Spatial Planning and Health

Tower Hamlets Joint Strategic Needs Assessment

Completion date: November 2016   **Updated: As required**

Executive Summary

Spatial planning decisions have profound impacts on the health and wellbeing of communities. If these impacts are to be optimised, the scope for delivering positive long-term health and wellbeing outcomes must be recognised and specific policies adopted to achieve this.This JSNA is designed to address these specific areas that are pertinent to the new local plan, it is not intended as a comprehensive in-depth review of health and planning which was completed as part of the Healthy Borough Programme[i].
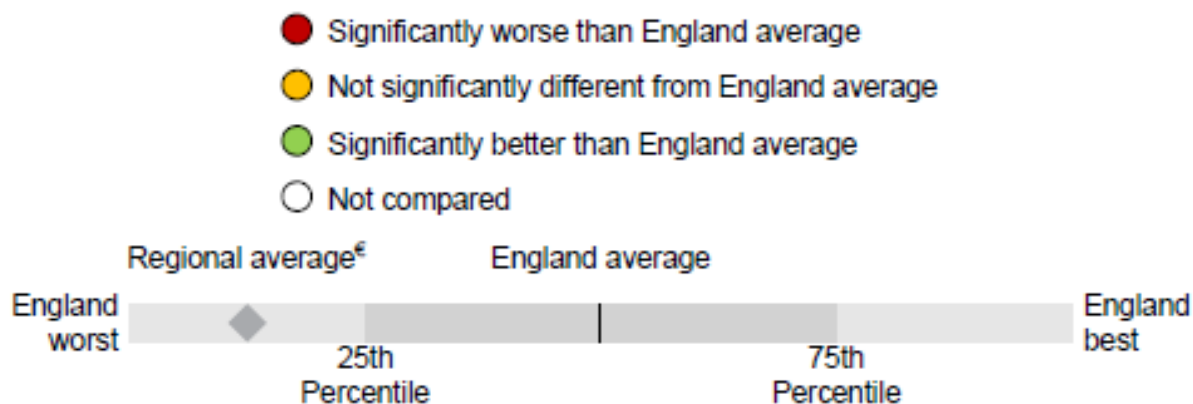
Recommendations

1. That the current Green Grid Strategy is refreshed and incorporated in the new Local Plan to ensure the contribution new development can make to the Green Grid is maximized.
2. That Community Infrastructure Levy income is allocated to the Green Grid to enable an ongoing programme of projects to be developed to deliver priority projects as identified by the refreshed Green Grid Strategy.
3. New developments that will be used by sensitive receptors to poor air quality such as care homes, schools or healthcare facilities should be positioned at least 50m away from highly used roads.
4. Ensure sufficient guidance is in place so that developments meet or exceed the ventilation standards in the current Planning Approved document F to safeguard ventilation requirements in the event that the approved document is withdrawn or downgraded.
5. Adopt the principles contained in Chapter 3 of the Active Design Guidance (New York, 2010).
6. Pedestrians, cyclists, and users of other transport that involve physical activity need the highest priority when developing or maintaining streets and roads. This can mean reallocating road space to support walking and cycling, restricting motor vehicle access, introducing road-user charging and traffic-calming schemes, and creating safe routes to schools and childcare settings.
7. Promote car-free residential developments
8. Require direct desire lines for walking and cycling, for example, through filtered permeability
9. Require high levels of well-thought-out cycle parking in developments
10. Encourage developments with a mix of uses, for example residential, retail, leisure and/or commercial uses to reduce the need to travel by car
11. Zero car parking in commercial developments (apart from accessible parking for Blue Badge holders)
12. Create lifetime neighbourhoods. There are three principles of lifetime neighbourhoods which include neighbourhoods:
    - that are well-connected and walkable
    - where people, as far as possible, have a choice of homes, accessible infrastructure and services, places to spend time and to work, with a mix of accessible and adaptable uses, and
    - where people can belong to a cohesive community which fosters diversity, social interaction and social capital.
13. Restrict the over concentration of uses that detract from the ability of people to live healthy lifestyle such as hot food take-aways and betting shops, New applications for betting shops should be resisted using the provisions of the updated 2015 in the User Class Order regulations.
14. Ensure the ten elements of a healthy street contained in the TFL plan are taken into account when deciding

application that will impact on a high street.Adopt the GLA SPG Standards for the quantum of dedicated play space require by new developments

15. Adopt the NPFA recommend play space guidance but only in relation of types of play space to be provided by new developments
16. Require developers to demonstrate they have used the Play England 10 key design principles for creating successful play for any proposed play space on their development
17. A health Impact Assessment with scope and proposed methodology agreed with the councils Public Health Department, should be carried out at an early stage, and submit it as part of their planning application.
    - Major developments
    - Or developments which contain any of the following uses: Education facilities, Health facilities, Leisure or community facilities, Publicly accessible open space, Proposed A5 or Sui Generis betting shop uses
    - Or is in locations which have poor air quality (ie exceed and annual mean of 40 µg/m3 of NO2 or 10 µg/m3 of PM2.5) or are deprived area or areas with significantly lower healthy life expectancy (male or female, see appendix 1) than for England
18. Support measure sustainability measures to combat climate change such as requiring new developments to be energy efficient.
19. Support measure to limit the impact of development sites by controlling emissions from plant used on site.

Health Profile

The chart below shows how the health of people in this area compares with the rest of England. This area's result for each indicator is shown as a circle. The average rate for England is shown by the black line, which is always at the centre of the chart. The range of results for all local areas in England is shown as a grey bar. A red circle means that this area is significantly worse than England for that indicator; however, a green circle may still indicate an important public health problem.

● Significantly worse than England average

○ Not significantly different from England average

○ Significantly better than England average

○ Not compared

Regional average[€]   England average

England worst   25th Percentile   75th Percentile   England best

Domain	Indicator	Period	Local No total count	Local value	Eng value	Eng worst	England Range	Eng best
Our communities	1 Deprivation score (IMD 2015) #	2015	n/a	35.7	21.8	42.0		5.0
	2 Children in low income families (under 16s)	2013	18,250	34.4	18.6	34.4		5.9
	3 Statutory homelessness†	2014/15	19	0.2	0.9	7.5		0.1
	4 GCSEs achieved†	2014/15	1,479	64.6	57.3	41.5		76.4
	5 Violent crime (violence offences)	2014/15	6,598	24.2	13.5	31.7		3.4
	6 Long term unemployment	2015	1,490	7.1	4.6	15.7		0.5
Children's and young people's health	7 Smoking status at time of delivery	2014/15	145	3.4	11.4	27.2		2.1
	8 Breastfeeding initiation	2014/15	3,678	x[1]	74.3	47.2		92.9
	9 Obese children (Year 6)	2014/15	761	27.1	19.1	27.8		9.2
	10 Alcohol-specific hospital stays (under 18)	2012/13 - 14/15	75	41.4	36.6	104.4		10.2
	11 Under 18 conceptions	2014	74	18.1	22.8	43.0		5.2
Adults' health and lifestyle	12 Smoking prevalence in adults†	2015	n/a	20.0	16.9	32.3		7.5
	13 Percentage of physically active adults	2015	n/a	57.5	57.0	44.8		69.8
	14 Excess weight in adults	2012 - 14	n/a	52.7	64.6	74.8		46.0
Disease and poor health	15 Cancer diagnosed at early stage #	2014	188	43.9	50.7	36.3		67.2
	16 Hospital stays for self-harm	2014/15	246	74.9	191.4	629.9		58.9
	17 Hospital stays for alcohol-related harm	2014/15	1,040	552	641	1223		374
	18 Recorded diabetes	2014/15	15,874	6.8	6.4	9.2		3.3
	19 Incidence of TB	2012 - 14	314	38.3	13.5	100.0		0.0
	20 New sexually transmitted infections (STI)	2015	4,770	2245	815	3263		191
	21 Hip fractures in people aged 65 and over	2014/15	105	606	571	745		361
Life expectancy and causes of death	22 Life expectancy at birth (Male)	2012 - 14	n/a	78.1	79.5	74.7		83.3
	23 Life expectancy at birth (Female)	2012 - 14	n/a	82.5	83.2	79.8		86.7
	24 Infant mortality†	2012 - 14	60	4.3	4.0	7.2		0.6
	25 Killed and seriously injured on roads	2012 - 14	343	41.9	39.3	119.4		9.9
	26 Suicide rate†	2012 - 14	68	10.9	10.0			
	27 Deaths from drug misuse #	2012 - 14	26	3.7	3.4			
	28 Smoking related deaths	2012 - 14	596	350.7	274.8	458.1		152.9
	29 Under 75 mortality rate: cardiovascular	2012 - 14	327	112.0	75.7	135.0		39.3
	30 Under 75 mortality rate: cancer	2012 - 14	466	157.0	141.5	195.6		102.9
	31 Excess winter deaths	Aug 2011 - Jul 2014	88	8.8	15.6	31.0		2.3

Indicator notes

1 Index of Multiple Deprivation (IMD) 2015 2 % children (under 16) in low income families 3 Eligible homeless people not in priority need, crude rate per 1,000 households 4 5 A*-C including English & Maths, % pupils at end of key stage 4 resident in local authority 5 Recorded violence against the person crimes, crude rate per 1,000 population 6 Crude rate per 1,000 population aged 16-64 7 % of women who smoke at time of delivery 8 % of all mothers who breastfeed their babies in the first 48hrs after delivery 9 % school children in Year 6 (age 10-11) 10 Persons under 18 admitted to hospital due to alcohol-specific conditions, crude rate per 100,000 population 11 Under-18 conception rate per 1,000 females aged 15-17 (crude rate) 12 Current smokers, Annual Population Survey (APS) 13 % adults achieving at least 150 mins physical activity per week 14 % adults classified as overweight or obese, Active People Survey 15 Experimental statistics - % of cancers diagnosed at stage 1 or 2 16 Directly age sex standardised rate per 100,000 population 17 The number of admissions involving an alcohol-related primary diagnosis or an alcohol-related external cause (narrow definition), directly age standardised rate per 100,000 population 18 % people on GP registers with a recorded diagnosis of diabetes 19 Crude rate per 100,000 population 20 All new diagnoses (excluding Chlamydia under age 25), crude rate per 100,000 population 21 Directly age and sex standardised rate of emergency admissions, per 100,000 population aged 65 and over 22, 23 The average number of years a person would expect to live based on contemporary mortality rates 24 Rate of deaths in infants aged <1 year per 1,000 live births 25 Rate per 100,000 population 26 Directly age standardised mortality rate from suicide and injury of undetermined intent per 100,000 population (aged 10+) 27 Directly age standardised rate per 100,000 population 28 Directly age standardised rate per 100,000 population aged 35 and over 29 Directly age standardised rate per 100,000 population aged under 75 30 Directly age standardised rate per 100,000 population aged under 75 31 Ratio of excess winter deaths (observed winter deaths minus expected deaths based on non-winter deaths) to average non-winter deaths (three years)

† Indicator has had methodological changes so is not directly comparable with previously released values.   € "Regional" refers to the former government regions.

