

Re-connecting Poplar Riverside

A Delivery and Implementation Strategy and urban design project by

Meadowcroft Griffin Architects

March 2009



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wider area

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1.0 Executive Summary	9	5.0 Delivery of Links	141
		5.1 Key Connections	143
2.0 Introduction	17	5.2 Bridge Link	145
		5.3 A13 Link	151
3.0 Context and Background	23	5.4 Aberfeldy Street Link	153
3.1 Geographical Location	25	5.5 River Link	155
3.2 Socio-Economic Context	35	5.6 Lochnager Link	159
3.3 Context of Change	39	5.7 Canal Link	161
3.4 Historical Development	45	5.8 Gillender Street Link	163
3.5 Policy Context	51	5.9 A12 Boulevard	165
		5.10 Chrisp Street Link	171
4.0 Area Wide Strategies	67	5.11 Wider Area Priorities	175
4.1 Principles Of Approach	69	6.0 Core Areas	177
4.2 Connectivity -Walking & Cycling	73	6.1 Urban Design Strategy - Core Areas	179
4.3 Connectivity -Public Transport Strategy	85	6.2 Core Area 1 - Bow Lock	183
4.4 Local Centre Strategy	93	6.3 Core Area 2 - Ailsa Street	187
4.5 Open Space Strategy	101	6.4 Core Area 2a - Tramshed	195
4.6 Engineering Strategy - Flood Risk Scoping Strategy	107	6.5 Core Area 3 -Nairn Street	201
4.7 Engineering Strategy - Preliminary Land Quality Study	123	6.6 Core Area 4 -Gasometers And New River Park	205
4.8 Engineering Strategy - Utilities, Related Infrastructure & Sustainability	129	6.7 Core Area 5 - Fortrose Close, Lanrick Road	211
4.9 Property Strategy	137		

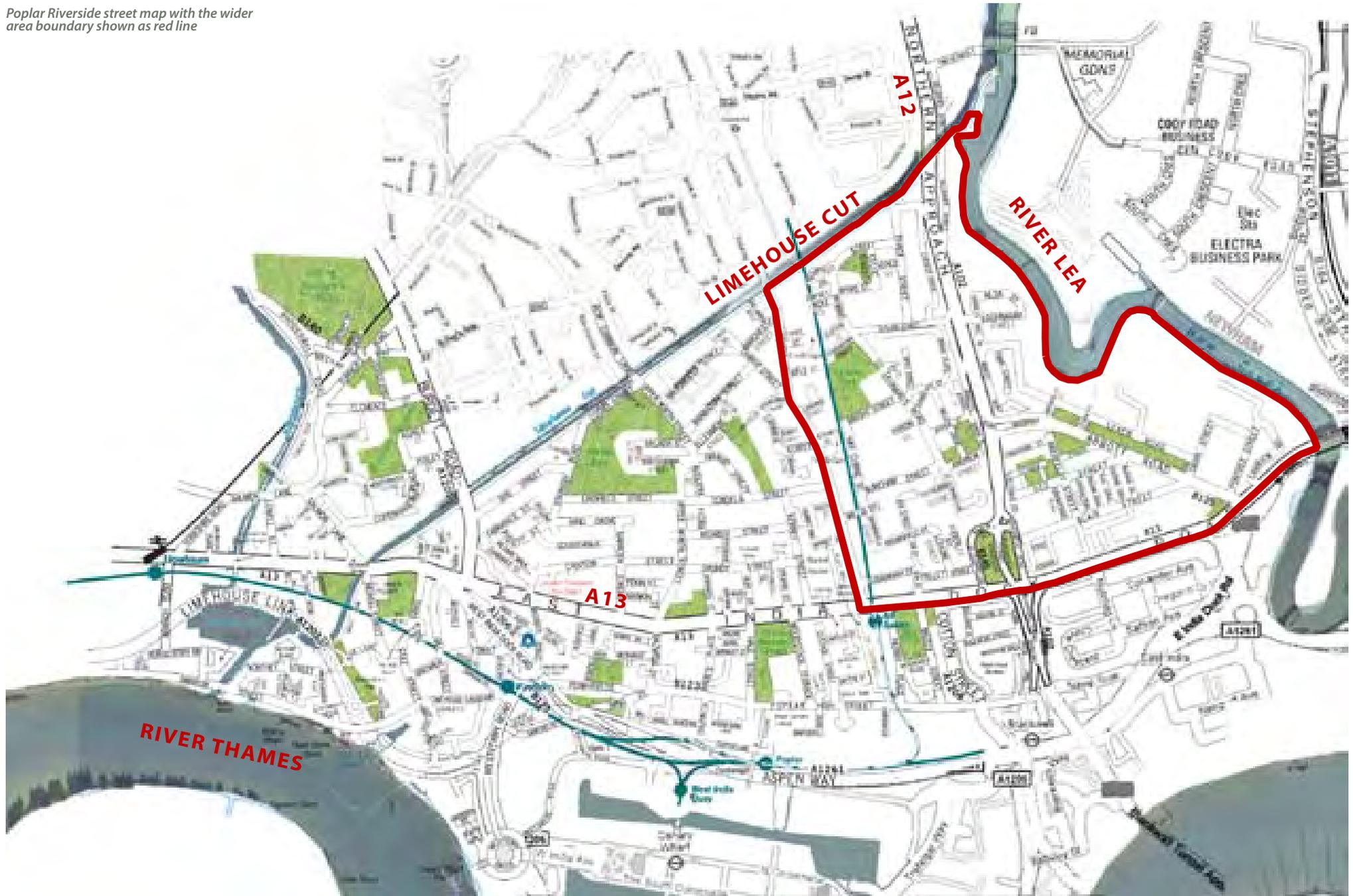
7.0 The Proposed strategy	219
7.1 The Proposed Strategy	221
7.2 Figure Ground	223
7.3 Open Space Strategy	225
7.4 Road Network Strategy	227
7.5 Massing & Uses Strategies	229
7.6 Phasing	231



ACRONYMS / VOCABULARY

DFL	Design For London <i>Design for London was established to support the delivery of well-designed projects across London, to make sure that design excellence is reflected within all projects that the mayoral agencies commission or fund.</i>
EA	Environmental Agency <i>The Environmental agency is the leading public body for protecting and improving the environment in England and Wales.</i>
HSE Consultation Zone	Health and Safety Executive <i>HSE provides advice to planning authorities on applications they receive for developments near major hazard sites.</i>
LBTH	London Borough of Tower Hamlets
LDF	Local Development Framework <i>The Local Development Framework (LDF) is a collection of planning documents to guide future planning decisions in Tower Hamlets.</i>
LLV	Lower Lea Valley <i>The Lower Lea Valley is the area which surrounds the River Lea, which runs along the London Boroughs of Tower Hamlets and Newham boundary.</i>
LLVOAPF	Lower Lea Valley Opportunity Area Planning Framework <i>This Lower Lea Valley Opportunity Area Planning Framework was agreed by the Mayor in January 2007 and sets out his strategic planning vision.</i>
London Plan	<i>The London Plan was adopted in February 2004 and acts as the Spatial Development strategy for London</i>
LTGDC	London Thames Gateway Development Corporation <i>The LTGDC are the Government's lead regeneration agency for the Lower Lea Valley and London Riverside.</i>
PADHI	Planning Advice for Developments near Hazardous Installations
Poplar HARCA	Poplar Housing and Regeneration Community Association <i>Poplar HARCA are a registered social landlord who own and manage around 8,500 homes in Poplar.</i>
PTALs	Public Transport Accessibility Levels <i>PTALs are a detailed and accurate measure of the accessibility of a point to the public transport network.</i>
SPD	Supplementary Planning Document <i>SPDs provide more detailed advice about the core strategies and development control policies and reflect current best practice guidelines.</i>
UDP	Unitary Development Plan <i>The UDP is the council's statutory development plan. This is a strategic document that establishes the land use and planning framework for the borough.</i>

Poplar Riverside street map with the wider area boundary shown as red line





1.0 Executive Summary

1.1 Reconnecting Poplar Riverside

This Delivery and Implementation Strategy has been commissioned by the London Thames Gateway Development Corporation (LTGDC) in partnership with London Borough of Tower Hamlets (LBTH), Design for London (DfL) and Poplar HARCA with the stated primary objective of -

‘developing a structured delivery strategy which the LTGDC can use to initiate interventions aimed at improving conditions for existing residents and new communities and to provide an attractive environment for new commercial investment in the area.’

The Strategy investigates the development capacity of the area in relation to other opportunities within a wider Lea Valley context and presents a costed delivery strategy to guide development and provide an action plan for the LTGDC and its partner organisations.

Poplar Riverside is located within the Lower Lea Valley (LLV) in East London which is currently undergoing rapid change. Over the next 20 years the combined effect of the new Lea River Park and 2012 Olympic Legacy will transform the Valley from a declining industrial backland into a foreground ‘water city’ for East London.

1.2 Building upon the Lower Lea Valley Opportunity Area Framework Vision

The proposals for Poplar Riverside build upon the vision and principles of the The Lower Lea Valley Opportunity Area Framework (LLVOAPF) which aims to

...transform the LLV to become a vibrant, high quality and sustainable mixed use city district, that is fully integrated into the urban fabric of London and is set within an unrivalled landscape that contains new high quality parkland and a unique network of waterways.

The Strategy follows the seven core principles within the LLVOAPF which are:

A Water City: Develop the LLV as a water city

B Thriving Centres: Create thriving centres

C Neighbourhoods and Communities: create new sustainable residential communities.

D Working Valley: Manage the transition of industrial sites for other land uses and a mix of employment uses

E A Connected Valley: reduce physical severances, improve public transport, road, cycle and pedestrian networks

F A Sustainable and Enduring Legacy; Proposals should adhere to principles of sustainability in the built environment.

G Reap the benefits of Olympic investment: plan and phase social infrastructure to maximise integration and synergy

The Strategy builds upon these core principles within a vision for Poplar Riverside which develops new landscape connections to link the river park to surrounding communities.

1.3 An integrated Vision for Poplar Riverside

The Strategy looks at a wider area and core area which have been brought together into an integrated vision for Poplar Riverside.

The wider area strategies look specifically at creating new connections within Poplar Riverside and to surrounding areas; new local centres and social infrastructure to support new and existing communities.

The core area proposals look at the transformation of industrial sites along the River Lea within 5 sub-sites to include mixed residential and employment uses and a new river edge park as part of the Lea River Park open space network.

The Strategy highlights key constraints and opportunities which restrict the development of the core area and concludes that new links are essential to the development of Poplar Riverside as a whole and to its role within a connected valley. Finally it sets out a costed delivery strategy and an action plan for the LTGDC and its partner organizations.



1.4 The purpose of the Strategy

The Strategy has been commissioned by the LTGDC to initiate a series of interventions to improve the area. It provides private and public sector bodies with guidance on future proposals and although it will not have planning status it will be used to inform responses to planning applications. Sections of the report may be used as stand alone documents to inform future developments.

1.5 Thematic objectives addressed by the strategy

The strategy focuses on a core area defined within the brief and specifically on how it can be transformed from current industrial uses to a mixed residential area with a new river edge park as part of the wider Lea River Park proposal. The proposed transformation is based on a series of thematic objectives and key aims and principles which have been identified in previous policy documents, the brief, and expanded in discussions with client and stakeholder groups from the outset (see following page).

‘Reconnecting Poplar Riverside’ builds upon the core principles of the LLVOAPF within a vision for Poplar Riverside which develops new landscape connections to link the river park to surrounding communities.’

view north along the River Lea from the A13





Improve key connections

- Overcome current barriers to improve connectivity within Poplar Riverside and to key areas beyond.
- Improve access to local centres, services and amenities by increasing permeability.
- Connect the core area through strong east-west links to overcome A12 severance and build upon the potential of the new crossing at Lochnagar Street.
- Identify connections to major centres to the north (Bromley-by-Bow), south (East India, Canary Wharf), east (Canning Town, Star Lane, Cody Campus) and west (Chrisp Street market).
- Improve accessibility, movement and linkage within Poplar Riverside and to the surrounding areas.



Improve public transport

- Improve PTALs. improve public transport in terms of new bus routes, restrictions on heavy vehicles, cycleways and access to public transport.
- Identify and support local centres at the heart of communities consistent with LBTH's retail and social infrastructure strategies.



Enhance and intensify local centres

- Identify and locate services and facilities necessary to support the growing communities.
- Enhance local centres and identify opportunities to consolidate fragmented retail provision plus new community facilities into accessible centres with strong identity - 'hamlets' within Poplar Riverside.
- Improve the quality of the public realm.



- **Redefine Poplar's riparian identity.** Identify ways in which Poplar Riverside can re-connect and engage with the River Lea through public spaces within new development. Provide public access to the river and across through new pedestrian, cycle and vehicular bridges at strategic points.
- **Integrate the proposed 6 hectare river edge park at Leven Road** (from LLVOAPF and Lea River Park concept study) within a wider area strategy which links Chrisp Street, Langdon Park DLR Station to the Lea River Park.
- **Improve the A12 as an environment appropriate within a built up urban area,** increase and improve crossings.
- **Identify a hierarchy of public spaces and improvements to the public realm,** linked to connections to the new district I riverside park.



- **Identify design principles to design and protect against the 1 in 1000 year flood risk.**
- **Respond to flood risk by locating non-residential uses or town house type units on the ground floor.**
- **Indicate the need to manage contamination risk carefully through consideration of sources, receptors and pathways.**
- **Identify that the efficiency of site wide engineering through the development of integrated strategies for water, energy and waste.**



- **Define areas for new residential development, indicate, mix, density, mass and scale for core area sites in line with the needs of the local community, the wider policy context and the objective of delivering sustainable communities.**
- **Anticipate how this relates to developments within the wider area. Optimise residential capacity within the core area and balance use mix, employment opportunity, flood risk and public amenity.**
- **Indicate the potential for higher density residential capacity through development of available or underused sites within the wider area and the potential for expanding the range of residential accommodation to cater for a more diverse population, tenure and mix.**
- **Explore opportunities for new industries of varying scales which can be located within a more diverse residential environment – creative and green industries, recycling, research, start –up.**
- **Develop guidelines for density, massing and scale of buildings to guide future development. The general principle of lower buildings towards the river, higher towards the town centres is central to a cohesive urban structure.**

1.6 Key Connections

Poplar Riverside suffers from major barriers: The River Lea, Limehouse Cut, the A12 and A13, the DLR cutting and large scale post-war estates, which separate it from surrounding areas, transport centres and create major divisions.

The strategy focuses on improving west-east connections with 3 new links;

- **The Bridge Link**

Chrip Street market to Canning Town town centre and transport interchange via Brownfield Street, Dee Street and new pedestrian bridges across the A12 and River Lea. This is the highest priority connection with 'quick win' bridge projects which can be implemented at an early stage.

- **The River Link**

Chrip Street to the river edge including a new A12 crossing, the knitting together of existing open spaces, a new public space at Devon's Wharf and the new park. A new pedestrian bridge connects to The Fatwalk, Cody campus and east to the future Star Lane DLR station.

- **Lochnagar Link**

Zetland to Lochnagar Street via the new crossing to be constructed in 2009. A new pedestrian bridge connects to Cody Campus.

In addition 6 north - south links include:

- A new road bridge over Limehouse cut provides a new bus route through poorly served local areas to Bromley-by-Bow.
- A new road connecting Gillender Street to Leven Road will provide access and bus routes through the core area.
- A new pedestrian crossing over the A13 to connect Aberfeldy Street to the south.
- The A12 transformed into boulevard faced with active frontages, widened edges to incorporate avenues of trees, dedicated cycleways, roads and parking to serve local movement.



Key links diagram



River link diagram

1.7 Core areas:

Key connections optimise opportunity to develop 5 core area sites including the new 6 hectare park on the river edge. New developments within the core area have the capacity to open up a stretch of the river previously denied and to overcome the barriers which have had a detrimental affect on the growth and development of the area over time. There is now the opportunity unlock landlocked sites and reconnect hinterland areas to the river edge and beyond. The river parks will be destinations in their own right for the local and wider communities, a key driver for the surrounding developments and regeneration of the area as a whole.

We believe that development should be permeable, diverse and flexible. Wherever possible the layout should extend existing street patterns, provide clear, safe, routes to new river crossings, provide a coherent hierarchy of usable public, communal and private spaces,

A number of key principles have steered the proposals and include:

- that development takes advantage of river views without restricting public access
- that buildings are lower close to the river, taller further away. Avoid tall buildings along the river edge
- that a mix of unit sizes and tenures should be integrated within courtyard buildings with a range of private and communal open spaces
- that buildings are generally 5-7 storeys high rising to 10 storeys facing onto the A12
- large areas of at grade car parking to be avoided. Provision of 0.5 car parking spaces per dwelling are accommodated within semi-basement car parks
- that the river edge is respected as a public amenity space. Avoid privatisation of the river edge, increase river ecology through a softening of edges
- that west-east connections are created from the A12 to the river edge to provide direct physical and visual links

The core areas in summary are:

Core area 1: Bow Lock

Recommended to change from industrial use to residential with employment uses. The attractive area to the north should be extended south and made accessible.

Core area 2: Ailsa Street

In multiple ownership and of poor environmental quality this area is currently the subject of a Green Book Appraisal as part of the LTGDC CPO process. The new Lochnagar Street crossing raises development potential and the area will be served by a new road connection from Gillender Street to Leven Road. The proposal includes a new 0.9 hectare local park and 2FE primary school, both located at the eastern end of Lochnagar Street. LTGDC intervention is required to unlock the site which is vital to the successful development of other core area sites.

Core area 2a: Tram shed

The Tram Shed is one of the few historic industrial buildings which remains and is worthy of retention in part. The proposed change of use into a public facility such as a performing arts centre combined with residential development, and a new public square it will make a significant point of arrival on the river edge.

Core area 3: Nairn Street Estate

Owned by Poplar HARCA, this area is a landlocked and introverted estate of poor quality and is part of HARCA's redevelopment strategy for renewal. It could form a continuation of the Ailsa Street development in character with frontages onto the A12. We propose that Nairn Street should be reinstated to connect to Abbott Road.

Core area 4: Poplar River Park

This site includes a 6 hectare park identified in LLVOAPF and developed within the Lea River Park Framework as one of a necklace of 6 district parks containing sports pitches, interactive and educational facilities in the form of a river ecology and/or a renewable energy centre. It provides an opportunity to break out the river edge with stepped terraces and reed beds to relate to the ecology park across the river. One of the gasometers is retained as a vertical garden. This site is currently owned by

National Grid with active gas holders. Decommissioning is scheduled for 2015 so implementation of the park is a longer term proposition. Any way of bringing this forward would be desirable.

Core area 5: Fortrose Close, Lanrick Road

The layout integrates the new pedestrian bridge which forms part of the key connection to Canning Town. It shows redevelopment of the HARCA owned Fortrose Street Estate to include a direct route from Abbott Road to the bridge. The south east corner could be developed prior to the decommissioning of the gasometers, with retention of the Blackwall Estate, which would allow the implementation of the bridge connection. This is considered an essential to core area development. We propose that small scale industrial uses occupy the ground floor of residential blocks along the river edge and acts as a buffer to the noisy industries across the river. A new public space with local retail units is created at the junction of Abbott Road and Oban Street. Next to the park there is potential for sports changing facilities, and corner shops related to the new bridge and park buildings.

Priorities:

A phasing strategy identifies short, medium and long term projects. The short term priorities are:

- 1. Chrisp Street to Canning Town connection via Brownfield Street and new bridge crossings**
- 2. A12/Lochnagar crossing to provide access to the Ailsa Street sites (due to be implemented in 2009)**
- 3. Ailsa Street CPO and redevelopment**
- 4. A new A13 crossing at Aberfeldy Street**
- 5. A new road bridge over Limehouse Cut from Uamvar Street to Empson Street to provide a much needed bus route from the Teviot estates to Bromley-by-Bow.**
- 6. Poplar River Park providing the gas holder decommissioning can be brought forward.**



Indicative visualization of the A12 bridge



Indicative birds eye view of the proposed strategy



2.0 Introduction



2.1 Commissioning 'Reconnecting Poplar'

The Poplar Riverside Delivery and Implementation Strategy was commissioned in March 2008 by the London Thames Gateway Development Corporation (LTGDC) and their strategic partners following competitive tender and interview. The Strategy has been prepared by the selected team of Meadowcroft Griffin Architects with their consultant team of Savills, Steer Davies Gleave, Latz und Partner, and Davis Langdon.

2.2 A Vision for Poplar Riverside

The Strategy sets out a vision for Poplar Riverside, to guide development over the next 10-20 years and beyond. It defines a strategic context for investment and a structured delivery strategy which the LTGDC and its partners can use to initiate a series of interventions to drive and manage change within Poplar Riverside which is fully integrated with vision, aspirations and changes within the wider Lower Lea Valley.

2.3 The Aims of 'Reconnecting Poplar'

The Strategies' aims are as follows:

- to support the vision of the London Plan and LLVOAPF to transform the lower lea valley into a connected water city with vibrant new mixed residential communities
- delivery of sustainable communities
- to bring local and regional policy agendas and initiatives together
- to use the momentum of recent, current and future regeneration efforts in Poplar Riverside, surrounding town centres, the Lea Valley, and Thames Gateway as a whole, and

thereby

- to maximise the regeneration benefits in a way that builds a strong identity and cohesive urban structure for future growth
- to identify specific projects for implementation within a costed delivery strategy and action plan.

2.4 The Study Area : Wider Area & Core Area

The Poplar Riverside study area is defined within the The Lower Lea Valley Opportunity Area Framework (LLVOAPF) as the area between Chrisp Street, the River Lea, Limehouse Cut and the A13 - the 'wider area'. The 'core area' of predominantly industrial river edge sites east of the A12 lies within the LTGDC boundary and is identified within the LLVOAPF as an area for release from current industrial use to mixed residential and employment.

The Strategy is divided into two categories, firstly a Delivery Strategy for the Wider Area and secondly a Delivery Strategy and Implementation Strategy for the Core Area. The delivery strategy for the core area is detailed and focused on redevelopment. The wider area focuses on environmental improvements, new connections and the intensification of residential development.

2.5 Poplar Riverside Today

Poplar Riverside is currently extraordinary in its imbalance of deprivation and proximity to the extreme commercial wealth of Canary Wharf and the Isle of Dogs. It is a typical fringe area, on the border between boroughs of Tower Hamlets and Newham, which has developed piecemeal in its post war history. The decline in river related industry and the imposition of major arterial road infrastructure have resulted in 'landlocked' communities without identity, focus, social infrastructure and local economy to thrive. It is an 'island' separated

from surrounding communities and major transport centres which are close by but difficult to get to. It has a high proportion of social housing (Poplar Harca own 37% of land in the wider area) within large estates, recognised as being of generally poor quality and ready for renewal. It now consists of semi derelict industrial sites which separate hinterland communities from the river.

2.6 Poplar Riverside Tomorrow

The strategy for Poplar Riverside aligns with the aspirations of the LLVOAPF which states that:

The key opportunity for transformation in the LLV is provided through the managed release of industrial land and ensuring that new development is sustainable and built to the highest environmental and design standards.

The strategy is a response to the commitment of the LTGDC to co-ordinate a managed regeneration of Poplar Riverside which optimises the opportunities for change in a way which is beneficial for new and existing communities, promotes high quality development and builds upon the intrinsic qualities of the area.

The Strategy brings together and synthesises a spectrum of studies ranging from the LLVOAPF, LBTH emerging planning policy; to Poplar Harca's Reshaping Poplar study. The LLVOAPF has been the main point of reference and the starting point in looking at how Poplar Riverside can be part of the vision for a connected water city within the LLV.

The thematic objectives are listed below and will be discussed in further detail in the Area Wide Strategies section:

- **Improve key connections**
- **Improve public transport**
- **Enhance and intensify local centres**
- **Improve access to green spaces and the public realm**

- **Provide long term engineering solutions**
- **Deliver transformation through regeneration**

2.7 Funding and phasing

Key projects will be identified and prioritised, and phasing and funding mechanisms will be defined to unlock the regenerative potential of Poplar riverside and surrounding areas. Recommendations for priority have been identified as, key infrastructure improvements, the need to deliver higher densities via improved PTALs, the lochnagar junction.

2.8 Our Approach

The strategy has been developed by taking a 'bottom up approach' involving extensive consultation with individual stakeholders (see the following page for a comprehensive list of all client/stakeholder meetings and presentations).

Building on the inherent characteristics of the area, the proposed strategy, aims to repair, knit and transform existing communities to mesh with the new. It focuses on transformation rather than change; renewal and repair rather than replacement.

A level of detail has been developed, in parallel with the green book appraisal, necessary to provide robust, practical and viable solutions to overcome the immediate barriers. This synthesizes a delivery and implementation strategy which meshes local needs and timescales with wider strategic issues.

• Inception meeting with client and key stakeholders	LTGDC, LBTH , DfL, Poplar HARCA,MGA	20th March 08
• London Borough of Tower Hamlets Consultation	LBTH, MGA, Design Team	2nd April 08
• Client meeting	LTGDC, MGA	14th April 08
• Client meeting	LTGDC, DfL, 5th Studio, MGA	14th April 08
• Client meeting	Poplar HARCA, LDL, MGA	14th April 08
• Crown Wharf Workshop	LTGDC, LBTH, DfL Allies and Morrison, MGA	18th April 08
• EDAW meeting	EDAW, MGA, Latz und Partners	21st April 08
• Witherfod Watson Mann meeting	Witherford Watson Mann, MGA, Savills	28th April 08
• Client meeting	LTGDC MGA	2nd May 08
• Design for London review	DfL, MGA	7th May 08
• Transport for London meeting	TfL, MGA, Steer Davies Gleave	14th May 08
• Client Review Meeting	LTGDC, LBTH, DfL, Poplar HARCA, MGA, Design Team	21st May 08
•		23rd May 08
• Design for London Chrisp Street Workshop	LBTH, DfL, MGA, Savills	23rd May 08
• LBTH meeting	LBTH, MGA	30th May 08
• Strategy Review	LTGDC, LBTH, DfL, Poplar HARCA, MGA, LGL	6th June 08
• Design for London review	DfL, MGA	20th June 08
• Design for London design workshop	DfL, MGA	27th June 08
• LBTH Retail Strategy meeting	LBTH, MGA	2nd July 08
• Client meeting	LTGDC, MGA	7th July 08
• Design for London DIS review	DfL MGA	11th July 08
• Leaside Regeneration meeting	LGL, MGA	21st July 08
• Transport for London meeting	DfL, TfL, MGA	21st July 08
• Teviott Now residents Association	Poplar HARCA, MGA	30th July 08
• Client meeting	DfL, MGA	4th September 08
• Client meeting	DfL, MGA	22nd September 08
• Presentation to LTGDC Board	LTGDC Board, MGA	6th October 08
• Presentation to LBTH	LBTH, MGA	7th October 08
• Client meeting	DfL, MGA	24th October 08

2.9 Report structure

This report is structured in the following sections:

3.0 Context and Background

This section describes the geographical, socio-economic, context of change, historical, and policy context of Poplar Riverside.

4.0 Area Wide Strategies

This section outlines the strategies for the key area wide issues, connectivity, local centres, open spaces, flood risk, land quality, utilities, infrastructure, sustainability and property, and identifies the key strategic links.

5.0 Delivery of Links

This section looks at how each strategic link identified can be delivered as physical routes.

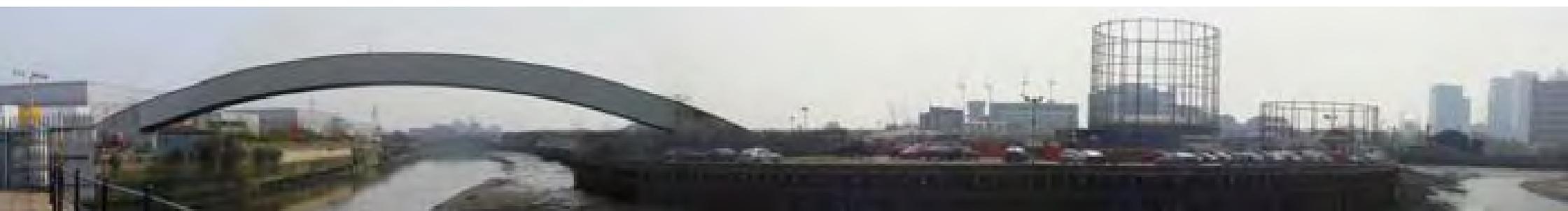
6.0 Core Areas

This section defines how the core areas within the site can be developed within the context of the opportunities created by the new connections.

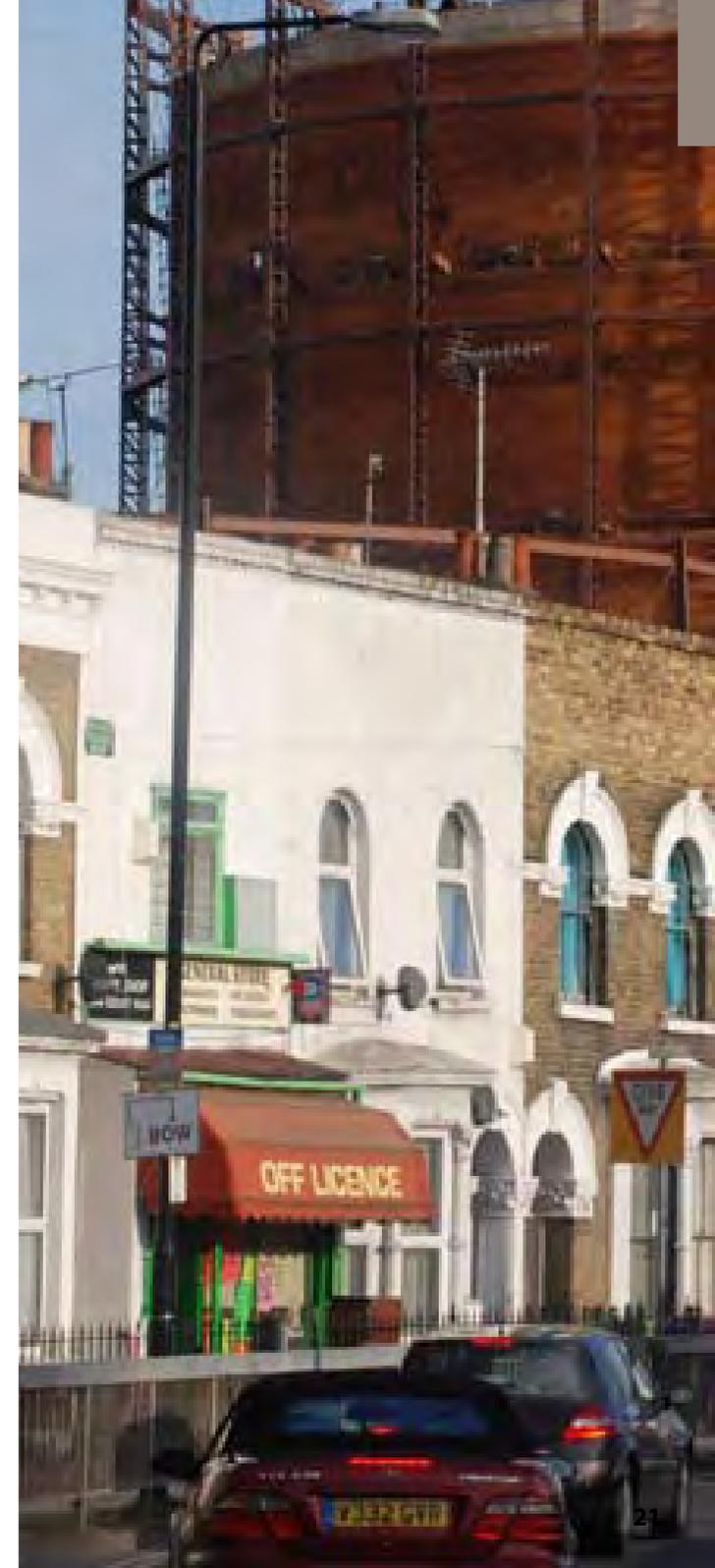
7.0 The Proposed Strategy

This section summaries the wider area and core area strategies into a series of drawings and also describes a phasing of projects over a series of timescales.

view across River Lea to gasometer site



‘The key opportunity for transformation in the LLV is provided through the managed release of industrial land and ensuring that new development is sustainable and built to the highest environmental and design standards.’





3.0 Context and Background



3.1.1 Wider Geographical Context

Poplar Riverside is an area within LB Tower Hamlets on the west bank of the River Lea which forms the borough boundary with Newham.

The River Lea

The River Lea is one of the main geographical features of east London running north south through a complicated mass of streams and flood channels. The area surrounding the River Lea (or Lee) is The Lower Lea Valley.

Throughout its history the The River Lea has supplied water, energy, and transport to support a range of industries - textiles, engineering, pottery, chemicals, gas and electricity - many highly toxic, particularly within the southern part, which have left a legacy of pollution to this day.

Poplar Riverside is located at the southern end of the Lower Lea valley to the west of Bow Creek with its dramatic bends, at the point where the many waterways and channels to the north coalesce into a tidal river before it meets the Thames at Trinity Buoy Wharf.

Poplar Riverside is part of the riparian culture of the River Lea and the Thames. Its character and identity is intimately bound to the changes within the Lea Valley throughout its recent and more distant past.

A Fringe Location

Situated between Canary Wharf, the Royal Docks and Stratford, the Lower Lea Valley is located within one of the most historically disadvantaged parts of London and has long been a regeneration priority. The Valley is currently characterised by large areas of derelict industrial land and poor housing. Much of the land is fragmented, polluted and divided by waterways, overhead pylons, roads and railways.

Poplar Riverside is one of the most deprived areas within this wider context of deprivation. For decades it has fought to overcome the disadvantages of its fringe location. Its position between navigable waterways of Limehouse Cut and the River Lea was once its strength within the context of 19th century river related industries. As trade and traffic along the river has subsided, and the river has become a 'backland', Poplar Riverside along with other surrounding areas has found itself on the margins, physically, politically, socially and economically.

Opportunities & Potential for Growth

Although Poplar Riverside has been disadvantaged by its fringe location, it now sits within a context of great opportunity; from the enormous wealth of adjacent Canary Wharf to new, effective transport infrastructure and multiple regeneration initiatives. Poplar Riverside as a result of its location, is now part of Europe's largest regeneration area which offers enormous potential. It is part of the LTGDC Zone of Change 4 within the wider growth area of London Thames Gateway and it is situated at the southern-most end of the M11 London, Stansted, Cambridge corridor (the LSC). The area's potential for growth is further magnified by its proximity to the 2012 Olympics and its emerging legacy framework.

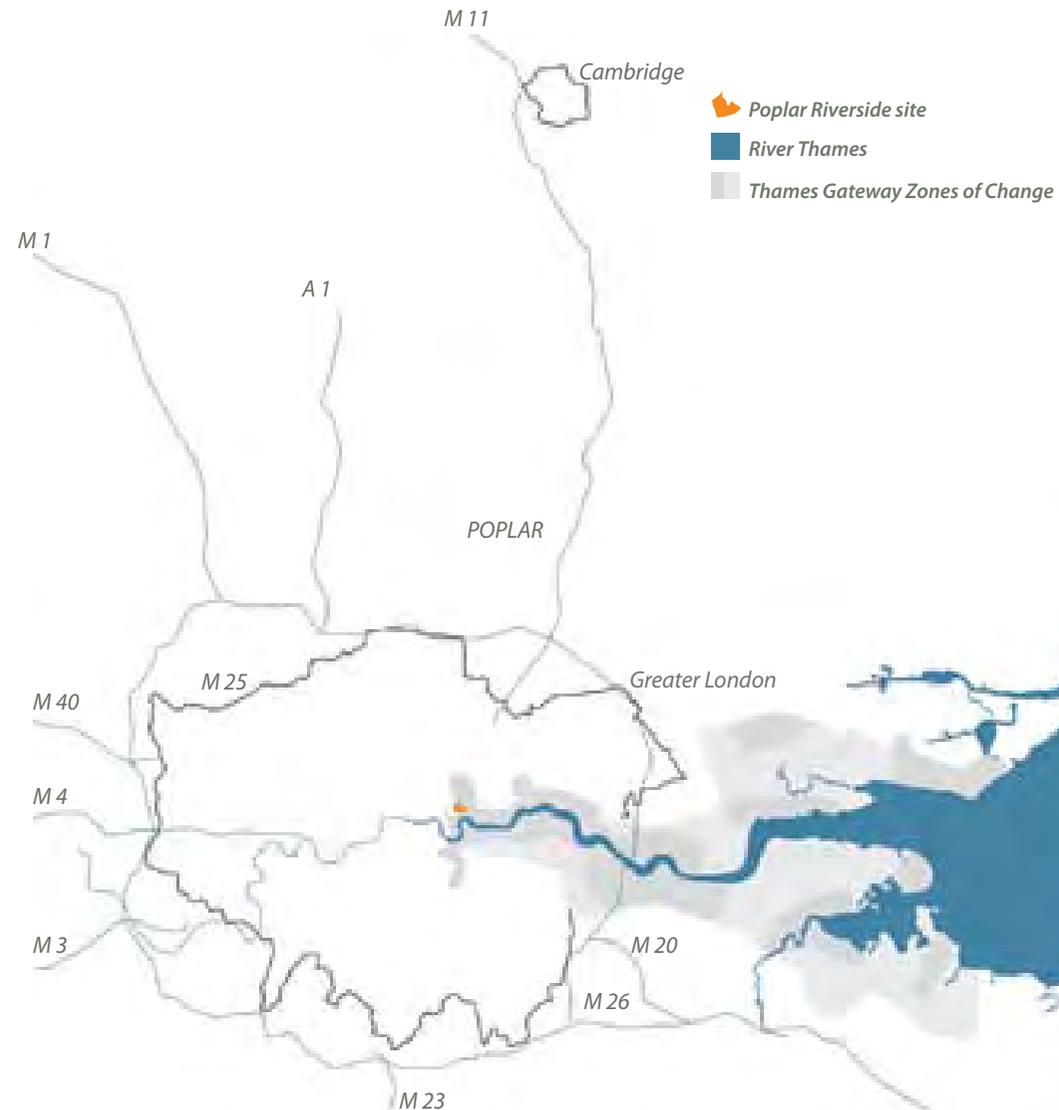
Connections

Poplar Riverside is within striking distance of an already excellent transport infrastructure which is still evolving. This infrastructure includes major road links: the A12/ Blackwall tunnel running north south and crossing the Thames, and the A13 that runs east west. This transport infrastructure also includes various rail links: the DLR, London Underground, Network Rail, and Crossrail to come. Furthermore City Airport with its links to a range of European cities is very close by and Stansted airport is within easy range to the north.

Bow lock looking south

Poplar Riverside is within Europe's largest regeneration area which offers an enormous potential magnified by its proximity to the 2012 Olympics and its emerging legacy framework

Poplar's location in relation to Greater London, Thames Gateway Zones of Change, Cambridge and the motorway network



3.1.2 The Local Geography of Poplar Riverside

Despite Poplar Riverside's location within an area of opportunity it is nevertheless currently a failing area. Situated on the eastern edge of Tower Hamlets, it has a typical edge of borough condition. It is sufficiently remote from town centres to be lacking in basic services and social infrastructure. It has an imbalanced proportion of social housing within large low quality estates, lack of diverse uses, high unemployment and poverty and low grade industrial uses which are in decline.

Poplar Riverside is a fringe 'in between' place. Built within the flood plain it has always had a rather fragile existence, a sort of wilderness, remote from surrounding centres, its raison d'être and character, formed by its industrial connection to the river, Limehouse Cut and East India Dock.

Topography - Poplar Riverside as an island

Poplar Riverside, despite its location next to the River Lea, no longer relates to the river. As a place with a long history of riparian culture it has lost its point of contact and symbiotic relationship with the river which this study aims to restore. The area is flat, close to the river, of made up ground to a level relating to flood defences which now contain the river. Land rises gently rising westwards from the A12.

The wider study area is entirely within the LBTH's Lansbury and East India Ward whose boundaries to the north east

and south follow topographical features which currently 'landlock' the area. Poplar Riverside is now an 'island' contained by Limehouse cut to the north, the River Lea to the east, the A13 to the south and the DLR to the west. Now, the river and this transport infrastructure form significant barriers to surrounding areas (see diagram on page 31).

The island character of the area is experienced within the quiet, suburban quality of streets which are far removed from the vibrant activity of local centres such as Chrisp Street Market and other surrounding areas that are developing as major centres - Stratford, Bromley-by-Bow and West Ham to the north, Canning town to the east, Canary Wharf and the Isle of Dogs to the south.

This significant absence of vibrancy and activity is reinforced by the island quality highlighted by the large estates which are set back from, or turn away from, the streets. Incremental and piecemeal estate renewal has resulted in a patchwork of housing types and 'styles' from the heroic Balfron Tower to the low rise 'village' Close.

Open Space & Lack of Orientation

Poplar Riverside is characterised by a fragmented urban structure without continuity and hierarchy. Orientation is difficult with many roads having been severed by the intervention of Post-War estates and large scale infrastructure projects such as the A12 and A13. This is particularly noticeable at Aberfeldy Street, St.. Leonards Street and Brownfield Street where there is a lack of direct views and clear definition of routes. Many spaces are

unclear as to whether they are public or part of residential estates. Everywhere the usual signs of where to go, where the main events and activities take place are missing.

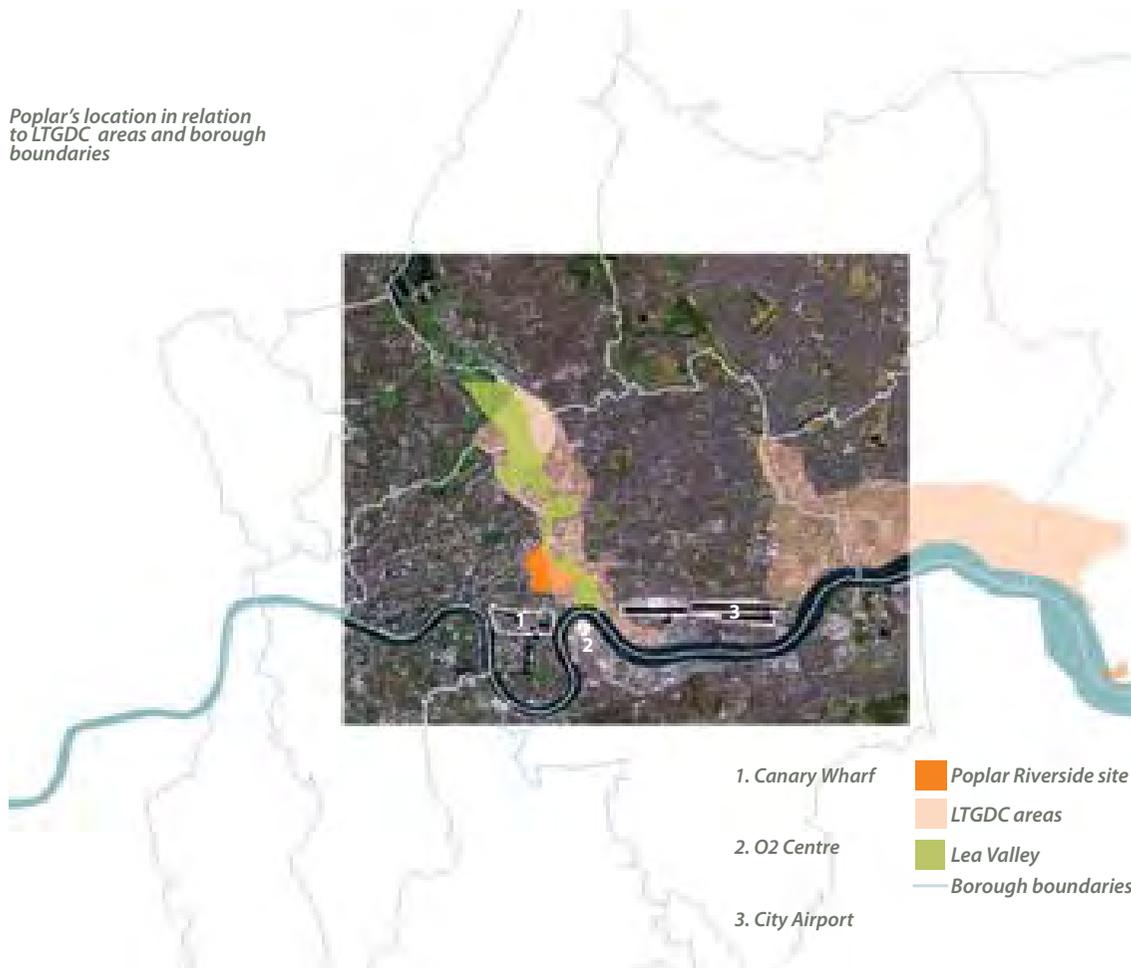
The prevailing sense of an expansive horizon is reinforced by a high proportion of open space. Much of it is within estate boundaries but cannot be used and is little more than a maintenance burden. There are as many fences and walls fronting onto street edges as buildings. Many streets lack active frontages, feel secluded and unsafe.

Langdon Park is the main public green open space within the wider area but feels rather under valued, perhaps due to the fact that it is the result of WWII bomb damage and



Poplar Riverside is characterised by wide expansive horizons, ordered by a series of vertical landmarks that help orientation

Poplar's location in relation to LTGDC areas and borough boundaries



view south along River Lea



is without open space status. Nevertheless it is a valuable amenity asset, particularly for Langdon Park School and for the developing communities around Crisp Street and within the wider area. However, located close to Langdon Park Station, and away from the A12 the school is in a good position to develop further.

Landmarks and Points of Orientation

Against the expansive horizon, taller structures stand out as key landmarks and points of orientation within an otherwise disorienting environment. These include Balfron Tower, the Leven Road gasometers, Langdon Park School, Church spire, Tweed House. New high rise development is in the process of altering the skyline which may reduce the legibility of these structures.

There is a conservation area around St Leonards Street and a few significant buildings such as the listed Bromley Hall, Old Library and the (unlisted) Tram Shed.

The Leven Road Gasometers, along with Balfron tower are the major landmarks within the area. They are not only key points of orientation but also symbolise the industrial and post-industrial history of the area.

Local Centres to Support a Predominantly Residential Area

Poplar Riverside is predominantly a residential area, with a high degree of social housing, mainly within post-war estates. Many of this social housing is dominated by large estates which are territorial and insular.

Within these residential areas there are generally no perceived centres. There are a handful of pockets of retail, some of which relate to other community facilities - e.g. Aberfeldy, but generally they are stand alone and are struggling to survive. Most of the retail is focussed around Crisp Street market which will continue to develop as the main local centre.

Social infrastructure:

There is a general lack of social infrastructure for existing and growing populations within the area.

There is one secondary school and two active primary schools within the wider study area: Langdon Park Secondary School and Culloden and Manorfield Primary Schools. Bromley Hall SEN school is currently vacant and part of a proposal for a new 2FE primary school east of the A12. There are a number of other primary schools within Lansbury to the west which are within easy reach of Poplar Riverside but are difficult to get to - St Saviours, Lansbury Lawrence, Bygrove, Mayflower.

Additionally there is a 4 GP medical centre on Etrick Street, The Teviot Centre on Wyvis Street, Aberfeldy Street Neighbourhood Centre.

Poplar Riverside is predominantly a residential area with no perceived centres

- existing retail
- existing primary schools
- existing secondary schools
- existing community centres



Existing socio- economic plan

3.1.3 Four Distinct Areas

Poplar Riverside is a fractured and fragmented place. Its character reflects the collision between pre and post war development with major divisions between uses and communities west and east of the A12. The area is broadly divided into four distinct areas, see below for descriptions and diagram on page 31:

A The Core area:

The core area along the river edge which is mainly industrial. This extends from Bow Lock to the north, is bounded by the A12 and Leven Road to the west, the River Lea to the east and the A13 to the south. This area is made up of a multiple of industrial activities under separate ownership and forms a barrier to the river. There are a number of perceived sub-areas within it:

- Bow Lock/Gillender Street: accessible by the public, a pedestrian river crossing, locks of historic interest;
- Ailsa Street: Sites around Lochnagar Street and Ailsa Street which includes the Waste Transfer Depot, small scale vehicle recycling industries which offer an extremely poor environment. Also includes Leaside Regenerations' offices within Bromley Hall and Bromley Library and successful container business units.
- The Tram Shed: Owned by Iron Mountain, one of the few remaining industrial buildings of historic interest within the area.
- Nairn Street estate: Owned by Poplar Harca - an 'island' estate.
- Leven Road Gasometers: NG owned. 3 operating gasholders currently scheduled for decommissioning in 2015. The HSE risk zones potentially restrict development within the core area - see diagram
- Blackwall Industrial estate, Lanrick Road, Fortrose

Close estate, Currie and Dunkeld: The Blackwall estate is an active operation, adjacent sites are vacant. TfL own the southern most river edge site. Fortrose Close and Currie and Dunkeld both Harca owned.

B Residential areas east of the A12:

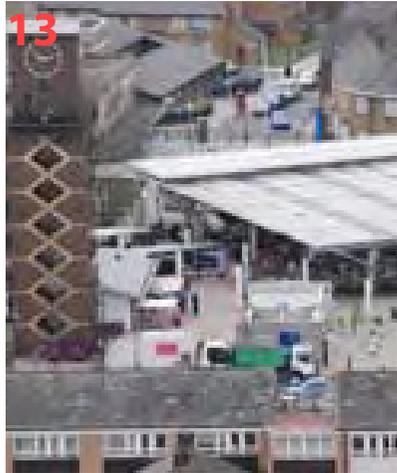
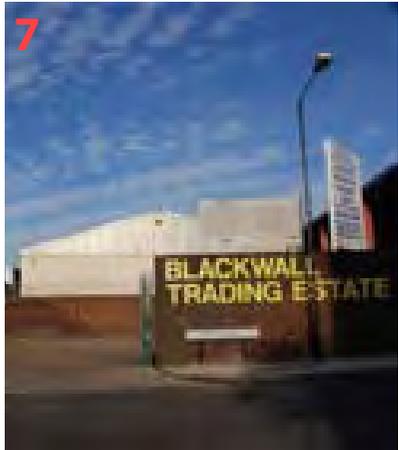
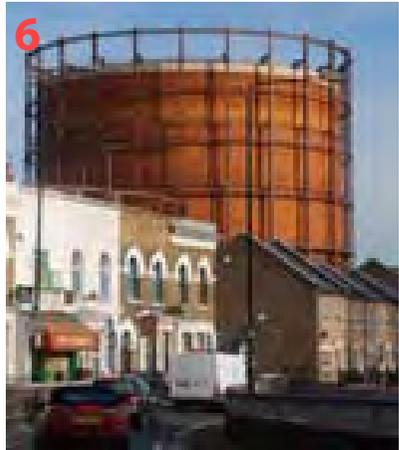
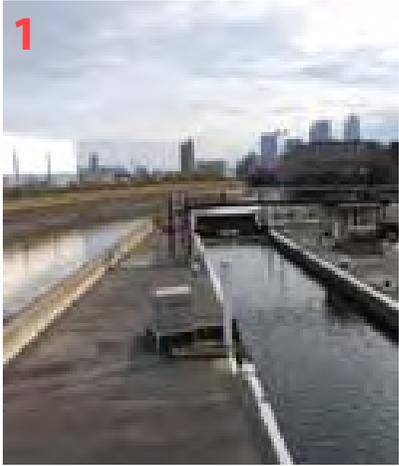
Bounded by the A12 to the west, Leven Road to the east, the A13 to the south: the Aberfeldy estates), owned by Poplar Harca.

C Residential areas west of the A12

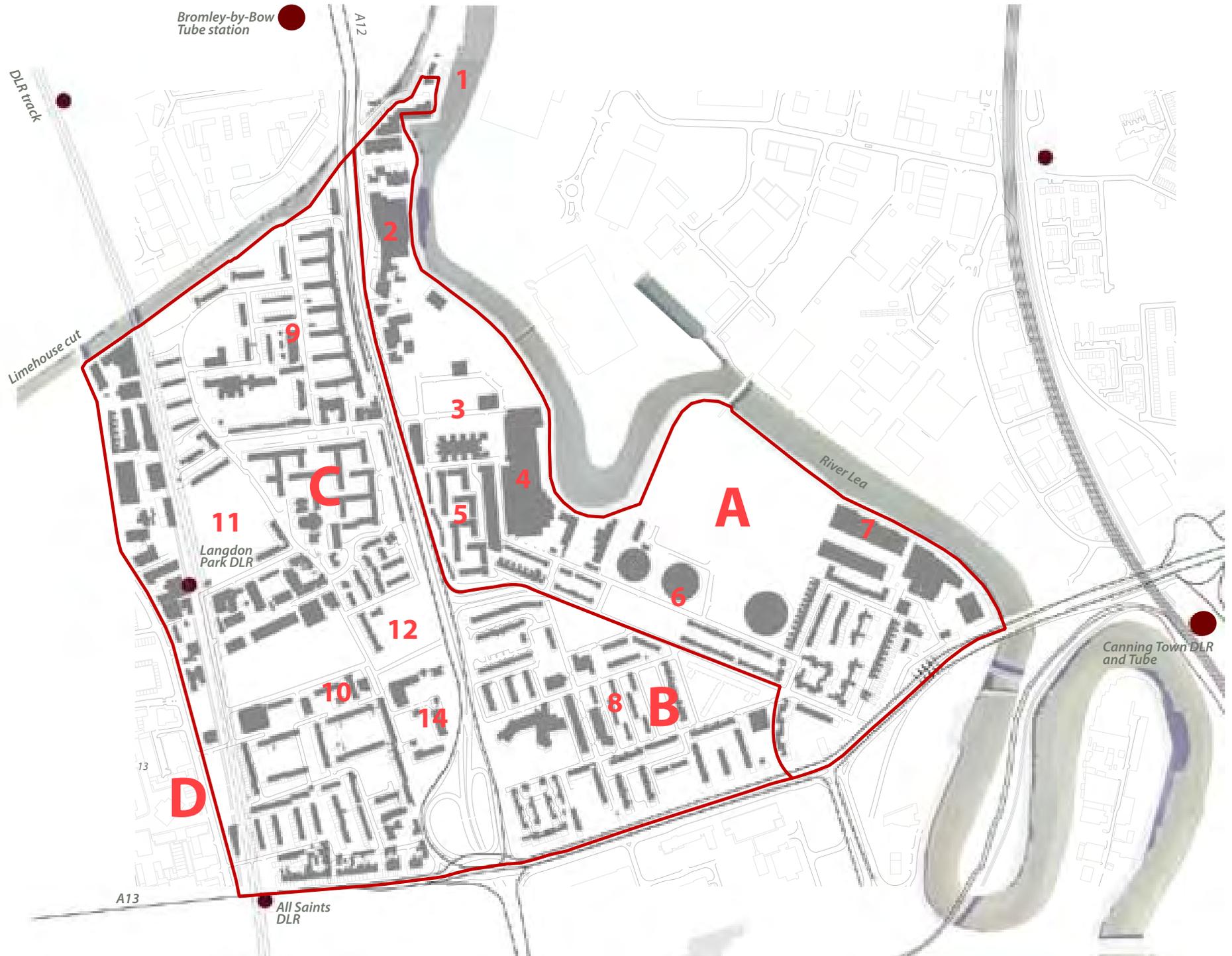
Bounded by Limehouse Cut to the north, the DLR to the west, the A13 to the south. The Teviot estates to the north and the Brownfield estate to the south all HARCA owned. The central area around St.. Leonards Street, the Church and Langdon Park School has an intensity of activity, is a remnant of the old fabric recognised within the conservation area. It contains two local parks - Langdon Park and Jolly's Green.

D Chrisp Street and Chrisp street

Market west of the DLR which runs northwards from East India Dock road.



- 1. Bow Lock
- 2. Gillender street
- 3. Lochnagar Street
- 4. The Tramshed
- 5. Nairn Street Estate
- 6. Abbott Road and Gasometers
- 7. Blackwall Industrial Estate
- 8. Aberfeldy estates
- 9. Teviot estate
- 10. Brownfield estate
- 11. Langdon Park
- 12. Jolly's Green
- 13. Crisp street market
- 14. Balfour Tower



Bromley-by-Bow
Tube station

DLR track

Limehouse cut

A12

River Lea

11
Langdon
Park DLR

Canning Town DLR
and Tube

A13

All Saints
DLR

3.1.5 Accessibility within Poplar Riverside

Major north-south rail and road connections follow the course of the valley. The A12 in particular is a vital regional arterial route feeding the Blackwall tunnel at the junction with the A13. Communities which developed beyond the flood plain are well served by rail networks although these are remote from areas which border the river. There is a noticeable lack of east west connections across the river which is one of the key issues identified within the LLVOAPF and currently being addressed within the valley-wide transport vision.

Poplar Riverside is surrounded by town centres, road and railway networks. Most of the wider area is within a potential 10 minute walk of a station, but because of severance and poor crossings they are difficult to get to.

The new Langdon Park station now gives access to the DLR for communities west of the A12. For communities to the east, access to Canning Town and Bromley-by-Bow is difficult. The south east corner of the core area is particularly close to the major transport hub of Canning Town but lack of a direct connection across the A13 involves a long and convoluted route to get there.

It is currently possible to walk from Aberfeldy to Canning Town within 10-15 minutes along Abbott Road and the A13 although proximity to heavy traffic makes this difficult.

Gillender Street connects the northern part of the core area to Bromley-by-Bow but again this is a rather poor environment and may feel unsafe at night.

Buses serve the residential areas and connect to stations but they are currently infrequent - see transportation section later.

There are currently no transport connections across the river between Canning Town and Bromley-by-Bow.

The LLVOAPF identified improvement to connections to Canning Town and 3 other possible bridges (2 pedestrian/cycle, 1 vehicular) over the River Lea along the stretch to Bow Lock.

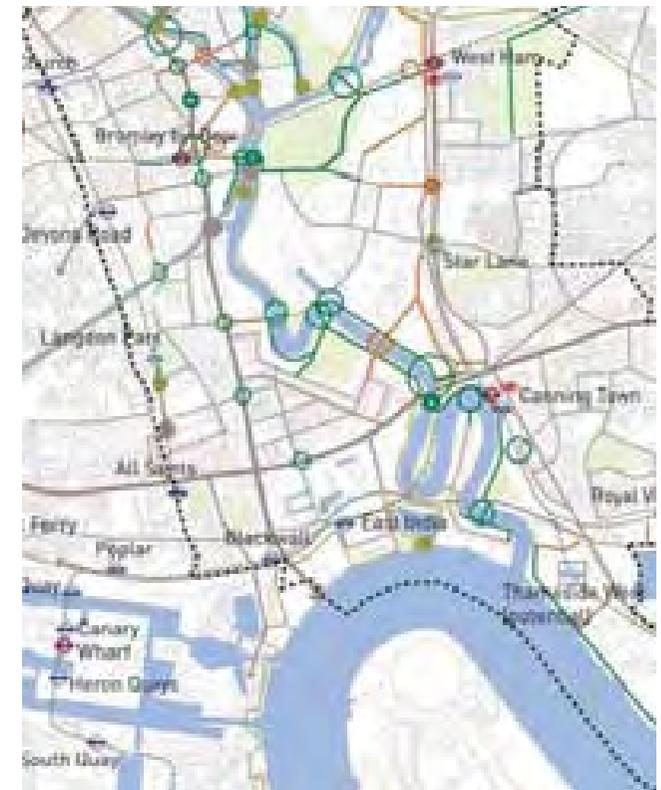
The A12 is a major through-route to the Blackwall tunnel. It has a 40mph speed limit, is jammed during peak hours, dangerous and noisy the rest of the time. There are three underpass crossings within the Poplar Riverside area but they are difficult to get to and feel very unsafe day and night. It is a massive barrier within the area and offers a threatening and inhospitable environment. Lack of active frontages and noisy traffic discourage people from going there or along it. Most surrounding development is set back and turns away from it adding to the sense of separation of the two sides. It impedes movement of local traffic. To avoid peak time jams, traffic heading east finds alternative routes to the A13 via Abbott Road which, constructed on marshland is now suffering structurally from the effect of HGVs.

