

Project Title: Tower Hamlets Green Grid Update

Client: London Borough of Tower Hamlets

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Tower Hamlets Green Grid Strategy: Update 2017

Final report Prepared by LUC June 2017



Executive Summary

The aim of the Green Grid Strategy is to create a framework for the design and delivery of appealing walking routes and associated green infrastructure across Tower Hamlets, to secure a healthy and attractive environment for residents, workers and visitors.

The key objectives of the Strategy Update are as follows:

- · Update the Green Grid evidence base and priorities
- Identify opportunities for Green Grid investment
- Ensure that the Green Grid is integrated with the planning system and other key strategies including the Health and Wellbeing Strategy, Physical Activity Strategy, Open Space Strategy, Water Space Strategy, Cycling Strategy and the Housing and Regeneration Strategy.
- Enable the Council to secure support from key organisations.
- Reflect the important role of the Green Grid in public health and biodiversity.
- Include recommendations for Green Grid delivery.

The original Green Grid Strategy was developed in 2010; however implementation has been limited. The defined Green Grid Network could be described as 'aspirational', as many parts do not necessarily function as good Green Grid (i.e. they are of poor quality and/or have obstructions). However, it is anticipated that, following this update and incorporation in the Local Plan, implementation will be secured through planning obligations, the Community Infrastructure Levy and direct implementation through major developments, thereby creating a cohesive network.

The Green Grid Strategy Update highlights opportunities for:

- Facilitating movement and commuting
- · Increasing connectivity (particularly between schools, open spaces and stations)
- · Overcoming severance
- Improving safety and security
- Enhancing access to open space
- Enhancing Biodiversity and access to nature
- · Improving health and wellbeing
- · Improving air quality
- Linking with water space
- · Linking with regeneration
- Mitigating against urban heat island effect

The strategy proposes a number of borough-wide strategic actions, a set of overarching design principles, a number of site-specific improvements, and recommendations on how the strategy should be referenced within the Local Plan.

Borough-wide strategic actions:

- Green Grid Extensions particularly in relation to:
 - Connectivity
 - Water spaces
 - Regeneration
- Wayfinding (for example integrated into Legible London maps)

• Online promotion (including online mapping, plus directory of community initiatives / events on the Green Grid)

Overarching design principles

- Conserve and enhance heritage features and provide interpretation or art installations where appropriate to share the diverse and fascinating history of the Borough.
- Installation of street trees, planting and other vegetation where appropriate, to provide access to nature, ameliorate poor air quality and deliver climate adaptation.
- Create space for wildlife by prioritising Green Grid routes for delivering urban greening projects proposed through the Tower Hamlets Biodiversity Action Plan.
- Maximise opportunities to create access to nature, natural play and educational elements along the Green Grid
- Use suitable tree species guidance is available from Trees for Cities and Forest Research
- Promoting quiet streets and routes away from main roads and heavy traffic, to protect pedestrians from poor air quality.
- Create safe streets and routes with good natural surveillance and adequate street lighting.
- Use quality materials which are consistent with the character of the surrounding area
- Ensure uncluttered, appealing streets with consistent, Green Grid-branded signposting.
- Allow adequate space for pedestrians where possible, extend narrow footways

Site-specific improvements

Site-specific opportunities were identified through desk-top research, site visits by the project team and feedback from officers working in a range of Council departments. Opportunities are presented in the context of nearby development site-allocations which could provide funding through S106 or CIL.

Recommendations for the Local Plan

The strategy concludes by making recommendations for the way the Green Grid is embedded within the Local Plan, in order to maximise the chance of developers have to take action to maintain and enhance the Green Grid as part of planning consents.

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1 Introduction

1.1 The London Borough of Tower Hamlets commissioned LUC to update and refresh the Green Grid Strategy which was originally prepared in 2010. The Green Grid provides a framework for the delivery of walking routes and associated green infrastructure (GI) in the Borough. Since the original Green Grid Strategy, there has been significant population growth and development in the Borough, and this is expected to continue over the next 15 years.

Green Grid Objectives

- 1.2 The Tower Hamlets Green Grid Strategy identified the following five objectives, which are still relevant now:
 - GG1: Retain all existing open spaces and walking routes.
 - GG2: Enhance the quality of selected existing open spaces.
 - GG3: Create new publicly accessible open spaces.
 - GG4: Connect open spaces to local communities with enhanced and new walking routes.
 - GG5: Manage the Green Grid to a high standard.
 - This study has reviewed and updated opportunities to help deliver objectives GG3 and GG4.

Defining the Green Grid

- 1.3 For the purposes of this strategy, the Green Grid is defined as an integrated network of high-quality open spaces, streets, waterways and other routes that aim to encourage walking within Tower Hamlets.
- 1.4 Reference to the 'Green Grid' within this report incorporates both linear routes and open spaces.

 However, where appropriate this report differentiates by referring to walking routes as the 'Green Grid Network', and open spaces as 'Green Grid Open Spaces'.
- 1.5 The use of the term 'Green Grid' reflects two meanings of the word 'green':
 - 'Green' in the sense the Green Grid should, where appropriate incorporate green infrastructure (trees and vegetation), which in turn provides biodiversity and other benefits.
 - 'Green' in the sense that increased walking helps to reduce emissions from motorised vehicles and the green gird will facilitate walking away from polluted roads.
- 1.6 The Green Grid's focus is on creating high quality spaces and routes for pedestrians. In 2016 the London Borough of Tower Hamlets published a separate cycle strategy which outlines a number of key cycle ways planned within the Borough. The Council intends to make links between the two strategies going forward.
- 1.7 Green Grid interventions along waterways within this strategy have been taken into account in the separate Water Spaces Strategy.
- 1.8 The Borough's Open Space Strategy 2017 considers the quality, quantity, value and accessibility of strategic open spaces (above 1ha). The Green Grid primarily focuses on improving and promoting walking links between open spaces and community facilities, as well as providing green corridors and small open spaces (below 1ha).
- 1.9 In addition, it is important to note that, whilst there are many opportunities to incorporate green infrastructure within the Borough, this strategy prioritises quiet walking routes and open spaces as opposed to major roads (unless integral to connecting community facilities).

Purpose of this document

- 1.10 The aim of the Green Grid Strategy Update is to create a framework for the design and delivery of appealing walking routes and associated green infrastructure across Tower Hamlets, to secure a healthy and attractive environment for residents, workers and visitors.
- 1.11 The Green Grid Strategy Update will inform the Local Plan. It focuses on the potential for site allocations, planned development and growth locations to deliver the Green Grid.
- 1.12 The key objectives of the Strategy Update are therefore as follows:
 - Update the Green Grid evidence base and priorities
 - Identify opportunities for Green Grid investment
 - Ensure that the Green Grid is integrated into the planning system and other key strategies including the Health and Wellbeing Strategy, Physical Activity Strategy, Open Space Strategy, Water Space Strategy, Cycling Strategy, Housing and Regeneration Strategy and Air Quality Action Plan.
 - Enable the Council to secure the buy in of key organisations
 - Reflect the important role of the Green Grid in public health and biodiversity.
 - Include recommendations for Green Grid delivery

Structure of the strategy

- 1.1 The remainder of the document is structured as follows:
 - **Section 2:** Key issues for the Green Grid summarises the social and environmental context for the study, including key issues, opportunities and threats to the Green Grid in Tower Hamlets.
 - **Section 3:** Opportunities to enhance the Green Grid describes the opportunities for Green Grid enhancement and extension alongside planned development.
 - **Section 4:** Recommendations on how the findings of the Green Grid Update should be integrated within policy and plans, and how the opportunities can be delivered alongside development.

Benefits of the Green Grid

Air quality

- 1.13 The health impacts of poor air quality are well documented. Short-term exposure to high levels of air pollution can exacerbate of asthma and breathing problems, whilelong-term exposure can reduce life expectancy, due mainly to increased risk of mortality from cardiovascular and respiratory causes. 1
- 1.14 The World Health Organisation has concluded that there is a causal relationship between children's exposure to lead particulates and cognitive impairment. London's trees provide pollution removal services worth £126 million each year². Increased walking and cycling, and better routes to public transport hubs also contributes to improved air quality by reducing car use.³

Flood Risk

- 1.15 The London Underground is extremely vulnerable to flooding, with 75 Underground and DLR stations experiencing flood risk⁴ London's trees are estimated to provide storm water alleviation of 3.5 million cubic metres worth £2.8 m each year⁵.
- 1.16 Mental and physical healthPhysical activity has a wide range of benefits for people's physical health and mental wellbeing. This has wider economic benefits to local NHS services through cost savings. The

¹ National Institute for Health and Care Excellence (NICE)(2016). Air Pollution: outdoor air quality and health: NICE Guidelline https://www.nice.org.uk/guidance/gid-phg92/documents/draft-guideline

² Treenomics London (2015) Valuing London's Urban Forest: Results of the London - i-Tree Eco Project

³ NICE Guidance on air pollution.