New indicator for Health Profiles 2016.   x1 Value not published for data quality reasons

The 2016 draft summary JSNA outlines the follow for the determinants of health and those particularly related to place.

Health determinants

There are a number of demographic and socioeconomic factors that affect current and future health and social care need in Tower Hamlets.

Population

- Tower Hamlets is the 10th most deprived borough in the country. 58% of the population reside in the 20% most deprived areas in England; 24% live in the 10% most deprived[ii].
- Tower Hamlets has a young population - 48% are aged 20-39 compared to 36% across London. The borough has the lowest proportion of residents aged 65 and older in London and nationally, with only 6.0% of the total population in this age group[iii].
- Population Growth – Tower Hamlets is the fastest growing borough in the country, with the population increasing by almost 30% between 2001 and 2011.[iv] The population is expected to increase by a further 10% to 322,000 from 2015 to 2020[v].
- Population change – the borough has the 11th highest rate of change in England and Wales. There is a total turnover of 224 per 1000 persons who move in or out of the borough per year (23%)[vi].
- In 2014/15 the total number of National Insurance number registrations to adult overseas nationals in Tower Hamlets was 18,867, which was an increase of 23.74% from the previous year. There were also increases in London (37.36%) and the UK (36.6%)[vii].
- In 2014 there were over 14,000 migrant registrations with local GPs in Tower Hamlets, representing one of the highest rates in the country[viii].
- Almost 69% of the borough's population are from a minority ethnic group: 45% white, 41% Asian (32% Bangladeshi, 3% Indian, 3% Chinese), 7% black, 4% mixed ethnic, and 2% other. In the last decade international migration has shaped the profile of the borough's communities; 38% (about 113,000) of the population were born outside of the UK[ix].
- In 2011 the single largest ethnic group was the Bangladeshi population, although this group has decreased slightly as a proportion from 33.4% in 2001[x].
- Since 2001 the white British population has decreased by 6% in the context of 30% population growth overall, resulting in a significant decrease in the proportion of the borough that is white British (from 42.9% in 2001 to 31% in 2011)[xi].
- English is not a main language in 19% of all households in the borough[xii].

Income and welfare reform impact

Welfare reform is being phased in by the government, encompassing change to many means tested benefits such as Housing Benefit, Job Seekers Allowance, and Incapacity Benefits. It introduces a size criterion for housing payments (the "bedroom tax"), a new universal credit scheme, an overall benefits cap, and reallocation of people to employment related schemes.

A potential 40,000 families (about 45% of all working age households in Tower Hamlets) will be affected: the impact includes a reduction in housing payments by an average of £33 per week for about 4000 families[xiii], and benefits capped to £23,000 per year for about 500 families. About half of those affected will be workless, and three quarters will be aged over 45[xiv]. A summary of the impact is below:

- Benefit cap – 501 households affected, average weekly loss £72
- Bedroom tax – 2,100 households affected, average weekly loss £23
- Local Housing Allowance (LHA) cap – 1,878 LHA capped, average weekly loss £42 (dependent on number of bedrooms)
- Non-dependent deductions – 4,495 households affected, average weekly loss £45
- Incapacity Benefit changes to Employment Support Allowance (ESA) – majority of recipients (around 12,000) have moved onto ESA
- Universal Credit – 1,368 claims to date, 50% from 18-24 year olds

The council has established a Welfare Reform Task Group whose objectives include: ensuring all households have access to information on welfare reforms and how it may affect them, ensuring there is appropriate

support to help those in crisis, and managing support for those at most risk. The strategy includes transitional support payments and ways of increasing employment.

Employment

- There are 279,000 jobs in Tower Hamlets. Canary Wharf, the second largest business district in the country, now provides more than 112,000 jobs, 40% of all employment in the borough[xv].
- In 2014/15, 45,400 residents in Tower Hamlets were economically inactive, of whom 69% were women[xvi].
- Income data from CACI (2015) suggest that 21.5% of families in Tower Hamlets have an annual household income of less than £15,000 compared to 18% in London[xvii]. 10.3% are unemployed compared to 7.0% in London[xviii].
- Unemployment varies amongst ethnic groups: from 7% in all white groups, to 19% in all Black and Minority Ethnic groups[xix].

Place based Health determinants

There are a number of characteristics of Tower Hamlets as a place that affect health and social need, and that impact on inequalities between Tower Hamlets and within the borough:

Physical environment

- Green space is limited: there are 1.04ha of open space per 1,000 residents. This is an increase on the previous year, but is half the national average of 2.4ha per 1,000 people. The total amount of open space in the borough is 264.98ha[xx].
- Over 15% of the population are exposed to high noise levels from transport during the daytime. This is above the average for London but has decreased slightly over the past decade[xxi].

Air Quality

- In common with much of Inner London, Tower Hamlets suffers from poor air quality. An estimated 195 deaths per year are attributed to small particulates (PM 2.5) and nitrogen Dioxide (NO_2)[xxii].
- The World Health Organisation's mean annual limit for PM2.5 is 10µg/m^3; this limit is exceeded across all of Tower Hamlets.
- The European Union's mean annual limit for NO_2 is 40µg/m^3; this limit is exceeded on all main thoroughfares in the borough.
- The borough is declared as an Air Quality Management area and the council has a programme that regularly assesses air quality for the following pollutants carbon monoxide, benzene, 1,3-butadiene, lead, nitrogen dioxide, sulphur dioxide and particles (PM10 and PM 2.5)[xxiii].

Housing

- There are now over 121,000 households in Tower Hamlets with an average household size of 2.48 which has remained stable over the past three years[xxiv].
- The number of households is projected to increase by approximately 3% per year to 136,000 by 2022. This is the second highest projected growth in the country[xxv].
- 40% of the population live in social rented accommodation, compared to 24% in London[xxvi].
- Overcrowding varies across the borough, from 23% in Mile End East, to 11% in St Katharine's and Wapping[xxvii].
- There are over 19000 households on the housing waiting list, of which 7078 (37%) are currently overcrowded.
- 52.3% of households on the housing waiting list are families of Bangladeshi ethnic origin.
- Between 2008/9 to 2012/13 over 4,300 households approached the Council as homeless or at risk of being made homeless. The figures for each year have remained relatively stable. The number of statutory homelessness assessments (homelessness decisions) has fluctuated since 2008/9, but there was a 15% reduction in homelessness decisions between 2014/15 and 2015/16.
- The Housing Options Team made 672 homeless preventions in 2014/15.
- The number of households accepted as homeless has also reduced in recent years, from 713 in 2008/9 to 557 in 2013/14.

- There are 1996 households living in temporary accommodation.
- Although the general trend in homelessness has been downwards over the last four years, there has been a recent upturn across London, with a 10% increase in homelessness since the third quarter of 2015.
- Impact of welfare reform on housing is outlined in the section Tower Hamlets People above.

Shops and Businesses
- In 2015 there were 16,650 businesses trading in the borough. Since 2010 the number of businesses has increased by 43% compared to an increase of 29% in London as a whole[xxviii].
- There is a high density of 'junk food' outlets (42 per secondary school – the 2nd highest in London). 97% of Tower Hamlets residents live within ten minutes of a fast-food outlet[xxix].
- There are 76 betting shops in the borough, generally in areas of high deprivation[xxx]. Tower Hamlets Fairness Commission expressed concern about significant expansion of betting shops, pawnbrokers, and payday loan shops on the high street[xxxi].

Crime
- Around half of residents think that people using drugs and littering were big problems in their local area. However more than half agreed that council staff and local police were successfully dealing with anti-social behaviour[xxxii].
- Violent crime has been rising. Tower Hamlets has among the highest rates of violence against the person offences, including gang, knife, and sexual crimes, with 24.2 per 1000 compared to 13.5 in England[xxxiii].
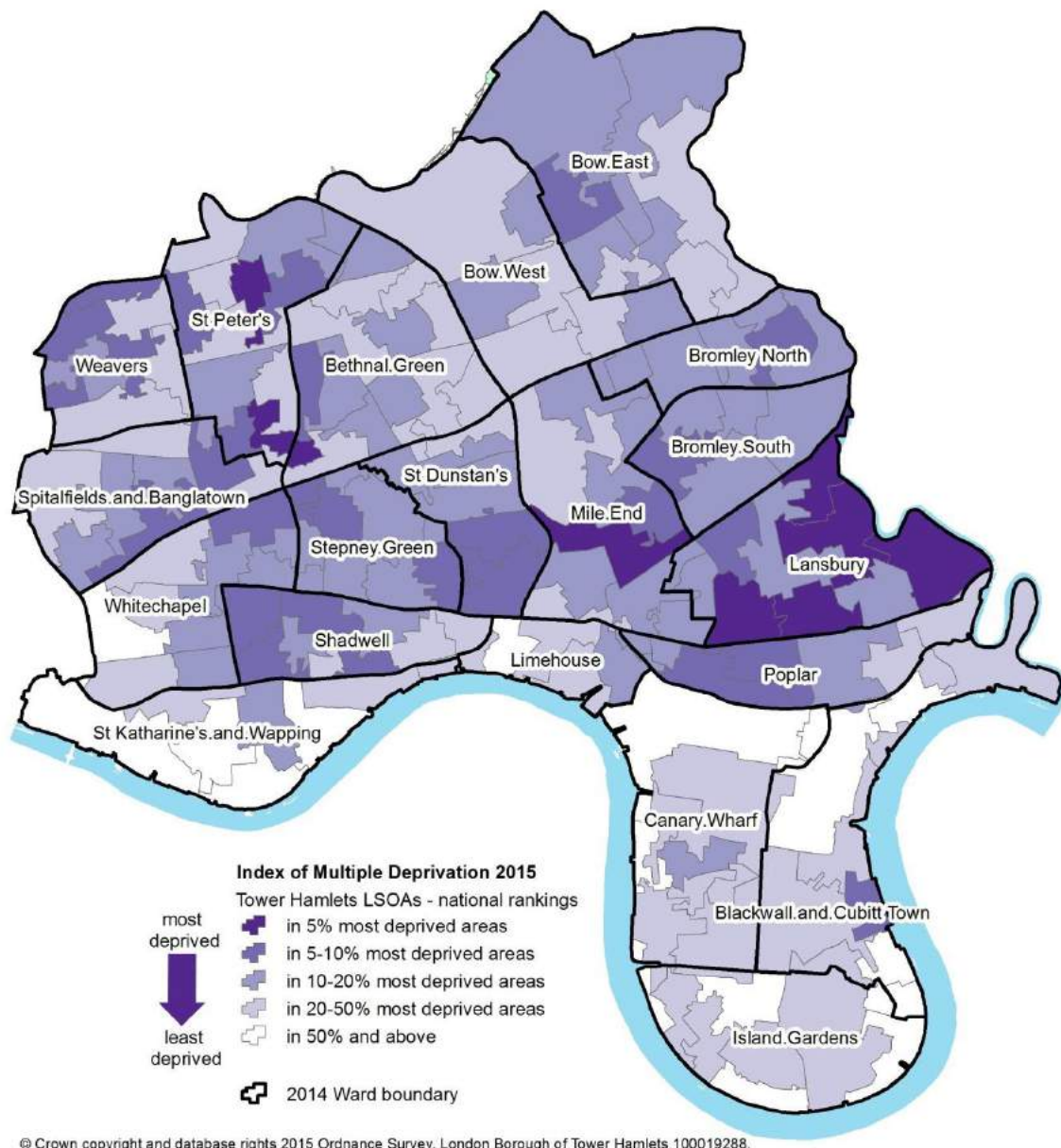
Community Cohesion
- Residents in the borough have a strong sense of community cohesion: the majority of residents (86%) think that people from different backgrounds get on well together[xxxiv], up from 69% in 2009.