The LLVOAPF identified two new crossings along the A12 - at Zetland Street/Lochnagar Street and at the Abbott Road junction. The new at grade crossing at Lochnagar Street, due for completion in 2009 will provide the first direct west-east connection for pedestrians and vehicles and will introduce traffic lights which will change the nature of traffic along this section and raises the possibility that further crossings may be viable.

The A13 is a major easterly route out of London. Between the junction of the A12, to Canning Town and beyond it is a major barrier between Poplar Riverside and areas to the south. Despite strong north-south desire lines there is no crossing point along the whole stretch from the A12 to Abbott Road. Even at the A12/A13 junction where there are crossings, they are difficult to negotiate.

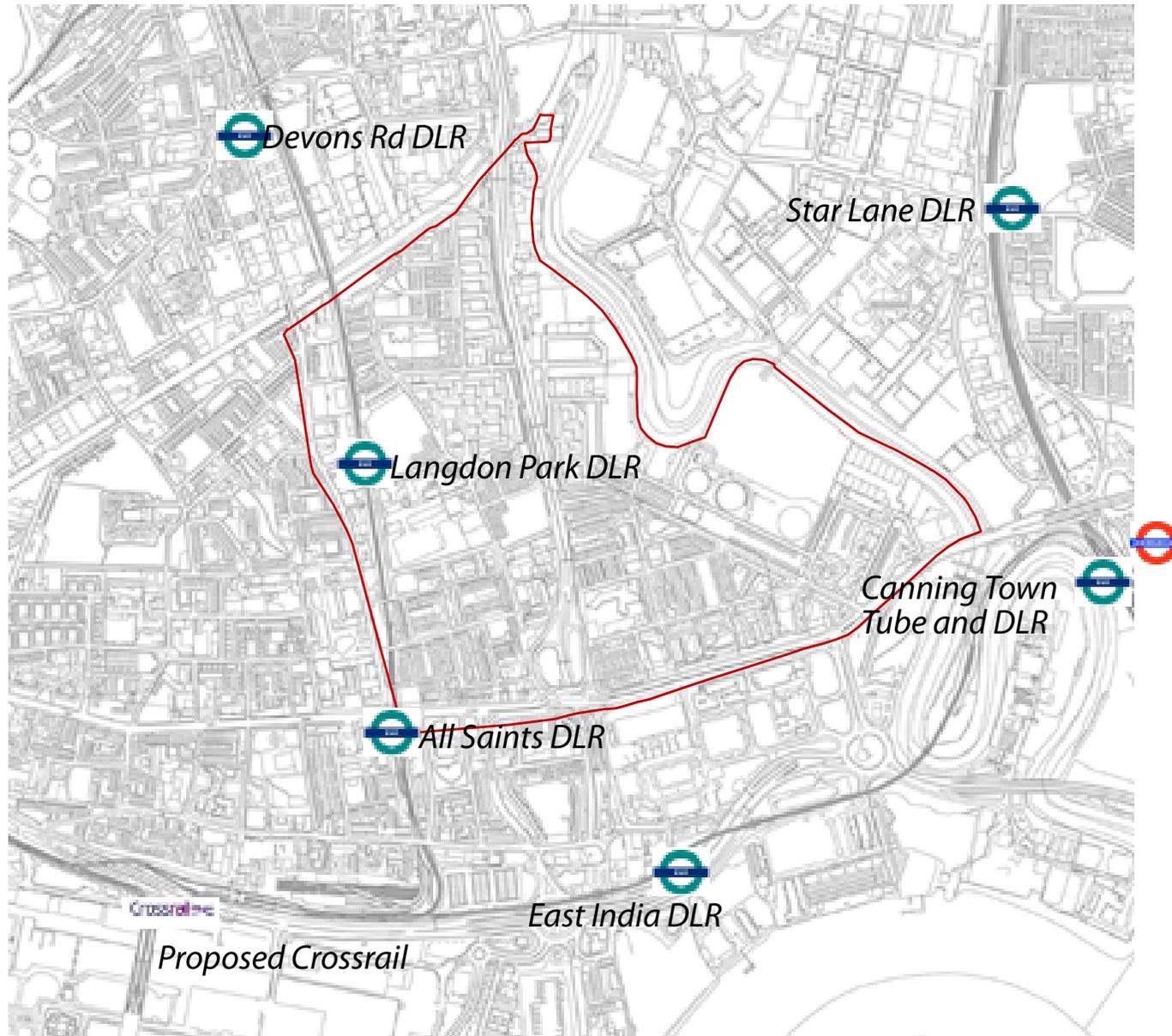
The LLVOAPF identifies 1 new north-south crossing to connect Aberfeldy Street to Nutmeg Lane.

The A13 has a boulevard feel but it is lifeless. New commercial buildings border the A13 along the south side but they lack active frontages. On the north side residential blocks within Aberfeldy are set back at a lower level.

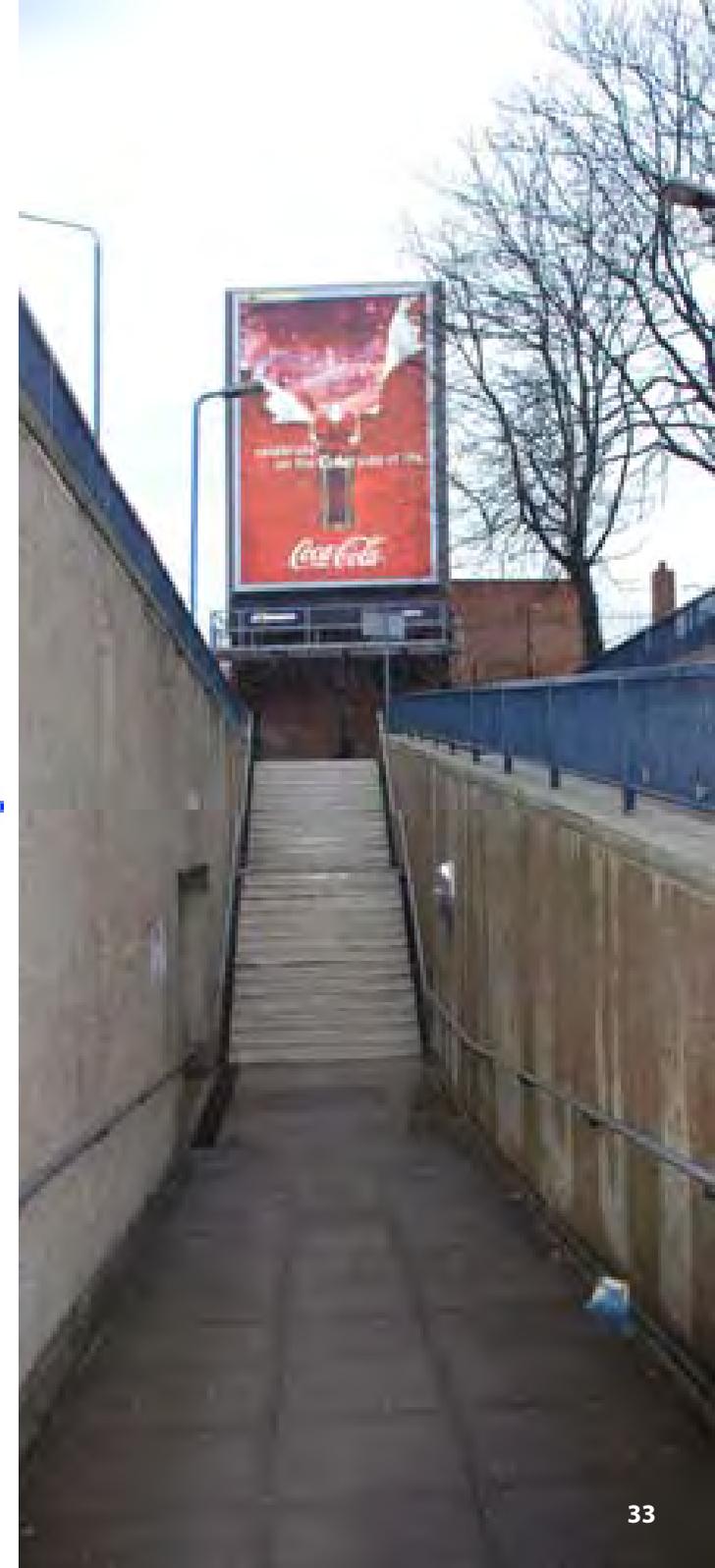


Illustrative Local Movement Network (Source: EDAW, Lower Lea Valley Opportunity Area Planning Framework 2007 for the Greater London Authority)

 Bromley by Bow Tube



Site location and transport links



A12 pedestrian underpass



3.2.1 Socio Economic Baseline Introduction

This study has been put together by Barney Stringer of HDS. It is a concise account of the socio-economic characteristics of Poplar Riverside. The study shows where there are imbalances in terms of the population. In particular it focusses on where there is a skills shortage and highlights that there is a relatively high level of unemployment, a high level of social housing, and wide ethnic range. It shows what is lacking in terms of community facilities and predicts a population growth.

3.2.2 Socio Economic Characteristics

The socio-economic characteristics of the area are influenced by the very high proportion of social rented housing – more than two thirds of the dwellings in the ward. Even compared to Tower Hamlets as a whole the ward has very few people living in privately owned homes, and a very small private renting market. This is highlighted for the Core Area, as shown below.

Reflecting this housing mix, levels of economic activity in the area are particularly low (around 44% of residents of the Core Area are economically inactive, compared to 41% in Tower Hamlets and 32% in London), and the area suffers from serious deprivation under the Government’s indices of deprivation, as outlined below.

Around 36% of residents of the Core Area and 44% of residents of the Ward have no qualifications, and the proportion with level 4/5 qualifications (equivalent to degree level) is significantly lower than London average (17% compared to 31%).

Over half of the residents of the Core Area are classified as Black, Asian and Minority Ethnic (BAME), with a large proportion being Asian (29%), similar to the structure of the ward and Borough, as outlined below. The age structure

shows a significantly high proportion of people aged between 20-30 in Tower Hamlets, and a predominantly young population in the Core Area and Ward.

3.2.3 Existing Community Facilities

There are two health centres in the area shown below, both operating from relatively new premises. Both have relatively low patient lists per GP although this is typical of an area with serious deprivation where demand for health care can be much greater.

Health Centres

GPs	Practice list size	Patient list per GP
Chrip Street	9	11,441
Aberfeldy	4	4,550
Total	13	15,991

Chrip street is the larger centre, and with nine GPs has the critical mass now expected of urban health centres. It also offers services from a team of health visitors, district nurses, community psychologists, and visiting midwives.

Aberfeldy with only four GPs, is smaller than Chrip Street and has been identified by the Primary Care Trust as a practice that could be expanded to help meet the needs of the growing population in the area.

3.2.4 Existing School Provision

There are four schools in the area. Langdon Park secondary school, the Bromley Hall pupil referral unit, and two primary schools, shown below:

Primary School Capacity and number on roll January 2007 ASC	Capacity	Number of roll	Surplus places	Surplus%
Culloden Primary	406	390	16	3.9%
Manorfield Primary	420*	414	6	1.4%
Total	826	804	22	2.7%

* prior to 2008 expansion

Balfour Tower from Chrip Street market

3.2 Socio-Economic Context

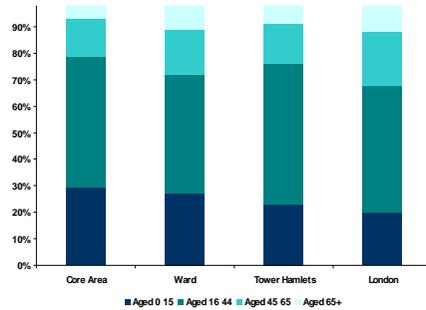
Culloden has very little surplus capacity, and was oversubscribed in 2007 at reception level. Manorfield was also effectively full, however it is being expanded and from September 2008 it will admit 90 children to its reception class, meaning that over seven years of phased expansion it will grow to 630 places.

Both schools have relatively new buildings, and reasonably-sized plots for inner London. They have challenging intakes, with very high proportions of pupils eligible for free meals, and a high proportion for whom English is not their first language.

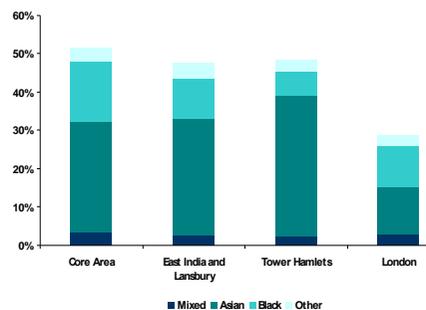
Unemployed Local Residents

There is a relatively high unemployment level in East India and Lansbury Ward, with 8.8% of the working age population claiming Job Seekers Allowance (JSA) in May 2008. Evidence from claimant count data suggests that unemployed people in the area are most likely to be seeking elementary or sales / customer service occupations, and skilled trade occupations. A large proportion (44%) of the ward's residents have no qualifications.

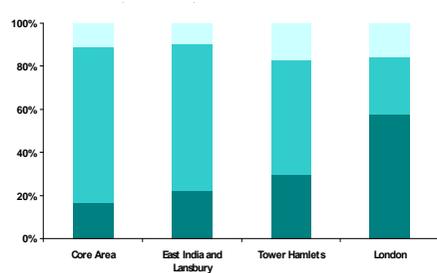
3.2.5 Employment Baseline



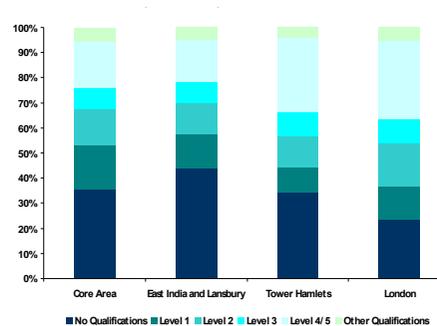
Age Profile (Census, 2001)



Ethnicity of BAME Residents (Census, 2001)

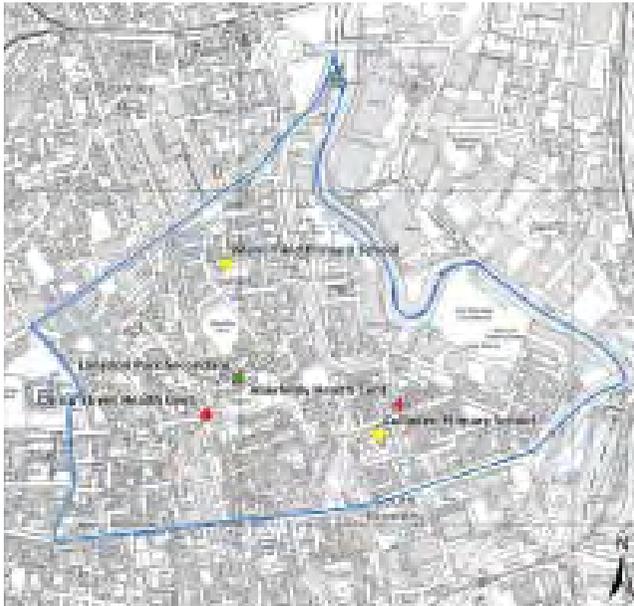


Tenure of Accommodation (Census, 2001)

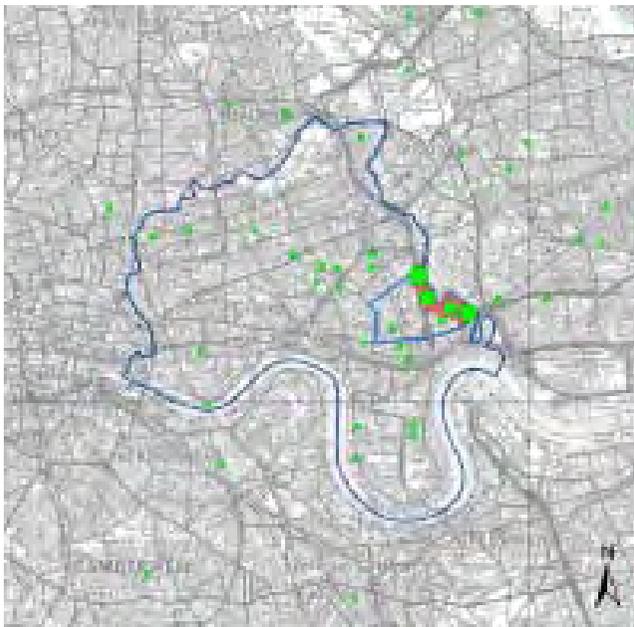


Qualification level of residents (Census, 2001)

Existing social infrastructure



Location of Primary Schools, Secondary Schools and Health Centres



Travel to work patterns of employees of the Core Area

In terms of Jobcentre Plus vacancies, around 20% are in elementary occupations in Tower Hamlets, compared to 27% in London. There is a large proportion of vacancies in administrative and secretarial occupations in Tower Hamlets (26%).

Local Residents in Work

Of ward residents who are in employment, the largest numbers are in low-skilled occupations. 17% of residents in the ward were employed in elementary occupations at the time of the 2001 Census, with the same figure for the Core Area. Over 95% of local residents in work in London.

Current Employment

At the time of the 2001 Census, there were approximately 390 people working in the four Output Areas that broadly comprise the Core Site. The Annual Business Inquiry indicates that there are currently around 3,210 people working in the East India and Lansbury ward, and around 190,000 people working in Tower Hamlets.

The employment of the core area is dominated by construction, with 56% of the workforce employed in this sector in the three super output areas covering the core area. At ward level, public administration, education and health occupations are most prevalent, accounting for 33.4% of employees. There is a relatively high proportion of employees in the construction sector, at 21.5%.

Commuting

Census data has been used to look at the travel to work patterns of employees at the Core Site (broadly defined as the four Output Areas covering the Site). Figure 1 shows where these employees live, with the size of the dot representing the number of employees that live in that location.

Commuting patterns from the 2001 Census indicate that around 80% of employees of the core area are residents of London, 28% are residents of Tower Hamlets, and 15% are residents of the East India and

Lansbury Ward, with a large number of these employees living in the Core Area.

%	Core Area	East India and Lansbury	Tower Hamlets	London
Managers and Senior Officials	10%	10%	16%	18%
Professional Occupations	11%	9%	17%	15%
Associate Professional and Technical	16%	14%	20%	18%
Administrative and Secretarial	16%	16%	13%	15%
Skilled Trades	9%	11%	7%	8%
Personal Service	8%	8%	5%	6%
Sales and Customer Service	8%	8%	6%	7%
Process Plant and Machine Operation	6%	8%	5%	5%
Elementary	17%	17%	11%	9%

Occupation of residents (Census, 2001)

	East India and Lansbury	Tower Hamlets	London	England
Agriculture and Fishing	0.0	0.0	0.1	0.8
Energy and Water	0.3	0.7	0.3	0.5
Manufacturing	4.4	6.0	4.8	10.9
Construction	21.5	2.3	2.9	4.6
Distribution, Hotels, Restaurants	15.9	11.5	21.3	23.7
Transport and Communications	3.0	4.2	7.4	6.1
Banking, Finance, Insurance	17.1	53.9	33.5	21.9
Public admin, Education, Health	33.4	17.1	22.7	26.3
Other services	4.3	4.3	6.9	5.3

Current Employment (Annual Business Inquiry, 2006)

	East India and Lansbury	Tower Hamlets	London
Managers and Senior Officials	2%	2%	4%
Professional Occupations	2%	3%	4%
Associate Professional and Technical	6%	7%	9%
Administrative and Secretarial	0%	13%	1%
Skilled Trades	5%	12%	0%
Personal Service	4%	5%	5%
Sales and Customer Service	22%	25%	22%
Process, Plant and Machine Operation	10%	8%	7%
Elementary	30%	26%	25%

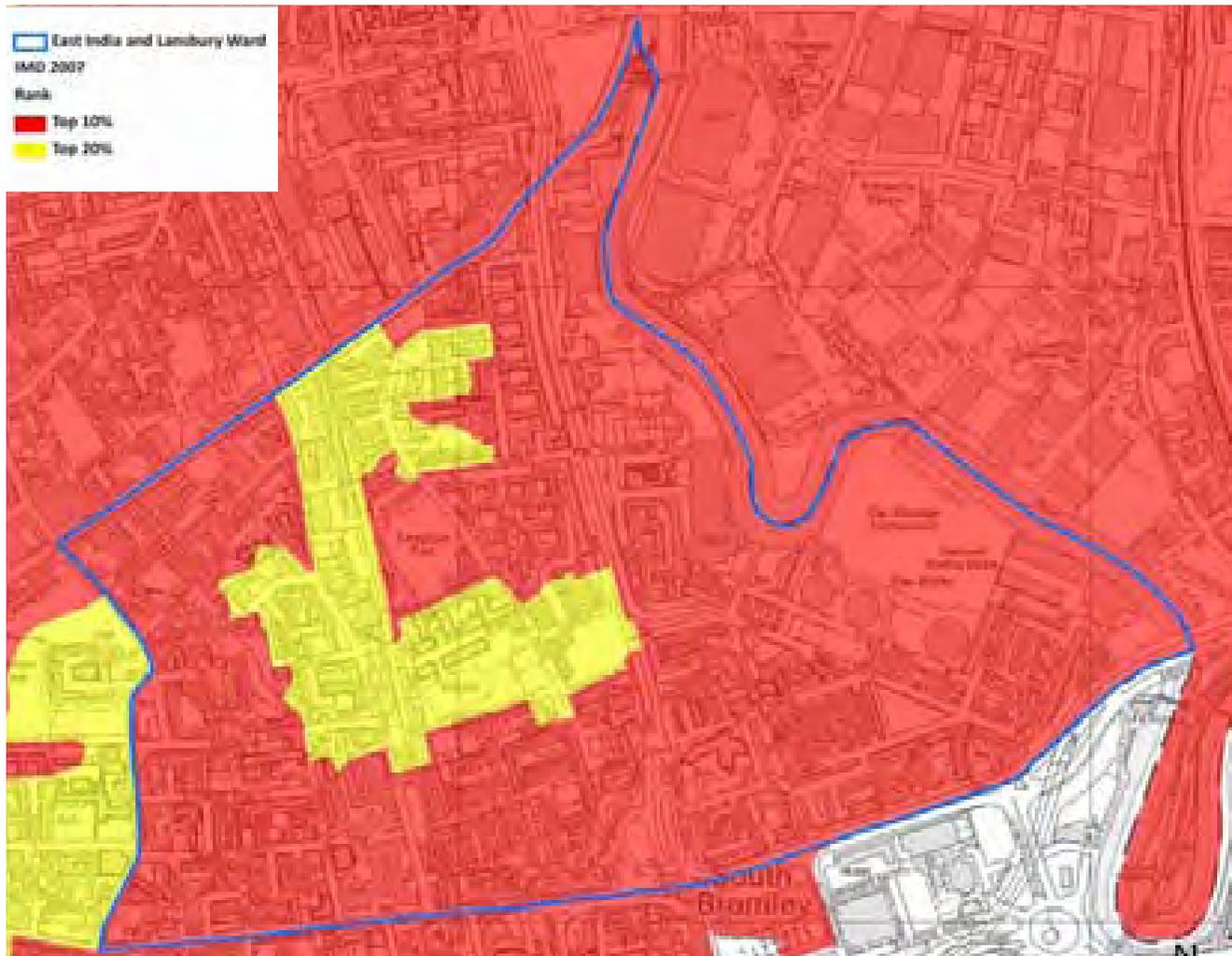
Sought occupation of JSA claimants (DWP Claimant Count Data, May 2008)

	East India and Lansbury	Tower Hamlets	London
Managers and Senior Officials	0%	9%	6%
Professional Occupations	55%	6%	4%
Associate Professional and Technical	0%	8%	10%
Administrative and Secretarial	0%	26%	9%
Skilled Trades	0%	9%	11%
Personal Service	0%	6%	10%
Sales and Customer Service	9%	7%	12%
Process, Plant and Machine Operation	0%	9%	11%
Elementary	36%	20%	27%

*Total vacancies in East India and Lansbury = 11

Current Jobcentre Plus Vacancies (JCP, 2008)

56% of the workforce in the study area are employed in the construction industry



Government Indices of Multiple Deprivation (IMD, 2007)



Chrip Street Market



3.3.1 Context of Change

Poplar Riverside sits at the centre of a rapidly changing wider environment. It has been earmarked as a key site within the LLV that has a huge amount of potential for development. In the context of an out-of-date LBTH Unitary Development Plan (UDP) and with the London Development Framework (LDF) in draft form only, Poplar Riverside draws upon wider strategic planning documentation:

- **The London Plan (2004)**
- **The LLVOAPF (2005)**

The London Plan

The London Plan is the Mayor's spatial development strategy that sets out guidelines for an integrated social, economic and environmental framework for the future development of London, looking forward 15-20 years.

The LLVOAPF

The Lower Lea Valley Opportunity Area Planning Framework is a key planning document that was commissioned by the GLA in 2005 and adopted by the London Plan in 2007. It outlines a vision and development principles for the Lower Lea Valley in terms of land use strategy including the scale and nature of proposed change. It now guides overall development in the area by setting out the main objectives and remains the most robust planning document for the Poplar Riverside area and has been taken as the starting point for this strategy.

It should be noted that the LLVOAPF concludes that up to 173 hectares of existing industrial land could be released to 2016 with a capacity to deliver between 30,000 and 40,000 new homes (with at least 44% as family housing). It also notes that 50,000 new jobs and between 30,000 and 60,000 volunteer opportunities will arise from the Olympic and Paralympic Games. It is within this context that the development opportunities for Poplar Riverside will be explored.

One of the key objectives of the LLVOAPF is to consolidate industry into key areas within the valley. These are: Cody campus, Devons Road, Pudding Lane and Hackney Wick. This process simultaneously releases existing industrial sites to develop in support of existing communities.

3.3.2 Vision & Opportunity

Within the LLVOAPF the vision for Poplar Riverside has been identified by the managed release of industrial land. This provides a key opportunity to deliver new communities as part of a long term vision to transform the valley from an isolated area to an integrated 'water city'.

The LLVOAPF shows that, based on strategic assumptions of industrial land release to 2016, Tower Hamlets has the potential capacity to deliver a total of between 7,560 and 8,340 new homes. Of these, 919 would have been delivered as part of the 2004 O&LPP, a further 3,500 units could be delivered in the borough through development in new residential areas, 1,700 through mixed use development and 2,000 from intensification of existing residential areas (including estates renewal) where in accordance with local and strategic policy.

The 2004 O&LPP also provides for up to approximately 11,350m² of B1 (a) office space, 5,847m² industrial floor space (Classes B1b, c, B2 and B8), 900m² of retail space.

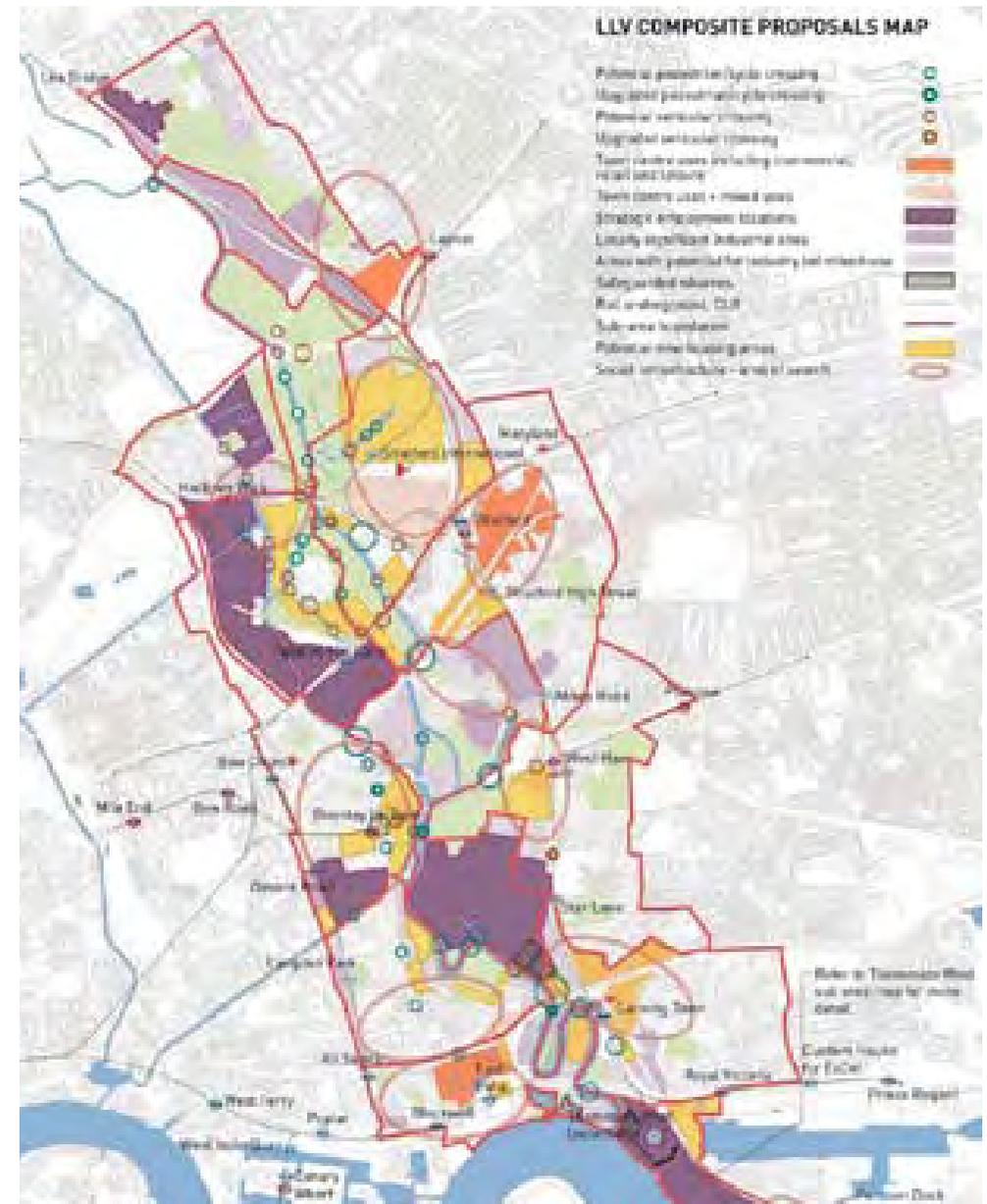
The document outlines the sub-areas that fall within the boundaries of LBTH, one of which is Poplar Riverside indicating it as sub area 12 within the LLV Regeneration area.

7. Fish Island and Marshgate area (part)
8. Bromley by Bow
- 12. Poplar Riverside**
14. Blackwall and Leamouth'

Poplar Riverside is one such area identified within the LLVOAPF to change of use to residential led mixed use. The LLVOAPF also indicates a new river edge park on what is currently the National Grid Leven Road

The London Plan and LLVOAPF identified the managed release of industrial land as a key opportunity within the LLV to deliver new communities as part of a long term vision to transform the valley from an isolated area to an integrated 'water city'.

LLV Composite Proposals Map (Source: EDAW, Lower Lea Valley Opportunity Area Planning Framework 2007 for the Greater London Authority)



gasholder site, and suggested key crossings of the River, Limehouse Cut, A12, A13 which will be discussed later.

3.3.3 Current Developments: The 2012 Olympics and The Lower River Park

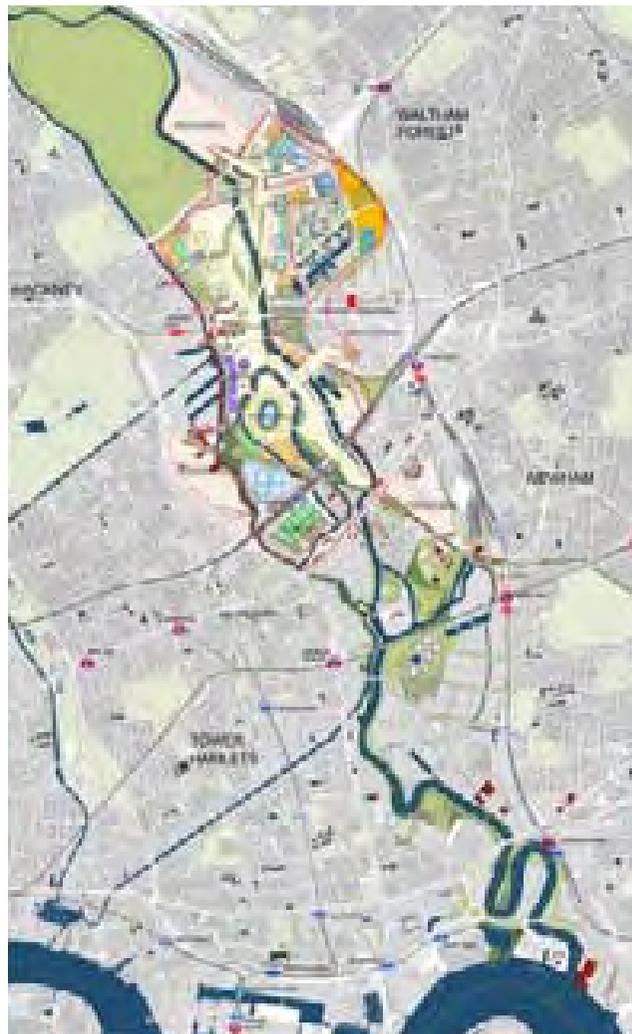
The strategic policy is clearly in place to guide development within the Poplar Riverside area but surrounding developments that are taking place are equally important in their ability to act as catalysts for change which is rapidly taking place.

There are two major current developments that will have a major impact on the future of Poplar Riverside. These are:

- **The 2012 Olympics Bid**
- **The Lea Valley Park**

The 2012 Olympics

The 2012 Olympics will deliver a legacy of sporting facilities, housing and commercial space and will remediate major tracts of polluted land, provide new infrastructure for the regenerated valley, including cleaner and extended watercourses, riverside parks, and a network of connections into and across the Valley. It has massive regenerative potential to transform from a waning industrial backland to a vibrant new water city. It is seen as one of the most exciting and challenging urban



Olympic masterplan (source: EDAW, Lower Lea Valley Opportunity Area Planning Framework 2007 from the Greater London Authority)



Rail infrastructure (source: EDAW, Lower Lea Valley Opportunity Area Planning Framework 2007 from the Greater London Authority)



regeneration opportunities in Britain, with the potential to accommodate up to 40,000 new homes and provide 50,000 new jobs. The Olympic park lies only a couple of miles north of Poplar Riverside.

The Lea River Park

Poplar Riverside is an integrated part of the Lea Valley Park, a landscape project that will transform the River Lea from a backland into a major river park extending from the Olympic Park to East India Dock on the Thames. The proposed 'Fatwalk' connects a necklace of 6 new river edge parks including the Poplar River Park at Poplar Riverside. Central themes are to bring the public to the river edge, provide access along it, to connect existing and new open spaces for a range of uses, extend to connect communities either side, celebrate and integrate the industrial heritage of the LLV through reuse of industrial structures - e.g.... Gasometers at Twelve Trees and Poplar, enhance and reintroduce river ecology, combining recreational and educational activities throughout.

The Lea River Park will radically change the use and perception of the River. Its transformation from

The Lea River Park will transform the River Lea from backland to foreground



Panorama looking east from Waste Transfer Depot

Core Park Areas (source: 5th Studio Lea River Park Design Framework February 2008 for the London Thames Gateway Development Corporation)



backland to foreground will create a vast new public amenity space as an extension of the East London Green Grid, connected to a framework of regional and local parks and will encourage people from local areas and farther afield to and along the river.

3.3.4 Surrounding Developments

Most opportunities for development that are related to the A12 corridor and the river are a direct result of the release of industrial land along the river and to enhancements in transport infrastructure at key intersections and town centres. Many of these also include areas within and bordering Poplar Riverside.

The illustration on the right maps projects which are currently under construction, or have been submitted for planning.

3.3.5 Previous Studies

There have been many previous studies for the area particularly around Ailsa Street which is now the subject of a Green Book Appraisal commissioned by LTGDC as part of a CPO process (2008). In 2003 Witherford Watson Mann Architects carried out a study for the LDA to look at how the Ailsa Street area could be developed followed in 2005 by an SPD and subsequent proposals.

The Lea River Park Framework (5th Studio 2008) set out a vision for the Poplar River Park and how this could form a connection between the river and Aberfeldy estate.

‘Reshaping Poplar’ by Poplar Harca/Leaside Regeneration (Casey Fierro 2008) puts forward an holistic vision from the point of view of the main landowner within the area. It also sets out a time-frame for renewal of existing estates.

There are currently a number of major developments being constructed between the DLR and Chrisp Street. These are high rise and high density (1000+ habitable rooms /hectare).

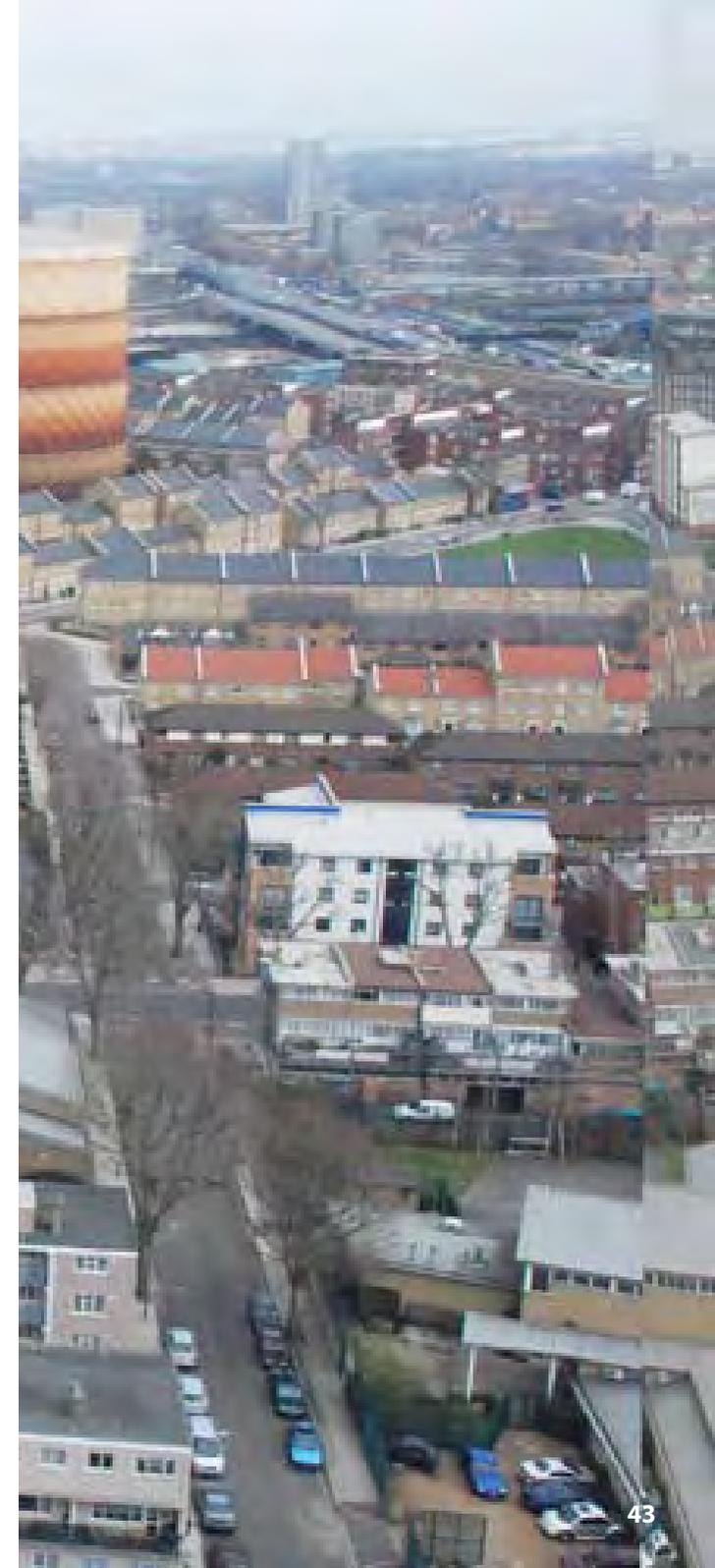
Most Opportunities along the A12 corridor and the river are a direct result of the release of industrial land



Existing proposals within and around the site boundary

The Vision for a 'Water City' should be delivered through the creation of a new open space network structured around the waterway system; ecological enhancement and re-naturalisation of this waterway system; reinstatement and extension of the waterway system; greater use of the waterways, for living, transportation, and recreation; and, by ensuring that flood risk is appropriately assessed, mitigated and managed as an integral component of future development.

Quote from LLV OAPF



View from Balfon Tower along Dee Street



3.4.1 Early Poplar - A network of Rivers and marshland

Two hundred and fifty years ago, the area east of the City of London was still farmland and market gardens. The river was an important part of the landscape and the relationship between the land and water very prominent. Rocques map from 1742 shows the network of rivers being the most important features in the local landscape. Farmland was divided up into fields, sized and shaped by the natural drainage patterns that evolved towards the river. Early development naturally took over individual or collections of fields that related directly to the landscape and the river.

The Limehouse Cut was constructed in 1770 and had its own lock to the Thames until relatively recently. It provided a short-cut from the River Thames at Limehouse Basin north-east to the River Lee Navigation, avoiding the tortuous curves of the lower reaches of the River Lee or Lea at Bow Creek, and the need to wait for the tide to make the long detour round the Isle of Dogs.¹

3.4.2 This 'Tartan' patch - A network of Streets

The 19th century marked the start of the transition of Poplar Riverside from marshland to what we recognise today. The figure plans on the opposite page summarise the 19th growth of the area showing how the tight street patterns of the early Victorian roads extended towards the river. This Victorian development overcame the marshland through a sensitive urbanisation that created a delicate and direct relationship with the river which has now been lost.

The rate of transformation from marshland reached its peak within the 19th Century with the Victorian development

¹ It was only in 1969 that a new short length of canal was cut, taking the Cut into the Regents Canal Dock (also called Limehouse Dock.)

Rocques map 1742

'..one little part of Poplar, delimited by the Docklands Light Railway to the west, the Limehouse Cut to the north, the River Lea to the east and the East India Dock Road to the south, became forever Caledonia..¹

¹ From 'East London history'

3.4 Historical Development

fueled by the rapid expansion of rail infrastructure that started in 1840 and by its proximity to the docks. Initially Poplar Riverside developed along the main arteries of Christ Street, East India Dock Road (A13) Limehouse Cut.

The pre-19th century relationship with the river developed with the advance of industry and Poplar Riverside took on a particular note which is still evident within street patterns and street names. Of particular interest is the Scottish influence in the area. In 1813, the whole area was bought by 'contractor and excavator' Hugh McIntosh from the East India Company. Development happened gradually with the area remaining rural for a long while, with maps of the time showing 'McIntosh's Farm' at the northern end of McIntosh's Lane. The area had originally been the Bromley Marsh, but with the development of the riverside, and particularly the construction of the East India Docks at Blackwall in 1802, the somewhat scrubby land suddenly had potential. The McIntosh family remained active in the development of the area with Hugh McIntosh's grandson continuing the project as the docks and factories of Canning Town were creating a demand for workers' housing. Of note at this time is that the area was masterplanned with great consistency probably due to the singular approach of one company.

It is probable that the McIntosh family took their Scottish antecedents as inspiration for the naming and a sense of Scotland meets Poplar permeates. However the estate proved too big for one firm and in 1873, McIntosh sold the land east of 375 East India Dock Road to a manufacturing chemist called John Abbott, of Forbes & Abbott. Abbott continued the naming convention begun by McIntosh, with a web of streets bearing Scottish place names and set out to cover the alphabet from A to Z. - from ABERFELDY and AILSA to ZETLAND. Other streets in this "tartan" patch include BLAIR CULLODEN, DEE, ETTRICK, FINDHORN, LEVEN, LOCHNAGAR, OBAN, SPEY and TEVIOT. Mr Abbott, in an expression of ego, had named the longest road in the development after himself.



Poplar map 1867



Poplar map 1895



Poplar map 1914



Poplar map 2007

3.4.3 A Coherent Community

The Victorian development was most significantly characterised by a tight network of streets which created a connected community. At its peak Poplar Riverside had a thriving and coherent community which lived and worked within the area. At this time there was a direct and desirable symbiotic relationship between the population, river trade and industry.

The McIntosh Estate 'infill' extended to the river edge and was served by the Brunswick Road which developed as a high street and through route connecting Bromley-by-Bow, East India Dock and the Blackwall tunnel.

Chrip Street and Brunswick Road developed as the main high street thoroughfares along with St... Leonards Road which connected north-south to East India Dock road and the docks. Brunswick Road was a significant thoroughfare and one of the main centres of the area. Radical change took place in the 1890s with the construction of the Blackwall Tunnel. Now the Approach Road has sliced right through this 'little Caledonia' and all but a short section of Brunswick Road has been swallowed up by the Northern Approach Road to the Blackwall Tunnel².

3.4.4 An Industrial Landscape

Throughout the 19th Century Poplar Riverside was sustained primarily by industry. The early 20th century saw this industrial landscape reach its peak and the area's connection with industry be its at its strongest.

²BRUNSWICK ROAD... originally approached the Brunswick Dock. Based on the old well established Blackwall Yard, the dock was built in 1789 by John Perry, a noted ship-owner and builder, who was a staunch friend and supporter of William Pitt. The road was named as a compliment to the reigning Royal House. King George III paid a visit to the Blackwall Yard. Later this Dock was incorporated into the East India Dock system. BLACKWALL Way, in the dock land area of Poplar, is thought to take its name from the 'black wall', an ancient embankment of earth along this portion of the Thames. Or Blackwall could come from the "bleak wall," the bleak east wind sweeping over the river wall here...From East London History

“ St Leonard’s Road provided the residents of Poplar with more shops of every description”¹

¹ source: p. 58 'Poplar Memories' by J. Hector



St... Leonard's Road (source: Poplar Memories by J. Hector)



Bromley Library

...from
ABERFELDY
and AILSA to
ZETLAND... this
'tartan' patch also
includes BLAIR
CULLODEN,
DEE, ETTRICK,
FINDHORN,
LEVEN,
LOCHNAGAR,
OBAN, SPEY
and TEVIOT.



this 'tartan' patch

Poplar 1895 map



From this period there are significant structures and buildings remain such as the Gasometers, The Tramshed, Bromley Library, a civic building on the Brunswick Road on the A12, and the Church.

3.4.5 Post War Patchwork - The Street Network Lost

As industry went into decline in the 20th Century, Poplar Riverside suffered greatly. Furthermore, the network of streets with its connection to industry was interrupted during the Second World War with the devastation of the Blitz. Post war reconstruction has given the area the character it has today with a series of badly connected, impermeable estates that are more 'Patchwork' than 'Tartan'. A lot of the Post-War housing estates were developed incrementally, with no singular vision nor masterplan for the area.

From this period however there are a series of significant buildings. Erno Goldfinger's Balfron Tower was one of the first social housing projects and along with its sister the Trellick tower in the west is undergoing a renaissance as a post war architectural 'jewel'.

A combination of severe WW2 bomb damage, industrial decline and replacement of Brunswick Road by the A12 have created a fragmented and divided community. Poplar has in effect suffered a series of traumatic changes from the advance of the railways to the Blitz and the Decline in Industry, that have created a place in need of substantial urban care.

3.4.6 History - Lessons Learnt

'Reconnecting Poplar Riverside' looks at how to reconnect parts of Poplar by 'knitting it back together' and recreating active centres where they are needed. Some of the streets that still exist were built in the 19th Century and display the characteristics of connectivity at both ends, many have been broken and severed. We propose to put the connections back together by identifying what worked and proposing bespoke new connections based on this site-derived knowledge.

'Reconnecting Poplar Riverside' looks at how to knit back together the urban fabric in the area by learning from the coherency and clarity of the past street network.



The last Trolley Bus outside the Tramshed



3.5.1 Policy Context Introduction

This section has been put together by planning consultants, RPS. It introduces the background context for the site including the policies set out in the London Plan. Re-connecting Poplar Riverside integrates these policies and uses them as a base line for proposals.

3.5.2 Section 1

1.1 This report has been prepared by RPS Planning to summarise regional and local planning policies relevant to the preparation of the Delivery & Implementation Strategy for Poplar Riverside.

1.2 Section 38 (6) of the Planning and Compulsory Purchase Act 2004 states that planning applications must be determined in accordance with the Development Plan unless material considerations indicate otherwise. The statutory Development Plan for the Poplar Riverside area constitutes the London Plan (Consolidated with Alterations since 2004) (2008) and the London Borough of Tower Hamlets Unitary Development Plan (UDP) which was adopted in 1998. These documents are reviewed in Sections 2 and 3 of this report.

1.3 The report also summarises a number of other relevant regional and local policy documents including the East London Sub Regional Development Framework and the Lower Lea Valley Opportunity Area Development Framework, as well as Tower Hamlets emerging Local Development Framework which are set out in Sections 4 and 5.

3.5.3 Section 2 Statutory Development Plan: London Plan

2.1 The London Plan was adopted in February 2004 and acts as the Spatial Development Strategy for London. Early and Further Alterations to the plan were published in December 2006 and February 2008 respectively, with a new composite plan released in February 2008.

2.2 The plan sets out policies for accommodating London's growth in a sustainable manner. Policy 1.1 establishes the Mayor's main objectives for the plan. Objective 1 seeks to accommodate London's growth within its boundaries without encroaching on open spaces. To achieve this, a number of policy directives have been identified as follows:

- make the most sustainable and efficient use of space in London and encourage intensification and growth in areas of need and opportunity;
- achieve an urban renaissance through higher density and intensification in line with public transport capacity, leading to a high quality compact city, building upon London's existing urban quality and sense of place;
- enable the Central Activities Zone (i.e. central London) and the main Opportunity Areas for development to intensify and to accommodate much of the growth in jobs;
- make the Thames Gateway parts of North East and South East London the priority area for new development, regeneration and investment, including the prime location for the 2012 Olympic Games and Paralympic Games, introducing a new scale and quality of development;
- promote London's polycentric development and a stronger and wider role for town centres, to meet the full range of local needs and to strengthen their sense of identity; and
- protect and improve the green belt, Metropolitan Open Land, other designated open spaces, the Blue Ribbon Network and Green Grid.

3.5 Policy Context

a) Spatial Strategy

2.3 The plan emphasises the re-use of brownfield land in accordance with national planning policy. As such the Plan identifies 28 Opportunity Areas which are considered capable of accommodating substantial new jobs and homes, and go some way to spatially allocating London's growth.

2.4 Poplar Riverside is located within the North East London sub-region. Policy 5C.1 sets out the key strategic priorities for the sub-region, those of specific relevance to Poplar Riverside are as follows:

- deliver the London element of the Government's priority for the Thames Gateway for development, regeneration and transport improvement;
- take advantage of the sub-regions exceptional access to the Central Activities Zone;
- promote the contribution of the sub-region to London's world city role, especially in relation to the City and Isle of Dogs;
- optimise development of Opportunity Areas;
- enhance attractiveness of town centres;
- ensure the substantial new population expected within the sub-region is accommodated in sustainable communities, taking into account the need for social and community infrastructure, and the capacity of existing services;
- ensure improvements to the open space and Blue Ribbon Network, specifically in the Lower Lea/Stratford area; and
- manage the strategically significant surplus stock of industrial land, taking into account the need to accommodate additional waste management facilities.

2.5 The Plan notes in paragraph 5.57 that the North East and South East London sub regions, especially the Thames Gateway area, are the Mayor's priority for development, regeneration and infrastructure improvement. As such the Plan anticipates significant growth in the sub-region including 102,000 additional homes to 2016 and 250,000 new jobs by 2026. The majority of this growth is to be accommodated in the defined Opportunity Areas, which include the Lower

Lea Valley (including Stratford) that encompasses Poplar Riverside.

2.6 Policy 5C.3 relates to Opportunity Areas in the sub-region and states that 'developments will be expected to maximise residential and nonresidential densities and to contain a mix of uses'. The Lower Lea Valley area is required to accommodate an employment capacity of 50,000 new jobs and a minimum of 32,000 homes to 2026.

2.7 In respect of the Lower Lea Opportunity Area, paragraphs 5.78 to 5.83 state:

"Stratford and the Lower Lea. Based on a dynamic planning framework being prepared by a range of partners including the Mayor, the relevant boroughs, the Olympic Delivery Agency and the London Thames Gateway Development Corporation (LTGDC), this Opportunity Area will accommodate some of the most important strategic regeneration initiatives for London and an urban renewal challenge of global significance. It will include:

- the 2012 Olympic and Paralympic site and its legacy,
- the development of a new Metropolitan centre focused on Stratford town centre and railway lands, and
- a rich mix of industry, housing and open space in the Lower Lea Valley.

Together these form the axis linking two nationally important growth corridors: the London-Stansted-Cambridge-Peterborough corridor to the north and the Thames Gateway to the east.

The main Olympic Park for the 2012 Olympic and Paralympic games is in the northern part of the valley and will radically accelerate the realisation of the vision for the Lower Lea Valley: for it to become a vibrant, high quality and sustainable mixed-use new city district set within an unrivalled landscape of high quality parkland and water features.

The Lower Lea Valley (LLV) Planning Framework proposes a significant new residential community in the valley

– potential capacity to deliver between 30,000 and 40,000 new homes has been identified – including the development of a new Metropolitan retail, leisure and business centre focused on Stratford town centre, with at least 4,500 new homes to suit a range of requirements. Close integration of new development on the rail lands and rejuvenation of the existing town centre, including physical links, is crucial.

Realising the potential of the unique landscape of the LLV is a central part of the vision for the future of the area – the four miles of waterways crisscrossing the valley will be revitalised, and in many places incorporated into the new park network which will extend the Lea Valley Park right to the Thames. This new linear park will function as a key element of the 2012 Olympic and Paralympic masterplan. The geography of industrial land proposed in the emerging planning framework seeks to ensure the carefully managed release of appropriate sites for mixed-use development, and to ensure the retention of key industrial land, particularly in the Strategic Industrial Locations (SILs). Overall, the emerging planning framework has identified the potential for up to 50,000 new jobs to be generated; including over 30,000 predominantly office based jobs at Stratford City. This is in addition to the 7,000 temporary jobs that can be expected from construction of the 2012 Olympic and Paralympic Games facilities."

b) Housing

2.8 The London Plan sets a minimum London wide target for the provision of housing at 30,500 additional homes per year and a specific annual target for the London Borough of Tower Hamlets of 3,150 new dwellings. Policy 3A.2 states that Local Planning Authorities (LPA) should seek to exceed these figures, and recognises that major opportunities exist in Opportunity Areas, the Thames Gateway and the redevelopment of low density commercial premises.

2.9 Policy 3A.3 seeks to ensure that development proposals achieve the maximum intensity of use compatible with the local context, key design principles

and public transport capacity. LPAs are encouraged to develop density policies in line with Table 3A.2 (reproduced below).

2.10 In respect of affordable housing, the Plan establishes a London wide target that 50% of units should be affordable, and within that, 70% social rented and 30% intermediate provision. However, Policy 3A.10 clarifies that LPAs should seek to negotiate the maximum amount of affordable housing having regard to the need to encourage rather than restrain residential development and the individual circumstances of the site. Targets should be applied flexibly, taking account of individual site costs, the availability of public subsidy and other scheme requirements.

2.11 The Plan also notes the need for proposals to take into account issues of social infrastructure, the provision of leisure and play space and utility infrastructure.

c) Employment

2.12 The Plan seeks to ensure efficient employment space is available to accommodate 176,000 new jobs to 2026 in the North East Sub-Region. Paragraph 3.147 notes that the Central Activities Zone and the Isle of Dogs alone has capacity for over 300,000 office based jobs, however, this cannot be realised without a significant increase in transport capacity.

2.13 With regard to manufacturing and wholesale distribution, the Plan identifies a series of Strategic Industrial Locations (SIL) as London’s strategic reservoir of industrial capacity. Policy 3B.4 notes that the Mayor will promote, manage and where necessary protect this varied industrial offer. Tower Hamlets has been designated with two SILs (Fish Island/Marshgate Lane and Empson Street) both of which lie to the north of the Poplar Riverside area.

2.14 LPAs are encouraged to manage locally significant and other industrial sites and should carry out integrated assessments of industrial demand to justify retention and inform release, thus enabling surplus land to meet other requirements such as housing and social infrastructure. It

is noteworthy that the Further Alterations to the London Plan fully recognise the decline in demand for industrial land and thus recognise the potential for the release of land where justified by local assessments. This is reflected in the Mayor’s draft SPG on Industrial Capacity.

d) Town Centres

2.15 In line with PPS6 the London Plan seeks to encourage retail, leisure and other related uses in town centres. The Plan sets out a hierarchy of centres of which Chrisp Street, to the west of the Poplar Riverside area, is defined as a District Centre. LPAs are required to assess the need and capacity for additional retail, leisure and commercial development within each centre. Comparison goods are encouraged within larger town centres, with convenience goods being focused in smaller centres, particularly District Centres.

e) Open Space

2.16 The London Plan seeks to protect, promote and improve access to London’s network of open spaces, including the East London Green Grid. LPAs are encouraged to identify broad areas of public open space deficiency using the open space hierarchy (as shown below).

2.17 The document also emphasises the importance of children’s play space and makes reference to a Supplementary Planning Guidance ‘Providing for Children and Young People’s Play and Informal Recreation’ which sets out specific space standards.

f) Climate Change

2.18 The London Plan affords particular importance to the need for new development to tackle climate change. Policy 4A.3 sets out a number of sustainable design and construction measures that should be reflected in local planning policy, and furthermore considered as part of the determination of major developments.

2.19 The Mayor requires the provision of energy assessments with all major applications which should consider the use of decentralised energy and aim to reduce carbon dioxide emissions by 20% from on site

Setting	Public Transport Accessibility Level (PTAL)		
	0 to 1	2 to 3	4 to 6
Habitat	150 – 200 hq/ha	150 – 250 hq/ha	200 – 250 hq/ha
1.0 – 1.2 hq/ha	20 – 30 hq/ha	20 – 30 hq/ha	30 – 50 hq/ha
1.3 – 1.7 hq/ha	40 – 45 hq/ha	40 – 45 hq/ha	50 – 75 hq/ha
1.7 – 1.9 hq/ha	50 – 75 hq/ha	50 – 75 hq/ha	75 – 100 hq/ha
Urban	150 – 250 hq/ha	200 – 450 hq/ha	200 – 700 hq/ha
1.0 – 1.2 hq/ha	20 – 40 hq/ha	40 – 100 hq/ha	40 – 100 hq/ha
1.3 – 1.7 hq/ha	40 – 45 hq/ha	50 – 100 hq/ha	50 – 225 hq/ha
1.7 – 1.9 hq/ha	50 – 75 hq/ha	70 – 175 hq/ha	75 – 250 hq/ha
Central	150 – 300 hq/ha	300 – 650 hq/ha	650 – 1100 hq/ha
1.0 – 1.2 hq/ha	30 – 60 hq/ha	60 – 120 hq/ha	100 – 200 hq/ha
1.3 – 1.7 hq/ha	40 – 100 hq/ha	60 – 270 hq/ha	175 – 300 hq/ha
1.7 – 1.9 hq/ha	50 – 100 hq/ha	100 – 240 hq/ha	275 – 450 hq/ha

table 3A.2 Density matrix (habitable rooms and dwellings per hectare)

Open space categorisation	Area guidelines	Minimum Area Minimum
Regional Parks Large areas, situated in urban or semi-urban areas, that provide a wide range of facilities and features offering recreational, ecological, landscape, cultural or sports infrastructure benefits. Offer a combination of facilities and features that are accessible (walking) and easily accessible by public transport and are managed to meet best practice quality standards.	400 hectares	0.2 to 0.5 kilometres
Metropolitan Parks Large areas of open space that provide a wide range of benefits to Regional Parks and offer a combination of facilities and features at the sub-regional level, and easily accessible by public transport and are managed to meet best practice quality standards.	80 hectares	1.0 kilometres
District Parks Large areas of open space that provide a landscape setting with a variety of natural features providing for a wide range of activities, including outdoor sports facilities and playing fields, children’s play, the different age groups and informal recreation grounds.	20 hectares	1.0 kilometres
Local Parks and Open Spaces Providing for adult sports, children’s play, sitting-out areas and outdoor recreational areas.	2 hectares	400 metres
Small Open Spaces Sitting-out areas and areas available for sitting-out or other uses of a smaller nature, including nature conservation areas.	Under 2 hectares	Less than 400 metres
Pocket Parks Small areas of open space that provide natural surfaces and shaded areas for informal play and provide recreation that contributes to walking and play enjoyment.	Under 0.5 ha	Less than 400 metres
Linear Open Spaces Open spaces and linear paths alongside the Thames, canals and other waterways, paths, disused railways, nature conservation areas and other routes that provide opportunities for informal recreation. Offer opportunities for activities in areas which are not fully accessible to the public but contribute to the enjoyment of the space.	Variable	Wherever Possible

table 3D.1 London’s public open space hierarchy

renewable sources, where feasible. The Mayor also seeks to ensure that new developments have regard to flood risk, and employ sustainable forms of drainage and water consumption. The plan also sets targets for waste management and recycling.

g) Design & Blue Ribbon Network

2.20 The London Plan recognises that good design is central to the creation of sustainable communities. Policy 4B.1 sets out the key design principles for the development in the capital and encourages all development to meet the highest standards of accessibility and inclusion. The plan supports the creation of tall buildings where they create attractive landmarks enhancing London's character, act as a catalyst for regeneration and are acceptable in terms of design. Policy 4B.10 sets out a series of design and impact criteria, including the requirements of the View Management Framework.

