## Quality Management

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<td>Emily Hamilton</td>
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1. Introduction

1.1 Purpose of Document
This is the second report of the Newham Community Infrastructure Study and covers the baseline position for each of the services covered by the study.

1.2 Appointment and Purpose
Capita Symonds, in association with Colin Buchanan and Partners, Sector and Professor Janice Morphet, have been appointed by the London Borough of Newham (LBN) to undertake a borough-wide Community Infrastructure Study.

The Community Infrastructure Study assesses what infrastructure currently exists as well as what is currently planned against what infrastructure will be needed over the next 15 years, a period in which large areas of LBN will be transformed by growth.

Out of this research, an Infrastructure Plan will be drawn up setting out proposals for the provision of additional infrastructure to meet future capacity levels, including what investments are required and how these could be funded.

The Community Infrastructure Study and accompanying Plan will form part of the evidence base for LBN’s Local Development Framework, more specifically the Core Strategy. However, the Plan has a longer term purpose. Some wider functions include:

- Newham Parks Development Plan (via the open space study carried out for the Community Infrastructure Study);
- Newham Education Primary Capital Programme;
- Schools for the Future;
- Early years’ childcare provision;
- Newham Council property Asset Management; and
- Spatial planning by the Newham Primary Care Trust
- Liaison with the Newham Sustainable Community Strategy.

The Sustainable Community Strategy places emphasis on in infrastructure provision, particularly as LBN is expecting to experience substantial housing and population growth. In order to foster sustainable communities through this period of change, it is important to ensure that the growing population have access to services and facilities such as schools and health centres, and that social inclusion is encouraged.

1.3 The Project
The Study is designed to engage all stakeholders, including infrastructure providers, to plan infrastructure required and to ensure a collaborative and integrated approach. The programme constitutes the following tasks:

- Task 1 Inception – agree approach and establish stakeholder communications;
• Task 2 Best Practice – understanding of current state of service provision including innovations in infrastructure delivery to underpin the Study;
• Task 3 Standards – consultation with providers to enable reporting on current standards, gaps in standards and how they might change in the future;
• Task 4 Baseline – identify existing infrastructure assets and establish schedule of assets linked to a Geographic Information System (GIS);
• Task 5 Planned Improvements – analyse growth and future investments over next 15 years and continue engagement with providers to verify schedule;
• Task 6 Draft Infrastructure Plan – produce draft infrastructure delivery plan with schedules; and
• Task 7 Final Infrastructure Plan – refine plan and present findings to Project Steering Group.

Figure 1.1 Project Methodology and Responsibilities

Tasks 1–3 were completed in October 2009 and reported in the Inception Report.

This Baseline Report is part of the outcome of Task 4 of this programme and is structured in the following format:

• Section 1 – This introduction
• Section 2 – Physical Infrastructure: Transport
• Section 3 – Physical Infrastructure: Energy and Water
• Section 4 – Physical Infrastructure: Flood Defence
• Section 5 – Social Infrastructure: Education
• Section 6 – Social Infrastructure: Healthcare
1. Introduction

- Section 7 – Social Infrastructure: Indoor Sports Facilities
- Section 8 – Social Infrastructure: Community Facilities
- Section 9 – Social Infrastructure: Adult Social Care
- Section 10 – Emergency Services
- Section 11 – Green Infrastructure

Task 5 and 6 were completed in December 2009

Task 7 will be completed by March 2010

Accompanying Geographic Information System will follow in January 2010.
2. **Physical Infrastructure: Transport**

2.1 **Existing Infrastructure**

Located east of the capital, the London Borough of Newham falls within the remit of Transport for London (TfL). Public services that fall under the overall control of TfL in the borough are set out below in Table 2.1:

<table>
<thead>
<tr>
<th>Infrastructure</th>
<th>Facility</th>
<th>Organisation</th>
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<tbody>
<tr>
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<td>Network Rail, Train Operating Companies</td>
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<td>TfL, DLR</td>
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<tr>
<td></td>
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<td>LB Newham</td>
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<td></td>
<td>Local Road Network</td>
<td>LB Newham</td>
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<tr>
<td>Cycles</td>
<td>London Cycle Network</td>
<td>TfL, LB Newham</td>
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<td>Walking</td>
<td>Footways</td>
<td>LB Newham, TfL</td>
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<td></td>
<td>Footpaths (Public Rights of Way)</td>
<td>LB Newham</td>
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<tr>
<td>Horses</td>
<td>Bridleways</td>
<td>LB Newham</td>
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</table>

In addition to these the borough is on the National Rail Network, including the Channel Tunnel Rail Link, major highway infrastructure such as the A13 and the North Circular (A406).

2.2 **London Rail Services**

Studies undertaken by National Rail and TfL have established the current levels of capacity (in terms of passengers required to stand per square metre) for rail services in London. The most recent published data is for 2006. Figure 2.1 illustrates overleaf the current levels of capacity for rail services in London.
Figure 2.1: Rail Services Capacity
As can be seen from figure 2.1, levels of congestion with rail cars increase as you get closer to major employment centres such as Canary Wharf and the City of London. Even with the proposed upgrades to the public transport system predicted increases in the use of public transport keep up or even exceed the capacity improvements.

2.3 **National Rail Service and Stations**

Two rail corridors pass east-west through the Borough providing good links between Central London, Essex and East Anglia. An additional link connects Stratford with Stansted. These are summarised as follows:

- Services from Fenchurch Street Station to South Essex – Station: West Ham (C2C)
- Services from Liverpool Street Station through Stratford Station to Essex and East Anglia—Stations: Stratford, Maryland, Forest Gate
- Services from Stratford to Essex and Stansted

The C2C Line is one of the most overcrowded in London with again 3-4 people standing per square metre in the morning peak.

2.4 **London Underground Stations**

The District, Hammersmith & City, Central and Jubilee lines serve Newham’s stations, connecting the borough with all four corners of the capital and every major rail terminus within London. Within Newham, stations to the underground network are as follows:

- Central Line – Stratford;
- District/Hammersmith & City Line – West Ham, Plaistow, Upton Park, East Ham; and
- Jubilee Line – Stratford, West Ham, Canning Town.

The area of London covered by LBN is highlighted in the figure below. It demonstrates that the central line and District Line in Newham have levels of overcrowding of 3-4 persons standing per square metre in the morning peak, higher than the Central or District Lines coming in from West London. Passenger overcrowding can be cited as a reason for persons not using public transport. Whilst some sections of rail services within the borough have low levels of passengers standing, in could be inferred that congestion elsewhere on the network could still deter passengers from using services.

Studies undertaken by National Rail and TfL have established the current levels of capacity (in terms of passengers required to stand per square metre) for underground services in London.

2.5 **Docklands Light Railway Services and Stations**

The DLR connects the City of London and Stratford with the Royal Docks, the Canary Wharf financial, business and entertainment district and with Greenwich and south-east London. There are three branches to the network with stations located as follows:
2. Physical Infrastructure: Transport

- Beckton Branch - Canning Town, Royal Victoria, Custom House, Prince Regent, Royal Albert, Beckton Park, Cyprus, Gallions Reach, Beckton
- Woolwich Branch – Canning Town, West Silvertown, Pontoon Dock, City Airport, King George V
- Stratford Branch – Pudding Mill Lane, Stratford

2.6 Cycling

The borough has an extensive network of recommended cycle routes which are identified within the TfL local Cycling Guides, Nos. 4, 7 and 8. Borough wide Cycle Routes

However, it is evident from the Transport for London Cycle maps that there are few routes of dedicated off road cycle lanes. Much of this is alongside the A13 and will become part of the Superhighway. Provision is notably lacking in the area between the River Lea/Bow Creek and the A1011 Manor Road corridor. However, much of this area is scheduled for redevelopment, either through the Olympic Park or other regeneration schemes.

With the exception of the “route for cyclists that may be on busier roads” carriageway are a lack of routes that provide direct linkages across the borough.

2.7 Bus Services

Within Newham there is a network of service that provides a total of 25 high frequency routes, 6 low frequency routes and 5 night services. A high frequency route is one that has five or more buses an hour. A low frequency bus route generally runs four or fewer buses an hour.
Figure 2.2: Bus Routes in Newham
Using Keypoint data from TfL, we have been able to assess the available capacity on buses on routes that pass through Newham. We have identified the locations of bus stops where passing services have an occupancy level of 50% or more at during the typical peak periods.

The peak periods we have used are the am and pm peaks as well as midday.

Figure 2.3 overleaf shows the location of the bus stops where the vehicle occupancy is greater than 70% and also shows the level of occupancy for the peak periods.
Figure 2.3: Bus Capacity Diagram
Table 2.3 overleaf shows the bus stops, the direction of travel and the percentage occupancy of the vehicles. As can be seen certain services are at or close to capacity. This indicates that any development that is either close to or is likely to share services that go through these points will require investment in public transport services.

It should be noted that as other transport schemes are improved or come on line, such as DLR Stratford link, that bus patronage may well alter and therefore up to date data sets should be used if using this tool to help plan future bus improvement.
### Table 2.3: Bus capacity Levels

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<th>mid arr %</th>
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<td>276</td>
<td>S Newington, Stoke Nght</td>
<td>A012 21 Stratford in Sth Barking Rd Stp G</td>
<td>45</td>
<td>75%</td>
<td>75%</td>
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<tr>
<td>276</td>
<td>S Newington, Stoke Nght</td>
<td>A012 29 Stratford in Sth Barking Rd Stp G</td>
<td>45</td>
<td>75%</td>
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<td></td>
</tr>
<tr>
<td>104</td>
<td>Manor Park</td>
<td>A012 02 Upton Pk Gen EAF Barking Rd Stp G</td>
<td>70</td>
<td>70%</td>
<td>70%</td>
<td>70%</td>
<td>70%</td>
<td>70%</td>
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<tr>
<td>104</td>
<td>Manor Park</td>
<td>A012 02 Upton Pk St Bf Barking Rd Stp F</td>
<td>70</td>
<td>63%</td>
<td>63%</td>
<td>63%</td>
<td>63%</td>
<td>63%</td>
<td>63%</td>
<td></td>
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<tr>
<td>330</td>
<td>Canning Town</td>
<td>A012 02 Upton Pk St Bf Barking Rd Stp F</td>
<td>70</td>
<td>63%</td>
<td>63%</td>
<td>63%</td>
<td>63%</td>
<td>63%</td>
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</tr>
<tr>
<td>58</td>
<td>East Ham</td>
<td>A012 02 Upton Pk St Bf Barking Rd Stp F</td>
<td>70</td>
<td>63%</td>
<td>63%</td>
<td>63%</td>
<td>63%</td>
<td>63%</td>
<td>63%</td>
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</tr>
</tbody>
</table>

2.8 **Journey Times**

Figures 2.4-2.8 overleaf show journey times across public transport modes to a selected destination.

The sample destinations are:

- Stratford
- Bank
- Barking
- Canary Wharf
- East Ham

---

Newham Community Infrastructure Study Baseline Report
January 2010

2. Physical Infrastructure: Transport
Figure 2.4 Public Transport Journey Times to Stratford
Figure 2.5 Public Transport Journey Times to Bank
Figure 2.6 Public Transport Journey Times to Barking
Figure 2.7 Public transport Journey Times to Canary Wharf
Figure 2.8: Public Transport Journey Times to East Ham
2.9 ACCESS TO PUBLIC TRANSPORT

Figure 2.9 below shows walk times to a means of public transport within the borough of Newham. As can be seen, the areas where shorter walk times of less than 3 minutes are possible are close to major highway and hence bus services and rail infrastructure with walk times increasing as the road network either reduces in capacity or density.

It is clear from this figure that many of the areas identified as having long walk times to public transport coincide with many of the chosen development sites within the borough.

The long walk times to public transport facilities in these locations are likely to be determined by several factors.

The area whilst having a network of access roads does not have a bus service e.g. industrial use areas such as those in the Lea Valley or that the area is currently has no public access e.g. sites awaiting development.

Figure 2.9: Access to Public Transport
3. Physical Infrastructure: Energy and Water

3.1 INTRODUCTION

This assessment covers the utilities involved in the provision and distribution of drinking water, foul sewerage, sewage treatment capacity and the provision and distribution of gas and electricity supplies.

3.2 REGULATION

Since the 1980s all utility services have been provided by private companies. But since they are natural monopolies they are subject to strict regulation. Each industry has a Regulator which controls their charges to the consumers. The Regulators seek to establish stable pricing regimes for five-year periods. When setting prices at the beginning of these periods the regulator will take a variety of matters into account:

- Claims made by the provider in their proposed business plans regarding ageing asset replacement.
- Claims made by the provider in their business plans regarding the need to meet future demand for the product.
- Changes in the wider policy environment, such as health and safety, EU directives, environmental policy, government desire to reduce waste of water or energy, government policy on government policy on non fossil fuels.
- Representations made by consumer groups regarding price, and by public bodies such as the Environment Agency regarding water quality and national parks regarding overhead lines.