Socioeconomic deprivation and place
- Deprivation is widespread in Tower Hamlets and the majority (58%) of Lower Super Output Areas (LSOAs)[xxxv] in Tower Hamlets are in the most deprived 20% of LSOAs nationally[xxxvi].

Map 1 - London Borough of Tower Hamlets and deprivation by index of multiple deprivation[xxxvii]

Index of Multiple Deprivation 2015
Tower Hamlets LSOAs - national rankings

most deprived

- in 5% most deprived areas
- in 5-10% most deprived areas
- in 10-20% most deprived areas
- in 20-50% most deprived areas
- in 50% and above

least deprived

- 2014 Ward boundary

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Wellbeing

There are a range of harmful and protective social, economic and environmental factors which impacts on mental wellbeing[xxxviii]:

- Those which are harmful to mental wellbeing include: social isolation, high levels of social inequality, area level deprivation, childhood poverty, parental unemployment and living in poor quality or social housing, adult unemployment, household income and neighbourhood level violence and disorder.
- Those that are protective to mental wellbeing include: social participation and large social networks, lifelong learning and education (are associated with promoting cognitive capacity, self-esteem, employment chances and income) and at a neighbourhood level, regeneration and access to green spaces improves mental wellbeing.

1. Spatial Planning and Health

1.1 The links between the physical and socio-economic environments and health has long been clear with the earliest national Public Health Act in 1848 bought in to tackle issues of poor housing, sanitation and unwholesome food. The first planning act in 1907 which bought in town planning had the aim of creating '... the home healthy, the house beautiful, the town pleasant, the city dignified, and the suburb salubrious.'

1.2 In recent years much more evidence has accumulated which reinforces just how important the physical, social and economic environment in which we live and work is for our health. Studies looking at the contribution to overall health of different factors estimate environment and socio-economic factors contributing 60% whilst healthcare only accounts for up to 25%.[xxxix]

1.3 The Marmot review[xl] to address health inequalities had as one of its six strategic priorities to create and develop healthy and sustainable places and communities.

1.4 The relationship between health and wellbeing in relation to local neighbourhoods is represented in the following diagram.[xli]
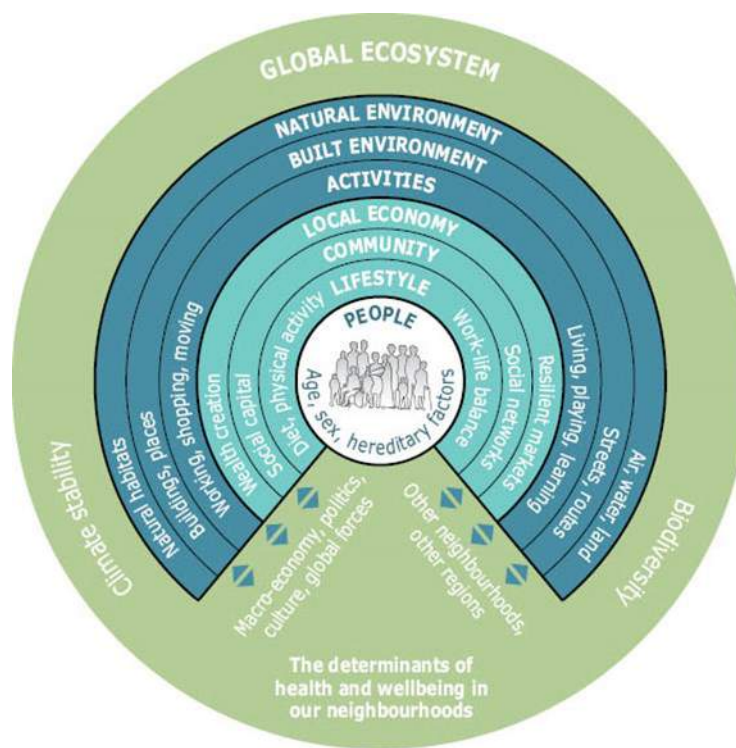
2. What is the policy context?

2.1 The Community Plan sets out the strategic vision for the future of the Tower Hamlets and the local plan is the spatial representation of this plan. It provides a 15 year plan which will shape the planning policy and subsequently design, scale and location of development required to deliver the community plan.

2.2 The local plan is now being refreshed with a target of having new local plan adopted in spring 2017.

3. Key Area – Open and Green Spaces

Note: There is a separate Green Grid Strategy which can be found here
http://www.towerhamlets.gov.uk/Documents/Planning-and-building-control/Strategic-Planning/Local-Plan/Evidence-base/THGG-Final-Strategy-100511.pdf this provides details of the current green spaces and the priority areas for development of the

What is the issue

Open and Green spaces are important for promoting health and wellbeing. A recent Faculty of Public Health briefing paper (Faculty of Public Health, 2010) concluded on reviewing the evidence that contact with safe, green spaces can improve a number of aspects of mental and physical health and wellbeing as well as various social and environmental indicators.

- Contact with green spaces and natural environments can reduce symptoms of poor mental health and stress, and can improve mental wellbeing across all age groups.
- Access to green spaces can increase levels of physical activity for all ages.
- Having green spaces in an area can contribute to reduced health inequalities.
- Safe, green spaces can increase levels of communal activity across different social groups as well as increase residents' satisfaction with their local area.
- Green spaces can help with our response to climate change through their potential to reduce the impacts of heatwaves and reduce flooding and reducing CO_2 emissions.
- Green spaces and natural environments can improve air and noise quality and support sustainability through increasing biodiversity, encouraging active transport and community participation.

What is the picture locally

Tower Hamlets has historically had a deficit of Green Space with currently 0.97 hectare (ha) per 1000 residents compare to the minimum standard of 1.2 ha in the current open space strategy.

What are the effective interventions/policies

The Council's Green Grid Strategy was adopted in 2010 to promote the development of high quality, publicly accessible green infrastructure including open spaces and green links between them. It provides a tool to attract and direct investment in green infrastructure in the borough.

Recommendations

1   **That the current Green Grid Strategy is refreshed and incorporated in the new Local Plan to ensure the contribution new development can make to the Green Grid is maximized.**
2   **That Community Infrastructure Levy income is allocated to the Green Grid to enable an ongoing programme of projects to be developed to deliver priority projects as identified by the refreshed Green Grid Strategy**

4. Key Areas – External Air Quality

What is the issue

Outdoor Air pollution has a significant negative impact on health with effects ranging from worsening respiratory symptoms and poorer quality of life, to premature deaths, from cardiovascular and respiratory diseases. The key pollutants in outdoor air from a health perspective are generally regarded to be particles (measured as PM_{10} and $PM_{2.5}$), oxides of nitrogen (principally NO_2) and ozone (O_3), with sulphur dioxide (SO_2), carbon monoxide (CO), hydrocarbons (including benzene, 1,3-butadiene and PAHs) and metals.

The table below shows the types of health effects associated with elevated levels of these pollutants:
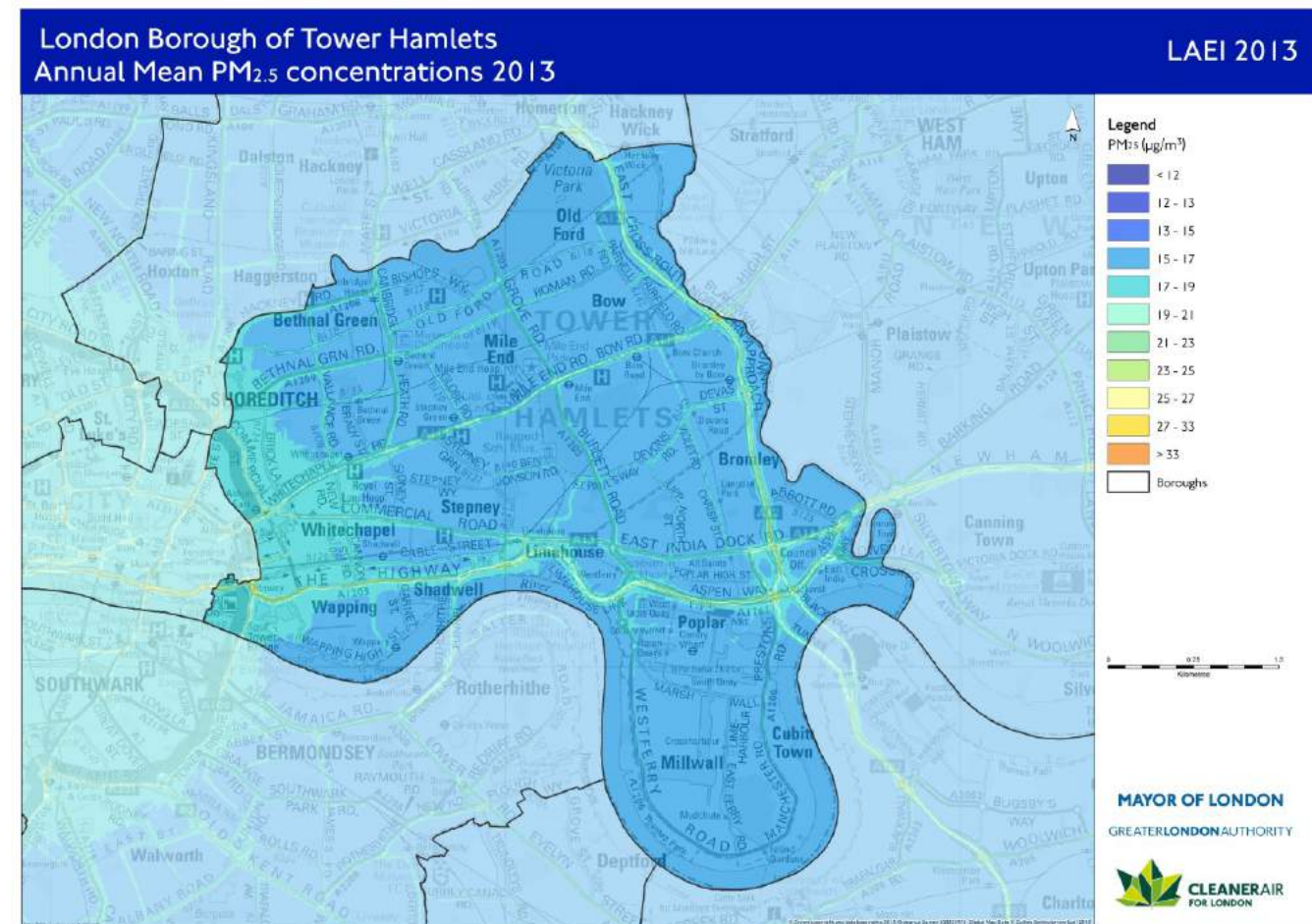
Pollutant	Example of source	Short-term health effects at very high levels	Long-term health effects
Nitrogen Dioxide	Motor vehicle exhausts	These gases irritate the airways of the lungs, increasing the symptoms of those suffering from lung diseases including breathing problems and reduced lung function. [xlii,4] Correlation between daily cardiovascular hospital admissions/deaths and elevated concentrations of nitrogen dioxide, sulphur dioxide and ozone[3].	
Sulphur Dioxide	Motor vehicle exhausts		Reduction in life expectancy[xliii]
Ozone (ground level)	Formed when other pollutants react in sunlight		
Particulate Matter (PM10 & PM2.5)	Vehicle exhausts, chimneys or formed in the air from reactions between other pollutants[4].	Fine particles can be carried deep into the lungs where they can cause inflammation and a worsening of heart and lung diseases[2,xliv]. Correlation between daily cardiovascular hospital admissions/deaths and elevated concentrations of particles[3].	Cardiorespiratory illness, including lung cancer[xliv] Reduction in life expectancy[3]
Carbon Monoxide	Product of incomplete combustion, e.g. from vehicle exhausts	This gas prevents the uptake of oxygen by the blood. This can lead to a significant reduction in the supply of oxygen to the heart, particularly in people suffering from heart disease[2] Correlation between daily cardiovascular hospital admissions/deaths and elevated concentrations of carbon monoxide[3].	