2.21 The River Lea forms part of the London Plan's Blue Ribbon Network. Chapter 4C of the London Plan outlines the key principles of the Blue Ribbon Network, which include enhancing biodiversity and natural heritage, and a desire to focus water transport, leisure and recreation uses in such locations. In seeking to protect the unique character and openness of the Blue Ribbon Network, proposals for new structures over or into the water should be accompanied by a risk assessment detailing the extent of their impact on navigation, hydrology and biodiversity.

2.22 In July 2008, the new Mayor released 'Planning for a better London' as an interim policy statement, which

sets out his planning agenda for London. This statement is a material consideration that intends to guide the review of the London Plan, which is to be released by 2010. Before this time, weight will remain with the London Plan (Consolidated with Alterations since 2004)(2008).

2.23 The policy statement is broadly in accordance with the London Plan, however explains that a number of substantial alterations are to be made to strategic issues particularly concerning affordable housing, tall buildings and climate change.

2.24 With regards to affordable housing, the Mayor continues to reinforce the need for affordable homes. However, this will be via alternative means and as such the current 50% target is to be removed.

2.25 Alterations will also be made to the London Plan regarding development of tall buildings. The policy statement emphasises that tall buildings will be supported in appropriate places, where there are clusters of tall buildings already developed such as the Isle of Dogs.

h) Summary

2.26 In summary, the Poplar Riverside area is located within the Lower Lea Valley Opportunity Area which is to be the focus of considerable housing and employment growth. Development proposals in this area should maximise site potential, having regard to the density levels of Table 3A.2, whilst also being mindful of the need to ensure sufficient social and transport infrastructure is available to support the development.

3.5.4 Section 3: Statutory Development Plan: Tower Hamlets Unitary Development Plan

3.1 The Tower Hamlets Unitary Development Plan (UDP) was adopted in 1998. The Council subsequently commenced the preparation of its Local Development Framework, however, a number of documents including the Core Strategy, Proposals Map and Leaside Area Action Plan were withdrawn in October 2007. Tower Hamlets are now in the first phase of consultation on a revised Core Strategy, which is envisaged to be adopted in winter 2009.

3.2 In view of the above, the UDP remains the relevant statutory development plan, despite its aged content. A letter from the Government Office for London (dated September 2007) verified the policies to be saved pending the completion of the Local Development Framework.

3.3 The UDP Proposals Map (an extract of which is shown on the following page) identifies a number of site specific allocations within the Poplar Riverside area which are summarised below:

- Flood protection area (blue dots);
- Industrial/employment areas (pink dots);
- Employment proposals (red hatching);
- Residential/open space (brown allocation, with green perimeter);

View south from Uamvar street



- Green chain along the river (green dots);
- Core and fringe areas of the District Centre at Crisp Street (blue allocation and dashed blue line);
- Local shopping parade (blue line);
- Site of nature conservation importance (green hatching);
- New station at Carman Street (black stars); and
- Open space improvements (green dots with black outline).

3.4 The Proposals Map demonstrates that the riverside location of Poplar has an industrial focus. A limited number of other site specific allocations have been identified, and the entire area is identified as a flood protection area.

a) Employment

3.5 The UDP actively promotes employment growth through the re-use of vacant land and derelict buildings, the re-development and upgrading of sites already in employment uses, and through the development of those sites shown on the Proposals Map (Policy EM11). The Proposals Map allocates part of the Poplar Riverside area for industrial/employment purposes.

3.6 Policy EMP3 deals with the redevelopment of surplus employment land to non B Class uses, and indicates that the Council will take the following matters into account:

“The length of time that surplus office floorspace has been vacant. The council will expect the applicant to demonstrate that the surplus office floorspace has been actively marketed at values prevailing in the area for industrial and commercial re-use or redevelopment; The level of vacant office floorspace and the level of unimplemented planning permissions for offices in the surrounding area;

Whether the development would involve the loss of premises built to a standard which provides adequate loading and servicing facilities for the full range of B1 uses; and

Whether the development proposed is in accordance with the other policies and proposals of this plan, and in the case of residential development, whether the immediate vicinity is adequately provided with services needed by residents, including open space, education and social services.”

3.7 The UDP therefore clearly seeks to retain allocated employment/industrial areas within the B Use Class, unless a series of criteria are met.

b) Housing

3.8 The majority of UDP policies relating to housing including overall quantum and affordable housing have not been ‘saved’ by the Government Office for London as the content has been superseded by the London Plan. Policy HSG7 relates to the mix and type of dwellings and identifies the need for a substantial proportion of family housing of between 3 and 6 bedrooms.

c) Design

3.9 The UDP states that outside the Central Activities Zone tall buildings may be considered acceptable subject to the design, siting and character of the development and its impact on the surrounding environment. Development will also be considered against its impact on strategic and local views.

3.10 Two areas within Poplar Riverside (Langdon Park and St.Fridewide’s) are designated as conservation areas, and as such any redevelopment proposals will need to be mindful of the impact upon the character of these areas.

3.11 Policy DEV46 indicates that waterways and water bodies are protected and promoted for their contribution to the character of the borough and as important open areas. The Council will therefore seek to preserve existing areas of value, promote public access and encourage appropriate locations for recreation along the waterways. Policy DEV 48 states that new development along the River Lee will be expected to provide a walkway.

d) Summary

3.12 In summary, the UDP allocates much of Poplar



Map 1: Extract from the 1998 Proposals Map

Borough	Estimated Total Industrial Land Stock 2001	Estimated Area of Industrial Land Released 2001-2006	Identified locations for release 2006-2016 through LDF process	Further sites, not currently identified for release 2006-2016 via LDF process	Suggested Monitoring Benchmark for Transfer of Industrial Land to other uses 2001-2016
Barking & Dagenham	474	44	15	3-25	62-84
Barking	293	3	22	0-1	23-26
City of London	5	0	0	0	0
Greenwich	214	26	4	2	40
Hackney	241	12	12	0-6	25-32
Havering	245	0	24	0	24
Lewisham	143	16	4	0-2	20-21
Newham	480	34	10	0-10	160-190
Redbridge	83	2	2	0-6	4-11
Tower Hamlets	144	10	40	0-10	50-60
Totals	2,546	211	240	11-43	438-664

Source: URS-GLA. *Note: Benchmarks provided are indicative only and are based upon interim estimates of East London's industrial land stock (derived from OCRM/Valuation Office data on factory and warehousing built classes).

Table 1G.2 Indicative Borough monitoring benchmarks for the transfer of industrial land to other uses 2001-2006 (hectares)*



b) Lower Lea Valley Opportunity Area Planning Framework (GLA, January 2007)

4.7 In accordance with Policy 5C.3 of the London Plan, a Planning Framework has been prepared by the GLA for the Lower Lea Valley. The document provides non statutory guidance on the implementation of London Plan policy for this specific area. Although the Opportunity Area Planning Framework is only to be used as a material consideration, a recent appeal decision (Aitch Group Holdings Ltd. & Generis Housing Group vs London Thames Gateway Development Corporation) acknowledged that it can be afforded a significant degree of weight, with the Inspector stating:

“In conclusion, both the Secretary of State and the Inspector found that the Proposed Development would prejudice the effective redevelopment of the area, thereby prejudicing the effective implementation of the broad strategy of the London Plan to secure the regeneration of this important part of the Lower Lea Valley through a mixed use development, The Inspector said that the Proposed Development would prevent the development of a neighbourhood centre focused on the station, as sought by the OAPF, a strategy document that should be afforded very considerable weight.”

4.8 The overall vision for the Lower Lea Valley is:
“To transform the Lower Lea Valley to become a vibrant, high quality and sustainable mixed use city district, that is fully integrated into the urban fabric of London and is set within an unrivalled landscape that contains new high quality parkland and a unique network of waterways.”

4.9 The document defines 7 core thematic development principles:

“(i) The environmental transformation of the Valley to create a Water City through enhancement and extension of the existing waterway network and associated development of a linear park and ecological corridor along the waterways linking the Lee Valley Regional Park to the Thames and the East London Green Grid.

(ii) Providing a strong urban structure of Thriving Centres by clustering community infrastructure in new centres and expanded existing centres, supported by an effective transport network.

(iii) The development of cohesive Neighbourhoods and Communities by using the land released from industrial use for housing, especially family housing, supported by necessary community, education and health facilities, shops and businesses, and open space and other amenity uses.

(iv) Supporting the LLV’s role as a Working Valley by retaining important employment functions and intensifying activities in key areas to create dynamic employment areas that are carefully integrated into the urban fabric.

(v) Ensuring that new development will create an internally and strategically connected Valley by improving local movement routes and ecological linkages, as well as creating a sustainable transport strategy that encourages people to walk and cycle to their local destinations.

(vi) Working with all partners to ensure that any development provides a sustainable and enduring legacy in terms of utilities provision and management, and enhancing aspects of the unique environmental and

historic character of the Valley.

(vii) Optimising the benefits of the Olympic Investment to focus inward investment on opportunities in the rest of the Valley, ensure continued excellence in design and creation of dynamic new employment sectors.”

4.10 These principles have been applied to each of the sub-regions and an indicative site plan is produced. An extract for Poplar Riverside is shown below. In considering the potential for land use change within Poplar Riverside the document notes that a number of existing development activities are well established and likely to act as fixes. These include much of the existing residential areas, although it recognises the opportunities within them for selective redevelopment and intensification.

i) Housing

4.11 In respect of housing, the document states that: “Based on strategic assumptions of industrial land release in the Lower Lea Valley the Poplar Riverside sub-area has the potential capacity to deliver between 1,750 and 1,850 units in a range of densities between 65 and 275dph (225-725hrph), with the majority of housing delivered at 275dph. This higher density is subject to improvements in local public transport accessibility; otherwise lower densities will be more appropriate.” (para 4.201)

4.12 The document suggests that this potential housing provision could be delivered as:

- 800 new units;
- 800 units through intensification of existing residential

Green at Abbott Road and Blair Street junction



areas; and

- 150 units through mixed use residential development with retail and office uses.

ii) Industrial/Employment

4.13 The document acknowledges the guidance in the London Plan and Supplementary Planning Guidance on Industrial Capacity which seek to ensure adequate industrial land across London, whilst recognising the opportunities to transfer surplus land into more active uses. It also recognises the conclusions of industrial land studies which suggest a release of 173 ha of industrial land to 2016 across the Lower Lea Valley. Specifically in relation to Poplar Riverside paragraph 4.203 notes a potential release of 16.3 ha along the River Lea corridor.

4.14 Map3 (opposite) identifies the 'optimum distribution of industrial land across the Valley', which reflects the SIL allocations of the London Plan. This shows selective sites along River Lea in Poplar Riverside classified as 'Other industrial areas', the lowest of the 3 industrial categories. These areas are considered to have the potential to accommodate a proportion of non industrial uses whilst still maintaining existing industrial capacity.

4.15 Non-industrial uses introduced into such areas are not to result in overall net loss of industrial capacity through more efficient use of sites, by, for example, more compact arrangement of facilities on a site, stacking the industrial facilities, etc. The document notes that this will enable the introduction of higher density, mixed re-development in those industrial sites, that have good public transport accessibility, especially those within or on the edge of town centres.

4.16 Paragraph 2.105 provides further clarity on 'other industrial areas' stating:

"To allow this intensification, including the addition of non-industrial uses, to occur in a managed way and to be sustainable, it is an essential pre-requisite that these areas are subject to a detailed analysis and spatially specific masterplan process that:

- Demonstrates to the satisfaction of the Strategic and Local Planning Authorities that there is no net loss of

industrial capacity;

- Determines the geographical area of industrial land to be retained and designated as new LSIS, the extent of industrial land to be released, areas where mixed uses could be satisfactorily co-located, and the type and location of non-industrial uses;
- Demonstrates that no unacceptable disturbance would be caused to new land uses and the existence of new land uses would not unacceptably constrain existing and future flexibility of industrial uses; and
- Demonstrates that, where residential and community uses are proposed, they have adequate and safe access to public transport."

iii) Other

4.17 Poplar Riverside is envisaged to deliver a range of other uses including office (3,970sq.m), retail (2,330sq.m) and social infrastructure (including a new 2 FE primary school, 2 GP surgery and 575 sq.m of community space). It also seeks a new open space adjacent to the River Lea, a new bridge over the River Lea at Lochnagar Street, new open space links along the river and enhancements to the attractiveness and ecology of the canal banks.

4.18 The document recognises the need for appropriate flood risk mitigation measures and enhanced public transport accessibility along the A12 corridor including feasibility of a new dedicated public transport route using Gillender Street and linking to Ailsa Street. The document recommends the closure of existing subways under the A12 and potential replacement with new at grade crossings at Zetland Street/Lochnagar Road as well as the removal of the Leven Road gas works.

c) Summary

4.19 In summary, the Sub Regional Development Framework and Opportunity Area Planning Framework recognise the potential for significant industrial land to be released within the London Borough of Tower Hamlets. The Opportunity Area Planning Framework identifies only three areas of Poplar Riverside for industrial uses, which are within the lowest tier of the employment land hierarchy.

4.20 Whilst the Opportunity Area Planning Framework



Map 4: Extract from the Core Strategy Proposals Map

recognises the potential for redevelopment of these areas for alternative uses, it is clear that any redevelopment proposals should incorporate a comparable level of employment floorspace, and indeed should result in no net loss of floor area.

4.21 The Opportunity Area Planning Framework identifies the potential for significant housing growth in Poplar Riverside and identifies sites where this may be most applicable. It also identifies the need for necessary social and physical infrastructure to support such new development, and a new park on the Leven Road site.

Section 5: Other Relevant Local Policy Guidance

5.1 In October 2007 the Council withdrew the Core Strategy, Proposals Map and Leaside Area Action Plan. The Council subsequently adopted these plans as interim planning guidance, and thus they have limited material status.

a) Core Strategy & Proposals Map

5.2 As a result of the designation of the Lower Lea

Valley as an Opportunity Area and in line with the detail of the Opportunity Area Planning Framework, the Proposals Map promotes a shift in land use allocations at Poplar Riverside toward mixed use residential/employment. An extract of the Proposals Map is shown below (with the full plan enclosed at Appendix 2), and identifies the following allocations for Poplar Riverside:

- Archaeological priority designation east of the A12;
- Flood risk area east of the A12;
- Identification of various development sites along the River Lea (the uses are addressed in the Area Action Plan);
- Three conservation areas east of the A12; and
- Strategic industrial allocation to the north east of the sub area.

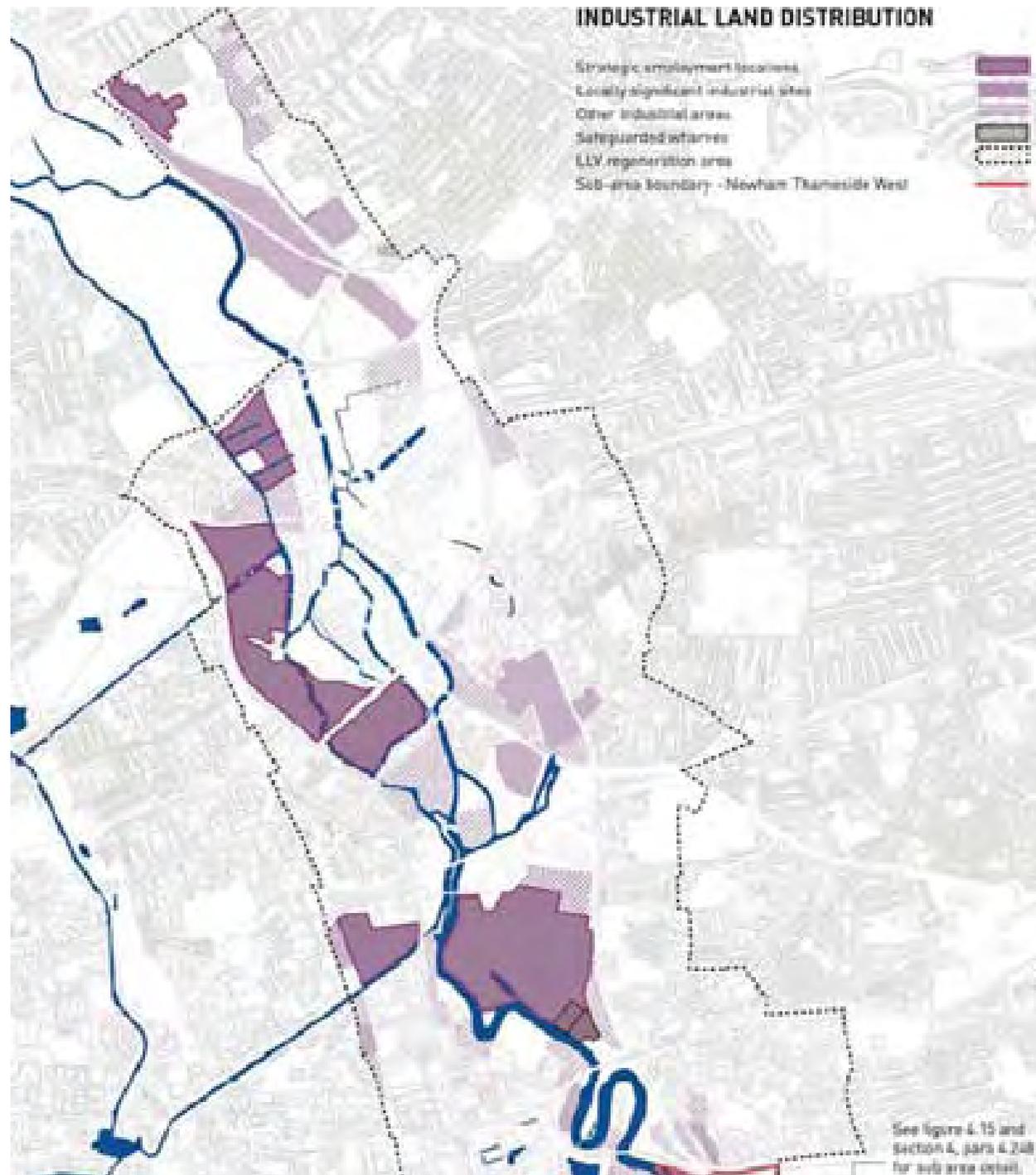
APPENDIX 2

5.3 The spatial strategy for the borough is reflected in the Key Diagram (Appendix 3) which identifies the riverside locations in Poplar for new housing development, around a new park at the Leven Road site.

APPENDIX 3

i) Employment

5.4 The Core Strategy promotes investment in the Borough to safeguard and enhance the number and range of jobs available to local residents (Policy CP7). The Poplar Riverside Area is not subject to any solely industrial/employment allocations, but the Council generally seek to retain employment buildings and sites outside Strategic Industrial Locations, Local Industrial Locations, and Preferred Office Locations which are suited for industrial and other employment uses (Policy CP11). However, the Council recognise that the overall decline in traditional industrial uses in London has created an oversupply of industrial land, and that current and emerging employment sectors are less land intensive. In view of this and in line with the London Plan the Council undertook an Industrial Land Study (2006) to inform the spatial allocation of employment land across the Borough. The study specifically considered the 'Leven Road North' and "Leven Road Gas Works/Blackwall Estate" areas the eastern fringe of Poplar Riverside. In respect of the former, it was concluded that it 'has good access to the strategic road network and that it has abutting areas



Map 3: Extract from the Opportunity Area Planning Framework

with similar uses. However, there is a mix of uses already present in the immediate area - specifically, housing - which limit its potential to serve as an industrial location due to negative impacts on amenity.' Similar conclusions were reached in respect of the Gas Works/Blackwall Estate area and it was considered to have limited potential as a strategic or local industrial location. The areas were therefore recommended for a mix of uses and as such is not subject to any site specific employment allocations.

5.5 The Core Strategy indicates that redevelopment proposals on sites that accommodate existing small and flexible workspaces must continue to supply at least the same net amount of floor space (Policy CP9).

ii) Housing

5.6 The document reflects the London Plan target that 31,500 additional homes are to be provided in the Borough by 2016, subject to the timely provision of social and physical infrastructure. Policy CP19 states that new housing will need to accord with the following:

"The Council will seek to direct all the required housing provision to brownfield sites, appropriate for housing.

New housing provision will not be supported on sites identified for alternative uses including: employment uses and waste facilities; open space, community or social facilities; infrastructure and utilities.

The Council will require all new housing to contribute to the Borough's housing need; in particular contributing to the Council's housing priorities including affordable housing and family housing."

5.7 In line with national and regional policy, the Council require proposals to make efficient use of land. Policy CP20 and Development Control Policy HSG1 state that the Council will seek to maximise residential densities taking into consideration a number of factors including local context, achieving high quality, and housing mix and type. The Council's density matrix seeks between 200 – 450 hrph in areas with a Public Transport Accessibility Rating (PTAL) of 1-3 or 450 – 700 hrph where the PTAL is 4-6.

5.8 In terms of mix, Policy CP21 promotes a mix of

dwelling sizes, family housing and accessible homes to create mixed and balanced communities and range unit types and sizes will be required.

5.9 The Council aim to maximise affordable housing in order to achieve the 50% target across the borough and will seek a minimum of 35% on proposals of 10 dwellings or more. The Council also seek a ratio of 80:20 social: intermediate (Policy CP22).

5.10 In terms of social rented housing, Development Control Policy HSG2 states the following mix should be provided:

- One bedroom 20%
- Two bedroom 35%
- Three bedroom 30%
- Four bedroom 10%
- Five and six bedroom 5%

5.11 The policy goes on to state that both the intermediate and market housing should include 25% family housing, comprising 3, 4 and 5 bedrooms.

5.12 Policy CP25 requires all new housing in Tower Hamlets to provide high quality, useable amenity space, comprising private and communal (including children's play), in accordance with the standards below:

- Private Amenity Space
- All dwelling housings, terraces or ground floor units comprising 3 bedrooms or greater - 50m²
- Terrace/ground floor units comprising less than 3 bedrooms - 25m²
- Dwellings comprising 1 bedroom or studios - 6m²
- Dwelling comprising 2 bedrooms or more - 10m²
- Communal Amenity Space
- All developments with 10 or more residential dwellings 50m² for the first 10 units, plus a further 5m² for every 5 additional units thereafter;
- Where 10 or more child bed spaces are being provided (from family housing) 3m² of play space for every child bed space.

5.13 Development Control Policy HSG5 relates to estate regeneration schemes and states:

"1. The Council may consider a net loss of affordable housing may be considered on an estate regeneration site, only where:

a) high-quality, usable open space or another non-residential use within the estate boundaries is determined to be more beneficial to the overall estate regeneration scheme; or

b) it can be demonstrated that limited loss of affordable housing is required to improve the tenure mix on site.

2. Where proposed housing on estate regeneration sites includes market housing, the Council may consider varying its requirement for contributions towards additional affordable housing where it can be sufficiently demonstrated that the provision of market housing on the estate regeneration site is necessary in order to cross subsidise the works being undertaken to bring existing dwellings on site up to a decent homes plus standard."

iii) Other

5.14 The Council seek to increase and improve the provision of all types of open space in the Borough in accordance with the 1.2 hectare per 1000 population standard and encourage the use of new and innovative design measures to achieve high quality open space (Policy CP30).

5.15 The River Lea is defined as a Green Chain and the Council encourage functional and physical linkages between these areas and the Borough's network of open space and the wider public realm (Policy CP34). The Council also seek to protect the amenity of the existing waterways and the river frontage for nature conservation, biodiversity and appropriate recreation, transport and tourism purposes. Extensions and access improvements to waterside walkways and the river frontage will also be promoted (Policy CP36).

5.16 With regard to flood risk, the Council will not support development or the intensification of existing uses in the Flood Risk Area or elsewhere in the Borough, where the Council considers that the residual risk of flooding has not been mitigated or minimised to an acceptable level (Policy CP37).



5.17 Various sustainability and energy policies are proposed which follow the emphasis of the London Plan, including Policy CP38. Policy CP39 provides that all existing waste management sites should be protected and that non-waste uses will only be permitted where compensatory facilities are provided in a sustainable location.

5.18 The Council promote, through new development, the creation of sustainable transport networks. Proposals should seek to create sustainable patterns of development and reduce the need to travel by encouraging a sustainable mix of land uses which promote easy and convenient access to jobs, shopping and leisure facilities. High-trip generating uses should be located in areas with good access to public transport and with a Public Transport Accessibility Level of 4 – 6.

5.19 The document includes various design and amenity related policies. In respect of tall buildings the Council will support such developments in the northern part of the Isle of Dogs where they consolidate the existing tall building cluster at Canary Wharf and at Aldgate to facilitate the regeneration of the area. The Council will however consider proposals for tall buildings in locations outside the tall building cluster locations if adequate justification can be made for their development. All proposals for tall buildings must:

- contribute positively to a high quality, attractive environment;
- respond sensitively to the surrounding local context;
- not create unacceptable impacts on the surrounding

environment, including the surrounding amenity;

- contribute to the social and economic vitality of the surrounding area; and
- not create unacceptable impacts on social and physical infrastructure.

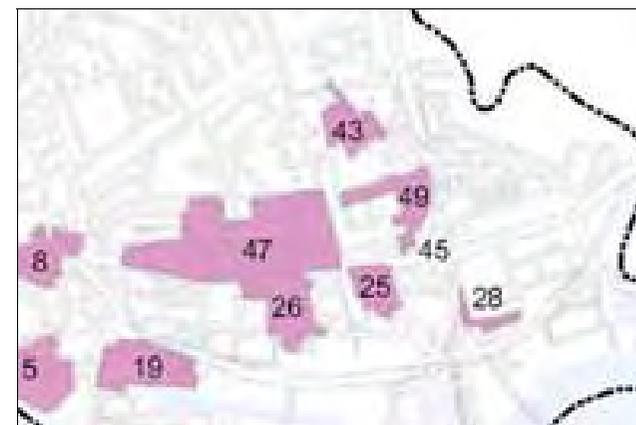
5.20 The Council seek to protect and enhance the historic setting of the Borough including the character of statutory listed and locally listed buildings (Policy CP4). Policy CP50 identifies a series of strategic and local views which the Council will seek to protect where possible.

5.21 The document recognises the importance the Blue Ribbon Network as emphasised in the London Plan and Policy OSN3 sets out various criteria for development proposals.

5.22 The document sets out a town centre hierarchy which in respect of Poplar Riverside consists of Crisp Street District Centre and Aberfeldy Street Neighbourhood Centre.

5.23 In line with PPS6 the Council seek to maintain and support the vitality and viability of existing town centres, however, the document encourages the provision of local facilities to support the needs of local residents (Policy CP15). New residential development needs to be supported by adequate provision of social and community facilities (Policy CP27) and the loss of existing facilities will not be supported unless there are acceptable plans for full replacement.

5.24 Schedule 6 identifies various parks within the



Map 5: Extract from Core Strategy



Map 7: Extract from Leaside Area Action Plan of Development Sites in Poplar Riverside



Poplar Riverside area (Braithwaite Park, Aberfeldy Millennium Green and Leven Road Park), of which Aberfeldy Millennium Green is a proposed Site of Nature Conservation Importance. Three Conservation Areas are designated west of the A12 within Poplar Riverside (Langdon Park (43), St Fridewide's (45) and Balfron Tower (49)), as shown opposite in Map 5.

5.25 In July 2008 Tower Hamlets released a revised Core Strategy Options and Alternatives for consultation. The document will replace the existing core strategy adopted as interim planning guidance. The document sets out a series of key objectives and identifies options for achieving these key targets.

b) Leaside Area Action Plan

5.26 The Leaside AAP covers the entire eastern fringe of the Borough. The spatial strategy for the area reflects the Core Strategy including a desire to retain and enhance strategic industrial areas (Gillender Street), support new small and medium-sized employment spaces throughout Leaside and provide flexible workspace for creative industry clusters, particularly at Leamouth and Bromley-by-Bow.

5.27 The spatial key diagram (Map 6 as shown opposite) identifies a number of key principles for Poplar Riverside:

- Public open space on the Leven Road site;
- Green chain along the River Lea;
- Mixed use areas, including some family housing for sites adjacent to River Lea;

- Key links east/west through the area; and
- Crossings over the River Lea.

5.28 The document recognises the importance of linking new developments to the delivery of public transport enhancements. Policy L3 seeks to achieve pedestrian and cycle crossings (at grade or bridges) over the A12, particularly at the A13 intersection. Improvements are also sought to existing crossing points, whilst new crossings are promoted at Ailsa Street and Leven Road.

5.29 Policy L4 relates to the waterways in Leaside and indicates the need for enhancements to the greenways, and pedestrian and cycle routes along the waterway.

5.30 In respect of open space, Policy L5 specifically refers to the need for a district park at Leven Road (6ha) including active sports pitches, and passive recreation facilities. Improvements are also sought to existing open spaces, including communal amenity spaces on social housing estates. The Ailsa Street and Nairn Street/Hays Depots sites are also to accommodate open spaces of 0.9 and 0.8 ha respectively which will provide pedestrian and cycle links along the River Lea. Blackwall Trading Estate and the Lanrick Road sites are also to provide open spaces of 0.22ha and 0.26 ha respectively.

5.31 Flooding is recognised as a significant issue for Leaside. As such the Council will seek to ensure that flood risk is managed in accordance with Government guidance (PPS25) and development which may result in, or be exposed to, an unacceptably high level of risk will not be supported. Green roofs, sustainable urban



Map 6: Extract from Leaside area Action Plan Showing the Spatial Key Diagram

View north from A13 bridge



drainage systems, and other mitigation measures to reduce surface water run off as close to source as possible, will be encouraged. Development within Flood Risk Areas should consider the residual risk of flooding, and finished floor levels for all residential accommodation should be above the Statutory Defence Level of the adjacent flood defences.

5.32 Policy L7 relates to education provision and states that to support population growth three new primary schools will be provided, including at Poplar Riverside.

5.33 The Council promotes the provision of new and expanded healthcare centres close to areas of residential development and in, or in close proximity to, neighbourhood centres, particularly at Bromley-by-Bow North and Poplar Riverside.

5.34 Policy L9 notes that the Council will closely monitor the capacity of key infrastructure essential to the creation of sustainable communities in Leaside, to ensure the pace of development corresponds with infrastructure availability. This includes monitoring transport, public open space, health, and education infrastructure and facilities. Applications for development in Leaside will be required to ensure that new and/or upgraded infrastructure will be in place to support the development prior to the development being occupied.

5.35 All existing waste facilities in Leaside are to be safeguarded, unless replacement facilities can be provided. The Council will consider opportunities for more intensive and efficient use of existing facilities, and where appropriate will consider opportunities for the expansion of existing facilities onto adjoining sites.

5.36 The Area Action Plan divides Leaside into a series of sub-regions including Poplar Riverside. Paragraph 4.50 sets out a character statement for the sub-area: "Poplar Riverside will once again embrace the River Lea with the transfer of existing industrial uses to residential, including the creation of a series of high quality, ecologically rich open spaces responding to the River Lea surrounded by new family-focused residential communities with new

community facilities, large recreation space, and a new primary school. Improved connectivity across the A12 and a permeable, legible built form will create direct links that allow existing communities to reap the benefits of these improvements, and utilise the waterway network as a space for everyone to relax, gather and play."

5.37 In respect of employment, Policy L29 states that: "In areas to the north of Leven Road Gasworks/ Abbott Road, employment (B1) uses should be part of mixed-use development and should be located adjacent to the A12 or A13.

In areas to the south of Leven Road Gasworks/ Abbott Road, employment (B1) uses suitable for small and medium sized enterprises should form part of mixed-use development."

5.38 The document classifies the area as 'urban' and thus suggests that densities of between 200-770 hr/ha are acceptable, however, where family housing is considered 200 to 450hr/ha would be more applicable.

5.39 Policy L30 also notes that retail and leisure uses will be supported in the Aberfeldy Neighbourhood Centre and will only be supported in other locations where they are of a scale and kind intended primarily to serve the needs of the development.

5.40 The document encourages more direct links through the Aberfeldy Estate to new open space at Leven Road and improved pedestrian links from Nairn Street to the Aberfeldy Estate. New bridges across the River Lea will be supported to improve river access and access to the new district park at Leven Road.

5.41 In terms of design, the Area Action Plan notes that the central part of the sub-area west of the A12 is predominantly composed of housing estates, many of which are the subject of estate renewal. To the west of the area there is potential to increase the intensity of residential development in order to increase activity and reduce the number of inactive frontages.

5.42 In the east of the sub-area, opening up access

to the waterfront is considered important in order to ensure everyone has access to the Lower Lea Valley Park. This would mean more permeable development forms in areas adjacent to the River Lea. Within the eastern part of Poplar Riverside there are a number of buildings of notable historical and architectural merit, not least the listed Bromley Hall. There is potential in this location for design that takes the lead from the industrial heritage of the area. The document notes the real challenges in creating links between the uses either side of the A12 while providing appropriate buffering against the road.

5.43 Those sites allocated on the Proposals Map for development are identified in the Area Action Plan (an extract is shown on the previous page Map 7). The Area Action Plan identifies the main uses that will be applicable for each site:

- LS14 Ailsa Street (4.69ha) - Residential (C3), Employment (B1), Public Open Space (0.9ha);
- LS15 Nairn Street and Hays Depot, Leven Road (4.20ha) - Residential (C3), Employment (B1), Public Open Space (0.8ha);
- LS17 Leven Road Gasworks (9.28ha) - Residential (C3), Employment (B1), Public Open Space (6ha);
- LS18 Blackwall Trading Estate (1.14ha) - Residential (C3), Employment (B1), Public Open Space (2.2ha);
- LS19 Lanrick Road (1.34ha) - Residential (C3), Employment (B1), Public Open Space (0.26ha);
- LS20 Currie/ Dunkeld Site (1.39ha) - Residential (C3);
- LS29 Carmen Street and Chrisp Street (0.44ha) - Residential (C3), Employment (B1).

5.44 In summary, the interim Core Strategy and Leaside Area Action Plan reflect the change in emphasis presented in the London Plan, Sub Regional Development Framework and Opportunity Area Planning Framework toward intensive redevelopment. The documents support the re-allocation of previous industrial/employment sites for mixed residential/employment uses.

5.45 The documents closely echo the Opportunity Area Planning Framework in terms of the need for a new park at Leven Road and associated social infrastructure facilities. High density development is supported at

appropriate locations, particularly those with high public transport accessibility, although an emphasis on family housing is reinforced. The importance of the River Lea is emphasised, especially encouraging access to new recreational facilities.

Section 6: Summary

6.1 The Poplar Riverside area falls within the Lower Lea Valley Opportunity Area as defined by the London Plan, which is to accommodate a substantial number of new homes and jobs.

6.2 Much of Poplar Riverside is currently used for low-intensity employment purposes, and this is reflected in the designations of the UDP. The UDP seeks to retain and enhance employment and resists the redevelopment of such sites for residential and other uses.

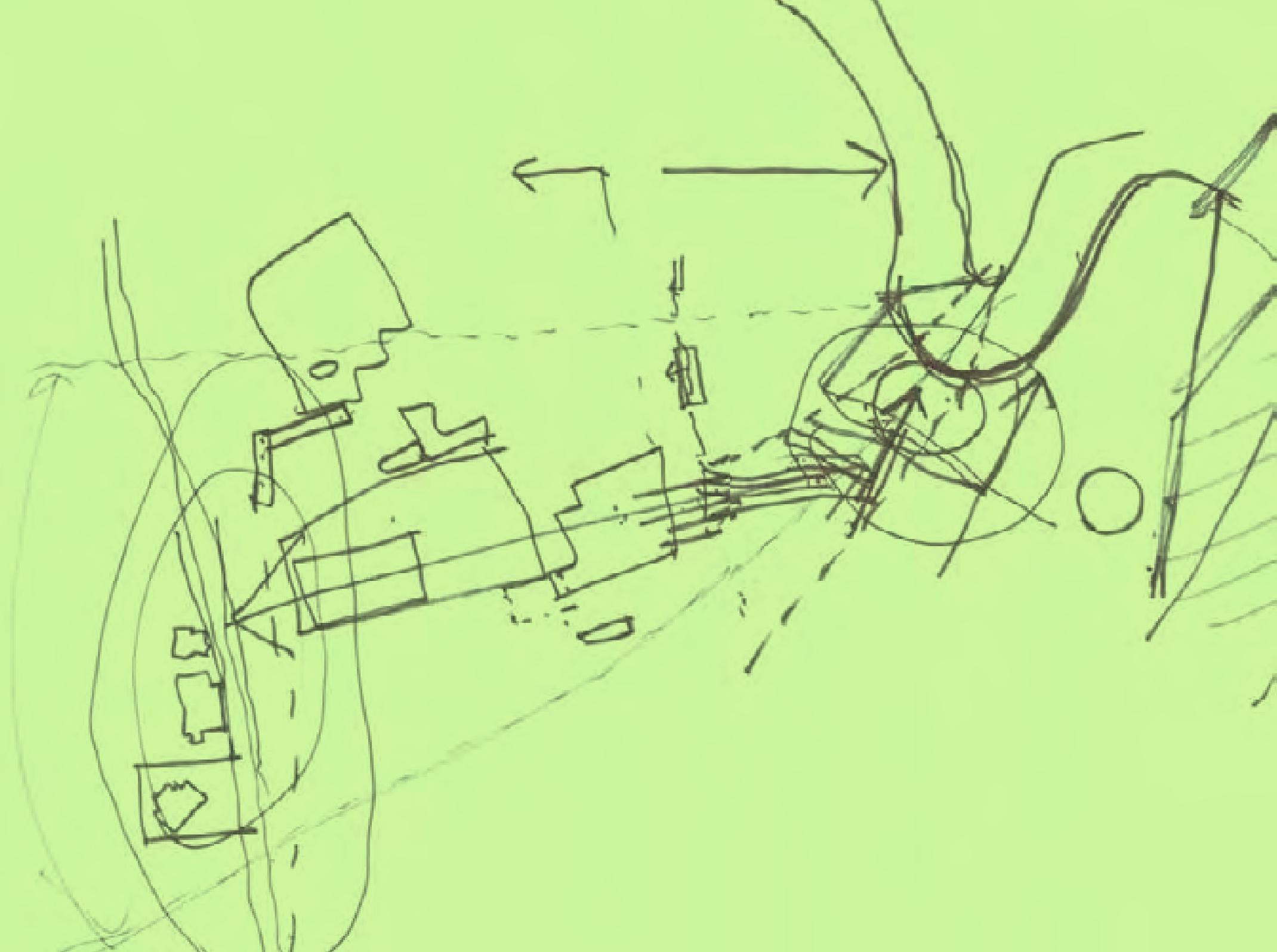
6.3 The UDP is acknowledged to be out-dated and thus does not reflect the London Plan approach toward employment land. Whilst recognising the need to ensure sufficient land is available to satisfy needs, the London Plan reflects on structural changes in the economy that have led to an identified surplus of land.

6.4 The Opportunity Area Planning Framework suggests that Poplar Riverside can release 16.3ha of employment land for alternative uses. However, a select number of sites are identified as potentially being locally important. The Planning Framework encourages the re-provision of these employment uses as part of mixed use redevelopments, subject to the employment capacity being re-provided.

6.5 Against this background the interim Core Strategy and Leaside Area Action Plan promote the creation of a new vision for Poplar Riverside which embraces the River Lea and transfers existing industrial uses to residential, supported by a range of complementary services and facilities.



Crisp street Idea Store





4.1.1 An Overall Vision

This section brings together, analysis, observations and site by site proposals within an integrated vision, and delivery strategy for Poplar Riverside wider area. This focuses specifically on ways in which interventions within the wider area can help to optimize the conditions for new development within the core area; the changes within the wider area necessary to accommodate an increase in population and how these can be integrated to knit together new and existing communities.

The overall vision responds to a number of key objectives and thematic areas of intervention which have been identified at a high level within the London Plan, LLVOAPF, other recent studies, the brief, and through extensive consultation with the client group and key stakeholders:

This section looks at wider area interventions and strategies, and then focusses on the detail of how they can be achieved and identifies specific projects which can be delivered over a range of timescales.

This sets the scene for looking at how core areas sites may develop in Section 5.0.

4.1.2 Change as part of a continuous process

The previous section showed Poplar Riverside as an area in a state of transition with radical changes to surrounding areas encroaching through new large scale developments along its borders and within. It is at a key point in its development. Major changes are taking place within the Lower Lea Valley, Thames Gateway the Isle of Dogs, East India Dock, the Olympic Park, new cross river connections and transport infrastructure. There is now a vital opportunity to redefine Poplar Riverside to encourage regeneration and prepare the area for a sustainable future for the community that exists and

the one it has to become to move forward to a successful future.

With opportunity there are simultaneous dangers. Rapid change can too easily lead to development that bears little regard to the particularities of place, or lack cohesion. Change should be recognised as part of a continuous process which links present and future with recent and distant past. It is vital that change is well managed at every level, that it respects and supports existing communities and recognises the shared benefits that new communities can bring to the vitality of the area as a whole.

Currently the area is characterised by its diverse scale of large industrial juxtaposed against small scale housing, large estates next to undervalued open space. Numerous physical and social conditions create hindrance to growth which need to be unlocked for Poplar Riverside to realise its potential and to fully benefit from the opportunities which exist within the Lower Lea valley.

With these challenges in mind we seek to identify the potential for sensitive and coherent integration of new development and public realm improvements that will help redefine Poplar as a place within its own right, fully integrated within the aspiration of the wider area. This task requires an effective and cohesive multidisciplinary and well managed approach which underpins this strategy.

Identity -Past Present Future:

The juxtaposition of fragments gives Poplar Riverside a distinctive character which records its chequered history. Most places in London which are appreciated for their strong character have found ways to develop continuously, maintaining links between past present and future. It is important that new development does not erase the layered history of Poplar but finds and builds upon the positive attributes of what exists, and through a process of knitting and healing transforms rather than replaces. Where renewal is inevitable it should be sensitive to the grain, character and scale of the particular place or location.

Poplar Riverside is a unique place with many positive characteristics upon which to build. Our aim has been to overcome failings, draw upon the unique qualities and to assimilate past and present rather than impose a sweeping new order.

4.1.3 A challenge of regeneration rather than redevelopment

These and other key principles have informed the urban design approach within this strategy:

Density and Diversity

That density and diversity create more vibrant and sustainable urban environments both in the shorter and longer term.

Incremental Growth

The strategy puts forward a framework for incremental growth which encourages and does not limit, further development, density and diversity over time. It aims at creating conditions through which Poplar Riverside can transform over time during and beyond the immediate 10-15 years. The strategy considers what could Poplar Riverside could be like in 10, 20, 50, even 100 years. It recognises that a robust, sustainable approach is one which provides a coherent but flexible framework. It promotes an infrastructure of streets, open spaces, centres and building typologies which can readily accept exchange of uses as economic and social circumstances change.

Expansion of activities

That integration of diverse activities helps to promote and sustain economic and social-well being. The strategy promotes expansion and integration of activities wherever possible rather than reduction and displacement.

Develop a strong identity

To support and develop a strong identity for Poplar Riverside which takes on board recent changes. At the same time it reinforces the latent character and identity of its historic past.

Build on existing

These key principles have been applied to create a strong sense of place which builds upon what exists within Poplar Riverside today and reflects the everyday life of the people who already live here as well as creating conditions to attract new population.

Social-Economics

For regeneration to succeed there needs to be an holistic approach. It does not depend solely on improvements to the built environment but must also address social and economic issues answering environmental and physical problems, along with problems and issues of high unemployment, economic inactivity, low skills base, deficiencies in social infrastructure, poor connectivity, poor quality of public space.

Mix of new buildings

In the context of radical change within the core area it will be important to consider how high density new development can be integrated with existing lower rise areas and ways in which it can create an extension to existing communities rather than an isolated new one. Linkages, mix of housing types and tenure, community facilities, permeability through high quality public spaces will all help to integrate new with old and act as a catalyst for the regeneration of the wider areas.

Strong linkages

For the regenerative benefits of new development to be realised over the wider area it is vital to create links and connections which knit separate areas and communities together. Strong new linkages between the core area, Langdon Park and Chrisp Street will help to share the benefits of new development across a wider area. East west connections which overcome the severance of the

4.1 Principles Of Approach

Our urban design philosophy states our strong belief that diversity of uses creates more vibrant and sustainable urban environments

A12 will be key to establishing a cohesive relationship between Poplar Riverside and adjacent town centres.

4.1.4 Key Proposals

Improve key connections

- Overcome current barriers to improve connectivity within Poplar Riverside and to key areas beyond.
- Improve access to local centres, services and amenities by increasing permeability.
- Connect the core area through strong east-west links to overcome A12 severance and build upon the potential of the new crossing at Lochnagar Street.
- Identify connections to major centres to the north (Bromley-by-Bow), south (East India, Canary Wharf), east (Canning Town, Star Lane, Cody Campus) and west (Chrip Street market).

Improve public transport

- Improve accessibility, movement and linkage within Poplar Riverside and to the surrounding areas.
- Improve PTALs. Improve public transport in terms of new bus routes, restrictions on heavy vehicles, cycleways and access to public transport.

Enhance and intensify local centres

- Identify and support local centres at the heart of communities consistent with LBTH's retail and social infrastructure strategies.
- Identify and locate services and facilities necessary to support the growing communities.
- Enhance local centres and identify opportunities to consolidate fragmented retail provision plus new community facilities into accessible centres with strong identity - 'hamlets' within Poplar Riverside.

Improve access to green spaces and the public realm

- Improve the quality of the public realm.
- Redefine Poplar's riparian identity. Identify ways in which Poplar Riverside can re-connect and engage with the River Lea through public spaces within new development. Provide public access to the river and across through new pedestrian, cycle and vehicular bridges at strategic points.
- Integrate the proposed 6 hectare river edge park at Leven Road (from LLVOAPF and Lea River Park concept study) within a wider area strategy which links Chrip Street, Langdon Park DLR Station to the Lea River Park.
- Improve the A12 as an environment appropriate within a built up urban area, increase and improve crossings.
- Identify a hierarchy of public spaces and improvements to the public realm, linked to connections to the new district I riverside park.

Provide long term engineering solutions

- Identify design principles to design and protect against the 1 in 1000 year flood risk.
- Respond to flood risk by locating non-residential uses or town house type units on the ground floor.
- Indicate the need to manage contamination risk carefully through consideration of sources, receptors and pathways.
- Identify that the efficiency of site wide engineering through the development of integrated strategies for water, energy and waste.

Deliver transformation through regeneration

- Define areas for new residential development, indicate, mix, density, mass and scale for core area sites in line with the needs of the local community, the wider policy context and the objective of delivering sustainable communities.
- Anticipate how this relates to developments within

the wider area. Optimise residential capacity within the core area and balance use mix, employment opportunity, flood risk and public amenity.

- Indicate the potential for higher density residential capacity through development of available or underused sites within the wider area and the potential for expanding the range of residential accommodation to cater for a more diverse population, tenure and mix.
- Explore opportunities for new industries of varying scales which can be located within a more diverse residential environment – creative and green industries, recycling, research, start –up.
- Develop guidelines for density, massing and scale of buildings to guide future development. The general principle of lower buildings towards the river, higher towards the town centres is central to a cohesive urban structure.

TRANSFORM
Poplar Riverside
into a revitalised,
integrated
community,
connected to the
River Lea and other
surrounding areas,
which fully realises
its potential as an
attractive location
for housing growth
and employment.





4.2.1 A Fragmented Street Pattern

The post war development of Poplar Riverside has all but negated the tightly knit street patterns which developed during the 19th and early 20th centuries. Although the general grain and some of the older streets remain visible the overlay of figure ground plans (as shown in the diagrams opposite) shows the degree to which the interventions of newer estates and transport infrastructure have created a radically different urban character and topography.

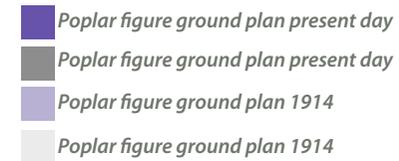
A series of rapid and traumatic changes interrupted the process of incremental sub-urban development which followed construction of railways and growth of river related industries. The combination of bomb damage, large scale piecemeal redevelopment, and new transport infrastructure have resulted in a fragmented urban topography with numerous inherent difficulties which affect Poplar Riverside today.

This primary change in character can be defined as a shift from the tightly knit pre-war street pattern to post-war large scale high rise estates with a high proportion of open space. This dynamic between historic growth and post war change is informative in identifying Poplar's present day character and latent structure. The fragmented character today is, to an extent, what gives Poplar a strong identity. The juxtaposition and sometimes conflict of Victorian remnants, large scale estates and open spaces, river edge industry gives the area qualities which are specific to Poplar as a place.

Pre-war urban structure is characterised by:

- low rise terrace houses
- dense street pattern = high permeability
- continuity of urban fabric
- clear centre - high street - Brunswick Road
- integration and symbiosis with industry and the river
- lack of open space

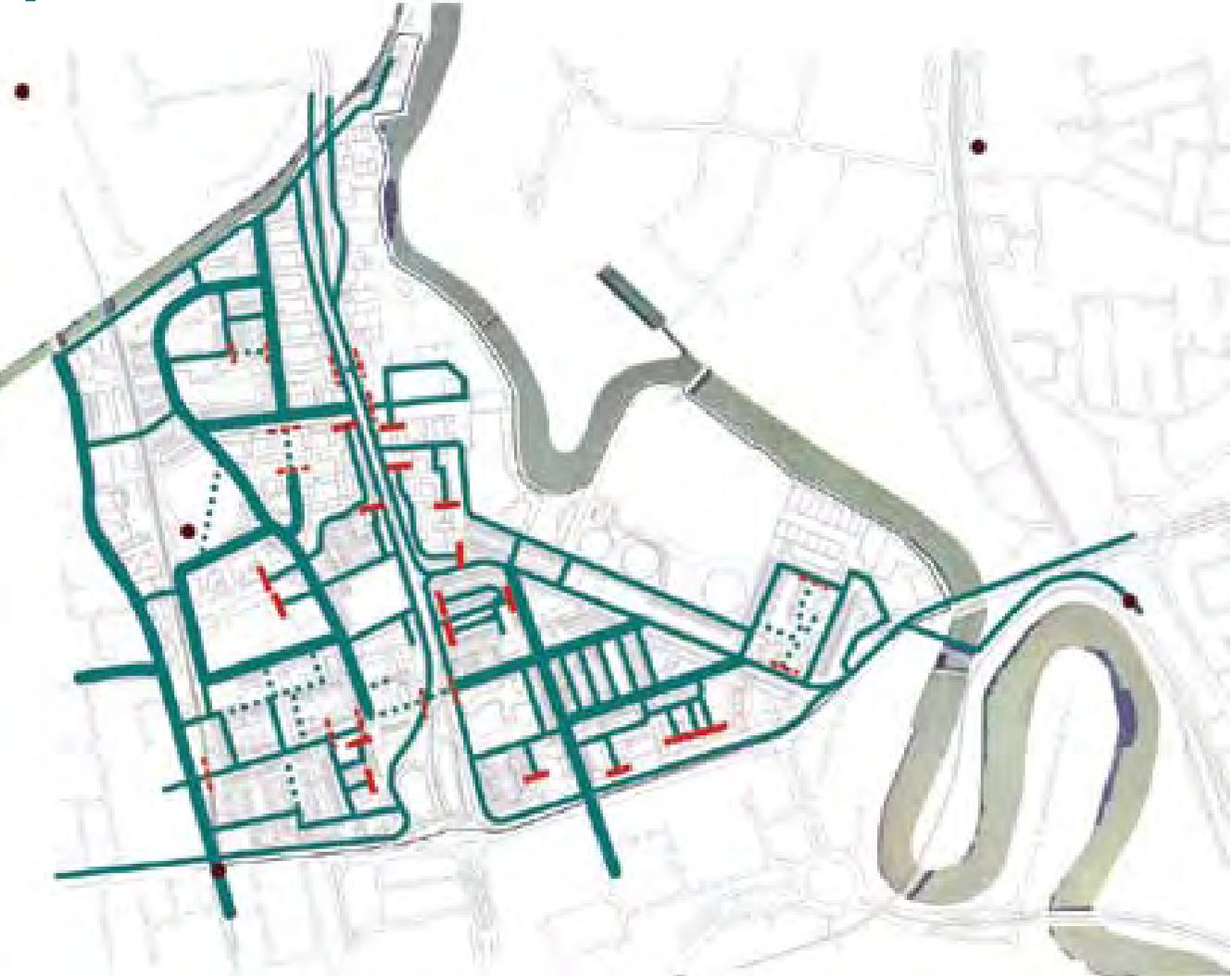
Willis Street- apparent dead end



4.2 Connectivity -Walking & Cycling



- Main routes
- Secondary routes
- Pathways
- No through routes
- Perceived no through routes



Existing routes within the site boundary

Post-war urban structure is characterised by:

- higher and high rise buildings
- large 'ring-fenced' estates = low permeability
- separation/disjunctures in urban fabric
- separation of industry and the river from surrounding communities
- more open space

The figure plan of present day Poplar (page72) shows that it has a high proportion of open space to building footprint. This implies a high level of permeability and yet the opposite is true. Many of the open spaces are within estates, are not accessible to the public or provide hostile environments (e.g. - the A12). By comparison, the tightly knit streets of Pre-war Poplar lacked the range of open spaces but afforded a high level of permeability.

4.2.2 Barriers to Movement

One of the major problems of Poplar today is the abundance of open space but lack of accessibility.

The diagrams to the right show the actual and perceived barriers to movement. It highlights the scale of areas, mainly estates which are either closed off from their surroundings or considered impenetrable because of lack of clearly defined through routes or direct visual connection. Where routes do exist, they tend to be dead ends or meandering without a clear sense of destination.

EXISTING:

- high proportion of open space
- low permeability



Present day block plan of actual and perceived permeability

Physical barriers and large scale estates create impermeable 'islands'

FUTURE:

- high proportion of open space
- higher density
- high permeability



Future urban block layout

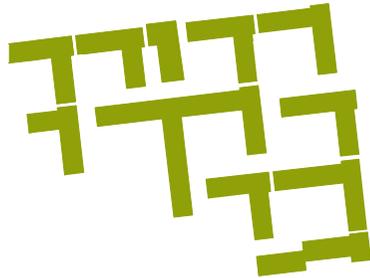
A finer grain of streets creates highly permeable dense urban environment

A long perimeter increases walking distances



LOW PERMEABILITY:

- **high density**
- **high proportion of open space**
- **low permeability**

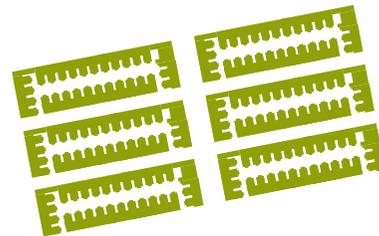


Example of low permeability in Poplar - the Teviot Street Estate figure ground extract

The large ring-fenced post war estates are difficult to get into and to get through. They do not feel accessible to the public

HIGH PERMEABILITY:

- **low density**
- **low proportion of open space**
- **high permeability**



Example of the high permeability created by the Victorian Street pattern

Small scale urban blocks and a fine grain of streets creates a highly permeable urban environment with shorter walking distances

The diagrams opposite compares the scale of present day estates (North Teviot and South Teviot) with a typical Victorian terraced block. The large scale and perimeter of the estates creates a huge walking distance in order to get from one side to the other. By comparison the compact Victorian block is easy to walk around and, when part of a grid network, creates a highly permeable environment, reinforced by clear straight site lines.

A combination of natural features and an incremental overlay of man-made infrastructure and new development have turned the area into an 'island' with fragmented and separated communities within. The major barriers are as listed below and shown in the diagram on page 77:

- The river Lea to the east which forms the border between the Boroughs of Tower Hamlets and Newham.
- Limehouse Cut to the north which creates a barrier between the wider study area and the developing town centre and transport interchange of Bromley-by-Bow. The A12 and Gillender Street cross at a point close to Bow Locks but weight of traffic creates a bottle-neck for buses.
- The DLR railway line and cutting to the west which separates communities to the east from the vibrant centre of Chrisp Street market.
- The A13 and entrance to the Blackwall tunnel to the south. A severe lack of crossings for pedestrians prevent access from the north to the developing areas closer to the River Thames and to the amenity of the Thames itself.

Reconnecting Poplar and preceding studies identified the severity of barriers which hinder access into, through and within the Poplar Riverside Area. It is essential that new connections are put in place at the earliest opportunity to integrate Poplar Riverside with LLV wide strategies, overcome current barriers to accessibility within the area and to optimize development potential.

which way do we go?

4.2.3 A Knitting and Healing Process

It would be detrimental if some of the more idiosyncratic juxtapositions were to be lost within the context of more homogeneous redevelopment. This strategy therefore seeks to build upon these inherent qualities through a process of knitting and healing rather than wholesale replacement and renewal.

One of the key challenges of this strategy is to define ways in which new well defined, local routes can help to reduce travel distances and break down the scale of the large estates.