The price setting process is weakly connected to the regional and local planning process for a variety of reasons:

- Each industry has its own five year period.
- The five year periods do not coincide with the London Plan or LDF process.
- Regulators only react to evidence put before them on future demand: they do not independently scrutinise companies' plans for robustness in relation to future demand from planned growth.
- Regulators' chief concern is price control for existing consumers. Given that housing completions are hard to predict, ensuring that funds for investing in providing for infrastructure for the housing of new households are available might result in overprovision of infrastructure ahead of need. Since this would raise prices it is not generally supported by regulators.

Provided that utility companies and regulators agree at the beginning of the price-setting process that investment is needed within the 5 year period to support the housing of new households, the investment can be tied in to the rolling programme of asset replacement undertaken by companies. (This has the benefit that proper planning of the process can be undertaken, with the asset replacement being programmed to support new growth, economies of scale achieved and “barriers” to obtaining planning permission for new infrastructure lowered). However, any requirements for utility investment
which arise after the conclusion of the price setting exercise have to be financed by external sources, such as developers’ contributions or specific grants.

A further consideration regarding the nature of the utility industries is that private companies are necessarily cautious about revealing their investment plans. A lot depends on which stage within the price setting cycle one seeks information. If (as in the case with water and electricity at present) the run up to the start of the pricing period is underway, companies may be reluctant to reveal information which might adversely affect their settlement and their position relative to competitors.

A related issue is the boundaries of utility companies. Our experience is that where a company has a limited catchment, it is much easier to obtain information which relates to a particular county or district. Large companies on the other hand may only have a small part of their assets in a single borough and disaggregating this from totals is complicated. Borough boundaries do not correspond to functional areas in utility terms, so relating individual elements of infrastructure to individual parcels of growth in the core strategy is complicated. A single major investment may serve both growth and existing demand in a large section of East London.

Even once the price review is completed, the delivery of major long term infrastructure projects is affected by the aspects of the approach to financing in the regulatory framework:

- The allowed cost of capital. The effect of an underestimation of the rate of return could be that investors do not finance the required investment, so infrastructure projects are not delivered as planned by the regulator.
- Length of the price control. Plans cover company commitments during a period of 25 years but the actual price control period is only 5 years. Therefore there is a lack of certainty over cost recovery on like long projects.
- The way in which company cash flows are addressed by the regulators (addressing the viability of the investment). Companies may be awarded the correct cost of capital, but they may be unable to attract finance for large investment projects if their cash-flow position is such that they cannot achieve required credit ratings from lenders or required dividend covers by equity investors.

3.3 ELECTRICITY

There is a national system for electricity generation and distribution dating from the 1950s – although local generation of electricity may play an increasing role in future years. Power is taken from various interface substations and is then distributed by EDF Energy to its primary substations at Barking and West Ham. Power which then distribute electricity on a more local basis to customers.

The supergrid supplies 400kV to the primary substation at West Ham and 275kV to City Road substation (to the west) and the primary substation at Barking (in the east).

The majority of the Borough is supplied via High Voltage (HV) cables from the EDF Energy main substations at:

- West Ham (132kV);
- Bow (132kV);
3. Physical Infrastructure: Energy and Water

- Barking (132kV); and
- Redbridge (400/66kV).

Power from the primary substation at West Ham is then distributed via HV cables to the following secondary substations:

- 3x66kV to Glaucus Road (outside to Borough)
- 2x132kV to Stephenson Street London Underground Ltd
- 2x132kV to West Ham British Rail (BR)
- 4x66kV to Silvertown, 2x66kV onward to Mayer S&S
- 2x132kV to Barking (outside to Borough)
- 2x132kV to Bow, Bow BR, Stratford BR and Hackney supergrid (loop) (Hackney outside to Borough)
- 1x132kV to Orchard Place (outside to Borough)
- 1x132kV to Brunswick Wharf (outside to Borough)
- 4x132kV to West Ham grid (11kV)
- 3x132kV to Westferry Circus (outside to Borough)

From Bow substation, 4 x 11kV cables supply Bow Channel Tunnel Rail Link (CTRL) onwards to the CTRL network.

Power is distributed from the primary substation at Barking to secondary substations at:

- 4x66kV to Nelson Street, East Ham tee point
- 3x33kV to Beckton STW
- 3x33kV to Whiston Road (west and outside of Borough)

From Redbridge substation supplies Woodgrange Park via 3 x 66kV cables.

EDF is responding to the current down turn in the economy by adjusting the forecasted load growth across the majority of the network. The company predicts very low growth levels over the next few years. It sees its asset replacement programmes as providing opportunities to rethink the way in which its infrastructure is developed to meet future customer needs, particularly for connections to green and renewable energy sources.

However, significant investments are planned at the following sites during the period 2010-2015 which will result in a major increase in capacity and resilience of the network.

3.4 GAS

Gas is transported from the North Sea and other sources (such as ports) across the country using a National Transmission System (NTS) of pipelines at up to very high pressure (85 bar). Gas is then transferred to eight gas distribution networks (GDNs) which cover separate geographical regions of Great Britain. These companies take gas from the NTS at "NTS Offtakes" and distribute it through a cascade of high pressure (over 7 bar) and lower pressure (under 7 bar) pipelines to customers. The
DNO for the North London area is National Grid Gas UK Distribution. It takes gas from the NTS from several offtakes include Luxborough Lane (near Loughton) and Peter’s Green (near South Mimms on the M25).

The company’s Long Term Development Plan uses demand forecasts produced by UK Gas Transmission, supported by feedback from its industry-wide consultation process “Transporting Britain’s Energy”. For the North Thames area, gas demand overall is forecast to change little over the next ten years, at around 63 Terawatt hours per year. This comprises firm demand which must be met and “interruptible” demand which can be cut off at peak moments. Gas companies also need to be able to cope with peak demand and the 1-in-20 peak firm demand is estimated to fall from 485 gigawatt hours/day in 2009-10 to 465 gigawatt hours/day in 2017-18. Figure 3.1 below shows historic and forecast overall gas demand for North Thames Gas Network.

**Figure 3.1: Historic & Forecast Overall Gas Demand for North Thames Gas Network**

![Graph Source: National Grid Distribution Long Term Plan, 2008]

3.5 **LONDON SUPPLY STRATEGY**

The general trend suggests that on the whole average gas consumption is reducing across the North Thames LDZ. Gas demand is increasing on the western side of London and declining elsewhere. Much of the network serving London is reaching the end of its serviceable life and needs replacing. Owing to the congested nature of any city replacing these assets can be disruptive and often very difficult to access. Replacing these large diameter cast iron mains forms part of an investment plan that is currently being prepared and stakeholder consultation is expected to take place over the next 2 years, see Figure 3.2 overleaf. Figure 3.2 overleaf shows that in the short term supply will exceed demand as a consequence of investment from the AMP4 period in a desalination plant at Beckton due to open in 2010 at a cost of £250 million which can supply up to 140 million litres a day if needed.
3.6 **FRESH WATER SUPPLY**

3.6.1 **WATER SUPPLY-DEMAND BALANCE**

Fresh water is provided to Newham by Thames Water from the Woodford Zone. The Woodford zone covers a very large undulating area of land that stretches from the river into neighbouring boroughs.

In September 2009 Thames Water published an updated version of its Water Resources Management Plan. This provides detailed information at the London WRZ level of the baseline water supply-demand balance and the prospects for catering for future growth.

The baseline is taken by Thames Water to refer to the balance of supply and demand in a situation where current spending plans (in the “AMP5” period up to 2015) are implemented but no further measures are taken after that. (This is a rather different concept of baseline than normal.) The measures in the AMP5 period include measures to reduce leakage, promote household and non-household water efficiency and voluntary metering. The impact of these measures on water supply – demand balance is shown in Figure 3.3 overleaf.
3. Physical Infrastructure: Energy and Water

Figure 3.3 London WRZ baseline scenarios (dry year average annual demand)

Source Thames Water WRMP Sept 0

3.7 Waste Water Treatment

Newham’s foul sewerage systems and sewage treatment is undertaken by Thames Water Utilities Ltd. The investment issues underlying sewage provision arise from two sources. In the first place existing sewage treatment works may need expansion in order to handle increased volumes of waste water arising from a larger number of households. Secondly, higher environmental standards (e.g. arising from the EU) may mean that even with no increase in “demand” existing sewage treatment works require upgrading.

As in the case for all east London boroughs, sewage is collected using the system originally designed in Victorian times and channelled to a single treatment works at Beckton in East London. A critical question for this network is the performance of the systems at times of high rainfall. Water run runoff is channelled into the sewage system, leading to pollution incidents in the Thames.

The London Tideway Tunnels seek to address this problem. Heralded as the largest water infrastructure project in the northern hemisphere, the London Tideway Tunnels aim to reduce sewage discharge into the rivers Thames and Lee by capturing the most polluting sewer overflows then transferring them to Beckton Sewage Works in East London.
4. Physical Infrastructure: Flood defence

4.1 Introduction

This section aims to provide information on the potential opportunities and constraints to the proposed growth in relation to flood defence infrastructure across Newham.

The overall objectives of this section are to:
- Provide an overview of the water environment;
- Understand the existing provision of flood defence infrastructure;
- Provide an assessment of existing flood risk from all sources including actual risk;
- Identify where possible the potential costs and means of funding for any required flood infrastructure; and
- Provide a summary of key messages from stakeholder bodies and identify gaps in knowledge.

4.2 Summary of Evidence Available

The data that informs this study has predominantly been sourced from the Environment Agency (EA), and London Borough of Newham Council. A meeting was held with the EA in October 2009 to discuss the objectives of the study and to gain their inputs and local knowledge on flooding infrastructure within Newham. Growth area data, Flood Zones, EA National Flood and Coastal Defences Database (NFCDD) and the relevant strategies have provided the main sources of data to inform the assessment. Table 4.1 below summarises the data and its sources.

Table 4.1: Data sources

<table>
<thead>
<tr>
<th>Document Title</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>TE2100 Plan Consultation Document, 2009</td>
<td>Environment Agency</td>
</tr>
<tr>
<td>Fact Sheet: Newham Borough Environmental summary, 2009</td>
<td>Environment Agency</td>
</tr>
<tr>
<td>Thames Catchment Flood Management Plan (CFMP), 2007</td>
<td>Environment Agency</td>
</tr>
<tr>
<td>Thames Gateway Environmental Standards, 2009</td>
<td>Environment Agency</td>
</tr>
<tr>
<td>Newham and Stratford Embayment Strategy (Draft), 2009</td>
<td>Environment Agency</td>
</tr>
<tr>
<td>Hidden Infrastructure—The pressures on Environmental infrastructure, 2007</td>
<td>Environment Agency</td>
</tr>
<tr>
<td>Managing the risk of flooding in the River Roding catchment, Consultation for the River Roding Flood Risk Management Strategy, 2006</td>
<td>Environment Agency</td>
</tr>
<tr>
<td>The Lower Lea Flood Risk Management Strategy Consultation, 2006</td>
<td>Environment Agency</td>
</tr>
<tr>
<td>Focus on Newham, local people and local conditions, 2007</td>
<td>London Borough of Newham</td>
</tr>
<tr>
<td>Thames Barrier and associated gate strategy, 2004</td>
<td>Environment Agency</td>
</tr>
<tr>
<td>Thames Embayment Strategy, 2004</td>
<td>Environment Agency</td>
</tr>
</tbody>
</table>
4.3 **WATERCOURSES IN THE LONDON BOROUGH OF NEWHAM**

Newham is heavily influenced by its water environment with the River Lea forming the boroughs western boundary, the River Roding forming the eastern boundary, and the River Thames forming the southern boundary. Due to the extensive and complex nature of the water environment a brief summary of the main watercourses in Newham is given below.

The Lower Lea forms the boundary between the London Borough of Tower Hamlets in the west and Newham to the east. The Lower Lea discharges into the River Thames in the Blackwall area to the west of the docklands. Within the borough the River Lea splits into the Waterworks River, River Lea and City Mill River around Marshgate Lane, before rejoining to the west of the River Lea. The River Lea Navigation canal also enters the borough flowing approximately parallel with the River Lea before rejoining with the river at Old Ford Locks. The Bow Back River system of navigable waterways is to the east of the River Lea. The Hertford Union Canal flows alongside Victoria Park and connects the Grand Union to the River Lea Navigation Canal near Bow Industrial Estate.

The River Roding flows along the boundary of Newham and Barking and Dagenham, before discharging into the River Thames. There are no significant tributaries discharging into the River Roding within the London Borough of Newham. The combination of urbanisation and geology contribute to the flashy response to rainfall within the Roding catchment.

The only main river tributary of the Lower Roding within the borough is the Whittings Sewer in East Ham. There are also a number of culverted ordinary watercourses that drain the low areas around Canning Town and Custom House and then discharge into the Royal Docks.

4.4 **EXISTING KEY FLOOD DEFENCES**

Over half the properties in Newham are at risk of flooding from the tidal River Thames (Flood Zones), however the ‘actual’ probability is low due to protection provided by the Thames tidal defences, including the Thames Barrier. The Environment Agency’s National Flood and Coastal Defence Database (NFCDD) contains flood defence and asset data for the whole of England and Wales. The NFCDD holds extensive records of structures within Newham, however many of these do not have a major impact on flooding during large flood events. This analysis will focus on large scale flood defence infrastructure such as alleviation channels or raised defences. Figure 4.1 overleaf shows the existing main flood risk defence infrastructure in Newham.

