

Appendix 2B: Baseline

Introduction

The baseline information consists of indicators that have been incorporated into the Sustainability Appraisal Framework. Other information that is contextually important but not included in the framework is noted as 'contextual characteristics'.

1. Population

1.1 Indicators

There are no population indicators included in the Sustainability Framework.

1.2 Contextual characteristics

The following were used to characterise current and future population.

- 1.3.1 Current and future population and growth rates (LBTH Borough Profile website based on 2011 Census and 2015 update on estimate; 2012-based Subnational Population Projections for England. ONS, 2014).
- 1.3.2 Population density (ONS 2012 MYE).
- 1.3.3 Age structure and sex (LBTH Borough Profile website).
- 1.3.4 Ethnicity and country of birth (LBTH Borough Profile website).

1.3 Description

1.3.1 Current and future population and growth rates

There were an estimated 284,000 people in Tower Hamlets in mid-2014. This represented an increase in population of 4.1 per cent or an additional 11,000 people from the previous year. This trend is also reflected in longer-term population growth. Over the 10 year period to 2011, the population increased by 34.5 per cent. This was the highest proportional increase of all local authorities across England and Wales.

According to the GLA's 2014 SHLAA population projections, the borough's population is projected to increase from 280,474 in 2014 to 364,804 in 2024, an increase of 23%. This large population growth will not be uniform across different elements of the population and will lead to changes in the demographics of our borough.

1.3.2 Population density

The population density in 2012 was estimated to be 13,235 residents per km². This made the borough the second densest borough in London after Islington. The population of Tower Hamlets is highly mobile with a high 'turnover' rate of 229 people per 1000 people moving to, from and within the borough each year.

1.3.3 Age structure and sex:

Tower Hamlets has a relatively young age structure. In particular there is a high proportion of young adults being those aged between 20-39 years old. This age group constitutes almost half of the boroughs population (48 per cent compared to 35 per cent for the London region). As such, Tower Hamlets has proportionately fewer older residents of those aged over 60 years old (9 per cent compared with 15 per cent for London overall).

The growth projections show that the borough's population will increase across all of the age groups, but that the greatest increases will be amongst the older working age population (ages 35 to 64).

Tower Hamlets has proportionately more males than females (51.7 per cent males and 46.4 per cent females). This is in contrast to broader trends in London and England which have slightly more females than males.

1.3.4 Ethnicity and country of birth:

43 per cent of residents in Tower Hamlets were born outside of the United Kingdom, as of 2011. This is comparative to the London average of 42 per cent. Tower Hamlets has a diverse migrant population including those who migrated decades ago to more recent arrivals. According to the 2011 Census, residents of Tower Hamlets were born in over 200 countries. Bangladeshis comprised the largest migrant group representing 15 per cent of the borough population. A further 20 migrant groups had significant populations of over 1,000 residents. The largest of which were from: India, China, Italy, France, Somalia, Ireland, Poland, Australia, Germany, the U.S.A., and Spain. Each of these groups comprised 1-2 per cent of the population. In recent years, the most significant population growth has been from European migrants.

The growth projections state that the increasing population will also create changes in the ethnicity of residents. The largest percentage increase will be in the 'other' category, which will increase by 49% from 10,600 in 2014 to 15,769 in 2024, reflecting the increasing 'hyper diversity' of the borough. The 'White' population is also due to increase by 33% over the next ten years, whilst the 'Bangladeshi' population is due to increase by a relatively smaller 16%.

1.4 Issues

The main population issues in the borough are:

- LBTH was the second fastest growing borough in England and Wales for the year 2013/14 (based on proportion). High growth is predicted to continue.
- This has implications for planning, housing, and services amongst other matters.

1.5 Data gaps and updates

- No significant data gaps identified for this topic.
- Population trends and figures should be updated throughout the plan making process to reflect ONS's latest estimates.

2. Equality

2.1 Indicators

The following indicators were used to characterise equality in the borough and included in the Sustainability Appraisal Framework.

- 2.3.1 Indices of deprivation (*English Indices of Deprivation, 2010; and summarised in LBTH Indices of Deprivation Summary, 2011*).
- 2.3.2 Percentage of children living in deprived households (*English Indices of Deprivation, 2010; and summarised in LBTH Indices of Deprivation Summary, 2011*).
- 2.3.3 Percentage of older persons living in deprived households (*English Indices of Deprivation, 2010; and summarised in LBTH Indices of Deprivation Summary, 2011*).
- 2.3.4 80:20 pay ratio (*London's Poverty Profile, 2014*)

2.2 Contextual characteristics

There are no further contextual characteristics in this section.

2.3 Description

2.3.1 Index of Multiple Deprivation 2010: Local authority rankings

The Index of Multiple Deprivation (IMD) is a composite index which has been built from 38 different indicators. These indicators are designed to capture different dimensions of the scale, severity and nature of multiple deprivations within an area.

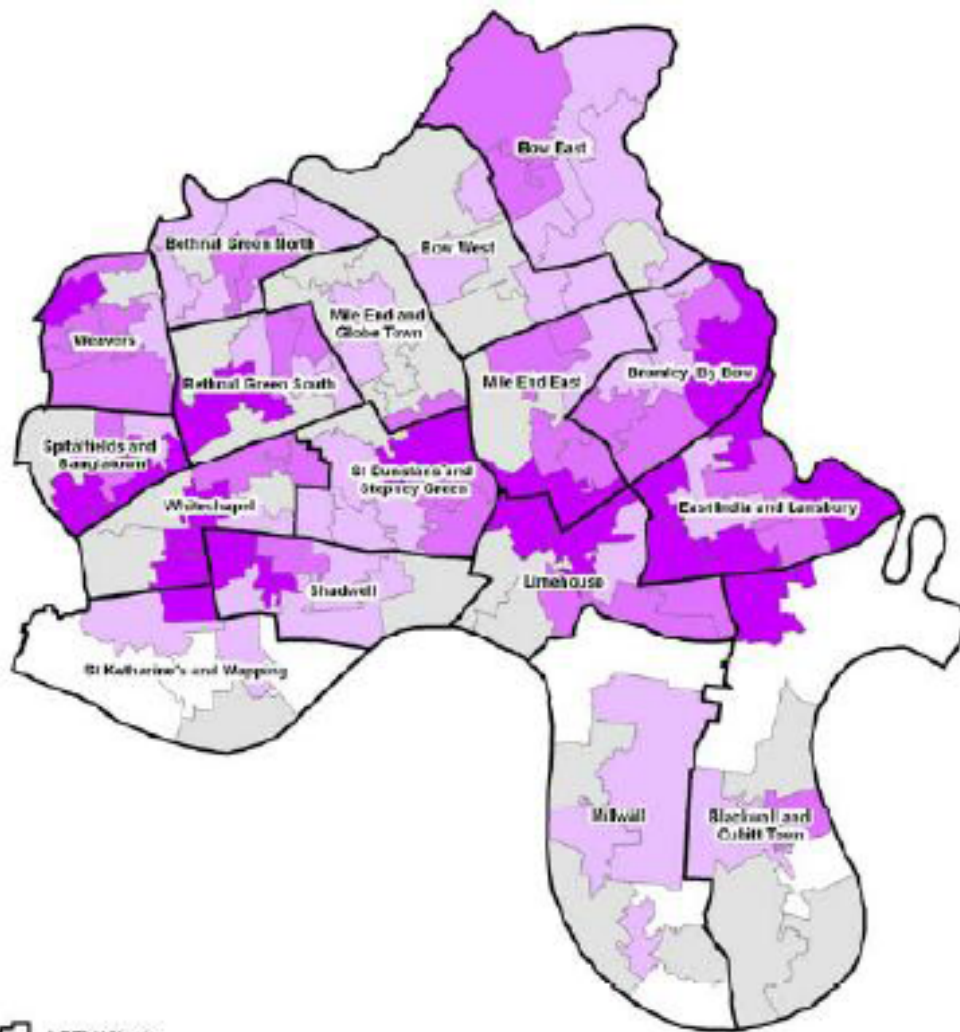
The indices that comprise the IMD are:

- Income deprivation;
- Employment deprivation;
- Health deprivation and disability;
- Education, skills and training deprivation;
- Barriers to housing and services;
- Living environment; and
- Crime.

There are two additional indices of deprivation which are not part of the IMD. These are:

- The Income Deprivation Affecting Children Index (IDACI); and
- The Income Deprivation Affecting Older People Index (IDAOPI).

Tower Hamlets is ranked the third most relatively deprived area in London, following Hackney and Newham for IMD average score, rank and extent (LBTH, 2011). Figure 1 shows that there are notable geographic differences in relative levels of multiple-deprivation across the borough. There are notable concentrations of relative deprivation around parts of Spitalfields and Banglatown; Whitechapel; East India and Lansbury; Bromley By Bow; and southern Mile End East/north Limehouse. The relatively least deprived areas are located near St Katharine's and Wapping; Millwall; and Blackwall and Cubitt Town.



 LBTH Wards
 LSOAs in Tower Hamlets: MD position in England (percentile)
 In 0% most deprived
 In 5-10% most deprived
 In 10-20% most deprived
 In 20-50% most deprived
 In 50% least deprived

Figure 1 graphic distribution of the Index of Multiple Deprivation 2010. Source: Indices of Deprivation 2010, DCLG in LBTH, 2011.

The borough is the most deprived area in London in terms of concentration of deprivation in small areas within the borough. 40 per cent of these smaller areas (called Lower Super Output Areas (LSOAs)), are in the top 10 per cent of the most deprived areas in England. This is an improvement from 2007 when 55 per cent of LSOAs were recorded for the same measure. Changes in IMD between 2007 and 2010 for LSOAs are shown in Figure 2.

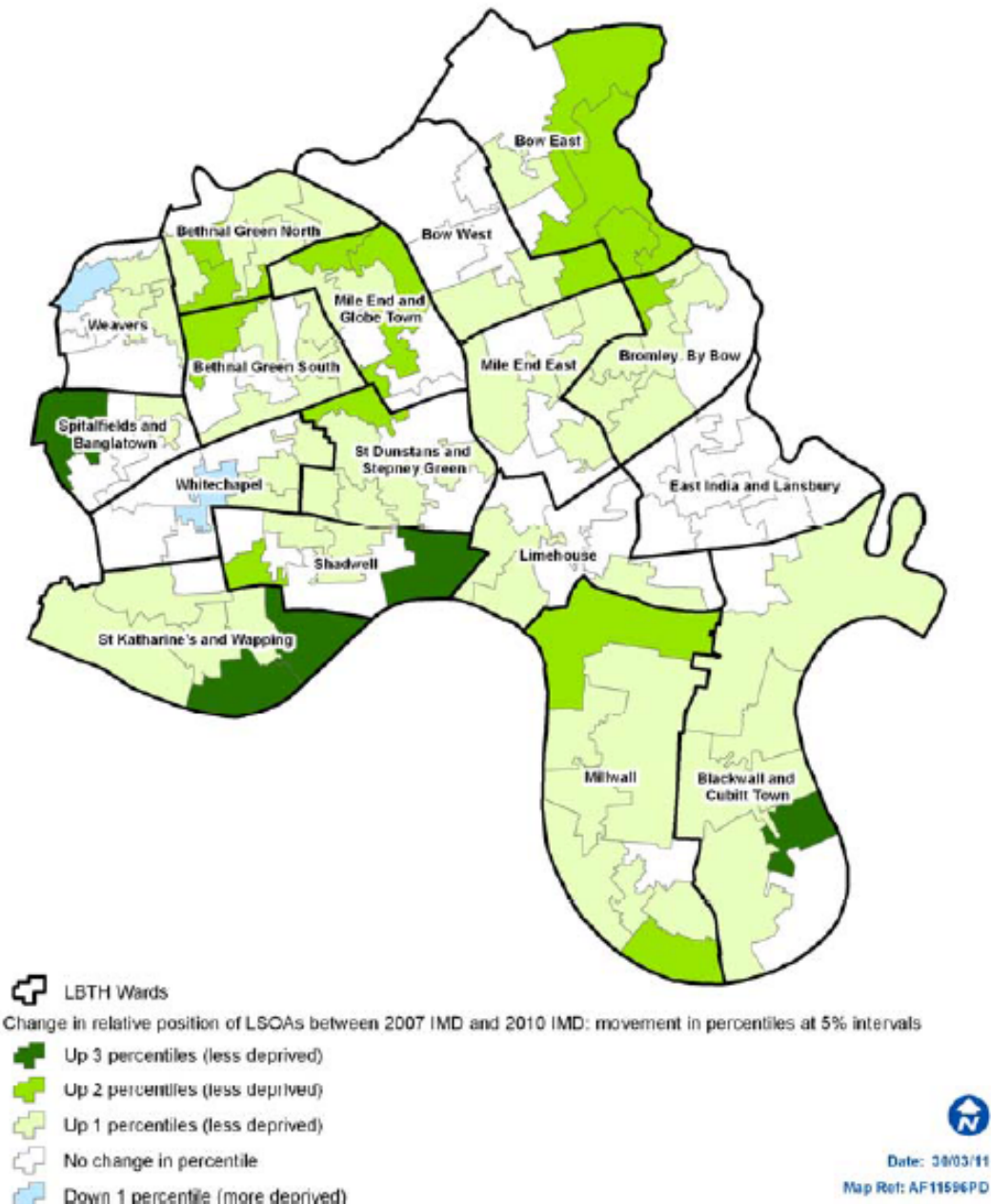


Figure 2: Change in IMD between 2007 and 2010. Source: Indices of Deprivation 2010, DCLG in LBTH, 2011.

