a shortage of capacity in the local sewer and treatment network and possibly the strategic sewer network for the 2500 houses planned post 2017. An impact study will be required, which will need to inform future investment planning through the AMP process.

Planned and Committed Investment

5.4.7 TW has confirmed that as part of AMP5 the STW's were subject to large scale upgrades to cater for proposed development. There are no other known large scale upgrades planned for the future at this time.

5.5 Water Supply

Baseline

5.5.1 Potable Water is supplied by Thames Water (TW). TW has produced a *Water Resources Management Plan 2010 to 2035.* This plan is updated every five years in alliance with the AMP's and TW are currently within *Water Resources Management Plan 13 (WRMP13*) which covers 2010 to 2015. DEFRA have advised TW on the work needed to be completed to inform WRMP14 and TW are currently undertaking this work.

5.5.2 Provisional discussions and enquiries indicate that there are insufficient water supplies to meet planned levels of service. Thames Waters WRMP states they expect the London Water Resource

Zone to fall into deficit in 2012/2013 rising to a deficit of 15% by 2035. This deficit is not broken down to the level of deficit on a Borough basis.

Implications of Future Growth

5.5.3 TW plan to address the deficit through balancing both supply and demand. Demand management programmes of leak reduction, metering and water efficiency are being implemented.

5.5.4 The mains replacement programme replaces around 500km of pipes in London which will benefit all Boroughs. Metering is being implemented to reduce usage although this has slowed as a result of the economic downturn and further studies are planned.

5.5.5 In addition TW is looking to improve supply by reducing pollution and installing further treatment at the Biggin Hill works.

5.5.6 TW cannot confirm if the proposals will affect their plant or if there is available capacity although as stated above there is a current and predicted deficit.

Planned and Committed Investment

5.5.7 In the work identified to inform WRMP14, TW are undertaking numerous studies to understand true deficits and resources. TW plan to undertake studies for: resources management in the south east for supply; an investigation into the Lower Thames abstractions; an aquifer storage and recovery study; an update study to implement metering; and some 24 other studies across the whole TW region. All the studies are planned to be completed by 2013 and will inform development areas moving forward.

5.6 Flooding

Baseline

5.6.1 A *Strategic Flood Risk Assessment (SFRA)* was commissioned and published by the Council in 2008 to inform the Local Development Framework. This included flood risk from all sources including rivers, sewers and groundwater.

5.6.2 With respect to flooding from sewers LBB does not have major problem areas but more sporadic localised flooding occurs during incidence of intense rainfall.

Implications of Future Growth

5.6.3 The SFRA will inform planning approval and site development. At all stages the SFRA should be consulted with respect to locating future development away from flood areas and within this regard flooding should not be a constraint to development.

Planned and Committed Investment

5.6.4 In the work identified to inform WRMP14 and AMP5/6, TW are undertaking improvement works where known flooding has occurred due to sewers.

5.7 Implications for the Local Plan

5.7.1 Key findings to inform the Local Plan are as follows:

- Electricity – with the exception of Biggin Hill it has been confirmed all the LBB centres are supplied by the Beddington to Hurst 132kv route and downstream substations. It would therefore be reasonable to assume that with respect to electricity provision there is no constraint to development location;
- Gas – SGN have confirmed in detail which planned and committed development sites may require reinforcement. SGN do not anticipate that these areas are more or less suited to development in terms of available gas capacity.;
- Sewerage and Sewage Treatment – TW do not expect there to be capacity in the local sewer network and possibly the strategic sewer network for the 2500 houses planned post 2017. An impact study will be required, which will need to inform future investment planning through the AMP process. They have stated that in simple terms the further west across LBB, the less downstream large diameter sewer capacity there is available, such as in Penge/ Anerley and Beckenham. Development in Orpington and Chislehurst may be easier to accommodate without causing detriment to the existing network, such as hydraulic flooding;
- Water Supply – TW are unable to confirm if there are areas within LBB more suited to the development proposed. It is assumed that as capacity constraints exist across the Borough and the wider London Water Resource Zone then location with respect to water supply is not a critical factor; and,
- Flooding – the SFRA informs proposed development by locating development in areas at least risk of flooding. The SFRA indicates that development will be less at risk the further east and south it is located. However at all times the SFRA and Environment Agency documents should be investigated on a local level.

6 Other Infrastructure

6.1 General Observations

6.1.1 In addition to those infrastructure categories reviewed by SKM Colin Buchanan in the previous sections of this report, the working draft Bromley IDP (January 2012) also addresses the following:

- Decentralised and renewable energy
- Waste Collection and Disposal
- Information and Communication Technology
- Green Infrastructure
- Dentistry, Pharmacy, Public and Mental Heath
- Emergency Services and Community Safety
- Community, Leisure and Cultural
- Specialist provision for particular groups

6.1.2 As the IDP is very much a work in progress, each is dealt with in various degrees of detail. At this stage of development the majority of information in the IDP relates to baseline condition and capacity rather than an assessment of future needs arising from new development and demographic change. However, a few general comments can be made on the overall approach and content:

- For the purposes of demonstrating deliverability of the Local Plan, the primary focus of the IDP should be on those types of infrastructure which are critical to support the delivery of the development proposed in the Plan i.e. those which pose a significant risk to plan delivery.
- For those items, the IDP should identify any risks to the plan of non delivery and what contingencies could be put in place (e.g. in terms of alternative development trajectories or plan review).
- A number of the infrastructure types included in the draft IDP would not pass this 'critical' test and/or will be provided through the open market as a commercial activity (e.g. public houses, cinemas, internet cafes, cinemas, festivals etc).
- For non-critical infrastructure (i.e. that which will not be a key consideration in the release of land for development) it is reasonable to expect the IDP to contain less information as these present a low risk to the delivery of the strategy.
- For a number of publicly provided social and community services the pressure on public finances has led to a radical restriction on service delivery (e.g. libraries, youth provision). In these sectors, previously adopted benchmarks of service provision may no longer be appropriate, as the nature of provision may be very different in future.