⁴ GLA (2011) Managing risks and increasing resilience: The Mayor's climate change adaptation strategy

⁵ iTree Eco Assessment for London

Natural Capital Committee estimates that improvements to mental and physical health offered by green infrastructure in urban areas would reduce the associated health treatment costs to the NHS by £2.1 billion⁶.

Increased appeal and economic value

1.17 A study in the 1990s found that increasing the land cover of trees by 20 per cent could increase the value of local house prices by over 7%⁷. Implementation of green infrastructure is also linked to increased labour productivity which links to higher profitability of business⁸.

⁶ Natural Capital Committee (2015) Natural Capital Investing in a Green Infrastructure for a Future London -The Green Infrastructure Task Force Report.

⁷ G Garrod and K Willis (1992) The amenity value of woodland in Great Britain: A comparison of economic estimates.
8 Ecotec by the Mersey Forest on behalf of Natural Economy Northwest: The economic benefits of Green Infrustructure: The public and business case for investing in Green Infrustructure and a review of the underpinning evidence.

2 Green Grid Issues

Green Grid Context

- 2.1 The Tower Hamlets Green Grid was originally set out in 2009 within the 'Tower Hamlets Green Grid Baseline Report'.
- 2.2 The 2009 strategy defined two different types of routes for the Green Grid, known as primary and local routes. The Green Grid Update does not retain this distinction between the two types of route, as connecting communities is now considered of equal importance to connecting open spaces. 'Primary routes' were mapped to connect parks and green spaces. These are intended to increase the opportunity to promote a healthy lifestyle including walking and outdoor recreational and connect people to facilities and, parks and open spaces. 'Local routes' were feeder routes to the primary routes, which were proposed to provide the necessary green walking routes from primary routes to schools, town centres and transport hubs.
- 2.3 Further survey work in October 2009 conducted jointly by LDA Design and the Transport Research Laboratory surveyed a number of routes in the Green Grid to understand in detail the scope and potential for action to shape the Green Grid. Four routes were selected on the basis of initial analysis that identified the potential of each route to be used to promote healthy living e.g. connecting residential areas to the Borough's open spaces, town centres, schools and public transport hubs and, to a lesser extent, its tourist attractions and leisure centres. After completion of this survey Tower Hamlets Council revisited the baseline report and revised the Green Grid network. The outcome was a Green Grid network significantly increased in length to better connect local communities with open space, shopping centres, schools and other destinations used regularly. Following this, the 2010 Green Grid Strategy outlined a number of site-specific projects that would help deliver the Green Grid Vision.
- 2.4 However, since 2010 implementation of the Green Grid has been limited. The defined Green Grid Network could be described as 'aspirational' as many parts do not necessarily function as good Green Grid (i.e. they are of poor quality and/or have obstructions). However, it is anticipated that, following this update and incorporation in the Local Plan, greater implementation will be secured through CIL, Section 106 agreements and direct implementation from major developments, thereby creating a cohesive network.
- 2.5 The following paragraphs describe the current issues which an improved Green Grid will help to address. These are described first at the Borough-wide scale and then in more detail for the four Local Plan sub areas.

Why is the Green Grid is important?

Movement and commuting

- 2.6 Public transport and local roads within Tower Hamlets face capacity issues⁹. This is likely to be exacerbated as the population grows. The Green Grid will help to address this by and facilitating walking between people's homes, shops, schools, transport hubs and other services.
- 2.7 The quality of walking routes in Tower Hamlets varies from well-designed sections using high quality materials, to unappealing sections, which might be unsafe or perceived as unsafe. Key issues associated with poor quality streets typically include:
 - Narrow footways so that pedestrians are in close proximity to traffic
 - Poorly placed street furniture limiting movement
 - Low quality materials
 - Lack of adequate street lighting
 - Street clutter such as unnecessary street railings and or excessive sign posts.
 - Inactive street frontages contributing to a lack of natural surveillance.
 - Lack of wayfinding

Increased connectivity

- 2.8 Providing walking environments between homes and shops, jobs and public transport is crucial in encouraging people to walk in the Borough. As such, people must be able to get from point A to point B in a convenient manner in order to choose walking as mode of transport.
- 2.9 The existing Green Grid network has good connectivity overall with leisure centres, libraries and the majority of open spaces. However, a shortfall in connectivity has been identified between the existing Green Grid network (as defined in the 2010 Strategy) and a number of schools, London Underground stations and open spaces. These include major transport hubs of Aldgate East and Mile End. Community facilities not connected to the Green Grid are shown in **Figure 2.1** and outlined in the **Table 2.1**.
- 2.10 Connecting the Green Grid to these facilities will help to maximise opportunities to walk in the Borough through a proposed borough-wide way-finding strategy and site-specific strategic projects located along different segments of the Green Grid proposed in chapter 3 of this report.
- 2.11 The draft Chapter 5 (Delivering Sustainable Places) of the forthcoming Local Plan indicates a number of routes planned for 'Strategic Pedestrian/ Cycle Link Improvements'. These enhanced connections are also taken in into account in section 3 of this report.

⁹ LBTH (2015). Sustainability Appraisal Scoping Report (Consultation Draft): For the London Borough of Tower Hamlets Local Plan

Table 2.1: Community facilities currently not connected to the Green Grid

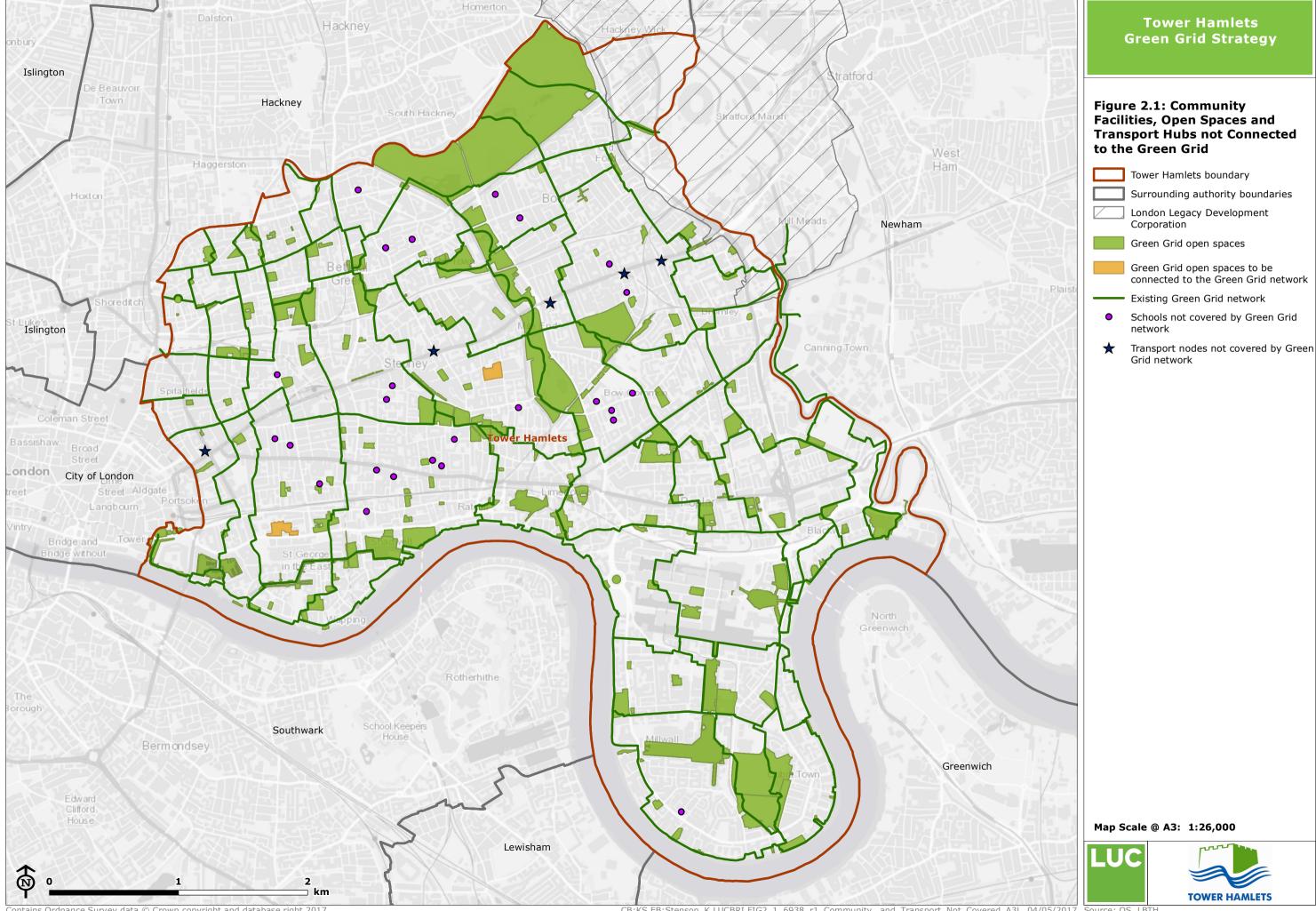
Name	Facility	
Bigland Green	Nursery School	
Blue Gate Fields Infants & Junior	Primary School	
Bonner (Bethnal Green)	Primary School	
Chisenhale	Primary School	
Globe	Primary School	
Halley	Nursery School	
Harbinger	Nursery School	
Kobi Nazrul	Primary School	
Marion Richardson	Primary School	
Mowlem	Primary School	
Old Church	Nursery School	
Olga	Primary School	
Osmani	Primary School	
Redlands	Primary School	
Smithy	Primary School	
St Mary's & St Michael's	Primary School	
St Paul with St Luke CofE	Primary School	
St Paul's Way Foundation	Primary School	
Stebon	Primary School	
Wellington	Primary School	
Bishop Challoner Catholic Federation	Secondary School	
Tower Hamlets College	Sixth Form College	
Madani Girls School & Madrasha	Secondary School	
Phoenix Primary and Secondary Special School	Primary School	
St Paul's Way Trust School	Primary School	
Bow Church	DLR	
Aldgate East	Underground	
Stepney Green	Underground	
Bow Road	Underground	
Mile End	Underground	
Stepney Green	Underground	