Figure 3 shows the proportion of LSOAs in the most deprived 10 per cent and 20 per cent of all LSOAs in England. Of note, the indices with the highest proportion of LSOAs were barriers to housing and services; and income. 100 per cent of LSOAs were in the most 10-20 per cent of deprived areas in England in terms of barriers to housing and services. 78 per cent of these were in the 10 per cent most deprived LSOAs in England for this measure.

In terms of income, 76 per cent of the borough's LSOAs were in the worst 10-20 per cent of deprived LSOAs in England. 63 per cent of the borough's LSOAs were in the 10 per cent most deprived areas for income in England.

Relative to all other LSOAs in England, the borough's LSOAs are relatively least deprived in terms of education and skills; crime and employment. For education and skills only one LSOA is in the 10 per cent most deprived LSOAs in England, while another 12 were ranked within the top 10-20 per cent most deprived.

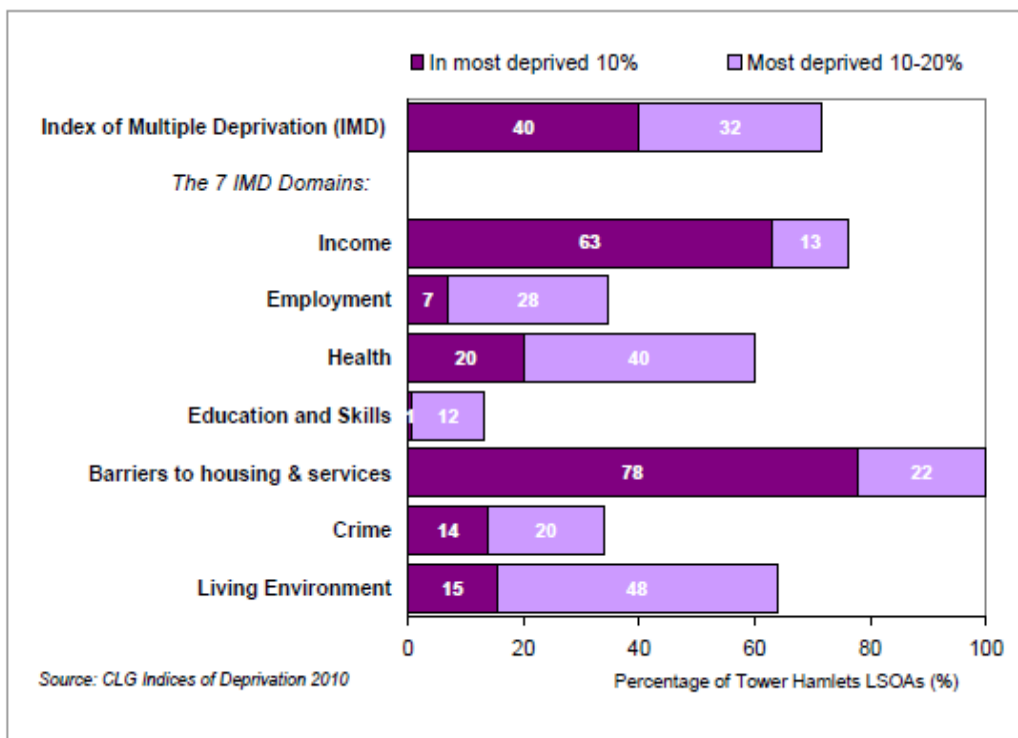


Figure 3: : Percentage of Tower Hamlets LSOAs among the most deprived in England for the IMD 2010 and the 7 domains. Source: CLG Indices of Deprivation in LBTH, 2011.

2.3.2 Children living in deprivation

Tower Hamlets had a relatively higher proportion of children aged 0-5 years old living in income deprived families (59 per cent in the borough, compared to 32 per cent across London). This was the highest rate for child deprivation across England. A significant 84 per cent of LSOAs in the borough fall into the most deprived 10 per cent of all LSOAs nationally. Figure 4 shows the geographic distribution of child deprivation across the borough.

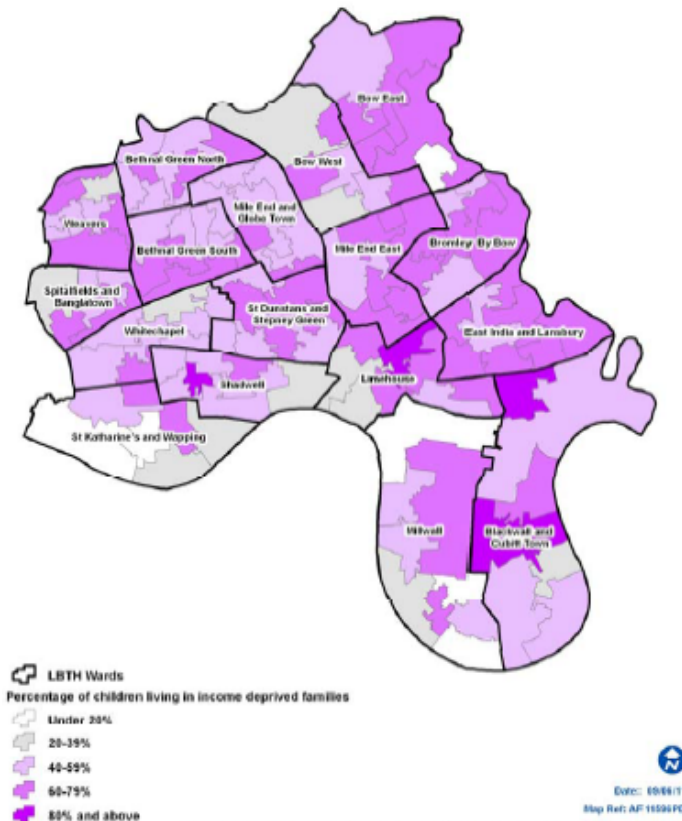


Figure 4: Percentage of children living in income deprived families, Source: Indices of Deprivation of Communities and Local Government, in LBTH, 2011.

2.3.3 Older persons living in deprivation

More than half of older persons (52.5 per cent) lived in income deprived families. This was more than double the London average of 23.8 per cent. 79 per cent of LSOAs in the borough fell into the most deprived 10 per cent of LSOAs nationally. Figure 5 shows the geographic distribution of older persons living in income deprived families. There are notable concentrations of more than 80 per cent of older persons living in income deprived households in areas near Spitalfields and Banglatown; Whitechapel; St Christopher's and Stepney Green; Mile End East and Millwall.

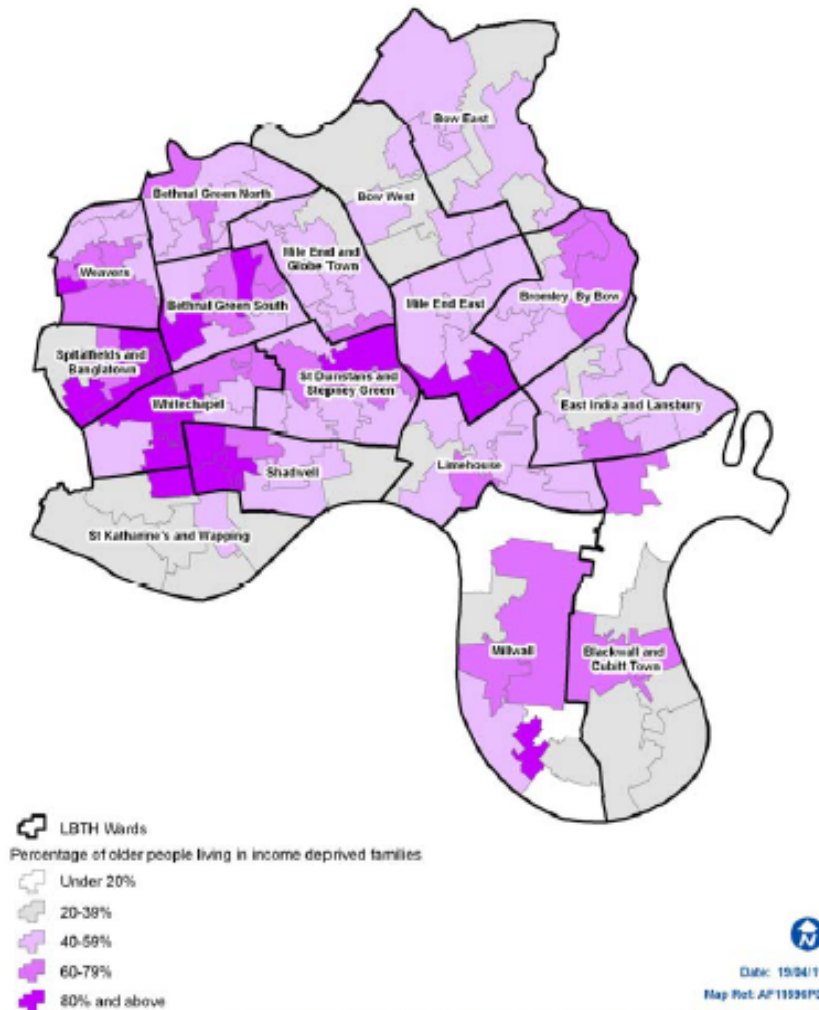


Figure 5: Percentage of older persons living in income deprived families. Source: Indices of Deprivation of Communities and Local Government, in LBTH, 2011.

2.3.4 80:20 pay ratio

Tower Hamlets has the highest pay ration between the 80th and 20th income percentiles of all London Boroughs. In 2014 it was 3.2, up from 2.9 in 2009.

2.4 Issues

- The borough is one of the most relatively deprived areas in London and England for multiple deprivations.
- The levels of income and housing deprivations are particularly high.
- The proportion of children and older persons living in income deprived families is significantly high.
- There has been an improvement in relative deprivation since 2007.
- Pay inequality is high and increasing

2.5 Data gaps and updates

- The data presented here should be reviewed when an update is released. Any associated trends should be utilised to inform the Sustainability Appraisal and Local Plan evidence base.

3. Housing

3.1 Baseline indicators

The following indicators were used to characterise housing in the borough and included in the Sustainability Appraisal Framework.

- 3.3.4 Additional housing need (GLA London Strategic Housing Market Assessment 2013; LBTH Strategic Housing Market Assessment, 2014 (draft)).
- 3.3.5 Affordable housing need (GLA London Strategic Housing Market Assessment 2013; LBTH Strategic Housing Market Assessment, 2014 (draft)).
- 3.3.7 Demand for three or more bedroom dwellings (LBTH, Strategic Housing Market Assessment, 2014 (draft)).
- New housing that is carbon neutral (data not available).

3.2 Contextual characteristics

Households

- 3.3.1 Number of current and projected households (CRU, 2012 and LBTH Strategic Housing Market Assessment, 2014 (draft))
- 3.3.1 Average and variation in household size and composition (ONS Local Profiles 2013; LBTH Borough Profile)

Dwellings

- 3.3.2 Dwelling stock total (ONS Local Profiles 2013)
- 3.3.3 Number of vacant residential units (ONS Local Profiles 2013)

Housing Needs

- 3.3.4 Housing needs, targets and trajectories (GLA London Strategic Housing Market Assessment 2013; LBTH Strategic Housing Market Assessment, 2014 (draft))
- 3.3.5 Number and proportion of households needing affordable housing per annum (LBTH Housing Market Assessment, LBTH Strategic Plan 2015/16)

Ownership and tenure

- 3.3.6 Ownership and tenure (LBTH Borough Profile)

Bedrooms and overcrowding

- 3.3.7 Number of dwellings by bedrooms per dwelling (LBTH, Strategic Housing Market Assessment, 2014 (draft))
- 3.3.7 Overcrowding (LBTH Overcrowding and under occupation statement, 2013)

House prices and affordability

- 3.3.8 Average house price (LBTH-CRU Factsheet 2013-02 June 2013)
- 3.3.8 Ratio of relative housing affordability (ONS Local Profiles 2013)

Specialist housing

- 3.3.9 Older persons housing (LBTH Older Person Housing Statement 2013-2015)
- 3.3.10 Number of travellers' pitches (LBTH Managing Traveller Accommodation)

- 3.3.11 Demand for student accommodation (LBTH Student Accommodation Report 2009)
- 3.3.12 Number of homeless households (LBTH Homelessness Statement 2013-2017)

3.3 Description

3.3.1 Households, number, size, composition and projections

In 2011 there were 101, 257 households (with at least one usual resident¹). In the 10 years between 2001 and 2011, the number of households in Tower Hamlets grew by an additional 22,727 households or 28.9 per cent. This was the highest growth rate in London and represented 9.1 per cent of all additional households in London. The average household in Tower Hamlets had 2.5 people in 2011. Household size varied with an average of 2.07 persons in the ward of St Katherine's and Wapping; while Mile End East had the largest household size with 2.85 persons. Between 2011-2035 the number of households in Tower Hamlets is projected to rise by 53,086 equating to 2,212 additional households per year. Table 1 shows the estimated increases in the number of households at 2 year intervals between 2011 and 2021.

Year	2011	2013	2015	2017	2019	2021
No of households predicted	102,100	109,500	116,500	123,000	129,100	134,800

Table 1 Household projections (interim 2011 based). Source: Department for Communities and Local Government in ONS, 2013.

3.3.2 Dwelling stock total

There were a total of 108,250 dwellings in the borough in 2012 (ONS, 2013). The majority of dwellings (85.9 per cent) were flats, maisonettes and apartments. The proportion of these dwellings increased by 2.3 per cent between 2001 and 2011; and is predicted to increase as the dominant type of dwelling stock in the borough.