- A key issue for the IDP will be to tease out from providers whether there will be land use and/or development requirements associated with the provision of new or enhanced infrastructure; where these will be needed and when.
- Review the contributions that will be sought through planning obligations (s106) to determine whether they are capable of meeting the legal tests in the CIL Regulations (2010).
- IDPs should be seen as a rolling continuous plan to ideally promote and programme infrastructure investment and should be subject to a regular refresh and update.

6.2 Specific Issues

6.2.1 The following specific comments are made in relation to further work required on individual infrastructure categories:

- **Sites for new schools or intensification of existing school uses** – Like many outer Boroughs of London, recent increases in school age children forecasts imply an acute level of pressure on existing school capacities both at primary and secondary level. A specific sites review to identify which will be most suitable for re-development or intensification of use would be an appropriate response to this problem. Experiences of inner London Boroughs where this is a familiar situation will be instructive.
- **Information Technology** – focus should be on Next Generation Broadband, and whether Bromley's exchanges are included in BT's Open Reach roll out programme. Further information can be found at: http://www.superfast-openreach.co.uk/where-and-when/.For areas of new housing planned in the short term in areas not served, the Council should inform BT and request faster roll out in these areas.
- **Green Infrastructure (Leisure and Public Realm)** – has an assessment of current provision against greenspace standards been undertaken? Where are the deficits?
- **Sports and Leisure** – does the Plan provide any opportunities to rationalise / restructure / enhance access to public sports and leisure provision in accordance with Corporate Strategy? How will sports facility standards be applied to new developments? Are they still relevant? If so, how will land be secured, or can they be met through enhancement to existing facilities to increase capacity / accessibility?
- **Pharmacies** – current provision appears to be good, and pharmacies are taking on additional services previously delivered through GPs/health centres. There appear to be no implications for the spatial strategy which cannot be dealt with via response to market demand.
- **Community Leisure and Cultural facilities** - mapping locations of all facilities would be useful to identify gaps in provision vis a vis areas of growth and change.
- **Libraries** – diversifying into providing a much wider range of services than book loans and web access e.g. pre-school services. Restructuring of library services will make it difficult to justify the use of a standard SE Museum, Libraries and Art Council (SEMLAC) developers charge under the CIL regulations. At the very least LBB will need to develop its own standards which reflect its own level of provision if it wishes to levy developer contributions.

7 Key Implications for the Draft Plan

7.1.1 The assessment of infrastructure needs anticipated to support future planned development and demographic change in Bromley has identified the following issues which will need to be taken into account in the ongoing development of the emerging Local Plan for Bromley:

- Rail – over-crowding is expected to remain a key issue in the long-term up to 2026. Notwithstanding planned investment, there is expected to be an increase in pressure on services through Bromley South and Beckenham Junction. It is recommended that Network Rail are kept informed of this issue by the Council.
- Road – the key pressure point is the town centre and further work might be required to release sites in the central area.
- Walking and Cycling – it is recommended that programmes to promote less reliance on the private car be advanced actively via a Sustainable Transport programme to achieve a further mode shifts.
- Buses – no future schemes are planned and it is recommended that the Council should work with TfL to explore ways to improve the service.
- Primary schools - there will be an increase in pupils to 2020 and beyond. Primary school capacity shortage starts from 2015 and becomes acute from 2017. No sites for new development are currently identified but will be needed to accommodate new pupils. The planning department could usefully help to identify potential solutions through the identification of suitable locations and sites for new or expanded provision.
- Secondary schools - a similar increase in pupils is expected. Pupil places are forecast to become unmanageable without additional capacity provision and associated infrastructure from 2019 onwards. Therefore sites for new development or expansion to existing schools are required, and identification of these in the Core Strategy would provide greater certainty about future delivery.
- Early Years - there is a need for an increase in provision of Early Years services. There is some limited potential for these to come forward as part of new large-scale commercial or residential developments. The Council should consider whether planning policies could be used to support provision in under-used retail or commercial uses in local centres, where the introduction of Early Years may support local vitality and viability.
- Health - Major pressure point is Bromley town centre, where Dysart is at capacity. Future provision will be required in the short-term. Penge / Anerley requires increased levels of provision to meet existing needs.
- Electricity – with the exception of Biggin Hill it has been confirmed all the LBB centres are supplied by the Beddington to Hurst 132kv route and downstream substations. It would therefore be reasonable to surmise that with respect to electricity provision there is no constraint to development location.
- Gas – SGN have yet to confirm if there are areas within LBB more suited to the development proposed.

- Sewerage and Sewage Treatment – Thames Water do not expect there to be capacity in the local sewer network and possibly the strategic sewer network for the level of housing development planned post 2017. An impact study will be required, which will need to inform future investment planning through the AMP process. TW has stated that in simple terms the further west across LBB, the less downstream large diameter sewer capacity there is available, such as in Penge/ Anerley and Beckenham. Development in Orpington and Chislehurst may be easier to accommodate without causing detriment to the existing network, such as hydraulic flooding.
- Water Supply – TW are unable to confirm if there are areas within LBB more suited to the development proposed. It is concluded that as capacity constraints exist across the Borough and the wider London Water Resource Zone, then location with respect to water supply is not a critical factor.
- Flooding – the SFRA informs proposed development by locating development in areas at least risk of flooding. The SFRA indicates that development will be less at risk the further east and south it is located however at all times the SFRA and Environment Agency documents should be investigated on a local level.

7.1.2 Overall, in light of the impact of growth on infrastructure, the main pressure point in the Borough is Bromley town centre, especially in relation to transport and healthcare where action is required to address identified issues. In general, the other main centres, with the exception of Penge / Anerley, appear to have capacity to accommodate future development however education requirements exist Boroughwide.