Newham is considered to be protected to a high standard from tidal flooding as it currently benefits from raised defences in the form of the Thames tidal defences which also include the Thames Barrier and the Barking Barrier. The raised defences are designed to protect London from a tidal surge on the Thames (in excess of a 1 in 1000 year return period tidal surge).

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*N ewham Borough Factsheet, Environment Agency, 2009*
The flood defence schemes detailed overleaf (Table 4.2) provide an overview of the major existing infrastructure across Newham that are operated and maintained by the Environment Agency. The River Lea Flood Relief Channel although not located in Newham does contribute to the management of flows within the River Lea network in Newham.
### Table 4.2: Key Flood Defence Infrastructure in Newham

<table>
<thead>
<tr>
<th>Scheme</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thames Tidal Defences</td>
<td>Embankments and sheet piled walls along the River Thames; comprised of raised man made defences. Designed to a 1 in 1000 year standard. In Newham have a statutory defence level of 5.18m AOD from the confluence of the River Lea and the River Thames as far as the Thames Barrier. Downstream of the Thames Barrier to the Barking Barrier the statutory defence level is 7.2m AOD. Maintained by the Environment Agency and landowners.</td>
</tr>
<tr>
<td>Thames Barrier</td>
<td>Significant flood defence infrastructure located between Newham and Greenwich. Operational in 1982, it has 10 steel gates that can be raised into position if a tidal surge is predicted. Predicted to provide protection for up to the 1 in 1000 year flood return period until 2030. Maintained by the Environment Agency.</td>
</tr>
<tr>
<td>Barking Barrier</td>
<td>Located at the confluence with the River Roding and the River Thames (TQ 455817). Consists of three wing gates and one high guillotine style structure. Operates under the same operating rules as the Thames Barrier by the Environment Agency.</td>
</tr>
<tr>
<td>River Lea and River Roding Fluvial/Tidal Flood Defences</td>
<td>Raised defences along the reaches of the River Lea and River Roding. Statutory defence levels on the River Lea range between 5.23m and 5.49 m AOD. The River Roding the defence levels are between 5.5 and 5.55m AOD. Maintained by the Environment Agency and land owners.</td>
</tr>
<tr>
<td>River Lea Flood Relief Channel</td>
<td>Located north of Newham. Offers some fluvial flood protection downstream in Newham. Constructed to offer protection to the 1 in 70 year return period, recently close to overtopping during the flood events of 1987, 1993 and did overtop in 2000.</td>
</tr>
</tbody>
</table>

The management of the river defences and assets within Newham is divided between a number of different parties including Environment Agency, local authorities and private owners. Maintaining existing flood defence infrastructure including culverts, maintained and natural channels as well as raised defences is the responsibility of private (riparian) owners or local authorities as dictated by the Water Resources Act 1991 and Land Drainage Act 1991. Under this legislation the Environment Agency have permissive powers to undertake works where they deem necessary. The Environment Agency is responsible for the maintenance and operation of the Thames Barrier.
Although not flood defence infrastructure, it is important to recognise the role flood warning has in providing flood protection. Currently there is £2.5 million spent nationally on Flood Warning, the EA have advised that this figure is difficult to break down to a regional level. The Environment Agency aim to provide at least two hours notice of flooding occurring, this is done for people and businesses within a floodplain who sign up to receive direct flood warnings via Flood Line Warnings Direct (FWD). In the London Borough of Newham, there are 3145 people registered (mid 2009) to FWD. This is approximately 4% of the properties at risk of flooding. However, this low percentage can be attributed to the protection offered by the Thames Barrier and that those at risk from tidal flooding receive alternative flood warnings.

4.5 Existing Flood Risk in Newham
The following section assesses the existing flood risk to Newham from all potential sources of flooding. It discusses the flood risk from the flood zones which shows the undefended situation and then the actual risk taking into account the presence of defences.

Environment Agency Flood Zones
The Environment Agency Flood Zones show that parts of Newham are within Flood Zone 2 and 3. Flood Zone 2 is land assessed as having between a 1 in 100 and 1 in 1000 annual probability of river flooding in any year (1% to 0.1%). Flood Zone 3 is land assessed as having a 1 in 100 or greater annual probability of river flooding in any year (>1%), ignoring the presence of defences.

The flood zones show the extent of flooding that would be expected from a fluvial and/or tidal flood event for an undefended scenario. The flood zones are shown in Figure 4.2, the flood zones have been provided by London Borough of Newham for use in this assessment.

The area of land within Flood Zones 2 and 3 covers large area in the south of the borough, around the tidal River Thames and along the east and west borders following the line of the River Lea and River Roding respectively. The majority of fluvial flooding in Newham without defences is from the River Lea, whereas the flood zones from the River Roding are smaller by comparison.

In Newham, there are just over 73,600 properties (66% of all properties) at risk of flooding from tidal and fluvial sources. The majority of these properties are residential. Approximately 97% of those at risk are classified as having a low likelihood of flooding due to the Thames tidal defences.

Flooding has occurred in the London Borough of Newham in 1928, 1947, 1953, 1987 and 2000. The more recent event of 1987 occurred around the Whitings sewer in Beckton, and the latest flood event in Newham of 2000 was a result of two different causes—local drainage/surface water and fluvial (river) flooding. Flooding occurred in the playing fields to the east of Plashet.³

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³ Figures are indicative only and are taken from the 2008 National Flood Risk Assessment (NaFRA—Environment Agency) and Newham Borough Factsheet, Environment Agency, 2009
4. Physical Infrastructure: Flood defence

Figure 4.2: Environment Agency combined fluvial and tidal Flood Zones in Newham

4.5.1 **Tidal Flooding**

There is a risk of tidal flooding in Newham caused by a storm surge in the North Sea and the associated impacts on the River Thames. The assessment of tidal Flood Zones in Newham has considered an undefended scenario where the Thames tidal defences have been removed and the Thames Barrier is assumed non-operational during a storm surge event. Figure 4.2 shows the tidal Flood Zones as well, and demonstrates extensive flooding along the Thames tidal floodplain corridor.

4.5.2 **Groundwater Flooding**

The underlying geology of Newham although dominated by London Clay, it is also underlain by two aquifers the first is classified as a major aquifer which forms part of the London Basin and the second is a shallow aquifer within the River Terrace Gravels classified as a Minor Aquifer, this overlies the London Clay formation.

Based on the underlying geology alone the risk from groundwater flooding in Newham is therefore a potential risk. However, the risk from deep basin chalk aquifer is being managed on strategic level by the Environment Agency after concerns from rising groundwater levels in the latter half of the 20th century. The programme of monitoring combined with the urban nature of Newham means the actual risk from groundwater flooding is considered to be low.
4.6 **Surface Water**

Flooding from land occurs when intense, often short duration rainfall is unable to soak into the ground or via drainage systems. Due to the highly urbanised nature of the borough, the potential for ground infiltration is limited and therefore the rate and volume of surface water is likely to increase. The risk of surface water flooding is expected to be greatest in the low lying areas of the borough where ponding may occur due to the impervious nature of dense urban area. Low lying areas of the borough include Canning Town, and the area directly north of the Royal Victoria Dock and the Royal Albert Dock and parts of East Ham.

Thames Water has provided information at a post-code level scale which collates their records of flooding from overloaded sewers in the last ten years. The records are divided into incidents of surface water, foul water and combined flooding. Data received for this study confirmed that the total number of properties in Newham flooded from overloaded sewer and combined overloaded sewer in the last 10 years is 593, and 585 respectively.

4.7 **Actual Risk of Fluvial Flooding**

A substantial area of Newham lies within Flood Zones 2 and 3, however the assessment of the actual risk of flooding takes into the presence of defences and shows the defended situation. It is important to assess the actual risk of flooding in terms of understanding what the current level of protection provided by the infrastructure offers to Newham. The actual risk should be assessed to determine infrastructure requirements for the future.

Actual risk provides a more realistic estimate of likely flooding than is provided by the Flood Zones. For the purpose of this study, a request for modelling information from the Lower Lea Valley Regeneration model was placed with the London Development Agency. The actual risk of flooding was modelled using the LLV Regeneration Model and Lower Roding Tuflow model with all defences in place. Figure 4.3 shows the actual risk of fluvial flooding during the 5%, 1% plus climate change and the 1% Annual Probability event.

4.7.1 **Flooding from the River Lea**

Fluvial flooding from the River Lea originates from two sources to the north, the floodwaters overtops the River Lea Flood Relief Channel in the London Borough of Waltham Forest, the second source is from the Dagenham Brook which overtops its banks near New Spitalfields market. The two flow paths then combine during the 1% AEP event to flow in a southerly direction towards Newham. Floodwaters enter Newham along the mainline railway, flooding parts of the Olympic Park and further south flooding parts of Stratford and Plaistow.

4.7.2 **Flooding from the River Roding**

Fluvial flooding from the River Roding is limited during the 1% AEP event. Some flooding does occur in Little Ilford, and also south of the mainline railway, flooding parts of the London Borough of Barking and Dagenham but also parts of Newham. The hazard to Newham residents from this flooding is considered to be low to moderate in the 1% AEP event.
4.8 Actual Risk of Flooding from Tidal Sources

The actual risk of tidal flooding in Newham is assessed with the tidal defences in place. Newham is protected from tidal flooding by the Thames defences, including the Thames Barrier and Barking Barrier and therefore the actual risk of flooding is much reduced.

The risk from overtopping from a tidal surge on the Thames to Newham is also considered to be low due to the predicted surge levels being lower than the statutory level of defence, therefore there is no actual risk of tidal flooding in Newham.

There remains a risk from breach or overtopping of the defences. Should a breach event occur there is the potential for Newham to experience deep and fast flowing water which could be dangerous to most people. It is difficult to prevent a breach in the tidal defences occurring but this risk can be managed through flood resilient design, evacuation and emergency planning. The actual risk of fluvial flooding is shown in figure 4.3 below.

Figure 4.3: Actual risk of flooding of fluvial flooding 5%, 1% plus climate change and 1% Annual Probability Event.
4.9 Existing Flood Defence Expenditure and Sources of Funding

Today the Environment Agency invests approximately £75 million every year in managing flood risk in the Thames region. This comes from a variety of sources including Government revenue, Grant and Aid, Resilience Funding and Defra funding. £30 million is invested in capital works; this includes creating new flood defence schemes, replacing and maintaining existing defences and meeting health and safety obligations at the sites. The figures in isolation for Newham are not available from the EA. However, indicative expenditure on flood risk is available for each of the Policy Units from the Thames CFMP. Table 4.3 below summaries the expenditure for the Lower Lea and Lower Roding, (the expenditure figure for the Lower Roding also includes the Middle Roding)⁴. There is currently no information on the expenditure on the tidal Thames defences.

Table 4.3: Expenditure and Maintenance for each Policy Unit.

<table>
<thead>
<tr>
<th>Policy Unit</th>
<th>Approximate Total Expenditure (£k)</th>
<th>Purpose of Maintenance</th>
<th>Approximate Standards of Protection (SoP) that apply</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower Lee</td>
<td>952</td>
<td>Maintenance of Lower Lea Defences</td>
<td>2% AEP (1 in 50 year). In some areas 4-3% AEP.</td>
</tr>
<tr>
<td>Lower Roding (including Middle Roding)</td>
<td>537</td>
<td>Maintenance of existing defences in the Lower Roding. It is estimated that the existing defences have a residual life of about 20 years</td>
<td>3% (1 in 33 year) to 2% AEP (1 in 50 year). Locally 1% AEP (1 in 100 year).</td>
</tr>
</tbody>
</table>

5. Social Infrastructure: Education

5.1 School Capacity and the Project Deficiency in Places

There are 15 secondary schools in Newham, 58 primary schools, 4 infant schools, 4 junior schools, 2 special schools and 8 nursery schools. Of these schools, 9 primaries, 1 junior and 2 secondary schools are denominational. Seven of the primary schools and both secondary schools are voluntary aided Roman Catholic schools; one primary school is a voluntary aided Church of England school; a further Primary school and a Junior school are voluntary controlled Church of England schools.

Approximately 11% of places in both the primary and the secondary sectors are in denominational schools, including Roman Catholic and Church of England schools. There are also two Pupil Referral Units: New Tunmarsh Centre, had 80 pupils on roll (sole registration) in January 2007 and New Directions had 270 on roll.

The total capacity of Newham’s primary and secondary schools for children from reception to year 11 in January 2007 was 26,938 in the primary sector and 18,270 in the secondary sector.

5.2 Population

Newham has an exceptionally young and rising population, with 40% of its population under the age of 25 years old. The Borough has the highest birth and fertility rate in the country averaging 2.56 children per woman, compared to 1.87 nationally, which has an impact on childcare demand. Compared to other London Boroughs Newham has a high level of mobility, based on 2001 Census information. Royal Docks and Beckton had the highest level of migration in the Borough and migration rates are known to be on the increase.