3.3.3 Number of vacant residential units

There were 2,317 vacant dwellings in the borough in 2012. This equated to 2.14 per cent of all dwellings. Over a third of these (34.8 per cent) have been vacant for a long period of time. This is slightly higher than the rate (33 per cent) for long-term empty dwellings across London.

3.3.4 Housing needs, trajectories and targets

As stated above, it is predicted that Tower Hamlets will have 134,800 households by 2021. The Further Alterations to the London Plan (update March 2015) sets targets for additional housing for each borough. It has allocated a target of 3,931 new units per annum in Tower Hamlets. This equates to 94,300 additional dwellings over 25 years until 2035. Tower Hamlets has prepared a draft Strategic Housing Market Assessment (SHMA) 2014 to understand the local particulars of

¹ NB: A usual resident refers to a person who on census day, was in the UK and had stayed or intended to stay in the UK for a period of 12 months or more, or had a permanent UK address and was outside the UK and intended to be outside the UK for less than 12 months.

housing need in the borough. The purpose of this assessment is to contribute to the housing evidence base for the Local Plan 2016/17. Based upon objectively assessed need, it estimates that the borough requires 2,562 dwellings per annum or 58,300 over 24 years. There is therefore a discrepancy between the target set by the GLA and the assessed need calculated by LBTH of almost 2,000 dwellings per year.

3.3.5 Number and proportion of households needing affordable housing per annum [info based on LBTH SHMA, 2014 draft not published]

Currently, 38-39 per cent of housing stock in the borough is affordable. This includes all intermediate, social and affordable housing. In 2012, the Tower Hamlets Council's had a total dwelling stock of 12,517. In 2015, there was a waitlist of 19,810 households on Council's housing wait list. On average about 2,200 properties become available through the housing wait list per year.

	2007/08	2008/09	2009/10	2010/11	2011/12
No of affordable dwelling provided	1,380	1,250	1,990	1,260	1,800

Table 2 Number of affordable dwellings provided by local authority provided funding. Source: Department for Communities and Local Government from Homes and Community Agencies and local authorities in ONS Local Profiles, 2013

The Further Alterations to the London Plan has set a target of 52 per cent affordable housing for all additional housing until 2034/35. This figure includes: 20 per cent intermediate and social rent; and 32 per cent affordable rent.

Housing Type	Number	Per cent
Market Housing	19,400	32.8
Intermediate Housing	2,500	4.4
Social rented housing (including affordable rented housing)	36,300	62.8
TOTAL	58,300	100

Table 3 from SHMA, 2014 draft

3.3.6 Ownership and tenure

Table 4 shows that the most significant changes in tenure have been the reduction of council owned dwellings (a decrease of 16 per cent), and the rise in the private rental sector (PRS) (an increase of 19 per cent). The table also shows that shared ownership represents a small proportion of all tenure and that there has been a decline in owner occupation of 8 per cent over the past 11 years. To sum, there are proportionately more people living in private sector rentals, less people living in council housing and less owner occupiers.

Tenure	2003	%	2011	%	2014	%
Owner Occupied	27,308	31	25,339	23	27,179	23
Council Owned	24,200	26	12,500	12	12,087	10
Registered Provider	17,828	20	26,484	24	30,540	26
PRS	17,513	20	41,870	39	45,978	39
Shared	500	1	2000	2	2,340	2

Ownership					
Total	87,349		108,193		118,125

Table 4 Tenure Change 2003-2014. Source: LBTH SMHA 2014.

3.3.7 Bedrooms and overcrowding

The borough has a reported average of 3.9 bedrooms per household. This is a decline of from 4 bedrooms in 2001. In the 2011 Census, Tower Hamlets had an average of 2.1 bedrooms per household, for an average household size noted above of 2.5 with an average range of 2.07 to 2.85. The borough shared the lowest averages across the nation with 3 other Inner-London boroughs (LBTH, Overcrowding Statement, 2013). In terms of overcrowding, 32,235 households had too few rooms than what they required. This represented 34.8 per cent of all households in the borough and was an increase on the 2001 figure which found that 29 per cent of households did not have enough rooms (22,984 households). As such the borough is ranked second nationally, after Newham 34.5) for proportion of households that are over occupied. The Inner London average was 21.7 per cent and in London it was 21.7 per cent.

While households are reportedly getting smaller, the borough still needs more 3 and 4 bedrooms. This is particularly so in the socially rented sector. Of households on the social housing waitlist in 2012 (ONS, 2013), 68.9 per cent required up to and including 2 bedrooms, 23.1 per cent required 3 bedrooms and 8.0 per cent required more than 3 bedrooms. The need for 3 and 4 bedrooms is higher than the London average.

	Market	Intermediate	Social	TOTAL
1 Bedroom	1,800	1,400	11,500	14,700
2 Bedroom	5,400	300	9,900	15,600
3 Bedrooms	8,500	400	11,400	20,300
4 Bedrooms	3,700	500	3,400	7,600
TOTAL	19,400	2,500	36,300	58,300

Table 5 LBTH assessed for bedrooms per dwelling and per tenure type in LBTH. Source: LBTH SHMA, 2014.

	Market	Intermediate	Social	TOTAL
1 Bedroom	4,400	2,100	18,600	24,900
2 Bedroom	9,600	1,800	15,600	26,900
3 Bedrooms	14,200	1,200	16,100	31,400
4 Bedrooms	6,000	600	3,800	10,400
TOTAL	34,100	5,600	54,600	94,300

Table 6 GLA targets for bedrooms per dwelling and per tenure type in LBTH. Source: LBTH, SHMA, 2014.

3.3.8 Housing costs and ratio of relative housing affordability

The average housing price in Tower Hamlets in April 2013 was £370,500. This was slightly below the London average of £375,800. House prices saw a 4.2% rise over the previous 12 months. Between 2010 and 2015 House Prices rose 46%.

House prices have increased relative to incomes in the borough. This is particularly so for housing and incomes in the lowest 25%. The ratio for which has risen from 6.4 in 2003 to 9.32 in 2014². This is still amongst the most affordable in London, however the earnings data excludes self employed and unemployed residents – which may skew the result.

Key drivers that are expected to affect affordability and the housing market include: introduction of affordable rent, rent hikes in the private rental sector, buy to let scheme and overseas development³.

3.3.9 Specialist housing- older person's housing

The majority of older persons in Tower Hamlets tend to live in flats and in rented social housing. This is in contrast to wider London and national trends. In addition, Bangladeshi older persons often live in extended multigenerational households. LBTH has smallest proportion of older persons in the greater London region. There is a need to do more work on older person housing in the borough.

3.3.10 Specialist housing- traveller's accommodation

As of 2011 there was one traveller's site located in the borough at Eleanor Street. This site has capacity to accommodate 19 pitches. There is scope for a further 1 to 2 pitches if the site is redesigned by Crossrail. As of August 2015, there were no recorded traveller families in housing in LBTH. The LBTH Gypsies and Traveller Criteria 2009, provides criteria for developing new sites. Previous targets set for traveller accommodation in local areas have been removed and current provision is deemed to meet current demand.

3.3.11 Specialist housing- student accommodation

Students made up 1.9 per cent of all Tower Hamlets households in 2011 equating to 1,974 households. With three universities located in the borough and a number of others located nearby, there is a steady demand for student accommodation. However, the supply of student accommodation needs to be kept in perspective with council's other priorities and demands for land and development. For example, due to the strong demand and delivery of student housing, in the years leading up to 2007, up to a third of the borough's annual housing provision was met through student housing. Student housing delivery does not however contribute to increasing the number of affordable houses, or address the borough's other significant housing needs.

3.3.12 Specialist housing- homeless households

Tower Hamlets Council's homelessness services had 3,300 approaches by households in 2011/12 presenting as homeless or at risk of being homeless. 38 per cent of these households were families and 62 per cent were lone persons.

Reasons that persons and households gave for homelessness were:

- Parents no longer willing to accommodate (24 per cent)
- Other relatives and friends no longer willing to accommodate (22 per cent)

² <http://data.london.gov.uk/dataset/ratio-house-prices-earnings-borough>

³ LBTH SMHA, 2014

- Domestic violence (14 per cent)
- Termination of Assured Short hold Tenancy (11 per cent)

The number of decisions on homelessness has declined significantly since 2008/09, with a 30 per cent reduction in the 3 years between 2008/09 to 2011/12. This was partially due to prevention efforts such as housing advice and support. Numbers have been more stagnant post 2012.

3.4 Issues

- Housing is a key local challenge for Tower Hamlets. This is particularly true given the fast growing population, low income levels for many households and high house prices.
- Overcrowding is an issue, particularly in social housing. There is a need for more 3-4 bedroom dwelling stock.
- The borough is currently not building enough homes to meet locally assessed nor regionally assessed need.
- Housing has been getting less affordable in the borough. There are issues of who can afford to live in the borough, as well as setting and achieving the 'right' proportional mixture of housing tenures to meet the needs of all residents.
- The housing targets set by the GLA as well as other housing matters such as provision for travellers require cooperation with other local government authorities within London and also further afield. The processes and relations necessary to further operationalise the duty to cooperate on housing matters may need to be further developed.

3.5 Data gaps and updates

- There is a potential need to better understand the need and nature of older person housing in the borough as the characteristics of older person housing needs differ from the norm across the GLA.
- Data on the proportion of new dwellings that are carbon neutral is not available.

4. Economy and Employment

4.1 Indicators

The following indicators were used to characterise economic and employment conditions in the borough and inform the Sustainability Appraisal Framework.

- 4.2.1 Major industries of employment (BRES, 2012 in LBTH, 2014)
- 4.2.2 Number of jobs in the borough (BRES, 2012 in LBTH, 2014)

Employment and unemployment characteristics of residents

- Number and proportion of residents employed (NOMIS-Official Labour Market Statistics Local Authority Profile- Tower Hamlets, 2014)
- Number and proportion of residents unemployed (NOMIS-Official Labour Market Statistics Local Authority Profile- Tower Hamlets, 2014)
- Occupation and industries of employment of residents (NOMIS-Official Labour Market Statistics Local Authority Profile- Tower Hamlets, 2014)
- Average gross weekly pay (NOMIS-Official Labour Market Statistics Local Authority Profile- Tower Hamlets, 2014)
- Household income (LBTH Household Income in Tower Hamlets, 2014)

4.2 Description

4.2.1 Major industries and economy

Tower Hamlets' economy was worth over £6 billion per annum in 2009/10⁴. The major industries of employment located in the borough are:

- Financial and insurance industries (30 per cent)
- Administration and support (11 per cent)
- Professional services (11 per cent)
- Information and communication (9 per cent)
- Health and social care (7 per cent)
- Education (6 per cent)

4.2.2 Number of jobs in the borough

Tower Hamlets is the fourth largest employment location in London. In 2012, approximately 240,000 jobs were located in the borough. Just over half of these were concentrated in Canary Wharf and the Isle of Dogs which had 129,000 jobs. The majority of employment is undertaken by employees commuting from outside the borough (LBTH Employment Strategy, 2011). This is reflected in the estimated daytime population of 428,000 people, despite the resident population being 284,000 for the same period. Conversely, about a fifth of jobs in the borough are filled by residents. Around 20 per cent of all employment in the borough (about 48,000 jobs) are based in the 'low pay' sectors (BRS in LBTH, 2014).

4.2.3 Employment and unemployment of residents

As of 2014, there were 209,700 residents of working age in the borough (those aged between 16-64 years old). Tower Hamlets has a higher proportion of residents of working age (73.8 per cent) compared to London (68.2 per cent) and the U.K (63.5 per cent) (ONS mid-year population estimates). Table 7 shows that

⁴ ONS annual population survey

of working age residents, 159,400 (77.7 per cent) are economically active which is a similar proportion, but slightly higher than London (77.0 per cent) and the U.K (77.4 per cent). The proportion of residents in employment (69.7 per cent) however is slightly less than for London (71.7 per cent) and Great Britain (72.7 per cent). The proportion of unemployed persons was estimated to be 8.9 per cent. This is higher than that for London (6.7 per cent) and Great Britain (6.0 per cent).

	Tower Hamlets (Numbers)	Tower Hamlets (%)	London (%)	Great Britain (%)
Economically Active	159,400	77.7	77.0	77.4
In Employment	143,000	69.7	71.7	72.7
Employees	125,000	61.2	58.5	62.2
Self Employed	17,800	8.3	12.8	10.1
Unemployed	13,900	8.9	6.7	6.0

Table 7: Employment and unemployment of residents of Tower Hamlets for the period (April 2014 – March 2015). Source: NOMIS, 2015. (NB: unemployed data is model based).

Table 8 shows that about 45,400 (22.3 per cent) people of working age were economically inactive over the same time period. This was slightly less, but a comparative proportion to London (23.0 per cent) and Great Britain (22.6 per cent). Notable differences were the greater proportion in Tower Hamlets who were economically inactive due to looking after family and/or the home (41.9 per cent of economically inactive persons).

	Tower Hamlets (Numbers)	Tower Hamlets (%)	London (%)	Great Britain (%)
Total	45,400	22.3	23.0	22.6
Student	13,400	29.5	32.2	26.5
Looking after family/home	19,000	41.9	31.0	25.4
Long-term sick	6,600	14.5	16.1	21.6

Table 8: Economically inactive residents of Tower Hamlets for the period (April 2014 – March 2015). Source: NOMIS, 2015. (NB: samples for retired, temporary sick and discouraged were too small to include data).

4.2.4 Occupations of residents

Table 9 shows that of the 143,000 residents in employment, just over half (52.7 per cent) were classified as being managers, directors, senior officials; professional occupations; or associate professional and technical positions. This was slightly less than London overall (53.2 per cent) and substantially more than Great Britain (44.3 per cent).