Overcoming the severance effects of infrastructure

- 2.12 Tower Hamlets benefits from good road and rail links, as well as the River Thames, River Lea and network of waterways including several canals (see section on Water Space below). However, these features and their associated infrastructure often create physical barriers to pedestrian movement, meaning that pedestrians need to take longer, circuitous routes with limited way-marking.
- 2.13 There are two physical features in Tower Hamlets that have dramatic effect in terms of severance: the East Anglian railway line running from east to west from Liverpool Street towards Stratford; and the north/south A12 trunk road in the east of the Borough. Both restrict movement between neighbourhood centres.



View looking south along A12 Trunk Road



Improved safety and security

2.14 The Green Grid will provide safer routes, away from major roads. Enhancing accessibility and encouraging active street frontages will also help create natural surveillance discouraging against such anti-social behaviour and make spaces feel safe.

Enhance access to open space

- 2.15 Tower Hamlets has just over 260 hectares of open space. This amounts to less than the local open space standard of 1.2 hectares per 1,000 residents¹⁰. It is also significantly lower than the National Playing Fields Association standard of 2.4 hectares per 1,000¹¹. With increasing development and high land values, creating significant areas new open space is a challenge. The Green Grid provides an opportunity to address open space deficiency in the Borough by increase access and quality of existing open spaces, enhancing links between those spaces, and providing residents of areas deficient in open space to alternative quiet, pedestrian-friendly environments.
- 2.16 **Figure 2.2** highlights those areas of Tower Hamlets which are deficient in access to open space. These areas have been calculated using park (above 1ha) catchment areas from Tower Hamlets Draft Open Space Strategy. It is important to note open space deficiency here is reflected in terms of Parks only and does not take into account other publicly accessible open spaces.¹²

Enhancing biodiversity

2.17 The Tower Hamlets Biodiversity Action Plan 2014-2019¹³seeks to stem any further reduction in the Borough's biodiversity and sets objectives and targets to increase priority habitats and species. The plan makes a number of suggestions for the built environment, namely, incorporation of climbers, green walls, hedges and planters which can provide nectar for bees and nesting sites for declining house sparrows. A lack of biodiversity in certain areas of the Borough is reflected in the presence of large areas considered to be deficient in access to nature. The Borough has two large areas of deficiency (AoD) in access to nature (**Figure 2.2**). These areas coincide with the highest density of building and population. Delivery of the Green Grid will help to both increase levels of biodiversity and increase access to nature.

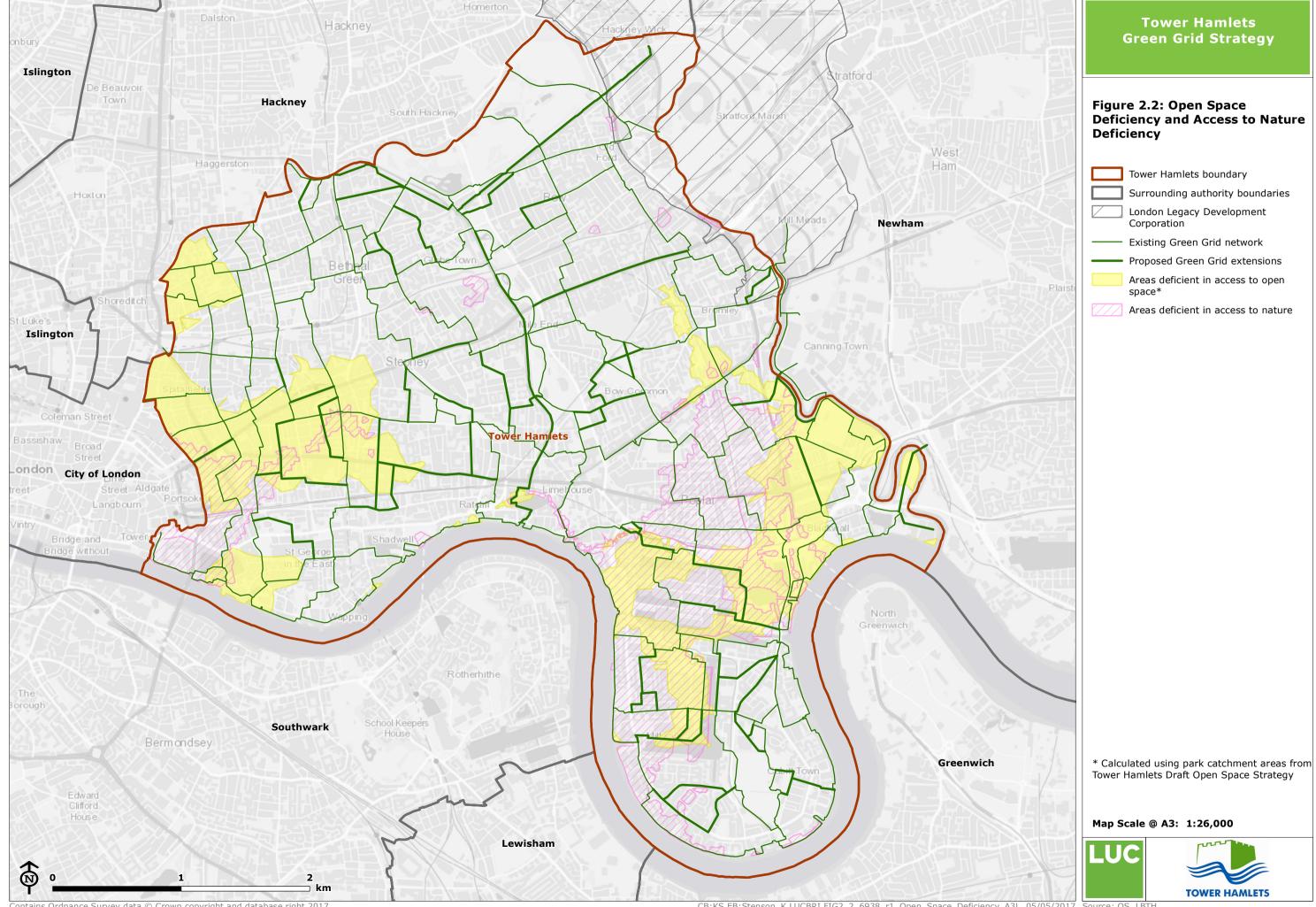
June 2017

 $^{^{10}}$ LUC (2016) Tower Hamlets Open Space Audit.

¹¹ LBTH (2015). Sustainability Appraisal Scoping Report (Consultation Draft)

¹² LBTH (2017) Parks and Open Spaces: An open space strategy for London Borough of Tower Hamlets (2017-2027). Draft

¹³ LBTH (2014) Tower Hamlets Local Biodiversity Action Plan 2014-2019



Health and well-being

- 2.18 Nearly three quarters of the Borough is within the bottom 20% in terms of London-wide social deprivation. High levels of deprivation are mirrored by poor levels of health and wellbeing¹⁴.
- 2.19 Healthy life expectancy is 8.2 years lower for men in the most deprived areas of Tower Hamlets than in the least deprived areas¹⁵.
- 2.20 Levels of childhood obesity are also significantly higher in Tower Hamlets than the London and England averages. In year 6, 27.1% of children are classified as obese¹⁶. Tower Hamlets also has significantly higher premature death rates from the major killers (cancer, heart disease, stroke, lung disease) in London¹⁷.
- 2.21 Low levels of exercise and activity are linked to the health implications described above, yet walking offers a free means of exercise. Encouraging and enabling more people to walk, through investing in the Green Grid, will help tackle these health issues which in turn will reduce demand on local health services.