25% of Newham’s population are aged 0 – 16 years. The projected child population for Newham for 2007 was as follows:

Table 5.1: Child population of Newham (GLA low RLP projections 2007)

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Count</th>
<th>Percentage Of Child Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aged 0-4 years</td>
<td>22,074</td>
<td>34</td>
</tr>
<tr>
<td>Aged 5–10 years</td>
<td>23,530</td>
<td>36</td>
</tr>
<tr>
<td>Aged 11-16 years</td>
<td>19,514</td>
<td>30</td>
</tr>
</tbody>
</table>

5.3 Early Years

Newham has 12 active Children’s Centres and another 8 in development, shown in figure 5.2 overleaf. Some are entirely new institutions, some are based on school sites and some are delivered in conjunction with private sector partners.
Table 5.2: Children’s Centres

<table>
<thead>
<tr>
<th>Type of Centre</th>
<th>Active Children’s Centres</th>
<th>Children’s Centres under development</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;Standalone&quot; LBN Children’s Centres</td>
<td>Canberra</td>
<td>Abbey Lane</td>
</tr>
<tr>
<td></td>
<td>North Woolwich</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Susan Lawrence</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shrewsbury</td>
<td></td>
</tr>
<tr>
<td>Nursery School based Children’s Centres</td>
<td>Edith Kerrison</td>
<td>Oliver Thomas</td>
</tr>
<tr>
<td></td>
<td>Kay Rowe</td>
<td>Sheringham</td>
</tr>
<tr>
<td></td>
<td>Rebecca Cheetham</td>
<td></td>
</tr>
<tr>
<td></td>
<td>St Stephen’s</td>
<td></td>
</tr>
<tr>
<td>Primary School based Children’s Centres</td>
<td>Ellen Wilkinson</td>
<td>Maryland</td>
</tr>
<tr>
<td></td>
<td>Tolgate</td>
<td>Plaistow</td>
</tr>
<tr>
<td></td>
<td></td>
<td>New City</td>
</tr>
<tr>
<td>Private Sector partner Children’s Centres</td>
<td>Abrahams Nursery</td>
<td>-</td>
</tr>
<tr>
<td>Voluntary / other NFP Sector provider</td>
<td>Woodlands</td>
<td>Deanery Road (New Tec)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Trinity</td>
</tr>
</tbody>
</table>

5.4 Childcare for Children under Five

The main suppliers of childcare for children under the age of 5 are full daycare settings and childminders. These all provide care for more than 4 hours per day. Provision for children under 5 will typically be provided in day nurseries between 8am and 6.30pm. Some nurseries open at 7.30am. Childminder services are typically available between 7am and 7pm.

There is a fairly even spread of childcare provision across the Borough, however, there is a slightly higher concentration of places in the north west of the Borough. It is evident that children’s centres are placed in some areas with little other childcare provision and will as part of their core offer deliver childcare in these areas. This is particularly true for the south east and north east of the Borough (Beckton, Royal Docks).

There are no pre-school group daycare place in the wards of Boleyn, East Ham South and Plaistow North. However, some childcare places for children under 5 are available through childminders in the aforementioned areas. There is little supply of childminder places for children under 1, particularly in East Ham North and Royal Docks. However, in the ward of Boleyn, East Ham South and Plaistow North, where no group care places were available, there are childminder places available for children under 5.

In terms of the number of childcare places in each of the 9 community forum areas, Forest Gate, Green Street Manor Park and Plaistow all have approximately 300 places available. Beckton and Royal Docks have the lowest number of places available. Custom House and Canning Town has over 500 places available and Stratford and West Ham also has a large number of places to offer.
5.5 Childcare for Children Over the Age of Five

Childcare (out of school care) for children over the age of 5 is based around the school day. After school clubs in Newham are open between 3pm and 6pm or 6.30 and operate term time. Holiday provision will typically operate from 8am to 6pm or 6.30 pm.

44 schools in Newham are currently running a breakfast club with a further 7 schools developing breakfast clubs. This represents a percentage of 60% of all Newham primary and secondary schools.

5.5.1 Vacancy Rates

The average vacancy rate for full daycare setting (0-5s) across Newham is just over 27%, which means that nurseries in Newham are on average operating at 73% capacity. This rate varies across the Borough. Higher vacancy rates are in some instances due to opening of new nurseries, which are not yet operating at capacity. This is in particular true for Beckton.

According to the National Day Nurseries Association, the average national vacancy rate is 20%, which means that there are 3% more vacancies in Newham than nationally. No vacancies are reported for Boleyn, East Ham South and Plaistow North as no group daycare is available in these wards.

It is evident that where little provision is available for 5-8 year olds such as Canning Town South, East Ham North, East Ham South and Green Street East, there are no current vacancies. There are no places available for children aged 5-8 in Green Street West. For children over the age of 8, there was no provision in Forest Gate South, Green Street East, Green Street West and Manor Park. In addition, where little provision was available such as Beckton, Boleyn, Canning Town South, Little Ilford, Royal Docks and Wall End vacancy rates are either very low or nil.

The average vacancy rate for after school services for children aged 5-8 is 25.2%. The average vacancy rate for after school childcare for children aged 8+ is 29.3%.

Table 5.3: Number of childcare places currently vacant in each sector across the Borough

<table>
<thead>
<tr>
<th>Childcare places by sector</th>
<th>Number of vacancies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group Care For Children Under 5</td>
<td>585</td>
</tr>
<tr>
<td>Childminding places for under 5s</td>
<td>963</td>
</tr>
<tr>
<td>Childminding places for children aged 5-8</td>
<td>685</td>
</tr>
<tr>
<td>After school places for 5-8s</td>
<td>199</td>
</tr>
<tr>
<td>Holiday places for 5-8s</td>
<td>237</td>
</tr>
<tr>
<td>After school places for children over 8</td>
<td>163</td>
</tr>
<tr>
<td>Holiday places for children over 8</td>
<td>147</td>
</tr>
</tbody>
</table>

5.6 Childcare Affordability

Childcare prices in Newham are lower than the average for outer London. Newham currently has 580 neighbourhood nursery places all of which are priced in line with set criteria. The price per week is not allowed to exceed the current threshold for childcare tax credit, which is £175 per week.
5.6.1  **The Childcare Affordability Programme (CAP)**

In Newham, childcare providers have been providing flexible childcare using supply side subsidy funded by the Sure Start unit and the London Development Agency. Participation in the CAP has been very positive in Newham. Nearly 80% of Newham’s private and voluntary sector providers currently take part.

At the end of quarter 3 of 2006/07 a substantial number of places were filled by children of eligible parents. This meant that Newham was able to claim just over 81% of the total funding allocation with just over 60% of total available places being filled. Newham’s figures are much higher than the London average of 32% take up. According to figures provided by Government office for London in June 07, Newham is the 3rd best performing local authority in London.

All prices for childcare in Newham are within the Government’s guidelines for affordable childcare and average prices do not exceed the threshold for claiming the childcare element of the Working Tax Credit. Many Newham families earn below the national income levels and should therefore qualify for support through the tax credit system.

However, although the prices of all types of childcare in Newham are much lower than those recorded for outer London, parents are still referring to cost as a barrier to accessing formal childcare. CAP has aided the cost of flexible care and made it affordable; however, the concern amongst childcare providers is the period after this subsidy ends. Providers are being subsidised to meet parents'/carers’ needs in terms of flexibility and affordability, but this would not be sustainable without the CAP funding.

**Suitability and Accessibility**

Early indications from surveys conducted with parents of children in Newham in the Childcare Sufficiently Assessment (CSA) suggest that there is a lack of awareness of childcare available to children with additional needs. Further consultation with parents with children with additional needs is recommended by the CSA in order to establish the full picture. In addition, it is recommended that childcare providers should be consulted on inclusion perhaps using the users of the 2 year olds pilot scheme.

**Time Gap**

Childcare provision for children under 5 is typically open from 7.30am or 8am to 6pm or 6.30 pm Monday to Friday. In many childcare settings, times are flexible and no major need for different times of operation for this age group has been expressed. When consulting children in this age range on the times that they attend out of school care, it was evident that they were satisfied with the time spent in out of school care.

**Age Range Gap**

It is evident that there are low levels of childcare for all age groups compared to outer London figures. However, large vacancy rates also indicate that provision is available across the borough. A particular gap identified is provision available for children over the age of 8, where provision levels are very low. However, many alternative activities are available for this particular age group such as out of hours learning activities and the development of open access play.
LOCATION OF PROVISION
For children under the age of 5, there are gaps in the market in the wards of Boleyn, East Ham South and Plaistow North. However, children under 5 in these particular wards are travelling to neighbouring or other wards in the Borough to access provision. Where levels of provision for children aged 8 and over are particularly low such as East Ham North, Beckton and Canning Town North, open access play projects will be developed in the next financial year.

Quality of provision

Ofsted figures point to a gap in quality of childcare in Newham compared with the rest of the country. Outstanding and good inspection results are a third lower in Newham than the national average. When looking for childcare, parents/carers rated quality as a very important factor when choosing childcare. Poor quality was also one of the main reasons stated by parents when saying that their childcare needs were not being met. Quality is being tackled through a variety of means and is being continuously monitored to tackle parents’ concerns and to promote choice.

Awareness of provision

According to the assessment carried out as part of the CSA, lack of awareness of Newham’s Children’s Information amongst parents is prevalent. Many parents/carers are unaware of its existence and function.

FUNDING
Capital funding for new facilities is thin on the ground currently. Newham has recently completed a 10 year programme to establish 20 children centres across the borough and any additional funding will be focused on enhancing current provision rather than providing new facilities. There is some money coming through other funding streams including the Access and Inclusion Fund, however these streams are not early years specific.

5.7 PRIMARY EDUCATION

At January 2007 there were 26,949 pupils in the 66 infant, junior and primary schools in the Borough. The overall capacity in these schools was 29,958, which meant that there was a Borough wide surplus of 3,009.

Some Newham primary schools are relatively large compared with those elsewhere in the country. Currently there are 10 primary schools with three forms of entry (630 pupils) as well as three infant and three junior schools with this intake. There are also four primary schools with four forms of entry (840 pupils) and an infant and a junior school of similar size.

These larger schools have tended to be the result of amalgamations of infant and junior schools or where the provision of additional places was best achieved by the expansion of an existing smaller school. The Local Education Authority considers that it may be appropriate for further primary schools to increase to this size where this would provide places in an area where they were needed.

There has been a steady increase in the overall number Primary pupils over the last few years following a dip in the numbers of Primary age children coming through in the middle of this decade.
Subsequently between 2006 and 2009 PLASC figures indicate an increase of 234 pupils in Reception giving a total of 4012 by January 2009.

Birth rates have risen by over 25% in the 5 years to 2008 and therefore the Borough is seeing the effects of this boom materialise in its Primary schools as these children turn 5 and arrive in Reception.

Over the last 4/5 years concentrated demand for places in the East and North East of the Borough has resulted in Newham having to put in additional "bulge" classes at existing schools to deal with this demand. For the Sept 09/ Jan 10 intake 10.5 additional reception classes have been put in to the primary system to deal with the demand. "Bulge" classes can either be located in 'spare' classrooms in existing accommodation or in modular accommodation. It should be noted though that this is a short term solution to the problem. In the longer term, the Primary Capital Programme is delivering the expansion of 5 schools in the Manor Park and East Ham Areas as well as new Primary provision at the all through school proposed at Langdon but it is unlikely that any of these construction projects will be finished prior to September 2011.

The concentration of demand spreading across the Borough, meaning that there is higher take up of places in the centre of Newham, which helps alleviate pressure on the Manor Park and East Ham areas. The only areas of fairly significant levels of surplus places in recent years have been in Canning Town and a small pocket of schools between Stratford and Canning Town.

There has been much discussion about bussing children to Canning Town rather than providing "bulge" classes in the east of the Borough but this has been resisted where possible as parents prefer places in the schools in the east near their home and it is actually more cost effective to install and rent a modern modular building than bus pupils from Manor Park and East Ham to Canning Town.

5.7.1 CONDITION

In recent years the Council has been successful in seeking funding through the Private Finance Initiative (PFI) in building Kingsford School, two new primary schools, and in a second contract the new premises for Cumberland School.

Newham’s primary school estate is made up of a range of building types that exhibits significant suitability problems. For example, a number of school buildings are 80 to 100 years old and have undersized classrooms, spread across many levels. This not only inhibits teaching but also makes Disability Discrimination Act compliance difficult. As part of the setting priorities for the next years of the programme, the Authority will consider setting out a stream of investment into these schools to address suitability issues and to aspire that all schools become DDA compliment over the 15 years of the programme.

As the demands on primary schools are changing, there is a move towards creating flexible, multi-purpose spaces that can be adapted to suit the needs of the curriculum. In AMP terms 22 of Newham primary schools (a third) have main buildings that fall within the old DCSF building category Grade 1 (pre-1919) and Grade 2 (inter war). 18 schools are Grade 1 and of these 12 are the old ‘Victorian 3 Decker’ schools.
Newham has a programme of Asset Management Plan (AMP) condition surveys to refresh current data, and assess whether recent investment to address condition issues has been fully reflected in these reported costs. It is a priority of the Authority to continue to give a high priority to address condition problems at primary schools. Within the last 10 years, 9 primary schools within the Borough are sufficiently new or have been 'modernised' to the extent that one would not anticipate them requiring any significant investment from the Primary Capital Programme (PCP).