	Tower Hamlets (Numbers)	Tower Hamlets (%)	London (%)	Great Britain (%)
Managers, Directors, Senior Officials; Professional Occupations; Associate Professional and Technical	75,300	52.7	53.2	44.3
Administrative & Secretarial	21,800	15.3	17.9	21.4

Skilled Trades and occupations				
Caring, leisure and other service occupations Sales and customer service occupations	25,100	17.5	14.8	17.1
Process Plant and machine operatives Elementary Occupations	20,800	14.5	14.1	17.2

Table 9: Occupations of residents of Tower Hamlets. Source: ONS Annual Population Survey, in NOMIS Official Labour Market Statistics, 2015.

4.2.5 Weekly earnings and household incomes

The average gross earnings of residents in Tower Hamlets in 2014 was £670.4 per week. This was notably higher than for London (£617.8) and Great Britain (£520.8). Male residents in Tower Hamlets (£713.0) earn more than the London average for males (£617.8), while female residents (£574.9) earn the same as the London average for females (£574.9).

	Tower Hamlets (£)	London (£)	Great Britain (£)
Full-time workers	670.4	617.8	520.8
Male full-time workers	713.0	661.3	561.5
Female full-time workers	574.9	574.9	463.0

Table 10: Gross weekly earnings of residents in Tower Hamlets in 2014. Source: NOMIS Official Labour Market Statistics, 2015.

The median household income in the borough in 2013 was £30,805. This was £900 lower than the Greater London average of £31,700. 17 per cent of households had an annual income greater than £60,000, while another 17 per cent of households had an annual income of £15,000. Figure 6 shows the spatial distribution of median households across the borough.

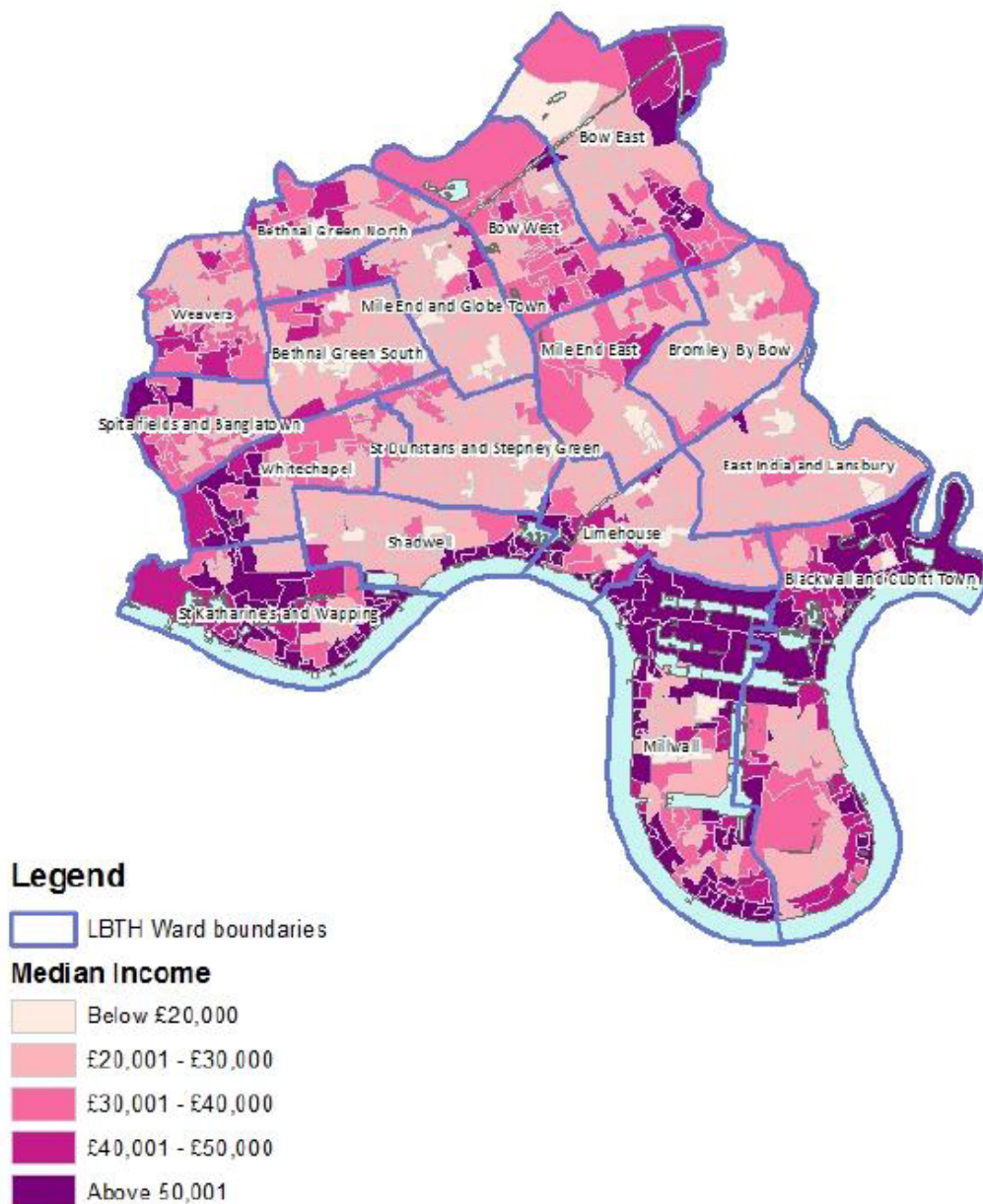


Figure 6: Median household income by area 2013. Source: CACI Paycheck, 2013 in LBTH Household Income Survey, 2013.

4.3 Issues

- Tower Hamlets is a major location for employment in London, attracting a large daytime population of employees.
- Compared to Greater London and Great Britain, Tower Hamlets has a larger proportion residents of working age, of which a similar amount are employed. Further employed residents in Tower Hamlets earn more.
- However there is a higher proportion of unemployed persons, while the median household income is less than that for Greater London and Great Britain. There are also significant differences in household incomes across the borough. This highlights that there is a need to focus on those that are

unemployed and households with incomes less than £20,000 to address income inequalities.

- This also highlights that there may be a need to diversify employment within the borough, particularly to match the skills of existing residents.
- It is important to continue to support the role of Tower Hamlets as a major attractor of employment and economic functioning.

4.4 Data gaps and updates

- There is minimal data about the number of people who work from home.
- There is minimal data on the need for different types of workspace and emerging industries.

5. Education

5.1 Indicators

The following indicators have been incorporated in the Sustainability Appraisal Framework:

- 5.2.1 Proportion of 16-18 year olds not in education, employment or training (NEETs) (Department for Education).
- 5.5.2 Proportion of people aged 16- 64 years old who have attained a NVQ Level Four or higher (Office for National Statistics in NOMIS Labour Market Survey, 2014; ONS Annual Population Survey).
- 5.2.3 Proportion of residents with no qualifications (Office for National Statistics, in NOMIS Labour Market Survey, 2014)
- 5.2.4 Education and skills deprivation (CLG Indices of Deprivation 2010).

5.2 Contextual characteristics

- 5.3.5 Need for School Places
- 5.3.6 Need for Early Years Places

5.3 Description

5.3.1 Young people not in employment, education or training

In 2012, 4.9 per cent of 16 to 18 years olds in Tower Hamlets were not engaged in employment, education or training (NEET). This was an improvement of 0.1 per cent from 2011. On this measure, Tower Hamlets proportionally fares better than England, but not as well as the London average.

	2011 (%)	2012 (%)	Change 2011 to 2012
Tower Hamlets	5.0	4.9	- 0.1
London	4.5	4.7	+0.2
England	6.0	5.8	- 0.2

Table 11: Proportion of 16-18 year olds not in employment, education or training (NEET). Source: Department of Education.

5.3.2 Attainment of NVQ Level 4

44.2 per cent of residents aged between 16 and 64 years old in Tower Hamlets had achieved a NVQ4 and above recorded in the period of in 2014. This was proportionally less than London (49.1 per cent) but higher than Great Britain (36.0 per cent).

5.3.3 No qualifications

24,000 residents (12.1 per cent) in Tower Hamlets did not have a qualification in 2014. This was proportionally more than for both London (7.8 per cent) and Great Britain (8.8 per cent).

5.3.4 Education and skills deprivation

In terms of the seven indices of deprivation, Tower Hamlets is least deprived in education and skills with only 1 LSOA being in the top 10 per cent most deprived areas in England and an additional 12 in the 10-20 per cent deprived in England.

5.3.5 School Places:

Projections of the need for school places

Projections of the need for school places are provided by the GLA which uses a standard model for the majority of London LAs. The trends over the 10 year projection period can fluctuate in each annual round of projections. This can reflect the most recent birth data and variations to housing data.

The projections for 2015 show a continuing rise in need for places at both primary and secondary. The LA should continue to take a cautious approach to planning for additional school capacity. Whilst the projections of need are now showing a slower rate of increase at primary, it is possible that this could vary again either upwards or downwards in the future. For primary places, the projections beyond 2018/19 relate to projected rather than actual births so are less reliable than the short to medium term projections based on actual birth data.

Primary Schools

It is projected that there will be 625 more Reception aged pupils in 2024/25 than in 2014/15. This means in addition to plans for extra capacity already agreed there will be a need for 7FE of more primary capacity in the period.

Secondary Schools

It is projected that there will be 856 more 11 year olds in 2024/25 than in 2014/15. This means there will be a need for 20FE of more secondary capacity, with 7FE needed by 2021/22.

<http://modgov.towerhamlets.gov.uk/documents/g6200/Public%20reports%20pack%2008th-Sep-2015%2017.30%20Cabinet.pdf?T=10>

5.3.6 Statutory Early Years Provision:

In 2013 the Government introduced a new statutory duty on Councils to ensure adequate provision of 15 hours of childcare for disadvantaged two year olds. The borough's demographics mean that Tower Hamlets needs to provide the highest number of places. The Council is currently under providing by 1,398 places. In 2017 the duty will increase to 30 hours for disadvantaged 2 year olds and all 3 and 4 year olds, increasing the need to provide places.

5.4 Issues

- Fewer than London average adult residents hold higher qualifications or any qualifications.
- There are insufficient school places in the borough to meet current projected need.
- There are insufficient nursery places in the borough to meet current statutory duty for provision.

5.5 Data gaps and updates

- Future projections for Early Years Places, especially to meet future 3 and 4 year old requirements.

6. Safety

6.1 Indicators

The following indicators were used to characterise safety in the borough.

- Crime rates per 1000 of the population for key offences including burglary (Office for National Statistics Local Profiles).
- Percentage of people who thought crime was a problem in their local area (TNS-BMRB, Tower Hamlets Annual Residents Survey 2014).
- Crime deprivation (Indices of Deprivation for England 2010).
- Public Confidence in the Police (Tower Hamlets Community Safety Partnership, Strategic Assessment, 2013 – 2014)

6.2 Contextual characteristics

No further contextual characteristics were used in this section.

6.3 Description

6.3.1 Crime rates per 1000 people

In Tower Hamlets the overall crime rate in 2011-2012 was 63.3 crimes per thousand people compared to 57.4 crimes per thousand people in London and 38.4 crimes per thousand people in England⁴.

The type of crime with the highest rate in 2010-2011 in Tower Hamlets was violence against the person with 27 crimes per 1,000 persons; this was greater than the London region which had a rate of 21 crimes per 1,000 persons.

Over the period 2006-2007 to 2010-2011 violence against a person in Tower Hamlets decreased by 1,412 offences overall. Over the period 2006-2007 to 2010-2011, wounding or other acts endangering life in Tower Hamlets increased by 159 offences overall.

6.3.2 Perceptions of crime

31.0 per cent of people in Tower Hamlets thought that crime was a problem. This was the top personal concern for residents. Public confidence in the police currently stands at 60%

6.3.3 Crime deprivation

The crime deprivation measure records crime rates for burglary, violence, theft and criminal damage. The crime deprivation in Tower Hamlets shows that all except the three wards Millwall, St Katharine's and Wapping, Mile End and Globe Town have LSOAs in the bottom 20% for crime deprivation.

6.4 Issues

- The rate of crime is higher than that for London and England.

- Residents reported crime as the top concern in Tower Hamlets

6.5 Data gaps and updates

- A more nuanced understanding of the trends with regards to different types of crime is required.

7. Health and wellbeing

7.1 Indicators

The following indicators were used to characterise population in the borough:

- 7.2.1 Life expectancy at birth for males and females (Compendium of Population health Indicators (HSCIC), Life Expectancy at Birth, Jan 2015, 200-1993 to 2011-13, in LBTH Health JSNA, 2015).
- 7.2.2. Percentage of people participating in regular sport or exercise (Sport England Active People Survey 6) and Rates of physical inactivity amongst Adults (Public Health Outcomes Framework)
- 7.2.3 Health Deprivation and Disability (Indices of Deprivation for England 2010).
- 7.2.1 and 7.2.3 Health inequalities (London Health Programmes, Life expectancy at birth by sex and ward, 1999/03 - 2006/10, Jan. 2013, in LBTH Joint Strategic Needs Assessment: Life and Health in Tower Hamlets)
- 7.3.4 % of children achieving a good level of development at the end of reception year; % of children in reception who are obese; tooth decay; vitamin D deficiency. LBTH JSNA 2015
- 7.3.5 % of adult carers who have as much social contact as they would like, as a proxy measure for social isolation (Public Health Outcomes Framework) and reduce the number of people who experience common mental health disorders

7.2 Contextual characteristics

No further contextual characteristics were used in this section.