Air quality

- 2.22 Many areas in Tower Hamlets suffer from poor air quality. These areas are located on streets and roads with higher volumes of traffic. For example, the A12 in the east of the Borough records some of the highest levels of pollutants. The health implications of poor air quality are well documented with children and older people being the most vulnerable to heart and respiratory conditions. Those living in deprived areas are also more likely to be affected, partly because these areas are often near busy roads¹⁸.
- 2.23 The Green Grid provides an opportunity to mitigate the effects of air pollution in a number of ways. Firstly, provision green attractive walking routes away from main roads will encourage people to walk in areas of relatively higher air quality. Secondly, where quiet routes between facilities are not available, provision of well-designed green infrastructure such as along main roads in areas of poorer air quality can help to improve air quality as vegetation is recognised as being able to improve quality of the air by filtering and buffering pollutants. Thirdly, safe attractive walking routes provide a cheap, attractive alternative transport option individuals from using motorised vehicles that contribute to poor air quality
- 2.24 Improving air quality is particularly important in proximity to schools. This is reflected by the current Mayor of London's current funding to audit air quality for schools across London²⁰. Recent data published by the GLA reveals that for Tower Hamlets reveals that 75/126 schools (60%) are located in areas failing the EU legal limit for NO_2^{21} . This reflects the London wide poor air crisis, with identified 802 schools (almost 25%), nurseries and colleges breaching EU legal limits according to work commissioned by the Mayor of London²².

Water Spaces

- 2.25 Tower Hamlets is has an extensive network of waterways, or 'blue infrastructure', including 19 water spaces. As stated in section 1, Tower Hamlets have commissioned LUC to produce a Water Spaces Strategy which proposes opportunities to enhance Water Spaces within the Borough. However, the Green Grid Strategy incorporate proposals for Water Spaces where such spaces provide linkages between community facilities and open spaces and are, thus, incorporated into the Green Grid.
- 2.26 The Borough is bounded by the River Thames to the South and River Lea to the East. The Regent's/ Grand Union Canal, Hertford Union Canal, Limehouse Cut and River Lea Navigation extend through the

¹⁴ Tower Hamlets Health and Wellbeing Board (2013). Health& Wellbeing Strategy 2013-2016. Towards a Healthier Tower Hamlets

 $^{^{\}rm 15}$ Public Health England (2016) Tower Hamlets Health Profile 2016.

Public Health England (2016) Tower Hamlets Health Profile 2016.

Tower Hamlets Health and Wellbeing Board (2013). Health& Wellbeing Strategy 2013-2016. Towards a Healthier Tower Hamlets

¹⁸ Mayor of London (No Date). Health and exposure to pollution. https://www.london.gov.uk/what-we-do/environment/pollution-and-air-quality/health-and-exposure-pollution

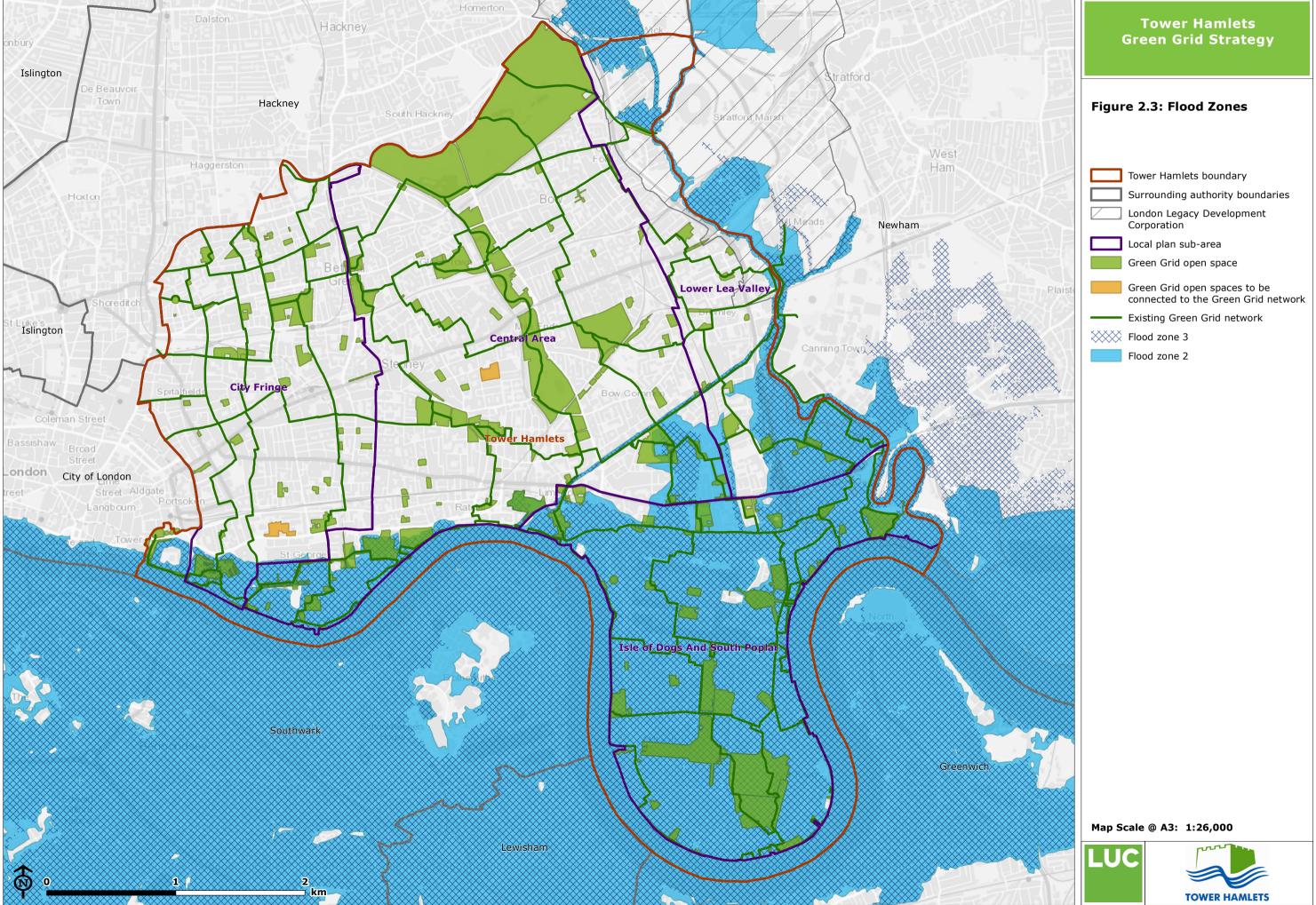
¹⁹ Mayor of London (2011) Green Infrastructure and Open Environments. The All London Green Grid. Supplementary Planning Guidance

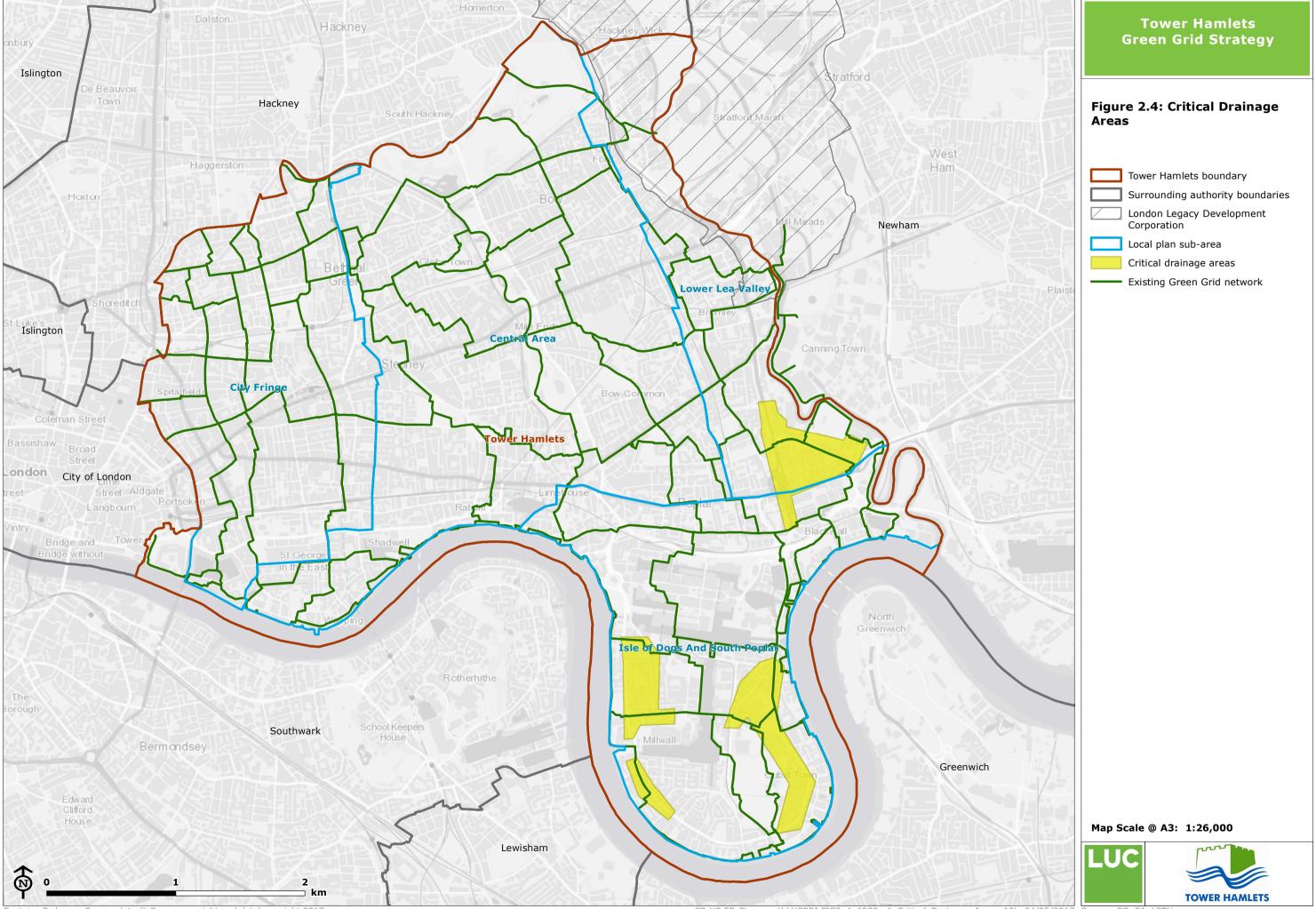
²⁰ GLA – Mayor announces new air quality audits. https://www.london.gov.uk/press-releases/mayoral/air-quality-audits-to-protect-school-kids