7.1.3 Several of the service providers have offered views on the level of current provision ahead of assessing demands imposed on them by anticipated growth. However it should not be assumed that this study takes full account of current shortfalls in provision which the Bromley IDP may seek to correct as part of its growth planning. The pressures of continued growth in the future may not be regarded as the sole basis of having to plan new capacity, given the ageing and full replacement needs for some older capital assets and services.

7.2 Next Steps

7.2.1 There are various sources of data and information which it has not been able to source during the course of the study, which would be helpful to inform future assessments of needs and options for delivery. These include:

- Identification of potential suitable sites for primary school expansions or new development in the medium to long-term (5+ years)
- Identification of potential suitable sites for secondary schools expansions for new development
- Condition of schools to identify those in need of investment.
- GP surgeries – size of patient lists; condition of surgeries.

Appendix 1: Briefing Note

Briefing Note

Date	06 March 2012
Project No	VN50015
Subject	**Bromley Infrastructure Delivery Plan – Briefing Note on Future Growth**

1. Introduction

London Borough of Bromley is currently preparing a new local plan for the Borough which will set out the strategy for new development over the next 15 years.

SKM Colin Buchanan (SKM CB) has been appointed by the London Borough of Bromley to assist in the preparation of an Infrastructure Delivery Plan (IDP). An IDP essentially sets out what infrastructure is required to support likely population change and planned development in the Borough, and how it will be delivered. It forms part of the evidence bas informing the preparation of the local plan.

The IDP will evolve in parallel with the Council's emerging development plan as it is intended to help the Council decide the best strategy to grow the Borough in the future, especially in relation to the location for new housing development.

Currently, the Borough has a housing allocation (set out in The London Plan) however the exact location of all new development is yet to be determined. Therefore, the process of preparing this work provides a risk assessment, to understand which locations would be most able to accommodate or respond to growth under different scenarios.

This Briefing Note has been circulated to service providers, in advance of meetings with SKM CB consultants, to help inform these discussions. This note sets out how the Borough is expected to grow in relation to future housing and population growth. These topics are set out in sections 2 and 3. Section 4 contains a series of questions which will form the basis of meetings.

2. Housing

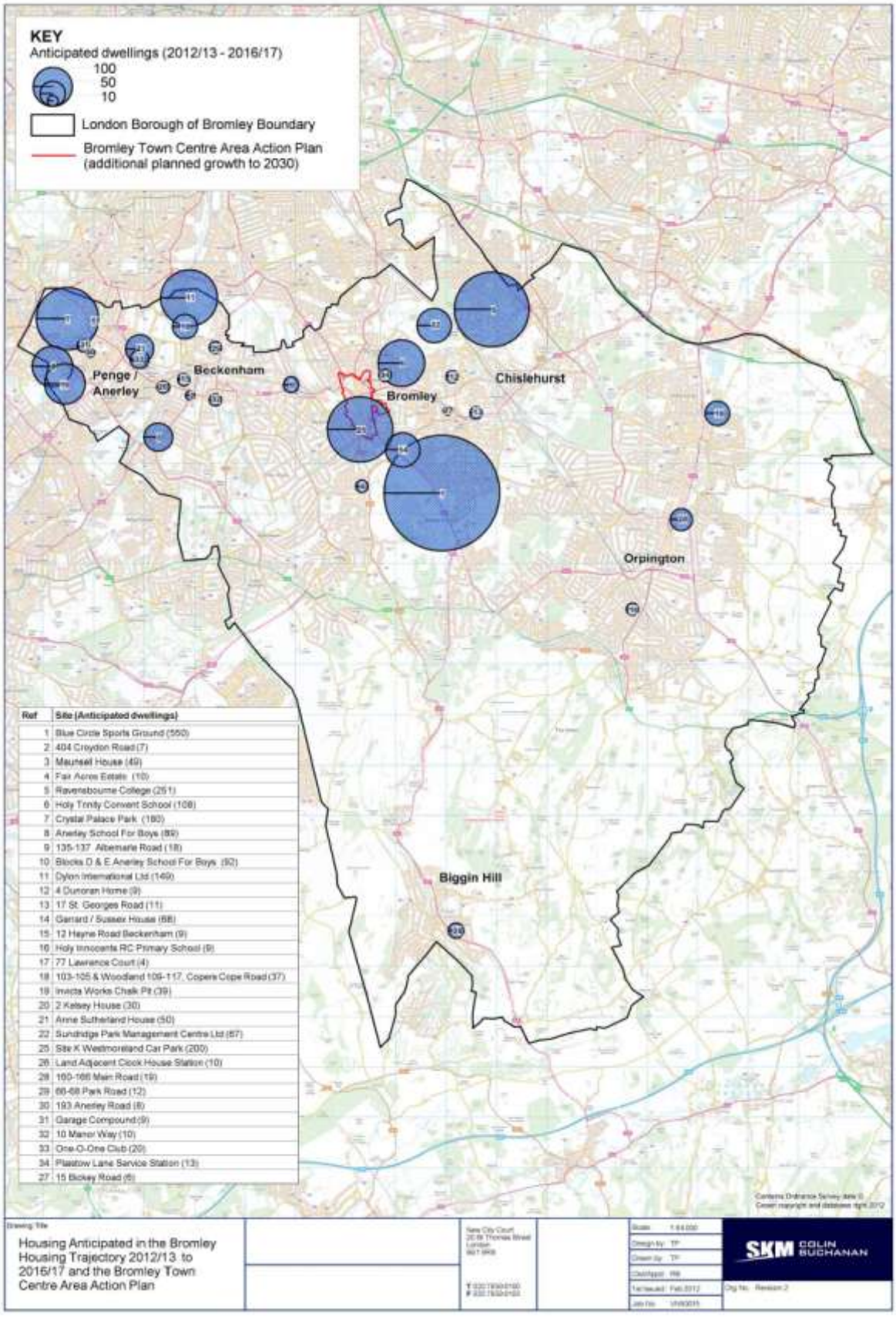
The London Plan: Spatial Development Strategy for Greater London (July 2011) requires Bromley to provide 500 dwellings per annum from 2011 to 2021. Therefore a total of 5,000 new homes need to be planned for over a 10-year period.