7.3 Description

7.3.1 Life expectancy

Life expectancy in Tower Hamlets remains lower than the rest of the country but continues to improve. In 2011-2013 in Tower Hamlets, the average life expectancy of females of 82.6 years was lower than the national average for females of 83.1 years. The average life expectancy for males in Tower Hamlets of 77.5 years was lower than the national average of 79.4 years.

However the life expectancy gap between Tower Hamlets and the national average has improved. Between 2000 and 2011, the gap between females in Tower Hamlets and nationally, improved from 1.8 years to 0.5 years; and for males improved from 3.3 years to 1.9 years.

Health inequalities in the borough persist and are responsible for the notable gaps between the least and most deprived residents. These inequalities result in a difference of 3.3 years between the most and least deprived females in the borough, and 6.9 years for males.

Compared to London, Tower Hamlets has the second highest premature death rate from circulatory disease (87 per 100,00), the second highest premature

death rate from cancer (128.5 per 1000) and the second highest premature death rate (36.9 per 100,00) from respiratory disease (these conditions typically constitute 75% of all premature deaths (LBTH JSNA 2015).

7.3.2 Participation in exercise

Proportionately more residents in Tower Hamlets (38.5 per cent) were engaged in taking part in physical activity at least three days a week, than for London (36.0 per cent) and nationally (35.7 per cent). However in 2014 30% of adults were physically inactive, above the London average rate of 27%.

7.3.3 Health and disability deprivations

Health and disability deprivation measures incorporate years of potential life lost; comparative illness and disability ratio; acute morbidity; mood and anxiety disorders. Health and disability deprivation in Tower Hamlets is higher than average. This is also compounded by health inequalities within the borough. Ward life expectancies for males varied by 10 years, while for females there was a variation of 15 years of life expectancy.

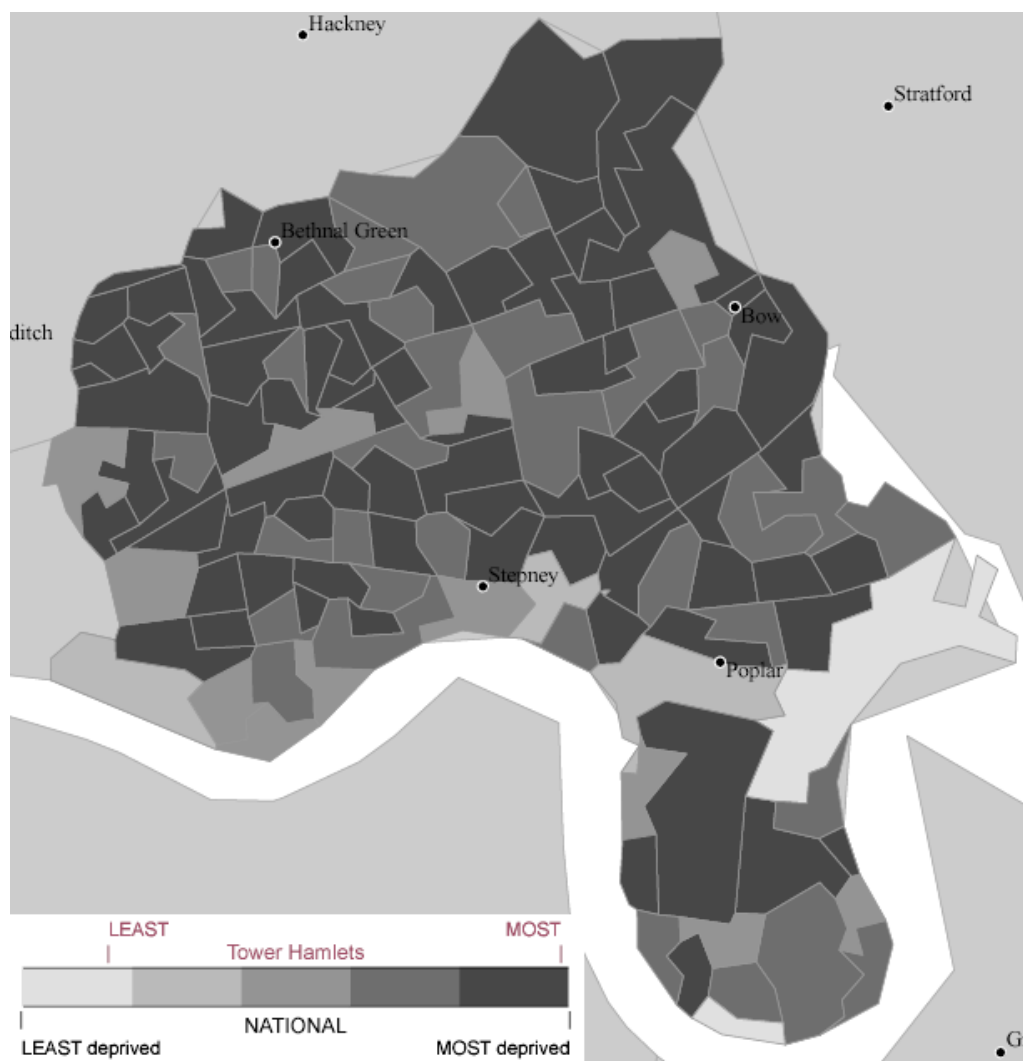


Figure 7: Geographic distribution of health and disability deprivation across Tower Hamlets. Source: Indices of Deprivation 2010 for England.

7.3.4 Children's Health Issues (LBTH JSNA 2015):

- Only 55% of children achieve a good level of development at the end of reception year at school. The London average is 62%. (2013/14)
- 12.2% of children in Reception Year (4-5 year old) are obese (Joint 10th highest in the country)
- 5% of 5 year old children have experience of tooth decay compared to 33% for London and 28% nationally compared to the previous study there is evidence of deterioration of child oral health
- Local evidence indicates particularly high levels of Vitamin D deficiency in both mothers and children.

7.3.5 Mental Health (Tower Hamlets Mental Health Strategy) and Isolation

- Tower Hamlets has a high prevalence of mental health problems: The fourth highest proportion of people with depression in London, the fourth highest incidence of first episode psychosis, and the highest incidence of psychosis in east London according to GP registers.
- In total there are approximately 30,000 adults estimated to have symptoms of a common mental health problem in the borough, with around 15,900 people known to their GP to have depression, and 3,300 known to have a serious mental illness, with a prevalence of c. 1150 people with dementia
- Using % of adult carers who have as much social contact as they would like, as a proxy measure for social isolation, in Tower Hamlets the figure is 29.8%, amongst the worst ten in London and below the London Average of 41.3%

7.4 Issues

- Residents in the borough have lower life expectancies than average, but life expectancies are improving.
- There are significant health inequalities amongst residents in the borough. This is reflected in the variation of life expectancies between the most and least deprived residents.
- Health incomes for children in the borough are particularly bad and under the London average.
- High prevalence of mental health issues and social isolation.

7.5 Data gaps and updates.

- There is a gap in evidence of the actual health impacts of new developments. Post-occupancy surveys would assist in filling this gap.
- There is an evidence gap regarding access to health facilities and their capacity with regards to population increase.

8. Air Quality

8.1 Indicators

The following indicators were used to characterise air quality in the borough and included in the Sustainability Appraisal Framework.

- 8.3.1 Levels of carbon dioxide (CO₂), nitrogen dioxide (NO₂), and dust and particulate matter (PM₁₀) emissions (London Air Quality Network, 2015; LBTH Clear Zone Plan, 2010)

8.2 Contextual characteristics

- 8.3.2 Air quality impacts (King's College London, 2015)

8.3 Description

Tower Hamlets has three monitoring sites within the borough. These sites are operated and maintained by the London Air Quality Network (LAQN) and data is reported in real-time. In addition, the council also has 26 mini monitoring stations collecting data used to identify trends and hotspots, predict future pollutant levels, and monitor the success of the implementation of their quality action plan.

8.3.1 Levels of emissions

The borough exceeds air quality objectives for Oxides of Nitrogen (NO + NO₂-collectively referred to as NO_x) and particulate matter (PM₁₀). As of 2015, the Council has a duty to monitor PM_{2.5}. Table 12 shows pollution levels in 2014 measured against targets set by the Government's Air Quality Strategy, 2014.

		Was target achieved?		
		Blackwall	Mile End	Victoria Park*
Ozone	100 ug/m ³ as an 8 hour mean, not to be exceeded more than 10 times a year	Yes	-	-
Nitrogen Dioxide	200 ug/m ³ as a 1 hour mean, not to be exceeded more than 18 times a year	Yes	Yes	Yes
Nitrogen Dioxide	40 ug/m ³ as an annual mean	No	No	Yes
	Overall are objectives met?	No	No	Yes

Table 12 Air pollution levels in 2014 measured against targets set by the Government's Air Quality Strategy 2014. *Victoria Park data is for 2015 as insufficient data available for 2014. Source: London Air Quality Network.

The borough has been declared an Air Quality Management Area. This is due to the high concentration of NO_x and PM₁₀ caused largely by traffic on major roads in the borough. Road transport has been identified as the largest source of

emissions in Tower Hamlets⁵. Air quality hotspots as of 2010 were Aldgate, Limehouse and Bromley-by-Bow. There are a number of interventions to reduce sources of air pollution from transport such as encouraging more sustainable mode splits and supporting active transport and trip reduction⁶.

8.3.2 Air quality impacts

Research undertaken at KCL studied the impacts of pollutants in the air on school children's respiratory health in Tower Hamlets. Small particulates (PM 2.5) alone are estimated to contribute to 102 deaths per year in Tower Hamlets.

8.4 Issues

- Air pollution levels for the borough overall exceed targets set by the Government's Air Quality Strategy, 2014.
- Transport contributes to the majority of pollution in the borough. This is particularly so, near large arterial roads throughout the borough and increased exposure to populations living within proximity to major roads, especially vulnerable groups such as children, the elderly and those with existing medical conditions. Air pollution has significant implications on health and life expectancy and is said to be the second largest contributor to deaths after smoking.
- Major hotspots for poor air quality are on the Transport for London Road Network, over which the borough has limited direct control. This reduces the borough's ability to improve air quality from vehicular traffic.
- Measures taken to reduce pollution, particularly targeting transport will have wider benefits to health, wellbeing and open spaces.

8.5 Data gaps and updates

- No data gaps have been identified.
- The LBTH air quality assessment may need to be revised to reflect recent data and trends.

⁵ Defra (2007). The Air Quality Strategy for England, Scotland, Wales and Northern Ireland.

⁶ LBTH. (2010). Clear Zone Plan.

9. Energy and Climate Change

9.1 Indicators

The following indicators were used to characterise energy and climate change in the borough and incorporated into the Sustainability Appraisal Framework.

- 9.3.1 Energy consumption by sector
- 9.3.2 Average consumption of domestic electricity (Neighbourhood Statistics, ONS, 2013)
- 9.3.4 Local carbon dioxide emissions per capita (Department of Energy and Climate Change, in ONS, Environment Profile 2013)
- 9.3.5 Number of households experiencing fuel poverty (Department of Energy and Climate Change, Fuel poverty sub-regional statistics 2013)

9.2 Contextual characteristics

- 9.3.3. Consumption of domestic gas
- 9.3.6 Decentralised energy
- 9.3.7 Urban Heat Island

9.3 Description

9.3.1 Energy consumption by sector

In 2011, a total of 5,262gWh of energy was consumed in the borough. Industry and commerce consumed the largest amount of energy per sector with 3,132gWh. This was almost double the usage of the domestic sector which consumed 1,156gWh. The transport sector consumed 972gWh.

9.3.2 Efficiency and consumption of domestic energy

The average domestic electricity use for Tower Hamlets was 3,269kWh per meter point in 2011. This was lower than London (3,714kWh per meter point). Between 2009 and 2011 there was a reduction in domestic electricity usage of 19kWh per meter point in Tower Hamlets which was a greater reduction than the London average of 11kWh per meter point.

9.3.3 Consumption of domestic gas

In 2011, the average consumption of domestic gas for the borough was 9,853kWh per meter point. This was lower than London which had an average of 14,038kWh per meter point. In the two years between 2009 and 2011 there was a reduction in domestic gas usage of 812kWh per meter point in the borough which was a smaller decrease than the London average of 1,090kWh per meter point.

9.3.4 Local carbon dioxide emissions

The estimate of carbon dioxide emissions was 7.5 tonnes per person in the borough in 2011. While this represents a decrease of 1.2 tonnes over the preceding two years, Tower Hamlets still has a higher rate than the London average of 4.9 tonnes and England at 6.7 tonnes. The higher rate per capita in Tower Hamlets, can be somewhat accounted for by the high number of people that commute to the borough each day such as Canary Wharf, but are not

resident in the borough and therefore there is a discrepancy in the amount of CO2 per resident.