²¹ GLA - air quality exposure data broken down by parliamentary constituency based on the current 2013 data from the London Atmospheric Emissions Inventory. The legal limit for NO2 is an average annual concentration of 40 ug/m3. Published 03/05/2017

²² GLA report released February 2015 https://data.london.gov.uk/dataset/analysing-air-pollution-exposure-in-london.

- Borough, and there are many docks and basins around the Isle of Dogs. In addition there are a number of basins predominantly connected to the River Thames by locked gates. These provide opportunity for walking and other forms of recreation and also tend to be quieter parts of the Borough, located away from busy roads with poorer air quality.
- 2.27 Whilst most water spaces have reasonable public access, this is generally not well-promoted and their value as a public resource is not fully realised. The Green Grid provides an opportunity enhance accessibility to these spaces through creating and enhancing green spaces adjacent to water bodies, as well as creating new linkages.
- 2.28 A key development in relation to both water spaces and Green Grid Space is the planned Lea River Park (LRP). The Lea River Park is the name given to six new parks which together connect Queen Elizabeth Olympic Park to the Royal Docks and the River Thames, linked by the Leaway walking route. Two of the Parks proposed (Poplar River Park and East India Dock Basin) are located within Tower Hamlets.
- These multiple water courses bring an associated risk of flooding within the Borough. Whilst the tidal Thames poses a potential risk of flooding to properties within the Borough, the Thames Tidal Defences (TTD) provides substantial protection. This is provided primarily by the Thames Barrier operated to protect against storm surges from the North Sea and extreme high tide and fluvial water events. The River Lea is also defended; however, small areas to the north-east of the Borough are at actual risk of fluvial flooding from this source, due to overtopping of defences.
- 2.30 A broad indicator of areas prone to flooding from tidal and fluvial sources is the designation of Flood Zones. Flood Zones relate to the probability of river and sea flooding (ignoring the presence of defences). There are three main areas at risk of tidal flooding in Tower Hamlets; the Isle of Dogs, extending into Poplar, Wapping and Blackwall. All of these areas are located within Flood Zone 3 with additional areas of Poplar located in Flood Zone 2. **Figure 2.3** shows these Flood Zones in the Borough.
- 2.31 There is a potential risk of flooding from (non-river related) sources throughout the Borough, including sewer surcharge and surface water flooding as result of heavy rainfall. This is an issue within Critical Drainage Areas (CDAs), in particular the Isle of Dogs, as shown in **Figure 2.4.** This is likely to be ameliorated through the installation of the Thames Tideway tunnel; however no Borough-specific information could be found on the extent to which this threat will be reduced.
- 2.32 Areas throughout the Borough are also susceptible to elevated groundwater levels, which may interact with and exacerbate other sources of flood risk. It is expected that changing climate patterns will have a substantial impact on the level of flood risk from all sources within the borough.
- 2.33 The Green Grid will help reduce the risk of flooding from fluvial and non-fluvial sources as implementation of natural features such as sustainable urban drainage systems (SUDs) can provide a means of water storage and reduce surface runoff.





Regeneration and change

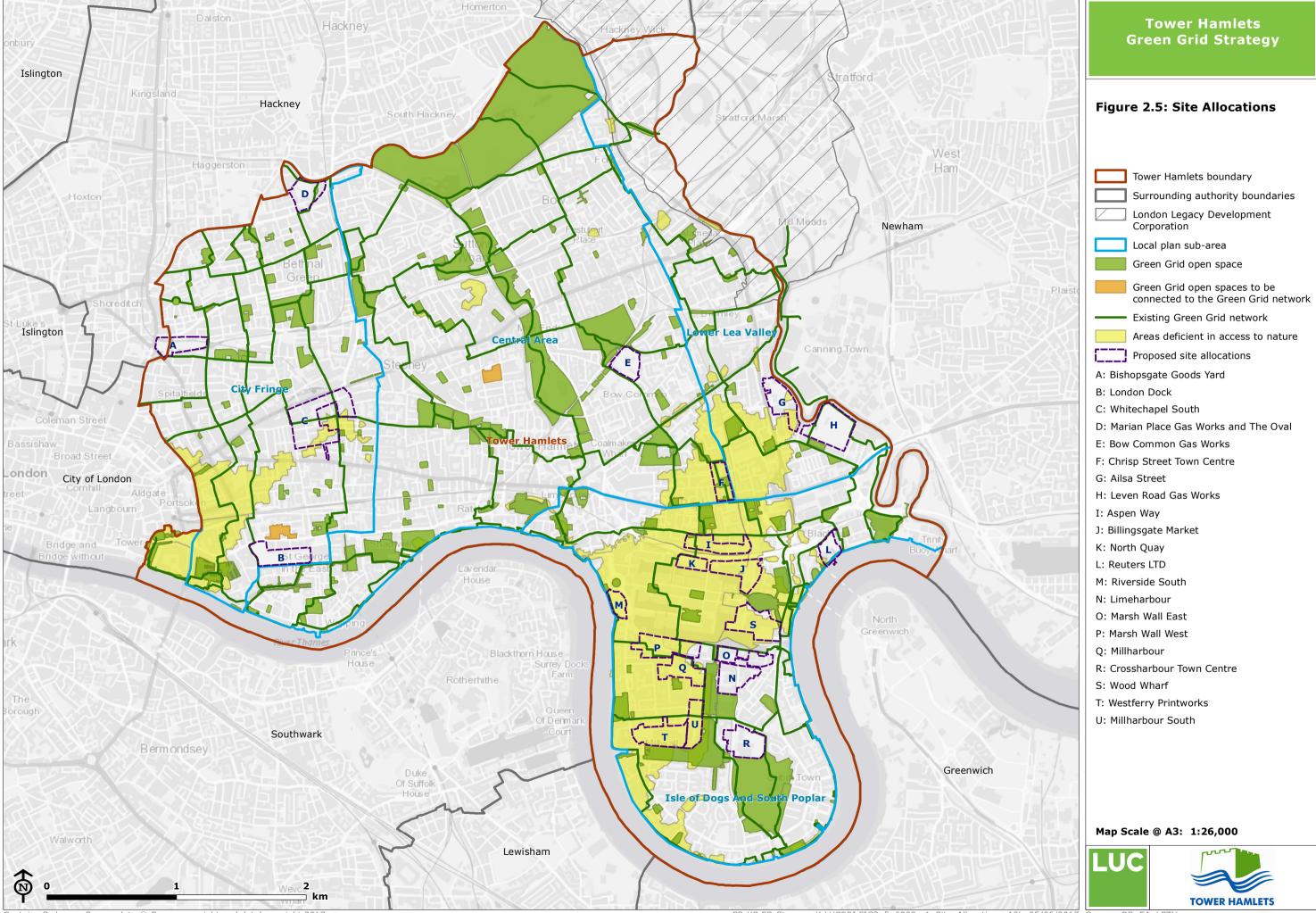
- 2.34 Tower Hamlets is experiencing rapid population growth²³, with 43,275 new homes planned to be built by 2025 (an increase of over 42% from 2009)²⁴.. A key challenge of the Green Grid Strategy is to capitalise on this development within site allocations through both good design and financial contributions from development, which are currently secured through the Community Infrastructure Levy (CIL) and under Section 106 of the Town and Country Planning Act (1990). If not carefully planned, major developments can result in severance between neighbourhood centres and community facilities. In the past, this severance has been caused in part by the development of gated communities. The Green Grid strategy provides an opportunity to ensure strategic pedestrian links are provided through major development sites.
- 2.35 Regeneration and change in the Borough will be shaped at various scales through the forthcoming Local Plan spatial strategy. The spatial strategy is sub-divided into three scales.
 - **Borough-wide** strategic policy will support the process of delivering the Local Plan's spatial vision and the required infrastructure to support growth.
 - **Sub Areas** strategic policy is preceded by each Sub Area containing a summary of the characteristics and challenges together with detailed priorities and principles for development.
 - **Site allocations** -within each Sub Area there are sites allocated for specific land uses, e.g. residential or employment land. These sites are the primary resource for delivering growth. The council has identified 26 potential sites in the Borough which can provide new homes or employment/office space alongside required infrastructure. **Figure 2.5** shows the site allocations for the entirety of the Borough within their respective sub areas.
- 2.36 In addition to the local plan, supplementary planning documents provide guidance on regeneration within the Borough. These provide more detailed design guidance on specific places in the Borough and incorporate some of the site allocations identified for the local plan. Relevant SPDs include:
 - South Quay Masterplan (SPD)
 - Whitechapel Vision Masterplan (SPD)
 - Bromley-by-Bow (SPD) adopted by the LLDC.