Bromley town centre is planned to accommodate 'around 1,820' (approximately 20%) of this total. This target is set out in the Bromley Town Centre Area Action Plan (October 2010) which aims to provide new homes by 2030. However it should be noted that this level of housing growth is not expected to be fully delivered.

The map overleaf sets out Housing Anticipated in the Bromley Housing Trajectory 2012/13 to 2016/17 and the Bromley Town Centre Area Action Plan. Excluding the Town Centre AAP apart from site K, a total of 2,143 new homes are anticipated over the next 5 years. The pattern of development scattered across the northern part of the Borough and is focused in and around the main population centres. It should be noted that there is likely to be additional housing sites brought forward in this timeframe but their location is yet to be determined however it will broadly reflecting the development patterns the map already indicates.

Furthermore, in relation to growth in Bromley town centre the following increase in land uses is planned to take place:

- B1 Business (gross additional) – 7000 m2
- A1 Retail (gross additional) – 42,000 m2
- A3/A4/A5 Food and Drink (gross additional) – 7,500 m2
- Hotel beds (gross additional) – 350
- Leisure (gross additional) – 4,000 m2
- Community (gross additional) – 3,500 m2



Ref	Site (Anticipated dwellings)
1	Blue Circle Sports Ground (550)
2	404 Croydon Road (7)
3	Maunsel House (49)
4	Fair Acres Estate (10)
5	Ravensbourne College (251)
6	Holy Trinity Convent School (108)
7	Crystal Palace Park (180)
8	Anerley School For Boys (89)
9	135-137 Albemarle Road (18)
10	Blocks D & E Anerley School For Boys (92)
11	Dylon International Ltd (149)
12	4 Duncan Home (9)
13	17 St. Georges Road (11)
14	Garrard / Sussex House (68)
15	12 Hayne Road Beckenham (9)
16	Holy Innocents RC Primary School (9)
17	77 Lawrence Court (4)
18	103-105 & Woodland 109-117, Copers Cope Road (37)
19	Invicta Works Chalk Pit (39)
20	2 Kelsey House (30)
21	Anne Sutherland House (50)
22	Sundridge Park Management Centre Ltd (67)
25	Site K Westmoreland Car Park (200)
26	Land Adjacent Clock House Station (10)
28	160-166 Main Road (19)
29	66-68 Park Road (12)
30	193 Anerley Road (8)
31	Garage Compound (9)
32	10 Manor Way (10)
33	One-O-One Club (20)
34	Plaistow Lane Service Station (13)
27	15 Bickley Road (6)

3. Population

Population data is sourced from the GLA Housing Projections (updated 07/02/12). This data includes two projections based on two different assumptions: i) standard fertility, and ii) higher fertility. Both are considered below.

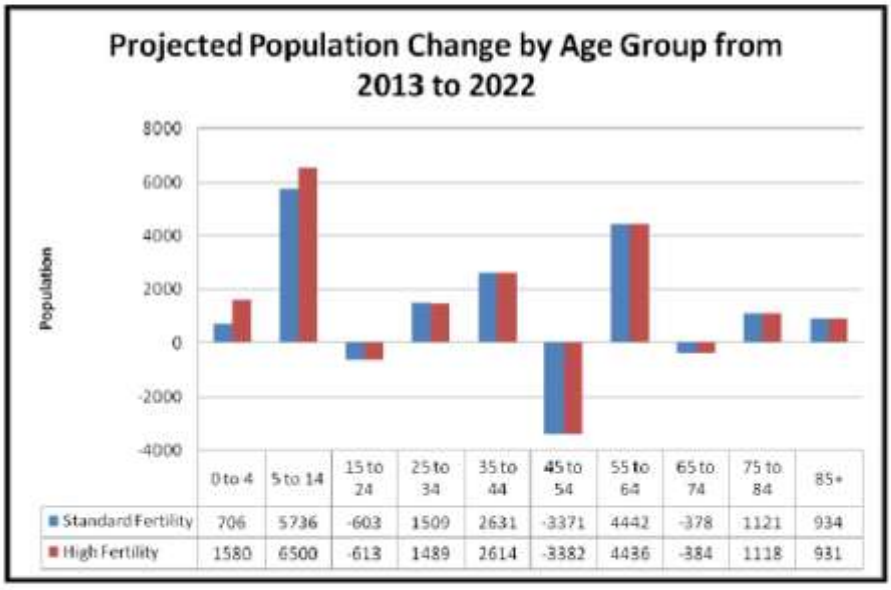
The current population of Bromley (2012) is 316,647. The population of the Borough has grown by almost 10% over the last ten years.

Over the 10-year study period (2013 to 2022) the Borough's population is set to grow by 4%. This proportion of growth is the same for standard and higher fertility rates. Significant differences in these two rates are evident only in the age groups up to 14 years.

Overall both rates follow similar overall trends. To summarise:

- there will be greatest growth in the ages groups of 5 to 14 years and 55 to 64 years which will increase by approximately 16% and 14% respectively;
- age groups between 25 to 44 also show notable growth at approximately 3% to 6%;
- there will be a greatest fall in the 45 to 54 age group at -8%; and
- all other age groups have small increases apart from 15 to 24 and 65 to 74.

The graph below shows the change in population by age group from 2013 to 2022 for both standard and higher fertility rates.