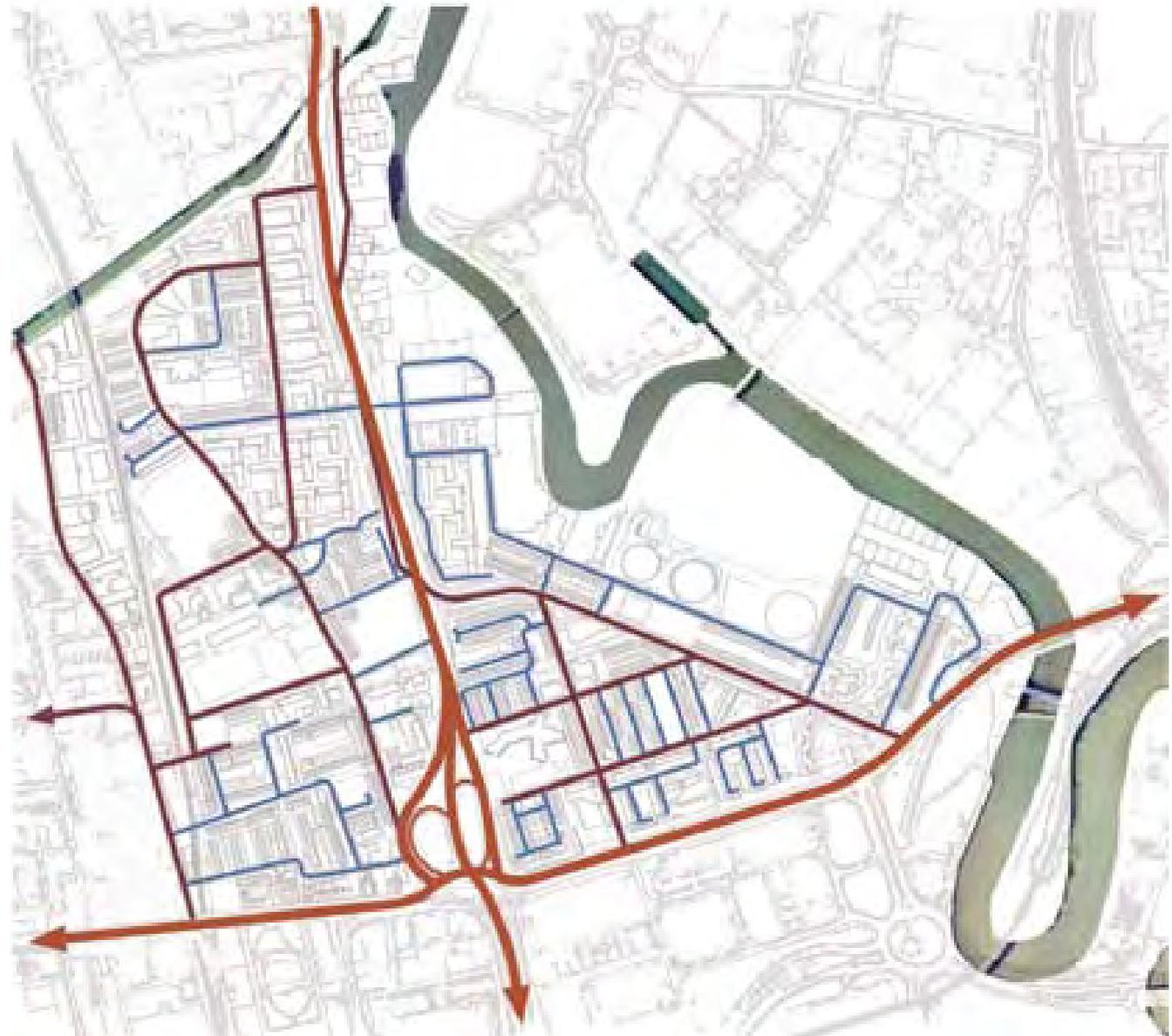
One of the ways to achieve this is to identify the key places where the historic street pattern remains but has been interrupted and then to find ways to reinstate them as continuous connections. The key west-east connections do this albeit with the help of various crossing devices.

Elsewhere the repair of the historic grain and street connections will go a long way to improving local movement.

For example:

- the extension of Teviot Street south of Zetland Street to Spey Street,
- the extension of Uamvar street, Wyvis Street, Venue Street eastwards to the A12,
- the extension of Nairn Street from Bromley Hall Road to Abbott Road,
- the reconnection of Ettrick Street across Aberfeldy Street
- the extension of the grain of streets (south from Dee Street of the A13,
- the reconnection of Leven road to Ailsa Street

- Main roads
- Secondary roads
- Minor roads



Existing roads within the site boundary



1. A13



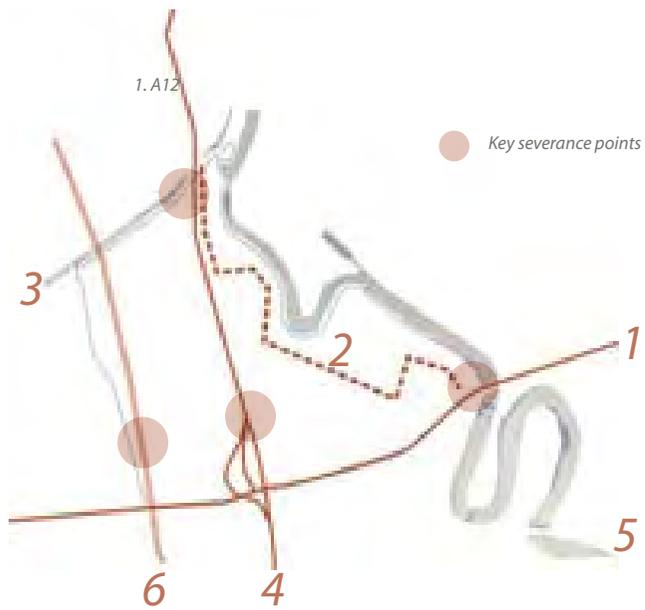
2. Industry



3. Limehouse Cut



4. A12



Main causes of severance within and around the site



5. The River Lea



6. DLR track

4.2.4 Reasons to Re-connect

For connections to be improved, it is vital that the repair of the historic grain is undertaken:

- Poplar Riverside is at key location between major transport nodes and developing town centres - Canning Town, Bromley-by-Bow, Canary Wharf etc. In the context of change within the much wider area, connectivity between these centres is an essential ingredient to their success. It is important that Poplar Riverside helps to bind these areas together rather than to separate them.
- Strategic linkages which affect the LLV area should be supported - for example the east spine which is intended to run north south parallel to the east side of the River Lea.
- To overcome the barriers of superimposed infrastructure which have divided the area from its surroundings and within.
- Poplar Riverside is surrounded by major transport centres, road and rail connections, but it is difficult to access any of these from within the area. For Poplar Riverside to develop successfully it must take full advantage of the opportunities given by the available transport network and offer direct, safe routes.
- The majority of the wider area and core area is within a 10 minute walk radius of a station yet it takes far longer to get there by using currently available routes. This is particularly significant in terms of Canning Town, access to which is severely impeded by the A13 barrier and lack of direct, safe crossings.
- Despite proximity to public transport the majority of the core area suffers from a low PTAL2 rating. This is a limitation on residential capacity which needs to be improved if Poplar is to fulfill its potential.
- Proposed changes to the River Lea as a new accessible park (ref LLVOAPF, 5th Studio LLV Park Strategy) will

substantially change the dynamic of the area and shift its focus towards rather than away from the river. A new 6 hectare park on the Leven Road gasometer site is intended to be a major component of the Lea River Park. For it to succeed as a park of regional significance it needs to be accessible from all directions.

- The transformation of the River Lea will create a river edge environment and public amenity which is attractive for residential and other leisure, recreational uses. There is an imbalance between sites of 'higher value' coinciding with lowest PTALs. How can this be addressed?

- Post war estates within Poplar Riverside have interrupted the previous finer grain street Victorian street patterns. Many are of a relatively large scale and are ring fenced resulting in lack of permeability within the more local areas. Permeability through these areas would improve movement and access throughout the whole area. Street patterns and public access routes should reflect local movement and desire lines.

- The A12 severs west from east and is a hostile environment. Although there are numerous crossings, they are all underpasses and are difficult to find, use and are intimidating, particularly at night. Improved A12 crossings are essential to knit the communities east and west together. This has already been recognised in the new A12/Lochnagar Road crossing which is to be implemented by TfL in 2009.

- There is a need to open up routes beyond the wider area to both east and west. Numerous primary schools and community facilities which serve the population of Poplar Riverside lie outside the study area but are currently difficult to get to. Access to Cody Campus industrial area could provide greater opportunity for local employment.

- Cross Borough would allow both to benefit from developments and amenities on both sides.

Direct connections which link Poplar Riverside to its surroundings are the key to its success

Summary

- Improve connections to key centres: Canning Town, Bromley-by-Bow, Canary Wharf
- Connect into LLV wide strategic connections
- Improve east west connections beyond and within the wider area
- Improve connections to available transport nodes
- Create safe and direct crossings across the A13 and A12
- Create access to the river edge/LLV park
- Improve PTAL ratings to the core area
- Improve permeability through existing estates and the wider area as a whole
- Improve access to community facilities and employment opportunities beyond the wider area
- Develop cross Borough connections

4.2.5 East-West Connections

Poplar Riverside will continue to struggle unless it is connected to its surrounding areas. It will not be able to develop unless it has good links to the excellent transport network which continues to develop around it. The transition of industrial sites cannot happen unless they have good access to public transport and a good environment in which to grow. Existing communities will be separated and insular unless they become more integrated within the whole area.

Direct connections which link Poplar Riverside to its surroundings are the key to its success.

Through careful analysis the Strategy has developed a vision for 4 east-west links to answer these needs and which bring together the high level strategy of the LLVOAPF, the ethos of the Lea River Park and an understanding of local conditions.

The key east west links are:

- **Lochnagar link**
building upon the opportunity of the new A12 crossing
- **River link**
connecting a spine of existing open spaces to new public spaces on the river
- **Bridge Link**
crossing the A12 and the River Lea to Canning Town
- **A13 link**
developing the A13 as a more public route

Common to all of these is the thematic objective that they extend the Lea River Park into surrounding areas. The vision is that these links are functional and are also landscape 'corridors' which link river to local centres.

Re-connect Poplar Riverside through: 4 east-west landscape links which connect the river park to surrounding communities



Key East West linkages

4.2.6 North-South Connections

The Valley has a natural north-south grain which connects centres along the west side.

The vision for 5 north south links is about enhancing transforming existing links and overcoming the main barriers of Limehouse Cut and the A13.

The key north south links are:

- **Gillender Street link**
a new parallel connection to the A12 to the north
- **Aberfeldy link**
connecting to Aberfeldy street from the south across the A13
- **A12 boulevard**
widening to incorporate tree lined avenues to promote local vehicular, cycle and pedestrian routes
- **Canal link**
connecting across the Limehouse cut to Bromley-by-Bow
- **Chrip Street link**
new active retail and commercial frontages at ground floor level

Re-connect Poplar Riverside through: 6 north-south links to key areas along the Valley



4.2.7 The River Link

The river link creates a new landscape 'heart' for Poplar Riverside by connecting 3 existing open spaces to 2 new open spaces next to the river.

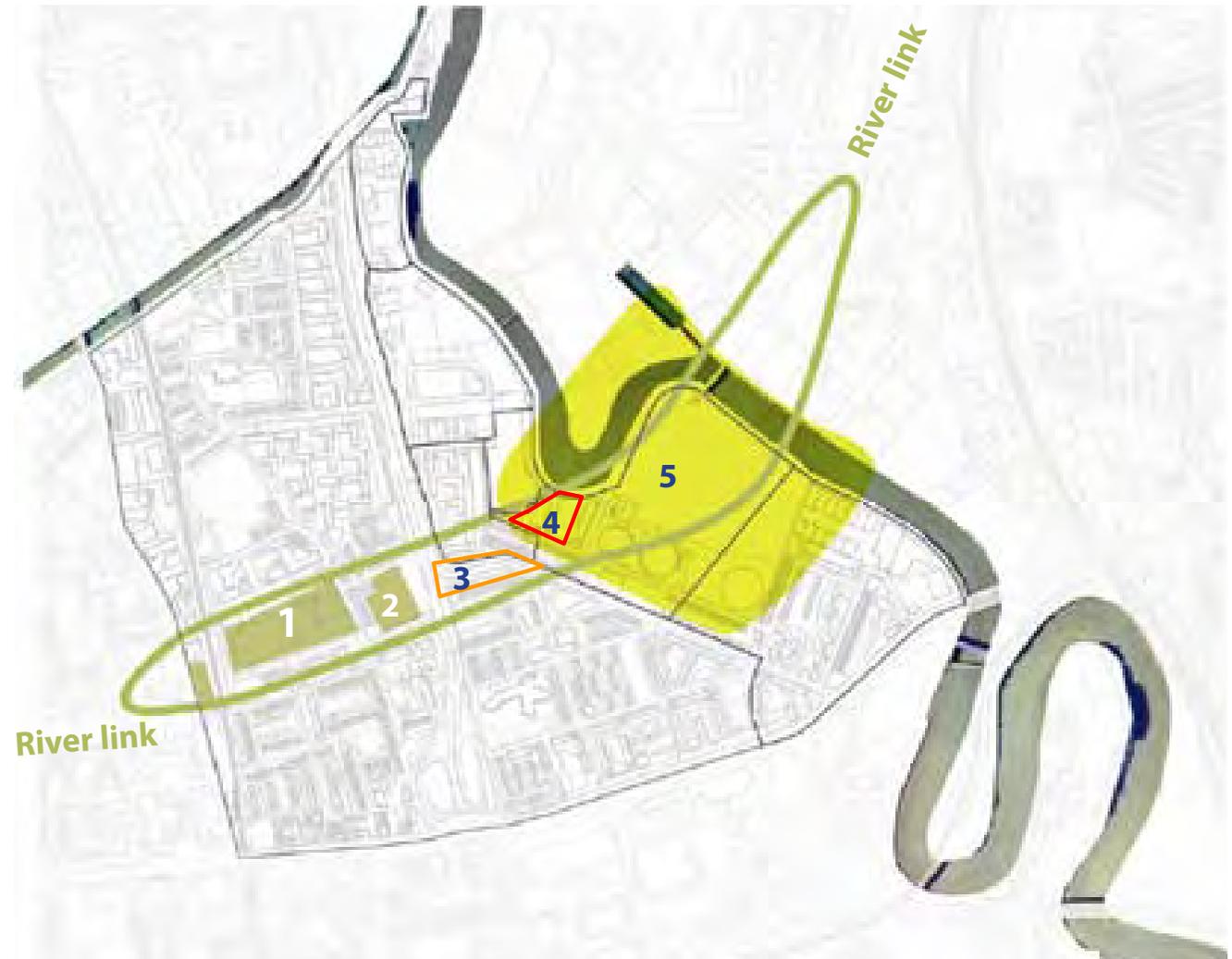
The vision is to create a linear park which enhances and supports the east-west route of Burcham Street and combines existing green spaces to connect Crisp Street to the river.

The spaces which form the river link are:

- 1 The sports ground of Langdon Park School and Burcham Street
- 2 Jolly's Green
- 3 The A12/Abbott Road junction
- 4 A new public space on the river at Devon's Wharf
- 5 The new Poplar River Park



A necklace of open spaces creates a new landscape 'heart'



The River Link

4.2.8 10 Key Links

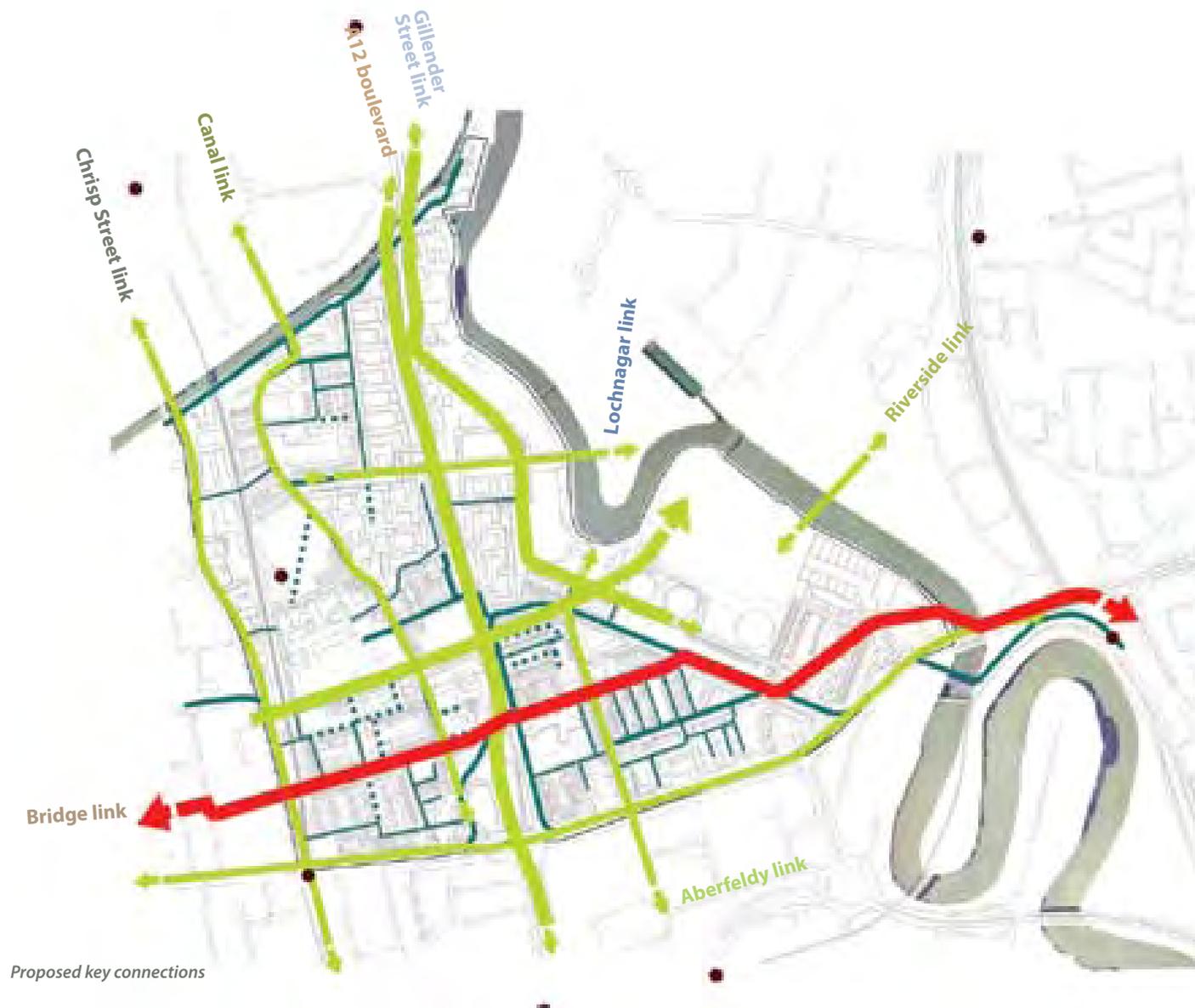
The vision for 10 key links can be translated into a network of specific routes which can be implemented over varying timescales.

The diagram on the right hand page shows the various routes which are described in more detail later in this section.

Delivery of the routes requires new crossings, bridges and improvements to existing streets and open spaces which are identified as separate projects for implementation.

The bridge link (in red) has been identified as the most important route to put in place first. It provides a strong east-west connection across the A12 and through Aberfeldy estate. A direct connection to Canning Town will create potential for residential development within the southern party of the core area. The diagram to the right shows the bridges and crossings which are necessary to deliver the links and routes.

10 links translates to key routes with new crossings which knit together what exists



10 routes 11 crossings, some more vital than others



Abbott Road at the junction with the A12 is a large green space cluttered with streetscape and impossible to cross





4.3.1 Introduction

This section has been compiled by Steer Davies Gleave. It outlines the existing Public Transport Accessibility Levels (PTALs) for the site and indicates the future PTALs for the site if the key connections are implemented.

PTALs are a detailed and accurate measure of the accessibility of a point to the public transport network, taking into account walk access time and service availability. The method is essentially a way of measuring the density of the public transport network at a particular point (although no weighting is given to where the public transport connects to, it's based purely on frequency of public transport services). The PTAL is categorized into 6 levels, 1 to 6 where 6 represents a high level of accessibility and 1 a low level of accessibility. Levels 1 and 6 have been further sub-divided into 2 sub-levels to provide greater clarity.

4.3.2 PTAL Assessment

PTAL for the whole site is calculated from 11 points on the site making the calculations more site specific. PTAL values are assessed for these points separately. Please see the figure 1 on page 86 for the reference of Points 1- 11. The walk time catchments are shown in figure 2 on page 87.

4.3.3 Baseline Condition

Point 1

There are 10 bus routes within walking distance of Point 1. These are the 309, 115, 69, 241, 474, 147, 5, 300, 323 and 330. Canning Town Station is 620 meters from point 1 which has Jubilee Line connecting to the central part of London and north east to Stratford. In addition to these, there are 2 DLR services in walking distance of the Point 1; Bank to King George V and Tower Gateway to Beckton.

The pedestrian footways on A13 are narrow and there is no direct connection for pedestrians to cross the River Lea. This makes it less likely to be used in spite of good public transport services from Canning Town Station.

Point 1 currently has a PTAL of 5 during the peak hours and 4 during the off peak hours of the day. This is classed as very good access to public transport in the peak hours and good accessibility to public transport during the off peak hours.

Point 2

There are currently 6 bus routes within walking distance of the Point 2. The routes 309 and 115 are to the west of river Lea and within 200-500 meters walking distance from the point 2. The routes 69, 241, 474 and 147 are accessible via the A13. In addition to these, there is 1 DLR station in walking distance of the Point 2, Canning Town station which also has access to the Jubilee Line services. Pedestrians can access the A13 by a set of steps connecting point 2 with A13 near the River Lea to cross the river and reach on the other side of the river. The route is deserted and not ideal in evenings. This makes it less likely to be used in spite of good public transport services from Canning Town Station.

The current situation with 1 DLR station and 6 bus routes gives the site an average PTAL of 3 during the peak and off peak hours. This implies that the public transport accessibility currently is moderate for point 2

Point 3

There are 2 bus routes within walking distance of Point 3. These are the routes 309 and 115. In addition to these there are 2 DLR services in close proximity of the Point 3; Bank to King George V and Tower Gateway to Beckton. Point 3 has limited access to more public transport facilities as it has no direct access to the east of river Lea and to the west of the A12.

4.3 Connectivity -Public Transport Strategy

The current situation with 2 bus routes and 2 DLR services gives the site an average PTAL of 2 in the peak hours and during the day. This implies that the public transport accessibility currently is poor during the peak hours and during the day.

Point 4

There are 3 bus routes within walking distance of Point 4. These are the 309, 115, and 108. Canning Town Station is 790 meters from Point 4 which has Jubilee Line connecting to the central part of London and north east to Stratford. In addition to these, there are 2 DLR services in walking distance of the Point 4; Bank to King George V and Tower Gateway to Beckton. Point 4 has limited access to more public transport facilities as it has no direct access to the east of river Lea and to the west of the A12. Point 4 currently has a PTAL of 3 during the peak hours and the off peak hours of the day. This is classed as moderate access to public transport in the peak hours and during the day.

Point 5

There are 3 bus routes within walking distance of Point 5. These are the 309, 115, and 108. In addition to these, there are 3 DLR services within walking distance of Point 5; Langdon park Stratford to Lewisham, Bank to King George V and Tower Gateway to Beckton. There is a pedestrian subway on the junction between Abbott Road and A12. The subway is well lit during the day but is not very convenient during the evenings and night. This may make the Langdon Park station less likely to be used by pedestrians from Point 5. There is also a pedestrian subway on the A12 near the junction with Zetland Street.

The current situation with 3 DLR services and 3 bus routes gives the site an average PTAL of 3 during the peak and off peak hours. This implies that the public transport accessibility currently is moderate for point 5.

Point 6

There are 5 bus routes within walking distance of Point

5. These are the 309, 115, 323, S2 and 108. In addition to these, there is 1 DLR service within walking distance of Point 6; Devons Road Stratford to Lewisham. Bromley by Bow station is to the north of point 6 on A12 at about 380 m walking distance. It has Hammersmith and City Line and District Line connecting to the central London and further east towards Upney and Upminster.

There is a pedestrian subway on the A12 near the junction with Zetland Street. The subway is well lit during the day but is not very convenient during the evenings and night. This may make the bus routes like 309 on the other side of the Zetland street less likely to be used by Point 6.

The current situation with 1 DLR services and 5 bus routes gives the site an average PTAL of 4 during the peak and off peak hours. This implies that the public transport accessibility currently is good for point 6.

Point 7

There are 3 bus routes within walking distance of Point 7. These are the 309, 115, and 108. In addition to these, there is 1 DLR service within walking distance of Point 7; Langdon park Stratford to Lewisham. Bromley by Bow station is to the north of point 7 on A12 at about 815 m walking distance. It has Hammersmith and City Line and District Line connecting to the central London and further east towards Upney and Upminster.

There is a pedestrian subway on the A12 near the junction with Zetland Street near the point 7. The subway is well lit during the day but is not very convenient during the evenings and night. This may make the Langdon Park station less likely to be used by pedestrians from Point 7. The current situation with 1 DLR service, 2 underground lines and 3 bus routes gives the site an average PTAL of 3 during the peak and off peak hours. This implies that the public transport accessibility currently is moderate for point 7.

Point 8

There are 3 bus routes within walking distance of Point



8. These are the 309, 115, and 108. In addition to these, there is 1 DLR service within walking distance of Point 8; Langdon park Stratford to Lewisham. There is a pedestrian subway on the junction between Abbott Road and A12. The subway is well lit during the day but is not very convenient during the evenings and night. This may make the Langdon Park station less likely to be used by pedestrians from Point 5. There is also a pedestrian subway on the A12 near the junction with Zetland Street.

The current situation with 1 DLR service and 3 bus routes gives the site an average PTAL of 2 during the peak and off peak hours. This implies that the public transport accessibility currently is poor for point 8.

Point 9

There are 2 bus services within walking distance of Point 9. These are the 309 and 108. In addition to these, there is 1 DLR service within walking distance of Point 7; Langdon park Stratford to Lewisham. Bromley by Bow station is to the north of point 7 on A12 at about 815 m walking distance. It has Hammersmith and City Line and District Line connecting to the central London and further east towards Upney and Upminster.

There is a pedestrian subway on the A12 near the junction with Zetland Street. The subway is well lit during the day but is not very convenient during the evenings and night. This may make the Langdon Park station and bus route 309 less likely to be used by pedestrians from Point 9.

The current situation with 1 DLR service, 2 underground



fig. 1 PTAL locations



lines and 2 bus routes gives the site an average PTAL of 3 during the peak and off peak hours. This implies that the public transport accessibility currently is moderate for point 9.

Point 10

Point 10 is similar to point 7 but because it is in the centre of the site towards the River Lea, it has no accessibility to underground stations. There are 2 bus routes within walking distance of Point 7. These are the 309, 115, and 108. In addition to these, there is 1 DLR service within walking distance of Point 10; Langdon park Stratford to Lewisham. There is a pedestrian subway on the A12 near the junction with Zetland Street near the point 7. The subway is well lit during the day but is not very convenient during the evenings and night. This may make the Langdon Park station less likely to be used by pedestrians from Point 7.

The current situation with 1 DLR service and 3 bus routes give the site an average PTAL of 2 during the peak and off peak hours. This implies that the public transport accessibility currently is poor for point 10.

Point 11

Point 11 is similar to point 2 but because it is further in towards the River Lea, it has limited access to Bus routes on A12 and Langdon Park Station. This gives an overall understanding of PTAL values over the site. There are currently 2 bus routes within walking distance of the Point 11. The routes are 309 and 115. There are 2 DLR services at canning town station within walking distance of the Point 11; Bank to King George V and Tower Gateway to Beckton.

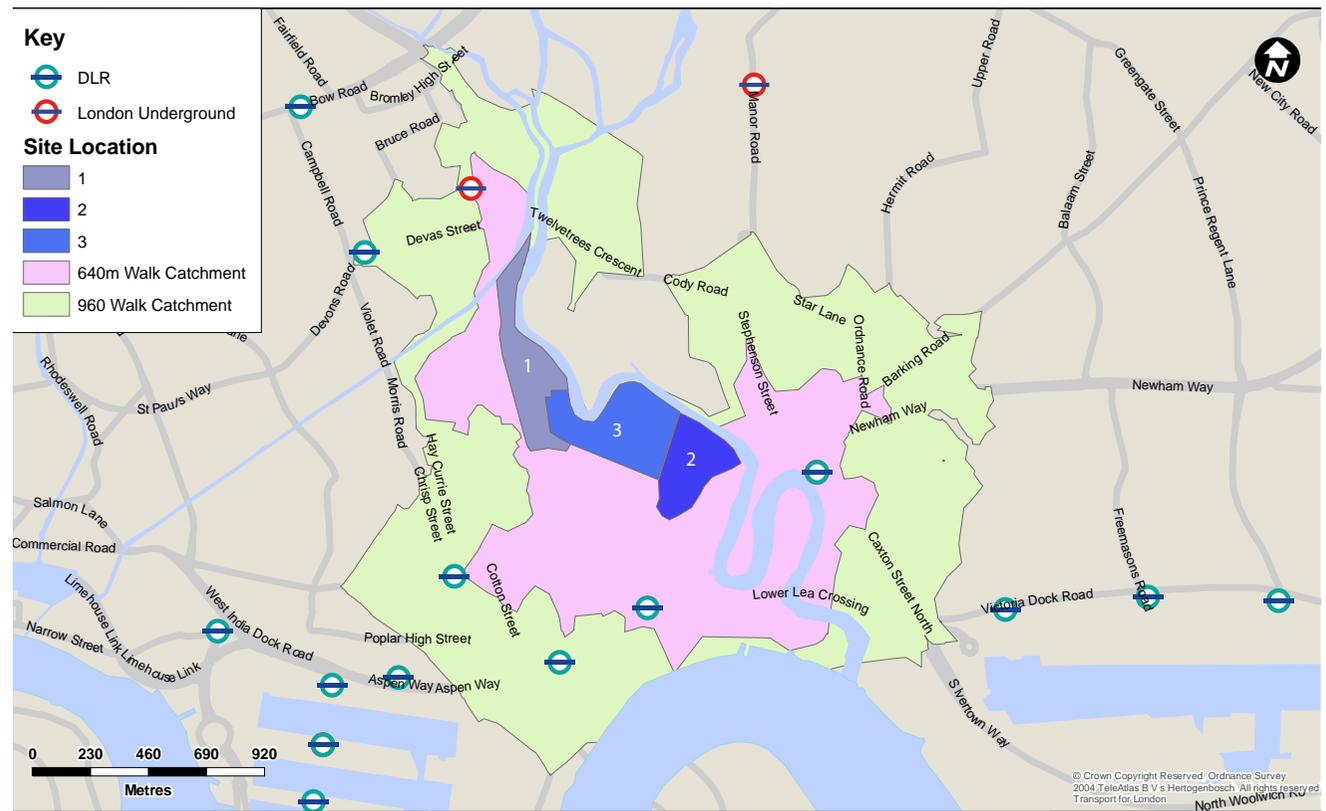


fig. 2 walk time catchments



In addition to these, Canning Town Station also has Jubilee Line which has frequent connections to Central London and north east towards Stratford. Pedestrians can access the A13 by a set of steps near the River Lea to cross the river and reach on the other side of the. The route is deserted and not ideal in evenings. This makes it less likely to be used in spite of good public transport services from Canning Town Station.

The current situation with 2 DLR services, 2 bus routes and 1 underground line gives the site an average PTAL of 2 during the peak and off peak hours. This implies that the public transport accessibility currently is poor for point 11.

Summary

The site has variable accessibility to different transport options from different locations within the site. This explains the variation of PTAL values across the site. Figure 3 illustrates the locations of all the pints along with their PTAL values. Points 1 and 6 have been classed with good and very good accessibility levels being in close proximity to Canning Town Station and Bromley by Bow respectively. Points 2, 4, 5, 7 and 9 have a moderate accessibility level. Out of these points, Point 5, 7 and 9 are on A12. The accessibility is moderate due to limited crossing options across the A12. Points 2 and 4 are close to Canning Town Station and A13 but the connection could be improved to ensure their usage. Point 3, 8, 10 and 11 are towards the interior of the site and have no direct connections across A12 towards Langdon Park or across A13 and River Lea towards Canning Town Station. Thus the PTAL value for these locations is poor.

4.3.4 Poplar Today

Transport

1.1 The Poplar Riverside site is bounded by the A13 East India Dock Road, the A12 Blackwall Tunnel Approach and the River Lea.

1.2 To the east of the River Lea is Canning Town DLR and Underground Station. To the south are East India and

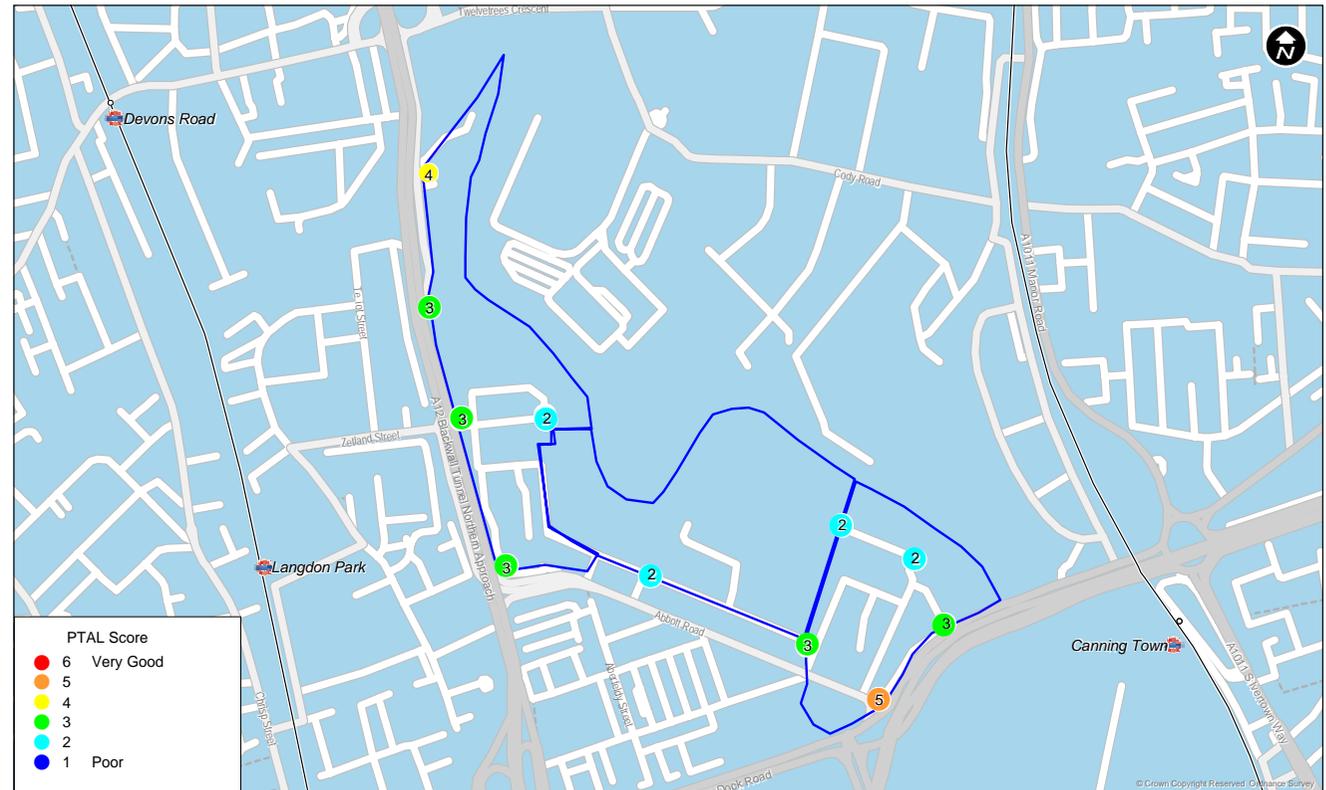
TABLE 1.1 DLR & LU SERVICES

Station	Route	Daytime Frequencies	Weekend and Evening Frequencies
Langdon Park	Stratford to Lewisham, Crossharbour or Canary Wharf	20 tph*	10 tph
Canning Town (DLR)	Tower Gateway/Bank to Beckton/King George V	22 tph	20 tph
East India	Tower Gateway/Bank to Beckton/King George V	22 tph	20 tph
Blackwall	Tower Gateway/Bank to Beckton/King George V	22 tph	20 tph
Canning Town (LU)	Stanmore to Stratford	30tph	12tph
Bromley by Bow (LU)	District Line – Ealing Broadway to Upminster	30tph	12tph
	Hammersmith & City Line – Hammersmith to Barking	8tph	5tph

*trains per hour

TABLE 1.2 LOCAL BUS SERVICES

Service Number	Route	Daytime Frequencies	Weekend & Evening Frequencies
5	Canning Town - Romford	12 bph*	5 bph
15	Paddington Station – Blackwall Station	7.5 bph	6 bph
69	Canning Town – Walthamstow Central	10 bph	6.5 bph
108	Lewisham – Stratford	7 bph	5 bph
115	Aldgate – East Ham	10 bph	6 bph
147	Canning Town – Ilford High Road	8.5 bph	5.5 bph
241	Stratford – Hermit Road E13	6 bph	4.5 bph
277	Highbury & Islington – Leamouth	12 bph	7.5 bph
300	Canning Town – East Ham	4 bph	4 bph
309	Canning Town – Bethnal Green	7.5 bph	5 bph
323	Canning Town – Mile End	4 bph	4 bph
330	Canning Town – Wanstead Park	5.5 bph	4.5 bph



Blackwall DLR Stations. To the north is Bromley by Bow DLR and Underground Station.

1.3 The area is served by bus routes along the A12 and the A13, along with a route travelling through the site.

1.4 Figure 1.1 to the right shows the local transport links in relation to the Poplar Riverside Core Area.

Local Highway Network

1.5 To the west of the core site is the A12 Blackwall Tunnel Approach. This is part of the Transport for London Road Network (TLRN) and is therefore maintained and managed by Transport for London. The Blackwall Tunnel is a highly important road river crossing, providing links between southeast and northeast London.

1.6 The stretch of the A12 to the west of the site is dual carriageway with a central reservation and a maximum speed limit of 40mph. Access to the road for local traffic from the core site is restricted to Abbot Road where traffic can turn southbound or use an underpass to travel northbound, and Lochnagar Street where traffic can turn southbound.

1.7 To the south of the site, the A13 runs from the City in the west to Dartford, the M25 and Essex to the east. This route is also part of the TLRN.

1.8 The A13 is also dual carriageway with a central reservation and a maximum speed limit of 40mph. Access to this road from the core site is at the Abbott Road/Leamouth Road junction.

Local Public Transport Network

1.9 The core site is accessible from Langdon Park, Canning Town, East India, and Blackwall DLR Stations.

1.10 Canning Town and Bromley by Bow stations also provide links to the London Underground network.

1.11 Table 1.1 (left) details the DLR and LU services available from each of the stations.

1.12 The site is also served by a number of bus services. Details of these bus services are shown (left) in Table 1.2.

Pedestrian and Cycle Network

1.13 The site is bounded by the significant pedestrian barriers of the A13, the A12 and the River Lea.

1.14 East-west pedestrian routes are restricted to those provided through subways under the A12. This restricts access for pedestrians to Langdon Park DLR Station and the Chrisp Street retail area.

1.15 North-south pedestrian links are provided at the A12/A13 junction and the A13/Leamouth Road junction. This means there is no pedestrian crossing available in between these locations along the southern boundary of the core site, restricting access to East India Quay and the DLR station.

1.16 To the east, pedestrian routes are provided along the A13 over the River Lea alongside the dual carriageway.

TABLE 1.3 EXISTING PTAL SCORE BY DEVELOPMENT AREA

Development Area	PTAL Score
1 – Northern Site	3/4
2 – Ailsa Street	2/3
3	3
4	2
5	4
6 – Leven Road Masterplan Area	2



fig. 1.1 Local Public Transport Links

These provide connections to Canning Town DLR and London Underground Station.

1.17 To the north, pedestrian routes alongside the A12 provide connections up to Bromley by Bow Station.

Key Development Areas - Accessibility

1.18 The Core Site is made up of six development areas with varying levels of accessibility. Figure 1.2 shows the existing Public Transport Accessibility Level (PTAL) at locations across the Core and Wider Area. Table 1.3 on the previous page details the average PTAL for each of the development areas.

4.3.5 Poplar Tomorrow

2.1 The Poplar Riverside area provides a number of opportunities to improve transport and accessibility to the core site and wider study area.

2.2 The key issues to overcome are the existing barriers to movement of the River Lea, the A12 and the A13.

2.3 The opportunities that have been identified as most important are as follows:

- Pedestrian/Cycle crossing of the River Lea adjacent to the A13;
- Improved pedestrian crossing facilities across the A12 and A13 towards Langdon Park and East India DLR Stations;
- Additional north-south bus route to the east of the A12; and
- Additional north-south bus routes to the west of the A12.

2.4 These additional connections and routes have been identified as having the most significant on the public transport accessibility of the area and therefore would provide new residents with the most useful links to the wider transport network.

Future Accessibility

2.5 The additional links outlined above have been incorporated into the PTAL analysis to identify the

potential future PTAL of the main development areas and beyond.

2.6 The PTAL calculations have been based on the following assumptions:

- At-grade pedestrian crossing of A12 at Lochnagar Street (programmed in to commence work on-site late 2009);
- At-grade pedestrian crossing of A13 at Aberfeldy Street (identified within the Pell Frischmann Connectivity Study);
- Pedestrian/cycle bridge across River Lea adjacent to A12 providing improved route to Canning Town;
- Pedestrian/cycle bridge across River Lea to Bidder Street providing link to planned Star Lane DLR station;
- Pedestrian/cycle bridge across River Lea at Lochnagar Street;
- New bus corridor to the west of A12 via St. Andrews Way, bridging over Limehouse Cut and routing south via

TABLE 2.1 EXISTING PTAL SCORE BY DEVELOPMENT AREA

Development Area	PTAL Score
1 – Northern Site	5
2 – Ailsa Street	4
3	3/4
4	5
5	4/5
6 – Leven Road Masterplan Area	3

Uamvar Street; and

- New bus corridor to the east of the A12 via Gillender Street, Leven Road and Abbott Road (highlighted as a solution through discussions with TfL London Buses).

2.7 For the purposes of this analysis, new bus routes have been assumed with a peak frequency of 10 buses per hour on either side of the A12.

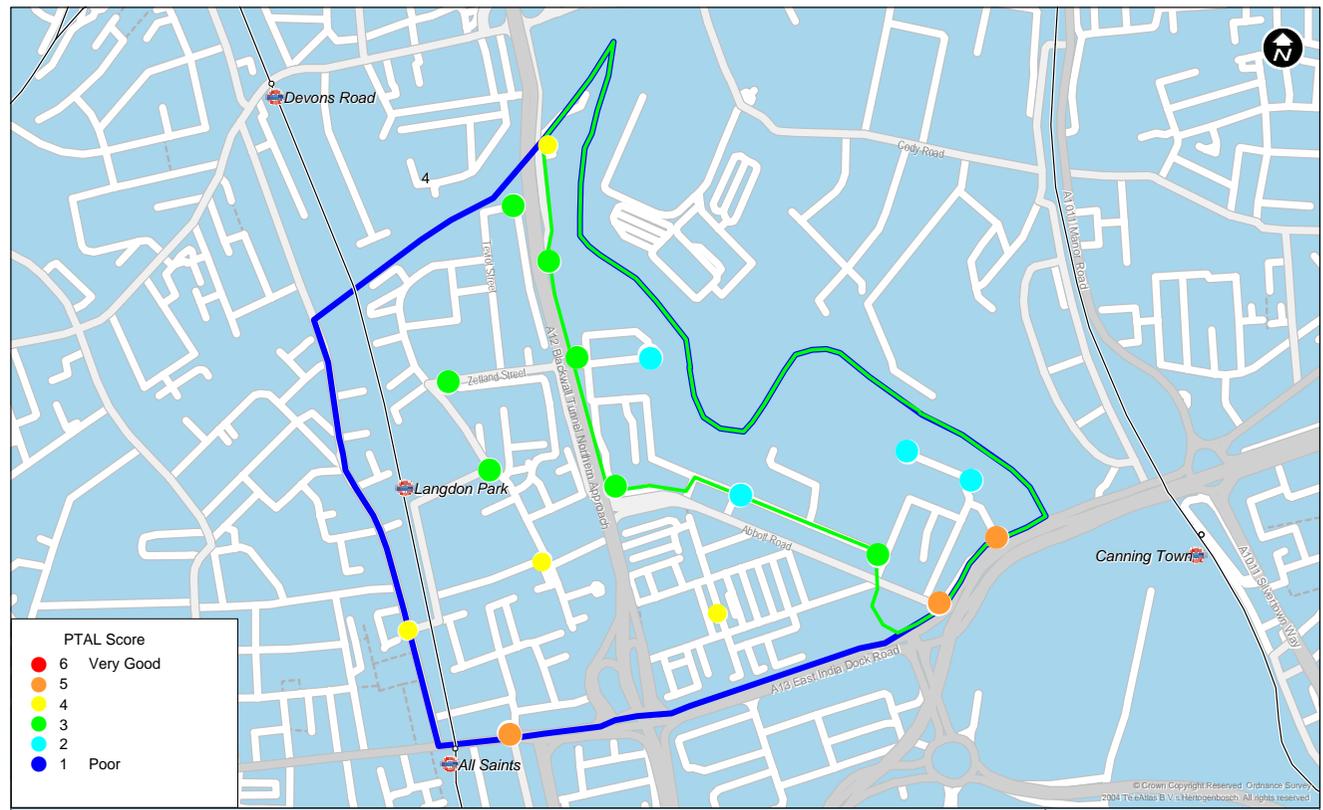


fig. 1.2 Existing PTAL Scores

2.8 These proposals have been tested to identify the optimum future PTAL that could be achieved in the development areas. Figure 2.1 below shows the future PTAL scores at sites across the wider and core areas. Table 2.1 to the left details the average score for each of the development areas.

2.9 As can be seen from Figure 2.1 and Table 2.1, these proposals have a marked improvement on PTALs in the east of the site with enhanced access to Canning Town interchange and improved bus services to areas along the River Lea. The link to Canning Town enables a number of additional bus routes as well as DLR and Jubilee Line services to be accessible to a more significant proportion of the site.

2.10 Sites to the east of Abbott Road experience improved public transport accessibility with the additional transport

schemes in place. This results in all sites showing a PTAL of 3 or above.

Summary:

2.11 It is clear from these findings that an improved link to Canning Town is key to achieving a 'good' PTAL score across the southern sector of the site. Although a link across to Star Lane may have a minor effect on the PTAL of the eastern edge of the site, this link does not provide access to any additional services over and above those available at Canning Town.

2.12 Elsewhere on the site, the focus should be on enhancing and improving links that already exist to ensure the pedestrian experience is satisfactory. This includes exploring the replacement of subway links under the A12 with at-grade or bridge crossings where possible.

2.13 Providing additional bus routes through the Core Area and Wider site is shown to have a considerable positive impact on accessibility in the vicinity of Leven Road and Lochnagar Street.

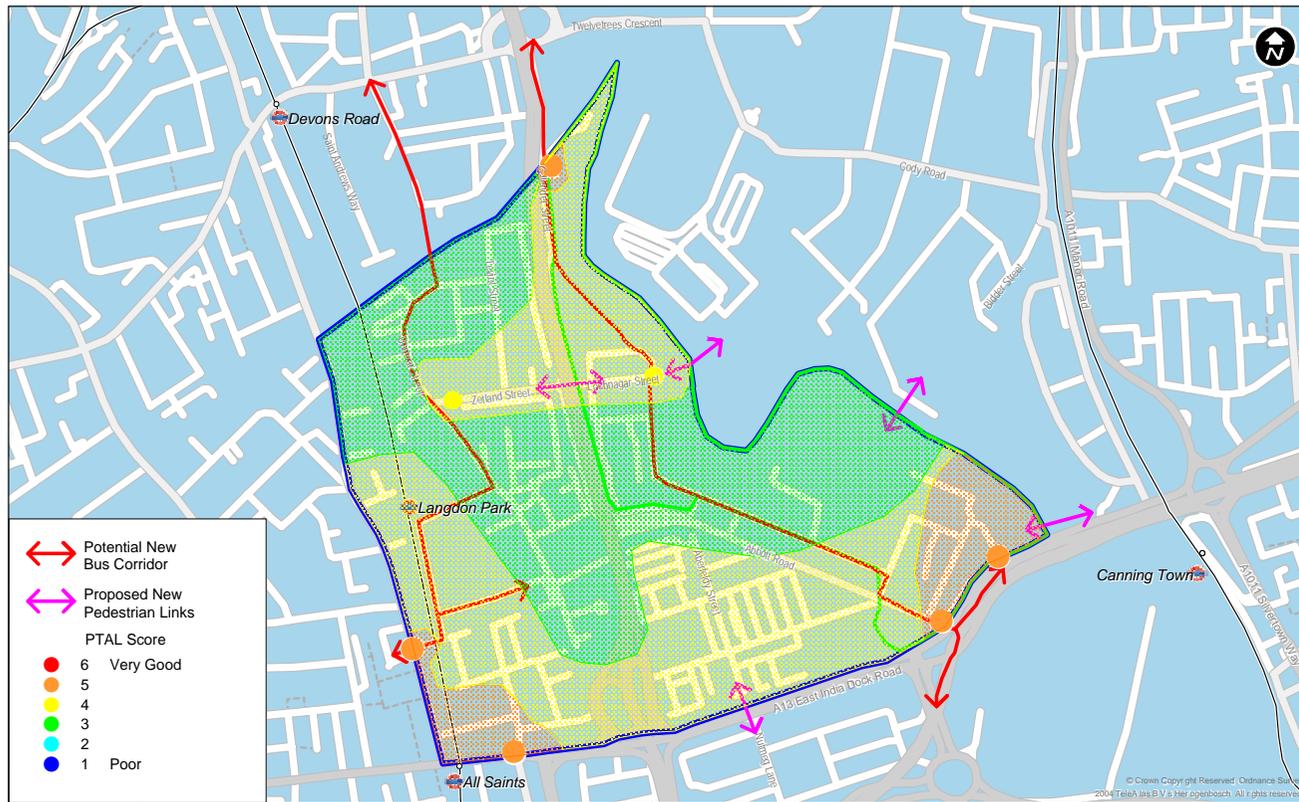


fig. 2.1 forecast Indicative Future PTAL Scores





4.4.1 A lack of identifiable centres

Beyond the riverside industrial areas, Poplar Riverside is predominantly residential and relatively uniform in its density and dispersal. East of Crisp street there are no identifiable local centres with the exception of the Aberfeldy Street/Dee Street intersection which is already identified as a Neighbourhood centre within the Town Centre Audit 2007 IPG. There are no other designated centres within the Poplar Riverside wider area between Aberfeldy and Bromley-by-Bow.

There are numerous small concentrations of retail uses within North and South Teviot, at Abbott Road/Oban Street - see opposite which under LBTH definition could be regarded as local centres. However, whilst these serve local daily needs they do not stand out as obvious focal points.

Crisp street market provides an obvious focal point, place to meet and place where other communal facilities could and should be concentrated. However, this does not cater for the 'on-the-doorstep' needs of Poplar Riverside which is generally lacking in places to go to, for help, to meet, to recreate or be entertained -places that one would recognise as a 'centre' or a focal point of everyday life.

4.4.2 Landmarks

There are currently a number of prominent landmarks which are compelling against a low horizon and act as significant and useful points of orientation - St... Leonards Church spire, Langdon Park School, Balfron Tower, the gasometers. With higher rise development already taking place, these landmarks may be subsumed, with exception of Langdon park School which is closest to the cluster of high rise, all other three should be preserved as recognisable features from a distance.

Landmarks do not constitute centres, although ideally one relates to the other. In Poplar's case it is rather accessibility and catchment area which should determine where centres are best placed.

With new population, particularly within the core area there is bound to be a shift in emphasis. However, on the basis that the core area extremities will relate to Bromley-by-Bow to the north and Canning Town to the south-east, the challenge will be to identify and enhance centres for existing communities within the wider area.

Poplar Riverside has a serious lack of 'on the doorstep' services

Tweed House across the A12

4.4 Local Centre Strategy

4.4.3 Principles of a Town Centre

LBTH Policy aims to prioritise and intensify existing town centres. A 'town centre' could be as small as a corner shop and hairdresser - i.e. of the scale of Abbott Road/Oban street junction. At the same time local population should have easy access to their daily provision (bread, milk, etc).

PPS6 annex A defines that a local shop should be 300m away (to become 200-250m). This defines town centre catchment areas - see diagram.

Local centres should be supported by other uses – school, medical centre, transport.

4.4.4 The Proposed Strategy - Local Centres

The outcome of this project has come up with a series of interventions that would enhance local centres throughout the area:

- Reinforce Aberfeldy Street Neighbourhood centre by enhancing retail provision and social infrastructure.
- Create a new intensified Local/Neighbourhood Centre related to the Teviot estates. There are currently a number of dispersed shops, school and community facilities. Each has the potential to be developed as a centre but collectively they are not close enough to form a tangible centre cluster.
- Enhance the Zetland Street to Lochnagar Street connection as a main thoroughfare. Zetland Road will become a significant west-east route and is the natural place to concentrate retail and community facilities, focussed at the Teviot Street junction.
- Bring together the shops at St Leonards/Spay Street

and North Teviot within a concentrated local centre at Zetland Street/St Leonards Road Junction supported by existing and future community uses.

- Keep/introduce small 'corner shop' retail units at key locations.

The proposal is to reinforce the existing Aberfeldy Street centre and create a consolidated centre at the junction of Zetland St and St Leonards Road - as shown. These are the focus for location of other community facilities and services - see later.

The drawing shows the relationship of these centres plus Chrisp street market and Canning Town to their catchment.

Elsewhere mini-centres should support new developments as clusters around existing shops or communal facilities. For example a mini centre is proposed to develop around existing retail locations at the Abbott Road, Oban Street junction to support new core area development - see later.

The local retail provision is necessarily tied to the town centre strategy and many of the principles apply¹.

Beyond Chrisp Street, Poplar Riverside has a number of stand alone shops or small clusters which are dispersed mainly throughout the larger estates. Many are closed or failing for the above reasons.

With increase in population there will be a need for more shops which should be concentrated within certain areas

¹ When MGA met with LBTH retail strategists 02.07.08 it was commented that 'many of the existing shops are failing due to lack of spending power and competition from other local shops close by. Although increase in population density will improve the situation a general strategy of consolidation of retail provision rather than dispersal is preferred. It may be advantageous to consider reducing the number of separate small scale retail concentrations in favour of one or two more focussed areas.'



along with one-off 'corner shops' to cater for everyday supplies and services.

The main retail concentrations should relate to the proposed local centres at Aberfeldy and Teviot (Zetland Street/Teviot Street junction).

Smaller clusters and one-off units are located at Abbott road/Oban street junction,

4.4.5 The Proposed Strategy - A12 Big Box Retail

In addition to the local centres proposals there are proposals for A12 improvements includes more active retail or commercial frontages facing onto an enhanced public realm. This was discussed with LBTH retail strategists which concluded:

LBTH retail policy doesn't refer to 'big box' retail which is a special case. Any out of town centre retail should be judged on its own merits in terms of the role it plays, its context and the contribution it makes within the particular circumstances. A retail study would be required for any planning application.

Discussions with LBTH retail strategists revealed a common question within the Town centre audit was "where can I buy my fridge".

LBTH also stated that they are "not saying no to retail outside the town centre but it should be sustainable".



A12 with its high density of traffic is an unusual condition should/could be considered on its own merits. The view is that the A12 could allow for a special case of certain kinds of retail outside the town centre – i.e. the sort of retail which is more difficult to accommodate within the town centre – large floor space for example. Therefore large floor space retail could be considered appropriate.

Showroom/shopfront large retail uses were considered positively along the A12 due to the high quantity of vehicles passing which gives a 'captured market'. Car parking is not desirable but because people are in cars anyway, car park provision/access by car would be suitable in this case.

Retail of this kind provides a useful buffer to the poor environment (the A12) although operation times will be an issue if in close proximity to residential areas.²

² When MGA met with LBTH on 02.07.08, LBTH agreed that there is an opportunity for a user such as B&Q, a car showroom, fridge centre along the A12 which would complement the area and activate the A12



Existing and proposed local centres and key proposed links

Panorama looking west from Balfron Tower





“where can I buy my fridge?”

Existing and proposed active frontages strategy

4.4.7 Socio Economic Key Findings

This section has been provided by Barney Stringer of HDS and outlines the projected socio-economic situation based on future population and consultations with LBTH Children’s Services and LBTH PCT.

Population

The future population will depend not only on the number of new homes built, but also the size, type and tenure. A range of assumptions on the likely mix have been developed, and detailed population modelling carried out to reflect this.

This suggests that for around 3,100 new homes, a population of around 6,150 people is likely. This is a relatively low household size of just below two people per dwelling, which is considered appropriate given that development in this area is likely to be predominantly flats.

For primary health care, this equates to a need for around three to four new GPs together with associated additional services (at an average list size of 1,800 patients per GP).

A total of 1,150 children is forecast, with a predicted age breakdown as shown in the table below:

0 to 4 yrs	5 to 10 yrs	11 to 15 yrs	Total children
568	364	218	1150

In broad terms this equates to nearly two forms of entry at primary school, and around one and a half forms of entry at secondary school.

Employment

A wide mix of employment space is suggested for the area, totalling more than 50,000sqm and including industrial, workshops, commercial, retail and community space such as the school and health centre.

	sqm floorspace	Estimated employment
Commercial	17,500	1,200
Industrial & workshops	20,300	600
Retail	2,800	200
Community space	11,500	100
Total	52,000	2000

* figures do not tally due to rounding effects

Overall, this space has the potential to bring around 2,000 new jobs to the Poplar Riverside area. The mix of uses means that there will be a full range of employment from unskilled and entry-level posts, to skilled graduate jobs.

Education

Discussions were held with Pat Watson, Head of Building Development at LBTH Children’s Services.

The key message was that the education needs of new housing at Poplar Riverside cannot be considered in isolation, and that the borough is already planning for substantial population growth and has forecast for how much additional capacity is needed borough-wide.

In this context the priority for Poplar Riverside is to contribute to primary school capacity in the borough, and the need is for a new two-form entry primary school. This would fit with other current, planned or potential capacity improvements, including:

- The recent expansion of Manorfield primary
- Plans to expand Marner primary
- Possibility of future expansion at Woolmore and Culloden primary schools
- Possibility of new primary schools in Isle of Dogs and Bromley-by-Bow
- Plans for a new secondary school at Fish Island

A new school in Poplar Riverside is likely to be needed to provide additional capacity, rather than as a replacement of an existing school.

The location of a new school is flexible, but noise issues would need to be dealt with very carefully through the design if it was near the A12. Timing of the school is an important issue, and a site that can be brought forward fairly early in the redevelopment of Poplar Riverside would be preferable to sites with complex planning issues such as the gasworks.

The built size of schools is determined by Building Bulletin guidance, but LBTH recognises that on an urban site there may need to be flexibility in relation to the size and nature of the outdoor playspaces to ensure deliverability and viability.

Subject to suitable high-quality design solutions, possible approaches that would be considered include shared use of playspaces outside normal school hours, rooftop “playdecks”, and “air rights” development such as housing above a school building.

Health

Consultation with Carol Fenton at Tower Hamlets Primary Care Trust gave an initial view on health centre requirements. The model for delivery of primary care is evolving, and final requirements will be determined by the PCT’s estates division.

In general, Tower Hamlets PCT’s preferred model for services is a “health and wellbeing centre” of up to 2,000 sqm serving 15-20,000 people, and offering a wide range of additional services such as pharmacy, dentistry, community services, social services and benefits advice. H&W Centres are already planned at St. Andrews, near Bromley-By-Bow, and Newby Place.

Small satellite health centres are not favoured, and a new large centre that combined the existing Aberfeldy centre with new services would be preferred. This is likely to need to be around 1-2,000 sqm, depending on the scale of housebuilding.

If this needs to be on a new site, the PCT is likely to want it either in the centre of Poplar Riverside, or as part of the redevelopment of the Aberfeldy Estate. A new health

centre in Poplar should avoid being too close to the St... Andrews Centre, to the north. A prominent central location, adjacent to other active uses such as shops, is very much preferred.

The PCT is content, in principle, for a new health centre to be split over two floors (and to have residential uses above), so long as this includes the ground floor, particularly for "street facing" services such as a pharmacy. Parking for up to 10-15 cars would be preferred, which could be part of a basement parking area. Kerbside ambulance or disabled parking would be needed.

Adjacent space to park a heavy goods vehicle would be considered an advantage (for temporary mobile clinics), although this could be an occasional/temporary shared use of other space, rather than dedicated space.



Existing and proposed social infrastructure and proposed figure ground plan



Chrisp street market



4.5.1 A Lack of Real Usable Open Space

A coherent open space strategy is key to the development of Poplar Riverside and its connection to the river.

Poplar Riverside is characterised by a general sense of openness and but is also lacking in genuinely usable amenity space, clarity of organisation and orientation. Green open spaces appear vestigial; severance of roads and routes prevent direct connections and views which make many areas confusing to walk through.