Urban Heat Island Effect

2.37 Like all urban areas, London has its own microclimate. The centre of London can be up to 10°C warmer than the surrounding rural areas due to the 'urban heat island effect' which is caused by the extent of heat absorbing built development and waste heat from energy generation. 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. Where green features such as trees and other vegetation cover are incorporated, investment in the Green Grid can help to alleviate the urban heat island effect.

 $^{^{23}}$ The population is expected to increase by an 22% by 2026 23

²⁴ Tower Hamlets 2010. Core Strategy Development Plan Document 2025



3 Opportunities to enhance the Green Grid

- 3.1 This section highlights a number of Borough-wide opportunities to enhance the Green Grid. These take the form of extensions to the existing Green Grid, enhanced way-finding and online promotion. In addition, a number of recommended overarching design principles are outlined. These act as guidance for site-specific enhancements going forward. Supplementing Borough-wide opportunities outlined in this section, **Appendix 1** outlines a number of Strategic Projects for each Sub Area of Tower Hamlets. Strategic projects represent localised site-specific projects. A description is given of the context and potential interventions for each project.
- 3.2 The method undertaken to identify opportunities involved desktop and on-site analysis. Desktop analysis primarily took the form of GIS analysis to identify opportunities in accordance with issues highlighted in section 2 e.g. location of, schools and transport hubs and flood zones. Opportunities are also identified in accordance with prospective development within the Borough e.g. that proposed within site allocations. The rationale behind this is to ensure delivery of the Green Grid as part of new development. A number of site visits were conducted which confirmed the relevance of opportunities identified through desktop analysis and to gain more detailed understanding of potential interventions in specific sites. It should be noted that the Green Grid opportunities have been identified using a previous version of site allocations, and as such some opportunities may not be clearly linked with a current site allocation.
- 3.3 The proposed opportunities to enhance the Green Grid outlined in this section were identified mainly by LUC. However, stakeholder engagement in the form of a consultation workshop with officers representing a range of departments at the Council provided useful guidance on the location and potential of many opportunities.

Borough-wide Actions

Green Grid Extensions

- 3.4 It is proposed that a number of extensions are made to the existing Green Grid network. These represent potential new waymarked routes, which address shortfalls in Green Grid connectivity throughout the Borough as well as take into account the likely location of new development within the Borough.
- 3.5 The analysis in **Section 2** highlights a number of issues and opportunities relating to the existing Green Grid. The following are considered particularly significant:

Connectivity

- There is a lack of connectivity to a number of community facilities including schools, transport hubs and open spaces.
- There is a need to take into account pedestrian and cycle link improvements highlighted in draft Local Plan chapter 5 on 'Delivering Sustainable Places'.

Water Spaces

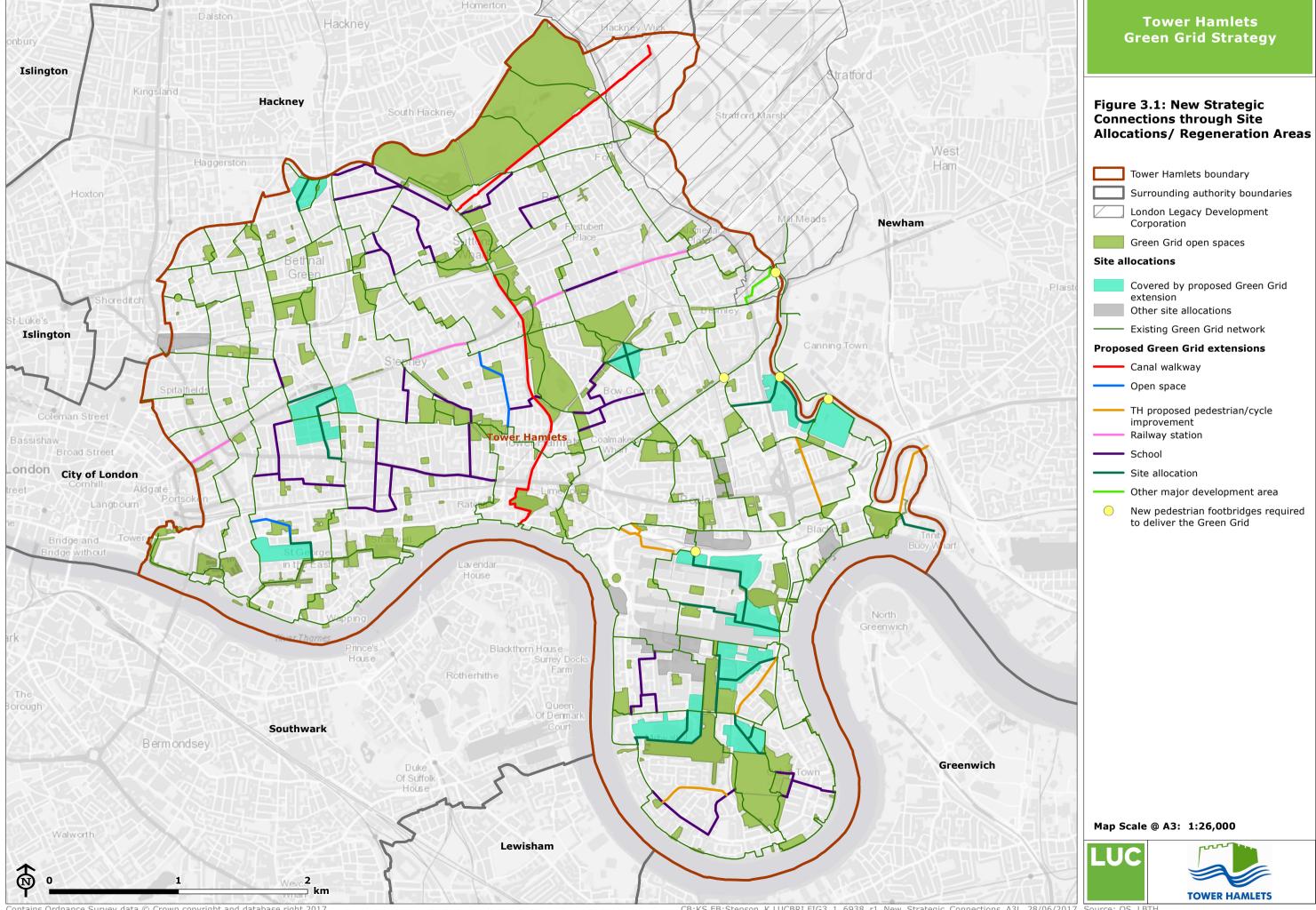
A number of walking routes along canals are not currently designated part of the Green Grid despite their beneficial environmental characteristics such as good air quality, senses of openness and often green surroundings. These are included in the proposed extensions to the Green Grid network, as outlined in this report.