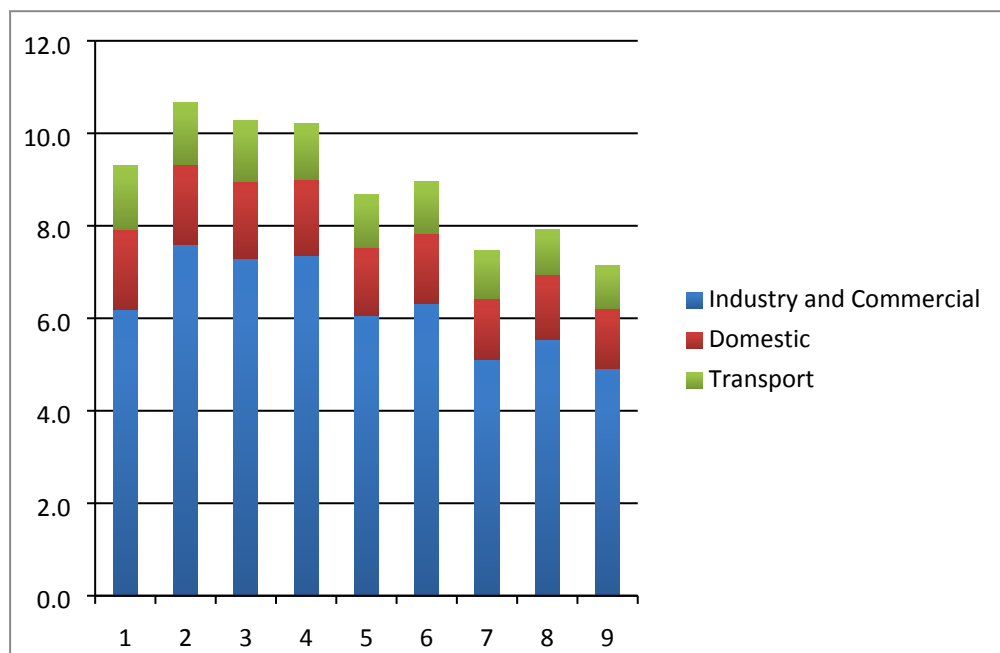


Figure 8: Per capita Local CO2 emission estimates; industry, domestic and transport sectors 2005-2013 (t CO2 per person). Source: UK local authority and regional carbon dioxide emissions national statistics: 2005-2013.

9.3.5 Fuel poverty

Fuel poverty is defined as spending more than 10 per cent of disposable income on heating to a minimal standard. In 2013, 7,813 households in Tower Hamlets were estimated to be experiencing fuel poverty. This equated to 7.6 per cent of all households. This was an increase from the previous year, in which 7,075 households experienced fuel poverty, equating to 7.3 per cent of all households in the borough.

9.3.6 Decentralised energy

There are limited opportunities for decentralised energy and heating within the borough. Besides lack of suitable sites, efforts are constrained by governance and logistical challenges of supply and demand between multiple stakeholders, high land prices for which energy facilities provide a relatively lower return than other uses. Incentives pursue implementation are also constrained, particularly against a broader policy landscape and uncertainty in meeting regional and national targets. There is also commercial uncertainty surrounding the lag time between planning and developing an energy supply; and having an adequate demand. Otherwise this risks increasing prices for end uses including residents.

9.3.7 Urban Heat Island ⁷

Our average summer temperatures are predicted to keep rising, such that by the middle of this century, we can expect what are now considered heatwave temperatures (32 degrees daytime, 18 degrees nighttime) in most summers.

⁷ <http://climatelondon.org.uk/lccp/>

London also generates its own microclimate, known as the Urban Heat Island (UHI), which can result in the centre of London being up to 10°C warmer than the rural areas around London. This can aggravate the effects of hot weather.

Summer heatwaves may make our homes, workplaces and public transport uncomfortable, and can have an effect on health, particularly of vulnerable people.

The 2003 summer heatwave resulted in about 600 excess deaths in London. The hot temperatures in 2006 resulted in extremely high demands on London's power supply network and subsequent 'brown outs', due to the high cooling demand. Future increases in electricity demand for cooling could affect London's sustainability.

Identified ways to adapt to increase temperatures include London Mayoral targets:

- Increase tree cover by 5% by 2025 (from a baseline of 20% in 2008)
- Increase green cover in central London by 5% by 2030 and a further 5% by 2050 (this equates to c.30 hectares of new green cover if the boundary of the Central Activities zone is taken as a proxy for central London)

In addition there is a necessity to ensure heat is considered as part of new development proposals and energy saving or refurbishment retrofits of domestic properties, particularly within the social housing sector. Measures could include – restriction of glazing on south/west facades, appropriate wall insulation, ventilation and cooling, green roofs, walls and climbing plants, installation of water efficient taps.

9.4 Issues

- High levels of energy related emissions contribute to poor air quality in the borough.
- Fuel poverty remains a significant issue in the borough.
- There are barriers to delivering decentralised energy which are still to be overcome.
- CO₂ tends to dominate the direction of clean energy policy and actions. On the other hand the impacts of NO_x are proportionately underrated in decisions.
- Predominance of the Urban Heat Island will increase as development increases

9.5 Data gaps and updates

- There is a lack of understanding of post-occupancy energy use and demand. Current decisions surrounding energy are based upon modelling of expected demand; however there is a discrepancy between modelling and real data. This understanding would provide more certainty to and build a stronger case for implementing decentralised and cleaner energy in the borough.
- Data needs to be updated with 2015 release for energy consumption which covers 2013 data.
- Need a better understanding of the effects of climate change and adaptation measures at the local Tower Hamlets level.

- Data is needed to measure the proportion of energy generated from renewable sources.
- Data is needed to quantify energy efficiency and adaptation of existing building stock as per DECC, 2012.
- Need a better understanding of the local heat island effects and whether there are particular local areas of heat concentration.

10. Transport and mobility

10.1 Indicators

The following indicators were used to characterise transportation in the borough.

- 10.3.1 Number of people killed or seriously injured in road accidents (LBTH Health Profile, 2014)
- 10.3.2 Length of cycle routes in the borough (LBTH Cycling Plan, 2009)
- 10.3.3 Journey to work by mode (2011 Census)

10.2 Contextual characteristics

There are no contextual characteristics in this section.

10.3 Description

10.3.1 Reduction of people killed or seriously injured in road accidents

There were 121 incidences of serious injuries and death on roads in Tower Hamlets in 2010-2011. This rate was worse than the English value.

10.3.2 Length of cycle routes in the borough

There are currently 53.3km of dedicated cycle routes in Tower Hamlets and 32.5km of pedestrian walkways. The Tower Hamlets Cycling Strategy 2015 outlines further improvements and growth in cycle routes – both segregated and on quietways.

10.3.3 Journey to work by mode

Tube, light rail and metro are the most popular modes to travel to work for residents of Tower Hamlets (37.32 per cent). This is significantly higher than for London (11.8 per cent). Conversely a lot less residents drive to work in Tower Hamlets (16.54 per cent) than for London (33.50 per cent). Similarly, car ownership is relatively low in the borough compared to London.

Mode of Journey to Work	Tower Hamlets (%)	London (%)
Underground, light rail, metro or tram	37.32	11.8
Driving a van or car	16.54	33.50
On foot	15.78	8.42
Bus, minibus or coach	10.39	11.12
Train	5.10	12.18
Bicycle	2.99	2.33
Passenger of van or car	1.38	2.51
Motorcycle, scooter or moped	1.13	1.42
Taxi or minicab	1.08	0.65
Other	0.64	0.42

Table 13: Journey to work by mode. Source: ONS Census 2011.

10.4 Issues

- There is a need to alleviate current and future capacity on trains, DLR, buses and local roads.
- 'Pinch points' around the borough need to be addressed, particularly those identified in the Isle of Dogs.
- Parking is an on-going issue. There is a need to reduce parking as a disincentive to drive and subsequently alleviate congestion and improve air quality. This may include reviewing parking hours and parking associated with developments.
- There is a need to further encourage active modes of transport, particularly for local trips.
- There is a need to address road space conflicts between cyclists, pedestrians and motorists. This is particularly pertinent for 'pinch points' which have been identified through modelling.
- Locations of end of trip facilities such as bicycle parking and electric vehicle recharge points is also another issue given space constraints.
- Out of a total of 68 Public Health Outcome Framework measures of the health of the local population, certain transport related measures are estimated to contribute to a third of them. Therefore interventions to enhance sustainable and cleaner transport could also have significant health benefits.

10.5 Data gaps and updates

- A number of plans and strategies are currently being updated. These should be reviewed and incorporated in the SA and Local Plan evidence base. These include: The Road Safety Strategy and Parking Policy.
- There is no data for CO2 emissions from transport in the borough. This is required to be able to measure the reductions in line with EU and London targets.

11. Biodiversity

11.1 Indicators

The following indicators were used to characterise biodiversity in the borough and inform the biodiversity target for the Sustainability Appraisal Framework.

- 11.3.1 Protected species
- 11.3.2 Protected sites including SAC, SPA, and Ramsar sites (Tower Hamlets Biodiversity website).
- 11.3.3 Local natural sites (Tower Hamlets Biodiversity Action Plan, 2009).

11.2 Contextual characteristics

- 11.3.4 Areas of deficiency in access to nature (2011 review of Sites of Importance for Nature Conservation).

11.3 Description

11.3.1 Protected species

There are a number of nationally protected and priority species in the borough. These include the Black Redstart, bats, and various more common wild plants and animals.

11.3.2 Protected sites

There are no sites of European significance within the borough. There are no SACs, SPAs, Ramsar sites, SSIs or NNRs in the borough. The closest such sites are:

- Walthamstow Reservoir (SPA)
- Epping Forest (SAC)
- Lower Thames Marshes (SPA)

The HRA scoping identified possible impacts that the direction of the Local Plan and its development could theoretically have on these sites are:

- Walthamstow Reservoir (SPA)- possible impact from increase in population.
- Epping Forest (SAC) – possible impact from air pollution as a by-product of increased/certain developments in LBTH.
- Lower Thames Marshes (SPA) – Possible impact if water pollution were to increase from LBTH or as a result of increased population.

The HRA screening identifies the impacts are negligible considering the distance between the sites and the borough.

11.3.3 Local natural sites

There are three Local Nature Reserves which are: Mudchute Park Farm, Tower Hamlets Cemetery Park and Ackroyd Drive.

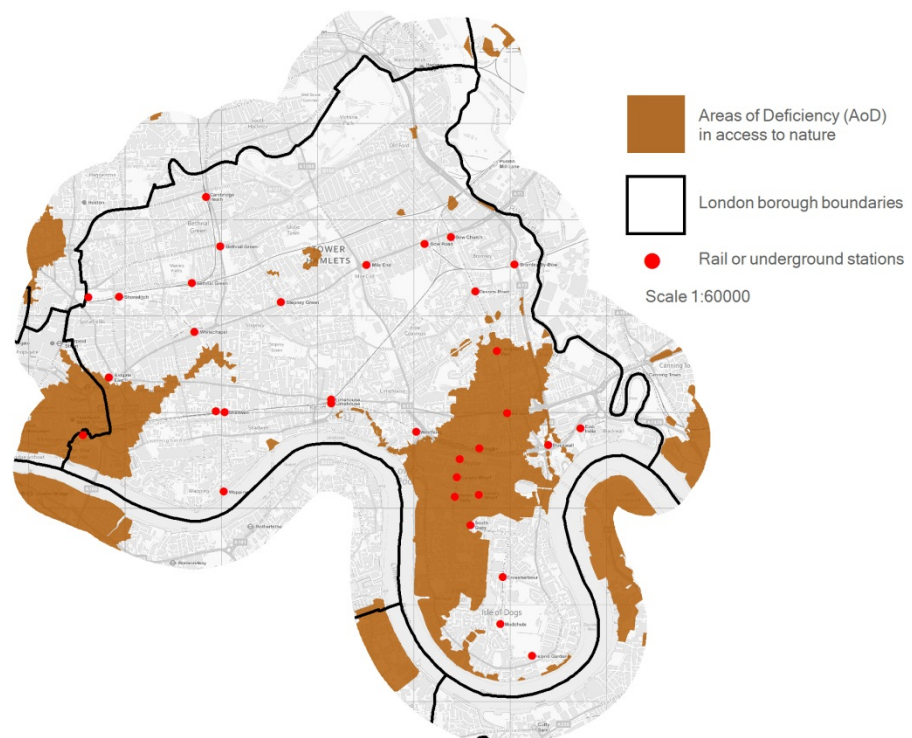
There are 46 Sites of Importance for Natural Conservation. Under the Tower Hamlets Biodiversity Action Plan, 2009, there are Habitat Action Plans for gardens and grounds; parks, squares and burial grounds; rivers and standing water; and the built environment. The Biodiversity Action Plan also identifies areas within Tower Hamlets that have deficient access to nature sites. There are

two large areas considered to have deficient access to Sites of Importance for Natural Conservation.

11.3.4 Areas of Deficiency in access to nature

The Areas of Deficiency in access to nature (AODs) are defined in the London Plan Implementation Report *Improving Londoners' Access to Nature* as areas more than 1 kilometre walking distance from an accessible wildlife site of at least Borough importance.

The AODs in Tower Hamlets were mapped by Greenspace Information for Greater London around the wildlife sites identified in the 2011 review of Sites of Importance for Nature Conservation:



Areas of Deficiency in Access to Nature in Tower Hamlets

Produced on behalf of the London Borough of Tower Hamlets © Crown copyright and database rights 2015 Ordnance Survey 100019288
Produced by Greenspace Information for Greater London CIC www.gigl.org.uk

11.4 Issues

- There are significant areas of the borough without sufficient access to nature.
- Increased development in the borough poses both problems and opportunities for wildlife.

11.5 Data gaps and updates

- No data gaps identified.

12. Soil

12.1 Indicators

The following indicators were used to characterise soil and land quality in the borough.

- 12.3.1 Extent of soil sealing (LBTH Biodiversity Action Plan, 2014-2019)

12.2 Contextual characteristics

- 12.3.2 Contaminated Land (Tower Hamlets Contaminated Land Strategy, 2013)

12.3 Description

12.3.1 Extent of soil sealing

Soil sealing refers to the covering of the ground by an impermeable material. It is one of the main causes of soil degradation. It can put biodiversity at risk, increase the risk of flooding and water scarcity and contribute to an urban heat island effect. It is an irreversible process.