The existing parks are resultants of a series of circumstances rather than a consequence of a coherent strategy. For example, Langdon Park is a remnant of war damage, Jolly's Green and Millennium Green products of clearance. As a result they do not relate to the surrounding communities, and collectively fail to offer the full range of play, recreational or leisure activities to support the local community.

Many of the smaller green spaces are products of poor planning within large post war estates, have ambiguous use and are, in the most part, fenced off from both residents and the general public. There is a real sense that they are more of a maintenance problem than of much value as usable amenity spaces. There are more signs of 'what not to do' than explicit opportunities for a broad range of outdoor activities and natural experiences.

The majority of streets fail to adequately serve their purpose. The main thoroughfares (Burcham Street, Abbott road, the A12) are congested and noisy at peak times. Routes are convoluted or have been severed –interrupted by estates, major roads, or bollards in attempt to limit 'rat runs'. Many street edges are poorly defined and feel unsafe due to lack of active frontages, particularly around and within the larger estates where buildings are set back, fences or walls border the street.

View across Jolly's Green from Andrew street to Burcham street

The underpasses and edges of the A12 offer inhospitable and dangerous environments – a far cry from the vibrant high street of Brunswick Road which it replaced. The A12 is a primary north south route but is vehicle dominated, does not serve local traffic and provides no incentive to travel along it as a pedestrian.

Public open spaces, where they exist are poor – e.g. Burcham Street/Leonard St... junction – here there is a wide open space, a key junction, shops, trees, a significant corner but is tarmac dominated. This is one of a number of spaces which could be developed as more of a meeting place with public realm improvement.

The river is isolated from surrounding areas except at Bow Lock which indicates the quality of setting which will be accessible in the future as part of the Lea River Park.

4.5.2 An opportunity for a coherent network of open spaces

With current proposals, there is a golden opportunity to repair the damage, to knit together and integrate the fragments into a coherent network of open spaces with a strong, new relationship to the river and the Lea River Park.

The Lea River Park will give the river a new significance within the area, with connections to areas beyond and a new amenity space to be enjoyed by everyone. To take advantage of this, it is vital that the river is accessible, not only for people who live on its edges but also for those who live further away. The west-east connections identified earlier not only connect communities to the east and west of the A12 but will also provide access to the Lea River Park and to the East London Green Grid.

Significantly, the LLVOAPF shows the area as at risk from flooding and also as an area with potential for new green spaces and opening up of river edges.

4.5 Open Space Strategy

'Well I can't think of a better symbol of regeneration and growth than a tree. I can't think of a better way of bringing people together than encouraging them to actively care for their own patch. Most people live in cities. City parks and planted squares are small pauses in the breathless narrative of traffic and work. We need those pauses. Our bodies benefit from the filtered air the trees provide and from the natural sound barrier any planting creates. Trees are not a luxury. The poorer the area, the more it needs trees.'

Jeanette Winterson, writer.



East London Green Grid



4.5.3 Landscape links that bind communities

Our vision is to create a network of varied, interlinked and multi-purpose open spaces which serve local communities and link the town centre to the river.

The vision for landscape connections and a linear park from Chrisp Street to the river are central to making the new river park available to everyone.

The are a number of key objectives for open spaces within the area:

- Provide new and enhance existing public open spaces to meet the needs of existing and future communities.
- Connect the town centre to the river. Provide public access to and along the river edges.
- Connect and integrate existing open spaces with the Lea River Park, Poplar River Park and the Fatwalk.
- Increase river edge ecology and green space wildlife. Create soft river edges where possible
- Create a legible hierarchy of open spaces from publicly accessible, shared/communal to private
- Mitigate flood risk
- Improve legibility and orientation. Where possible create direct connections and site lines. Improve definition of street frontages/building lines to define the public realm.
- Enhance the quality of the public realm from spatial definition and use, to selection of material and detail.
- Improve quality of green spaces; increase the range of formal and informal outdoor activities and experiences for adults, youths and children.
- Increase active street frontages
- Improve safety
- Improve the environment of the A12

The overriding sense is of fragmentation, disconnection and disorientation



Existing open spaces

4.5.4 The River Link

The Lea River Park will fundamentally change the quality and character of the river and its relationship to Poplar Riverside. Change of river edge uses and the proposal for a new river edge park provide the opportunity for existing and new communities to take full advantage of this vast new amenity space.

A new 6 hectare park on the gasometer site was identified within the LLVOAPF and developed within the Lea valley Park Framework as one of a series of discrete parks linked by the Fatwalk. Poplar River Park not only serves the local community but is also seen as part of a strategic network of landscape links across the valley, vital to connecting communities either side.

Our strategy supports the principle of extending the Lea River Park deep into surrounding areas through a series of east west connections characterised by landscaping which relates to the river edge. Of these, the cohesion of open spaces into a linear park at the heart of Poplar Riverside – the ‘River Link’ – is of particular importance both as a connection and in extending the influence of the river park to the town centre.

Open spaces within the core area should be of a character which expresses the river flood plain in terms of landscape and ecology.

4.5.5 Future Park Provision

Park provision needs to be considered within an overall strategy relating to incremental population growth and phased implementation over varying timescales.

In the short term there is a need to support and enhance the existing open spaces, particularly west of the A12 which has many open spaces but they are either inaccessible or are of poor quality. New development should contribute to the enhancement of park edges through active frontages, siting of communal/public facilities etc. Enhancements

A linear connection from Chrisp Street to the river will make the new river park available to everyone



Existing and proposed open spaces

The River edge

Treatment of the river edge follows the general Lea River Park strategy for creating soft and hard edges on opposite sides of the river along its length.

The LLVOAPF water strategy identifies the area as a place with the opportunity for breaking out of river edges – see diagram

New development and the apparent need to renew flood defences gives the opportunity to ‘soften’ the river edge through stepping back of flood defences and introduction of reed beds and river related landscape.

Streets and Public spaces, streetscape

Planning of new developments should create direct visual and physical connections where possible. There is a great need for straight routes to link key points to improve legibility and orientation.

Within the wider area there is opportunity in the future, to repair and reinstate some of the original street pattern. Reinstating Teviot Street south of Zetland Street, Nairn Street to Abbott Road are small changes which would improve connections and sites lines and repair the grain of urban fabric.

Incremental renewal of estates and new development should create clear building lines to streets, create active frontages to animate streets and improve safety.

In the future the principle of eradicating fences and walls along streets should be followed, and its should be ensured that there is a clear definition of frontages and protected internal spaces.

In the short term ways should be found of making routes through estates. In the future it should be ensured that estates renewal introduces a finer grain of streets and public paths to improve permeability. This should include careful consideration of shared surfaces, choice of materials and opportunities for tree planting.

4.5.6 A12 Vision

The vision is to turn the A12 into a vibrant public space which preserves the traffic artery but connects east and west.

Following the European model, this section of the A12 has the potential to take on a ‘boulevard’ character with central lanes devoted to traffic, flanked by layers of tree avenues, local traffic lanes and wide pavements.

The introduction of active retail and commercial frontages, combined with improved crossings will transform the A12 from a barrier and backland to a foreground public space.

See A12 key corridor section later for detail.





4.6.1 Executive Summary

This section has been provided by Buro Happold and introduces the key flood risk issues related to the site.

This Scoping Study Level 2 Flood Risk Assessment (FRA) has been prepared for the proposed redevelopment of Poplar Riverside in the London Borough of Tower Hamlets. The report assesses potential flood risk on the site and identifies those areas for further investigation.

The development has been assessed in accordance with the Planning Policy Statement 25: Development and Flood Risk (PPS25) (2006) and investigates the future impact of climate change.

It has been identified that the proposed development site lies within Flood Zone 3, comprising land which has a 1 in 100 or greater annual probability of the River Lea flooding (>1%) or a 1 in 200 or greater annual probability of flooding from the sea (>0.5%) in any year. This flood zone categorization does not take into account the flood defences along the waterways, and the site is currently defended up to the 1 in 1000 year flooding event by a series of flood protection measures which include the Thames Barrier and tidal sea walls both along the Thames Estuary and the River Lea.

The EA have indicated the requirement for the development site to be designed and protected against the 1 in 1000 year flood level. This includes requirements such as setting all sleeping accommodation above this level.

Land use allocation within the site should be carried out by utilising a sequential process and directing more vulnerable land uses such as residential properties (compared with commercial/industrial, for example) to areas at least risk of flooding to ensure safe development in the event of defence breach.

In line with PPS25, the London Plan (2008) and the SFRA, and in accordance with Thames Water, a drainage strategy will need to be designed. The surface water drainage strategy should look to adopt the principals of Sustainable Drainage Systems (SuDS) where ever possible.

At planning application stage an appropriate FRA will be required to demonstrate how flood risk from all sources of flooding to the development site and flood risk to others will be managed, taking into account climate change.

At detailed FRA Level 3, the following elements should be considered:

- Sequential and Exception Tests will need to be carried out as required under PPS25 – the EA will not review a FRA without evidence that these have been undertaken
- A breach analysis may be undertaken to assess potential flooding depths and velocities
- A flood resilient strategy should be developed in response to breach analysis results and site levels
- Surface water drainage issues and options will need to be identified

Further consultation is required with the London Borough of Tower Hamlets, Environment Agency, and Thames Water to address these issues.

4.6.2 Introduction

Purpose of Report

This report represents a Flood Risk Scoping Study for the proposed regeneration area of Poplar Riverside. This report is intended to provide insight into the likely requirements, constraints and opportunities for any proposed development in the area identifying any issues for future investigation. This will aim to ensure that flood related issues are considered at the outset of any future planning proposals, which will enable the development of efficient and sustainable designs.

4.6 Engineering Strategy - Flood Risk Scoping Strategy

Content of Report

In accordance with guidelines set out in the Planning Policy Statement 25 Practice Guide this Scoping Study includes the following:

- an appraisal of the availability and adequacy of existing information, including regional and local policies and legislation;
- a qualitative appraisal of the flood risk posed to the site, and the potential impact of the development on flood risk elsewhere;
- details of consultation with relevant external bodies, including the EA and Local Planning Authorities;
- identification of potential measures to minimise flood risk to acceptable levels.

4.6.3 Policy and Guidance

This section identifies the policy and guidance applicable to the Poplar Riverside site. The resultant considerations to be taken into account in the regeneration of the area are identified in Section 6.

Planning Policy Statement 25: Development and Flood Risk

Planning Policy Statement 25 – Development and Flood Risk (PPS25) (December 2006) is the overarching national Government policy on development and flood risk management. PPS25 provides the most up-to-date guidance to developers and other parties on appraising, managing and reducing the risk of flooding to new developments.

The aims of the policy are:

‘to ensure that flood risk is taken into account at all stages in the planning process to avoid inappropriate development in areas at risk from flooding, and to direct development away from areas at high risk. Where new development is, exceptionally, necessary in such areas, policy aims to make it safe without increasing flood risk elsewhere and where possible, reducing flood risk overall.’

Under PPS25 appropriate land uses are designated based

on the risk of flooding to the site and the vulnerability of the development. Flood risk is divided into three classifications, with suitable development identified for each. The following provides an example of the Flood Zones and compatible development:

- Flood Zone 1 (Low Probability) with less than a 1 in 1000 annual probability of flooding from rivers or sea. There are no restrictions on the type of development in these areas with regards to flood risk.
- Flood Zone 2 (Medium Probability) with between 1 in 100 and 1 in 1000 annual probability of river flooding or between 1 in 200 and 1 in 1000 annual probability of flooding from the sea. “Highly vulnerable” land uses (such as emergency services) are generally directed away from these areas.

- Flood Zone 3 (High Probability), with greater than a 1 in 100 annual probability of river flooding or 1 in 200 annual probability of flooding from the sea. “Highly vulnerable” uses are not considered to be appropriate in these areas, while “more vulnerable” and “essential infrastructure” uses (such as residential housing and strategic utility infrastructure) are generally directed away from these zones.

Tables D1 and D2 of PPS25 identify the various Flood Zones and the land uses considered suitable for development in each zone. These tables have been included in Appendix A for reference.

PPS25 provides allowances for climate change across the UK. This assessment has been undertaken in accordance with PPS25 requirements, including allowances for climate change.

PPS25 can be viewed via the following link:

<http://www.communities.gov.uk/documents/planningandbuilding/pdf/planningpolicystatement25>

Sequential Test

The Sequential Test forms an integral part of PPS25 guidance and is a process which designates areas for



particular land uses within a region, dependent on flood risk and the land uses required within the region. The Sequential Test should be applied to all stages of planning to steer new developments to areas with the lowest probability of flooding (i.e. Flood Zone 1). Where there is no suitability in Flood Zone 1, the suitability of Flood Zone 2 should be considered, then Flood Zone 3, taking into account the vulnerability of land uses.

Poplar Riverside lies almost entirely within Flood Zone 3 (refer Section 5) and a Sequential Test will need to be undertaken for the site. The Sequential Test is generally informed by a Strategic Flood Risk Assessment (SFRA), which should identify potential sites for development within a Local Authority area.

The SFRA for the borough of Tower Hamlets is currently being formulated and identification of development areas has not yet been undertaken. In order to carry out this Test, Poplar Riverside will need to be assessed against other available sites in the region, to determine whether there are any other more suitable sites that are reasonably available. It is the responsibility of the London Borough of Tower Hamlets (LBTH) to undertake the Sequential Test, however as there are no sequentially tested Local Development Documents currently available, it may be the responsibility of the developer to provide the evidence to enable the LBTH to carry out the assessment (PPS25 Practice Guide, 2007).

This Test should be undertaken at the earliest opportunity in the planning process. Note that the Environment Agency will not consider a FRA for Poplar Riverside if this process has not been carried out.

Exception Test

The Exception Test is to be applied following the Sequential Test and is required in circumstances when a development type, which is not compatible with the level of flood risk at the designated site, needs to be considered for the benefit of wider sustainability objectives.

In the case of Poplar Riverside, more vulnerable uses such as residential areas are not considered to be appropriate in the designated Flood Zone, thus the

Exception Test will need to be performed.

The Exception Test provides a method by which flood risk can be managed while still allowing necessary development to occur. The Test must demonstrate the wider sustainability benefits of the development to the community that outweigh the flood risk posed and should demonstrate that the site will be safe, without increasing flood risk elsewhere.

The decision on whether the development passes the Exception Test lies with the LBTH, while the EA also needs to be consulted with regards to flood risk and proof of safe development.

Flood Risk Assessments

A FRA is a tool used to address flood risk issues and is carried out in conjunction with the guidelines set out in PPS25. The aims of this planning policy are to ensure that flood risk is taken into account at all stages in the planning process to avoid inappropriate development in areas at risk of flooding, and to direct development away from areas at highest risk (refer Appendix A for details of flood zone classification and compatibility).

FRAs are carried out at all levels from a broad regional scale to site specific investigations. The following sections outline those flood risk documents that are applicable to Poplar Riverside.

Draft Regional Flood Risk Appraisal

Government guidance (PPS25) requires Regional Planning Bodies to prepare Regional Flood Risk Appraisals (RFRA) to inform their Regional Spatial Strategies on flood risk issues. In June 2007 the Mayor of London published the Draft RFRA for the London Plan for public consultation, in order to provide a regional understanding of the risk that flooding imposes on London.

The document summarises the source and significance of all flood risks across the London region. It identifies broad locations and establishes location criteria to highlight flooding issues that Local Planning Authorities should address through their SFRAs. The RFRA highlights that the tidal nature of the River Thames influences several

tributaries as far as Lea Bridge on the River Lee and that the site is therefore affected by the tidal surges of the Thames. The report recommends that all Thames-side planning authorities should adopt policies to promote the setting back of development from the river to enable the upgrade/maintenance of river walls/embankments and that particular attention should be made to the interaction of fluvial and tidal flood risks.

The Draft RFRA for London can be sourced via the following link:

<http://www.London.gov.uk/mayor/strategies/sds/regional-flood-risk.jsp>

Strategic Flood Risk Assessment for East London

A SFRA for East London was commissioned by the Thames Gateway London Partnership (TGLP) and the Environment Agency in 2004. This SFRA was completed in accordance with Planning Policy Guidance 25, the predecessor to PPS25, in 2005.

The aim of the SFRA was to inform strategic planning of East London by analysing the consequence of existing and proposed development in high flood risk areas.

This report can be viewed via the following link:

<http://www.thames-gateway.org.uk/social-inc-content.asp?id=16>

The SFRA classifies flood risk in the Poplar area as a "residual risk" due to the high standard of defences along the waterways, which would need to be overtopped or breached for flooding to impact the site (up to the 1 in 1000 year event). To further assess this risk, a series of breach analyses were undertaken across East London. Through these analyses, the SFRA identifies that the rapid inundation zone (i.e. a potential flood zone of high velocity and depth that could lead to a loss of life) typically extends approximately 500m inland. This information was utilised in conjunction with level data in order to define "high", "medium" and "low" risk categories within Flood Zone 3 – thereby identifying those areas that would be most at risk in the case of defence failure. It was intended that this delineation of zones would inform future Sequential Tests

within the boroughs of East London.

A description of the zones identified and a map delineating these zones for East London is presented in Appendix B, with an extract of the map presented in Figure 3—1. Red represents high risk, orange is medium risk and yellow is low risk within Flood Zone 3. It can be seen that the vast majority of the Poplar Riverside site is considered to lie within the “high” risk zone (refer Appendix B for further details).

The investigations carried out as part of the East London SFRA were strategic, and provide a generic indication of the scale of the residual risk in East London. More detailed, site specific studies may be necessary when considering particular development sites.

The East London SFRA identifies that there is little opportunity for secondary defences or raised land in the Poplar region due to the built up nature of the area. It is suggested that development with a non-habitable ground level and flood resilient design may be a mitigation option for the low lying areas.

London Borough of Tower Hamlets Draft Strategic Flood Risk Assessment

The LBTH is in the process of undertaking a SFRA for their region, with the available Draft dated January 2008. The SFRA will be created in accordance with PPS25 to guide development away from current and future flood risk zones. The SFRA is intended to refine information (compared with Regional Strategies and EA information) on the areas that may flood, taking into account other sources of flooding, such as groundwater and surface water. This should ultimately result in the production of maps showing flood outlines for different probabilities, impact, speed of onset, depth and velocity variance of flooding, taking account of the presence and likely performance of flood risk management infrastructure.

The final SFRA will provide the relevant information to enable a Sequential Test to be undertaken, which will inform the Local Development Documents.

The preliminary nature of the LBTH Draft SFRA means that the majority of flood information and assessment has not yet been carried out to provide insight into the region. It is therefore likely that any Sequential Test to be undertaken for the site will need to be informed by separate assessment, as outlined in Section 3.1.1. In the interim, the East London SFRA may provide guidance on the flood risk zones in the area and assist in undertaking a Sequential Test for Poplar Riverside.

Site-specific Flood Risk Assessments

At planning application stage, an appropriate FRA will be required to demonstrate how flood risk from all sources of flooding to the development itself and flood risk to others

will be managed now while taking climate change into account. The PPS25 Practice Guide defines three levels of FRA:

- Screening Study (Level 1) – to identify whether there are any flooding or surface water management issues related to a development site that may warrant further consideration;
- Scoping Study (Level 2) – to be undertaken if the Level 1 FRA indicates that the site may lie within an area that is at risk of flooding or that the site may increase flood risk due to increased run-off; and
- Detailed Study (Level 3) – to be undertaken if the Level 2 FRA concludes that further quantitative analysis is required to assess flood risk issues related to the development of

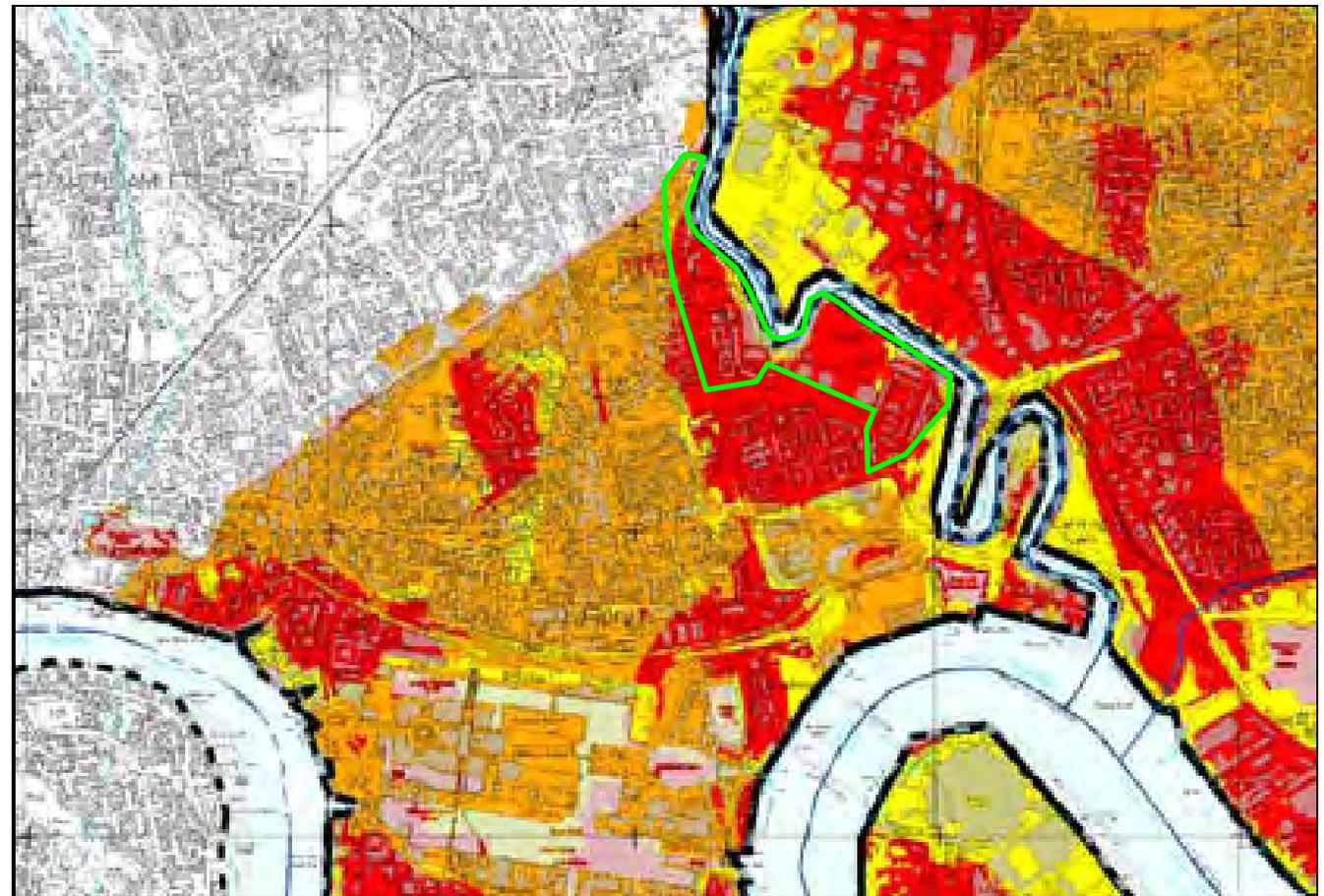


fig. 3.1 Extract from East London SFRA map

the site.

This report represents a Scoping Study to identify likely requirements for development across the Poplar Site, while also providing insight into the future requirements and processes to undertake the Level 3 (detailed) assessment.

As previously highlighted (Section 3.1), the Sequential and Exception Tests should be undertaken for the site prior to the creation (and certainly before the submission) of a FRA. The EA will not consider a FRA for Poplar Riverside without the evidence from these Tests.

The London Plan: Spatial Development Strategy for Greater London, 2008

The London Plan is a strategic plan that sets out an integrated social, economic and environmental framework for the development of London for the next 15-20 years to manage land use and future development. The Plan includes the following policies related to flooding:

- Policy 2A.1: Sustainability recognises the need to take into account the potential constraints associated with flood risk in the development of land as part of a wider sustainability strategy.
- Policy 4A.1: Tackling Climate Change and Policy 4A.9: Adaptation to Climate Change identify climate change as an issue, and that London is particularly vulnerable to flooding
- Policy 4A.3: Sustainable Design and Construction proposes flood risk should be managed through SuDS and flood resilient design of infrastructure and property.
- Policies 4A.12: Flooding and Policy 4A.13: Flood Risk Management outline the requirement to carry out a flood risk assessment for proposals in line with PPS25. Flood risk is to be considered during the planning application and the design stage to minimise the potential risks from flooding.

A copy of the Local Plan can be found at:

http://www.London.gov.uk/mayor/strategies/sds/london_plan_download.jsp

3.4 London Borough of Tower Hamlets, Leaside Area Action Plan, 2006

This document provides guidance on development and change within the Leaside area, with a strategic location, within the Thames Gateway development area. The aims of the Plan include:

- Deliver planned growth areas
- Stimulate regeneration
- Protect areas particularly sensitive to change
- Focus the delivery of area based regeneration initiatives

In terms of flooding, the document states that 'new developments must not unacceptably increase the risk of flooding.' Policy L6: Flooding outlines the commitments of the plan in terms of flooding. This includes the encouragement of green roofs, SuDS and other mitigation measures to reduce surface water run off; that flood risk is to be considered at early stages of development; that developments should consider the residual risk of flooding; and that developments be set back from the river and dock to allow access.

A copy of the Plan can be viewed via the following link:

<http://www.towerhamlets.gov.uk/data/planning/data/planning-policy/downloads/aap/hr/leaside.pdf>

Lower Lea Valley Opportunity Area Planning Framework, Strategic Planning Guidance, 2007

The Lower Lea Valley is one of the largest regeneration sites in the UK, this document sets out a balanced approach to land use and development within the Lower Lea Valley area, based on fifteen sub-areas. The Framework is a tool to assist the implementation of the London Plan. Poplar Riverside is identified as sub area 12. The LLV OAPF identifies the majority of Poplar Riverside in Flood Zone 3. The area identified as having a potential for extreme flooding hazard is located to the east of the sub-area, along the watercourse with the central area being at a high potential, therefore residential properties, particularly family housing should be directed away from the eastern side of the sub-area.

A copy of the LLV OAPF can be viewed via the following link:

<http://www.London.gov.uk/mayor/planning/docs/lowerleavalley-all.pdf>

The Planning Process

The EA has statutory responsibility for flood management and defence in England. They will be consulted by LPAs on all applications for development in flood risk areas, including those in areas with critical drainage problems and for any development on land exceeding 1 hectare outside flood risk areas. The final decision to grant consent lies with the LPA, however the EA are consulted during the review process. If the EA object to a planning application on flood risk grounds it is normal and expected that the LPA will refuse to grant consent, unless they conclude that other planning considerations outweigh the EA's objections on flood risk grounds. In that event (and where the EA maintain its objection) an application would have to be referred to the Secretary of State for review. This could lead to a refusal, or a grant of planning consent

4.6.4 Background

Study Area

Poplar Riverside extends across an area of approximately 84.7 hectares; the core area is 30.4 hectares, and the area of influence a further 54.3 hectares. The area of influence is land that is unlikely to experience major land use but there is the potential for intensification of existing land uses and improvement to local connectivity, open spaces and public realm. The core masterplan area comprises land with potential for land use change in accordance with the Lower Lea Valley (LLV) Opportunity Area Policy Framework (OAPF) and LBTH Leaside Area Action Plan (AAP).

Proposed Development

The London Thames Gateway Development Corporation (LTGDC) wish to unlock the potential of Poplar Riverside through managed regeneration, and strengthening and linking its neighbourhoods within the Lower Lea Valley. The LTGDC therefore aims to promote a physical environment that achieves a balance between residential, community, leisure and employment areas.

Consultations

The Environment Agency has been consulted about the proposed redevelopment at Poplar. The EA outlines the requirements of flood defences requiring information on the condition of existing flood defences and adequate protection for the proposed land uses. The EA response further outlines the requirements of Sequential and Exception Tests, flood risk assessments, groundwater protection and biodiversity, which are discussed in this assessment. Copies of correspondence are provided in Appendix C.

4.6.5 Poplar Riverside Flood Risk

This section provides an overview of the elements associated with flood risk to the proposed site development and the historical flooding events that have occurred within the surrounding area.

Assessing flood risk for a site requires the examination of the local topography, flood plain mapping, the sources of flooding and the land use patterns of the proposed development. The sources of flood risk to be assessed include fluvial, tidal, surface water and groundwater sources.

In Poplar Riverside, the primary concern regarding flood risk is the impact of tidal surges on the site. It should be noted that flood defences in the area are designed to protect the site up to the 1 in 1000 year tidal event and it is therefore unlikely that the site would be subject to inundation. Nevertheless, in consideration of the Flood Zone of an area, the undefended situation must be assessed to ensure that the consequences of overtopping or a flood defence breach are taken into account.

The following section identifies the flood information currently available for Poplar Riverside and the flood risk posed.

Flood History

Consultations with the EA reveal that the site was subjected to tidal flooding on the 6th and 7th January 1928, this was attributed to the overtopping of banks during a storm

surge that coincided with high fresh water flows.

During that period the approximate level in the Thames was 5.00 mAOD. The areas flooded in 1928 are shown in Appendix C (EA Map).

The London Borough of Tower Hamlets SFRA indicates that there have been two significant flood events in the 20th Century that have directly affected the borough. The floods of 1947 affected the majority of the major river basins in south England, and subsequently the River Lea; the floods were influenced by heavy rain in conjunction with rapid snowmelt. A tidal surge in the North Sea in 1954 resulted in extensive flooding in the London Docklands. It must be noted that in 1954, the London Docklands were not protected by the Thames Barrier (constructed 1983) which currently provides defence from tidal surges transcending upstream through the River Thames. The impact of these events on Poplar Riverside itself has not been qualified.

Poplar Riverside Flood Zone

Poplar Riverside could potentially be influenced by fluvial flooding from both the River Thames to the south and River Lea to the east. The site has been identified to be located within Flood Zone 3 (refer Section 3.1), with an annual probability of flooding from the sea greater than 1 in 200. It must be reiterated here that this classification of flood risk assumes the site to be undefended.

The EA's indicative flood map for the region shows the areas that are affected by fluvial and tidal flooding, as illustrated in Figure 5—1. The dark blue represents Flood Zone 3, the lighter blue represents Flood Zone 2 and all white areas are designated as Flood Zone 1. The dashed pink line represents flood defences, while the hatching indicates those areas benefiting from the flood defences. A more detailed Flood Zone map of the area is provided in Appendix C.

The boundary of the core area for development site is outlined in red on Figure 5—1.

In addition to the Indicative Flood Map information

available from the EA, the SFRA for East London and the Draft London Borough of Tower Hamlets SFRA identify the following:

- The London Borough of Tower Hamlets SFRA, in line with EA guidance has assumed that there is no functional flood plain (Flood Zone 3b, PPS25) within Tower Hamlets.
- East London SFRA identify the majority of the area as being within the rapid inundation zone, which represents the highest risk area within Flood Zone 3 (in the case of a breach or overtopping of defences).

SFRA flood zone mapping is currently unavailable from the London Borough of Tower Hamlets however the East London SFRA map is provided in Appendix B.

Tidal Flood Levels

The EA request that the Poplar Riverside development takes into account the 1 in 1000 year tidal levels in consideration of flood risk.

The EA have provided estimated tidal flood levels for the site based on modelling they have undertaken. The present day levels, and future levels in response to climate change (assuming a 100 year development life), are provided in Table 5—1 on the following page.

The levels reduce when climate change is considered because the hydraulic model accounts for the Thames Barrier closure rule, which relates to a change in circumstances and conditions of closure over time, i.e. increased sea levels will amplify the implementation of defence operation. Thus current modelling suggests the present day estimate of flood level may provide the worse case scenario.

Defences

The River Thames is protected from tidal flooding by a defence system comprising the Thames Barrier, seven other major flood barriers and 487km of tidal walls and embankments. The tidal walls extend from the Thames and up the River Lea to Hackney Marshes at Lea Bridge, thereby incorporating Tower Hamlets. The Environment Agency has indicated that the standard of protection provided is greater than the 1 in 1000 year return period

and the design can accommodate climate change up to the year 2030.

The Thames Barrier was first used defensively in 1983 and provides protection from storm surge, primarily from the North Sea. The barrier becomes operational, on average, five times a year (London Borough of Tower Hamlets SFRA, 2007). The Thames barrier provides protection against river levels greater 1 in 1000 year flood level; however through the impact of climate change this protection is expected to reduce to 1 in 1000 year protection by 2030.

The embankments along the River Thames in Tower Hamlets are part of the system of the Thames Tidal defences, and again provide protection up to the 1 in 1000 year return period. The London Borough of Tower Hamlets SFRA states, "it can be assumed that the current standard of protection (to at least 0.1% AEP event) will continue to be maintained in central London, including Tower Hamlets". The EA have provided a map showing defence levels along the Thames Estuary and the River Lea – this is provided in Appendix C.

The statutory defence levels bordering the site boundary range from 5.28m AOD to 5.33m AOD. The EA have indicated that defences along the tidal Thames are privately owned. The EA withholds responsibility for inspection to assess the fitness for purpose; however the owners are responsible for maintaining the defence level. The EA indicate that the overall condition grade for defences within the area in question is 2 (Good), on a scale of 1 to 5.

The strategy for managing tidal flood risk in the Thames Estuary is due to be published by Thames Estuary 2100 in 2009. This aims to develop a tidal flood risk management strategy for the Thames up to the year 2100, considering sea level rise and the deterioration in defence standards.

Surface Water Flooding

Little information is currently available on the risks associated with surface water flooding in Poplar Riverside.

Further investigation will be required to underpin any development proposals for the site, identifying the surface water constraints to be considered. Further information is provided in Section 7.4.

Groundwater / Localised Flooding

The Environment Agency does not have any records, nor do they suggest that there is any evidence, of groundwater or localised flooding within the Poplar Riverside site.

4.6.6 Development Considerations

There are a number of considerations to be addressed with regards to flood risk at the Poplar Riverside site.

The following identifies the main considerations to be taken into account. Correspondence with the EA regarding requirements for Poplar Riverside is presented in Appendix C.

Note that the details provided herein represent preliminary guidance only and additional investigations will be required to confirm specific objectives for planning applications and subsequent on-site development. Information on further investigations to be carried out is presented in Section 7.

Land Use

Ideally, land use should be located throughout the site based on the potential flood risk and the vulnerability of the land use in question, with more vulnerable uses directed to areas of lower risk (an "on-site sequential process"). As previously identified however (Section 3.2.2), the East London SFRA indicates that the majority of the site is located within the 'rapid inundation zone' adjacent to the River Lea. This suggests that all areas of the core development zone may have the same risk associated with them and therefore the on-site sequential process may not differentiate between areas.

In order to better assess areas at most risk from flooding within the site, it may be appropriate that a breach

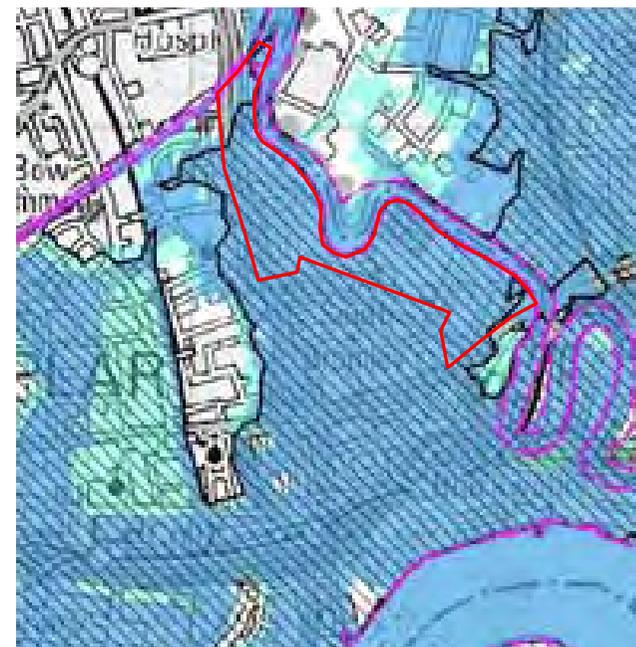


fig. 5-1 Environment Agency Indicative Flood Map

Tidal Event	Present Day [m AOD]	2102 (Climate Change) [m AOD]
1% Annual Probability (1 in 100 year)	4.88	4.85
0.5% Annual Probability (1 in 200 year)	4.91	4.86
0.1% Annual Probability (1 in 1000 year)	4.94	4.87

Table 5-1 Environment Agency Modelled Flood Levels

analysis is conducted to assess variations in flood depths and velocities across the development. This will provide a land use allocation tool by identifying pockets of land that are at most risk from defence breach.

Section 7.2 provides further details on breach analyses. The Environment Agency has indicated the following requirements for developments in Poplar Riverside:

- Finished floor levels of “more vulnerable” uses such as residential accommodation (refer Appendix A for further definition) should ideally be above the 1 in 1000 year tidal flood level. This level could be taken as the tidal level in the river (i.e. 4.94m AOD) or could be determined via a breach analysis.
- All sleeping accommodation should be located above the 1 in 1000 year flood level.
- Safe refuge must be provided for all buildings so that people can escape to higher ground in the event of a flood, i.e. access to upper storeys above the 1 in 1000 year flood level needs to be provided. It may be appropriate to locate less vulnerable land uses (e.g. commercial and retail) on lower floors, with residential units located above.

Flood Defences

The nature and extent of access to and along the flood defences for personnel and plant post-development should be considered. The Environment Agency requires access for inspection and essential maintenance of flood defences. They request a minimum 16m setback from flood defences to ensure the integrity of the defences is maintained. This distance may be negotiated if other adequate access can be incorporated into the design.

Flood defences should not be subjected to any horizontal or vertical loading, either temporarily or permanently, without full justification and calculation.

Bridge Design

Considerations for bridge crossings over the River Lea and Navigation were discussed with the EA and British Waterways respectively (telephone conversations 15/05/08).

The information contained herein is a guide only and requirements may alter depending upon the type of bridge proposed and location, etc. Consultation with the relevant authority should be undertaken at the earliest stage in bridge design to ensure that the specific requirements and constraints are taken into account at the outset.

Bridges over the Lea Navigation/Limehouse Cut fall under the jurisdiction of British Waterways.

Requirements may vary depending upon the width and type of bridge proposed, however as a guide, bridges over these watercourses:

- should have a clearance of 3.0 – 3.5m above the normal water level (approx 3.1m AOD) to the soffit of the bridge
- should have a clearance of at least 2.5m above the tow path. This is likely to represent the higher level in this area (as opposed to the clearance requirements over the water) due to the difference in level between the tow path and normal water level
- should not have abutments which encroach further upon the watercourse than existing bridges in the area

Clearance requirements for bridges over the River Lea will vary depending upon the width of the bridge. The EA have indicated that a wide bridge (i.e. a road bridge) is likely to require the following

- At least 12m clearance from the top of the flood defences to the underside of the deck
- Abutments a minimum 8m from the back of the defences
- Single span bridge

- Both the Environment Agency and British Waterways should be contacted at the outset of any proposed
- bridge design to determine the specific requirements that need to be met.

Consideration should also be given to the removal of flood plain storage due to the bridge abutments/ piers, and impacts downstream. This may require provision of flood plain storage at an alternative location.

4.6.7 The Way Forward

At planning application stage, an appropriate site specific FRA will be required to demonstrate how flood risk from all sources of flooding to the development itself and flood risk to others will be managed now and into the future. Details of specific issues to be addressed within the FRA are provided in EA correspondence in Appendix C.

The following sections identify those requirements that will need to be met in the development of a FRA.

Sequential and Exception Tests

Sequential and Exception Testing will need to be undertaken for any proposed development at Poplar Riverside. These Tests should be undertaken at the earliest opportunity in the planning process. The Environment Agency will not consider a FRA for Poplar Riverside if this process has not been carried out. Sections 3.1.1 and 3.1.2 provide detail on what the Sequential and Exception Tests entail.

Breach Analysis

A breach analysis may be undertaken for the site to determine the impact on development of a breach of the flood defences. This analysis aims to assess potential depths of flooding and velocities of flood waters in order to identify those areas most at risk. The results of this assessment will inform the flood mitigation measures required for any proposed development.

As previously noted, given the proximity of the area to

the river, flood levels on the site as a result of a breach may be similar to those experienced in the river itself. The proposed development could therefore be designed based on the 1 in 1000 year flood level of 4.94m AOD.

Flood Defences

Information on the flood defences must be provided with any planning application, including a condition assessment to verify that the defences will be appropriately reconstructed or maintained for the lifetime of the development (i.e. 100 years).

The requirements for the assessment of the existing condition of the flood defences are:

- Details of work required to ensure the flood defences adjacent to the development have a life expectancy of 100 years
- A survey to ensure the flood defence structure is constructed to a minimum level of 5.23m AOD
- An assessment of how the existing flood defences can be raised to at least 600mm above statutory defence level
- Identification of potential effects on the flood defences e.g. loading and permeability, and how these issues can be avoided or mitigated
- An assessment of the nature and extent of access to the defences (EA request a 16m buffer zone)

Surface Water Drainage

Flood risk associated with surface water will need to be assessed with the development of a surface water Drainage Strategy. The Drainage Strategy should look to adopt the principals of Sustainable Drainage Systems (SuDS) where ever possible. SuDS takes into account the quantity and quality of surface water runoff and the amenity value of surface water in the urban environment. These systems will aim to provide a more sustainable solution than conventional drainage and will:

- Manage runoff flow rates, reducing the impact of urbanisation on flooding;
- Protect or enhance water quality; and

- Be sympathetic to the environment setting and the needs of the local community.

Actual requirements for the surface water discharge, including outfall locations, rates of runoff and discharge quality, will need to be discussed with both the Environment Agency and Thames Water.

Given that the site is located in a tidal area, the EA may recommend the discharge of surface water as soon as possible to minimise flood risk, although large volumes of stormwater may still need to be stored in high tide conditions where gravity discharge is not possible.

In line with PPS25 and the recommendations of the SFRA, the drainage strategy will need to be designed with due consideration of the construction phasing.

Future Consultations

Liaison with the London Borough of Tower Hamlets should be maintained throughout the planning process to monitor progress/updates to the SFRA.

Consultation should be held with Thames Water to establish the network of storm water and foul sewers in and around the site, and stipulations for connection and alterations to current discharge rates.

Actual requirements for the surface water discharge, including outfall locations, rates of runoff and discharge quality, will need to be discussed with both the Environment Agency and Thames Water. British Waterways and the EA should be consulted in establishing design criteria for proposed bridges over the waterways.

References

- Association of British Insurers (2004) Flood Resilient Homes
- Building research Establishment Scottish Laboratory (1996) Design Guidance on Flood Proofing to Buildings
- Communities and Local Government (2006) Planning Policy Statement 25 – Development and Flood Risk, The Stationery Office, London

- Capita Symonds (2007) London Borough of Tower Hamlets Strategic Flood Risk Assessment, Volume I & Volume II, London Borough of Tower Hamlets
- Entec UK Limited (June 2005) Strategic Flood Risk Assessment of East London, Thames Gateway Partnership
- Greater London Authority (2007) Regional Flood Risk Assessment for the London Plan, Mayor of London
- Greater London Authority (2004) The London Plan: Spatial Development Strategy for Greater London, Mayor of London

4.6.7 Summary - Flood Risk

- PPS 25 has led to new strategies for the area
- Need to provide EA access to flood defences (16m set back usually required)
- No loading (horizontal or vertical) on flood defences
- The entire site is within the “rapid inundation zone”
- Sleeping accommodation will need to be above the 1 in 1000 year flood level. Determining the precise height of this level will require a breach analysis. (it will be approximately 4.94m above Ordnance Datum at Newlyn)
- Likely to favour less-vulnerable uses on ground floor with residential above.
- All buildings will require a “safe refuge”
- Early discussions with both the EA and British Waterways will be needed to determine precise constraints on design of all bridges

4.6.8 The Way Forward

- Sequential test to be undertaken by LBTH for all proposed development to direct development to areas of lower flood risk
- Exception test to be undertaken to demonstrate that each development is safe and does not increase flood risk on adjacent areas
- Information on all flood defences (existing and proposed) to be provided with planning applications
- Breach analysis to determine the consequences for the development
- Flood resilience strategy to be undertaken
- Flood risk associated with storm water to be addressed in a Surface Water Drainage Strategy

4.6.9 Appendices

Appendix A: PPS25 Tables

Table D.1: Flood Zones

Note: These Flood Zones refer to the probability of river and sea flooding, ignoring the process of defilement.

<p>Zone 1: Low Probability</p> <p>Definition This zone comprises land assessed as having a risk (from 1 in 1000 annual probability of river or sea flooding in any year) of 1%.</p> <p>Appropriate uses All uses of land are appropriate in this zone.</p> <p>FBA requirements For development proposals on sites comprising one hectare or above the vulnerability to flooding from other sources, as well as from river and sea flooding, and the potential to increase flood risk elsewhere through the addition of land surfaces and the effect of the new development on surface water runoff, should be incorporated in a FBA. This need only be met unless the factors above or other local considerations require particular attention. See Annex E for minimum requirements.</p> <p>Policy aims In this zone, developers and local authorities should seek opportunities to reduce the overall level of flood risk in the area (and beyond) through the layout and form of the development, and the appropriate application of sustainable drainage techniques.</p>
<p>Zone 2: Medium Probability</p> <p>Definition This zone comprises land assessed as having between a 1 in 100 and 1 in 1000 annual probability of river flooding (1% – 0.1%) or between a 1 in 200 and 1 in 1000 annual probability of sea flooding (0.5% – 0.1%) in any year.</p> <p>Appropriate uses The water-compatible, less sensitive and more vulnerable uses of land and essential infrastructure in Table D.2 are appropriate in this zone. Subject to the sequential test being applied, the highly vulnerable uses in Table D.2 are only appropriate in this zone if the exception test (see para. D.3.1) is passed.</p> <p>FBA requirements All development proposals in this zone should be accompanied by a FBA. See Annex E for minimum requirements.</p> <p>Policy aims In this zone, developers and local authorities should seek opportunities to reduce the overall level of flood risk in the area through the layout and form of the development, and the appropriate application of sustainable drainage techniques.</p>
<p>Zone 3a: High Probability</p> <p>Definition This zone comprises land assessed as having a 1 in 100 or greater annual probability of river flooding (0.5% or 1 in 200 or greater annual probability of flooding from the sea (>0.5%) in any year.</p> <p>Appropriate uses The water-compatible and less vulnerable uses of land in Table D.2 are appropriate in this zone. The highly vulnerable uses in Table D.2 should not be permitted in this zone. The most vulnerable and essential infrastructure uses in Table D.2 should only be permitted in this zone if the exception test (see para. D.3.1) is passed. Essential infrastructure permitted in this zone should be designed and constructed to remain operational and safe for users in times of flood.</p> <p>FBA requirements All development proposals in this zone should be accompanied by a FBA. See Annex E for minimum requirements.</p>

Table D.1: contd.

<p>Zone 3a: High Probability (continued)</p> <p>Policy aims In this zone, developers and local authorities should seek opportunities to: i) reduce the overall level of flood risk in the area through the layout and form of the development and the appropriate application of sustainable drainage techniques; ii) relocate existing development to land or areas with a lower probability of flooding; and iii) create space for flooding to occur by retaining functional floodplain and flood flow pathways and by identifying, allocating and safeguarding open space for flood storage.</p> <p>Zone 3b: The Functional Floodplain</p> <p>Definition This zone comprises land where water has to flow or be stored in times of flood. OFWs should identify the Flood Zone (and which would flood with an annual probability of 1 in 20 (5%) or greater in any year or is designed to flood in an extreme (1%) flood) or at another probability to be agreed between the LPA and the Environment Agency, including water company consent.</p> <p>Appropriate uses Only the water-compatible uses and the essential infrastructure listed in Table D.2 that fit in to them should be permitted in this zone. It should be designed and constructed to: – remain operational and safe for users in times of flood; – result in no net loss of floodplain storage; – not impede water flow; and – not increase flood risk elsewhere.</p> <p>Essential infrastructure in this zone should pass the exception test.</p> <p>FBA requirements All development proposals in this zone should be accompanied by a FBA. See Annex E for minimum requirements.</p> <p>Policy aims In this zone, developers and local authorities should seek opportunities to: i) reduce the overall level of flood risk in the area through the layout and form of the development and the appropriate application of sustainable drainage techniques; and ii) relocate existing development to land with a lower probability of flooding.</p>

Table D.2: Flood Risk Vulnerability Classification

Essential Infrastructure	<ul style="list-style-type: none"> Essential transport infrastructure including main evacuation routes which has to exist for use at risk, and strategic safety infrastructure, including electricity-generating power stations and grid and gasway substations.
Highly vulnerable	<ul style="list-style-type: none"> Police stations, Ambulance stations and fire stations and Command Centres and telecommunications installations required to be operational during flooding. Emergency shelter sites. Boarding schools. Careers, mobile homes and park homes intended for permanent residential use. Installations requiring hazardous substances consent.¹⁾
More vulnerable	<ul style="list-style-type: none"> Hospitals. Residential structures such as residential care homes, children's homes, social services homes, prisons and hotels. Buildings used for: meeting rooms, student halls of residence, cooking establishments, nightclubs, and hotels. Non-residential uses for health services, museums and educational establishments. Landfill and sites used for waste management facilities for hazardous waste.²⁾ Sites used for holiday or shorter careers and camping, subject to a specific warning and evacuation plan.
Less vulnerable	<ul style="list-style-type: none"> Buildings used for: shops, financial, professional and other services, restaurants and pubs, hot food takeaways, offices, general industry, storage and distribution, non-essential structures not included in more vulnerable, and assembly and leisure. Land and buildings used for agriculture and forestry. Water treatment (except landfill and hazardous waste facilities). Minerals working and processing (except for sand and gravel workings). Water treatment plants. Sewage treatment plants if adequate pollution control measures are in place.
Water-compatible Development	<ul style="list-style-type: none"> Flood control infrastructure. Water transmission infrastructure and pumping stations. Sewage transmission infrastructure and pumping stations. Sand and gravel workings. Docks, marinas and wharves. Navigation facilities. MCO defence installations. Ship building, repairing and converting, drydock, fish processing, and refrigeration and compatible activities requiring a suitable location. Water-based recreation including sleeping accommodation. Lifeguard and coastguard stations. Assembly open space, nature centres/museums and leisure/fitness, outdoor sports and recreation and essential facilities such as changing rooms. Essential auxiliary sleeping or residential accommodation for staff required by sites in this category, subject to a specific warning and evacuation plan.

Notes:

- The Classification is based partly on Environment Agency consent to flood risks to People (P222-URD)³⁾ and also on the need of some uses to keep functioning during flooding.
- Buildings that contain a mixture of uses should be placed into the higher of the relevant classes of flood risk category. Developments that allow uses to be distributed over the site may fall within several classes of flood risk category.
- The impact of a flood on the particular use identified within the flood risk vulnerability classification will vary within each vulnerability class. Therefore, the flood risk management infrastructure and other risk mitigation measures needed to ensure the development is safe may differ between uses within a particular vulnerability classification.

Appendix B: East London SFRA Flood Map

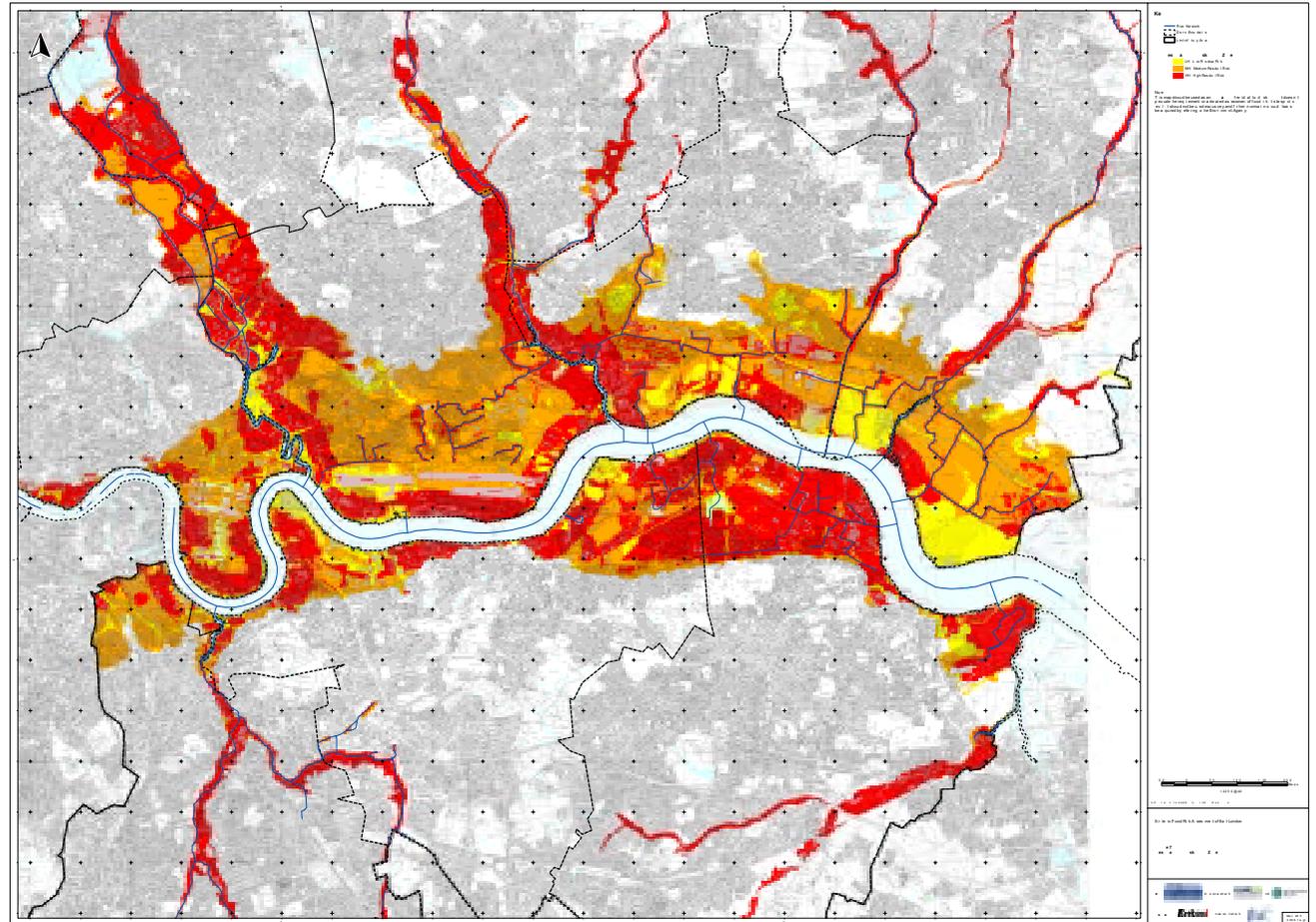
To undertake the PPG25 (Table 1 and Paragraph 30) Sequential Flood Risk Test (SFRT), as a first port of call, one has to use the Flood zone maps published by the Environment Agency. The maps identify the Low, Medium and High Flood Risk Zones of undefended floodplain referred to in PPG25. They give the horizontal extent of the three zones.

However, they do not describe the vertical dimension of flood risk and in particular do not take into account the moderating effect of the Thames Tidal Defences (TTD) which protect East London to a very high standard (in excess of 0.1% probability).

The SFRA Residual Risk Map

Whilst the TTD reduce the risk of flooding considerably, they do not eliminate flood risk altogether. Risk is not finite and risk behind any defence must be considered no matter how remote. More extreme events or conditions may occur when those defences are breached or overtopped. The term "Residual Risk" is used for East London because a considerable proportion of the risk is being effectively managed by the TTD.

The East London SFRA produced residual flood risk maps to describe this vertical dimension of flood risk behind defences in a map context. By use of inundation models a two-strand approach to the identification of the higher risk areas in Zone 3 has been developed. This is based on a typical extent of a zone of high velocity and depth, known as the rapid inundation zone. This was identified by carrying out a number of breach analyses within each tidal embayment with the zone of combined depth and velocity that would lead to a potential loss of life found to be approximately 500m. Where the current ground elevation was within 300mm of the peak 0.1% Thames Tidal Defence design water level, this was removed from the generic 500m wide rapid inundation zone as it is likely that simple mitigation measures would reduce the risk to an appropriate level.



The EA Flood Zone Map

In addition areas of low lying topography where breach water would flow and flood the area to a significant depth (greater than 0.6 m) were included in the screening of the high flood risk in Zone 3. This depth was calculated from a simple volumetric analysis of the depth of flooding for a typical breach volume entering a particular embayment.

The maps give a generic indication of the scale of the residual risk, and identify where a more detailed site specific study will be necessary when looking at a particular development allocation or application. In these high risk areas inundation mapping tools, such as those used in the SFRA, should be used to fully explore

the specific quantum of the residual risk, and where appropriate used to test mitigation schemes. In some instances this detailed work may show that the specific site is not in the higher risk area, but demonstrates the precautionary approach taken in the SFRA.

Legend of the Maps

The following figure gives a graphic indication of how residual risk is mapped and what each sub-zone means. In summary the approach taken in the gradation of risk within Zone 3 has been as follows:

Red Zone – High Residual Risk

- Fluvial floodplain (obtained as best estimate of 1 in 100 year (1%) undefended floodplain) has been classified as high risk. This is consistent with the lower level of protection provided in the River Thames tributaries compared with the Thames Tidal Defences (designed to a 1 in 1000 year standard (0.1%)), and is also in line with our broad analysis of Thames Water sewer flooding data;
- The land within Zone 3, which is within 500 m of the Tidal Defences and which is at least 300 mm below the 1 in 1000 year (0.1%) Thames Defence Design Level has been classified as high risk. This is because this land is likely to fall within the rapid inundation zone and a more detailed study needs to be carried out at site specific level to prove that there is an appropriate level of understanding of flood risk related to the site;
- The land within Zone 3, which lies beyond 500 m from the Tidal Defences and which is below the flood cell threshold level including an allowance of 600 mm where flooding would not pose a threat to human life, i.e. the low lying areas, has been classified as high risk. This is because if a breach was to occur, water would most likely end up ponding in these low lying areas; it should be noted that over the lifetime of property constructed now, potential floodwater depths could increase by 400mm as a result of sea level rise.

Orange Zone – Medium Residual Risk

- The land within Zone 3, which is within 500 m of the Tidal Defences and which is less than 300 mm below the 1 in 1000 year (0.1%) Thames Defence Design Level has been classified as medium risk. This is because in the event of a breach flood depth and flow velocities would be comparatively low which would reduce the likelihood of the area being within the rapid inundation zone;
- The land within Zone 3, which lies beyond 500 m from the Tidal Defences and which is above the flood cell threshold levels including an allowance of 600 mm where flooding would not pose a threat to human life, i.e. the higher ground, has been classified as medium risk. This is because if a breach was to occur, the site is unlikely to be in the rapid inundation zone and water would only be “flowing through” this area at speed that would not be life threatening.

Yellow Zone – Low Residual Risk

- The land within Zone 3 which falls above the 1 in 1000 year (0.1%) Thames Defence Design Level, i.e. the islands within the embayments, has been classified as low risk.

Appendix C: EA Correspondence

The following is taken from a letter sent from Miss Marie Raison Planning Liaison - Major Projects Officer at the Environmental Agency to Tara James at Buro Happolds in response to queries (dated 17th April 2008).