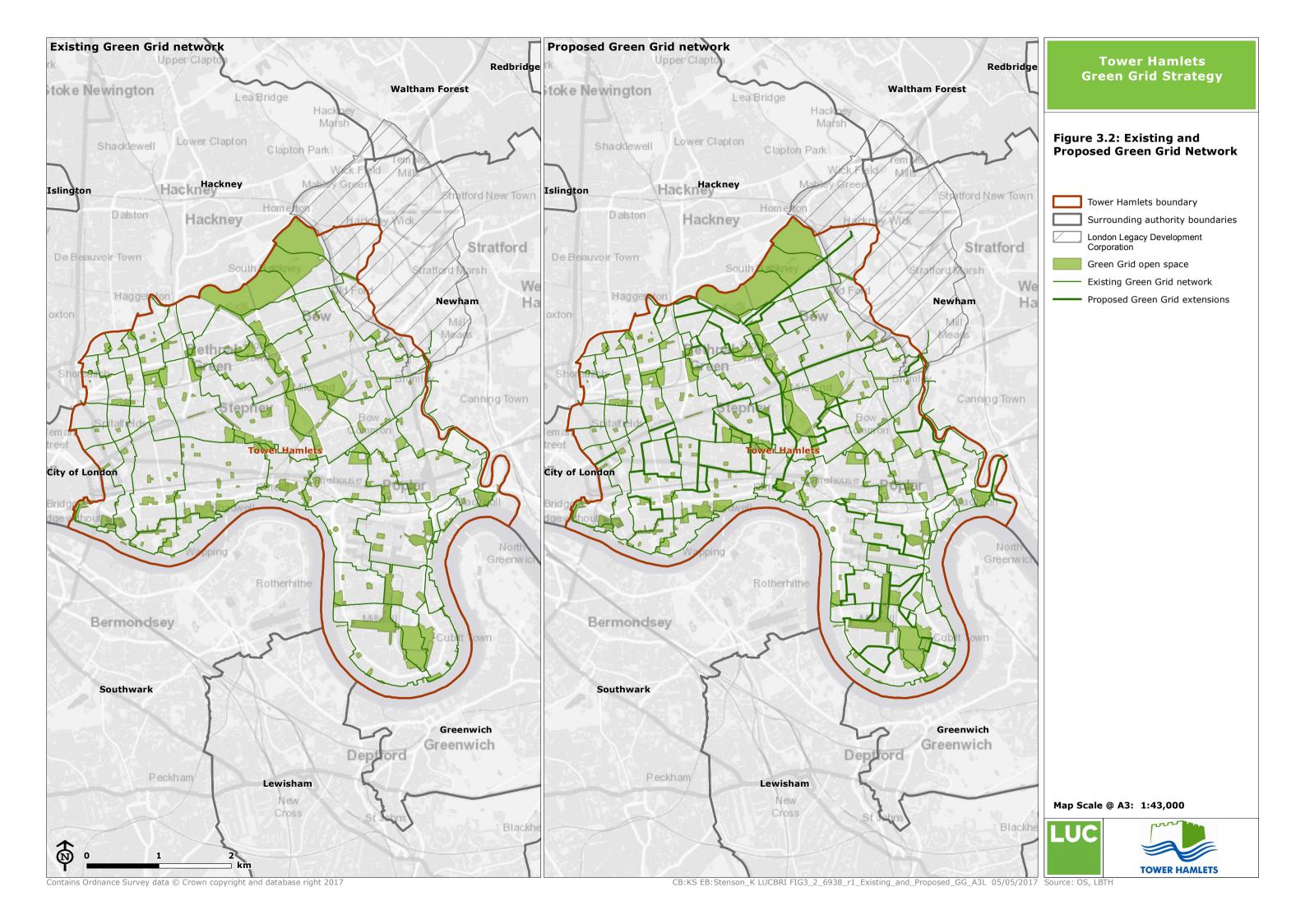
Regeneration

There is a need for the Green Grid to take into account new strategic routes and green spaces set out in site allocations and adopted SPDs. The Bromley-by-Bow Masterplan and Whitechapel Masterplan both contain guidance which allocate parcels

of land for green space that can be incorporated into the Green Grid.

- 3.6 In response to these issues a number of extensions to the Green Grid are proposed. These are highlighted in **Figure 3.1**. The extensions shown address those issues listed above through transposing existing walking routes (e.g. canal paths, school routes), and prospective strategic walking routes through site allocations into the Green Grid. The revised Green Grid Network predicates the Strategic Projects highlighted in the remainder of this section.
- 3.7 **Figure 3.1** also shows the locations where new pedestrian footbridges will need to be constructed to deliver the green grid. The context of these footbridges is described within Strategic Projects below. **Figure 3.2** shows a comparison between the existing Green Grid Network and proposed Green Grid after extensions have been integrated.





Wayfinding

3.8 A limiting factor of the current Green Grid is the lack of signage and way-marking. Whilst Tower Hamlets has signage in many areas indicating walking routes to specific destinations, current signage contains no visual reference to the Green Grid. In response, it is recommended that new signage be incorporated along key routes currently not signposted. In addition, a new logo signifying the Green Grid should be incorporated to existing and new signage to highlight its presence to walkers e.g. integrating the Green Grid into TFL's Legible London signage. This will increase both increase legibility on the Green Grid between key destinations and promote the Grid's existence more generally. This should be a planning requirement for new development schemes.

Online Promotion

- 3.9 Supplementary to physical wayfinding interventions, promotion online would help to encourage use of and support for the Green Grid. Possible online interventions include:
 - Online mapping allowing residents to plan walking routes along the Green Grid.
 - A directory of events and initiatives along the Green Grid, including bottom-up community based projects, making information on physical activity and volunteering opportunities relating to the Green Grid easily obtainable. This could be integrated into Tower Hamlets' existing events calendar on their website, and promoted on other websites promoting volunteering and community action.

Design considerations

3.10 The benefits of the Green Grid will be maximised through well-designed interventions which respect the local character and are designed to be low maintenance. Some overarching principles for future Green Grid enhancement are provided below, along with some illustrations of exemplary sites around the Borough.

Recommended principles

- Conserve and enhance heritage features and provide interpretation or art installations where appropriate to share the diverse and fascinating history of the Borough.
- Installation of street trees, planting and other vegetation where appropriate, to provide access to nature, ameliorate poor air quality and deliver climate adaptation.
- Create space for wildlife by prioritising Green Grid routes for delivering urban greening projects proposed through the Tower Hamlets Biodiversity Action Plan.
- Maximise opportunities to create access to nature, natural play and educational elements along the Green Grid
- Use suitable tree species guidance is available from <u>Trees for Cities</u> and Forest Research
- Promoting quiet streets and routes away from main roads and heavy traffic, to protect pedestrians from poor air quality.
- Create safe streets and routes with good natural surveillance and adequate street lighting.
- Use quality materials which are consistent with the character of the surrounding area
- Ensure uncluttered, appealing streets with consistent, Green Grid-branded signposting.
- Allow adequate space for pedestrians where possible, extend narrow footways

Example of a high quality Green Grid Link: Lefevre Walk

Promoting quiet routes away from main roads and heavy traffic, to protect pedestrians from poor air quality

Create safe routes with good natural surveillance.

Use quality materials which are consistent with the character of the surrounding area

Conserve and enhance heritage features and provide interpretation or art installations where appropriate

Uncluttered, appealing streets with consistent signposting Ensure Green Grid routes are appealing and likely to draw pedestrians away from main roads

Example of a high quality Green Grid Open Space: Bromley Recreation Ground

Active frontage encouraging use by a range of people Art features and interpretation add to the interest and appeal

Sheltered aspect adds to appeal



High quality built environment enhances the space

Planting for wildlife and to ameliorate local climate and air quality Space for healthy recreation and play, or quiet reflection

4 Recommendations

Embedding the Green Grid within the Tower Hamlets Local Plan

- 4.1 A draft local plan 'Tower Hamlets Draft Local Plan 2031: Managing Growth and Sharing the Benefits' was available for comment between November 2016 and January 2017. This sets out a proposed vision, objectives and planning policies to positively plan and manage development in the borough up to 2031.
- 4.2 Consultation on the evidence base, including this Strategy will take place in May-June 2017, prior to an updated version of the Local Plan for further consultation in summer 2017.
- 4.3 It is recommended that the findings of this Green Grid Strategy Update are embedded within the Local Plan. This should include:
 - Review of policy to ensure adequate reference to the Green Grid and its benefits and delivery.
 - Incorporating the Green Grid within the Policies map, alongside other site allocations.
 - Adopting a clear approach to requirements from new development to deliver the Green Grid extensions and Strategic Projects in proximity to the proposal site.
- 4.4 This will help ensure that the Green Grid is delivered effectively through future planning decisions, and that the Council capitalises on the extensive development expected in the Borough.

Policy enhancement

4.5 Chapter 4 of the draft Local Plan outlines the draft policies, and incorporates a policy on Open Space and the Green Grid (OS3), as outlined below:

Policy OS3: Open Space and Green Grid

- Development is required to provide or contribute to the delivery of an improved network of open spaces and green corridors in accordance with the Council's Green Grid Strategy and Open Space Strategy
- 2. Development on areas of open space will only be allowed in exceptional circumstances where:
 - a. it provides essential facilities that enhance the function, use and enjoyment of the open space; or
 - b. as part of a wider development proposal there is both an increase of open space and a higher quality of open space is achieved
- 3. Development adjacent to, or in a close proximity to the Green Grid network is required to demonstrate that it will not have negative impacts on the access, design and usability, as well as the biodiversity and recreational value of the Green Grid network and that it will contribute to the expansion and the enhancement of green infrastructure linkages
- 4. Major development is required to contribute to the delivery of new publicly accessible open space on site which should:
 - be of a high quality and provide facilities to promote active recreation and healthy lifestyles;
 - d. be well-connected to other open spaces in accordance with the Council's Green Gric Strategy; and
 - e. enhance biodiversity, contributing to the objectives identified in the Council's Local Biodiversity Action Plan
- 5. Development should not rely upon existing publicly accessible open space to contribute to policy required minimum on site communal amenity space and child play provision
- 6. Development should not adversely impact on the public enjoyment, openness, ecological and heritage value of the borough's strategically important publicly accessible open spaces including Metropolitan Open Land (MOL), the Olympic Park and the Lea River Park
- 7. Development of community allotments, gardens and pocket parks will be encouraged, particularly where they bring into use vacant developable land on a temporary basis.
- 4.6 In light of the Tower Hamlets Green Grid Strategy Update, it is recommended that the following changes/amendments to the draft policy, taking into account the connected policies on open space, water space and design:

Recommended amendments to policy

• It would be helpful to state a distance threshold within which development should contribute to enhancement of the Green Grid. It is suggested that 200 metres (equivalent to approximately 3 minutes walking time) may be an appropriate distance threshold to adopt. A 200m distance could be reasonably considered to be within the same community or neighbourhood as the development and a 'direct relationship' would exist between the Green Grid and the development –on the basis that residents would benefit from the Green grid and it presence would help

mitigate transport impacts.