While there is no specific indicator for amount of ground covered by impermeable surfaces in Tower Hamlets, land coverage provides a proxy. Over a third of Tower Hamlet's surface area is covered by buildings, roads and car parks; almost 40% is covered by gardens and landscaped areas around housing estates, schools, businesses etc; almost 15% is covered by water surface. 13% of the borough consists of parks and other public open spaces.

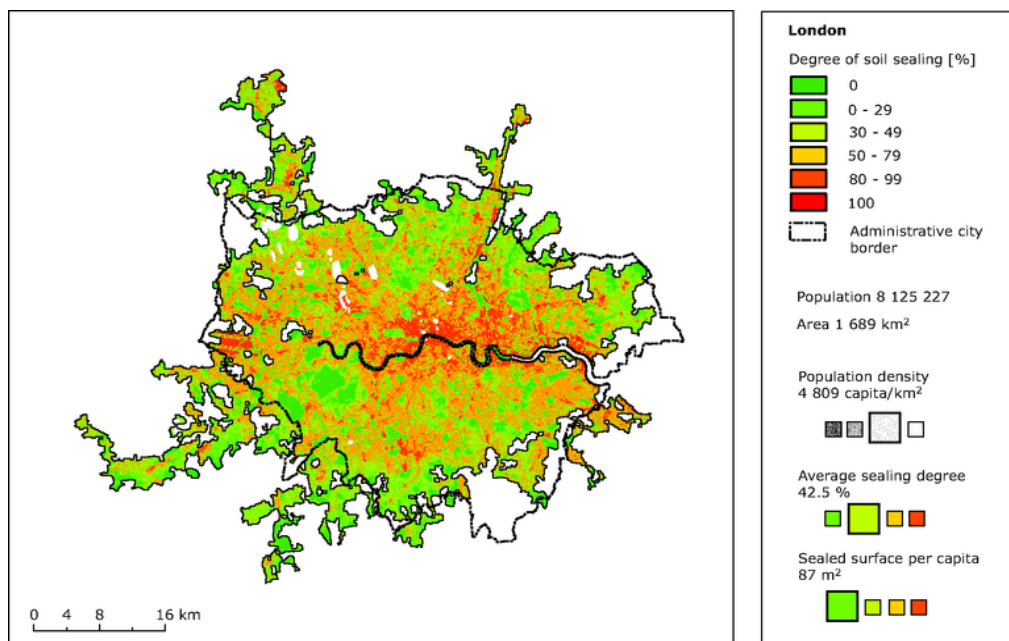


Figure: degree of soil sealing in London. Source: European Environment Agency.

12.3.2 Contaminated Land

In 1994, a study of former industrial land in Tower Hamlets identified over 900 sites, many, as expected were located along the River Thames, particularly along the periphery of the Isle of Dogs. Other areas identified were the banks of the Limehouse Cut and Bow, particularly the area spreading south from Hampton Wick. The latter is the historic centre of the British chemical industry.

The extensive brownfield development in the borough, means that more development is taking place on contaminated land. The opportunity areas in the borough, especially the South Poplar Housing Zone, are in areas with high levels of contaminated land. Proper remediation will be required to enable development to take place.

12.4 Issues

- Remediation of land from industrial uses and other polluting uses where there is a change of use.
- Soil Sealing will have an impact on surface water flooding (see section 13).

12.5 Data gaps and updates

There is little local data soil quality.

13. Flood risk reduction and management

13.1 Indicators

The following indicators were used to characterise flooding and river catchments in the borough.

- 13.3.3 Number of planning permissions granted contrary to Environment Agency advice on flooding and water quality grounds (Environment Agency reported in LBTH AMR 2014/15)

13.2 Contextual characteristics

- 13.3.1 Areas at risk of flooding (LBTH Level 2 Strategic Flood Risk Assessment, 2012).
- 13.3.2 Areas at risk of surface flooding (LBTH Local Flood Risk Strategy)

13.3 Description

13.3.1 Areas at risk of flooding

The main risks of flooding events are posed from fluvial flooding from the Lea Valley and the Thames River. Figure 9 shows that the lower portion of the borough, most specifically the Isle of Dogs is within Flood Zone 3. This demarcates that this zone has a high probability of flooding if the existing flood defences, particularly the Thames Barrier were not managed in accordance to procedures.

Flood Zone 2 as also shown in Figure 9 covers the area around Tower Hamlets' council offices and East India. This area in Flood Zone 2 is at risk of flooding in an extreme fluvial event on the River Lee.

Tower Hamlets Surface Water Management Plan predicts that if a 1 in 100 year rainfall event was to occur, 11,500 residential properties and 3,800 non-residential properties could be at risk of surface water flooding of a depth greater than 0.03m.

13.3.2 Surface Water Flooding:

Surface water flooding was thought to pose the most significant risk of flooding within the borough. Through urbanisation, most of the surfaces in the borough are paved and surface water runoff from rainfall is drained away via piped systems and into the combined sewer system. The sewer system was built in the Victorian period and even though surface water helps keep the sewer clear, its capacity for rainwater is limited. Furthermore topographical low points and underground infrastructure, such as tunnels pose a further risk to surface water flooding.

There is one critical drainage area identified in Tower Hamlets Plevna Street and Launch Street however the Isle of Dogs is also considered at risk from Surface Level Flooding, especially the potential to exceed the capacity of the drainage network

13.3.3 Planning permissions granted contrary to flooding advice

In 2013/14, 1 application was granted contrary to flood advice from the Environment Agency. In the previous year 2012/13, 3 such applications were granted. In the past 6 years, all approved planning applications have met the sequential test for managing flood risk.

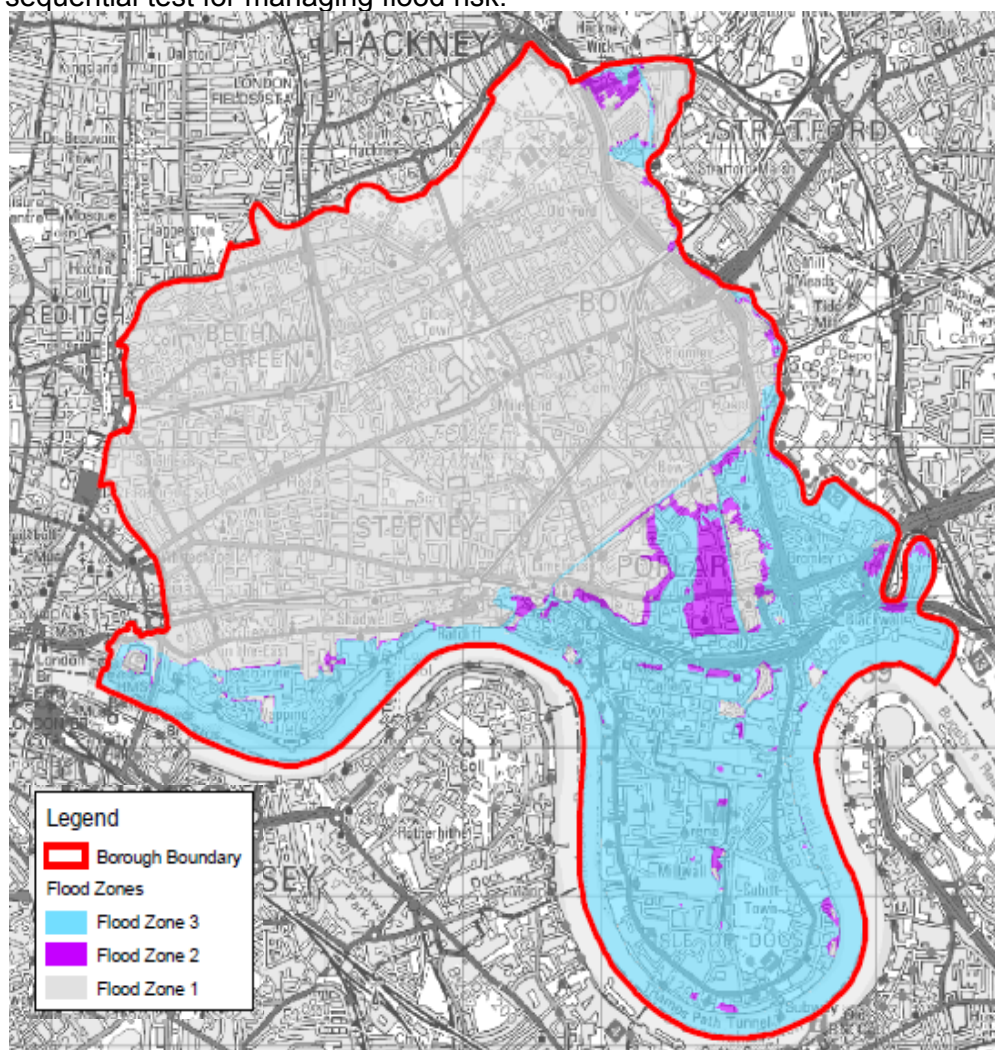


Figure 9: Tower Hamlets Strategic Flood Assessment. Source Capita Symonds for LBTH.

13.4 Issues

- A considerable proportion of the borough is within flood zones.
- The Isle of Dogs is at significant risk of surface water flooding
- Management of river ways and flood management require cooperation from multiple boroughs and tiers of government.

13.5 Data gaps and updates

- Flood impacts on people and property may need to be revised to take account of new developments and any associated and accumulated change in exposure to flooding.

14. Water resources and use

14.1 Indicators

The following indicators were used to characterise water use and quality in the borough.

- 14.3.1 Biological river quality (LBTH, AMR, 2013/14).

14.2 Contextual characteristics

No further contextual characteristics in this section.

14.3 Description

14.3.1 Biological water quality

Canals and rives in Tower Hamlets have little marginal vegetation and suffer at times from poor water quality and invasive non-native species. For the 3 years between 2011/12 to 2013/14 the quality of the Lower Lea has remained unchanged. The quality of the water is reported as moderate, its chemical status is moderate and ecology is poor.

14.4 Issues

- Water quality is poor and not improving.

14.5 Data gaps and updates

No data set found pertaining to per capita or household consumption of daily water use.

15. Waste

15.1 Indicators

The following indicators were used to characterise waste in the borough:

- 14.3.1 Amount of residual water per household (DEFRA in ONS, 2013)
- 14.3.2 Proportion of household waste recycled or composted (DEFRA)

15.2 Contextual Characteristics

There are no contextual characteristics in this section.

15.3 Description

15.3.1 Residual waste

	2012/1 3	2013/1 4	2014/1 5
	418.22	418.05	438.66

Table 14 Residual household waste per household. Source: Waste Data Flow.

15.3.2 Household waste sent for reuse, recycling or composting

	2012/1 3	2013/1 4	2014/1 5
% Dry Recycling	25.78	26.07	26.43
% wet recycling	1.60	1.63	1.7

Table 15 % of recycled waste. Source: Waste Data Flow.

The Tower Hamlets dry recycling rates are amongst the highest in London, however the wet recycling rate is the third lowest in London, with some authorities reaching 22%. However this is due to the relatively small number of gardens in the borough and therefore low levels of garden waste.

15.4 Issues

- The Council's recycling rates are below the London average, but rising steadily. The wet recycling rate is particularly low
- Our current safeguarded waste sites are both in areas transitioning away from industrial use and into residential use through their inclusion within the Poplar Riverside Housing Zone and the Fish Island area of the LLDC. The resulting increasing land values, as well as regional and local housing targets, creates pressure for alternative use for these sites.

15.5 Data gaps and updates

- There is minimal data pertaining to waste post-2011.

16. Noise

16.1 Indicators

The following indicators were used to characterise noise in the borough:

- 16.3.1 The rate of complaints about Noise (Public Health Outcomes Framework)

16.2 Contextual characteristics

- 16.3.1 Number of noise complaints received by the borough

16.3 Description

16.3.1 Noise Complaints

The Chartered Institute of Environmental Health calculates the rate of noise complaints per thousand of population for all London boroughs. In 2013/14 in Tower Hamlets this was 22%, amongst the highest in London and above the London average of 17.4%.

The below table provides details of the noise complaints the Council has received over the last 5 years. The majority of which are from construction noise.

	Nov 10 - Oct 11	Nov 11 - Oct 12	Nov 12 - Oct 13	Nov 13 - Oct 14	Nov 14 - Oct 15	
Category	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Noise - commercial premises	237	147	166	162	146	858
Noise - construction/demolition sites	415	312	318	354	329	1728
Noise - industrial, warehousing/distribution premises	6	4	1	20	17	48
Noise - leisure/recreation premises	66	31	72	45	24	238
Noise - other residential premises	0	0	0	0	2	2
Noise - single family houses	0	0	0	0	1	1
OOH noise - commercial premises	52	62	41	41	52	248
OOH noise - industrial, warehousing/distribution premises	2	4	2	5	7	20
OOH noise -	92	49	92	36	44	313

leisure/recreation premises						
OOH noise - on-licensed premises	0	0	0	0	8	8
OOH noise - vehicles machinery equipment including buskers	0	0	0	0	37	37
OOH noise construction/demolition sites	294	85	70	47	115	611
Total	1164	694	762	710	782	4112

16.4 Issues

- High complaints indicates a higher than average level of noise in the borough.

16.5 Data gaps and updates

- This comparative indicator data is calculated, not hard data.