	0 to 4	5 to 14	15 to 24	25 to 34	35 to 44	45 to 54	55 to 64	65 to 74	75 to 84	85+
Standard Fertility	706	5736	-603	1509	2631	-3371	4442	-378	1121	934
High Fertility	1580	6500	-613	1489	2614	-3382	4436	-384	1118	931

The two table below set out growth figures in more detail for Standard and Higher Fertility rates.

Standard	0 to 4	5 to 14	15 to 24	25 to 34	35 to 44	45 to 54	55 to 64	65 to 74	75 to 84	85+	Total
2013 pop	21451	38775	38150	49364	44722	43911	32170	26145	16546	7189	318424
2022 pop	22158	44511	37547	50873	47354	40540	36613	25767	17667	8123	331152
Difference	706	5736	-603	1509	2631	-3371	4442	-378	1121	934	12728
% Increase	3%	15%	-2%	3%	6%	-8%	14%	-1%	7%	13%	4%

Higher	0 to 4	5 to 14	15 to 24	25 to 34	35 to 44	45 to 54	55 to 64	65 to 74	75 to 84	85+	Total
2013 pop	21616	38781	38160	49383	44738	43921	32177	26150	16549	7192	318667
2022 pop	23196	45281	37547	50872	47353	40539	36612	25767	17667	8123	332956
Difference	1580	6500	-613	1489	2614	-3382	4436	-384	1118	931	14289
% Increase	7%	17%	-2%	3%	6%	-8%	14%	-1%	7%	13%	4%

The GLA projections note:

- Each year the GLA produces updated Borough population projections incorporating the latest births, deaths, migration, and development data.
- The GLA generates migration-led projections using a cohort component model that operates from a base of the 2001 ONS Mid Year Estimate (MYE) through to 2031. The model projects forward a year at a time from its base by a cycle of ageing on the population, and taking account of births, deaths and migration.
- Projections use either the London Plan housing targets or development trajectories based on the 2009 Strategic Housing Land Availability Assessment (SHLAA), which is updated annually.

4. Questions

It would be useful if the following questions are considered prior to any meetings.

1) Are there any significant surpluses or deficits in current service provision? Where are they? What are they?

2) How do you calculate demand for services and what standards do you apply if any? Please explain what catchment areas are used, if applicable?

3) Are there any other planned or potential changes to service delivery which may have physical consequences, such as the release of buildings, dual use of buildings with other services, emerging guidance etc. If yes, when will these decisions be made and by whom?

4) What is the planning cycle for investment planning? (How often are documents reviewed, updated and implemented)

5) What are the primary funding sources for capital investment and how often are these reviewed?

6) What assumptions relating to changes in population / households and spatial development are used to underpin current investment plans? Do they correspond to those provided in this note – if not, how do they differ?

7) What if, hypothetically, approximately 1,500 new homes were not delivered in Bromley town centre – where would be the best and worst locations in the Borough to accommodate new housing in terms of your capacity to provide necessary services?

8) Are there any projects set to take place for which your organisation will be responsible for delivery?

9) If any projects with a capital value of £5m or more exist, what are the key milestones for planning, approval and delivery of any projects?

Roland Brass
Planner
Phone: 020 7939 6152
E-mail: Rbrass@globalskm.com

Appendix 2: Infrastructure Schedules

Table 1: Transport Infrastructure Schedule – Roads

Scheme	Description	Status	Rationale	Funding	Cost	Lead Delivery Agent	Delivery Partners	Dependencies	Timeframe	Source
Pinch point reduction programme	Range of schemes to reduce congestion at identified pinch points on the road network	Committed	Previous studies to identify pinch points on the road network	Bromley	£182k	Bromley	TfL	n/a	2014	LIP2
A224 Orpington bypass northern section	Multi-year congestion relief scheme	Committed	Current levels of congestion	Bromley	£170k	Bromley	TfL	n/a	2014	LIP2
A234/A222/A2015 Beckenham centre EW route	Multi-year congestion relief scheme	Committed	Current levels of congestion	Bromley	£450k	Bromley	TfL	n/a	2014	LIP2
Town centre parking VMS/ closure of Westmoreland Road car park	Closure of existing 600-space car park for development, introduction of VMS for remaining car parks	Committed	Reduce traffic congestion	Bromley/ TfL/ S106/ CIL	£1m (£280k for VMS in 2012/3)	Bromley	TfL	n/a	2012/3	LIP2
UTMC/VMS scheme extension	Extension of VMS to incorporate additional public parking in conjunction with developments, "free text" traffic info signs on approaches to town centre, real-time bus/rail info around town centre (including within shopping centres)	Planned	Reduce traffic congestion	Bromley	TBC	Bromley	TBC	Feasibility study required	2011-2015	LIP2
Weekend P&R for Bromley town centre	P&R service from Norman Park, to south of Bromley town centre, to operate at weekends and daily during Christmas period	Planned	Peak parking capacity issues in Bromley town centre	Bromley	TBC	Bromley	TBC	Feasibility study required	2011-2015	LIP2
Bromley town centre car club	Up to 15 on-street bays currently in development of which 4 are in Bromley Town Centre. Plus 1 off-street developer-provided bay at Bromley South Central	Committed	Car club promotion to reduce congestion	Bromley/ S106	TBC	Bromley	TfL	n/a	2011/2	LIP2
Lennard Road car park	Extension of Lennard Road car park adjacent to New Beckenham station	Committed	Increase off-street supply for New Beckenham station	Bromley	£120k across 2 years	Bromley	TfL	n/a	2013	LIP2
Electric vehicle charging	Provision of electric vehicle charging points in car parks in town centres, including Bromley, Orpington, Beckenham, Penge and West Wickham	Planned	Encourage use of electric vehicles and reduce CO_2 emissions	Bromley	TBC	Bromley	TBC	Feasibility study required	TBC	LIP2