Additionally recent report also suggests links between air quality and diabetes, obesity, and changes linked to dementia[xlv]. There has also been a long term study of children in East London (including Tower Hamlets) which shows evidence of reduced lung volume in school children related to long term exposure to traffic pollutants consistent with impaired lung growth which is expected to be published shortly. Air pollution contributes to widening health inequalities as levels of particulate matter and NO_2 are higher on the most heavily trafficked roads which are used more by disadvantaged people as places where they live, work and shop.

What is the picture locally
Small Particles (PM$_{2.5}$)

Recent research commissioned by Transport for London and the Greater London Authority[xlvi] estimated that in 2010 there were an estimated 85 attributable deaths from small particular matter pollution ($PM_{2.5}$) equating to 1314 years of life lost.

London Borough of Tower Hamlets
Annual Mean $PM_{2.5}$ concentrations 2013

LAEI 2013

Legend
$PM_{2.5}$ (µg/m³)

< 12
12 – 13
13 – 15
15 – 17
17 – 19
19 – 21
21 – 23
23 – 25
25 – 27
27 – 33
> 33
Boroughs

MAYOR OF LONDON
GREATERLONDONAUTHORITY
CLEANERAIR FOR LONDON

The map above shows the annual mean concentration or $PM_{2.5}$, it should be noted that there is no threshold limit for $PM_{2.5}$. That is to say there is not a level below which there are no health effects. The WHO set annual mean a limit of 10 µg/m³ and the map shows that this is exceeded across the borough[xlvii]

London Atmospheric Emissions Inventory

PM2.5 Emissions - Tower Hamlets

Total PM2.5 Emissions by Source Type
Borough: Tower Hamlets

Legend:
- C&D Dust
- Resuspension
- Other
- D&C Other Fuels
- D&C Gas
- NRMM
- Industry
- Rail
- River
- Aviation
- Road Transport

Emissions (Tonnes) by	2008	2010	2013	2020	2025	2030
Road Transport	41.4	38.2	32.1	25.6	24.3	24.3
Aviation	0.4	0.3	0.3	0.3	0.4	0.4
River	2.8	2.6	4.2	4.7	5.2	5.6
Rail	0.0	0.0	0.0	0.0	0.0	0.0
Industry	5.6	4.4	4.1	4.1	4.1	4.1
NRMM	29.6	22.2	13.7	5.4	5.4	5.4
D&C Gas	3.9	3.6	3.3	3.7	3.7	4.0
D&C Other Fuels	1.8	1.8	1.4	1.2	0.8	0.7
Other	6.8	6.3	4.6	8.1	9.2	9.7
Resuspension	1.1	1.0	1.0	1.1	1.1	1.1
C&D Dust	0.3	0.3	0.3	0.3	0.3	0.3
Total	93.7	80.7	65.1	54.4	54.5	55.7

Notes:

(D&C = Domestic and Commercial — C&D = Construction and Demolition)

The summary graph represents emissions from each source stacked on top of one another, with the total stack height equalling the total emissions from all sources.

The numbers in the table are those used to plot the graph and represent the tonnes of pollution emitted into the atmosphere in that year (T/y).

The emissions are combined into reasonably self explanatory "Source Types".

However, the categories: "Industry", "NRMM" and "Other" require further explanation:

- **Industry:** is the total emission from Part A and Part B industrial processes, combined.
- **Non-Road Mobile Machinery (NRMM):** is the total emissions from construction and industrial off road machines, combined.
- **Other:** is the total emission from a number of small sources including: agriculture, outdoor fires, garden emissions, forests, waste and waste transfer sites, combined.

GREATER**LONDON**AUTHORITY   3   CLEANERAIR FOR LONDON   **MAYOR OF LONDON**
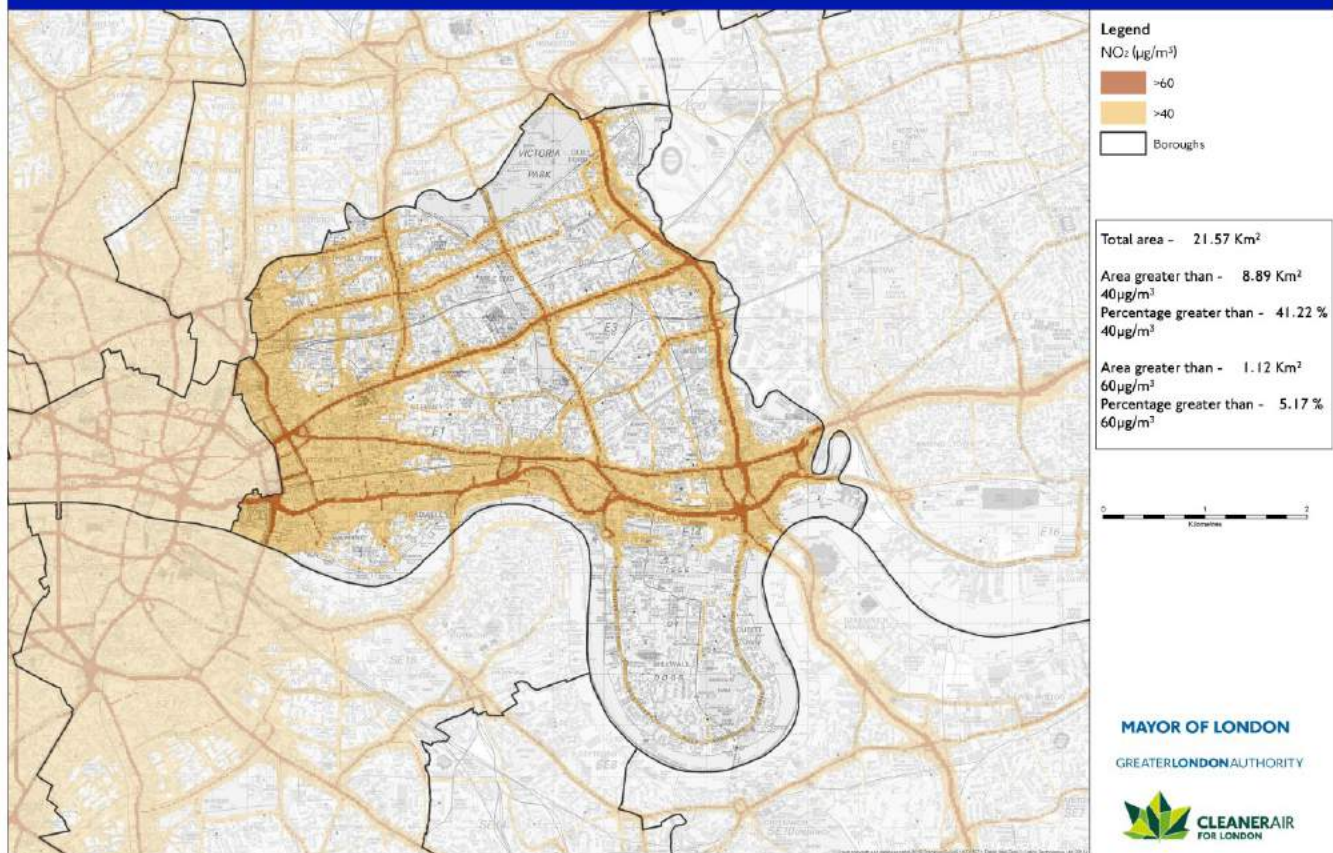
The table above shows the sources of $PM_{2.5}$ emissions in Tower Hamlets, and it can be seen that the largest source is road traffic followed by non-road mobile machinery which are estimated to account for over 70% of $PM_{2.5}$ emissions in 2013.

Nitrogen Dioxide (NO₂)

For nitrogen Dioxide (NO_2) in 2010 there were an estimated 158 attributable deaths from NO_2 equating to 2463 years of life lost[xlvi].

London Borough of Tower Hamlets
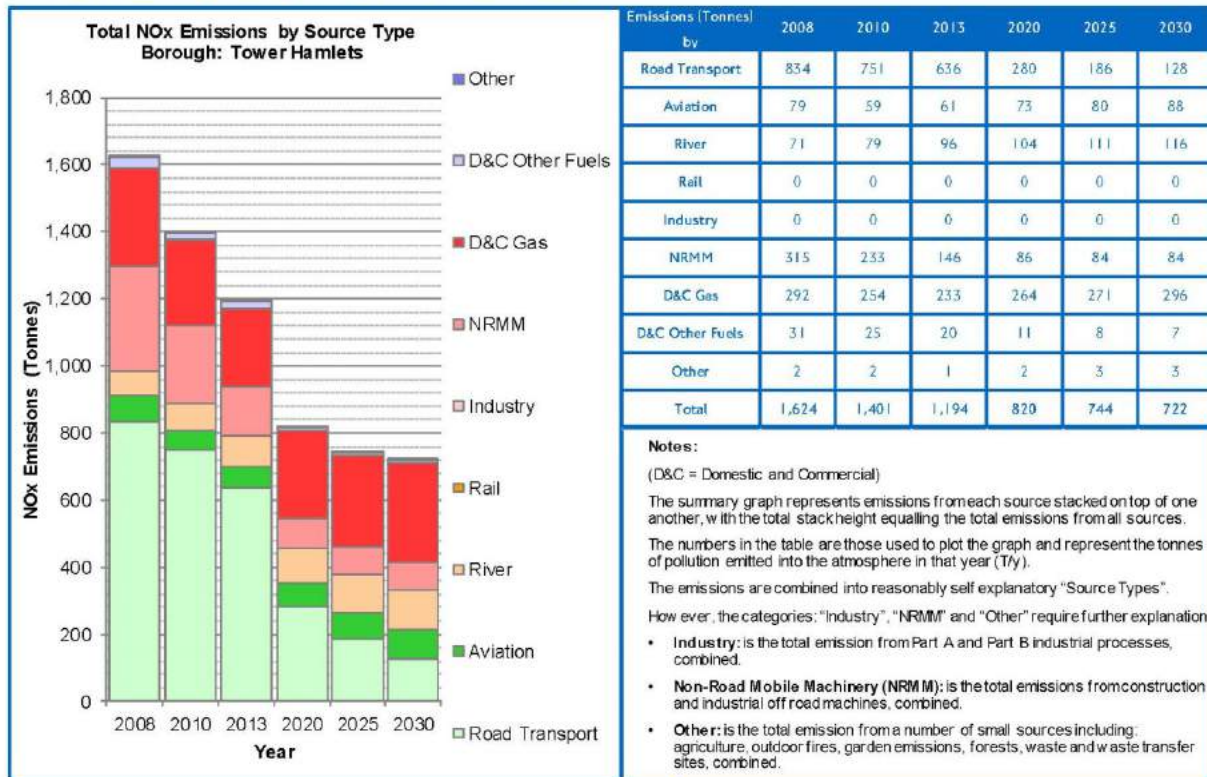**Annual Mean NO₂ concentrations 2013**