The Environment Agency has the following comments in relation to:

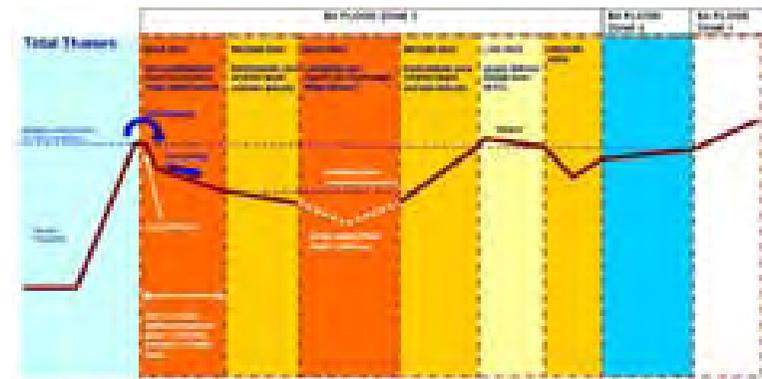
- *Flood Defences;*
- *Sequential and Exception Test;*
- *Flood Risk Assessment;*
- *Land Contamination;*
- *Biodiversity; and*
- *Water Resources.*

FLOOD DEFENCES

You must include information with any planning application which verifies the condition of the Flood Defences to ensure that they will stand up for lifetime of the development. As there is a residential aspect to your proposal you will need to ensure that they will still be adequate for 100 years. The Environment Agency also require access to the flood defences for inspection and essential maintenance. For tidal areas such as this we request a minimum of 16m setback to ensure that the integrity of the flood defences are maintained. An assessment of the condition of the existing flood defences adjacent to the site is required. The assessment should include:

- *Details of any work that is required to bring the life expectancy of the defences up to the life of the new development or 100 years, whichever is greater. To adequately demonstrate the condition of the flood defences intrusive testing / sampling is often required as part of the survey work.*
- *If survey data is not available for the flood defence structure, a survey should be carried out to ensure that the flood defences are constructed to at least the required flood defence level of 5.23m above ODN.*
- *An assessment of how the existing flood defences can be raised (if required) to at least 600mm above the statutory defence level at this site. Raising works should not create adverse environmental or structural impacts, encroachment into the river channel, or involve works disproportionate to the development in scale or cost. 600mm represents the current best estimate of the height the flood defences may need to be raised in future as a consequence of sea level rise.*
- *Identification of potential adverse effects on the flood defences, such as loading and permeability, and how these will be avoided or mitigated.*

The flood defences should not be subjected to any horizontal or vertical loading, either temporarily or permanently, without full justification by calculation. Detailed drawings showing the relative positions of any new piles, foundations, basements and/or any structures, stockpiles of



Entec



materials and excavations in relation to the defences, should support this assessment.

- *An assessment of the nature and extent of access to and along the flood defences for personnel and plant post-development. Adequate access is required for inspection, repair, maintenance, replacement and raising of the defences, working from the land-ward side.*

SEQUENTIAL AND EXCEPTION TEST

Planning Policy Statement 25 – Development and Flood Risk (PPS25) aims to reduce flood risk and to steer new development to sites in the lowest risk flood zone.

Table D.2. of PPS25 classifies residential development as ‘more vulnerable’. Table D.3 of the PPS also highlights that if more vulnerable development is proposed in flood zone 3 then both the sequential and exception test are required.

It is the responsibility of the local planning authority as the decision maker to decide whether the sequential and parts (a) and (b) of the exception test have been passed.

We only become involved in part (c) of the exception test as this relates to the safety of the development, whether it reduces flood risk overall and also aims to ensure that it does not increase flood risk elsewhere.

Therefore we strongly recommend that you approach the London Borough of Tower Hamlets to discuss the sequential test and parts (a) and (b) of the exception test before you spend money and time carrying out a Flood Risk Assessment (FRA).

This is to ensure that there are no other reasonably available alternative sites in lower risk flood zones where this development could be located.

Until we receive confirmation from the local planning authority that the sequential and parts (a) and (b) of the exception test have been passed we will object to any planning application and will not review the FRA.

FLOOD RISK ASSESSMENT

The proposed development site is in Flood Zone 3 of the Thames tidal floodplain. As such, it requires a flood risk assessment (FRA) in accordance with Planning Policy

Statement Note 25 (PPS25). The following issues need to be addressed specifically within the assessment:

1. An analysis of all potential sources of flooding, and how the identified sources of

flooding can be minimised, mitigated or eliminated.

2. An assessment of the risk of flooding to the site from overtopping or breach of the defences, including:

- A ground level survey of current and proposed levels across the site in relation to Ordnance Datum Newlyn (ODN). Establishing the site's ground level is important in determining the level of risk and accordingly the level of detail needed for an appropriate FRA.

- The distance of the site from the relevant flood defences.

- A comparison of the site elevation with the lie of the land and the appropriate statutory or design flood defence level to assess the probability of flooding on the site in the event the defences are overtopped or breached.

- If the site is identified as being at risk of flooding in a breach/ overtopping situation, the applicant should assess, with the aid of calculations or hydraulic modelling, the depth and velocity of flooding and suggest appropriate mitigation measures for the development. No part of the proposed development below the flood water levels shall be used for sleeping accommodation or be converted to form a self-contained dwelling.

- Alternatively, if the 1 in 1000 year tidal flood water level at the proposed location is not known, finished floor levels for residential developments should be placed above the height of the tidal flood defences nearest to the site or the flood water level in the river.

3. An assessment of surface water flooding risks and control. The assessment should include:

- The extent of surface water runoff and potential surface water flooding as a consequence of the development, both on and off site. This should be assessed for a 1 in 100 year rainstorm event.

- How surface water can be controlled or attenuated on site, and the level of attenuation that can be achieved.

- Details of sustainable drainage systems (SUDS) that can be employed on site. We expect the applicant to demonstrate how the principles of SUDS have been applied to the development in line with the guidance contained in Appendix E of PPS25. This assessment should include justification of constraints on the use of SUDS.

- The capability of receiving water or the surface water drainage network to accommodate the runoff. If runoff is to be discharged directly to the Thames, Environment Agency consent is required for any new outfalls and discharge quality standards will need to be satisfied. If runoff is to be discharged to the surface water/sewage system, you are advised to consult with Thames Water.

- The residual risk that may exist for events greater than a 1 in 100 year event.

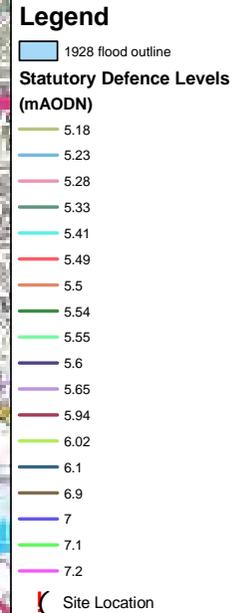
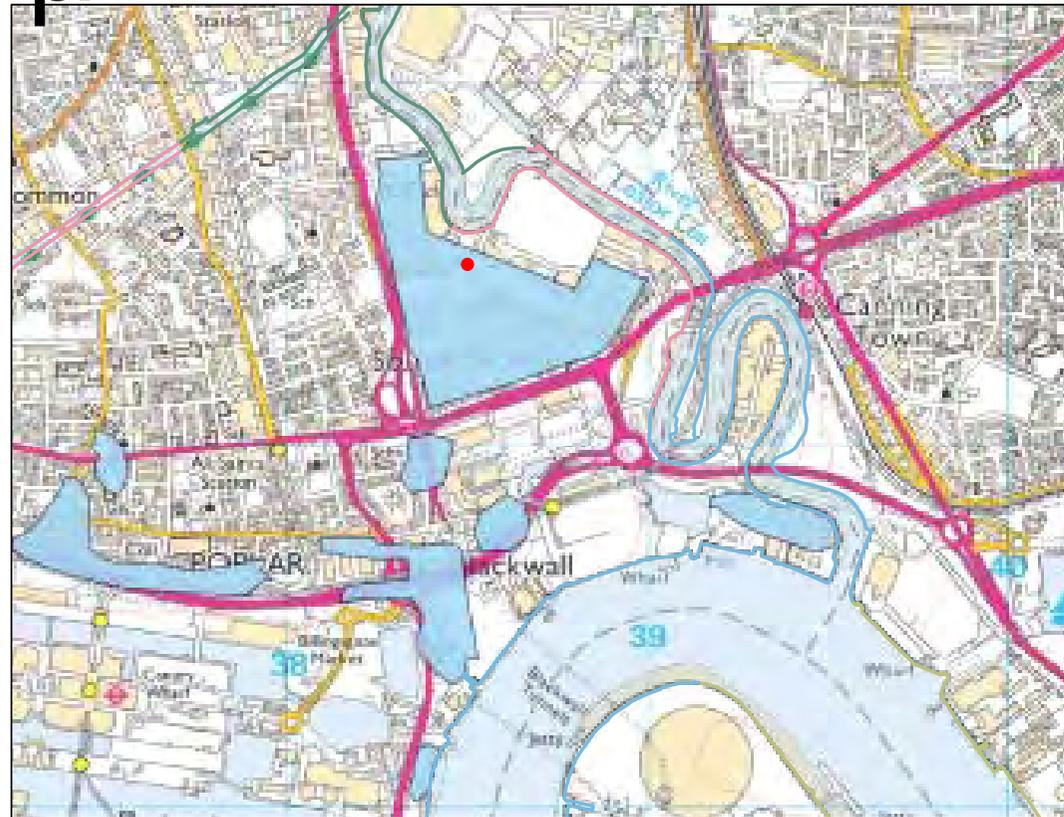
I have attached for your information a guidance document on the use of SUDS and the Environment Agency's requirements.

LAND CONTAMINATION & GROUNDWATER PROTECTION

PPS23 takes a precautionary approach to land contamination and requires an assessment whenever there might be a risk. As the

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NE16534 - Defence level and 1928 Flood Outline



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development is on a 'Brownfield' site it could mean that the site is contaminated. In line with PPS23 a risk assessment should be submitted with the application.

This should detail the site history and identify previous uses that had the potential to contaminate the site including the former gas works. It should also provide information on any previous remediation or site investigation works carried out on the site. These requirements are to ensure that the development poses no risk to controlled waters on or under the site.

The site is underlain by the Kempton Park Sands and Gravels which are likely to contain shallow groundwater. If subsurface structures are to be proposed such as underground car parks, then the applicant should be advised of the following:

Large underground structures constructed below the water table may act as an obstruction to groundwater flows. Consequently, a building-up of groundwater levels may occur on the up-gradient side of such structures. Any drainage systems proposed for such structures should also be capable of allowing groundwater flows to bypass the structure without any unacceptable change in groundwater levels, or flow in groundwater-fed streams, ditches or springs.

BIODIVERSITY

We have a duty to ensure the conservation and enhancement of the water environment and object to encroachment into the river corridor not only from a flooddefence perspective but also on nature conservation grounds. As the Bow Creek is tidal a 16m buffer zone is required along its length. This buffer zone should be managed so as to foster a natural character, with native species of trees and shrubs used and any grass areas left un-mown or mown only later in the season to enhance their floristic and habitat value.

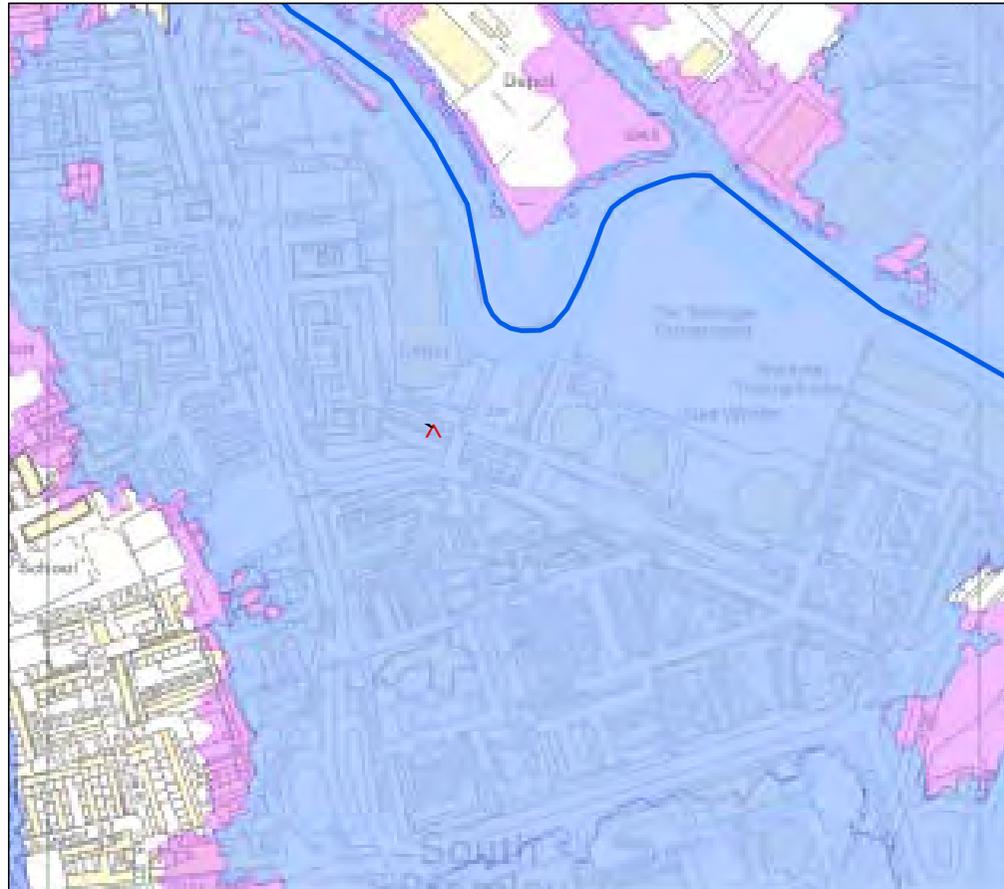
Buffer zones to watercourses are required for the following purposes:

- I. to allow the watercourse to undergo natural processes of erosion and deposition, and associated changes in alignment and bank profile, without the need for artificial bank protection works and the associated destruction of natural bank habitat;
- II. to provide for the terrestrial life stages of aquatic insects, for nesting of water-related bird species, and for bank dwelling small mammals;
- III. to provide a "wildlife corridor" bringing more general benefits by linking a number of habitats and affording species a wider and therefore more robust and sustainable range of linked habitats;
- IV. to allow for the maintenance of a zone of natural character with vegetation that gives rise to a range of conditions of light and shade in the watercourse itself. This mix of conditions encourages proliferation of a wide range of aquatic species, including fish;
- V. to allow, where appropriate, for the regrading of banks to a lower and safer profile, in areas where there is public access;
- VI. to prevent overshadowing of watercourses by buildings; and
- VII. to reduce the risk of accidental pollution from run-off.

WATER RESOURCES

Our Water Resources assessments for the North London area indicate that current rates of water abstraction are causing unacceptable environmental impacts (for more information see the London CAMS document – available from www.environmentagency.gov.uk/CAMS).

When a full planning application is made we will request a condition that requires all residential development to achieve at least Level 3 in the Code For Sustainable Homes. The condition will also require water efficient fixtures and fittings (taps, toilets etc) to be installed in other categories of development.



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Environment Agency
2 Bishops Square Business Park
St Albans Road West
Hatfield
Hertfordshire
AL10 9EX

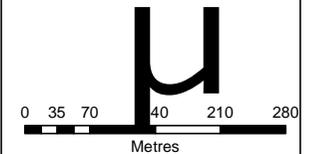
Flood Map
Poplar Riverside

Our ref: NE16534_SS

23 April 2008

Legend

-  Main Rivers
-  FZ 2
-  FZ 3



Produced by:
External Relations
Thames Region (North East Area)

The following is taken from a letter sent from Sandra Stormer External Relations Officer at the Environmental Agency to Tara James at Buro Happolds in response to queries (dated 25th April 2008).

The site in question lies within flood zone 3 of the River Thames and Bow Creek main river as shown on our Flood Map.

Flood zone 3 has a 1 in 100-year flood return period. This means that a flood event is predicted to occur with an annual probability of 1% (so there is a 1 in 100 chance each year this event will happen)

We advise you to contact the local water company regarding previous or potential flooding from sewers. You may also wish to contact the local authority regarding flooding from any non-main rivers or surface water runoff.

Flood History:

The site was subject to tidal flooding on the night of the 6th and morning of the 7th January 1928. There was overtopping in the area during a storm surge (which coincided with high fresh water flows). An approximate level in the Thames at the time was 5.00 mAODN

Please see the attached map for the flood outline.

Modelled Flood Levels:

The following modelled tidal levels (in metres above Ordnance datum Newlyn) apply in the Thames, close to this site;

Present day:

10% Annual Probability = 4.76

5% Annual Probability = 4.81

2% Annual Probability = 4.86

1% Annual Probability = 4.88

0.5% Annual Probability = 4.91

0.1% Annual Probability = 4.94

2052 (allowing for climate change)

10% Annual Probability = 4.84

5% Annual Probability = 4.86

2% Annual Probability = 4.87

1% Annual Probability = 4.88

0.5% Annual Probability = 4.89

0.1% Annual Probability = 4.91

2102 (allowing for climate change)

10% Annual Probability = 4.82

5% Annual Probability = 4.83

2% Annual Probability = 4.84

1% Annual Probability = 4.85

0.5% Annual Probability = 4.86

0.1% Annual Probability = 4.87

The levels are lower for greater return periods when including climate change

because the hydraulic model used to produce these levels takes into account the Thames Barrier closure rule (circumstances/conditions of closure) and assumes that it remains unchanged up to 2102. Increased sea levels and fresh water flows mean that the Thames Barrier closure rule will be met more often. This means that a smaller number of tides will be allowed to flow up into central London each year.

The highest tides experienced upstream of the Thames Barrier occur when the circumstances are within a fine margin of meeting the closure rule, and the decision is taken not to close (a near closure event). As there will be fewer tides per year upstream of the Barrier, and the ratio of near closure levels to regular tidal levels within this smaller number of tides remains constant, the number of near closure events will decrease, and therefore so do the modelled levels.

Defences:

The defences along the tidal Thames in this area are all raised, man-made and privately owned. The Environment Agency regularly inspects them to ensure that they remain fit for purpose. They must be maintained by their owners to the Flood Defence Level in this reach of the Thames (see map for defence levels). The overall condition grade for defences in the area is 2 (Good), on a scale of 1 to 5.

Standard of protection:

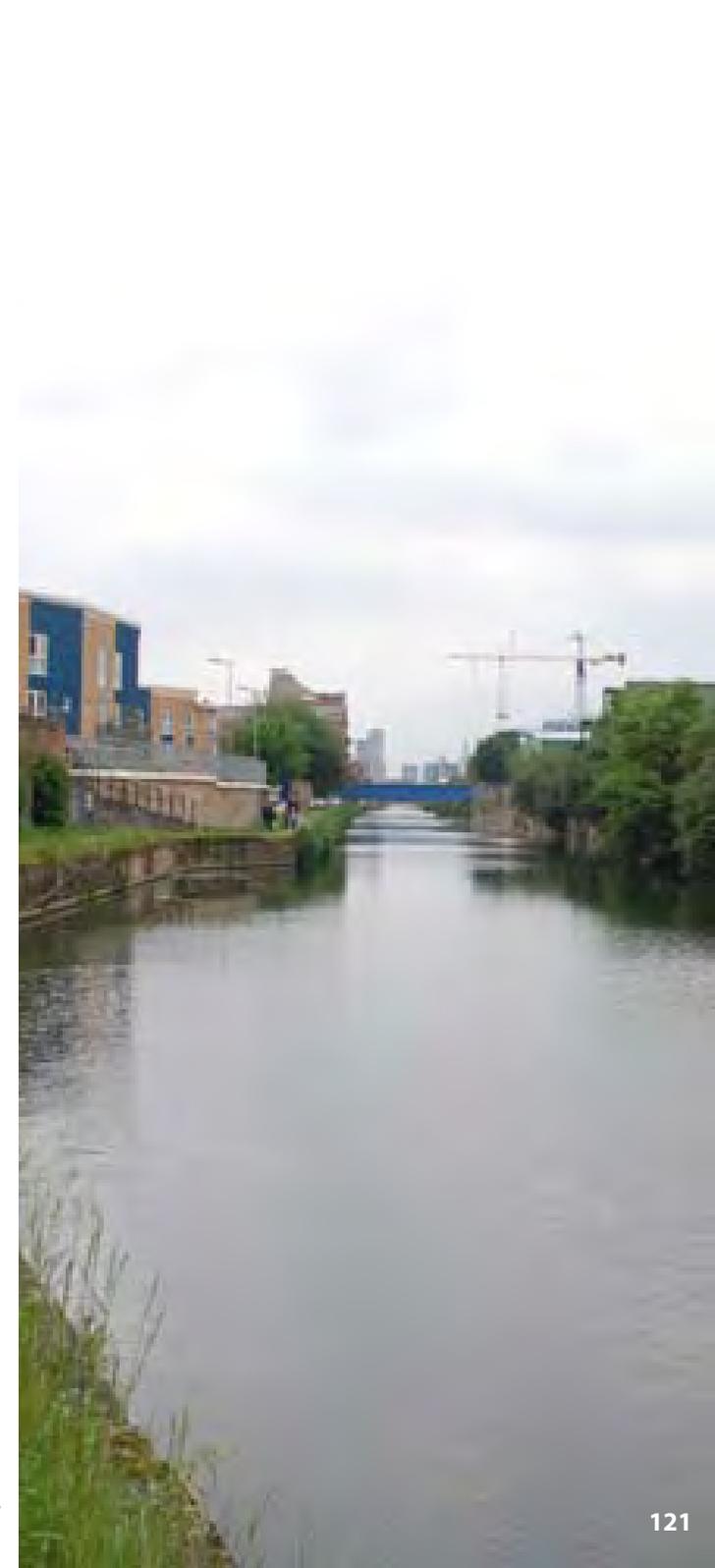
The river Thames is defended along this section to a standard of 1:1000. The defences protect against a tidal flooding event that has a 0.1% annual probability of occurring up to the year 2030. After 2030 the standard of protection will decrease over time. However we have a project (Thames Estuary 2100) that is studying options to manage flood risk in the Thames estuary up to 2100.

Breach analysis:

A suitable location for breach analysis is TQ3865181754. The breach should be 20 metres wide, with a sill level equivalent to the ground level behind the defence. It should be modelled as being open for 18 hours.

This site is on approximately 15 to 20m of London Clay which will act as a barrier to rising groundwater from the water bearing strata below it. We can say that the site is not directly at risk from groundwater flooding from the Chalk aquifer. The area is, however, on a band of gravel deposits which covers the western half. These are associated with spring or seepage lines and can cause problems during construction due to there being a shallow aquifer. This deposit is approximately 4 to 7m in depth.

We have no calls on our customer database regarding groundwater flooding at this location.





4.7.1 Introduction

London Thames Gateway Development Corporation commissioned Buro Happold to prepare a Delivery Strategy for Poplar Riverside, with one element of this work related to land quality. Accordingly, Buro Happold have carried out a land quality assessment of the site with regard to potential geotechnical and ground contamination aspects.

Study Aim and Objectives

The aim of this element of the study was to undertake a preliminary Land Quality Study in general accordance with the provisions of the EA/DEFRA Model procedures for the management of land contamination, 2004 (CLR11) (Ref 1).

This was achieved through the following objectives:

- establish an outline of historical potentially contaminative land use(s)
- establish a broad understanding of the geological setting of the site
- establish an initial understanding of the hydrogeological and hydrological sensitivity
- determine the likely scale of risk / liability associated with the likely scale of ground contamination
- comment upon the related opportunities / constraints and strategic remedial options, and
- note the need for and scope of further investigations.

Information Sources

The principal sources of information for this site appraisal included available historical and current topographic maps, published geology and groundwater vulnerability maps, London bomb maps and the Environment Agency web site. There are a number of additional sources of information which would normally form part of a land quality assessment desk study. Such sources are not part of this preliminary study.

4.7.2 The Site

Site Location and Brief Description

The site is located in Poplar, London at the approximate National Grid Reference 538270, 181560 and occupies an area of about 85 ha.

Docklands Light Railway runs across the western part of the site in a north-south direction. The site is divided in two by the A12. To the west of the A12 are mostly residential properties and schools. To the east are also residential properties and schools, but also depots and industrial properties along the River Lea. Poplar Gas Works is identified as a car storage compound on recent OS maps (Promap). The Blackwall Trading Estate is located in the east. Morris Street and Chrisp Street form the western boundary of the site, East India Dock Road (A13) forms the southern, the River Lea (Bow Creek) the eastern, and Limehouse Cut the northern. The site slopes down towards the south east, from 7m AOD in the north west to 2m AOD in the south east.

Development Proposals

Current proposals include several 32 storey towers along the edge of the river adjacent to the A13 and 8 storey courtyard buildings to the east. It is understood that the redevelopment of the site will involve the construction of new green areas. The exact nature of the proposed structures and site layout are not known at this stage.

History of the Site and Surrounding Area

The history of the site and environs have been determined with reference to currently available Ordnance Survey maps from 1867, 1895 and 1914, as provided. The history of the site and its surrounding area since 1914 has therefore not been possible to study.

By 1867, the site was largely developed in the west and north. Two distilleries and associated wash pits were present in the northern part of the site, with two tanks located nearby. The North London Railway ran across the

4.7 Engineering Strategy - Preliminary Land Quality Study

western part of the site in a north-south direction and alongside it in the north west was a rope manufactory. The south western part of the site was already developed with terraced houses, a saw mill and Poplar Hospital. The rest of the site appeared to be in agricultural use with some marshland along the river. A shipbuilding works and wharfs were present along the river in the east. By 1895, Poplar Gas Works had been constructed in the east with 2 large gas holders. The rest of the site was also developed, mostly with terraced houses and another saw mill. Additional wharfs were present along the river and numerous tanks were shown to the south of the distilleries. A dry grain works was present in the north west. By 1914, few changes had occurred. A garage was located in the south east, a car shed in the central part of the site, and a biscuits manufactory in the west. Additional small tanks were present along the river and in the gas works.

No maps covering the period from 1914 to the present day have been made available for review. This absence of data must be recognised and the resulting uncertainty taken into account.

Recent aerial photography shows that there are now three gas holders at the gas works. While some terraced houses still remains, many have been replaced by apartment blocks. The Blackwall Tunnel Northern Approach (A12) cuts the site in two. Langdon Park is present in the west.

In 1867, the area surrounding the site was mostly in agricultural use to the east of the river, apart from Westham Outfall Sewerage Works and several wharfs. A brick field was present to the north. The area to the north west was in industrial use (oil works, chemical works, felt works, charcoal works, match works, fish manure works, varnish works and a timber yard). Terraced houses were present immediately to the west.

Several warehouses associated with East India Dock and a railway wharf were shown immediately south. An iron foundry and plate glass works were present to the south east.

By 1895, the area to the north west was still industrial, with a soap works, a railway wharf, a printing and ink works and a paint and colour works. A shipbuilding yard was present to the east, a dock and gas works to the north east, engine sheds and a match manufactory to the north. An oil refinery, a goods and coal depot, a sack and bag works and a galvanized iron works were present to the east of Bow Creek.

By 1914, the sewerage works were identified as an electric power station. Warehouses along East India Dock were labelled 'transit sheds'.

Current Use of the Site and Surrounding Area

Current activities

As per the scope of this study, no site walkover was undertaken. Current activities on site and the standard of housekeeping are therefore unknown.

Evidence of contamination

As per the scope of this study, no site walkover was undertaken. Current activities on site and the standard of housekeeping are therefore unknown.

Buro Happold understand that the area occupied by the gas works is to be decontaminated following decommissioning in 2015.

Regulatory data

Information related to various regulatory controls was obtained from the Environment Agency website:

- Three historic landfill sites are present within 100m of the site (Eastern Dock, East India Dock, Lanrick Road); no additional details are available;
- Five significant pollution incidents have been attributed to the north eastern part of the site. All occurred between 2005 and 2006, and pollutants included waste materials, oils, fuel and contaminated water.



There is a potential for any hazardous materials associated with these activities to have impacted upon the ground conditions on site.

Unexploded Ordnance (UXO)

The London County Council Bomb Damage Maps (1939-1945) show that Poplar was substantially damaged by bombing during WW2 and suffered direct hits from V1/V2 rockets. Whilst the gas works aren't shown to have suffered any damage, most residential properties and wharfs suffered damage, from 'minor damage' to 'total destruction'. Recent aerial photographs show that the site has been largely redeveloped since WW2. UXOs are therefore likely to have been detected during demolition and construction works.

Consequently, the likelihood of UXOs still being present on site is considered to be low.

4.7.3 Environmental Setting

Geology and ground conditions

The 1:50,000 British Geological Survey (BGS) map Sheet 256 (1994) and the 1:10,000 BGS map Sheet TQ38SE (2002) show the solid geology of the site to comprise London Clay Formation, followed by Lambeth Group, Thanet Sand Formation and Chalk. The London Clay is likely to be approximately 10m thick on site, due to the close proximity to geological boundaries both to the north and south with the Lambeth Group. In terms of superficial deposits, Alluvium is found in the eastern part

Name	Description	Thickness	Aquifer type
Made Ground	Rubble and demolition debris	<5m (?)	Not Classified
Alluvium	Silty clay with sand, gravel lenses and organic layers – present in the east	A few meters	Minor Aquifer
Langley Silt	Sandy clay and silt (Brickearth) – present in places in the west	A few meters	Non-Aquifer
Kempton Park Gravel	River Terrace Deposits; gravel, sandy and clayey in part	A few meters	Minor Aquifer
London Clay	Blue or grey clay	~ 10m (?)	Non-Aquifer
Lambeth Group	Blue, grey, yellow and red mottled clay with sand and pebble beds	Up to 20m	Minor Aquifer
Thanet Sand Formation	Greyish Green fine-grained sand	Up to 20m	Minor Aquifer
Chalk	White chalk with flints	> 100 m	Major Aquifer

table 3.1 Geology of the Poplar Riverside Area



HSE consultation zones



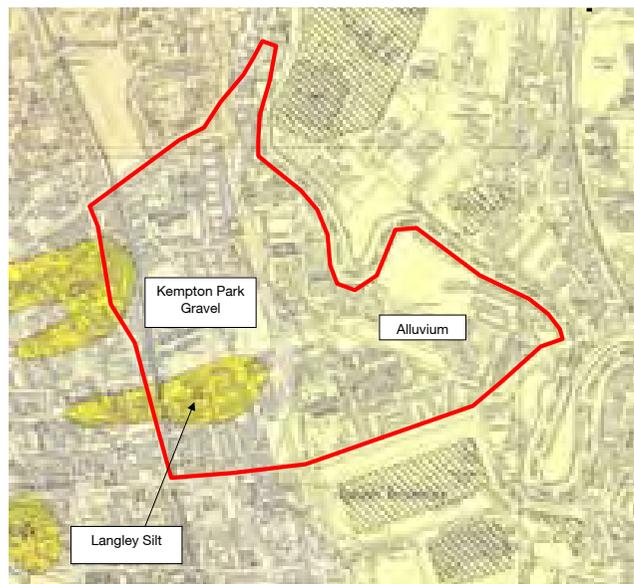


fig. 2 Geological Map- Superficial Deposits

of the site, whilst some pockets of Langley Silt are present in the west. Kempton Park Gravel underlies both types of deposits (Figure 2).

The Geological Survey plan also indicates that large areas of Made Ground are present to the north (gas works) and south (East India Dock) of the site.

Historical maps show that the site was already developed in 1867 and that numerous demolition/construction activities have taken place since. The site is therefore likely to be underlain by some Made Ground. The expected geology underlying the site is summarised in Table 3.1 to the left.

Hydrogeology

The Groundwater Vulnerability Map for the Thames Estuary (Sheet 40) indicates the underlying Kempton Park Gravel is classed as a Minor Aquifer by the Environment Agency. The overlying drift/ Made Ground deposits are considered to have a high potential for leaching contaminants into the underlying aquifer (urban classification). The site is not located within a Source Protection Zone.

Sources (likely associated contaminants)	Receptors	Pathways
Made Ground on site (heavy metals, other inorganic contaminants, polycyclic aromatic hydrocarbons (PAHs), other organic contaminants, ground gases, asbestos)	Site users and visitors, construction workers, occupants of adjacent sites	Dermal contact, accidental ingestion, inhalation of dust, gas accumulation in buildings/enclosed spaces
	Controlled waters (Terrace Gravel Minor Aquifer, Chalk Major Aquifer, River Lea)	Migration via permeable strata
	Plant life	Root uptake
Gas Works on site (heavy metals, fuel hydrocarbons, coal, asbestos – ref. 6)	Site users and visitors, construction workers, occupants of adjacent sites	Dermal contact, accidental ingestion, inhalation of dust

table 4.1 Sources, Receptors and Pathways identified in the present study

The Chalk Major Aquifer underlies the site at a depth of about 50m. There is currently no data available regarding any local abstraction.

Hydrology

The nearest surface water feature is the River Lea, which forms the eastern boundary of the site. It meets the River Thames approximately 850m to the south east. The River Thames is actually present from 550m to the south of the site.

4.7.4 Concluding Comments

Likely Scale of Risk and Liability

General Approach

In the UK, the assessment of risk from contamination follows the source-pathway-target approach. If one of these three elements is absent it is considered that there is no risk of harm. If, however, there is considered to be a linkage between any given source and any given target/receptor then a risk-based approach is used to assess the significance or impact of any such linkage.

Sources (likely associated contaminants)	Receptors	Pathways
	Controlled waters (Terrace Gravel Minor Aquifer, Chalk Major Aquifer, River Lea)	Migration via permeable strata
Railway (heavy metals, fuel oils, polychlorinated biphenyls (PCBs), PAHs, herbicides, ash, sulphate – ref. 7)	Site users and visitors, construction workers, occupants of adjacent sites	Dermal contact, accidental ingestion, inhalation of dust
	Controlled waters (Terrace Gravel Minor Aquifer, Chalk Major Aquifer, River Lea)	Migration via permeable strata
	Plant life	Root uptake
Pre-war site use including saw mills, garages, distilleries with wash pits, factories, timber yards, oil depot, bus depot, wharfs (heavy metals, fuel oils, PCBs, PAHs, herbicides, ash, sulphate, asbestos)	Site users and visitors, construction workers, occupants of adjacent sites	Dermal contact, accidental ingestion, inhalation of dust
	Controlled waters (Terrace Gravel Minor Aquifer, Chalk Major Aquifer, River Lea)	Migration via permeable strata
	Plant life	Root uptake
Post-war site use (unknown associated contaminants)	Site users and visitors, construction workers, occupants of adjacent sites	Dermal contact, accidental ingestion, inhalation of dust
	Controlled waters (Terrace Gravel Minor Aquifer, Chalk Major Aquifer, River Lea)	Migration via permeable strata

table 4.1 cont.

Risks are defined as the probability of an event occurring combined with the severity of the consequence of that event occurring. Particularly, to assess the risk to site end users posed by any given source, the sensitivity of each receptor is considered. For example, the concentration of contamination acceptable at a site to be developed as a residential property with a garden used to grow vegetables and accessible to young children is set lower than that for a commercial site where soil is exposed in minor areas of landscaping and the only long-term users of the site are adults. Similarly, a site overlying a major aquifer supplying potable water to a large population will be considered more stringently than a site overlying an impermeable geology with only minor seepages of groundwater.

Source-Pathway-Receptor Risk Assessment

The likely scale of risk and liability associated with the likely scale of ground contamination at the site has been established following the identification of likely sources, pathways and potential receptors. A summary is included in Table 4.1 on the previous page. However, the preliminary nature of the data describing the sources, pathways and receptors must be taken into account when considering both the identification of those elements as well as any

subsequent comment upon risk and liability.

The potential risks to people will be related to the likely areas of contamination (soils, liquids and gases), which are linked to past and recent site uses. The potential risks will also be related to the presence or absence of pathways. For example, where ground is covered in hardstanding, pathways such as dermal contact and accidental ingestion won't be applicable and although the source may remain, the potential risk for particular pollutant linkages would be mitigated.

The potential risks to the Terrace Gravel Minor Aquifer, the Chalk Major Aquifer and the River Lea will also be related to the likely areas of contamination. The potential risks to the Major Aquifer may be mitigated by the presence of the London Clay, which, if over 10m thick and not penetrated by foundations, will inhibit the downward migration of near surface contaminants.

Related opportunities and constraints

A rigorous contaminated land desk study (to accord with current good practice guidance) will be required for submission during the planning process under PPS23 (ref. 8). The results of the desk study will then inform a Preliminary Risk Assessment.

Redevelopment at the site will have a positive long term impact on the land quality of the area. The local authority and Environment Agency regulators will see it as the best opportunity to clean up contamination.

Government policy included in PPS23 (ref. 8) requires the scope and standard of remediation to be suitable for the proposed land use. This means that more sensitive uses such as parks with children playing areas will require more substantial cleaning up than a car park entirely covered in hardstanding. If groundwater is contaminated, the Environment Agency will normally seek for it to be remediated and will see any proposed development as an opportunity for the betterment of quality of the various controlled waters.

Strategic remedial options

Government policy is encouraging developers to use in-situ remediation methods. With an ever increasing cost of disposal to landfill, on-site treatment is promoted as being both a more environmentally friendly and sustainable option.

It is therefore likely that remedial techniques such as bioremediation and soil washing can play a major role on sites such as Poplar Riverside. Although feasible only for particular contaminant types (e.g.. hydrocarbons), other constraining factors (such as time and space) should not normally prevent the adoption of such techniques at this site.

The need for and scope of further investigations

Further desk based studies will need to be carried out. Such studies would include obtaining and reviewing existing data and reports on historical uses and ground contamination on the various sites within the Poplar Riverside area, as well as ordering relevant BGS boreholes. Enquiries should be made to the local authority and Environment Agency regulators. Other sources of data such as national and local libraries and the internet should be searched.

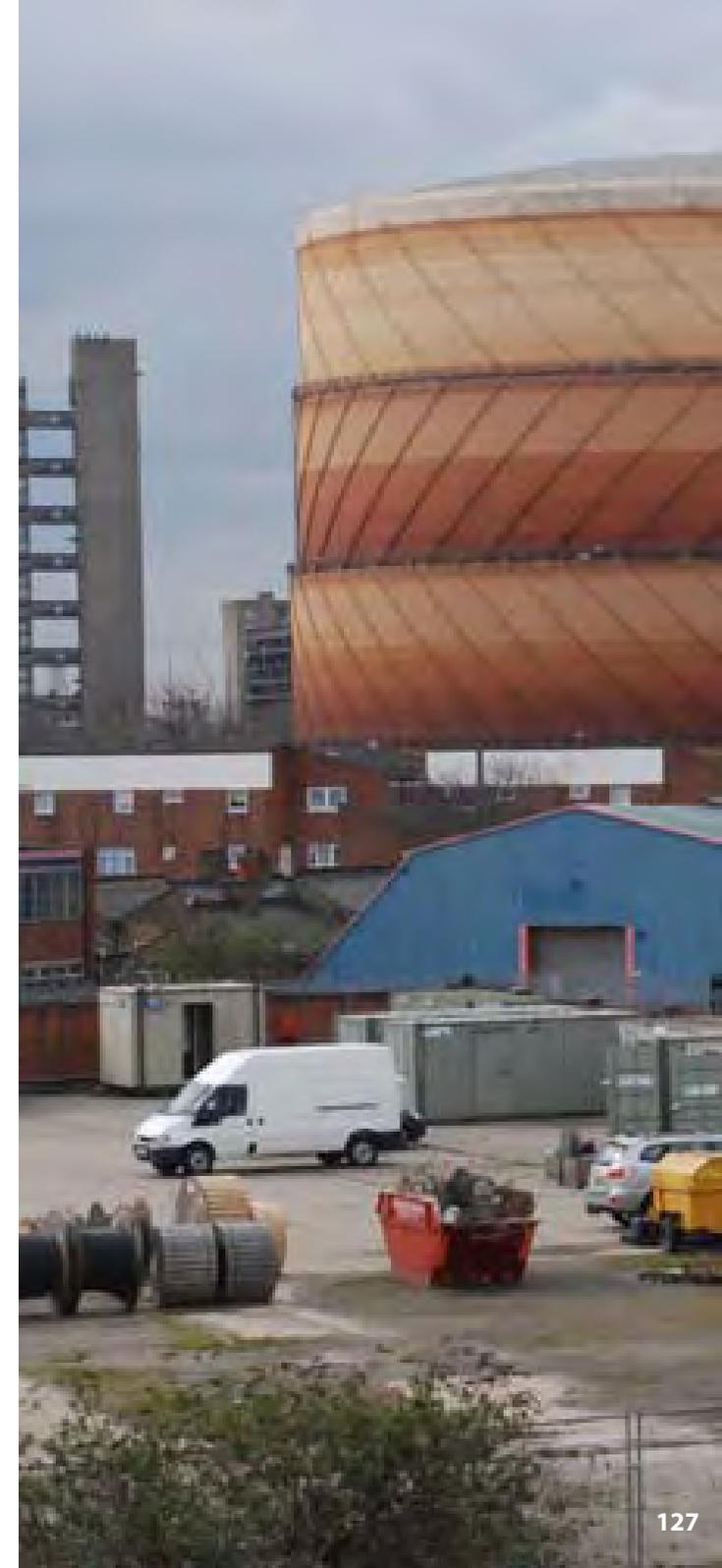
Subsequently, intrusive ground investigations will be required with the objective of defining soil and groundwater conditions. Such an investigation could be carried in conjunction with a geotechnical ground investigation necessary for foundation design etc. Soil samples could be taken from geotechnical exploratory holes and gas and groundwater monitoring standpipes could be installed in geotechnical boreholes. The intrusive investigation for contamination purposes must include in situ and laboratory testing of soils and groundwater across the site. The resulting data will inform an appropriate design for underground structures and generic quantitative risk assessment. The results of the contamination risk assessment will determine the need for and scope of any remedial design measures necessary to ensure safe redevelopment and subsequent occupation of the site.

4.7.5 References

- Environment Agency. 2004. Model Procedures for the Management of Land Contamination –
- Contaminated Land Report 11 (CLR11)
- London County Council Bomb Damage Maps 1939-1945, London Topographical Society, 2005
- British Geological Survey Map of North London, England and Wales Sheet 256, Solid and Drift Editions, 1:50,000, 1994
- British Geological Survey Map Sheet TQ38SE, Solid and Drift Editions, 1:10,000, 2002
- Groundwater Vulnerability Map for the Thames Estuary (Sheet 40), National Rivers Authority, 1996
- Department of the Environment Industry Profile: Gas Works, Coke Works and Other Coal Carbonisation Plants, 1995
- Department of the Environment Industry Profile: Railway Land, 1995
- PPS23: Planning and Pollution Control, 2004

4.7.6 Summary - land quality

- The site has a history of considerable industrial activity
- Three historic landfill sites have been identified within 100m of site
- Five significant pollution incidents occurred in 2005 / 2006
- While Poplar was heavily damaged by wartime bombing the risk of remaining unexploded ordnance is considered low
- There is potentially a high risk of contamination (pollution) incidents arising from future development
- Contamination risk will need to be managed carefully through consideration of sources, receptors and pathways
- A rigorous contaminated land desk study in line with PPS23 will be required
- The government encourages in-situ remediation measures. This will require early planning to ensure development programmes are not compromised.





4.8.1 Executive Summary

This section has been compiled by Buro Happold and indicates the steps to be followed for the entire Poplar Riverside site to ensure that the full impact of site constraints on utilities and sustainability issues are addressed early in any plans for development.

A number of opportunities are proposed for consideration that are likely to bring enhanced benefits for the site if they are addressed on a site-wide basis rather than plot by plot or building by building.

A number of studies are proposed for the entire site that would bring substantial benefits to the London Thames Gateway Development Corporation and for Tower Hamlets if they are undertaken before masterplans for individual plots are commissioned.

4.8.2 Introduction

London Thames Gateway Development Corporation commissioned Buro Happold to prepare a Delivery and Implementation Strategy for Poplar Riverside. This report deals with the issues associated with utilities and related infrastructure, and sustainability.

Study Aim and Objectives

The report considers the major existing infrastructure and comments on the constraints they may impose on development of the sites. It also considers the likely impact on the site of national, regional (GLA) and local (London Borough of Tower Hamlets) sustainability policies.

The report contains some guidance on the recommended approaches to delivering strategies related to the various infrastructure issues for the site, in particular:

Approaches to, and benefits to be gained from a centralised utilities strategy embracing on- and off-site

issues related to:

- Water (cross referenced to the Water and Drainage Strategy)
- Gas
- Telecoms.
- Electricity (cross referenced with Energy Strategy)
- Sewerage (Surface and Foul – cross referenced to the Water and Drainage Strategy)
- The approach to implementing, and the benefits to be gained from an integrated waste strategy, including the underground vacuum driven waste collection (e.g. ENVAC), and local industries linked to reclamation and recycling.
- The nature of, and benefits of an integrated security strategy for the site
- The nature of, and benefits of a semi-regional logistics strategy for collection and deliveries of goods requiring the use of heavy goods vehicles

The work on Utilities and Related Infrastructure has excluded the following:

- A survey of existing utilities
 - Assessment of capacity for any of the utilities
 - Discussions with utilities providers
 - Assessment of likely future loads on any of the utilities
 - Strategies for on-site or off-site reinforcement of utilities
- The section on Sustainability considers the implications for the wider site regarding:
- Water and drainage
 - Energy
 - CHP, district heating and use of renewable energy sources
 - Materials, including demolition and reclamation.

Information Sources

The principal sources of information for this report include:

- Documents provided by the project team
- National, regional and local planning policies addressing sustainability
- Several reports undertaken by Buro Happold for other projects in the Lea Valley region.

4.8 Engineering Strategy - Utilities, Related Infrastructure & Sustainability

The Site

Details of the site are given in Buro Happold's Preliminary Land Quality Study.

Limits of the Report

This report aims only to provide guidance on the key steps to be taken. Further detailed analysis will be required regarding many issues raised in the report.

In particular, this work excludes the following:

- survey of existing utilities
- assessment of capacity for any of the utilities
- discussions with utilities providers
- assessment of likely future loads on any of the utilities
- strategies for on-site or off-site reinforcement of utilities.

4.8.3 Utilities and Related Infrastructure

Constraints

A preliminary utility infrastructure assessment of the site has been undertaken to identify the existing surrounding and on-site utilities infrastructure, the constraints this infrastructure may impose upon future development, and any possible corresponding development opportunities.

Information has been drawn from the available reports provided, and it is recognised without undertaking a desktop utilities search, information could be superseded or not identified. The following key items of infrastructure and associated constraints have been identified related to the relevant Statutory Undertakers:

- Electricity – EDF Energy
 - Gas – National Grid
 - Drainage and water – Thames Water
 - Telecommunications – Various
- (see tables on the following pages)

The National Grid is responsible both for gas holders and the mains routes through the site.

Thames water is responsible for:

- Foul and surface water
- Sewerage treatment, and
- Mains (potable) water Opportunities

For a great many strategies relating to utilities and related infrastructure, there is great benefit (greater efficiency) to be achieved if a long term coordinated strategy is prepared for as large an area of development as possible. This will genially lead to greater flexibility and more effective use of resources, money and land than if the benefits are sought on individual development plots or in individual buildings.

A number of potential opportunities for the site is listed below:

- To release further development space by testing the viability of decommissioning the on-site gasholders. If deemed feasible, the associated decommissioning timeframe will drive the development delivery programme.
- Alternatively, if it is deemed unviable to decommission the adjacent gas holders, they could be used to drive the site-wide energy strategy and implement site-wide district combined heat and power (CHP).
- It is likely that site-wide CHP plant and networks will be viable, and this may be most effective if needs of the entire Poplar Riverside site are considered, not individual plots. CHP is best suited to, and most likely to be commercially viable for mixed-use developments, where a reasonably consistent base energy load is required throughout a daily period. It is less viable where energy spikes/peaks occur, for example the morning and evening peaks for a solely residential development.
- To minimise risks associated with the energy strategy and its delivery for the site, and to reduce reliance upon energy provision by statutory undertakers, it would be worthwhile exploring the opportunity to implement private wire energy via the ESCO(S) mechanism. The



Infrastructure Item	Associated Constraint
National Grid Substations	West Ham substation located across the River Lea to the east of the development site is part of the National Grid 400kv super-grid. The substation grounds 400kV power lines and transforms to 132kv so it is expected 400kV and 132kV overhead power lines are located in close vicinity to the site.
Overhead power line (location estimated/ voltage unknown)	High Voltage Cable 132kV - 30m Easement (15m each side of Centre line of cables). This value is subject to change depending on cable spec (e.g. swing & sag).
Underground power lines	<p>From information contained within the Ailsa Street Development Brief, there is one known identified extra high voltage route on the site. This line is part of the primary distribution cable network on route 316 and it carries 22kV to 132kV. The line enters the site from the east over a cable bridge, follows Ailsa Street to Lochnagar Street and then crosses over the A12. Cover on EHV cables is normally 750mm in the carriageway and 600mm in the footway.</p> <p>There are high voltage lines routing down the A12 adjacent to the site. There are no identified high voltage routes on the Ailsa Street site.</p> <p>Underground cable easements:</p> <p>11kV - 2m min, 3m preferred (1.5m each side of cable) 33kV - 3m min, 5 m preferred (2.5m each side of cable) 132kV - 10m min, 15m preferred (7.5m each side of cable)</p>
EDF Substations (location known/ size unknown)	<p>There are three substations that have been identified on-site at the junction of Bromley Hall Road/Ailsa Street and in the BlackWall Trading Estate adjacent to Oban House and adjacent to the Gas Holders on Leven Road.</p> <p>Sub station easements - these are very specific and are decided on an individual basis. They must be assessed by the EDF safety team. "Low rise" developments are better located near sub stations and any structures that have the potential to fall on/near the s/s would not be allowed to be built. Access space to both the s/s and neighbouring building/structure should be considered.</p> <p>It is assumed that additional on-plot sub-stations are to be found located within existing buildings on the site.</p>

table- EDF energy

Infrastructure Item	Associated Constraint
Gas Holder (note a definitive guide to PADHI regulations can be found on HSE website)	<p>The PADHI regulations govern development in the vicinity of hazardous gas installations and will therefore significantly impact upon development if the gas holders remain in-situ. PADHI guidance restricts certain forms of development within three concentric zones around the centre of the Gas Holder and addresses risk in terms of the level of exposures to the public (distance are measured from the centre of the holder)</p> <p><u>Zone 1 Inner, 81 metres</u></p> <ul style="list-style-type: none"> No residential dwellings Office/industrial development less than 3 storeys and no more than 100 employees in total Restaurants, Cafes, Shops libraries etc where total floor space is from 250m2 to 5000m2 no allowed in inner zone <p><u>Zone 2 Middle, 161 metres</u></p> <ul style="list-style-type: none"> Maximum 30 dwellings <p><u>Zone 3 outer, 226 metres</u></p> <ul style="list-style-type: none"> No hospitals, large public spaces etc
Gas Routes	<p>From information contained within the Ailsa Street Development Brief:</p> <p>The existing low pressure main that runs along the southern side of Lochnagar Street enters the site from the east over a cable bridge and then crosses over the A12. The main then follows the eastern side of Bromley Hall Road, then turning down Leven Road on the northern side of the street. It follows the northern, then western side of Leven Road until it reaches the end of the Hays Montrose Storage Depot where it crosses the street to the southern side. This polyethylene main varies between 90mm and 100mm in diameter.</p> <ul style="list-style-type: none"> A much larger low pressure main runs north to south along the western side of the A12. This main at the southern end of the site is 24 inches diameter changing to 14 inches diameter towards the north of the site.

table- Gas National Grid

Infrastructure Item	Associated Constraint
Foul/Surface water	<p>Thames Water is responsible for public drainage in the area.</p> <p>From information contained within the Ailsa Street Development Brief:</p> <p>A combined foul/surface line runs up the western side of the A12 (south to north).</p> <p>A combined line enters the Ailsa site from the front of the fire station. The line routes south to the west of the electricity substation, south along the eastern side of Bromley Hall Road into the Abbots Road Estate. The direction of flow on this line is south to north.</p> <p>A 305mm diameter combined line runs from the eastern end of Ailsa Street to its westernmost end, meeting the 305mm-diameter line that routes from the eastern end of Lochnagar Street to the western side of the A12.</p> <p>A 229mm diameter combined line runs from a manhole in the centre of Leven Road routing west then south down Leven Road.</p> <p>There are a number of private combined connections off all of the lines.</p> <p>There is a private surface water line that runs from 48 Blackwall Tunnel Northern Approach Road (the A12) into a private combined line which finishes short of any of the combined lines in A12.</p> <p>There is a network of private combined 229mm diameter lines that route down</p>
Sewerage Treatment	<p>Information extracted from the Bromley-by-Bow Land Use and Urban Design Brief (Feb 2008) suggests a sewer of recent concrete construction and located at -7m AOD and possibly a Victorian Constructed Sewer at between -2.5m and 3.5m AOD heads due south along the eastern edge of the A12. If the sewers continue south from the Bromley by Bow site and are adjacent to the site a vertical exclusion zone of 3m above the sewer crowns and a horizontal exclusion zone of 6m from the outside tunnel wall is likely to be required by Thames Water. Where possible building footprints should not extend over these sewers and street and open spaces should relate to the sewer alignments.</p> <p>From work undertaken on the Olympic Park it is understood the majority of sewers within the area head to the Beckton Treatment Plant. This plant is at near capacity accommodating combined storm water and foul water. The Olympic Park has separated foul and storm water so as not to increase the sewer flows to Beckton. Storm water will flow in to the local water courses. It is likely a similar strategy would be adopted for this development site and it is possible an on-site Sewerage Treatment Plan maybe required to treat effluent generated by the development.</p>
Mains (Potable) Water	<p>From information contained within the Ailsa Street Development Brief, two water mains route north/south along the western side of the A12. These are 16-15 inches and 6 inches in diameter respectively.</p> <p>At Bromley Hall Manor there are two 3-inch mains running into the property with undefined ends, one is a dedicated fire main the other a metered water supply main.</p> <p>Two 4-inch mains buried at a depth of 200mm route off the A12 main into the Ailsa site along Lochnagar Street down the centre of the street and along the southern side. The centre main routes into Ailsa Street generally following the centre line. There is a fire main and a water supply main routing into Ailsa Wharf. The adjacent Islay Wharf has a fire hydrant and washout. The Ailsa Street main then rejoins the lines in Lochnagar Street.</p> <p>A 4-inch main runs south down Bromley Hall Road into the Abbots Road estate. A 6-inch main routes up out of the Estate further to the west onto Leven Road running along the southern side of the street and then following Leven Road to the south. This main is 6-inches diameter changing to 4-inches diameter down Leven Road.</p>

table- Drainage and water - Thames Water

Infrastructure Item	Associated Constraint
Various providers	<p>From Ailsa Street Development Brief:</p> <ul style="list-style-type: none"> There is a BT utility box on the line on the northern side of the east-west section of Leven Road, which has a connection to a line crossing Leven Road heading into the Abbots Road Estate. It is understood to the south of the site London Docklands possesses one of the most advanced Information Communications and Technology infrastructure (ICT) in Europe. Opportunities to extend this technology infrastructure further north and create a technology and media corridor stretching from Hackney Wick to the Thames along the Lower Lea Valley. The sites are well placed to benefit from the existing and planned investment in ICT.

table- Telecommunications

regulatory limit of energy provision via a single ESCO is currently capped at 1MWe. ESCO(S) could deliver the energy and the infrastructure needed to provide it through private finance.

- With regard to on-site provision of alternative energy and associated utilities infrastructure, the River Lea will be used for delivery of biomass to the Olympic Park. There may be an opportunity to tap into this energy source with some minor wharf usage for the development.

- Waste is potentially a good source of energy and with recent improvements in the waste-energy products sector, the use of excess sludge from an on-site sewerage treatment plant, in addition to organic waste, could make a modular anaerobic digester a viable option. An anaerobic digester typically requires a critical mass somewhere in the order of 5,000 tonnes per year of organic waste/sludge to make it viable and so the large the size of the development, the more likely it is to be viable. This could potentially provide up to about 10% of the on-site energy requirement.

- A de-centralised on-site sewerage treatment plant could be provided to alleviate the pressure on Beckton Sewerage Treatment Plant and, in addition, provide a key element in an on-site water recycling strategy. Again, the excess sludge could be used to feed a waste-to-energy facility. Systems such as a Decentralised Wastewater Treatment Systems (DEWATS) and Membrane Bio Reactors (MBR) could be used as technologies for an on-site sewerage treatment plant.

- The site is well placed to benefit from the existing and planned investment in Information Communications Technology.

- Where possible, best practice would be to align roads/pedestrian footpaths/verges/green areas to suit existing utility alignments avoid unnecessary diversions. In addition it would be sensible to earmark land for a strategic utilities corridor(s) on-site.

- Strategic authorities, such as the GLA are currently

focusing on ‘future proofing’ developments, which essentially translates into ensuring the pipes and wires networks are adaptable/capable of accommodating technology changes in energy provision and distribution. For example, if CHP was adopted, the utilities corridor and pipe network should be flexible enough to accommodate increasing energy demand when future phased developments come on-line, or if the energy source changes to take advantage of forthcoming sustainable sources of energy.

- The phasing and sequencing of development will have a large influence on the utilities strategy. For example, the split between a conventional ‘plug into grid’ approach and less conventional on-site energy approach (i.e. CHP etc) will progressively change as more development parcels are completed, and the site wide energy/water strategy is implemented.

- The utilities/energy/water/waste strategies all tie in closely and it is important as early as possible in the process to determine the spatial requirements on-site for utilities plant/infrastructure and earmark this land within the development parcels.

Development Strategy

Listed in table 3.1 are the main studies that would be beneficial to accelerate and ease the delivery process for individual sites in our study area.

Significant benefits to the client in all cases will be to help prevent developers from overestimating the risk involved in development arising from the lack of information available, and to avoid duplicating efforts to mitigate these risks. These alone could save several million pounds.

Survey/study	Content	Indicative cost £'000	Benefits to LTGDC
Site Investigation	Desktop study – surveys and assessment of geotechnical issues and contamination (including drawings from Groundwise or similar)	8-10	Would identify aspects of the site and its history that may have impact on potential development
Site Investigation	Lidar topographical survey of site (with surrounding buffer zone where practical) + elements of the neighbouring highway, bridges etc.	30 – 50	Extremely valuable in assessing excavation and construction works, site levels, links to roads etc in adjacent sites
Detailed Statutory Authorities search	Detailed search of all existing information regarding underground services and utilities	15-20	Would identify existing capacity of utilities and enable assessment of on and off-site reinforcement and impact on potential development
Site-wide infrastructure strategy	Outline site-wide strategy for provision of energy, drainage, water, etc	300-350	Will help identify likely opportunities for site wide schemes for energy generation and distribution that would be impossible at smaller scale
Site Investigation	Second stage work – full underground services survey & producing information in digital form	100 – 200	Would enable strategic planning for major interventions such as area-wide CHP, district heating / cooling, SUDS & stormwater attenuation

table 3.1 Recommended infrastructure studies prior to detailed masterplanning

4.8.4 Sustainability

Overview

The development of the entire (wider) site, the areas that will be the subject of individual masterplans, and the development of individual buildings will be subject to the sustainability policies of Tower Hamlets and the Great London Authority.

For present purposes, it will be satisfactory to address only the GLA policies relating to sustainability as they largely embrace those for Tower Hamlets. In particular, the key policies are:

- The London Plan (consolidated with Alterations since 2004) (February 2008)
- The SPG on Sustainable Design and Construction (GLA, 2006)

Constraints

Development in the wider study area will be subject to a number of constraints with regard to issues addressed in sustainability policy documents. These are of four kinds:

- The legacy of existing buildings that may be demolished or require upgrading to achieve higher performance.
- The land or floor area that will need to be provided for plant and equipment related to high

sustainability performance such as on-site CHP plant, storage of separated waste in buildings.

- The costs associated with meeting requirements of sustainability policies, such as plant and equipment for energy generation, infrastructure for district heating, high-performance buildings (e.g. BREEAM Excellent or Code for Sustainable Homes 4- or even 6-star).
- The greater need for careful project planning to ensure that sufficient lead-time is included to arrange for procurement and provision of site-wide facilities and equipment that are well integrated with the availability of sites for development and the phasing of construction and delivery.

Materials

Development of all sites within the wider study area will lead to considerable demolition arisings. A narrow view of this situation is that high costs will be incurred in consigning these materials to landfill sites.