The costs of addressing planned maintenance / condition problems at primary schools have been estimated to be some £80 million over the next 15 years. 6 schools require in excess of £900,000 of investment to deal with condition issues.

5.8 SECONDARY EDUCATION
There are currently 15 secondary schools in the Borough, of which 13 are within the Building Schools for the Future (BSF) construction programme, as shown overleaf in Figure 5.1. The schools which are not in the BSF programme are the two new PFI secondary schools at Kingsford and Cumberland. Newham has also recently built the Royal Docks Community School.

The existing number of children on the roll of Newham’s secondary schools, together with current number of places shows that there are currently 19,350 places, with 17,571 on roll, giving 1,779 surplus places.

However, a significant proportion of Newham’s pupils attend schools in neighbouring authorities (7.9%), and a significant proportion of 11-16 year olds in Newham’s schools are resident in neighbouring authorities (6.6%).
Figure 5.1: Secondary School Provision
Table 5.6: Secondary School Provision

<table>
<thead>
<tr>
<th>School classification</th>
<th>Name</th>
<th>Number of Forms of Entry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Co-Educational Community Schools</td>
<td>Brampton Manor</td>
<td>11FE</td>
</tr>
<tr>
<td></td>
<td>Cumberland (PFI)</td>
<td>10FE</td>
</tr>
<tr>
<td></td>
<td>Eastlea</td>
<td>8FE</td>
</tr>
<tr>
<td></td>
<td>Forest Gate</td>
<td>7FE</td>
</tr>
<tr>
<td></td>
<td>Kingsford (PFI)</td>
<td>10FE</td>
</tr>
<tr>
<td></td>
<td>Brampton Manor</td>
<td>11FE</td>
</tr>
<tr>
<td>Community Girls’ Schools</td>
<td>Plashet</td>
<td>9FE</td>
</tr>
<tr>
<td></td>
<td>Sarah Bonnell</td>
<td>8FE</td>
</tr>
<tr>
<td>Community Boys’ Schools</td>
<td>Rokeby</td>
<td>8FE</td>
</tr>
<tr>
<td>Co-educational Foundation Schools</td>
<td>Stratford</td>
<td>6FE</td>
</tr>
<tr>
<td>Voluntary Aided Girls’ Schools</td>
<td>St Angela’s RC</td>
<td>6FE</td>
</tr>
<tr>
<td>Voluntary Aided Boys’ Schools</td>
<td>St Bonaventure’s RC</td>
<td>6FE</td>
</tr>
</tbody>
</table>

Newham is a relatively small Borough and schools are adequately distributed. However, most of the secondary schools sites in the Borough are below DfES space guidelines. Complementing the mainstream secondary school provision is a range of special and specialist provision for secondary age pupils:

- JFK: John F Kennedy School is the only traditional special school in the Borough, providing full time places.
- Eleanor Smith School: is a special school facility where children go for additional support for a temporary period (e.g. 2 days a week). The aim is to re-integrate these children into a mainstream school setting. All of the children at Eleanor Smith therefore remain on roll at their mainstream school.
- The PRU: is a registered Pupil Referral Unit. Currently there are 41 boys and 8 girls solo registered at the PRU. An additional 21 boys and 26 girls attend on a temporary or part time basis with the aim of being reintegrated back into their mainstream school. A further 12 (FTE) pupils are registered at the PRU and located at Walton Road Centre which runs specialist education activities and support for children aged 14-15 excluded from school or habitual non attendees who are at risk of needing authority care and assessing social work support.

- New Directions is a registered Pupil Referral Unit, which includes the following provision for secondary age children:
  - New LAP: Newham Late Arrival Project: full time education for pupils generally arriving from overseas
  - Full time provision for ex year 11 students who have dropped off main school rolls.

- At present, there are 148 solo registered boys and 80 solo registered girls and a further 98 boys and 46 girls are dual registered (these are disaffected students who are benefiting from alternative provision but also maintaining a link with their ‘old’ school and so still on the old school roll).
• Community Links: is a locally based not for profit charitable organisation which runs the 'Education Otherwise' programme for the authority. At secondary level this comprises 'Moving On' a programme for 40 11-16 year olds, excluded from or habitually not attending school and with domestic problems. Pupils have access to 1-1 support, peer group learning, residential trips, etc. All pupils are also registered with a school or PRU.

5.8.1 VACANCIES
The current position concerning the secondary sector can be summarised as follows: 8% of the available places are surplus places.
There are a significant number of surplus places in Year 7, and this is expected to continue to be the case for some years to come.

Despite the significant overall surpluses, there have been real difficulties in placing late admissions into schools (particularly those seeking places in year 9 or 10). This is however currently primarily a problem of funding and timetabling rather than a fundamental school organisation or capacity issue. Schools have the physical space but it is simply extremely difficult to offer a full curriculum to late arrivals when established classes are full.

The surplus places are concentrated in a small number of schools. In two cases (Langdon and Cumberland Schools) they are the product either of a technicality or of the school’s move to larger premises and will be resolved either through BSF works or natural growth.

5.9 FURTHER EDUCATION
Since re-organisation in 1992, post-16 (16-18) education in Newham has been provided through Newham Sixth Form College (NEWVIC), Newham College of Further Education (NCFE - itself re-organised in 1986 in order to provide more relevant and effective provision for local people) and the combined sixth form provided by the two single sex voluntary aided schools, St Angela’s and St Bonaventure’s.

There is also provision through an integrated community education and youth service (NewCEYS) building on the Council’s Community Education strategy that was implemented from 1986 onwards. All the community secondary schools in Newham and Stratford Foundation School provide for the 11-16 age range only.

Newham’s Post-16 system includes a wide diversity and choice of provision and providers including, general further education, sixth form college, school sixth form, religious ethos, secular ethos, voluntary and private sector providers, specialist academic and vocational (including the widest range of specialisation and centres of excellence in London and of the widest anywhere in England), full and part-time study, electronic and distance learning, work-based learning, flexible entry points, specialist additional support, support for learners with disabilities and learning difficulties, and enterprise based education (known as Studio Schools). An additional school-based 6th form is also planned as part of an Academy provision in the new Stratford City, sponsored by one of the developers. The size of the joint sixth-form at St. Angela’s and St Bonaventure’s has expanded to 800 students, with plans for 1000. The facility is currently oversubscribed. As a part of the BSF Programme it is
intended to relocate most of this provision in the present Stratford School annexe, Grosvenor Road, E7, which is immediately adjacent to St Angela’s where the joint sixth form is currently based.

New Vic has expanded beyond its original target of 1,000 students, now catering for over 2,300 full-time students and around 1,000 part-time students. NCFE has expanded to provide for 25,000 students, including 1600 full-time 16-18 learners in 2007. Both are seeking to expand with the support of the local authority.

Provision meets also meets the needs of those who, for one reason or another, fall outside the usual 16-18 pathways; NCFE offers six points of entry during the year, a range of provision from pre-entry to Level 4 across its entire curriculum and has pioneered the development of the new credit based programmes set to become a key feature of the Foundation Learning Tier in 2010, for which NCFE is the main live test and trial site nationally.

Wherever possible, duplication of provision has been avoided and where there is duplication this is usually the result of the need to provide such courses to a large adult learner population, as well as young people.

Post-16 education in Newham is characterised by the extensive range and high quality of the provision on offer. Students who stay in the Borough tend to do very well. Newham institutions substantially exceed national retention targets at FE colleges and levels of achievement are good.

5.10 HIGHER EDUCATION

Higher education in Newham is provided by the University of East London (UEL). The university caterers for around 20,000 students and is located on two main campuses in East London. These are:

- The Stratford Campus, at Stratford; and
- The Docklands Campus, in London’s redeveloped Docklands area

Docklands was London’s first new university campus to be built in over half a century. UEL’s new Business School and Knowledge Dock centre were opened in February 2007.

Stratford Campus is centred around University House, a 19th Century listed building. The campus is home to the Schools of Distance and E-Learning, Education, Health & Bioscience, Psychology and Law. In January 2008 the Centre for Clinical Education in Podiatry, Physiotherapy and Sports Science was opened. In 2009 the School of Education will move into its new centre equipped with mock classrooms, kitchens, music rooms and more.

5.10.1 PARTNERSHIP WITH BIRKBECK

On 21 November 2006, the new UEL/Birkbeck, University of London Partnership at Stratford was launched when a memorandum of understanding between the two institutions was signed. The partnership aims to improve participation in higher education in east London by attracting new students who would not otherwise participate through the provision of new opportunities and progression pathways.
Birkbeck was awarded nearly £5m in April 2006 by the Higher Education Funding Council for England (HEFCE) to take its evening teaching provision to east London, which has the lowest higher education participation levels in the London region. Birkbeck courses have been offered at the Stratford campus of UEL since September 2007 as part of the Birkbeck strand of the new partnership, now called Birkbeck Stratford.
6. **Social Infrastructure: Healthcare**

6.1 **Primary Care**

Primary care in Newham is commissioned from 66 General Practices (164 GPs) of which 16 are single handed. In addition to core primary care the PCT commissions a range of extended services from individual practices.

Collectively the 66 GP registered practices serve approximately 316,000 registered patients. The current geographical spread of GP practices ensures that most residents in Newham have a choice of GP and most patients are able to access a practice within 20 minutes walk.

There are 63 community pharmacies in Newham, some have been commissioned to provide local enhanced services. Dental services are commissioned from 31 dental practices and Optometry services are provided by 24 optometry practices illustrated by figure 6.1 below.

![Figure 6.1: Doctors Surgeries](image-url)
6. Social Infrastructure: Healthcare

6.1.1 CONDITION

In 2005/06 Newham PCT conducted an assessment of the condition of General Practice facilities in Newham which divided all premises into 4 categories: 4 being the worst and 1 the best, illustrated in Table 6.1 below. By September 2008, following a number of re-locations and the construction of Vicarage Lane Health Centre, the position was:

Table 6.1: GP Condition Assessment

<table>
<thead>
<tr>
<th>Category</th>
<th>No Of Premises</th>
<th>Percentage</th>
<th>Registered Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category 1 - Excellent</td>
<td>9</td>
<td>16</td>
<td>102,060</td>
</tr>
<tr>
<td>Category 2 - Good</td>
<td>23</td>
<td>41</td>
<td>145,991</td>
</tr>
<tr>
<td>Category 3 - Fair</td>
<td>19</td>
<td>34</td>
<td>69,011</td>
</tr>
<tr>
<td>Category 4 - Poor</td>
<td>5</td>
<td>9</td>
<td>11,625</td>
</tr>
</tbody>
</table>

6.2 ACUTE CARE

Newham University Hospital Trust (NUHT) is a District General Hospital towards the south of the Borough. It provides the PCT with 63% of its inpatient work. The Trust has a standalone Elective Care Centre - the Gateway Surgical Centre - which undertakes non complex elective surgery. The main trust site has an Intensive Treatment Unit (ITU) and a High Dependence Unit (HDU), A&E and separate Paediatric A&E. There is an inpatient Paediatric ward and observation unit. The trust has a separate Stoke Unit and an established integrated stroke team. The trust has a GUM clinic.

93% of the PCT’s acute services are provided through 4 trusts:

- Newham University Hospital NHS Trust (NUHT)
- Barts and the London (BLT)
- Whips Cross University Hospital NHS Trust
- Barking, Havering and Redbridge Hospitals NHS Trust

NUHT is the main provider of maternity services to Newham women; over 80% of deliveries take place here. It provides the full range of maternity services including a co-located midwifery led unit with 4 beds. It has Level 2 Neonatal Intensive Care (NICU). In addition, some outpatient services are based at the Shrewsbury Health Centre (Forest Gate), the Centre Manoe Park and the Appleby Centre (Canning Town).

The East London Foundation Trust (formerly East London and the City University Mental Health Trust) continues to be the principle provider of mental health services in Newham, providing general mental health services for adults and child and adolescent services.
7. Social Infrastructure: Indoor Sports Facilities

The Culture and Community Department at London Borough of Newham is responsible for providing indoor sports facilities in the study area. The Council has recently commissioned an audit of sports facilities entitled “The Future of Leisure Centres and Sports Facilities in Newham” (Continuum Sport & Leisure Ltd, 2007). This study reviewed existing provision and made recommendation for future development.

7.1 Leisure Centres

Indoor sports facilities include swimming pools, sports halls, health and fitness facilities, indoor tennis courts, indoor bowls rinks and ice rinks. Where provided, these facilities are predominantly concentrated in four main leisure centres:

- Atherton Leisure Centre – two swimming pools, four court sports hall, health and fitness suite, dance studios and a spa and steam room / vapour suite. Building was constructed in 1932 and has been re-furbished and reconstructed over recent years.
- Balaam Leisure Centre – two swimming pools and health and fitness suite. Opened in 1983.
- East Ham Leisure Centre – two swimming pools, health and fitness suite, dance studio, four court sports hall and climbing wall. Opened in 2001, following £15m from Sport England.
- Newham Leisure Centre – two swimming pools, eight court sports hall, health and fitness studio and dance studio. Built in 1970, and has been subject to considerable alterations.