Scheme	Description	Status	Rationale	Funding	Cost	Lead Delivery Agent	Delivery Partners	Dependencies	Timeframe	Source
Casualty reduction schemes	Range of schemes to reduce road accident casualties, including	Committed	Improving road safety	LIP2	£1.65m across 3 years	Bromley	TfL	n/a	2014	LIP2
New car park at Locksbottom	Provision of increased parking capacity at the Princess Royal University Hospital site.	Aspirational	Parking capacity deficit at Princess Royal University Hospital	NHS/Bromley/ TfL/developers	£3m	TBC	TBC	Negotiations with South London NHS Trust have begun	2010-2015	LIP2
The Hill multi-storey car park	Structural improvements to release additional capacity - currently operating at 147 spaces below capacity (658 spaces instead of 805) because of structural problems	Aspirational	Parking demand in Bromley town centre increasing	Bromley	£1.2m	Bromley	n/a	Funding and feasibility	2015-2017	LIP2
Bromley South station area - public transport hub improvements	Supporting proposed interchange improvements at the station, a scheme to improve public transport facilities in the wider area around the station, particularly to improve bus-rail interchange	Aspirational	See Bromley TC AAP	Bromley/ TfL/ developers	£1m	Bromley	TBC	Funding and feasibility	2015-2020	LIP2
Oakley Road/Bromley Common	Realignment and signalisation of junction	Aspirational	Highway network pinch point	TfL	£1m	TfL	TBC	Funding and feasibility	2015-2020	LIP2
Croydon Road/Oakley Road/Westerham Road	Realignment and signalisation of junction	Aspirational	Highway network pinch point - significant peak delays on Westerham Road northbound	TfL	£1m	TfL	TBC	Funding and feasibility	2015-2020	LIP2
P&R site for Bromley town centre	Development of a permanent P&R site for the town centre, potentially located near Norman Park providing access onto the A21 Mason's Hill	Aspirational	See Bromley TC AAP	TfL/developers	£3.5m	TfL	Bromley	A21 widening scheme (see below)	2020-2025	LIP2
A21 widening (Mason's Hill)	Provision of additional road capacity on the A21 between junction with Westmoreland Road and junction with Crown Lane	Aspirational	Scheme may be required to release development sites in town centre, and also allow town centre P&R	TfL/ developers	£21m	TfL	Bromley	Development of feasibility study (business case)	2020-2025	LIP2

Scheme	Description	Status	Rationale	Funding	Cost	Lead Delivery Agent	Delivery Partners	Dependencies	Timeframe	Source
High Street/Southend Lane/Rectory Road/Albemarle Road	Junction improvement scheme - potential new bridge over railway	Aspirational	Highway network pinch point on strategic road network	TfL/ Bromley	£5-10m	TBC	TBC	TBC	2020-2030	LIP2
Crofton Road (A21/A232)/Farnborough Common (A21)	Junction improvements	Aspirational	Highway network pinch point	TfL	£5m	TfL	Bromley	Land acquisition likely to be necessary	2020-2030	LIP2
Beckenham Lane/Bromley Road/Shortlands Road	Junction improvement	Aspirational	Highway network pinch point - delays on A222 during peaks	TfL/Bromley	£10m	TBC	TBC	Carriageway width limited by rail bridge	2020-2030	LIP2
Rail-based P&R at M25	Scheme to reduce car traffic on major radial routes into central London by promoting rail-heading at suitable stations	Aspirational	Congestion on major radial routes into central London	Network Rail/DfT/ TfL	TBC	TBC	TBC	Likely sites not in Bromley so external decision	2025-2030	LIP2
Measures to reduce bus journey times between Bromley and Canary Wharf, and Bromley and Croydon	None available at present	Aspirational	Improve bus services from Bromley, encourage mode shift to bus	TfL	TBC	TfL	TBC	Feasibility study, business case	TBC	TfL South SRTP

8.1.1

Table 2: Transport Infrastructure Schedule – Walking, Cycling and Public Realm

Scheme	Description	Status	Rationale	Funding	Cost	Lead Delivery Agent	Delivery Partners	Dependencies	Timeframe	Source
Cycle parking delivery schemes	Range of schemes to increase supply of cycle parking, in particular at railway stations (including Bromley North) and in town centres, and also at parks (i.e. Crystal Palace Park, Norman Park, Jubilee Park and Priory Gardens)	Committed	Encourage mode shift to cycling	LIP2	£75k across 3 years	Bromley	Network Rail (for station schemes)	n/a	Ongoing	LIP2

Scheme	Description	Status	Rationale	Funding	Cost	Lead Delivery Agent	Delivery Partners	Dependencies	Timeframe	Source
Interchange improvements at Bromley North station	Upgrade of station forecourt, improved signs/accessibility,	Committed	Poor existing urban realm/interchange environment	TfL/S106	TBC	Bromley	TBC	n/a	2011-2015	LIP2
Interchange improvements at Bromley South station	Scheme in two phases to ensure DDA compliance, improve way-finding and public realm at station forecourt, increase cycle parking, and improve bus interchange and car drop-off facilities	Committed	Poor existing urban realm/interchange environment	TfL	TBC	Bromley	Network Rail	n/a	2011-2015	LIP2
Bromley 'Biking Borough' schemes	Range of schemes to promote cycling in the borough, including 'cycling communities', profile raising, and Bromley town centre cycle hub	Committed	Promotion of cycling (encourage mode shift); health benefits	LIP2	£270k across 3 years	Bromley	TfL	n/a	2011-2015	LIP2
Court Road cycling and walking scheme	Scheme to improve cycling and walking route along Court Road	Committed	Promotion of cycling and walking; health benefits	LIP2	£135k	Bromley	TfL	n/a	2012	LIP2
Cray Valley linking quiet streets and green spaces	Scheme to integrate cycling and walking networks in the Cray Valley	Committed	Promotion of cycling and walking; health benefits	LIP2	£65k	Bromley	TfL	n/a	2012	LIP2
Bromley North Village	Public realm improvement scheme around the northern section of Bromley town centre	Committed	Current poor quality of urban realm in the northern section of town centre	LIP2	£5m	Bromley	TfL/ Network Rail	n/a	2014	LIP2
Recreational walking schemes	Range of schemes including wayfinding in parks, Green Chain improvements, rural walking projects, South Hill Woods, Downe area etc	Committed	Health benefits	LIP2	£270k across 3 years	Bromley	TfL	n/a	2014	LIP2
TfL cycle safety review of junctions	Schemes to improve safety at A21/A233 Oakley Road; A21 Masons Hill / Hayes Lane / Bromley Common / Homesdale Rd; A21 Kentish Way / Stockwell Close; and A21 Farnborough Way, 100m north of Green Street Green.	Aspirational	Cycle safety issues identified at junctions	TfL	TBC	TfL	Bromley	Feasibility studies and identification of budget	TBC	Bromley Transport Team
Beckenham town centre	Public realm/streetscape enhancement	Aspirational	Poor existing urban realm	TfL	£160k for Step 1 bid	Bromley	TfL	Future major projects funding from TfL - funding for 'Step	Post 2014	LIP2