A more enlightened approach will be to assess opportunities for avoiding sending materials to landfill by reclaiming and reusing materials, either on site or in the immediate vicinity. Such opportunities are discussed in the section on Opportunities, below. Opportunities related to excavated materials, which may be contaminated, are addressed in the Preliminary Land Quality Report.

Energy

- A proportion of the energy for each development will

need to be generated from renewable sources.

The aspiration of the 2008 London Plan is 20% of annual energy. It is likely that the most realistic means of achieving this will be to use boilers / CHP plant fuelled by biomass. The River Lea would provide a suitable means of delivering this fuel without significant impact on road traffic.

- Although not a policy requirement, per se, there is likely to be strong pressure to install a CHP plant on each masterplan site.
- Although not a policy requirement, per se, there is likely to be strong pressure to provide district heating, preferably heated using CHP plant.
- With Effect from 6 April 2008, where a building is to be sold or rented out the seller or landlord respectively is required to provide the buyer or prospective tenant with a valid energy performance certificate (EPC). This applies to new dwellings or dwellings created by conversion and to all other buildings with a floor area greater than 10,000m².
- Meeting these energy-related requirements will have a significant impact on the entire site, and the individual areas with it regarding the following, inter alia:
 - The area of the site needed for energy generation (both renewable and non-renewable) and related infrastructure
 - Provision of networks for district heating



Water and drainage

The London Plan requires that all large developments will require a Water Strategy to be prepared. This will need to embrace:

- Demand reduction measures
- Use of reclaimed water (grey water recycling)
- Use of alternative water sources (boreholes, rainwater, etc)

Although not a policy requirement, per se, there is likely to be pressure to incorporate the collection of rainwater for reuse, for non-potable purposes such as irrigation or toilet flushing.

There will be a requirement for Sustainable Urban Drainage Strategies to be implemented on all sites.

For further details of these requirements are to be found in the London Plan and London's Water Strategy "Water Matters" and the Supplementary planning guidance on Sustainable Design and Construction.

Building performance

In the area of the study there is currently no requirement for buildings to achieve a minimum performance using either BREEAM or the Code for Sustainable Homes. This situation is very likely to change during the period when the various sites are developed.

It is currently the target of the UK national government for all new residential buildings to achieve a 6-star rating under the Code for Sustainable Homes if they are

completed in 2016 or later. This will have a significant influence on building costs, for instance due to the space taken by plant and equipment needed to achieve 6-star performance.

Operational Waste

A number of waste collection and treatment facilities are in operation in the wider study area. If these are retained in their current locations and using current technologies and operational procedures, it is likely that they will not be able to meet the demands of the area when fully developed in several possible ways:

- They will be in unsuitable locations
- They will have insufficient capacity
- They will include facilities and technologies that will compromise the recycling and recovery targets that the London Borough Tower Hamlets is required to meet in the future.

Opportunities

The majority of the constraints mentioned above can be more effectively addressed when as large an area as possible is considered, since opportunities for overcoming them are more limited when a small site or an individual building are considered in isolation. For this reason a number of opportunities present themselves when considering the entire study area which could only be delivered if a number of wide-reaching strategies is put into place that could be delivered as individual sites are developed.

Materials

The environmentally responsible treatment of demolition arisings can be ensured by requiring that demolition is carefully planned to enable buildings to be dismantled or demolished carefully to maximise the reclamation of components and materials for reuse. This is best achieved by undertaking pre-demolition audits and requirement that demolition is undertaken in accordance with the Institution of Civil Engineers Demolition Protocol which requires setting targets both for reclamation of demolition arisings and for reuse of reclaimed materials on site.

It is recommended that a site-wide audit of existing buildings is undertaken to identify the following:

- Existing buildings that could easily be renovated or adapted for reuse (thus avoiding demolition)
- Buildings well suited to dismantling and subsequent reuse of major components (for example steel frame sheds).
- Buildings incorporating components and materials able to be reclaimed and reused, including structural timber, timber flooring, windows and doors, sanitary ware, roofing slates/tiles, some brickwork, etc.
- Likely locations / sources of hazardous materials such as asbestos, thereby reducing the risk of unpredicted costs being incurred.

Industrial sites along Lanrick Road



Given the long timescale of development for the entire site, it would be practical to set aside a temporary area that could be used to store materials for reclamation and reuse.

Energy

The main opportunities concerning energy are dealt with in the utilities section, above.

Water and drainage

The harvesting of rainwater on a large scale can provide water for non-potable uses such as irrigation or toilet flushing.

Pressure on the local sewage network could be relieved by provision of on-site treatment of foul (black) water for local non-potable uses such as irrigation and toilet flushing.

Building performance

It will be of great benefit to developers of individual sites for the required level of building performance to be agreed early in the development plans for the wider area (e.g. Area Action Plans). These need to be agreed with careful regard to the various site-wide initiatives suggested elsewhere in this document since there are occasions where greater environmental benefits for the area can be achieved by implementing site wide strategies rather than dealing with buildings individually (e.g. reclamation of water).

Operational Waste

There will probably be benefits to be gained from rationalising the areas of the wider state devoted to waste collection and treatment, both to reduce the total land-take, manage and rationalise traffic movements, and achieve the benefits of size that will facilitate schemes for

- bio-digestion
- waste-to-energy
- materials reclamation
- manufacture of products made from recycled materials

All these activities – sometimes collected together in an “Eco-Park” can generate employment.

Delivering Sustainability

Most of the sustainability measures referred to above are, generally speaking, easier and more economical to provide if they are implemented at site-wide level rather than for each individual building. Indeed many features (e.g. district heating) can only be provided at site-wide level.

At the macro scale, there are also opportunities for different “sustainable technologies” to support one another. For example, an energy-from-waste scheme can provide useful heat and power by using residual operational waste as a “renewable” fuel, and thus substantially reducing the waste sent to landfill.

For these reasons, it will benefit the site as a whole (from the Local Authority’s point of view) to undertake a number of site wide studies that will identify the opportunities for such beneficial strategies, and generally reduce the risk to developers of individual plots of land. Provisionally, the following studies should be considered as shown in the table to the right:

4.9.5 References

- PPS1
- The London Plan (consolidated with Alterations since 2004) (February 2008)
- The SPG on Sustainable Design and Construction (GLA, 2006)
- Green light to clean Power (2006)
- Water Matters (2007)

Survey/study	Content	Indicative cost £'000	Benefits to TGDC
Aerial photos	Taken from a microlite	1 – 2	Invaluable to any team to understand the site. More useful than Google Earth images
Existing buildings survey	Surveys of existing buildings to identify listed buildings, asbestos dangers and potential demolition arisings	50-100	Will help identify potential risks, constraints on development and opportunities for reclaiming / recycling materials
Detailed Statutory Authorities search	Detailed search of all existing information regarding underground services and utilities	15-20	Will verify existing capacity and its impact on potential development
Site-wide infrastructure strategy	Outline / strategic site-wide strategy for provision of energy, drainage, water, etc	300-350	Will help identify likely opportunities for site wide schemes for energy generation and distribution that would be impossible at smaller scale
Waste facilities	Desktop study identifying all the in the waste facilities in the area	10-15	Will identify opportunities for major waste initiatives including consolidation of facilities, major recycling facilities, underground vacuum waste collection plant, etc

4.8.6 Summary -utilities

- Constraints from electricity and gas utilities are considered “normal”
- Early detailed studies should be undertaken to establish from statutory authorities the locations of all underground services. If done prior to developer involvement, this could reduce the developer’s risk substantially
- Any proposals regarding changes to utilities will have significant impact on development programmes
- This is especially so for the existing gas holders whose removal would involve protracted negotiations. An early study is recommended
- In the meantime, development around the gasholders will be significantly constrained
- Early studies of potential opportunities for ESCOs is recommended in order to drive the energy strategy
- The River Lea is already to be used to deliver biomass to the Olympic Park. A riverside energy / CHP installation could exploit the same accessibility.

4.8.6 Summary - sustainability

Energy

- The requirement to provide renewable energy and CHP on site will require a (small but) significant area of the site
- Provision of CHP and district heating (and maybe cooling) will require the early provision of networks

Water

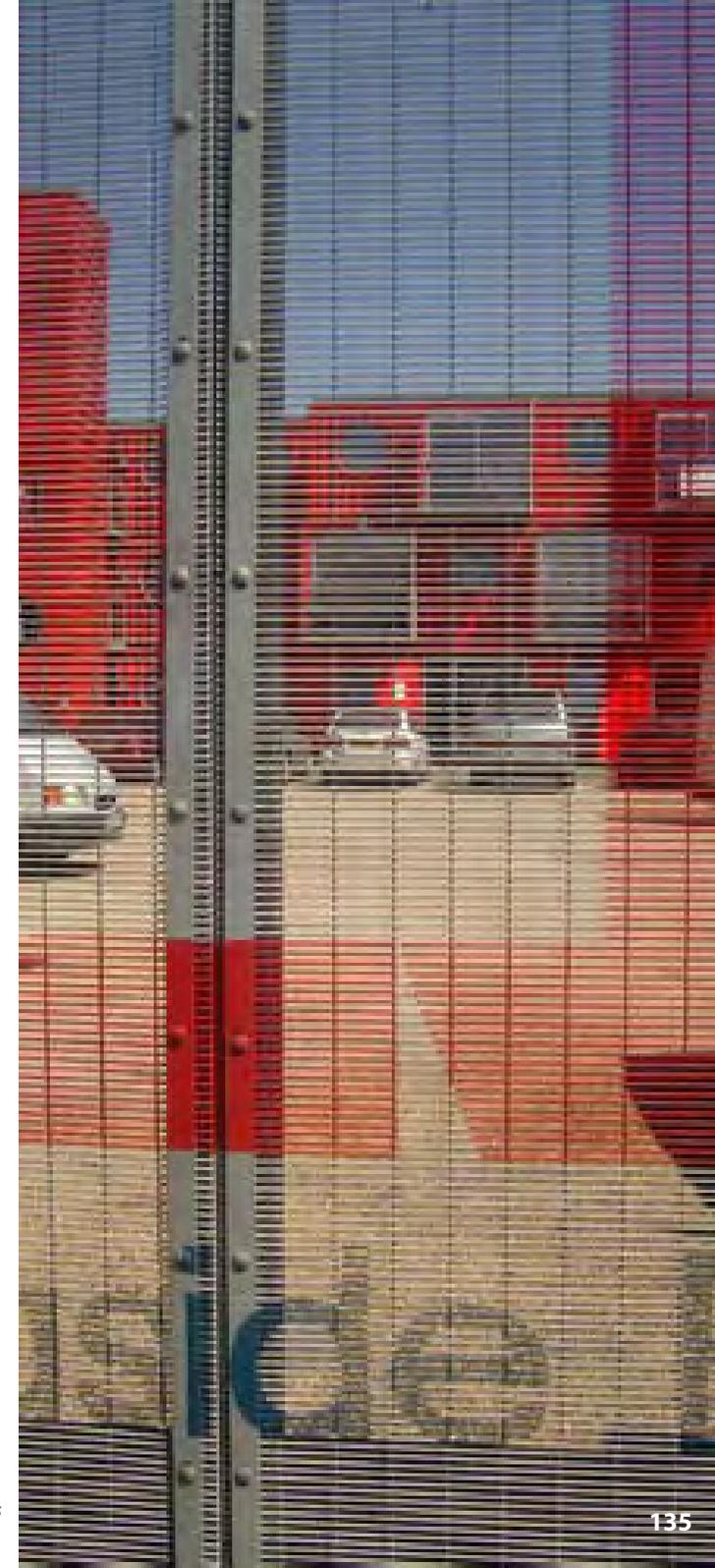
- It is very likely that rainwater harvesting (and reuse) and likely that grey water recycling will be required. A site-wide approach is more efficient than building by building.

Buildings

- Currently no requirement for BREEAM or CSH targets, but this situation is very likely to change (at least BREEAM Very Good and CSH 4*)

Waste

- There are opportunities for waste-related industries to be established and for provision of underground vacuum collection.
- Enhanced efficiency:
- The engineering of the site can be made significantly more efficient /effective (more sustainable) through the development of integrated strategies for water, energy, waste etc.
- This can only be achieved by undertaken a number of site wide studies as early as possible
- Examples include:
- Desk studies of ground conditions and utilities
- Integrated strategy for flood risk and drainage
- Development of strategic and integrated approach to energy, water and waste





4.9.1 Area Overview

In property terms, the London Borough of Tower Hamlets is undertaking a transformation from one of the more deprived boroughs in London to one holding some of the largest regeneration projects in the country.

Canary Wharf, the Royal Docks and Stratford City have set precedents for large scale mixed use schemes involving various land owners and public sector interventions.

Added to these, the London 2012 Olympics zone is slightly north of the borough and it is expected that the Legacy impacts will filter throughout the borough south along the green grid into Poplar itself.

This Delivery and Implementation Strategy Masterplan therefore seeks to build on these precedents and opportunities by setting out proposals for widespread socio-economic and physical changes throughout the area.

4.9.2 Ownerships

Poplar Riverside is made up of many sites in multiple ownerships. National Grid Limited and Poplar HARCA are two of the major landowners and others include Transport for London, London Borough of Tower Hamlets and Leaside Regeneration Limited. There are many other private owners as well.

Land ownership is one of the keys to unlocking the development potential of the area. LTGDC will work with stakeholders and development partners to assemble sites where possible, with the aim of comprehensive development always in mind.

Some sites may come forward sooner than others, and the role of the DIS is to act as an overarching strategy for

Tweed House



- Barratt Estate*
- T. Welley and R. Fox*
- Leaside Regeneration*
- David Deal*
- London Borough of Tower Hamlets*
- WC Shade & Sons*
- Poplar HARCA*
- Marks*
- Rumbol*
- Glassex Ltd*
- Iron Mountain*
- Chiltern Transport (Bow) Limited*
- Team Ltd*
- National Grid Gas Ltd*
- Blackwall trading estate*
- Business Serve Limited*
- Transport for London*
- tbc*

Existing land ownership plan

development of the whole area over a period of years.

4.9.3 Existing and Potential Development Uses

Poplar is a typical part of East London in many ways, in its mix of high density housing across all tenure types, combined with low grade industrial and commercial stock, and pockets of local retail uses.

Residential

The existing housing stock is dominated by the Poplar HARCA (Housing and Regeneration Community Association) property holdings, which comprise around 8,490 mixed tenure affordable housing units covering the Aberfeldy, Bow Bridge, Coventry Cross, Burdett, Devons, Lansbury, Lansbury West, Leopold, Lincoln and Teviot estates.

HARCA has produced its vision for Poplar [‘Reshaping Poplar 2007’] and the LTGDC will seek to work with HARCA as well as private sector partners in order to bring forward the regeneration of the area.

In terms of private housing stock, owner-occupation is generally lower in Tower Hamlets than many other London Boroughs, Poplar includes a significant proportion of privately rented properties.

Many of these units are poorly managed and contribute to the run down look of the area. An increase in private units, both rented and owner-occupied, with well managed private and shared spaces will add to an improved look and feel in the area.

Until recently, the housing market in this area of East London has been extremely buoyant.

Recent schemes to come forward in the area include:

- 82 units at Caspian Wharf, 55 Violet Road, E3
- 181 units at Merchants Quarter, British Street Estate, Bow Road, E3

- 425 units at Elektron, Aspen Way, E14

LTGDC, along with LBTH and Design for London is keen to promote high quality, design led schemes such as these, which fit into the aims and objectives of this DIS.

The key objectives for new housing, both private and affordable, are for well designed, sustainable properties that are able to enhance the sense of community in the area that are delivered: Housing should normally be brought forward as part of mixed use schemes providing commercial and community uses.

The provision of other residential uses, such as care homes and student accommodation will be considered on their merits according to demographic and market needs.

Commercial

Although surrounded by areas of thriving commerce, commercial activity is generally low in Poplar. Canary Wharf dominates the office and retail markets in the area, and larger scale industrial uses are centred in various industrial estates nearby, the closest being Cody Road.

Commercial space in Poplar therefore tends to be smaller workshop, office and industrial units which are scattered across the area, including at Core Area 1, Core Area 2 at Ailsa Street and Core Area 5 where the A12 intersects with the River Lea.

Units tend to be owner-occupied by businesses who have operated in the area for some time. Some of the commercial areas work well, with others being more run down and in need of investment.

The Leaside Business Centre on Core Area 2, which is owned and operated by Leaside Regeneration, is fully tenanted and demonstrates that there is demand for higher density, better quality employment uses in this area of the Lower Lea Valley. There may also be potential to build upon the existing creative/cultural industries cluster at Three Mills by developing suitable employment space at



Ailsa Street.

Poplar Library, Bromley Hall, Bow Business Centre and Poplar Business Park are also good examples of successful commercial developments in the area and the type of commercial spaces that the LTGDC will encourage the provision of through this DIS.

Retail Market

There are currently limited retail facilities within Poplar Riverside. Most of the existing estates have a small retail centre, which often comprise convenience goods stores, post offices, bookmakers and the like.

The main retail centre is at Chrisp Street, which as a local centre operates well, but is ill equipped to cater for a significant intensification of residential and commercial uses across the area. New retail space will be encouraged throughout the Poplar Riverside area but should not detract from Chrisp Street's importance as a local centre.

The provision of new commercial retail facilities within the area is likely therefore to be of relatively small scale and designed to meet the demands of its immediate vicinity, or passing trade on the busier road routes.

Types of retail that will be encouraged where appropriate include:

- Convenience retail
- Small 'local' supermarkets
- Trade counter, small retail warehousing (eg showrooms)

Retail provision will be expected to match the changing demographics of the area as redevelopment progresses.

Leisure

There are currently very few leisure facilities within Poplar Riverside. Leisure facilities are scattered around, but mostly provided in Canary Wharf and, in the future,

Stratford City.

The area will need more leisure facilities, above and beyond community ones and the provision of these will need to be commensurate with the increasing and changing population.

Bar and restaurant facilities would fit in well with the wider masterplan, and these be encouraged where appropriate. These, like retail, will potentially be underpinned by trade principally being generated from within the Poplar area, but given links to Canning Town, certain facilities may become destinations.

Hotels will also be encouraged in the appropriate locations, and in this respect Poplar may be able to benefit from the success of Canary Wharf and the Royal Docks.

Other leisure uses such as sport and the arts will be encouraged wherever possible. The restoration of some historic buildings may be put to good use in this respect.

4.9.4 Delivery and Implementation of the Strategy

The LTGDC is committed to the delivery of new development throughout the Thames Gateway and Poplar is an area identified to bring forward much needed housing. Poplar already has an identity and community and it is important that new development is sympathetic to this and builds on the good qualities of the area.

Linkages to the past and present of Poplar will be encouraged, and new development must also look forward to the demands and needs of people living today.

The core property aims and drivers for development of the DIS are:

- Housing
- Employment Space
- Public Service and Community Provision

- Sustainability of Development and Communities
- Transport & Connectivity Improvements

LTGDC wishes to work with the private sector to deliver the DIS and will consider flexible ways of working in partnership.

LTGDC will:

- Work with public and private sector partners, including HARCA and LBTH as planning authority to realise Poplar's development potential
- Seek to recycle Section 106 contributions into the area to ensure the provision of important community and educational facilities
- Consider the prospects for cross subsidy of sites and infrastructure improvements
- Implement the use of its Compulsory Purchase powers where necessary and appropriate
- Ensure through procurement of partners that Best Value is ensured

Each Core Area section sets out the type and form of development being promoted by this strategy and sets out recommendations for infrastructure and pre-construction works, suggestions for timing and phasing, the potential to retain existing buildings and uses, the requirement for flood risk mitigation and sustainability measures and the overall issues and opportunities for development.

4.9.5 The Core Areas

- Cross subsidy
- Other funding sources
- Delivery mechanisms – JVs
- CPOs
- SPGs/planning strategy and permissions
- Working with UDC – devt agreements on projects with intervention, overages/profit shares – land purchase

arrangements etc

- Procurement/ojeu/developer selection – marketing strategies, partnership working
- Key opportunities:
- Iron mountain
- Leven road
- Landmark bldgs
- Leisure facilities
- RSLs – affordable delivery
- Udc delivery targets – resi and commercial
- Industrial use retention – link to past
- Quasi resi uses – care homes, students, (offices?)
- Phasing
- Decant and relocation

Potential for development

(General overview of timing and phasing, implications of deliverability methods)





5.0 Delivery of Links

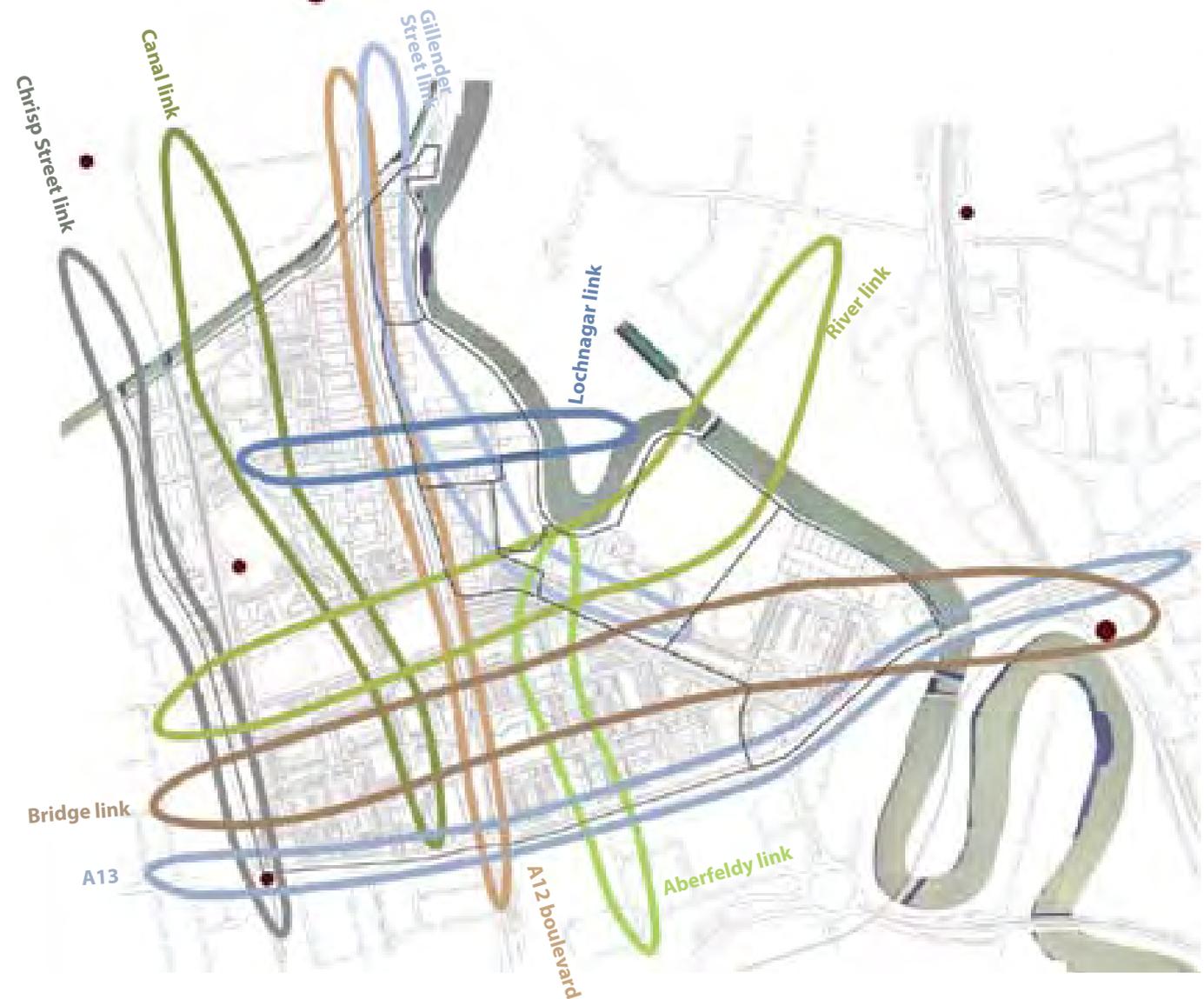
5.1.1 Introduction

The previous section identified the key links which will reconnect Poplar Riverside to its surrounding areas.

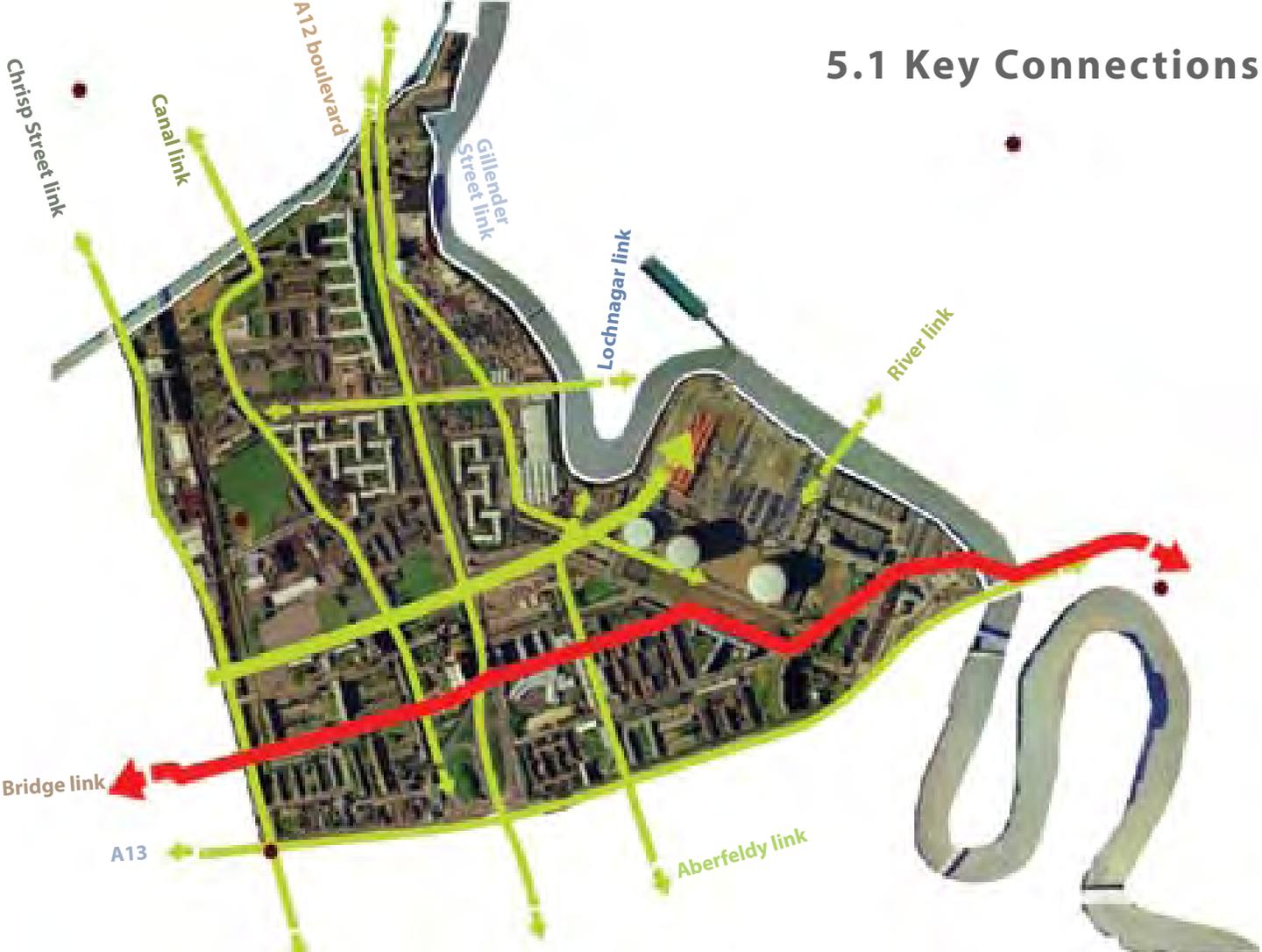
This section looks at how each strategic link identified can be delivered as physical routes and what needs to be done to put them in place. It looks at each link in turn and for each one identifies and analyses existing barriers and constraints along with the key opportunities and proposals from which to identify discrete projects which form part of the costed action plan.

In the majority of cases there are significant barriers to be overcome which require major pieces of infrastructure such as bridges, crossings and new roads which are identified as the highest priority and are the main focus. These are regarded as the key elements to 'unlock' connectivity and to catalyse further spatial improvement and development opportunity.

We have developed an holistic approach to defining routes which integrates new connections with intensification of activity and uses to help create and support safer, more active routes. Other areas for intervention are identified such as new public spaces, landscape and public realm improvements which support the routes and help to improve the environment within Poplar Riverside as a whole. These are also identified as related yet discrete projects which require further detailed study.



5.1 Key Connections



Panorama looking east from Balfour Tower



5.2.1 Two New Pedestrian Bridges

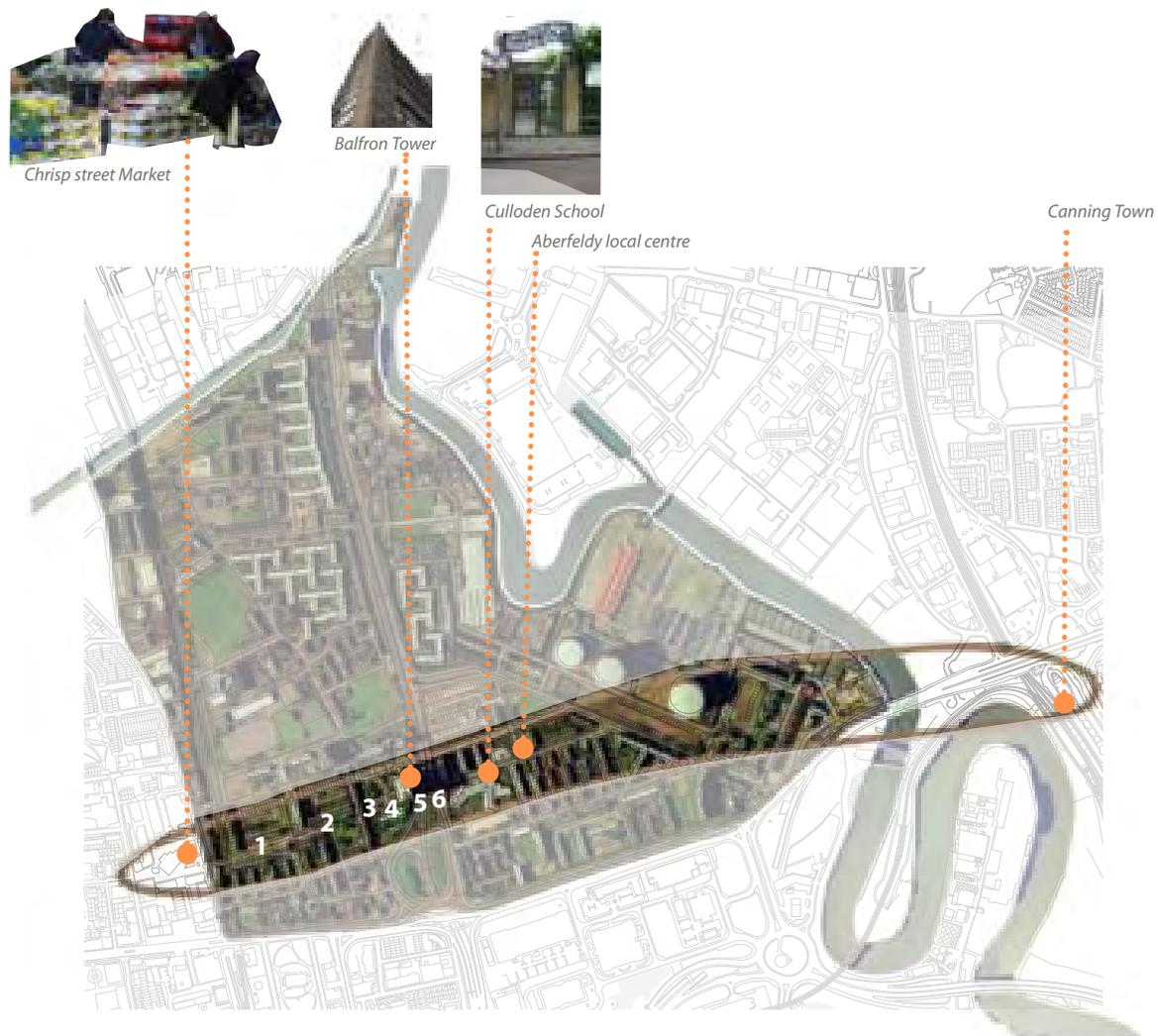
The 'Bridge Link' was identified in the previous section as a key east west connection. It has also been identified as the most important link and the one which should be implemented first. It connects communities east and west of the A12 and integrates Poplar HARCA's on-going improvements to the Brownfield Estate to create a new route between the key centres at Chrisp Street, Aberfeldy and Canning Town. It connects the southern most core area to Canning Town which will help catalyse future development.

5.2.2 Detailed Analysis

Two new pedestrian bridges are proposed to re-connect parts of a route which is currently broken by the A12 and A13. The first bridge over the A12 links Brownfield Street to Dee Street; the second bridge crosses the River Lea to connect the south eastern corner of the core area to Silvertown Way. Elsewhere, streetscape improvements will help to strengthen legibility of other parts of the route.

Brownfield Street is important as it is already connected to Chrisp Street market via a bridge over the DLR at its western end. There is a string of significant points along Brownfield Street and Dee Street:

- Chrisp Street Market
- The junction with St Leonard Street
- Balfron Tower



1 bollards interrupt route



2 bollards and lack of visibility / signage make route unclear



3 uninviting dark underpass



4 railings interrupt route



5 pathway leads to A12 - no clear route ahead indicated



6 uninviting A12 underpass



- The A12
- Culloden School
- Aberfeldy local centre
- Junction with Abbott Road

Although there is a direct route from Chrisp Street eastwards along Brownfield Street to Balfron Tower and the A12, the route is not clear and it is broken up by a number of visual and physical barriers:

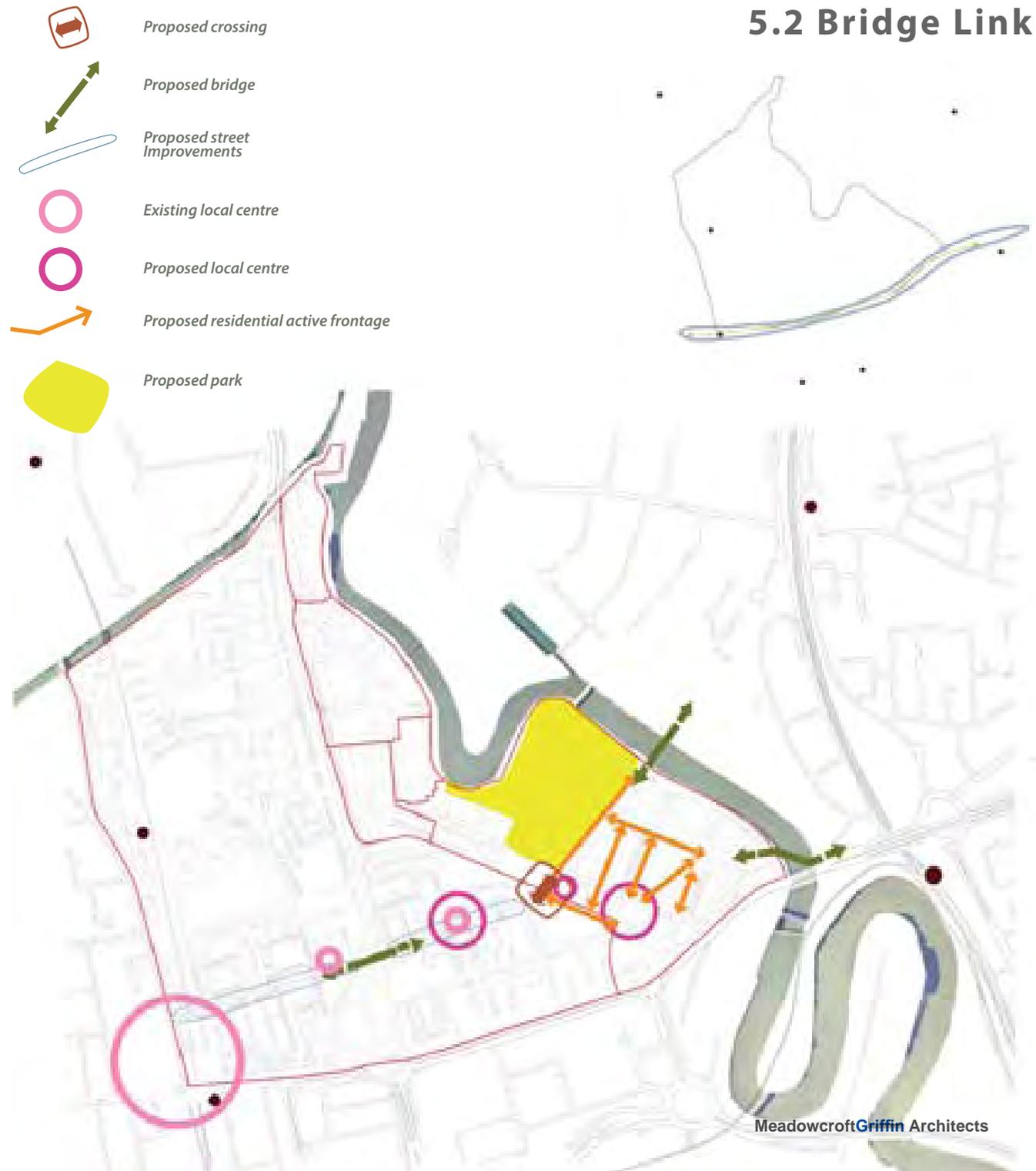
- the DLR bridge and bollards (1)
- Brownfield Street ends at Lodore Street. A pedestrian route continues eastwards through the estate but it is unclear to what extent it is accessible to the public
- bollards at the end of Brownfield Street
- ramp, railings and poorly lit undercroft
- lack of clear view and sense of destination beyond St Leonards Road
- a steep descent to the A12
- poor quality underpass across the A12

Poplar HARCA's Brownfield Estate improvements includes new buildings within the estate and improvements to the public realm. With this there is an opportunity to improve this key route through the estate to include a more usable crossing over the A12.

5.2.3 A new bridge over the A12

The fact that ground levels at the base of Balfron Tower are much higher than on the east side of the A12 gives opportunity for a new pedestrian and cycle bridge to connect over the A12 to Dee Street leading to Abbott Road and the proposed entrance to the future Poplar River Park. A pedestrian/cycle bridge in this location is considered to be an economical 'quick win' which could be implemented at an early stage. It would create a crossing over the A12 in a desired location where, due to the complexity of roads at the mouth of the Blackwall tunnel entrance, an at grade crossing is not possible. At

Proposed bridge link strategy



the same time it will overcome the failing of the existing underpass which should be closed as soon as the bridge is implemented. It would not affect A12 traffic flows and so, would not require the same level of modelling and negotiation as an at grade crossing.

At the western end of Dee Street, the junction with Abbott Road is a key point in the future development of the Core Area. At this point there is a multiple choice of key routes:

a - connection southwards via Abbott Road to the proposed new bridge link to Canning Town station described above. This is looked at in more detail later.

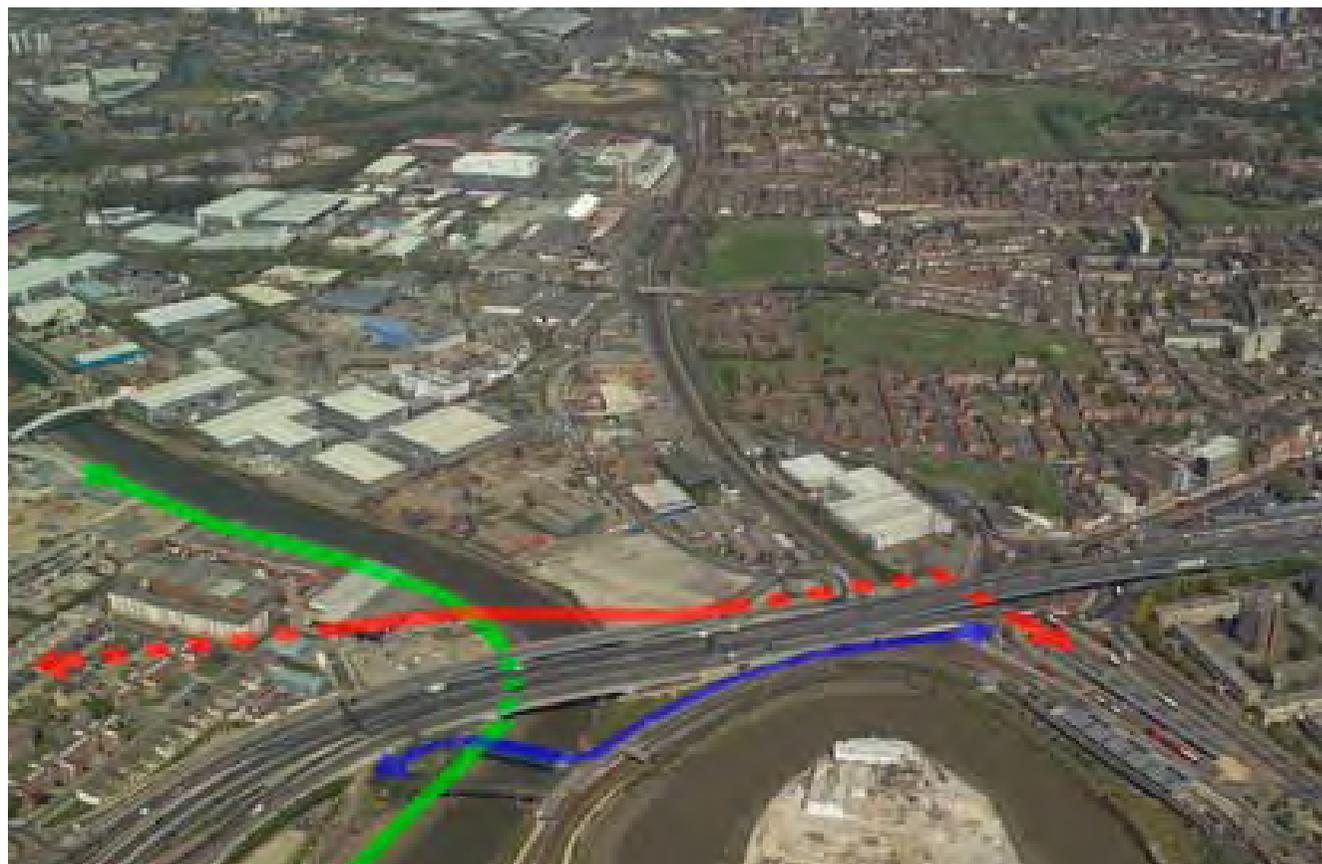
b - connection via southern edge of the proposed Poplar River Park to a possible new bridge connection to Bidder Street and the 'Fatwalk' on the east side- see later.

c - entrance into the proposed new Poplar River Park and access to the river.

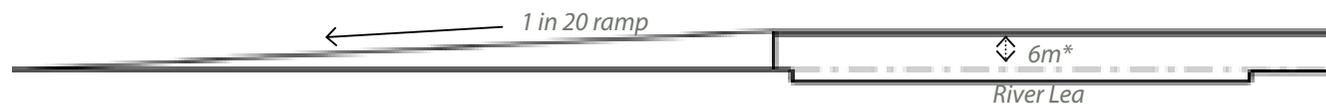
5.2.4 A new bridge over the River Lea to Canning Town

Despite close proximity to Canning Town pedestrian access from Fortrose Close/Lanrick Road to Canning Town is tortuous and difficult. A new pedestrian/cycle bridge over the River Lea from the southern most point of the core area will provide a new direct connection, substantially reduce travel time and increase PTAL rating to this part of the core area.

A new bridge is proposed from Lanrick Road to connect into the A13 slipway on the east side of the River Lea. To achieve the required clearance a ramp can be accommodated within a currently derelict TfL owned plot on the west bank of the Lea. Connection into the A13 slipway avoids the need for a ramp on the east side.



aerial photo with bridge link highlighted with red arrow



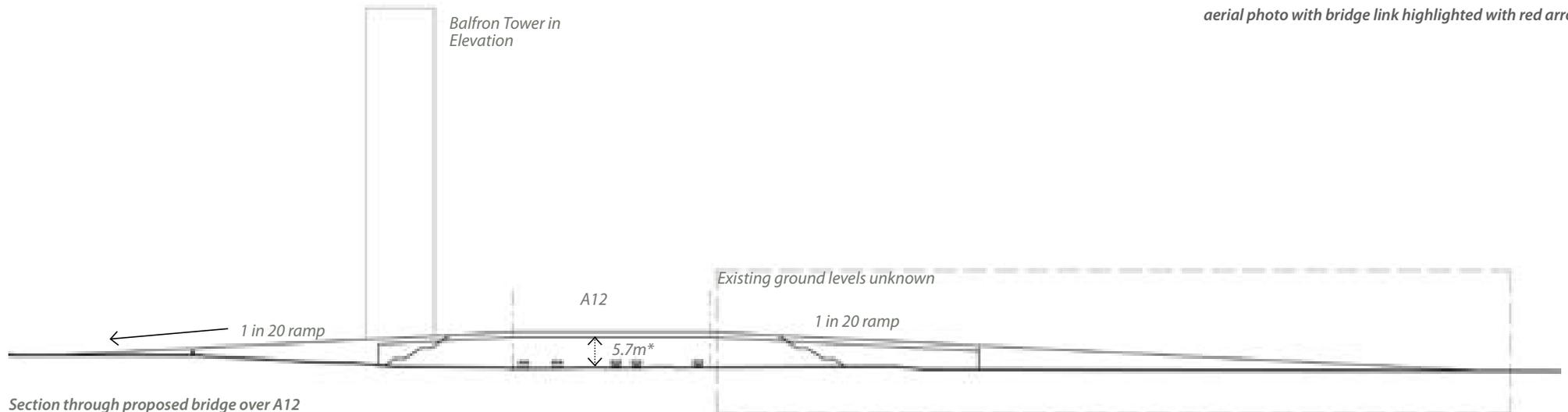
Section through proposed bridge over River Lea to connect to Canning Town

5.2.5 Summary

- street improvements to Brownfield street and Dee Street
- enhance existing local centre at Aberfeldy Street
- new pedestrian cycle bridge across A12
- new crossing at Dee Street/ Abbott Road junction
- new pathway to connect core area 5
- new pedestrian/cycle bridge across River Lea to connect to Canning Town



aerial photo with bridge link highlighted with red arrow



Section through proposed bridge over A12

*indicative minimum clearance based upon information supplied by the Environmental Agency, and TfL, all final levels to be confirmed with these agencies at a detailed design stage

Bridge Link: A new bridge over the River Lea to Canning Town





5.3.1 A New High Street

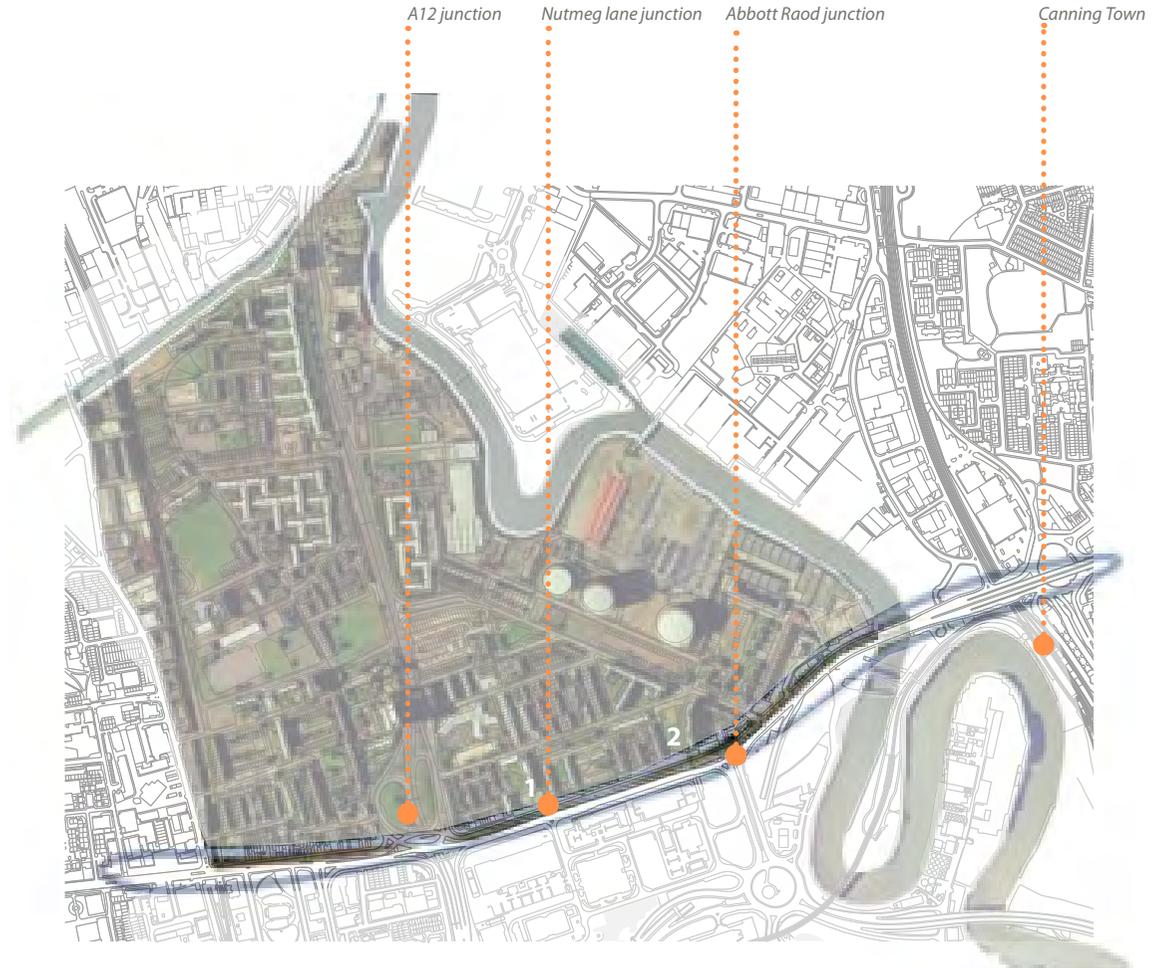
The A13 is a major easterly route out of London. Between the junction of the A12, to Canning Town and beyond it is a major barrier between Poplar Riverside and areas to the south. Despite strong north-south desire lines there is no crossing point along the whole stretch from the A12 to Abbott Road. Even at the A12/A13 junction where there are crossings, they are difficult to negotiate. This causes major severance between the Aberfeldy estates to the north and the new commercial areas around Nutmeg Lane to the south. On-going residential and commercial development to the south makes it even more important that strong new north south connections are created.

The LLVOAPF identifies 1 new north-south crossing to connect Aberfeldy Street to Nutmeg Lane which is now considered as a high priority for implementation

Although the edges are tree lined with wide pavements they lack active frontages which creates a sense of seclusion. Buildings within Aberfeldy to the north are set back at a lower level. New active frontages along the north side, visual connectivity between larger scale buildings on both sides combined with new crossings will help to link the two sides together.

Abbott Road is one of the main arteries within the Poplar Riverside area linking the A12 to the A13. If the Core Area is opened up for new mixed residential uses then it will be at the centre of communities stretching from the A13 to the River and has the potential to develop more of a 'high street' character over time, with denser developments on its edges and active retail/commercial frontages in support of new local centres. For Abbott Road to develop as a vibrant and attractive public space, traffic restrictions will need to be put in place to prevent current use by HGVs.

Abbott Road has the potential to provide a major route from within the core area to Canning Town if the A13



1 no crossings between A12 and Abbott road junction



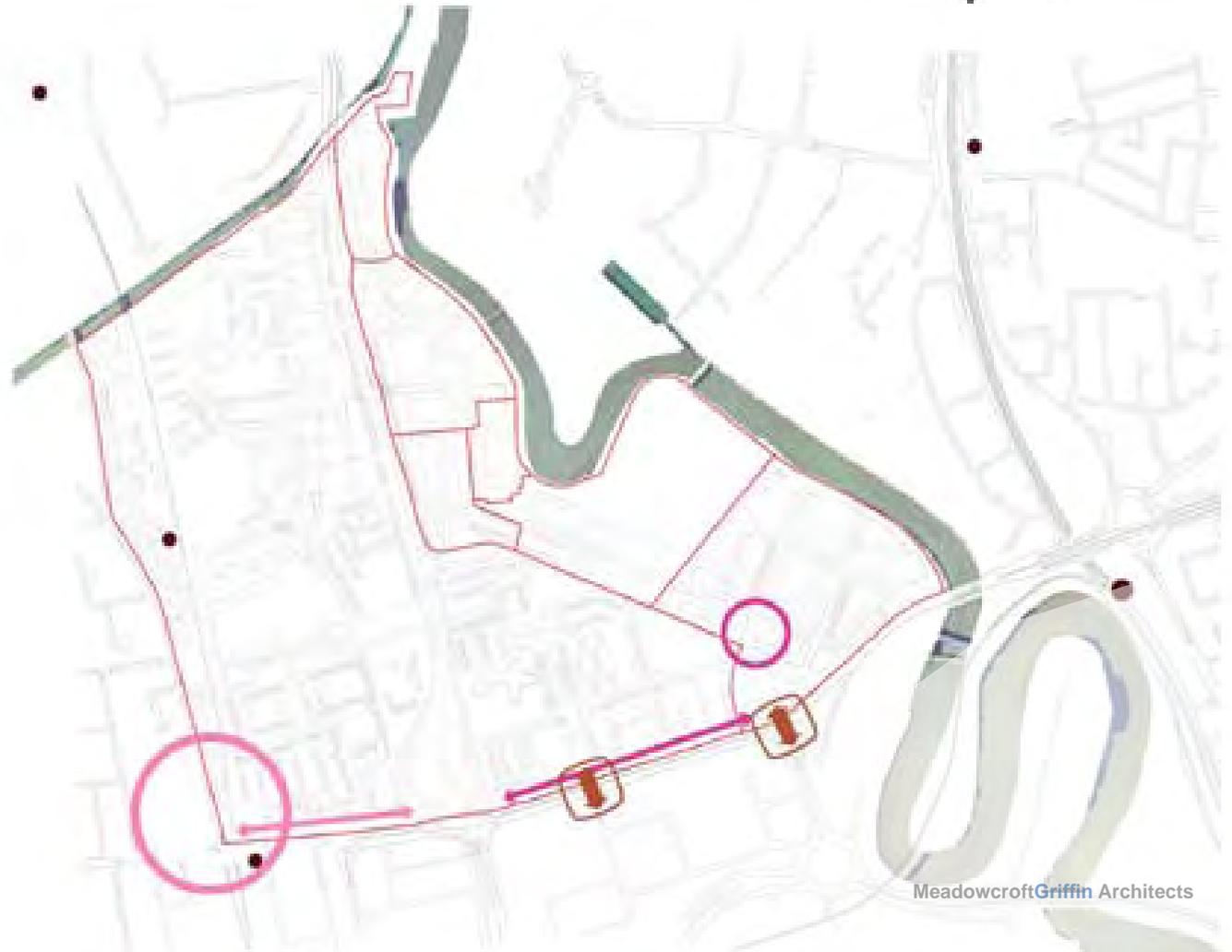
2 lack of active frontages



barrier can be overcome. In combination with the new River Lea bridge it is proposed that the Abbott Road/A13 intersection becomes a new pedestrian prioritised crossing which will give easy access to the River Lea, Leamouth Peninsula, Canning Town, East India Dock and the Thames. A new crossing would be complemented by a reduction in speed limit from 40mph to 30 mph and bound into a strategy for developing this section of the A13 from All Saints to the flyover with more active retail and/or commercial frontages, an improved, attractive and accessible public realm.

5.3.2 Summary

- **two new crossings: Aberfeldy Street to Nutmeg Lane; Leamouth Road /A13 junction**
- **create active retail, commercial and residential frontages onto the A13**
- **reduce traffic speed along A13 and introduce traffic restrictions along Abbott Road**



Proposed A13 strategy

5.4.1 Developing a Local Centre

A new pedestrian crossing from Aberfeldy Street to Nutmeg Lane will catalyse the development of Aberfeldy Street as a major north south route east of the A12 and help to extend the influence of Aberfeldy as a local centre as population density increases.

Aberfeldy is already a designated local centre within Poplar Riverside, although its retail offer is struggling, Aberfeldy Street is truncated at its southerly end through lack of access across the A13.

East India Station is closer to the Aberfeldy local centre than Canning Town but is even more inaccessible under present conditions. A new A13 crossing would give access to East India Station, commercial areas to the south and would open up opportunities for commercial and supporting creative industries to develop on the north side.

With direct access to Nutmeg Lane Aberfeldy Street should develop as a key route which connects the River Lea to East India Dock and eventually to the Thames. Implementation of the bridge link will place greater emphasis on the Aberfeldy Street/Dee Street intersection. Connectivity to both Canning Town and East India Dock stations will create potential for Aberfeldy estates to develop and Aberfeldy to expand as a local centre serving communities west of the A12.



1 lack of access to East India Station

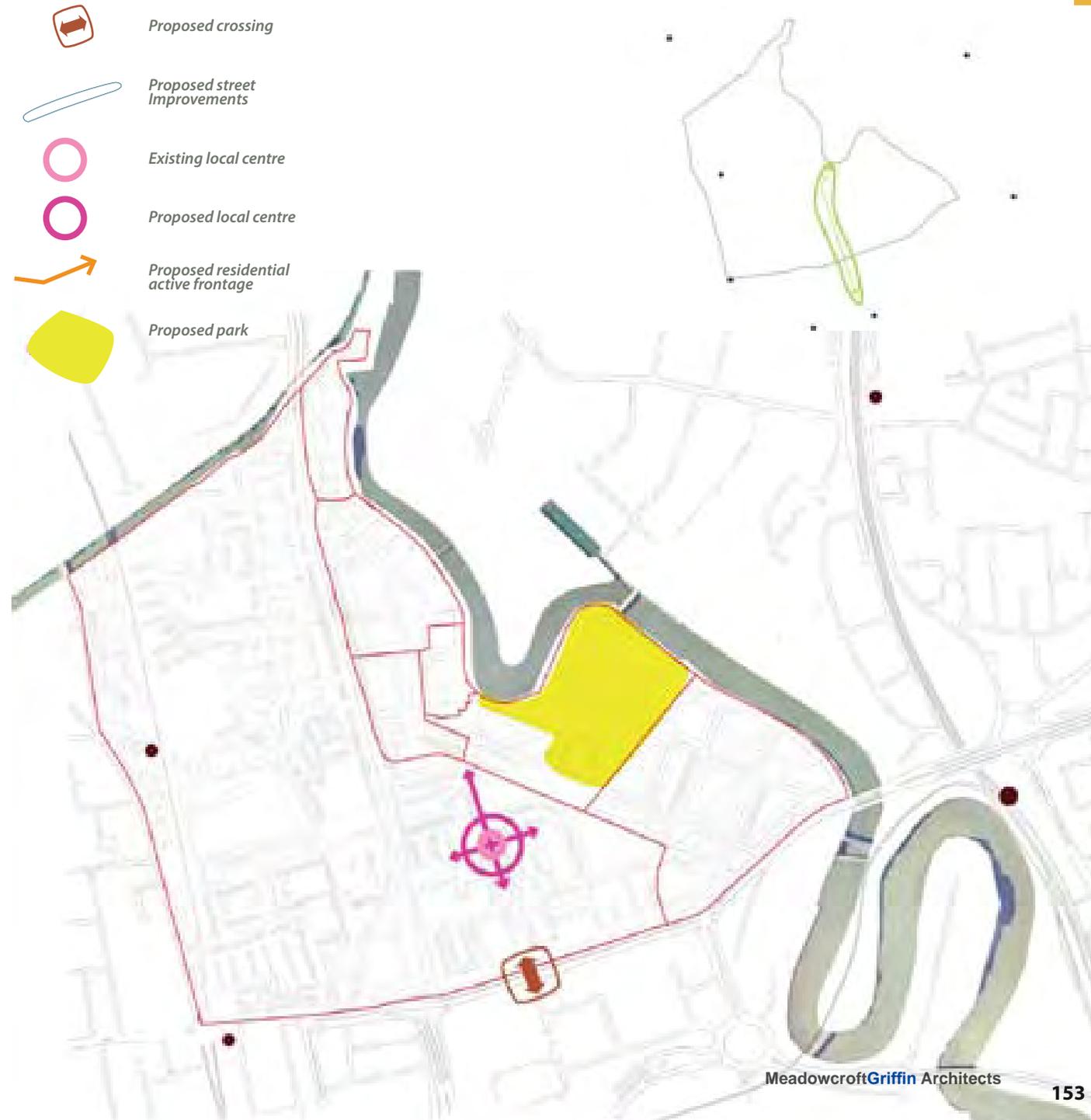


2 struggling local centre



5.4.2 Summary

- enhance Aberfeldy local centre by providing a new crossing at the A13 junction and direct access to Nutmeg Lane to the south
- develop Aberfeldy Street as a key north-south route which connects the River Lea to East India dock basin and to the Thames
- improve access to East india Dock station
- increase residential density and active frontages along Aberfeldy Street
- develop new retail, social infrastructure and employment opportunities around the junction with Dee Street and north south along Aberfeldy Street



Proposed Aberfeldy Street link strategy

5.5.1 Connecting to the River

The River Link develops the initial concept for an west-east necklace of interlinked public open spaces at the heart of new Poplar Riverside. It focuses on reinforcing Burcham Street as a major thoroughfare, which continues through Jolly's Green to the A12. A new at grade crossing over the A12 provides direct access to Abbott Road, the river, Poplar River Park and supports the LLVOAPF proposal for a crossing at this point.