LAEI 2013

Legend
NO₂ (µg/m³)
- >60
- >40
- Boroughs

Total area - 21.57 Km²

Area greater than - 8.89 Km²
40µg/m³
Percentage greater than - 41.22 %
40µg/m³

Area greater than - 1.12 Km²
60µg/m³
Percentage greater than - 5.17 %
60µg/m³

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The map above shows the annual mean concentration or NO$_2$, the EU limit for this is an annual mean of 40 µg/m³. This limit is exceeded around all main thoroughfares in the borough.

London Atmospheric Emissions Inventory
NOx Emissions - Tower Hamlets

Total NOx Emissions by Source Type
Borough: Tower Hamlets

Emissions (Tonnes) by	2008	2010	2013	2020	2025	2030
Road Transport	834	751	636	280	186	128
Aviation	79	59	61	73	80	88
River	71	79	96	104	111	116
Rail	0	0	0	0	0	0
Industry	0	0	0	0	0	0
NRMM	315	233	146	86	84	84
D&C Gas	292	254	233	264	271	296
D&C Other Fuels	31	25	20	11	8	7
Other	2	2	1	2	3	3
Total	1,624	1,401	1,194	820	744	722

Notes:

(D&C = Domestic and Commercial)

The summary graph represents emissions from each source stacked on top of one another, with the total stack height equalling the total emissions from all sources.

The numbers in the table are those used to plot the graph and represent the tonnes of pollution emitted into the atmosphere in that year (T/y).

The emissions are combined into reasonably self explanatory "Source Types".

However, the categories: "Industry", "NRMM" and "Other" require further explanation.

- **Industry:** is the total emission from Part A and Part B industrial processes, combined.
- **Non-Road Mobile Machinery (NRMM):** is the total emissions from construction and industrial off road machines, combined.
- **Other:** is the total emission from a number of small sources including: agriculture, outdoor fires, garden emissions, forests, waste and waste transfer sites, combined.

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The table above shows the sources of nitrogen oxides emissions. In 2013 Road transport accounts for over 50% and domestic and commercial gas combustion accounted for nearly 20% of all emissions.

What are the effective interventions/policies
Effective polices for improving air quality will be those that reduce transport, non-road mobile machinery, and domestic & commercial gas combustion emissions. Often these will be the same as those to promote active travel in the case of transport, controlling loss of amenity from development sites in the case of non-road mobile machinery and sustainability (increasing energy efficiency) in the case of domestic & commercial gas combustion.

Recommendations
1. **That the current Green Grid Strategy is refreshed and incorporated in the new Local Plan to ensure the contribution new development can make to the Green Grid is maximized.**
2. **That Community Infrastructure Levy income is allocated to the Green Grid to enable an ongoing programme of projects to be developed to deliver priority projects as identified by the refreshed Green Grid Strategy**
3. **Pedestrians, cyclists, and users of other transport that involve physical activity need the highest priority when developing or maintaining streets and roads. This can mean reallocating road space to support walking and cycling, restricting motor vehicle access, introducing road-user charging and**

traffic-calming schemes, and creating safe routes to schools and childcare settings.

4. **Promote car-free residential developments**
5. **Require direct desire lines for walking and cycling, for example, through filtered permeability**
6. **Require high levels of well-thought-out cycle parking in developments**
7. **Encourage developments with a mix of uses, for example residential, retail, leisure and/or commercial uses to reduce the need to travel by car**
8. **Zero car parking in commercial developments (apart from accessible parking for Blue Badge holders)**
9. **Create lifetime neighbourhoods. There are three principles of lifetime neighbourhoods which include neighbourhoods:**
- **that are well-connected and walkable**
- **where people, as far as possible, have a choice of homes, accessible infrastructure and services, places to spend time and to work, with a mix of accessible and adaptable uses, and**
- **where people can belong to a cohesive community which fosters diversity, social interaction and social capital.[xlviii,xlix]**
10. **A health Impact Assessment with scope and proposed methodology agreed with the councils Public Health Department, should be carried out at an early stage, and submit it as part of their planning application in locations which have poor air quality (ie exceed and annual mean of 40 μg/m3 of NO_2 or 10 μg/m^3 of $PM_{2.5}$) or are deprived or areas with significantly lower healthy life expectancy (male or female, see appendix 1) than for England.**
11. **Support measure sustainability measures to combat climate change such as requiring new developments to be energy efficient.**
12. **Support measure to limit the impact of development sites by controlling emissions from plant used on site.**

5. Key Areas – Indoor Air Quality (IAQ)

What is the issue
- The health effects of exposure to poor indoor air quality are similar to those caused by outdoor air pollution. The World Health Organisation (WHO) estimates that nearly two million people each year die prematurely from illness attributable to indoor air pollution. In the UK, indoor air quality is affected by domestic gas combustion from cooking and heating, cleaning agents, tobacco smoke, mold, condensation and asbestos.
- In urban areas, where filters are not in place, outdoor air pollution also has significant impacts upon IAQ. Impacts on indoor air quality are most likely to occur when outdoor air quality is consistently poor such as areas close to busy roads and where outdoor air quality targets are regularly exceeded.
- IAQ can be improved through source control, filtration and ventilation. Measures may still be taken to lower the populations' exposure by placing protective barriers between the pollutants and the local population. This may be achieved under the planning regime by ensuring that buildings in polluted areas are designed with appropriate ventilation that limits the exposure of those inside to the polluted air outdoors and maintains indoor air quality.

What is the picture locally
- Tower Hamlets reviews and assesses air quality against the objectives in the Air Quality Regulations

2000 and amendment regulations. It is identified that for carbon monoxide, benzene, 1,3-butadiene, lead and sulphur dioxide there is not a significant risk of the objectives being exceeded in the Council's area and the risk to health from these pollutants is not significant.

- However for nitrogen dioxide and particles the concentrations in large parts of Tower Hamlets are frequently at levels where harm to health is expected. In response to this risk to health the Council has designated an Air Quality Management Area (AQMA) across the Borough.
- The main sources of atmospheric pollutants are from road transport. The principal roads include sections of the A13, A12, and A11 trunk roads; plus the Borough Principal Roads: A1203, A1261, A1000 and A1205. The Borough includes the portals for the Blackwall and Rotherhithe Tunnels (on the north side of the Thames) and also Tower Bridge, which forms part of the eastern edge of central London's Congestion Charging area
- Any development within the borough is likely to be in an area where poor outdoor air quality may impact on the indoor air. This is evident by the borough wide AQMA. Furthermore any developments close to busy roads in the borough are at high risker of ingress of pollutants into the properties.
- The dense urban environment of Tower Hamlets dictates that developments, including potentially sensitive sites such as care homes, healthcare facilities, schools and play areas are proposed close to these sources of pollution.

What are the effective interventions/policies
- For the pollutants to cause harm three conditions need to be satisfied:
  o There must be a toxicologically significant source of the pollutant
  o There must be a person or population who could be exposed to the pollutant (receptors)
  o There must be a pathway for the pollutant to expose the population
- Thus air pollutants may be conceptualised as a source-pathway-receptor connection. As all three of these factors are required for an exposure, altering any of the characteristics of the source, pathway, or receptors will change the significance of the exposure and the impact to the population's health.
- In the case of potential planning interventions to reduce the impact of air pollutants we may review how we may reduce the source (i.e. lower the levels of the pollutants present in the air), break the pathway (i.e. reduce the exposure to the pollutants) and/or remove or distance the population from the source of the pollutants.
- Reducing the source of poor outdoor air quality is addressed in the separate Air Quality Action Plan which is currently being refreshed and consideration of this issue is not repeated here.
- One method of lowering the exposure to air pollution is by using planning policy to keep the population away from the areas that are most likely to be polluted. Spatially, the highest concentrations (poorest air quality) are found in closest to the source of pollution. In Tower Hamlets this is likely to be where the density of roads and other activity is greatest.
- It has been shown that in general, concentrations tend to be highest in the road carriageway itself, decreasing rapidly with distance. Pavements adjoining roads are therefore more polluted than conditions even a few metres back from the roadside.
- The true effect of distance on concentrations of pollutants will depend on a number of local factors including topography, topology, road characteristics, wind speed and direction etc. However, for the pollutants of concern in Tower Hamlets (nitrogen dioxide and particles), it is usually

acknowledged that beyond 50m from the road, concentrations approach background levels. Thus, at 100m or more from the road, the difference between the total concentration and the background concentration should be as close to zero as will make virtually no difference.

- Guidance on appropriate ventilation of buildings is available. Planning Approved document F contains Department for Communities and Local Government guidance on minimising ingress of outdoor pollutants into buildings in urban areas.

Recommendations
1. **New developments that will be used by sensitive receptors such as care home, homes, schools or healthcare facilities should be positioned at least 50m away from highly used roads.**
2. **Ensure sufficient guidance is in place so that developments meet or exceed the ventilation standards in the current Planning Approved document F to safeguard ventilation requirements in the event that the approved document is withdrawn or downgraded.**

6. Key Area – Active Design

What is the issue

Tower Hamlets has a number of conditions such as cardiovascular disease, obesity, type 2 diabetes and mental ill health that are linked with low levels of physical which are growing worse rapidly. The rise in obesity is tied to the population's over-consumption of calories and under-expenditure of human energy, both of which are shaped by the built environments in which we live, work, and play. Today, architectural and urban design too often support unhealthy rather than healthy diets, and sedentary rather than active daily lifestyles.

What is the picture locally

- Prevalence of Type 2 diabetes is high in Tower Hamlets, partly due to the large Bangladeshi community who are more susceptible to this illness. Based on the current population estimates suggest that Type 2 diabetes is set to increase significantly in Tower Hamlets over the next few years (Diabetes JSNA 2015).
- Mortality for Cardio-vascular disease is significantly higher than for England (PHE, 2016)

What are the effective interventions/policies

NICE guidance PH8 Promoting and creating built or natural environments[i] that encourage and support physical activity contains the following recommendations for interventions;

- During building design or refurbishment, ensure staircases are designed and positioned to encourage people to use them.
- Ensure staircases are clearly signposted and are attractive to use. For example, they should be well-lit and well-decorated.