Scheme	Description	Status	Rationale	Funding	Cost	Lead Delivery Agent	Delivery Partners	Dependencies	Timeframe	Source
								1' bid set aside in autumn 2012		
Cycle Superhighway (CS6)	Extension of Route 6 (Penge to City via Elephant & Castle)	Planned but subject to consultation	TfL target to increase cycling by 400% from 2001 baseline by 2026	TfL	TBC	TfL	Bromley	Outcome of consultation	Feb 2015 (latest)	TfL BP 2011-2015
West Wickham town centre	Public realm/streetscape enhancement focussed on the High Street (A232)	Aspirational	Poor public realm in town centre at present	TfL	TBC	TfL	TBC	Future major projects funding from TfL/ funding from TfL's 'Better Streets' initiative	TBC	LIP2
Bromley Cycle Hire	Scheme to introduce cycle hire in Bromley, in a similar format to the Barclays scheme in Central London	Aspirational	Encourage mode shift to cycling	TBC	TBC	TBC	TBC	Feasibility study and funding	TBC	LIP2

Table 3: Transport Infrastructure Schedule – Rail

Scheme	Description	Status	Rationale	Funding	Cost	Lead Delivery Agent	Delivery Partners	Dependencies	Current timeframe for delivery	Source
Bromley South station - 'Access For All' and NSIP proposals	Provision of step-free access at Bromley South and...	Fully committed and funded - work underway	Access For All - DfT assessment criteria; NSIP proposals - congestion issues and forecast poor LoS (category F) by 2031	Network Rail (level of spend set by DfT	Approx. £4m	Network Rail	n/a	n/a	Completed by summer 2012	Stations RUS (August 2011)
Crystal Palace 'Access For All' and NSIP schemes	Provision of step-free access at station	Fully committed and funded - work underway	Access For All programme allocated based on DfT assessment criteria	Network Rail/ London Rail	TBC	London Rail	Network Rail	n/a	Completed by end of 2012	NR discussi ons

Scheme	Description	Status	Rationale	Funding	Cost	Lead Delivery Agent	Delivery Partners	Dependencies	Current timeframe for delivery	Source
Orpington station NSIP proposals	Refurbishment (focussed on re-design of ticket hall layout) and car park capacity enhancements (scheme included in NSIP Tranche 3) plus improvements to bus interchange and links to town centre	Committed but no development planning undertaken yet	Very high footfall at station and significant observed growth in recent years.	Network Rail (range of sources)	£2m for car park	Network Rail	n/a	n/a	Completed by end of 2013	SL RUS (March 2008)/Stations RUS (August 2011)/LIP2
Bromley South station	Further accessibility enhancements and ticket hall enlargement	Planned - funding not yet secured	Very high footfall at station and significant observed growth in recent years.	Network Rail	TBC	Network Rail	TBC	Funding	2013-2020	TfL South SRSP
Sydenham line capacity - London Overground services extended to 5-cars		Aspirational	Capacity enhancements required on ELL	TBC	£249m (2002 prices, 60-yr appraisal)	TfL	Network Rail?	Minor works required at some stations; Selective Door Opening (SDO) required at Canada Water (platform extensions not possible)	2013-2020	L&SE RUS (July 2011)/TfL South SRSP
Thameslink programme	Range of enhancements including new off-peak all-stations service between Bromley South and Victoria, and capacity enhancements to services from Orpington via New Cross to London Bridge	Committed	Capacity enhancements required to prevent over-crowding on many routes in south London	DfT/ Network Rail	TBC	DfT	Network Rail/TfL		2018	TfL South SRTP