- Swimming Pools – existing supply exceeds demand, which is typical of London.
- Sports Halls – virtually the whole the of the Borough falls within the catchment area of a sports hall. The current stock equates to provision of 100 badminton courts (whereby 11 badminton courts = three 4 court sports halls). Application of Sport England’s Active Places Power Capacity Ratio shows that, in 2007, Newham had a surplus of 19 badminton courts.
- Indoor Tennis Courts – no facilities are located in Newham at present. The closest are in Waltham Forest and Redbridge, and are approximately 9km from central Newham. This represents a considerable distance for local residents to travel.
- Indoor Bowls – currently these facilities are provided solely at Atherton Leisure Centre, and are only operational during the winter.
- Ice Rinks – there is no Ice rink in Newham. Lea Valley Ice Rink in Waltham Forest is the closest facility and only six London Boroughs contain rinks.

Newham’s leisure centres show relatively high levels of usage and income generation. However, operating costs are also high. Visits increased by 44% from 2001 to 2004, to over 1.5m. Over half of visits were by ethnic groups, which reflects the makeup of the local population and levels of high customer satisfaction are up to over 90%. Nevertheless, one of the main objectives is to increase participation in physical activities.
The key issue facing the provision of indoor sports facilities primarily relates to accessibility. This is important as one of the Council's main objectives is to increase participation in sports and related activities. The Council advises that all residents should be within a ten minute walk (800m) time from facilities.

Another key issue is a shortfall in provision in certain areas of the Borough. Most of Newham is reasonably well served, however some areas, including Canning Town and Green Street, and the northeast and south of Borough are subject to under provision. A number of facilities are provided in local schools, decreasing availability due to limited opening hours.
8. Social Infrastructure: Community Facilities

The Culture and Community Department at LB Newham is responsible for providing indoor sports facilities in the Borough. This team works closely with parties responsible for indoor sports provision.

The service provider emphasised that the term community centre has changed from traditionally being a hall or meeting place to a more multi-functional space which is available to anybody to hire.

There are 31 community centres located in Newham. These are evenly spread across the Borough and are mainly owned by Housing Associations and are operated by the Council. There are also approximately ten private community centres.

The current stock is generally old, in relatively poor condition and not fit for purpose. Most facilities have been built around the traditional model, whereby centres are located within housing estates and contain a basic hall with bar facilities and toilets. These halls range in size and ability to accommodate meetings, groups and other activities.

There are enough existing facilities to meet demand for use, however, the offer provided by these facilities provided needs to be improved. In recent years, a number of facilities have undergone refurbishment. Nonetheless, the service provider commented that many facilities do not comply with standards which the Council, and potential users, aspire to. As a result, utilisation levels are not meeting potential or indeed historical levels. A third of community centres provided in Newham are highly utilised, whereas the remaining facilities require action to address lack of use.

Future plans and strategies will aim to address the condition and quality of facilities provided in Newham. In addition, similarly to sports provision, another key factor relates to accessibility. In terms of accessibility, all residents should be within a ten minute walk of a community facility. Accessibility is currently good as most existing facilities are located within residential areas.

8.1 Libraries

There are 11 libraries in Newham, located at Beckton, Canning Town, Custom House, East Ham, The Gate, Green Street, Manor Park, North Woolwich, Newham, Plaistow and Stratford. Provision is evenly spread throughout the Borough and accessibility is high due to the use of central locations which are well served by transport links.

Newham Libraries offer a range of services, extending beyond traditional borrowing of books and media to accessing computers and the internet, and providing a range of local information and activities.

The service also caters for people with disabilities by means of a Home Reader Service. This is a special home delivery service for local residents who are unable or have difficulty visiting a static library due to age, illness or disability.
Newham library network also offers multicultural services, offering a wide range of books and other items in a variety of community languages, as well as holding frequent outreach and community events which are aimed at different ethnic minority communities. Libraries work in partnership with community organisations to promote services and organise events.

Other services include reading groups for adults, families, children, religious groups, as well as ‘book buddies’, Over 50s Club, Writers Club, computer training and ICT surgeries.

Newham also has eight local service centres (one-stop shops), and one contact centre a providing telephone enquiry service. These facilities provide residents with access to Council services, via face-to-face, telephone and internet provision. Over recent years the Council has invested in these customer services, however, the overall service continues to be disjointed and variable across the Borough.
9. Adult Social Care

Adult Social Care in Newham is delivered in partnership with NHS Newham Primary Care Trust (PCT). In total, Newham had 6,770 people using adult social care during 2008-09. This represents 2% of the population aged 18-64 years and 16% of 65+ years.

During this time, there were 21,540 contacts from people regarding adult social care services. Over three quarters of people had their needs attended at, or near, the point of service, and self referrals counted for 43% of all contacts. Newham has a very high rate of contacts for adult social care. The Council supports people by providing accessible front-line Service Centres and Telephone responses. A comparatively high proportion of people have their needs met at the first point of contact, demonstrating the existence of well-trained front-line staff and provision of low-level and preventative services.

Adult Social Care provides assessments, support and care for adults who have needs arising from:

- a physical disability, including sensory impairments
- ageing or illness
- a learning disability
- mental health problems
- HIV/AIDS or other life threatening conditions
- misusing drugs and/or alcohol
- abuse or neglect, and
- to carers of people in these groups.

The Department of Health groups social care services as community based services (provided in the persons own home), residential care and nursing care. Information taken from the Care Quality Commission shows that Newham provides 53 care homes. The majority of care homes are privately owned. Of the remainder, the local authority owns 2 and 6 are run by voluntary organisations. Most homes are small scale, with only 8 providing more than 30 beds. In total, 814 bed spaces are provided, and over 80% of beds are accommodated in private homes. Over half of total beds provide in-house nursing care, of which over 90% of these are in private homes.

In 2008-09, a total of 1,058 people received residential or nursing care in Newham. This represents 10% of social care users. 40% of these people are in placement outside the Borough. Usage of this service is primarily influenced by people’s primary need, age and ethnicity. It is expected that this figure will decrease when more people begin using community based services.

In comparison, a total of 6,030 people were supported to live independently. Community based services provided include home care, day care, meals, residential not respite, direct payment (for own care / are workers), professional support and equipment and adaptations. The provision of these services is evenly spread throughout the Borough.
Approximately 7% of service users were supported by direct payments. This represents an increase in provision, especially in comparison to the 5% average for London Boroughs in 2007-8. This trend is expected to lead to adjustments in the way services are provided and the roles of staff.

The Supporting People programme is a national funding stream aimed at people with lower level needs, where the provision of suitable housing or support may prevent need for more intense services. Services provided include sheltered housing, temporary accommodation and extra care housing, of which there are currently 234 places available in the Borough.

Telecare services include technology and equipment, such as alarms and detectors, that are liked to a 24 hour service through the telephone system. It aims to support people who live independently in their own home. Since its inception in 2006, Telecare was installed into 2,500 homes (by 2009). Over 50,000 contacts have been made through the system.
10. Emergency Services

10.1 Fire and Rescue

Fire and Rescue services in Newham are delivered by the London Fire Brigade. There are 4 fire stations within Newham – these are located in the north (Forest Gate South Ward), east (East Ham South ward), south (Royal Docks ward) and west (Plaistow South ward) of the Borough as shown in Figure 10.1 overleaf. All stations cover a 6 minute response time and are therefore well placed within the Borough to respond to emergencies with the existing service standards (LFB, 2009a).

The Borough boundaries are not used for emergency response purposes. The London Fire Brigade ensure that the location of its fire stations and resources cover London wide. Resources can be deployed into neighbouring Boroughs or further afield depending on the severity of the emergency (LFB, 2009b).

An audit of the stations conditions is provided within the Draft Asset Management Plan (Property) (June 2009) and is provided within Table 10.1 below.

Table 10.1 Newham Fire Stations
Source: Draft Asset Management Plan (Property), June 2009

<table>
<thead>
<tr>
<th>Date of construction</th>
<th>Station Name</th>
<th>Condition</th>
<th>Notes</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960-1970</td>
<td>Stratford</td>
<td>Satisfactory condition</td>
<td></td>
<td>Fit for purpose</td>
</tr>
<tr>
<td>1960-1970</td>
<td>East Ham</td>
<td>Poor property condition (showing major defects and/or not performing as intended)</td>
<td></td>
<td>East Ham is a priority station for improvement</td>
</tr>
<tr>
<td>1930-1940</td>
<td>Plaistow</td>
<td>Poor property condition (showing major defects and/or not performing as intended)</td>
<td></td>
<td>Poor operationally (not fit for purpose). PFI project</td>
</tr>
<tr>
<td>1960-1970</td>
<td>Sivertown</td>
<td>Satisfactory condition</td>
<td></td>
<td>fit for purpose</td>
</tr>
</tbody>
</table>
A new audit is currently being carried out to assess how far existing stations conform to a new station design brief. The results of this are due in 2010.

A London-wide service standard is applied to fire services as follows:

- First appliance within 6 minutes on 65% of occasions
- Second appliance within 8 minutes on 90% of occasions (The London Fire Safety Plan 2008)

The service provider stated that East Ham Fire Station is working close to capacity, although services are well placed geographically to meet the requirements of service delivery (Personal Communications, 2009).
10.1.1 COMMITTED FUNDING

In November 2008, CLG announced that £130m had been set aside for Fire and Rescue Service projects to build new stations and other facilities. Fire and Rescue Services have been bidding for a share of Private Finance Initiative (PFI) credits for long-term projects to modernise the country’s fire stations. Plaistow station is identified as a PFI funded project, which involves the station being rebuilt although the same number of bays will be provided as before. Funding for stations within the PFI amounts to £57.4 million covering 9 fire stations across London. In 2008, an outline planning application (07/02259/FUL) for the works was granted permission. The proposals include new community facilities to help deliver fire prevention, and in particular the Local Intervention Fire Education (LiFE) programme. Construction on site is likely to take place in 2012.

10.2 POLICE

The Metropolitan Police Estate is owned and managed by the Metropolitan Police Authority, who are the statutory watchdog for the Metropolitan Police Service. The Metropolitan Police Estate in Newham is made up of the following sites shown in Table 10.2 below.

Table 10.2: Metropolitan Police Estate - Newham

<table>
<thead>
<tr>
<th>Building</th>
<th>Police Services Based</th>
<th>Contact Point / Front Counter</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Ham Police Station</td>
<td>3 Safer Neighbourhoods Teams</td>
<td>Yes</td>
</tr>
<tr>
<td>Forest Gate Police Station</td>
<td>Patrolling Custody Cells Senior Management Team 4 Safer Neighbourhoods Teams</td>
<td>Yes</td>
</tr>
<tr>
<td>Plaistow Police Station</td>
<td>Custody Cells 3 Safer Neighbourhoods Teams</td>
<td>Yes</td>
</tr>
<tr>
<td>Straford Police Station</td>
<td>Specialist Units</td>
<td>Yes</td>
</tr>
<tr>
<td>North Woolich Police Station</td>
<td>Front Counter</td>
<td>Yes</td>
</tr>
<tr>
<td>Carpenters Road Safer Neighbourhoods Base, N15</td>
<td>1 Safer Neighbourhoods Team</td>
<td>No</td>
</tr>
<tr>
<td>Little Ilford Police Station, Parkhurst Road</td>
<td>1 Safer Neighbourhoods Team</td>
<td>No</td>
</tr>
</tbody>
</table>

There are also a number of Safer Neighbourhood Team (SNT) bases within the community alongside those located within police stations, as follows:

- ExCeL Centre – 3 SNTs
- West Ham FC – 1 SNT


• The Hub, Star Street, E15 – 1 SNT
• Doran Walk, Stratford – 1 SNT

The Asset Management Plan (2007) propose that a number of teams are moved into permanent basis within easy reach of their wards. Since the draft Asset Management Plan was published in 2007, there have been a number of SNT relocations as follows:

• Plaistow South SNT - 522 Barking Road
• Boleyn SNT – Green Street
• West Ham, Plaistow North and South - 444 Barking Road
• Forest Gate North and South – 65 Woodgrange Road.

10.3 AMBULANCE

Newham is served by the London Ambulance Service NHS Trust that provides services across London. There are three ambulance stations in Newham as follows as shown in Table 10.3 below.

Table 10.3 Ambulance Stations

<table>
<thead>
<tr>
<th>Name</th>
<th>Location</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Newham Ambulance Station</td>
<td>Wellington Road</td>
<td>-</td>
</tr>
<tr>
<td>West Ham Ambulance Station</td>
<td>Howards Road</td>
<td>Refurbished in 2005</td>
</tr>
<tr>
<td>Silvertown Ambulance Station</td>
<td>North Woolwich Road</td>
<td>Constructed in 2007</td>
</tr>
</tbody>
</table>
11. Green Infrastructure

11.1 Introduction

What is open space, and how do people use it?
It is useful to break down the uses of open spaces into its component parts, so as to be better able to make future provision for it. PPG17 summarises these as follows:

- Parks and gardens, used for informal recreation;
- Natural and semi-natural green space, the main use of which is biodiversity and wildlife conservation
- Green corridors, used for walking, cycling etc
- Outdoor sports facilities
- Amenity greenspace,
- Provision for children and young people
- Allotments, community gardens
- Cemeteries and disused churchyards.

This section outlines the need for open space The key parameters are accessibility, quality and quantity.