New York City is a similar international city with a mobile multi-ethnic population, high population densities and similar health issues, particularly diabetes. The city undertook an in depth study on the effect of the environment of physical activity levels and produced comprehensive guidance on the design to promote activity in 2016[li]. Chapter 3 of this guidance contains detailed guidelines of design principles to adopt to promote physical activity,

Recommendations
1.   **Adopt the principles contained in Chapter 3 of the Active Design Guidance (New York, 2010)[li]**

7. Key Area – Active Travel

What is the issue

Walking and cycling are good for our physical and mental health. Switching more journeys to active travel will improve health, quality of life and the environment, and local productivity, while at the same time reducing costs to the public purse.

Increasing how much someone walks or cycles may increase their overall level of physical activity, leading to associated health benefits. These include:

- Reducing the risk of coronary heart disease, stroke, cancer, obesity and type 2 diabetes.
- Keeping the musculoskeletal system healthy.
- Promoting mental wellbeing.

An increase in walking or cycling can also help:

- Reduce car travel, leading to reductions in air pollution, carbon dioxide emissions and congestion.
- Reduce road danger and noise.
- Increase the number of people of all ages who are out on the streets, making public spaces seem more welcoming and providing opportunities for social interaction.
- Provide an opportunity for everyone, including people with an impairment, to participate in and enjoy the outdoor environment.

For most people, the easiest and most acceptable forms of physical activity are those that can be built into everyday life. Examples include walking or cycling instead of travelling by car, and using stairs instead of lifts. 'Active travel' (or active transportation or mobility) means walking or cycling as an alternative to motorised transport (notably cars, motorbikes/mopeds etc) for the purpose of making everyday journeys.

What is the picture locally

- Prevalence of Type 2 diabetes is high in Tower Hamlets, partly due to the large Bangladeshi community who are more susceptible to this illness. Based on the current population estimates suggest that Type 2 diabetes is set to increase significantly in Tower Hamlets1 over the next few years (Diabetes JSNA 2015).
- Mortality for Cardio-vascular disease is significantly higher than for England (PHE, 2016)
- Air quality is poor across Tower Hamlets with all area's exceeding the legal limits for Nitrogen Dioxide

What are the effective interventions/policies

Public Health England have summarised the effective interventions for active travel[lii] and for reduction of car use a summary has been produced by the Faculty of Public Health[liii]. The relevant effective polices are reproduced in the recommendations below.

Recommendations[liv]

13. **Pedestrians, cyclists, and users of other transport that involve physical activity need the highest priority when developing or maintaining streets and roads. This can mean reallocating road space to support walking and cycling, restricting motor vehicle access, introducing road-user charging and traffic-calming schemes, and creating safe routes to schools and childcare settings.**
14. **Promote car-free residential developments**
15. **Require direct desire lines for walking and cycling, for example, through filtered permeability**
16. **Require high levels of well-thought-out cycle parking in developments**
17. **Encourage developments with a mix of uses, for example residential, retail, leisure and/or commercial uses to reduce the need to travel by car**
18. **Zero car parking in commercial developments (apart from accessible parking for Blue Badge holders)**
19. **Create lifetime neighbourhoods. There are three principles of lifetime neighbourhoods which include**

neighbourhoods:

- **that are well-connected and walkable**
- **where people, as far as possible, have a choice of homes, accessible infrastructure and services, places to spend time and to work, with a mix of accessible and adaptable uses, and**
- **where people can belong to a cohesive community which fosters diversity, social interaction and social capital.**[lv,lvi]

8. Key Area – Healthy High Streets

What is the issue

Fast Food :-The Takeaway Toolkit produced by the London food board in partnership with the CIEH[lvii] makes clear need to be aware that fast food takeaway diets can be a contributing factor in the rise of childhood obesity and other major health problems.

• Diet has changed markedly over the past two decades and one of the major changes has been more food eaten outside the home

• Dietary change has included greater demand for fast food takeaways which frequently produce meals such as fried chicken and chips, which are high in fat, saturated fat and salt and low in fibre, fruit and vegetables

• Fast food outlets are proliferating, with some evidence suggesting a correlation between increased density and deprivation.

• The increase in fast food outlets will be a contributory factor in the growth of the obesogenic environment

• There are particular concerns about the impact of fast food takeaways close to schools.

• Diets high in sugar, fat, saturated fat, salt and low in fruit and vegetables are a major contributor to health problems including obesity, cardiovascular disease, type 2 diabetes, stroke and some cancers

• Such 'junk food' diets may also be a major factor in low levels of some micronutrients in children's diets

• Fried fast food may contain unacceptable levels of trans fats, which significantly increase risk of cardiovascular disease

• There is growing concern that 'junk food' diets contribute to children's negative behaviours

Gambling: -There are many public health issues relating to problem gambling and they affect three main groups of residents:

1. The individual: who will experience health and personal problems such as stress, depression and anxiety, job loss, social isolation, financial hardship, and family and relationship issues. Gambling often co-exists alongside mental illness and abuse of alcohol and drugs.

2. The immediate family and wider network of friends and family. Possible negative outcomes including family and relationship breakdown, domestic violence and a fall into poverty. The negative impact falls disproportionally on women and children and may exacerbate low income due to zero hour contracts and changes to the benefits systems. Local experience suggests that any money won on gambling was rarely spent on anything but more gambling.

3. The wider community/ society: Problem gambling may be linked to such issues such as unemployment, increased burden on health and welfare services, and an increased take up of benefits. At a local level the impact is often felt by the look of local neighbourhoods/high streets due to the clustering of outlets and a perception that there is a link to anti-social behaviour such as litter, street drinking and gathering of adults. Staff working alone on premises may feel vulnerable and at risk and reluctant to suggest that customers should take a break from using FOBT for example. Concerns are also raised about proximity to schools or faith venues. There are wider issues related to links to organized crime, gangs and human trafficking and money laundering.

Physical environments on Streets: The indicators for a healthy physical street environment[lviii] are summarised in the table below

Indicator	How it relates to health
Pedestrians from all walks of life	Everybody needs to be active every day. If the mix of people walking in the street does not include certain groups such as children, older people or those with disabilities then the street environment is excluding some people from staying active.
People choose to walk and cycle	Some people walk or cycle not out of choice but due to poor access by other modes of transport. This can have negative impacts on their health and wellbeing. Success should be measured by people choosing to walk and cycle, rather than levels of walking and cycling.
Clean air	The health impacts of air quality include cardiovascular disease and respiratory disease.
People feel safe	People need to feel that they will be safe from injury and crime when they are on the street.
Not too noisy	Noise has a range of health impacts including stress and high blood pressure. It also discourages people from walking and cycling.
Easy to cross	If streets are difficult to cross because of physical barriers or traffic, people will be discouraged from using the street, particularly on foot. This can be socially as well as physically restricting.
Shade and shelter	Some people have difficulty moderating their body temperature, and this can put their health at risk in hot weather. Shade is needed on streets to enable people to keep cool.
Places to stop	Many people can only walk short distances without taking a rest, particularly those who are older, young, pregnant, injured or who have a disability or health condition such as chronic obstructive pulmonary disease. Providing seating at regular intervals is necessary to enable these people to incorporate much needed physical activity into their daily routine.
Things to see and do	Street environments need to be stimulating and engaging to invite people to walk and cycle more. This highlights the importance of good urban design and maintenance of public spaces in delivering health benefits.
People feel relaxed	Walking or cycling in the street should not be a stressful experience. If people are not relaxed it indicates that issues such as noise, insufficient space or fear of danger have not been addressed.

What is the picture locally

The recent Royal Society for public health report 'London Health on the High Street'[lix] rated Tower Hamlets as having the most unhealthy and 4th most unhealthy high streets in London. The Gambling JSNA[lx] estimates the percentage of problem gamblers in Tower Hamlets at 1.3% i.e. twice the national average, with 3% at moderate risk. Tower Hamlets Fairness Commission expressed concern about significant expansion of betting shops, pawnbrokers, and payday loan shops on the high street.[lxi]There is a high density of 'junk food' outlets (42 per secondary school – the 2nd highest in London). 97% of Tower Hamlets residents live within ten minutes of a fast-food outlet.[lxii]

What are the effective interventions/policies

The tackling the Takeaways report[lxiii] which was carried out for Tower Hamlets outlined the case for restriction on the numbers of A5 hot food takeaways. The Gambling JSNA recommended restricting applications for new betting shops.

Recommendations

1. **Restrict the over concentration of uses that detract from the ability of people to live healthy lifestyle such as hot food take-aways and betting shops, New applications for betting shops should be resisted using the provisions of the updated 2015 in the User Class Order regulations.**
2. **Ensure the ten elements of a healthy street contained in the TFL plan[lxiv] are taken into account when deciding application that will impact on a high street.**

9. Key Area – Play Space

What is the issue

Play is so important to optimal child development that it has been recognized by the United Nations High Commission for Human Rights as a right of every child[lxv]

There is wide recognition that play is crucial to children's healthy development and quality of life. From very early childhood, play is one of the most important mechanisms for children to connect with the world through learning and interpretation. Whilst playing children pick up and hone a variety of skills and behaviours. Because playing is usually a positive experience it can also help children deal with stress and trauma. It is important both for children's immediate experience and as a way of gathering knowledge, skills and understanding for the future

Play, therefore, is an essential part of normal childhood development helping children develop and display a `sense of themselves'. Multiple evidence summaries note that children have to play in order to develop normally. In addition to contributing to the development of children's co-ordination, strength and social skills, playing helps them develop an understanding of and relationship with their environment.[lxvi]

Play is crucial to optimal child development and the extent and nature of children's play opportunities in early childhood may have far reaching effects. In early childhood, play is important in brain development. It also allows children, as they grow and develop, to stretch their imaginations, become more dextrous and physical, understand the world around them and test their emotions.[lxvii]

Studies also show a clear relationship between outdoor play and physical activity levels, which in turn has been linked to well-being and higher levels of self-esteem in young people[lxviii].

Pretty et al suggest that children who are active as toddlers grow up enjoying physically active play, especially in natural environments, may have better health and a longer life than those who are sedentary from early childhood[lxix]

Play is an important and enjoyable form of exercise for children. Aspects of physical activity they enjoy include having choice, having fun, spending time with friends, a sense of being part of a team, competition, achievement, showing-off skills, and opportunities for independence in outdoor play[lxx].

Physical activity is widely recognised as important for health in childhood, providing benefits for both physical and psychological well-being. Physical benefits include positive effects for blood pressure and on preventing obesity. This is especially important in in Tower Hamlets as Children in the borough have worse than average levels of obesity: 12.8% of children aged 4-5 years and 26.0% of children aged 10-11 years are classified as obese[lxxi]. Only 4.4% of people in Tower Hamlets use outdoor space for exercise/health reasons. This level is much lower than the averages for London (11.8%) and England (17.1%).[lxxii].

What is the picture locally

Providing adequate quantity of play space is a key factor in ensuring suitable active play. Providing children with additional playground space has been associated with increased physical activity through play[lxxiii].