- OS3 (3): Reference to the Green Grid network should refer directly to a map or plan of the existing network and opportunities identified through this study. The existing Green Grid network should be incorporated in the Local Plan's Key Diagram, and the opportunities to enhance the Green Grid should be set out in the Key Proposals map in the Local Plan.
- OS3 (4): It may be useful to adopt and refer to Supplementary Planning Guidance (SPG) here to
 provide more detailed information on the appropriate design, function, quality and connectivity of
 new routes and spaces).
- Unless already covered elsewhere, this policy should also refer to the importance of all
 development being designed to maintain and enhance the 'permeability' of the Borough for
 pedestrians, to ensure the community is better connected to transport and community hubs, plus
 parks and other social infrastructure.
- There should be a separate policy on water spaces, which should be cross-referenced here, to
 ensure that enhancement and investment in the Green Grid connects to and along the Borough's
 many water spaces, including ensuring that new development provides public access to
 waterfront.

Potential for Supplementary Planning Guidance





Supplementary Planning Guidance on the Green Grid could help to define different 'typologies' of the Green Grid, ranging hard surfaced routes, to routes with more green infrastructure incorporated, to 'parkland' routes.

Delivery mechanisms

Community Infrastructure Levy

- 4.7 The Community Infrastructure Levy (CIL) was introduced through the Planning Act (2008) as a capital cost payable by developers towards the cost of local and sub-regional infrastructure to support development. Green infrastructure is included in the types of infrastructure that are eligible for CIL funding. The NPPF states that the CIL should 'support and incentivise new development' and encourages local authorities to test the feasibility of proposed CIL charges alongside the Local Plan. As stated in the National Planning Practice Guidance:
 - "The levy can be used to increase the capacity of existing infrastructure or to repair failing existing infrastructure, if that is necessary to support development."
- 4.8 The Council has adopted CIL, and its associated Regulation 123 List of infrastructure is available on its website. CIL is a Borough-wide tariff on development, and the Green Grid is included on the Regulation 123 List within the categories 'Open space, parks and tree-planting', and 'Roads and other transport facilities'. The Regulation 123 List includes the above as categories of Strategic Infrastructure, defining this as: 'infrastructure that is designed to serve more than those residents or workers within one particular development by contributing to infrastructure improvements across the wider Borough.'
- 4.9 As such, CIL should be seen as the main mechanism for delivering the more strategic elements of the Green Grid through planning and development management. This will help to ensure that the wider Green Grid network can be enhanced, connected and promoted, beyond the doorstep of new development. This approach would fit with the proposals of the recent Housing White Paper, which suggests that the Community Infrastructure Levy (CIL) should be replaced by a Local Infrastructure Tariff (LIT), a streamlined low level tariff which would be supplemented by Section 106 contribution for larger developments.

Section 106

- 4.10 Developer contributions under Section 106 of the Town and Country Planning Act 1990 should provide a key mechanism for securing funding for the enhanced Green Grid where it is directly related to a new development. Section 106 agreements are a tool which makes a development proposal acceptable in planning terms, which would not otherwise be acceptable. There are three legal tests which must be met, in order for a Section 106 agreement to be appropriate:
 - Must be necessary to make the development acceptable in planning terms
 - Must be directly related to the development
 - Must be reasonably related in scale and kind to the development
- As Tower Hamlets has adopted the Community Infrastructure Levy (see above) and an associated Regulation 123 list which includes improvements related to public access green infrastructure, Section 106 cannot be used strategically on the Green Grid, and should only be used to secure enhancements which are site specific they must be directly related to the development. The Council's Planning Obligations Supplementary Planning Document (SPD)²⁵ provides guidance on this, and describes the following process for working with applicants for planning permission to achieve high quality development:
 - By working with developers, the Council will seek to ensure that most design and mitigation requirements are delivered as part of the initial development proposal.
 - In cases where an initial proposal does not meet the Council's policy and/or objectives, planning conditions will be used to ensure that the final proposal meets the Council's requirements.
 - Details relating to highways improvement will be set out in a Section 106 and/or Section 278 agreements, where necessary.
 - Where a proposal directly necessitates the provision of infrastructure to mitigate/enable development that is not within the scope of the Regulation 123 list, the Council may seek a

 $^{^{25}}$ http://www.towerhamlets.gov.uk/Documents/Planning-and-building-control/Development-control/Planning-obligations_SPD_Sept_2016.pdf

contribution through Section 106.

- 4.12 It is therefore recommended that Section 106 should be the mechanism employed to secure financial contributions from development where the proposal:
 - overlaps or is adjacent to a Green Grid Strategic Project;
 - is adjacent to or intersects an existing or proposed Green Grid link, or
 - is less than 200m from one of the Green Grid opportunities.
- 4.13 In these cases it is reasonable to determine a 'direct relationship' between the development and the Green Grid network, because future occupiers and users of the developments will both increase the need for the Green Grid and also make use of it over the life of the development.
- 4.14 Section 106 cannot be used for on-going revenue costs / maintenance of the Green Grid, so it would be appropriate for the Council to also consider an alternative source of funding for this.

Neighbourhood Forums

4.15 Neighbourhood Forums have been formed for a number of communities in Tower Hamlets, and their neighbourhood plans are in various stages of preparation. These Neighbourhood Forums can be consulted on 25% of CIL funding from development within their agreed boundary. In addition, the Council will engage Neighbourhood Forums in defining the Green Grid opportunities within their boundaries, and their input will be particularly valuable in informing the functions and design of the Green Grid opportunities.

Delivering the Green Grid – inspiration from around London





Euston, St Pancras, Kings Cross Walking Route

A sign-posted route guiding employees, visitors and tourists between Euston, St Pancras and Kings Cross has been installed by Urban Partners, a voluntary business partnership made up of organisations in the Euston, King's Cross and St Pancras area. The stations make up a transport hub and many routes through the country interconnect here, however visitors have tended to walk between the three stations via Euston Road, which is a busy, noisy route, and has the some of the poorest air quality in Europe. The signposted route takes pedestrians on a route via the local residential streets and parks, providing a more pleasant and quieter experience of the area.



Hermitage Basin

Hermitage Basin and the adjoining Canal Square were highlighted in the original Tower Hamlets Green Grid as an opportunity for enhancement. Whilst the opportunity for a new green space at Canal Square has not been realised, the basin which was empty in 2010 has been inundated and reinstated. The area also provides an appealing and fully accessible link for pedestrians and cyclists, and is a quiet node on the Green Grid network where many species of wild bird can be seen and heard.



Bartlett Park

Tower Hamlets has commissioned a masterplan to redesign and enhance Bartlett Park. The park is a key open space within an area of relative deficiency, and the masterplan involves the redesign to enable a range of different functions to maximise the parks appeal to the local community. In addition, the redesign will ensure the park is well connected with surrounding Green Grid routes as well as Limehouse Cut which is adjacent to the north. New features will be integrated to promote a range of sporting activities, space for play and biodiversity. The existing views of Canary Wharf will be maintained to provide a sense of place.

Nine Elms, Vauxhall

The strategic regeneration underway at Nine Elms on the South Bank will transform this previously industrial area of the city into a modern residential and commercial area. The masterplan incorporates a continuous green corridor, which will span the length of the area from east to west, providing green, car-free access between Battersea Power Station and Vauxhall Cross for pedestrians and cyclists. The retail elements of the new scheme will run alongside this green corridor, with businesses including cafes, bars shops and restaurants benefitting from this appealing location. In addition, the Nine Elms scheme will also deliver a new section of the Thames River Path along its length, bridging a gap in this important strategic route through the city. The aspiration is that as new developments are added to the area, they will incorporate new footpaths and cycle routes to ensure a well-connected community with good access to the Thames, ensuring that residents and visitors fully benefit from the riverside setting.

Conclusion

4.16 The Tower Hamlets Green Grid Strategy Update has highlighted a number of issues which investment in the Green Grid will help to address. It has also identified a number of opportunities which the London Borough of Tower Hamlets should consider priorities for encouraging and enabling walking in the Borough. Each of these opportunities will deliver a number of benefits to the Borough and its residents. The identified opportunities should be incorporated within the Local Plan, and delivered through prospective development and in partnership with relevant organisations. The Green Grid Strategy should be updated every 5 years to reflect any changes to the Local Plan, and new site allocations which may create new opportunities for Green Grid extensions.