- Accessibility: how far can people be expected to go to get to an open space? Some spaces, such as country parks, will draw people from a large area, while others, such as children’s play areas, will have a very small catchment;
- Quality: if an open space is inviting, e.g. due to lack of facilities, it will have limited use;
- Quantity: if there are not enough open spaces, those which are available may suffer from over-use.

11.2 Methodology

London Borough of Newham has undertaken a three-strand study. This comprised:

- A telephone survey of users; The Annual Parks Survey between 2002 and 2005 highlighted several key areas for improvement, as did the Liveability Survey 2008.
- Focus group / user group interviews - Consultation included a young people’s survey targeted at 5-24 year olds. The views of residents are summarised within the ‘Evidence Base’ section of the Parks Development Plan.
- An analysis of a socio-economic profile of the District which aimed to establish how use of and attitudes towards open spaces and sports facilities differ according to age, gender and ethnicity. CSL are currently working on this element of the study.

Having examined the user survey responses, it will be important to add to this evidence base to further establish perceptions of users and derive catchment areas for Parks and other open space typologies.

The basic level of information required to come from user survey questionnaires are;
11. Green Infrastructure

- Use of Open Space
- Reasons for visits
- Mode of travel
- Satisfaction with Open Spaces
- Quality of Life
- Non Use
- Improvements

Discussions with LB Newham indicate that a survey can be undertaken to provide further evidence and this will need to be programmed in to the development of the open space strategy.

11.3 Survey of Open Space Provision

PPG17 recommends that any assessment take into account:

- The overall level of supply, including the degree to which provision meets needs from beyond the local authority boundary;
- The accessibility of locations;
- The level of usage of facilities;
- The particular functions which certain facilities may perform, for example as a meeting place for one age group or community;
- The potential for a recreational use to contribute to wider social or regeneration objectives for LB Newham;
- The potential for new use, for example by achieving dual use of a facility or by bringing a private open space into public use;
- The potential to focus improved recreational provision of a particular site, in preference to lower level use of less accessible locations.

The two main approaches traditionally used to assess open space needs are the National Playing Fields Association (NPFA) six acre standard and use of an open space hierarchy.

The NPFA standard relates playing space provision to population and recommends that there should be a minimum of 6 acres (2.43 hectares) of outdoor playing/recreational space per 1000 people. The standard recommends that the 6 acre provision is broken down to take account of the different needs of different age groups. This standard can be easily applied but takes little account of the distribution of open space and people’s access to it.

Recreational roles can be either active/formal e.g. sports, or passive/informal e.g. dog walking. The activity may have dedicated provision e.g. sports pitches, or informal provision where there are no formal facilities but other evidence suggests an activity takes place. Non-recreational roles include the ecological, educational, social, cultural and amenity roles that an open space might play.

The Government’s companion guide to PPG17 ‘Assessing Needs and Opportunities’ (2002) recommends that the hierarchy approach can provide the basis to develop local standards as it identifies characteristics, size and effective catchment of different types of open spaces.
However, it is recommended that local authorities develop their own open space typologies to reflect local characteristics and facilities and the recreational and non-recreational functions of open spaces. An understanding of the types of open space will provide a basis for analysing the results of the site audits and enable an assessment of whether the range and types of open space functions in the local area meet the needs of local people.

11.3.1 Survey Methodology

The survey of public, private and educational open spaces was undertaken by LB Newham over a period of time ranging from 2000-2009. In order to update the initial database of sites a Green spaces workshop was held with officers of the Council including planning and parks department on 20 November 2009 enabling updates and corrections to the database to be verified.

11.3.2 Data Sources

Open space sites within the District were identified from the following information sources:

- A review of the Council’s adopted Local Plan proposals map;
- The Council’s ground maintenance database;
- A desk top assessment of Ordnance Survey mapping and other mapping services.

11.3.3 Open Space Typology

The existing database provided by LB Newham Parks Department provided a comprehensive list of sites and their function / typology. Nevertheless during the review of the site assessment work, each open space was considered and where necessary reclassified with reference to the typology of open space types included within the Annex to PPG17. The identification of the open space type was based upon consideration of the size, the primary role and function, recreational value, access arrangements and physical characteristics. The other roles performed by spaces are considered in Chapters 5-8. The categories of Open Space were reviewed against the following categories identified within the London plan and PPG17, identified are as follows in Table 112.
11.4 Parks

A public park hierarchy has been defined in order to set out appropriate levels of parks provision for different characteristics within the Borough. The hierarchy is based upon the following factors:

- Analysis of the existing range and type of open space provision available within individual settlements;
- Analysis of the typical sizes of different park types within the district; and
- Identification of effective catchment areas for each park type based upon the findings of the residents survey which identified park usage and travel patterns to different open space types.

The hierarchy is defined in Table 11.1. below. The term ‘Public Parks’ used within this assessment refers to the types of open space.

Parks were classified according to the most appropriate park category based upon their role, size and range of facilities. The size criteria represent a guide to the typical size of parks within each category. In a small number of cases there are a number of open spaces on the margins between different categories. Where a park does not fulfil the size thresholds defined in a particular park type but performs the range of functions identified as being associated with that park type, the park has been classified on the basis of its range of functions.

Table 11.1 Park Typologies

<table>
<thead>
<tr>
<th>Park Typologies</th>
<th>Characteristics</th>
<th>Size guidelines</th>
<th>Distances from home</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional Parks</td>
<td>Large areas, corridors or networks of open space the majority of which will be publicly accessible and provide a range of facilities offering recreational, ecological, landscape, cultural or green infrastructure benefits. Offer a combination of facilities and features that are unique within London are readily accessible by public transport and are managed to meet best practice quality standards.</td>
<td>400ha</td>
<td>3.2 - 8km</td>
</tr>
<tr>
<td>Metropolitan parks</td>
<td>Large areas of open space that provide a similar range of benefits to regional parks and offer a combination of facilities and features at the sub-regional level, are readily accessible by public transport and are managed to meet best practice quality standards.</td>
<td>60ha</td>
<td>3.2km</td>
</tr>
<tr>
<td>District Parks</td>
<td>Large areas of open space that provide a landscape setting with a variety of natural features providing for a wide range of activities including outdoor sports facilities and playing fields, children’s play for different age groups and informal recreation pursuits.</td>
<td>20ha</td>
<td>1.2km</td>
</tr>
<tr>
<td>Category</td>
<td>Description</td>
<td>Area</td>
<td>Distance</td>
</tr>
<tr>
<td>------------------------------</td>
<td>------------------------------------------------------------------------------</td>
<td>-------</td>
<td>----------</td>
</tr>
<tr>
<td>Local Parks and open spaces</td>
<td>Providing for court games, children’s play spaces or other areas of a specialist nature, including nature conservation areas</td>
<td>2ha</td>
<td>400m</td>
</tr>
<tr>
<td>Small open spaces</td>
<td>Gardens, sitting out areas, children’s play spaces or other areas of a specialist nature, including nature conservation areas</td>
<td>Under 2 ha</td>
<td>Less than 400 metres</td>
</tr>
<tr>
<td>Pocket Parks</td>
<td>Small areas of open space that provide natural surfaces and shaded areas for informal play and passive recreation and that sometimes have seating and play equipment</td>
<td>Under 0.4ha</td>
<td>Less than 400 metres</td>
</tr>
<tr>
<td>Linear Open spaces</td>
<td>Open spaces and towpaths alongside the Thames, canals and other waterways, paths, disused railways, nature conservation areas, and other routes that provide opportunities for informal recreation. Often characterised by features or attractive areas that are not fully accessible to the public but contribute to the enjoyment of the space</td>
<td>Variable</td>
<td>Wherever feasible</td>
</tr>
</tbody>
</table>

LB Newham have undertaken a qualitative and quantitative assessment of all parks and open spaces under council management. Although completed in 2004 the assessment results provide a significant and comprehensive evidence base and have informed parks development works over the intervening period. The results, tabulated overleaf in Table 11.2 indicate a qualitative hierarchy of parks which has provided a basis for the planning of future improvements to be delivered through this plan.

The categories set out in the Parks Development Plan are:

- Upper Tier parks;
- Middle Tier Parks;
- Lower Tier Parks; and
- Potential pocket parks.

Upper Tier sites have been assessed as making a more significant contribution to corporate objectives and, in general, attract a higher number of users due in part to the fact that they offer a broader range of facilities and experiences. They therefore tend to have larger effective catchment areas and consequently a greater local significance since they serve a wider section of the community. It is clear that the park typologies although unique to Newham are not consistent with PPG17 typologies and only relate to those parks in Council management. In order to identify shortfalls and investment requirements for the Borough, the re-categorisation of open space has addressed the PPG17 typologies.

- District Parks;
- Local Parks;
- Small open space; and,
- Pocket parks.

**OTHER OPEN SPACES**
Using the existing and updated database it has also been possible to identify all open spaces within the local authority area regardless of ownership and the extent of public access, except private gardens. Given the relatively dense urban character of the London Borough of Newham, and the fact that small sites are likely to be valuable locally, a minimum threshold of size of each typology has not been used and even relatively small sites have been included in the assessment.

The typologies of other open spaces are listed in Table 11.2 below

### Table 11.2 Typologies (other open space)

<table>
<thead>
<tr>
<th><strong>Typology (Other open spaces)</strong></th>
<th><strong>Description</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Provision for children and teenagers (incorporated into public park hierarchy);</td>
<td>including play areas, skateboard parks and outdoor basketball hoops, and other more informal areas (for example, hanging out areas, teenage shelters)</td>
</tr>
<tr>
<td>Linear open spaces</td>
<td>including river and canal banks, cycleways and rights of way. Other routes which provide opportunities for informal recreation, including nature conservation. They are often characterised by features or attractive areas which are not fully accessible to the public but contribute to the enjoyment of the space. They play a vital role in linking open space. They should not be taken for granted, though it is not appropriate to try to define a standard for them</td>
</tr>
<tr>
<td>Natural or Semi-Natural greenspace</td>
<td>including woodlands, urban forestry, scrub, grasslands (for example, downlands, commons and meadows), wetlands, open and running water, wastelands, and derelict open land and rock areas (for example, cliffs, quarries and pits).</td>
</tr>
<tr>
<td>Green Spaces within grounds of institutions;</td>
<td>-</td>
</tr>
<tr>
<td>Amenity Green Space;</td>
<td>(most commonly but not exclusively in housing areas) including informal recreation spaces, green spaces in and around housing, domestic gardens and village greens.</td>
</tr>
<tr>
<td>Allotments;</td>
<td>-</td>
</tr>
<tr>
<td>Cemeteries and churchyards</td>
<td>-</td>
</tr>
<tr>
<td>Civic Spaces/Pedestrianised areas</td>
<td>including civic and market squares, and other hard-surfaced areas designed for pedestrians.</td>
</tr>
<tr>
<td>Outdoor Sports Facilities / Playing Fields</td>
<td>(with natural or artificial surfaces and either publicly or privately owned) – including tennis courts, bowling greens, sports pitches, golf courses, athletics tracks and school and other institutional playing fields</td>
</tr>
</tbody>
</table>
11.5 PARK CATCHMENT AREAS

Consultation has identified the concerns and needs of local residents, their reasons for visiting parks and the barriers that can prevent them from accessing the benefits of our parks and open spaces. The Annual Parks Survey between 2002 and 2005 highlighted several key issues that have helped determine catchment areas;

- 82% of survey respondents use their closest park and
- 80% access parks and open spaces on foot indicating a local pattern of use.

The catchment areas originally identified in the Parks Development plan were based on some elements of best practice and informed by the Residents’ Survey.

LBN GGP overlay maps defined catchment area for each park, amenity area and open space under LBN management. The overlay also includes West Ham Park, Wanstead Flats and Thames Barrier Park. Where insufficient survey data was available to enable calculation by this method, the following catchments were adopted:

- Site Area < 1000m²  Distance Threshold  100m
- Site Area > 1000m² and < 10000m²  Distance Threshold  200m
- Site Area > 10000m²  Distance Threshold  300m

This approach is however not entirely clear and transparent and does not relate to the typologies of open space, identified above and which may suggest different catchment areas (see Table 11.3 below). The distances identified below relate to the typical effective catchment area of each park type. The effective catchment area represents the area within which around 80% of park users are likely to be drawn.

<table>
<thead>
<tr>
<th>Type of Park</th>
<th>Description</th>
<th>Size</th>
<th>Distance away</th>
</tr>
</thead>
<tbody>
<tr>
<td>District Parks</td>
<td>Large areas of open space that provide a landscape setting with a variety of natural features providing for a wide range of activities including outdoor sports facilities and playing fields, children’s play for different age groups and informal recreation pursuits.</td>
<td>20ha</td>
<td>1.2km</td>
</tr>
<tr>
<td>Local Parks and open spaces</td>
<td>Providing for court games, children’s play spaces or other areas of a specialist nature, including nature conservation areas</td>
<td>2ha</td>
<td>400m</td>
</tr>
<tr>
<td>Small open spaces</td>
<td>Gardens, sitting out areas, children’s play spaces or other areas of a specialist nature, including nature conservation areas</td>
<td>Under 2 ha</td>
<td>Less than 400metres</td>
</tr>
<tr>
<td>Pocket Parks</td>
<td>Small areas of open space that provide natural surfaces and shaded areas for informal play and passive recreation and that sometimes have seating and play equipment</td>
<td>Under 0.4ha</td>
<td>Less than 400metres</td>
</tr>
</tbody>
</table>
In order to provide a consistent approach to catchment areas a review of distance parameters was therefore necessary. Clearly specific factors may influence walking time/distances on a District wide basis such as topography, street morphology, and urban grain and the distribution of open space provision and its relationship with patterns of residential development. The catchment area and population for each individual park will therefore be different even within the same level of the hierarchy.