Tower Hamlets has high levels of overcrowded housing (35% compared to 22% in London) which limits the ability for indoor play. Additionally the borough has limited green space (about 1.5 football pitches green space per 1000 people 3.6 football pitches per 100 people nationally) which implies a deficit in areas for play that should be sought to be reduced by appropriate planning policy[lxxiv].

The 2007 Tower Hamlets play strategy included an audit of dedicated play space. There were 54 equipped play

areas, 21 ball games areas and 2 wheeled play areas across parks and open spaces. Of the 54 equipped play areas 15 are targeted at children between the ages of 0 and 4 years. 16 were targeted at children and young people over the age of 5, and 23 catered for children and young people of all ages. The strategy noted that many of the publicly accessible open spaces were small and awkwardly sited without reference to where residents live compounding inequality of access.

On housing amenity land there were 97 areas that are designated as play areas. Of these, 59% were considered to be in poor condition or lacking any facilities and the majority of the playgrounds were described as small and intended for very local use[lxxv].

The strategy notes that access to play space is restricted, and in practice only local residents tend to use it. Much of this play space is fragmented and equipment is generally of poor condition. It is stated that future remodelling of the borough offers opportunities for improving the quantity and quality of play space and public access to it.

What are the effective interventions/policies
Location and Access
Two systematic reviews of evidence by NICE of active play found a significant positive correlation between children's physical activity and proximity to play space[lxxvi][lxxvii]. Barriers to active play were highlighted as parental restrictions on independent movement, limited play destinations locally and adult disapproval of children playing outside (for example, children told off for playing in streets by adults). These highlight the need for play space to be available locally.

The distance children travel independently from home has also changed dramatically over the past forty years. By the late 1990s the radius from home in which children regularly moved around independently, their `play range', was only one ninth of what it was in 1970.[lxxviii]

This meant that by the 1990s, a child of 9 years old was allowed to play outside only to the same extent as a 7-year-old from 20 years earlier.[lxxix]

The distance children have to travel to their local play spaces is a major factor in their decisions about whether or not to use those spaces. The ones they use most tend to be closest to home, and if a play space is more than a few hundred metres away from home children are less likely to use it. However, the distance children are prepared to travel to play depends on their age and the facilities available.[lxxx]

Play England identify three types of play space each with their own recommendations for local accessibility. Their guidance states that all children and young people aged birth to 16 years old should have access to at least three types of good quality playable space all within easy, safe walking or cycling distance of where they live. The types broadly correlate with the NPFA recommendations.

Type A: Doorstep space and facility
A small space, within sight of home, where children, especially young children can play within view of known adults. This should be normally located within straight-line distance of 60m of the home.

The space could incorporate some interesting and attractive landscape features and/or a small number of items of play equipment and create an environment which will stimulate young children's play by providing opportunities for a variety of play experiences, bearing in mind that older children and young people may also use the space from time to time

Type B: Local space and facility
A larger space which can be reached safely by children beginning to travel independently and with friends,

without accompanying adults and for adults with young children to walk to with ease. Normally within straight-line distance of 240m of home

These spaces and facilities provide a varied and interesting physical environment including, for example, natural features, sand and water, and incorporate some interesting and attractive landscape features with varying levels and contours, which test children's capabilities.

There might also be features designed for specific activities such as ball games, wheeled sports or meeting places and/or several of items of play equipment offering a variety of play experiences.

Type C: Neighbourhood space and facility
A larger space or facility for informal recreation which children and young people, used to travelling longer distances independently, can get to safely and spend time in play and informal recreation with their peers and have a wider range of play experience – normally within straight line distance of 600m of home.[lxxxi]

The space or facility provides for a variety of age appropriate play and informal recreational experiences. It might provide a varied and interesting physical environment incorporating some interesting and attractive landscape features with varying levels and contours.

There are likely to be more challenging items of equipment and features that meet the needs of older children and young people.

Larger facilities specifically designed for informal recreation could be present such as a ball court, multi-use games area or skateboard area which can provide the opportunity for a variety of experiences to young people with differing skills levels.

This is supplemented by planning guidance from the GLA. The GLA guidance suggests that the maximum walking distance from residential units to play space should be 100 m for playspace for Under 5s, 400 m for 5-11 year olds and 800 m and 12 +.[lxxxii]

Accessibility factors for play space are more complex than simple distance from the residence. The play space must be free from both tangible and intangible barriers in order to be used. Well-located places for play are ones that are well-connected with the wider built environment.

- They should be near and have easy access to well-used pedestrian, cycling or bus routes,
- adjacent to well used buildings (i.e. shops, school) or homes to allow for a level of informal community supervision and generate a sense of social safety and security
- Play spaces should not be isolated by large expanses of open space, or severed from the rest of a neighbourhood by physical barriers such as busy roads or railway lines[lxxxiii]

Design
There are numerous guidelines by non-governmental organisations on what should be considered when designing play spaces.

Key guidance on designing successful play spaces, published by Play England highlights 10 key design principles for creating successful play spaces[lxxxiv].

Successful play spaces:
- are 'bespoke'
- are well located

- make use of natural elements
- provide a wide range of play experiences
- are accessible to both disabled and non-disabled children
- meet community needs
- allow children of different ages to play together
- build in opportunities to experience risk and challenge
- are sustainable and appropriately maintained
- allow for change and evolution

These principles are difficult to articulate in set policy terms as it is not possible to be both bespoke and proscriptively described. However some indicators for what makes a good play space are provided in the literature.

Ensure the spaces and facilities used for physical activity meet recommended safety standards for design, installation and maintenance. For example, outdoor play areas should have areas of shade from the sun and sheltered areas where children can play to reduce the impact of adverse weather.

Informal oversight
The space should be designed with a good level of informal oversight by adults, for example views are unobstructed, site is in an area with people frequently passing by or through it or in full view of local housing.

Access points/Getting there
The space should be designed to allow children and accompanying adults can get to the site easily, safely and independently from their homes. No significant hazards to accessing the play space safely.

Personal safety, lighting and security
The site and access routes should be designed to feel safe at all times and have good exit routes. Both are well lit after dark if open. Site is located away from busy roads.

Disability access and play opportunities for disabled children
Research by KIDS found that the parents of children with greater support needs tended to be less satisfied with the play spaces available to their children than parents of children requiring less support. [lxxxv]

The GLA identifies access into and around play spaces as one of the most significant barriers that excludes disabled children from play spaces. The existence of steps, the lack of dropped kerbs and associated tactile paving or wide smooth level paths around and to play equipment, the lack of accessible toilets and the lack of parking often prevents disabled children and their families from getting into and using play spaces[lxxxvi]

The space should include play features are designed for a range of abilities and impairments including sensory and physical impairments and behaviours. Disabled and non-disabled children are able to play together.

Meeting other children
Site located where there is a very high likelihood of other children passing by and joining in play e.g. on the way to and from school or local shops.

Access to the natural environment
The space should provide some natural features such as trees, bushes, plants, shrubs, wild flowers and long grass, sand, water, rocks, and a variety of levels; and a range of visual and sensory stimuli.

Places for children to sit
Children can sit and play or talk together, places for children to sit are incorporated into the play space, and near

to tables or other seated play surfaces.

Enticing to children to play
Visible signs welcoming children to play using signage and other playful messages, ensure space is child-friendly and appealing.

Health and safety
Many public play areas are seen by children as boring and have become over-regulated with health and safety concerns curtailing the imaginations of designers and providers. As a result, many children, especially as they get older, find there are no interesting places for them to play. A survey conducted in northwest England in the late 1990s showed that the majority of parents of 8-11 year olds were dissatisfied with play facilities.[lxxxvii]

Seating for adults
Adults can sit and observe children playing.

Litter bins
Appropriate litter bins to be provided for the size of the playspace.

Dog free zones
Management of dog fouling in place through bins, clarification of dog free areas, signs discouraging owners from bringing dogs to the site

Quantity of play space in new developments
The absence of a nationally recognised and widely applied set of standards for play space has been debated for many years and whilst many organisations (NPFA / English Nature / Woodlands Trust / individual local authorities) have established a framework for standards applicable to either elements of open space (play / playing fields) or local authority areas no formal and national standard has been established.

The NPFA recommend play space on the scale of development by number of dwellings. These are summarised in the table below

Scale of development	Place space provision			
	Local play space (100m^2)	Local equipped play space (400m^2)	Neighbourhood Equipped play space (1000m^2)	Multi-Use Games area (800m^2)
5–10 dwellings	√			
10–200 dwellings	√	√		Contribute
201–500 dwellings	√	√	Contribute	√
51+ dwellins	√	√	√	√

Table 1 recommended Application of Quantity Benchmark Guidelines – Equipped/Designated Play Space (http://www.fieldsintrust.org/Upload/file/PAD/FINAL%20ONLINE%20Planning%20Guidance%20for%20Outdoor%20Sport%20and%20Play%20Provision%20Oct%202015.pdf)
Developments of increasing number of units are required to provide larger play spaces with increased facilities. The Scottish government conducted a review of local authority play space policies in 2005. They found a majority of local authorities adopted the NFPA guideline and as a result they adopted this guideline as a Scottish standard[lxxxviii].

The GLA have developed supplementary planning guidance (SPG) which provides a suggestion for the amount of dedicated playspace based on child occupancy. The quantity of play space is calculated using a benchmark standard which recommends a minimum of 10 sq m of dedicated play space per child as a basis for assessing

existing provision within an area.

The SPG calculates new provision based on multiplication of the benchmark figure by the expected child occupation of the development. The child occupancy model is based on information from the Demography and Policy Analysis Group at the GLA. The guidance states that it is intended as one example as to how child occupancies from new developments can be determined, and may be useful for local authorities or developers. Different scales of expected occupancy are supplied for flats/housing and in relation to social housing and another for intermediate or market rate occupancy. A summary of the tables are shown below.

Housing type	Number of Bedrooms					
	0	1	2	3	4	5+
Market and intermediate houses	0.17	0.17	0.12	0.45	1.10	1.36
Social rented/affordable houses	0	0.2	1	2	3.29	4.5
Market and intermediate flats	0.01	0.01	0.10	0.33	0.00	0.00
Social rented/affordable flats	0	0.2	1	2	3.29	4.5

Table 2 – summary of GLA SPG Child occupancy

In most instances intermediate or market rate flats are calculated to have few child occupants. For example a development of 100 two bedroomed intermediate or market rate flats would require a 100sq m play area. A standard football pitch is 7140sq m for comparison.

The occupancy rates for new social housing development are modelled with a higher child occupancy rate. A 100 two bedroomed social flat development would require 1000sq m of play space.

Recommendations
1. **Adopt the GLA SPG Standards for the quantum of dedicated play space require by new developments**
2. **Adopt the NPFA recommend play space guidance but only in relation of types of play space to be provided by new developments**
3. **Require developers to demonstrate they have used the Play England 10 key design principles for creating successful play for any proposed play space on their development**

10. Key Area – Health Impact Assessment

What is the issue
Development proposals will have health consequences if implemented, if these consequences can be predicted and assessed it is possible to modify the proposals to try and ensure the good consequences for health could be enhanced and how the bad consequences could be avoided or minimised. The overall health consequences for a population may not be uniform and it is also important to assess the distribution of health impacts in that population which groups benefit and which groups lose or at least benefit less.