Scheme	Description	Status	Rationale	Funding	Cost	Lead Delivery Agent	Delivery Partners	Dependencies	Current timeframe for delivery	Source
Bromley South to Victoria additional capacity enhancements	Shoulder peak lengthening, additional fast services, 12-car outers and additional fast services, grade separation at Herne Hill,	Aspirational	More capacity needed to avoid worsening crowding – growth likely to be especially strong serving Bromley town centre	Network Rail	TBC	Network Rail	TBC	Funding and feasibility	TBC but post 2014	TfL South SRTP
Bakerloo line southern extension	Conversion of Hayes branch for use by LUL services from Elephant & Castle via Lewisham - option to Beckenham Junction also under consideration	Aspirational	Alleviate pressure on routes via London Bridge; provide additional capacity in inner South London; possible capacity relief for Elephant & Castle corridor to Blackfriars	TBC	TBC	Possibly TfL (depending on route alignment)	Possibly Network Rail (depending on route alignment)	Funding and physical constraints on converting line for use by LUL; Bromley Council currently oppose scheme	TBC, but long-term beyond 2020	L&SE RUS (July 2011)
Extension of Tramlink to Crystal Palace	Extension of Tramlink services to Crystal Palace and the removal of all heavy rail services on the Birkbeck route	Aspirational	Demand for Outer London orbital PT capacity enhancements	TBC	TBC	TfL	Possibly Network Rail (depends on route alignment)	New turnback facility required at Norwood Junction to allow necessary level of service on Gipsy Hill route to be retained	TBC, but long-term beyond 2020	L&SE RUS (July 2011)
Sydenham line capacity - further improvements on London Overground services	Further train lengthening earmarked post 2020	Aspirational	Capacity enhancements required on ELL	TBC	TBC	TfL (London Overground)	Network Rail?	Funding, including for initial train lengthening to 5-car	Post 2020	TfL South SRSP
Extension of Tramlink from Beckenham Junction to Bromley town centre	Extension of existing Tramlink alignment terminating at Beckenham Junction to Bromley town centre, potentially utilising existing rail tracks	Aspirational	Demand for Outer London orbital PT capacity enhancements	TBC	£100m	TfL	Network Rail (depends on route alignment)	Engineering feasibility study, organisation of rail services and use of tracks serving Bromley South	2022-2030	NR discussions/LIP2

Scheme	Description	Status	Rationale	Funding	Cost	Lead Delivery Agent	Delivery Partners	Dependencies	Current timeframe for delivery	Source
DLR extension from Lewisham to Bromley North station	Use of existing rail route from Bromley North to Grove Park for DLR services extended from Lewisham	Aspirational	Demand for public transport corridor between Bromley and Canary Wharf	TBC	£30m	TfL	Network Rail (depends on route alignment)	Engineering feasibility study and business case	2022-2030	LIP2

Table 4: Education Infrastructure Schedule

Scheme	Description	Status	Rationale	Funding	Cost	Lead Delivery Agent	Delivery Partners	Dependencies	Current timeframe for delivery	Source
Planning area 1	Churchfield PS - increase admission from 30 to 60 places pa (therefore new 1FE)	Aspirational / planned	Set out in Primary Schools Development Plan							
	Malcolm PS - increase admission from 30 to 60 places temporary (therefore new 1FE)	Aspirational / planned	Set out in Primary Schools Development Plan							
Planning area 2	Bromley Grove Infant and Worsley Bridge Junior	Aspirational / planned	Set out in Primary Schools Development Plan							
Planning area 3	Additional 1 FE ?	Aspirational / planned	Set out in Primary Schools Development Plan							
Planning area 4	Valley PS - increase admission from 60 to 90 places temporary (therefore new 1FE)	Aspirational / planned	Set out in Primary Schools Development Plan							
Planning area 5	Southborough PS and Keston PS possibly (additional 1FE)	Aspirational / planned	Set out in Primary Schools Development Plan							
Planning area 6	Chislehurst C of E school - relocation and expansion	Aspirational / planned	Set out in Primary Schools Development Plan							

Scheme	Description	Status	Rationale	Funding	Cost	Lead Delivery Agent	Delivery Partners	Dependencies	Current timeframe for delivery	Source
Planning area 7	Midfield and Leesons PS temporary (additional 1FE)	Aspirational / planned	Set out in Primary Schools Development Plan							

Table 5: Primary Healthcare Infrastructure Schedule

Scheme	Description	Status	Rationale	Funding	Cost	Lead Delivery Agent	Delivery Partners	Dependencies	Current timeframe for delivery	Source
Health Centre	Blue Circle Sports Ground - health centre	Planned	Part of wider development project							

Table 6: Utilities Infrastructure Schedule

Scheme	Description	Status	Rationale	Funding	Cost	Lead Delivery Agent	Delivery Partners	Dependencies	Current timeframe for delivery	Source
Crossness and Long Reach Sewage Treatment Works	Large scale upgrades to cater for planned and proposed development proposals	Completed		Thames Water AMP 5		Thames Water	Ofwat		Completed	Thames Water
AMP 6 Sewers and capacity improvements	Improvements necessitated by committed development in AMP 6 period 2016-2021	Currently being finalised		Thames Water AMP 6		Thames Water	Ofwat		2016-2021	Thames Water
Water Resource Management Plan 14	Impact studies on water resources	Ongoing		Thames Water		Thames Water	Ofwat and the EA		2013	Thames Water

Appendix 3: References

General

- Infrastructure Delivery Plan Working Draft (London Borough of Bromley) 2012
- Bromley Town Centre Area Action Plan (AAP) (London Borough of Bromley) Adopted October 2010
- GLA Population Projections (Greater London Authority) 2012

Transport

- Bromley Approved Second Local Implementation Plan (LIP2) January 2012
- Mayor of London's Transport Strategy (MTS) 2010;
- TfL Business Plan 2011/2-2014/5
- TfL Investment Programme 2010 (2009/10-2017/8)
- TfL South Sub-Regional Transport Plan (SRTP)
- Route Utilisation Strategy (RUS) for London and South-East (Network Rail) July 2011
- RUS for South London (Network Rail) March 2008
- RUS for Stations (Network Rail) August 2011
- London Assembly Transport Committee report 'The Big Squeeze – overcrowding on the rail network in London', 2009.

Education

- Review of Primary Schools' Development Plan: Outcome (Children and Young People Portfolio Holder) February 2012
- Update on the recent Government reform developments: including the Academy Programme (Children and Young People Portfolio Holder) January 2012
- Meeting Minutes 24/01/12 (Children and Young People Policy Development and Scrutiny Committee) January 2012
- Children and Young People's Plan 2011 – 2014: Need Analysis 2010 (London Borough of Bromley)

Healthcare

- Commissioning Strategic Plan 2010 – 2015 (NHS Bromley) January 2010
- Childcare Sufficiency Assessment 2011 (London Borough of Bromley) 2011