The catchment definition assumes that 400 metres is the equivalent of a five minute walk, 800 metres is a ten minute walk, etc. When plotting these on a map, 800 metres should be represented by a radius of 560 metres, to allow for topography, urban grain etc. It is recommended that both radii are plotted to allow sensitive analysis.

The overall number and frequency of visits is influenced by factors including:

- The range of facilities and environments within the park and their quality and condition affect the attractiveness of the space to potential users. Parks with a wider range of facilities will have larger catchments than shown in Table 4.1. The number and frequency of visits is also likely to be higher;
- The demographic and socio-economic structure of the population in the catchment and the extent to which park facilities meet their needs;
- The pattern of land use within the park catchment particularly patterns of residential development and population density;
- Choice of other open space nearby.

Locally based standards of provision for the following categories of open space, where it is important that local needs are provided for on a consistent basis are recommended. Issues considered include quantity, accessibility/distribution, quality, value.

- Parks;
- Provision for children and teenagers;
- Outdoor sports fields and playing field needs;
- Natural or semi-natural green space;
- Allotment provision.

It is not appropriate to set Borough-wide standards of provision for cemeteries. Amenity green spaces were found to include a range of uses, varying from village greens featuring mostly passive recreation, to open grassland featuring occasional sports activities. Only two civic spaces were identified in the Borough. As their name implies, they have less of a recreational role and are more formal urban spaces. They are not considered further in this study.

The exact level and type of provision should be responsive to the nature of the development and the existing level and type of open space provision.

Within certain areas of the Borough amenity green space and other forms of open space form an integral part of the fabric of the settlements in LB Newham and contribute towards local character and distinctiveness.
For this reason it is not appropriate to define a consistent quantity or access standards relating to such provision. Within areas with shortfalls in other forms of open space provision such other open spaces can be of particular value and represent possible opportunities for meeting local deficiencies.

11.6 SELECTED METHODOLOGY

It is considered that the use of a parks hierarchy concept is the most appropriate means of planning open spaces in LB Newham. This study has used this approach to address the issues identified in PPG17. The hierarchy of open space has been amended and the typology of open space expanded to reflect the findings of the Residents/Users Survey and Liveability survey the roles of different open space types and accessibility issues. In the next chapter the significance of the application of the hierarchy to existing spaces within the Borough is demonstrated.

11.7 ASSESSMENT OF SUPPLY

People value parks and green spaces. Over 30 million people in England use them, making over 2 billion visits in total each year ("Green Spaces, Better Places" - final report of The Urban Green Spaces Taskforce). With about 80 percent of the population of England living in medium to large towns, the countryside and its open spaces are seen as resources with the potential to enhance quality of life.

This chapter examines the distribution of public parks and provision for children and teenagers within the Borough through the application of the hierarchy defined in the previous chapter. It contains the following:

- A summary of the open space audit, and the role of parks in the hierarchy;
- An analysis of the quantity and accessibility of current provision;
- A consideration of the range of functions of open space; and
- An identification of deficiencies in accessibility to parks.

11.8 EXISTING OPEN SPACE PROVISION

A summary of open space provision within the District by type and ward will be provided, however the current assessment of supply is being considered as part of a workshop with officers at LB Newham to ensure all inaccuracies are resolved and additional sites plotted and agreed with the client before proceeding with a final baseline.

At present the current results in Table 11.4 overleaf indicates the following number and size of various typologies of open space across the Borough.
Table 11.4 Open Space provision by type

<table>
<thead>
<tr>
<th>Open Space</th>
<th>Total Number of sites</th>
<th>Area (ha)</th>
<th>%Open Space Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parks and Gardens</td>
<td>26</td>
<td>194.09</td>
<td>10.78%</td>
</tr>
<tr>
<td>Regional Park</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Metropolitan Park</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>District park</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Local Park</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Small Local park / open space</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Pocket Park</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Linear open space / green corridor</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Public Park Total</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Allotments and City Farms</td>
<td>15</td>
<td>19.74</td>
<td>0.01</td>
</tr>
<tr>
<td>Amenity Green Space</td>
<td>53</td>
<td>20.19</td>
<td>1.12</td>
</tr>
<tr>
<td>Cemeteries and Churchyards</td>
<td>21</td>
<td>121.21</td>
<td>6.75</td>
</tr>
<tr>
<td>Green Corridors</td>
<td>10</td>
<td>97.84</td>
<td>5.44</td>
</tr>
<tr>
<td>Natural / Semi-natural space</td>
<td>52</td>
<td>1583.71</td>
<td>87.98</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td>101</td>
</tr>
</tbody>
</table>

Where a space lies within 2 or more wards, it will be included in the ward which includes its greatest proportion.

11.9 DISTRIBUTION AND ACCESS TO OPEN SPACE

Distribution and access to public parks within the Borough has been considered looking at their distribution by ward / population, and distribution by distance from residential areas, see Table 11.5 below and overleaf.

Table 11.5 Parks and Gardens

<table>
<thead>
<tr>
<th>Label_ID</th>
<th>Site Name</th>
<th>Council</th>
<th>Ward</th>
<th>Forum</th>
<th>Hierarchy</th>
<th>Area (ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>Lister Gardens</td>
<td>Yes</td>
<td>Plaistow North</td>
<td>West Ham NDC</td>
<td>sLow Profile Park</td>
<td>0.38</td>
</tr>
<tr>
<td>93</td>
<td>Forest Lane Park</td>
<td>Yes</td>
<td>Forest Gate North</td>
<td>Forest Gate</td>
<td>sHigh Profile Park</td>
<td>2.03</td>
</tr>
<tr>
<td>45</td>
<td>Cundy Park</td>
<td>Yes</td>
<td>Custom House</td>
<td>Canning Town</td>
<td>sLow Profile Park</td>
<td>2.07</td>
</tr>
<tr>
<td>44</td>
<td>Lyle Park</td>
<td>Yes</td>
<td>Royal Docks</td>
<td>North Woolwich and Silvertown</td>
<td>Mid Profile Park</td>
<td>2.15</td>
</tr>
<tr>
<td>43</td>
<td>Keir Hardie Recreational Ground</td>
<td>Yes</td>
<td>Canning Town South</td>
<td>Canning Town</td>
<td>sLow Profile Park</td>
<td>2.76</td>
</tr>
<tr>
<td>No.</td>
<td>Park Name</td>
<td>Access</td>
<td>Nearest Train Station</td>
<td>Nearest Town</td>
<td>Profile Type</td>
<td>Notes</td>
</tr>
<tr>
<td>-----</td>
<td>---------------------------------------------</td>
<td>--------</td>
<td>-----------------------</td>
<td>--------------</td>
<td>-----------------</td>
<td>-------</td>
</tr>
<tr>
<td>22</td>
<td>Priory Park</td>
<td>Yes</td>
<td>Booleyn</td>
<td>Green Street</td>
<td>sMid Profile Park</td>
<td>3.01</td>
</tr>
<tr>
<td>24</td>
<td>Barking Road Recreation Ground</td>
<td>Yes</td>
<td>Wall End</td>
<td>East Ham</td>
<td>sMid Profile Park</td>
<td>3.23</td>
</tr>
<tr>
<td>27</td>
<td>Brampton Park</td>
<td>Yes</td>
<td>East Ham South</td>
<td>East Ham</td>
<td>sMid Profile Park</td>
<td>3.61</td>
</tr>
<tr>
<td>47</td>
<td>King George V Park</td>
<td>Yes</td>
<td>Custom House</td>
<td>Beckton</td>
<td>sLow Profile Park</td>
<td>3.67</td>
</tr>
<tr>
<td>29</td>
<td>Plaistow Park</td>
<td>Yes</td>
<td>Plaistow South</td>
<td>Plaistow</td>
<td>sMid Profile Park</td>
<td>3.89</td>
</tr>
<tr>
<td>34</td>
<td>Star Park</td>
<td>Yes</td>
<td>Canning Town North</td>
<td>Canning Town</td>
<td>sMid Profile Park</td>
<td>4.00</td>
</tr>
<tr>
<td>32</td>
<td>Hermit Road Recreation Ground</td>
<td>Yes</td>
<td>Canning Town and Grange</td>
<td>West Ham NDC</td>
<td>sMid Profile Park</td>
<td>4.15</td>
</tr>
<tr>
<td>14</td>
<td>Stratford Park</td>
<td>Yes</td>
<td>Westham</td>
<td>Stratford</td>
<td>sHigh Profile Park</td>
<td>4.30</td>
</tr>
<tr>
<td>53</td>
<td>Royal Victoria Gardens</td>
<td>Yes</td>
<td>Royal Docks</td>
<td>North Woolwich and Silvertown</td>
<td>sHigh Profile Park</td>
<td>4.80</td>
</tr>
<tr>
<td>137</td>
<td>King George V Park &amp; City Farm</td>
<td>Yes</td>
<td>South</td>
<td>Tbc</td>
<td></td>
<td>5.89</td>
</tr>
<tr>
<td>48</td>
<td>New Beckton Park</td>
<td>Yes</td>
<td>Beckton</td>
<td>Beckton</td>
<td>sMid Profile Park</td>
<td>6.68</td>
</tr>
<tr>
<td>26</td>
<td>Gooseley Playing Field</td>
<td>Yes</td>
<td>East Ham South</td>
<td>East Ham</td>
<td>sMid Profile Park</td>
<td>6.81</td>
</tr>
<tr>
<td>136</td>
<td>Thames Barrier Park</td>
<td>No</td>
<td>Custom House &amp; Silvertown</td>
<td>Tbc</td>
<td></td>
<td>7.0</td>
</tr>
<tr>
<td>15</td>
<td>Plashet Park</td>
<td>Yes</td>
<td>East Ham North</td>
<td>East Ham</td>
<td>sMid Profile Park</td>
<td>7.08</td>
</tr>
<tr>
<td>98</td>
<td>Three Mills</td>
<td>No</td>
<td>Stratford</td>
<td>Stratford</td>
<td></td>
<td>7.49</td>
</tr>
<tr>
<td>46</td>
<td>Canning Town Recreation Ground</td>
<td>Yes</td>
<td>Custom House</td>
<td>Canning Town</td>
<td>sLow Profile Park</td>
<td>7.75</td>
</tr>
<tr>
<td>61</td>
<td>Thames Barrier Park</td>
<td>No</td>
<td>Custom House &amp; Silvertown</td>
<td>North Woolwich and Silvertown</td>
<td></td>
<td>8.37</td>
</tr>
<tr>
<td>25</td>
<td>Central Park</td>
<td>Yes</td>
<td>East Ham Central</td>
<td>East Ham</td>
<td>sHigh Profile Park</td>
<td>9.89</td>
</tr>
<tr>
<td>16</td>
<td>Little Ilford Park</td>
<td>Yes</td>
<td>Little Ilford</td>
<td>Manor Park</td>
<td>sHigh Profile Park</td>
<td>10.46</td>
</tr>
<tr>
<td>31</td>
<td>Memorial</td>
<td>Yes</td>
<td>Canning Town</td>
<td>West Ham</td>
<td>sMid</td>
<td>12.44</td>
</tr>
<tr>
<td>Recreation Ground</td>
<td>North</td>
<td>NDC</td>
<td>Profile Park</td>
<td>Area</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------</td>
<td>-------</td>
<td>-------------</td>
<td>--------------</td>
<td>------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>West Ham Park</td>
<td>No</td>
<td>Park</td>
<td>Forest Gate s</td>
<td>27.89</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beckton District Park</td>
<td>Yes</td>
<td>Custom House/Beckton</td>
<td>s-High Profile Park</td>
<td>32.29</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Area</strong></td>
<td></td>
<td></td>
<td></td>
<td>194.09</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

These findings will then be used to identify and consider the significance of shortfalls in public park provision in terms of access and quantity.

The distribution of parks is illustrated in Figure 11.1 overleaf.
Figure 11.1: Distribution of Parks
11.9.1 **Catchment Populations**

Once complete and final assessment of all open space has been established, the estimated number of people within the catchment areas of different types of park will need to be calculated by counting the number of address points within the catchment radii applicable to the type of park, and factoring it up by the average household size of 2.64.

The population outside the park's catchment, but inside the park's ward will also be calculated. This will provide an indication of numbers of people not well served by public park provision. The method has its shortcomings, since not all address points are residential. They include businesses as well as houses, which exaggerates total numbers in town centres. However, it is a graphic representation which allows one to make a good estimate of the situation on the ground.

This exercise will be undertaken for all typologies of parks. For local/Neighbourhood parks, the catchment is likely to be based on walking distances, whilst for Borough and Country Parks it will be likely to be based on driving distances, reflecting the tendency for these modes of travel revealed in the residents’ survey.