What is the picture locally
Tower Hamlets is an area of high levels of deprivation and poor health outcomes, however currently the effect of proposed developments is not systematically assessed as part of the planning process.

What are the effective interventions/policies
Health Impact Assessment (HIA) is a practical approach used to judge the potential health effects of project on a population, particularly on vulnerable or disadvantaged groups. Recommendations are produced for decision-makers and stakeholders, with the aim of maximising the proposal's positive health effects and minimising its negative health effects.

The six key stages in an HIA are[lxxxix];

- Decide whether a proposal requires assessment by HIA – often called screening.
- Clarify the questions to be answered by the HIA and how the assessment will be carried out – often called scoping
- Decide what the health impacts will be and how big by considering each pathway by which the proposal could impact on health – often called appraisal and assessment.
- For each option make recommendations as to how good health consequences could be enhanced how bad health consequences could be avoided or minimised and how health inequities could be reduced.
- Communicate the findings of the HIA to the decision makers.
- Evaluate the quality of the HIA highlighting lessons for future HIAs. Monitor which proposals and if possible assess whether any predictions made were correct.

For each proposal there will be numerous paths by which health could be affected some good impacts some bad. Predictions are made by systematically exploring the different causal pathways by which a proposal could affect health. For example

- Build factory – Emit particulates – Damage to health
- Create cycle path – More physical activity – Better health
- Build by-pass – Reduced traffic in town – Better health

For each impact the HIA should seek to describe

- Its nature (death, illness, contentment)
- The direction of change (increased or decreased)
- Its size (how many people affected how severely).

Impacts may be predicted by epidemiological methods (exposure and dose response) or by participative methods (asking people about their hopes and fears if the proposal is implemented). While HIA aspires to be able to say how big an impact will be in practice very few HIAs have adequately described the size of impacts (quantification).
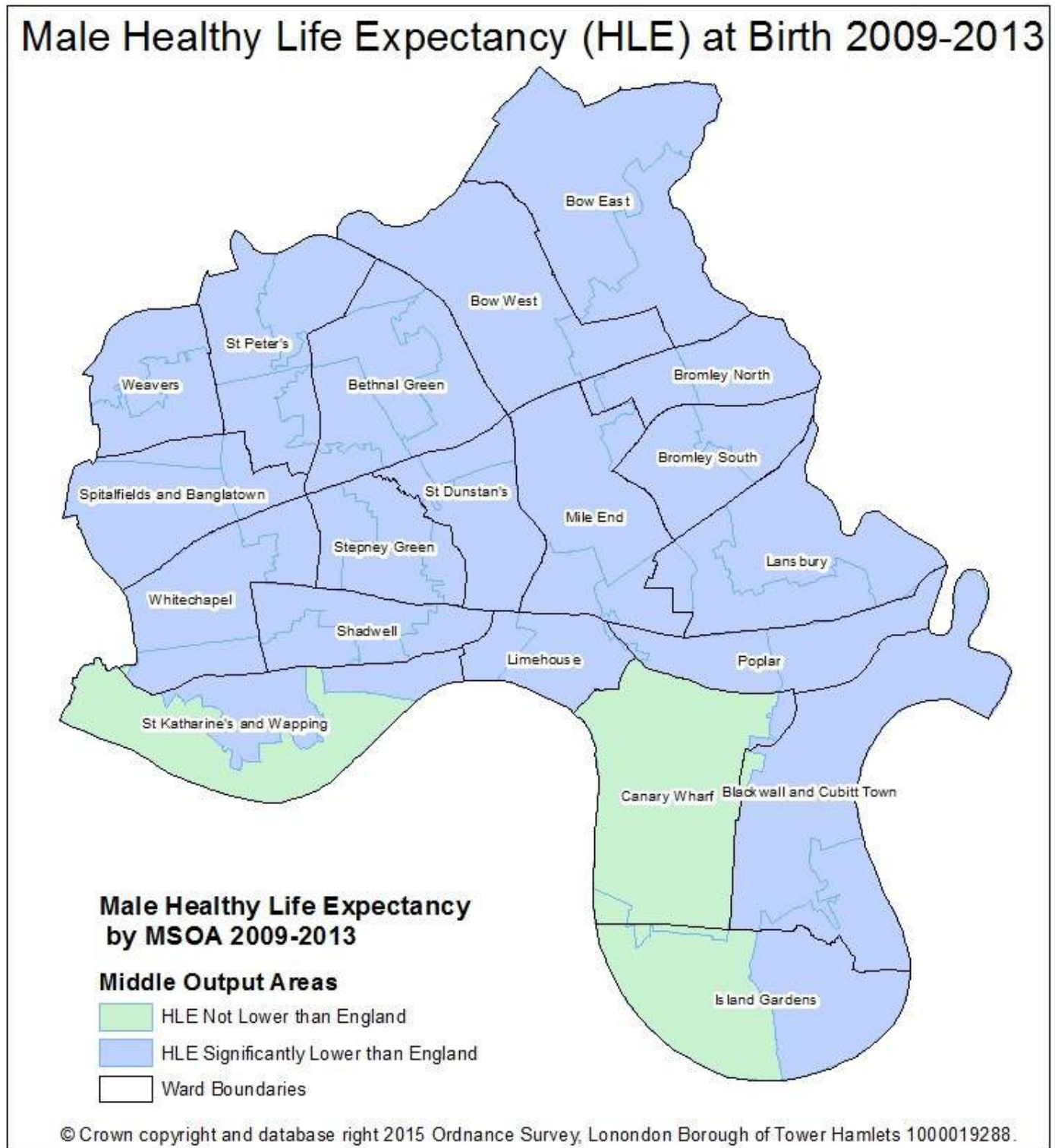
Recommendations

1. **A health Impact Assessment with scope and proposed methodology agreed with the councils Public Health Department, should be carried out at an early stage, and submit it as part of their planning application.**
   - **Major developments**
   - **Or developments which contain any of the following uses: Education facilities, Health facilities, Leisure or community facilities, Publicly accessible open space, Proposed A5 or Sui Generis betting shop uses**
   - **Or is in locations which have poor air quality (ie exceed and annual mean of 40 μg/m3 of NO_2 or 10 μg/m^3 of $PM_{2.5}$) or are deprived area or areas with significantly lower healthy life expectancy (male or female, see appendix 1) than for England**
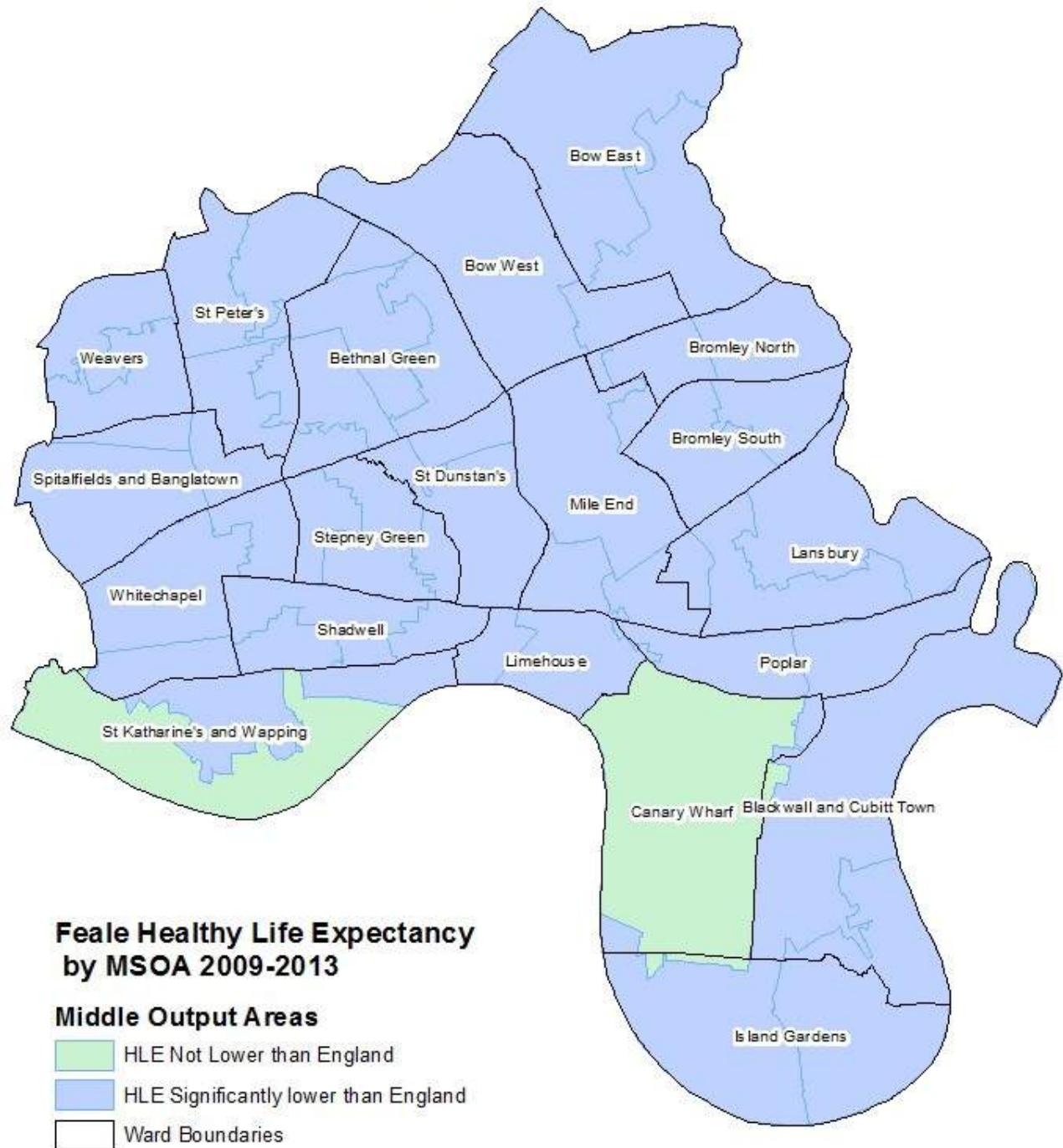
11.Contacts / Stakeholder Involvement

Contacts

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Male Healthy Life Expectancy (HLE) at Birth 2009-2013

Male Healthy Life Expectancy by MSOA 2009-2013

Middle Output Areas

- HLE Not Lower than England
- HLE Significantly Lower than England
- Ward Boundaries

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Data ONS accessed at
https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/healthandlifeexpectancies/datasets/life
expectancyleandhealthylifeexpectancyhleatbirthbysexformiddlelayersuperoutputareasmsoasinengland

Female Healthy Life Expectancy (HLE) at Birth 2009-13

Feale Healthy Life Expectancy by MSOA 2009-2013

Middle Output Areas
- HLE Not Lower than England
- HLE Significantly lower than England
- Ward Boundaries

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Data ONS accessed at
https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/healthandlifeexpectancies/datasets/life
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