17. Town Centres

17.1 Indicators

The following indicators were used to characterise town centres in the borough:

- 17.3.3 Number of junk food outlets per secondary school (LBTH Health JSNA, 2015)
- 17.3.1 Town Centre Vacancy Rates

17.2 Contextual characteristics

- 17.3.2 Description of town centres and retail

17.3 Description

17.3.1 Town Centre Vacancy Rates:

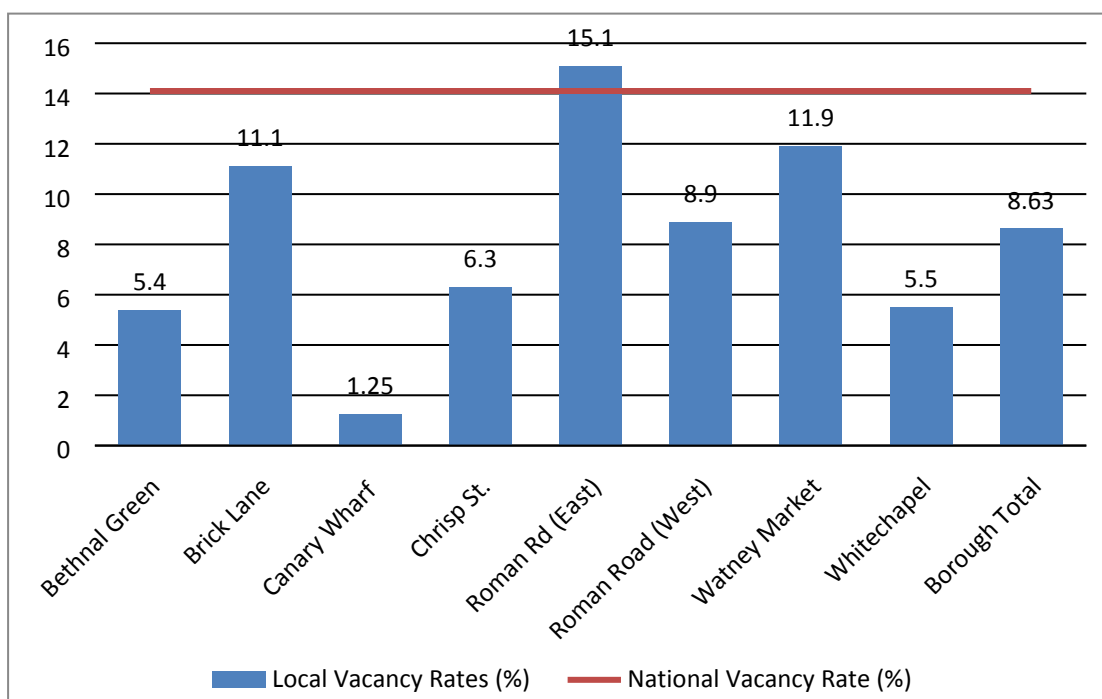


Table 16 2014/15 Town Centre Vacancy Rates. Source: LBTH Survey

17.3.2 Description of town centres and retail

There were 14,945 businesses trading in the borough in 2014. Since 2010, this was an increase of 28.9 per cent in the number of businesses trading compared to a decline of 17.4 per cent in London. Beyond Canary Wharf, retail in Tower Hamlets is not characterised so much by anchor stores. Retail in town centres tends to be characterised by independent retail including: convenience stores, beauty salons, takeaways and local businesses.

17.3.3 Takeaways, betting and loan shops

There is a high density of 'junk food' outlets. There are 42 junk food outlets per secondary school which is the second highest in London.

17.4 Issues

- Levels of fast-food outlets, betting shops and payday loan stores are higher than ideal and have socio-economic and health implications.
- The consequences of pursuing higher residential in town centres is unknown. This relates particularly to active street frontages and retaining a mix of viable uses within town centres. This also relates to how to protect general shops of less than 150m² as such spaces can also be converted into residential.
- There is an increasing demand for restaurants and there is also potential for more leisure and community services to be located in town centres.

17.5 Data gaps and updates

- No known data gaps.

18. Heritage, Archaeology and Design

18.1 Indicators

The following indicators were used to characterise population in the borough.

- 18.3.1 Number of Heritage Listed Buildings (LBTH Conservation website)
- 18.3.2 Number of Scheduled Ancient Monuments (LBTH Conservation website)
- 18.3.3 Number of war memorials (LBTH Conservation website)
- 18.3.4 Number of Conservation Areas and Registered Historic Parks and Gardens (MAGIC)
- 18.3.5 Number of sites and aspects on the Heritage at Risk register (Historic England's Heritage at Risk register).

18.2 Contextual characteristics

- 18.2.1 Archaeology
- 18.2.2 Views
- 18.2.3 Daylight, sunlight and wind

18.3 Description

18.3.1 Heritage Listed Buildings

Within the borough there are over 2,000 Listed Buildings a list of these can be found on the LBTH conservation website. There are:

- 13 Grade I Buildings that are of exceptional national interest. These include the Tower of London, Tower Bridge and Christ Church Spitalfields.
- Approximately 40 Grade II* buildings of special interest. These include Wapping Hydraulic Pumping Station.
- Around 2,000 Grade II buildings of special interest.

18.3.2 Scheduled Achievement Monuments (SAMs)

Brunel's Great Eastern ship slipway in Millwall has recently been declared a SAM. Other SAMs are Three Colt Bridge SAM and Parnell Road Bridge SAM. An up to date map of these can be found on the LBTH Conservation website

18.3.3 War memorials

As of August 2015, there were 44 war memorials in the borough. A list of these can be found on the LBTH Conservation website.

18.3.4 Conservation Areas

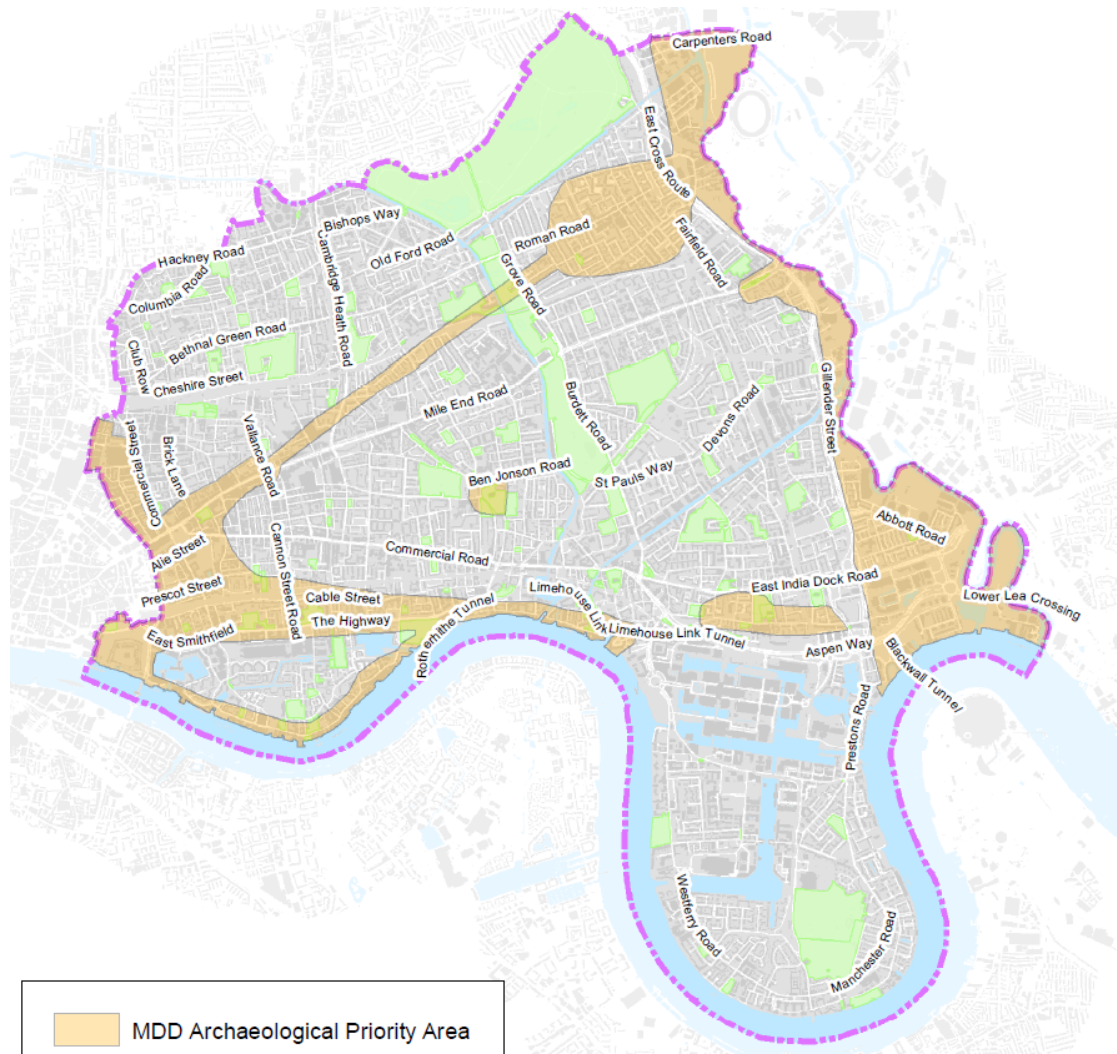
As of August 2015, there were 58 Conservation Areas within the borough. A list of these and respective character appraisals and guidelines about how the character can be conserved can be found on the LBTH Conservation website.

18.3.5 Heritage at Risk

35 heritage sites and aspects are registered on Historic England’s Heritage at Risk Register. These include 28 listed buildings, 6 conservation areas and 1 SAM.

18.3.6 Archaeology:

The borough has large areas of Archaeological Priority. These are highlighted on the map below. Many of the areas of Archaeological Priority coincide with opportunity areas and consideration will have to be given as to how to preserve the archaeological heritage alongside supporting development.



18.3.7 Views:

The London Plan designates 27 views across London. Tower Hamlets regularly responds to planning applications which could impact on four of these views:

- View 5: Greenwich Park to Central London
- View 10: Tower Bridge
- View 24: Island gardens, Isle of Dogs to Royal Naval College
- View 25: The Queen’s Walk to Tower of London

18.3.8 Daylight, Sunlight and Wind

Modelling on individual sites has indicated increasing sunlight, daylight and wind effects with new development sites. A number of rights to light issues have also prevented development from coming forward. However the borough has no borough wide modelling of these factors or the potential impact from development.

18.4 Issues

- High levels of development and associated drivers of land prices and population growth, place pressure on heritage conservation. This pressure is compounded by the borough's location on the city fringe which has a mass of tall buildings. To some extent this may set a precedent for further tall buildings nearby in Tower Hamlets. The demand for development can result in less consideration to the impact of appropriate scale of new buildings on the wider area.
- Conserving the use of building uses that are in decline such as public houses being converted for other uses such as residential is also a matter that needs to be noted.
- Trans-boundary matters should be noted and the impact that development in Tower Hamlets may have on heritage in other boroughs. Such examples include sight lines from General Wolfe in Greenwich and Island Gardens which form part of the Greenwich world heritage site, and protecting the background of the Tower of London are such examples.

18.5 Data gaps and updates

- There should be clearer strategic understanding of where tall buildings should be located in the borough to minimise impacts on heritage.
- The LBTH Conservation Strategy 2009 was last updated to align with the Local Development Framework and Core Strategy. No necessary updates are foreseen.
- Further borough wide data is required on the sunlight, daylight and wind effects of proposed development, especially in high density development.
- The London Plan evidences views of strategic importance to London, however Tower hamlets has no local evidence on locally important views.

19. Open space

19.1 Indicators

The following indicators were used to characterise open space and landscape in the borough.

- 19.3.1 Number of open spaces classified as Green Flag standard (LBTH Annual Monitoring Review 2014/15)
- Open space (hectares) per 1,000 people (LBTH, Local Monitoring Report, 2012/13)

19.2 Contextual characteristics

There are no contextual characteristics in this section

19.3 Description

19.3.1 Green Flag standards

There are over 120 parks and green spaces in Tower Hamlets. The following eight have received Green Flag Awards.

- Mile End Park
- Millwall Park
- Island Gardens
- King Edward Memorial Park
- Victoria Park
- Trinity Square Gardens
- Weavers Fields
- St George's Gardens

19.3.2 Open space standards

There were a total of 264.98 ha of open space in the borough in 2012/13. This equated to a total of 1.04 ha per 1,000 residents which was an increase from the previous year. The national average is 2.4 ha per 1,000 residents. Tower Hamlets Council has prepared a previous Green Grid which together with the Open Space Strategy guides the direction of open space provision and quality.

19.4 Issues

- With increasing density, development and population conserving and creating new open space is a challenge.

19.5 Data gaps and updates

- An update is being prepared for the Open Space Strategy.

20. Trans-boundary matters

20.1 Indicators

- No indicators were included in the Sustainability Appraisal Framework.

20.2 Description

A number of the above elements of sustainability are trans-boundary in nature and require cooperation across boroughs and authorities. These include:

- Housing
- Flooding
- Waste- sites

The duty to cooperate was created in the Localism Act 2011, and amends the Planning and Compulsory Act 2004. It places a legal duty on local planning authorities.

20.3 Issues

- Sustainability issues can be trans-boundary in nature.
- Addressing sustainability issues may require trans-boundary cooperation as per the duty to cooperate.
- The Local Plan and actions taken within the borough, may affect areas outside of the borough.

20.4 Data gaps and updates

- Information may need to be collected from other boroughs, if an issue or the Local Plan may potentially affect areas outside of Tower Hamlets, most notably in neighbouring boroughs.