Burcham Street is one of the few busy east-west connections in the area and is already well used as a main thoroughfare for cars, buses and pedestrians between St... Leonards Street and Crisp Street. Running along the northern edge of the Brownfield Estate it is accessible from both Brownfield and Teviot Estates. Running along the southern edge of Langdon Park School grounds it already connects key open spaces of Crisp Street, the sports ground, St... Leonards Street, Andrew St... junction and Jolly's Green.

The diagram to the right shows the alignment of this west-east route and the location of a possible new A12 crossing. Strengthening of the quality and interrelationship of existing open spaces along with new open spaces on the River edge can be developed into a linear park which connects the river edge to Crisp Street as part of a vision for active green open spaces at the heart of new developments within all four quadrants of Poplar Riverside. A new public open space at Devons Wharf, provides a connection to the river at its eastern end at the point where the tight meander of the river is closest. The linear park will eventually culminate in the proposed Poplar River Park from which new cross river bridge connections provide access to the east.



1 lack of access to East India Station



2 underused public space



3 poor quality local park



4 A12 barrier



5.5.2 The Open Space Necklace

This string of key open spaces form part of the strong character of the area west of the A12. They give a sense of openness at the heart of this area with long views eastwards and are a significant and intrinsic part of the character of Poplar Riverside.

The sports ground and athletics track is clearly a vital amenity for the school and for the public. The athletics track, is in particular a hugely valuable asset for the local and wider communities and should be reinforced in terms of increased level of use, public activities and events to be the focus of recreational activity in the area. Whilst the activity around the running track is a vibrant feature of the area, the sports areas at the eastern end are underused and create a gap at the key junction with St... Leonards Street.

The junctions of Burcham Street, St... Leonards Street, Andrew Street is a significant point and has one of the few public spaces in the area, although currently vehicle dominated, undervalued and under used. The open space on the south west corner of the junction with its local corner shop is already a meeting point for the local community but offers a poor quality physical environment. There is a sense, that with streetscape improvements and more active frontages, this space could be developed as a key public space with the potential to bind rather than separate Teviot and Brownfield estates.

Jolly's Green is one of the few public green open spaces in the area but is of a poor quality as a local park, lacking in opportunity for a range of activities one would expect in a park of this kind. The northern end of Jolly's Green is raised above the A12 by a number of metres and, from this point there are views across the A12 towards the river. From Jolly's Green there is access to the A12 via Andrew Street, but no direct access across. The proposition shared by Poplar HARCA for a wide pedestrian route which extends Burcham Street to the A12 could be a shared pedestrian

Proposed river link strategy



and bus route with the potential to provide essential west-east bus route across the A12 which is currently lacking.

The A12 Abbott Road junction is another key point in the area and, at least symbolically is the 'gateway' to the Aberfeldy estates. The junction forms a wide open space at this point, but is cluttered with roadways, barriers and railings which make it impossible to cross and visually unsightly. Radical changes to this junction may be possible if the vehicular underpass is removed.

These are all significant open spaces in their own right and have the potential to play more important roles within the community for different reasons. When related together and considered as part of an integrated network of spaces they have the potential to form a strong necklace of open spaces as part of a major west-east route connecting the town centre to the river. The vision for a linear park at the heart of the area is even stronger when viewed in the context of proposed changes to the river edge, in particular the future Poplar River Park which would culminate the park sequence it at its eastern end.

5.5.3 New A12 crossing at Abbott Road Junction.

The potential for a strong west-east connection from town centre to the river can be realised, if a new direct connection can be created across the A12 at the Abbott Road Junction. There are a number of possible options:

1 A pedestrian and cycle bridge which takes advantage of the height difference between Jolly's Green and the A12. A minimal gradient is required for a bridge to achieve sufficient clearance over the A12 from the west side. Ramps and stairs on the east side could land within the wide space of the Abbott Road A12 junction and integrated as part of the reconfiguration of the junction.

2 A wide 'land bridge' which extends the green space of Jolly's Green over the A12. This is a more elaborate and costly proposal but would be consistent with the linear

park theme and would strengthen the green connection between town centre and river. It would be more difficult to integrate ramps and stairs on the east side, although it would be possible with reconfiguration of the junction to release more space. This option has the potential to create an 'iconic' park structure (re Mile End Park) as well as a vital new link.

Bridges have the advantage of avoiding any affect on A12 traffic flow and, as with the Brownfield Street connection a foot/cycle bridge here would be another 'quick win'. However there may be unnecessary duplication of the proposed bridge link further south.

3 The preferred option is for a new at-grade crossing with traffic lights allowing left and right turns into Abbott Road from the A12, and a network of new east-west/north south pedestrian crossings. This would be integrated as part of the reconfiguration of the A12/Abbott Road junction following removal of the vehicular underpass.

The new A12/Lochnagar Street crossing is to be implemented in 2009 and shows that changes to the A12 are possible whilst maintaining acceptable traffic flow capacity. The proposition for a second new crossing at Abbott Road assumes that if lights can be synchronised, this would similarly not have a detrimental effect on traffic flow. It would also help to reduce to speed of traffic between Lochnagar Street and Abbott Road junctions which fits into a general aspiration to reduce traffic speed limit from 40 to 30 mph on this section of the A12 - see later.

These issues were discussed at a design workshop with TfL and, though not conclusive, indicated that a new at grade crossing would not be out of the question (see notes of meeting in appendices) but would need to be founded on detailed traffic modelling at a later stage.

A new A12 crossing would help to unlock a range of other routes of benefit to the local area in particular Langdon Park Station via St... Leonards Street to Abbott Road.

Burcham Street/DLR crossing.

The DLR cutting forms a barrier at the western end of Burcham Street. Although it is currently possible to cross the DLR via road bridge at Willis Street and via pedestrian bridge at Langdon Park Station, another direct crossing as an extension to Burcham Street would be beneficial in reinforcing the east west link from Chrisp Street.

Poplar Riverside is currently characterised by routes which are convoluted, are truncated or are without clear site lines. The Burcham Street/Willis Street connection is such an instance, where there is no clear visual destination for pedestrians at the western end of Burcham Street and the tight, meandering route is difficult to negotiate for buses and cars.

In order to improve legibility within the urban fabric, it is important to create as many visually clear routes as possible, particularly in primary locations. It is this for this reason that a new bridge connection at the western end of Burcham Street would be desirable as part of an upgrade and extension of the Burcham Street connection.

5.5.4 Linked public spaces

A series of key interconnected public spaces can be developed to complement the necklace of green spaces forming the east-west spine route. Some of these spaces exist already, but are in need of enhancement and improvement, others can be formed to strengthen the connection between the town centre and the river and will help to catalyse and support development within key areas.

A necklace of key public spaces are formed by:

1 A new 'square' linking Burcham Street, Chrisp Street and Cordelia Street and incorporating a possible new bridge link over the DLR for buses and/or pedestrians and cycles. This would provide a direct connection from the Lansbury Estate to the River Lea.

2 Improvements to the existing open space at the

intersection of Burcham Street, St... Leonards Street and Andrew Street to create a local square supported by new active frontages.

3 The reconfigured A12/Abbott Road junction as a threshold space linking estate communities east and west of the A12, north and south of Abbott Road. This is reliant upon the removal of the vehicular underpass and the new A12 crossing.

4 A new public space at Devon's Wharf on the edge of the river at the point where it is closest to the town centre and Langdon Park station. It would also provide access to the proposed Poplar River Park and to other public facilities along the river edge.

5 The proposed Poplar River Park as the key public space on the edge of the river giving access to river crossings the Fatwalk and the Lea River Park

5.5.5 Summary

- **develop the vision for a linear park connecting the river to Chrisp Street at the heart of Poplar Riverside**
- **create a necklace of interlinked public open spaces as focal points for existing and new communities**
- **street improvements to Burcham Street**
- **extend Burcham Street via a shared pedestrian/bus route along the south side of Jolly's Green**
- **a new at grade crossing at the A12/Abbott Road junction**
- **create a new public space by the river at Devon's Wharf**
- **a new public space and possible bridge from Burcham Street to Cordelia Street to connect Lansbury estates with Poplar Riverside**
- **implement Poplar River Park as the culmination of the linear park incorporating cross river connections**

5.6.1 A New A12 Crossing

Following Langdon Park DLR Station the next major transport change within the area will be a new crossing of the A12 between Zetland Street and Lochnagar Street, to be implemented in 2009.

This will give direct access into the Ailsa Street area and will catalyse development opportunity. It will also provide opportunity for a bridge link across the river into Cody Campus and Star Lane DLR station via South Crescent and Cody Road.

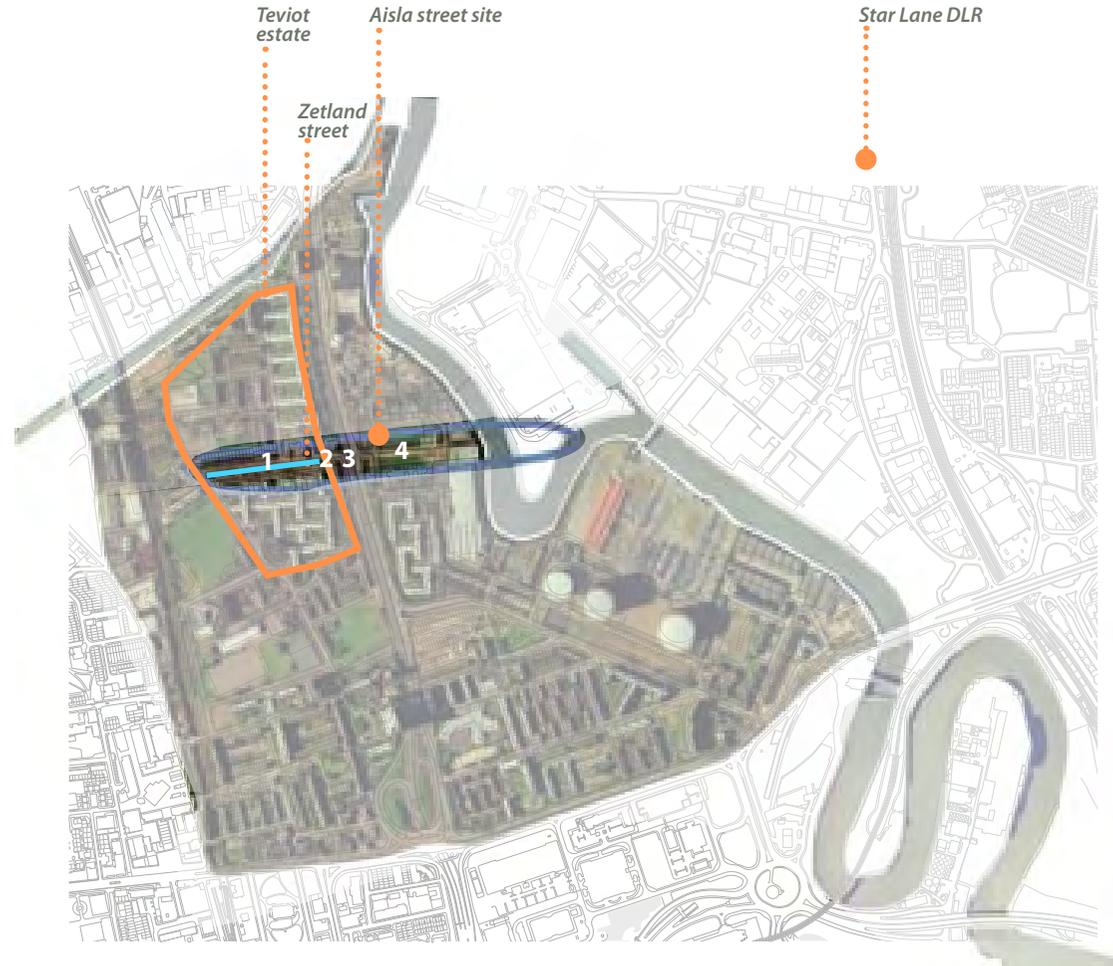
A bridge link in this location was discussed at the workshop with TfL. There is a perceived desire for a cross river bus connection to Star Lane and this represents a potential location for a vehicular (possibly bus only) bridge to serve that purpose. However, with current bridge clearance requirements the necessary ramps would form a divisive barrier and precludes this option.

Alternatively the preferred option of a pedestrian and cycle bridge would suitably extend the Zetland Street/Lochnagar Street crossing across the river and give access to Star Lane.

The new A12 crossing will create a new key west-east route connecting Teviot estates to the river. It provides the opportunity for Zetland Street and Lochnagar Street to develop more active frontages as part of longer term proposals for new mixed residential development within Harca's of estate renewal programme.

There are key points which deserve particular emphasis as locations for new community facilities, local retail provision and amenity space:

- St Leonards Street/Zetland Street junction as a local centre with retail provision and active frontages extending east along Zetland Street
- The Zetland Street, Lochanagar Street, A12



1 lack of local centre at Teviot street estate due to scattered community facilities, lack of active frontages



2 Zetland street



3 A12 east west barrier



4 industry creates barrier to river



crossing as a key focal point for new development fronting onto the A12

- the eastern end of Lochnagar Street where it meets the river edge as an amenity space to serve the new communities east of the A12

5.6.2 Summary

- new crossing across A12 at Zetland street Lochnagar street junction
- new local centre between St Leonards Street and Teviot Street along Zetland Street
- development of Ailsa street site (see core area 2 and 2A strategy)
- new local park at the eastern end of Lochnagar Street on the river edge
- new pedestrian/cycle bridge across the River Lea



5.7.1 A New Vehicular Bridge Connection

Discussions with TfL established the need for more local bus routes parallel to the A12 to serve local estates, particularly the north Teviot Estate and also the need for a connection across Limehouse Cut to Bromley-by-Bow to the north.

A new vehicular bridge connection across Limehouse Cut has been identified to provide new bus routes with a connection to Empson Street and Devons Road to the north. Sites in this location both north and south of Limehouse Cut are currently available and provide a good opportunity to implement such a proposal.

An alternative connection has been considered from Uamvar Street to St... Andrews Way which provides a good alternative but is more difficult in terms of a connection across Devons Road, Devas Street and a connection northwards.

It is assumed that clearances over Limehouse Cut are not an issue provided they at least match that of the A12 bridge.

A new bridge connection would support the development of St... Leonard's Street which should be supported by more active frontages.

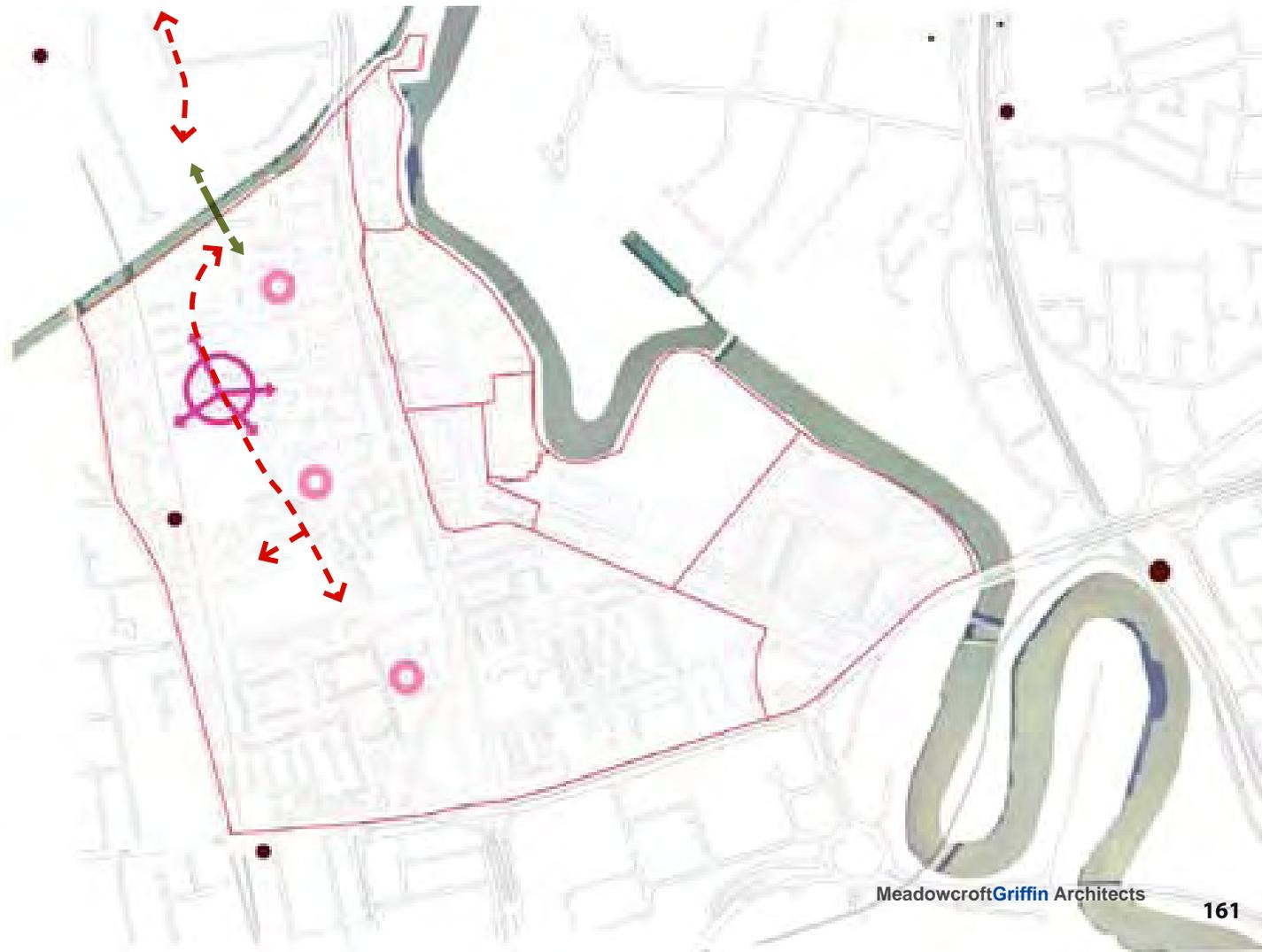
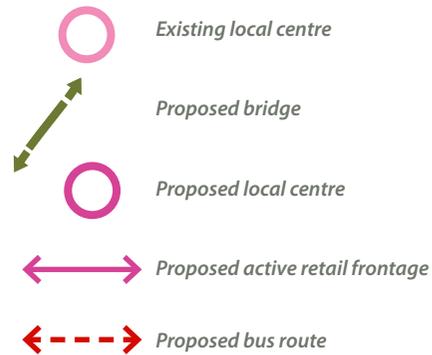


1 Limehouse cut barrier to north



5.7.2 Summary

- a new vehicular bridge over Limehouse Cut from Uamvar Street to Empson Street
- a new bus route serving estates west of the A12 to Bromley-by-Bow



5.8.1 Taking Advantage of the Bromley-by-Bow Public Transport Connections

Despite the A12 running north south across Limehouse Cut it represents a blockage for bus routes at this point. As a result there is a dearth of north south bus connections.

There needs to be an increase in connectivity north south to take advantage of the developing public transport connections at Bromley-by-Bow and to improve conditions for development within the Core Area and Poplar Riverside as a whole.

Discussions with TfL¹ clearly identified that parallel routes are preferred to any increase of buses along the A12. For the reasons stated above parallel routes best serve the local communities, provide more dedicated routes for buses and local traffic and do not conflict with current traffic flow along the A12.

Gillender Street already provides a parallel connection west of the A12. It joins Twelve Trees Crescent to the north with a connection to Bromley-by-Bow station and Devas Street. It connects onto the A12 south of Limehouse Cut which currently limits its capacity for any further increase to existing bus traffic along this route. However previous studies (e.g. WWMA 2003) identified the opportunity for a new road to connect Gillender Street to Ailsa Street which would overcome this problem.

It is possible to connect a new road to the southernmost end of Gillender Street which runs parallel to the river and the A12 to Leven Road. This route by-passes the A12 and provides access and a local bus route to Core area sites and southwards to Canning Town. Potential CPO acquisition of sites around Ailsa Street gives a high possibility that this connection can be implemented in the not too distant future and early discussions show this as a preferred route by TfL.



1 Leven Road



2 Gillender Street



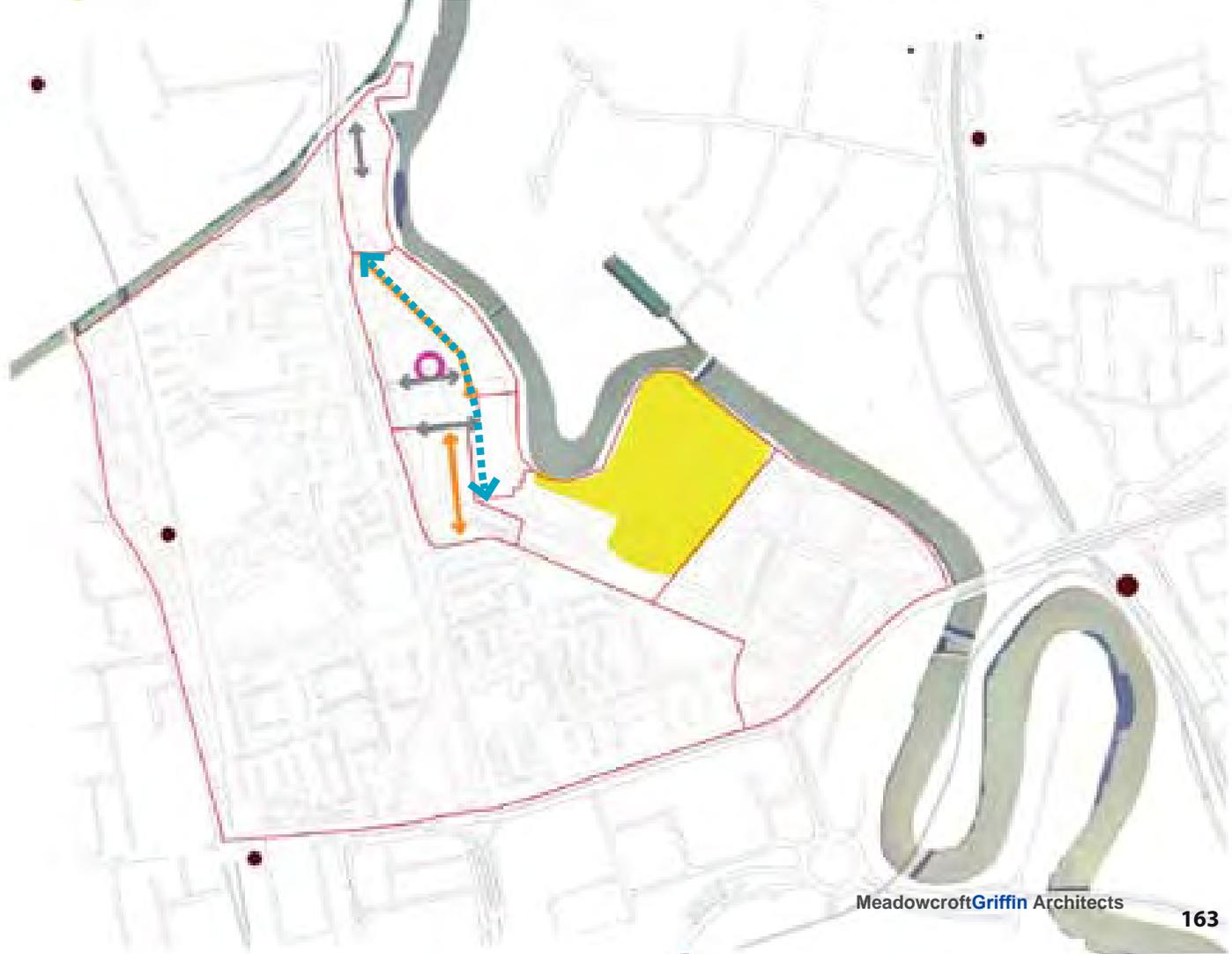
1 MGA met TfL on both 14th May and 21st July 08

5.8 Gillender Street Link

An indicative route for the new road connection is shown here and developed later as part of the development study for the Core Area.

5.8.2 Summary

- implement a new road through core area 2 to connect Gillender Street with Ailsa street and Leven Road
- develop a local bus route from Bromley-by-Bow to Canning Town via a new connection between Gillender Street and Leven Road



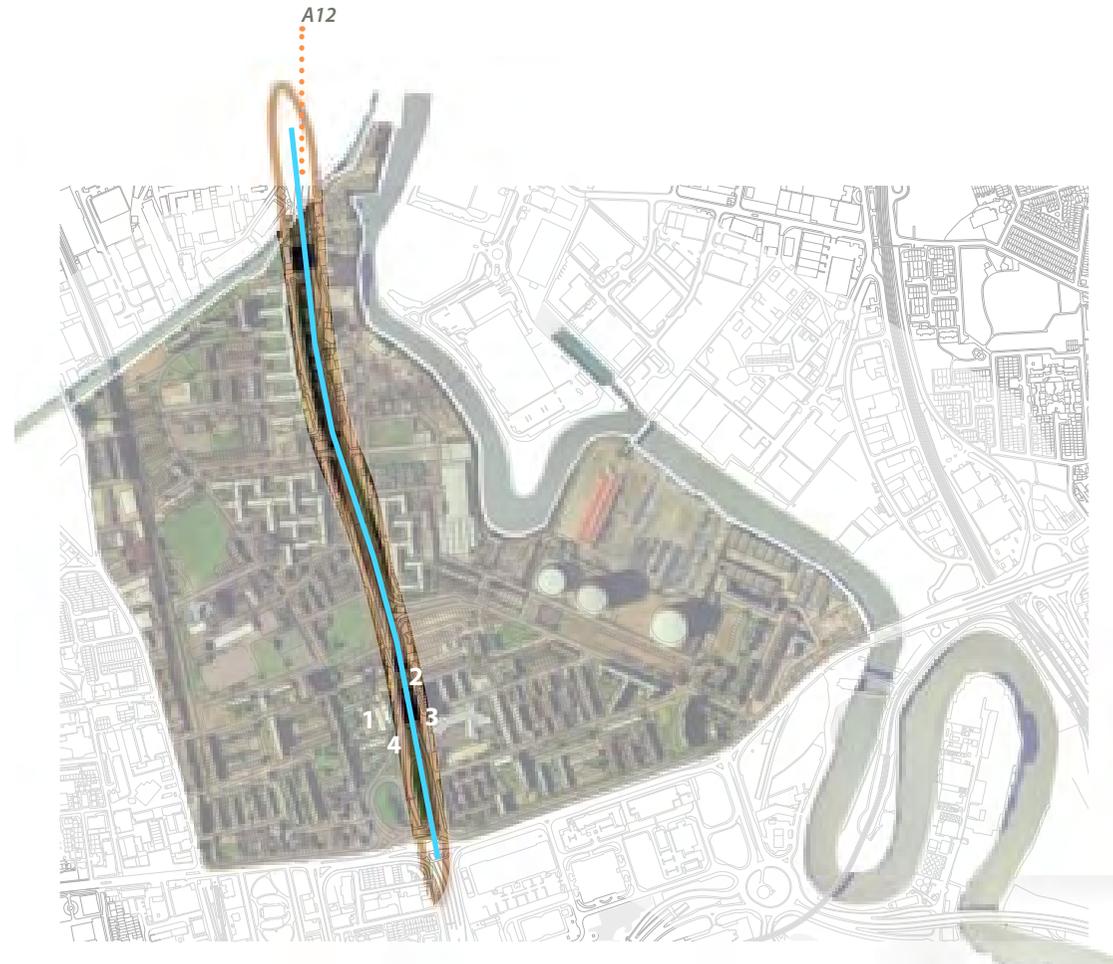
5.9.1 Resolving The A12 Issues

The A12 is one of the main barriers within the Poplar Riverside area and the cause of extreme severance between areas east and west. Its construction (in the 1970s) along with surrounding estates transformed the once active high street of Brunswick Road from a focus for surrounding communities into a vehicle dominated through route which surroundings now turn away from.

It is a major north-south thoroughfare of high strategic importance to regional traffic flow serving the Blackwall tunnel. However, on a local level it is dominated by heavy traffic which restricts local movement, and offers an inhospitable environment for pedestrians.

If Poplar Riverside is to develop in the future then it is vital that major issues with the A12 are resolved:

- severance between west and east. Although it is possible to cross the A12 via three underpasses they are difficult to find, are of poor quality and are unsafe, particularly at night.
- through traffic is heavy, noisy and dirty. At peak times it is congested leading to 'rat runs' through local areas. HGVs along Abbott Road are a particular problem. At other times the 40mph speed limit exacerbates noise problems, and creates a threatening environment for pedestrians.
- it restricts local traffic movement across and along it.
- There is conflict between local and through traffic. It is difficult for local traffic to turn on and off the A12. Where it does it impedes through traffic flow. Through traffic is given priority which severely impedes local traffic movement particularly west to east.
- the public realm is of extremely poor quality - it is uncomfortable to walk along it and lacking active



1 A12 barrier



2 A12



3 pedestrian underpass



4 pedestrian underpass



5.9 A12 Boulevard

frontages feels unsafe.

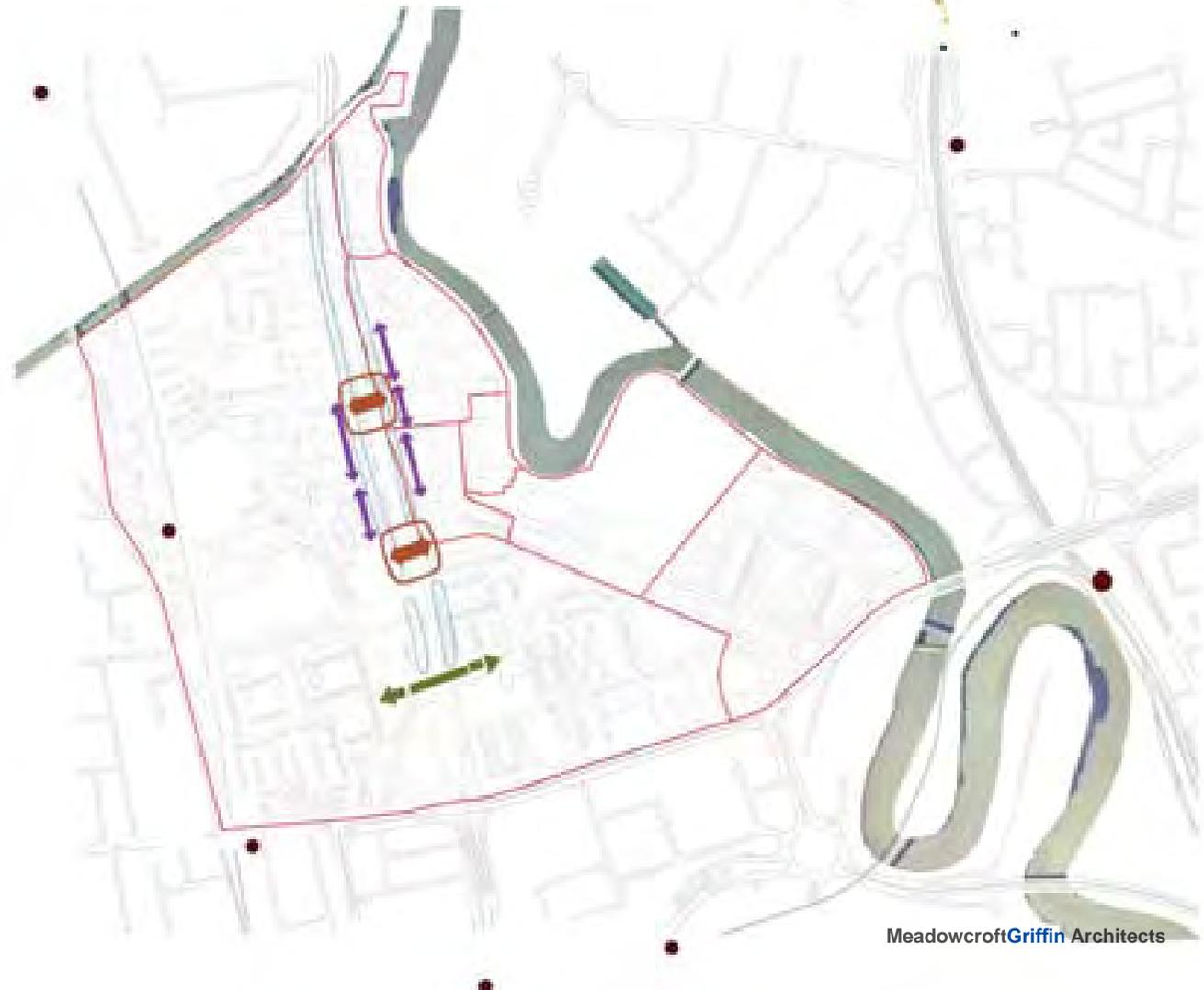
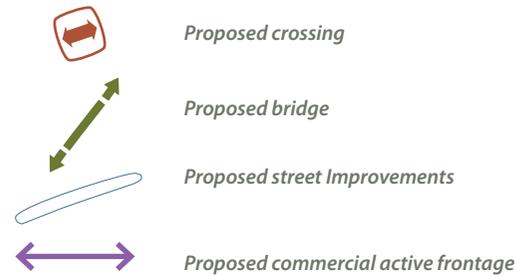
- there is no provision for cycles.
- It is not possible to improve bus routes (discussed with TfL)
- Surrounding buildings are set back and turn away from it. Lack of active frontages and visual connections increase the sense of separation between east and west.

It is imperative to find ways to overcome severance, integrate and improve local movement whilst maintaining current levels of traffic flow along it. Along with improved pedestrian crossings there is a need to create a safe and hospitable environment which will attract people to its edges and create visual connections across.

The new Zetland Street to Lochnagar Street crossing is the first major intervention which accepts that local change to the A12 is necessary and possible. It will not only provide access across and to areas east of the A12 but it will also catalyse improvements to the A12 itself.

The Lochnagar crossing and Brownfield bridge crossings are essential short term 'wins' which can have a major and immediate affect in knitting together east and west. They should also be considered as part of a long term strategy of improvements which combines:

- 3 new crossings: Lochnagar crossing, Brownfield to Dee Street bridge, River link crossing at Abbott Road junction. Close underpasses
- traffic management speed reduction, separation of local traffic and through traffic, improved local movement, avoidance of 'rat runs', dedicated cycleways
- environmental improvements: tree planting, noise reduction, visual connections, improved street lighting
- improved public realm: wider pavements, improved safety



Proposed A12 boulevard strategy

- active frontages: buildings with appropriate uses and entrances facing onto and across the A12 to improve visual connectivity and natural surveillance.

5.9.2 A tree-lined Avenue

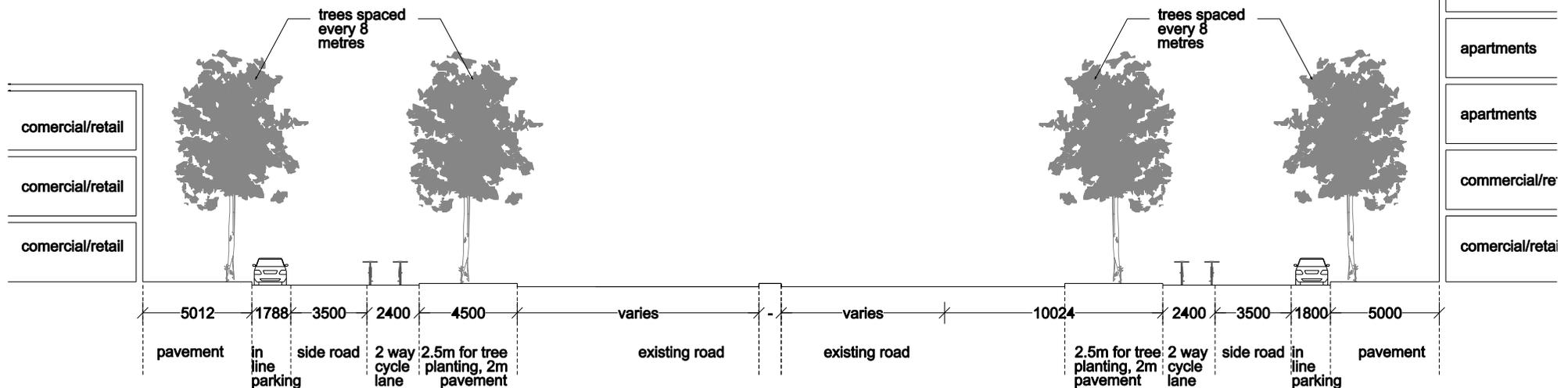
The vision identifies a range of possible changes and improvements as part of a transformation of the A12 into an active tree-lined boulevard at the heart of Poplar Riverside involving a widening strategy which integrates tree avenues, local access roads and wide pavements serving large scale retail and commercial uses.

The widening strategy utilises large stretches of underused space which border both sides of the A12. Much of this lies within HARCA owned estates (north, south Teviot; Nairn Street, Aberfeldy) and currently occupied by garages, access roads, and planting strips. The combination of estate renewal and development of other sites offers the opportunity to increase the width of the A12 sufficiently on both sides to incorporate two avenues of trees, a single bus/access lane, in-line parking, two-way cycle lane and wide pavements.

Avenues of trees will provide continuous green edges, act as a visual 'buffer' and will help to mask noise.



Plateau de Kirchberg, John F. Kennedy Avenue, Luxembourg, Latz und Partners (1993-2010)



Indicative proposed typical A12 section

Traffic lanes either side of the central carriageways will provide local access for buses, cars, service vehicles and cycles and will reduce the need for local traffic to turn on and off the A12. They will give a clear separation between local and through traffic. The introduction of local access roads will create local access 'loops' around smaller scale urban blocks either side of the A12 which will greatly improve local traffic movement. Provision of in-line parking relates to large scale retail and commercial units with active frontages facing onto wide pavements which incorporate the second avenue of trees. Retail/commercial uses within higher density mixed residential buildings facing onto and across the A12 will animate and enliven the edges of the A12, will create visual connectivity between the two sides and will make it a destination in its own right.

The combination of local traffic, active frontages, improved and active public realm will improve safety through natural surveillance both day and night.

These changes will improve the edges of the A12 without disturbing the traffic flow of central lanes. It is however proposed that the new Lochnagar crossing and possible Abbott Road crossing will help to manage traffic flow sufficiently to enable a reduction in speed limit from 40-30mph.

These principles were discussed with TfL at a design workshop and subsequent meetings and received a positive response.

Summary:

- **new at grade crossings at Lochnagar Street and Abbott road**
- **separate local traffic from through traffic**
- **widening to incorporate avenues of trees, access lanes, cycleways, car parking and wide pavements**
- **local traffic 'loops' either side improve local traffic movement**
- **new retail, commercial and residential uses with active frontages facing onto the A12**



Transformation of the A12 into an active tree-lined boulevard at the heart of Poplar





5.10.1 Coherent Principles for Crisp Street

The Crisp Street link proposes consolidation of new residential development with active retail and commercial frontages at ground floor level.

Crisp Street market is already a vibrant focus for the area. Crisp Street itself is a relative backwater acting more as a service road to the market at its southern end and becoming quickly residential further north. The combination of the market and other community facilities make it the main local centre and it will remain so, particularly with the density of new development currently taking place around and along it.

New developments are happening incrementally as low density industrial sites become available along the east side of Crisp Street. These are generally high rise which are already making a radical change to the feel, character and skyline of Crisp Street and surrounding areas. The view west from Langdon Park will rapidly change from one of open skies to tall buildings - part of a process of urbanisation of the park edges. Proposed redevelopment of the market area (ref reshaping Poplar -- HARCA) will provide the opportunity to redefine the focus of the area and enhance the retail provision in relation to frontages along the India Dock Road (A13) and Crisp Street.

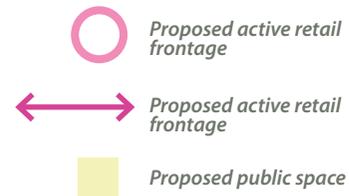


With this degree of change already underway, there is a danger that piecemeal development will not take full advantage of the opportunity to knit together this important local centre and fulfil regenerative potential. The purpose, therefore of this strategy is to develop a coherent set of principles to help guide existing and future planning applications within the Crisp Street environs.

5.10.2 Crisp Street Issues

There are a number of issues to be addressed:

- the market square is vibrant and well used. However it is inward looking with shop frontages facing into the square and backs/ service yards facing onto Crisp Street. Crisp Street has developed a rather 'back-of-house' quality around the market area - e.g. Somerfield delivery bay.
- The activity and influence of the market stops on the west side of Crisp Street. There is a distinct change in character from Crisp Street market to Brownfield Street which reinforces the divide of the DLR and the separation of Brownfield estate from Crisp Street.
- Crisp Street lacks active frontages. Existing low rise buildings are set back, sometimes behind fences, there are gaps e.g. Somerfield car park, which discourages people to it and along it. It does not function as a destination in its own right.



- The streetscape is fragmented. Existing buildings have different character within each individual plot. Without a cohesive strategy, new piecemeal development may add to the fragmentation.
- Current proposals are high rise and extremely dense (up to 1400hrh). Piecemeal development could result in a necklace of tall buildings which could create a visual and physical barrier.
- Existing open spaces are privatised and are detrimental to the use of the street.
- Connections to the east across the DLR are inadequate. There are too few and where they exist they are not obvious or are of poor quality.

5.10.3 Responding to the Issues

- There should be a clear definition of fronts and backs along Chrisp Street. Any future development should create active fronts with main entrances to the street

at ground level. Delivery/ servicing should be from the street or within the site, and should not interrupt active frontages.

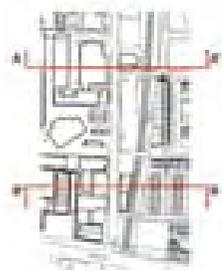
- Developments in the area between India Dock Road (A13) and Carmen Street should have retail frontages onto Chrisp Street and should follow a consistent building line. North of Carmen Street commercial and/or residential frontages should continue a strong consistent building line.
- There should be a consistent roof line to building frontages. Buildings should firmly define the back of pavement line and extend to a height of 6-8 storeys. Taller elements should be set back-
- Tall buildings should form a cluster close to the market and Langdon Park Station to indicate the importance of this location. Buildings should be distinctly lower north of Carmen Street.
- A new public space on the east side of Chrisp Street could extend the market and integrate Willis Street and Brownfield Street bridge connections.
- Rather than developing Chrisp Street as another

linear 'high street' it is envisaged that the local centre influence should permeate areas immediately east and west, particularly eastwards.

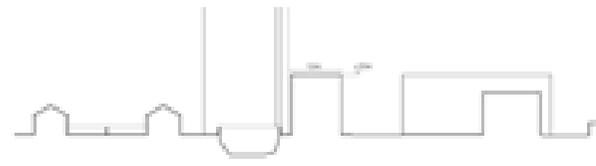
- New retail and employment uses could be introduced east of the DLR to connect west and east and encourage pedestrian movement in an easterly direction as well as north south along Chrisp Street.



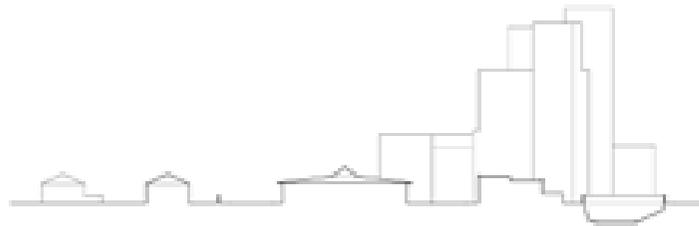
Chrisp Street with existing development indicated



Existing Site Section A-A' - Crisp Street 1:500



Existing Site Section B-B' - Crisp Street 1:500



Proposed Development Site Section A-A' - Crisp Street 1:500

Willis St

120-132 Crisp St

71 Carmen St

Morris Rd & Rifle St



5.11.1 Priorities

The delivery of links relies upon the implementation of key infrastructure which have been identified and described within this section.

To re-connect Poplar Riverside, the connections across the A12 are vital along with new bridges and crossings which connect beyond its defined boundaries.

The highest priority is given to projects which can be quickly and easily implemented and which will have the most immediate effect in improving connectivity within Poplar Riverside and in catalysing new development within the core area.

The top priority projects are:

- **A new pedestrian/cycle bridge over the A12 from Brownfield Street to Dee Street.**
- **A new pedestrian/cycle bridge over the River Lea from Lanrick Road to the A13.**
- **A new road from Gillender Street to Leven Road.**

5.11 Wider Area Priorities



Plan of top priority projects in the wider area



6.0 Core Areas



6.1.1 Focus on the Core Areas

The following sections define how the individual areas within the core area can develop in the context of opportunities created by new connections.

The transport Strategy clearly demonstrates how the implementation of key connections affect the accessibility of certain areas translated as PTAL ratings from which, in accordance with The London Plan and Local Planning Policy, potential development capacity are defined.

Previous sections identified connections to optimize capacity within the Core Area. The following sections develop the relationship between connections and new development to illustrate how a coherent urban structure may develop which knits existing and future communities and makes the most of existing and future assets of the area.

6.1.2 Core areas and wider context - core principles

Although the core area will be the focus of this study it is vital to consider any new development within the context of the wider study area and beyond.

New developments within the core area have the capacity to open up a stretch of the river previously denied and to overcome the barriers which have had a detrimental affect on the growth and development of the area over time.

With the proposed Lea River Park and new riverside park at Poplar there is now a golden opportunity to open up landlocked sites and reconnect hinterland areas to the river edge and beyond.

The river parks will be destinations in their own right for the local and wider communities, a key driver for the surrounding developments and regeneration of the area as a whole.

The key challenge for new development will be to optimize commercial viability and build upon opportunities which benefit local communities through its physical attributes and through funding mechanisms.

With new development there is a danger that it excludes surrounding communities and creates or re-creates existing barriers.

Development should be permeable, diverse and flexible. Permeability is a vital component and will be a key factor in masterplanning the core areas. Wherever possible the layouts should extend existing street patterns, provide clear, safe, routes to new river crossings, provide a coherent hierarchy of usable public, communal and private spaces, promote rather than restrict access to the river park and riverside walks. Aspect and access to the new open space will be a major attractor but should not be exclusive to the new developments. It should be a shared amenity which re-connects existing communities to the river.

New development should knit into existing communities and balance their changing needs with demands which attract new residents to the area. An holistic approach has been taken towards new development in riverside locations and housing renewal/densification in the wider area. The proposals look at ways in which demand for large family units and social housing, intermediate and shared ownership residences can be combined with a range of higher income owner occupied dwellings spread throughout the whole study area. Diversity of mix is key in looking at the longer term regeneration of the area. The attraction of clear river edge sites is evident from other developments within the Lea Valley. How to attract a broad social mix and to spread the advantage into hinterland areas is a more complex but vital issue which has been a major consideration in our approach.

Layouts of core area sites build on and support the links and routes identified in previous sections developing the opportunities offered by connectivity and links to

6.1 Urban Design Strategy - Core Areas



Poplar-wider and core area boundaries

surrounding communities. The aim is to develop a framework for new development which optimizes the existing and future assets of the area and to build new local centres which serve the new communities well within the context of developing communities and centres within the wider area.

The following sections look at 5 subareas within the core area. These subsites broadly relate to current land ownerships and boundaries of inherited studies - e.g. Ailsa Street development and loosely to LLVOAPF, LBTH use areas.

6.1.3 Property Summaries - Overall Introduction

This section has been provided by John Fosbraey at Savills and introduces the issues concerning property and delivery.

Savills have also provided information for each of the core area sites 1-5 (in the following sections) which establish the potential for change on a site by site basis, and set out the opportunities and constraints for delivery of each.

Delivery

The following section comprises a detailed overview of each of the core areas, and sets out recommendations for their delivery.

The overarching aim of the DIS is to encourage comprehensive, where possible, development of the core areas alongside improvements in the existing stock across the wider area.

The core areas should be developed in accordance with this Strategy, which sets out the front loaded works, including transportation improvements, that are required to enable change in the area.

The industrial past and present of the area gives the opportunity for new development to forge a strong link with its history, but also means that high levels of remediation may be required in some of the most heavily used sites.

Allied to the required transport infrastructure improvements, there are significant abnormal costs for almost all of the core areas. This means that their development must be carried out to an exceptional standard in order to maintain values on both residential and commercial properties.

LTGDC is committed to the delivery of Poplar Riverside

and will take on key actions and responsibilities along with public and private sector partners in order to realise the vision. Other key agencies and organisations include the Homes and Communities Agency, London Development Agency, the Greater London Authority, Transport for London, the London Borough of Tower Hamlets and Poplar HARCA.

Sites will be brought forward with partners according to the indicative timing and phasing within this document, and with LTGDC's ability to provide Compulsory Purchase and planning input.

LTGDC's aim is to create a fully integrated and sustainable community with cross sector working and community consultation at its heart. The DIS will be used as a tool by LTGDC to secure the development of the area by pooling resources.

Many of the projects and improvement schemes set out in this document will be delivered with the aid of planning obligations

LTGDC will seek contributions from development proposals that come forward within the Poplar Riverside area, and a list of priorities for planning obligations is set out below. The list is not exhaustive and the capacity to deliver such obligations will be



The Limehouse Cut from Bow Creek



A12 with old Library



Nairn street Estate

assessed on a scheme by scheme basis.

Planning Obligations will include:

- Affordable Housing
- Contributions to the provision of education facilities
- Contributions to the provision of community facilities
- Public transport improvements and travel plans
- Infrastructure and highway improvements
- Public realm improvements

Planning obligation may include:

- Walking and cycle routes
- Public art
- Open space
- Recycling and waste management initiatives
- Employment training schemes and jobs brokerage

Implementation Strategy

It is considered that this document has an implementable life of 10-15 years and it may take that long or more for the comprehensive regeneration of the area in line with the strategy to be achieved.

The core areas have different opportunities and



Leven Road to the Tram Shed

constraints for delivery and, as such, will come forward at different stages and over different timescales. Some core areas may come forward at the same or similar times, particularly where land assembly can take place at any early stage, and others will take longer, such as Leven Road where the gasworks require decommissioning, before meaningful development can commence.

Core Areas should be able to come forward within:

- The short term (1 to 4 years)
- The mid term (5-8 years)
- The long term (9 years +)

Each area should be delivered in accordance with the Delivery and Implementation Strategy (DIS), and any other layers of planning policy which enhance it in the future, for example Supplementary Planning Documents.

Timescales are likely to be ultimately led by land acquisition and assembly. Financial viability will be affected by abnormal costs, as well as changes to the market over the duration of the DIS.

The individual development briefs for each core area as follows set out the basis for implementation.



Abbott Road towards A13

Fortrose Close estate





6.2.1 Industrial Character

Core area 1 is defined by Bow Lock to the north, Gillender Street to the west, the river to the east and the Waste Transfer depot to the south. It is currently designated within the LLVOAPF and LBTH UDP for retention as industrial use.

Bow Lock, where Limehouse Cut meets the River is an attractive area of historic interest and value. It is the only place within the core area where there is access to the river with a public path from Limehouse Cut leading to a pedestrian bridge at Bow Lock. Further south there are small scale industries occupying single storey sheds. Further south still, there are studios within the old Fire Station and Iron Mountain storage fronting onto Gillender Street which are two of the few industrial scale buildings which remain in direct contact with the river edge.

Industry and industrial scale buildings form the strong character of the area. We support retention of industry and employment in this area. However, in the context of new, mixed, residential developments both north and south a more integrated mix of uses for this area is proposed. This combines a higher density of smaller industrial units, workshops, studios etc with residential as a way of creating a more active, permeable river edge. Residential development along Gillender Street would also create more active frontages which would improve the environment of what is envisaged to become a key pedestrian route to Bromley-by-Bow.

6.2.2 New Development

New development should be sensitively designed to preserve and enhance the industrial character and heritage of the area and to support the important river industrial heritage of Bow Lock. The existing buildings of the old fire station and Iron Mountain have a distinct industrial character and scale which is worth preserving. This is one of the few places where buildings meet the river edge,

Bow lock

and give a strong river edge industrial character to Bow Lock. For this reason, retention of these buildings is the preferred option even though they prevent pedestrian access along the west side of the river.

Elsewhere, new development within Core area 1 should provide views and access to the river edge with new public spaces complementing some public uses at ground floor level - eg river edge cafe/restaurant etc. Improved and active river related public spaces will help to support the public amenity and interest of Bow Lock and provide more direct connection to the Lea River Park at this significant point.

6.2.3 Massing

The proposed layout shows a new public space to the north related to Bow Lock. To the south of this is a combination of new medium to high buildings which complement the character and scale of existing buildings further south. A taller building (8-10 storeys) is shown fronting onto the A12 to form a 'gateway' to Poplar Riverside with Tweed



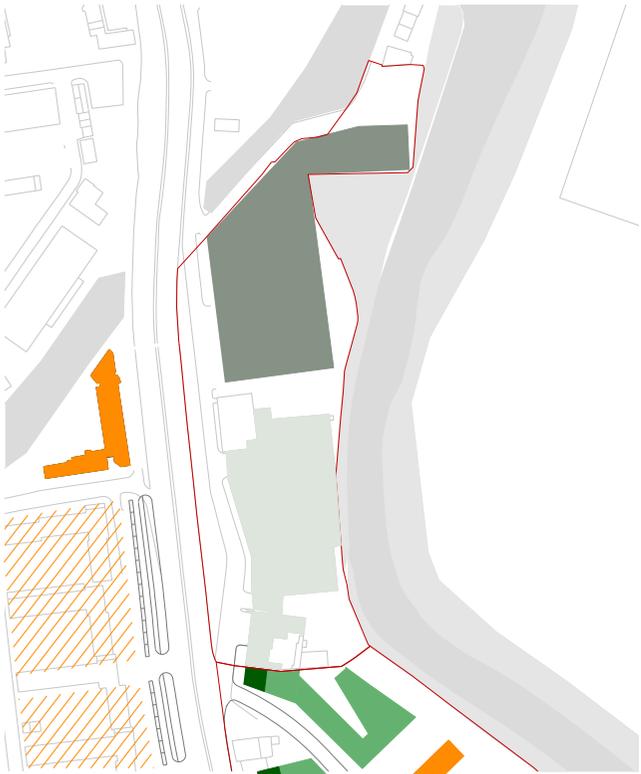
Industrial buildings along the river edge

6.2 Core Area 1 - Bow Lock

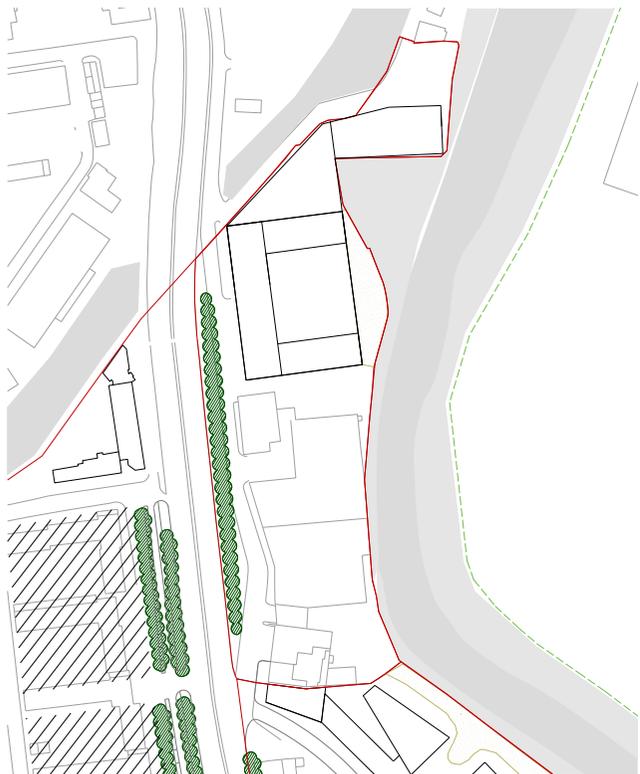
- Proposed Workshops/studios
- Existing residential
- Proposed Residential
- Existing industrial
- Proposed Office
- Proposed Commercial/retail
- Proposed area for redevelopment in accordance with Poplar HARCA

- Proposed river edge
- Proposed new buildings
- Current developments
- Existing buildings

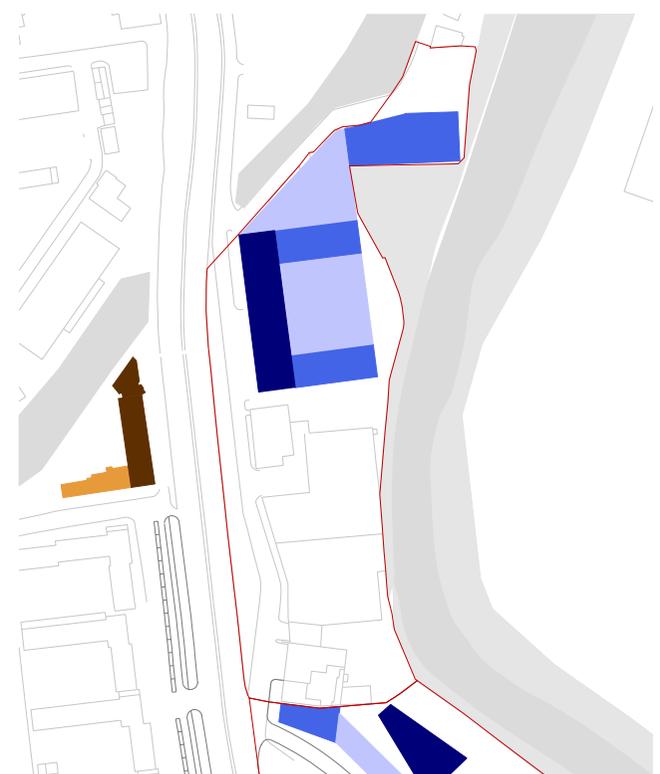
- Low rise 2-4 storey
- Medium rise 5-7 storey
- High rise 8-10 storey
- Current developments - low rise 2-4
- Current developments - medium rise 5-7
- Current developments - high rise 8-10
- Current developments -high rise 10+



Core area 1 proposed ground floor uses



Core area 1 proposed building outlines and open space



Core area 1 proposed massing

House opposite.

6.2.4 Property Current Situation

Description of the existing site

The existing site comprises an old fire station, refurbished to provide commercial accommodation on the ground floor with residential units above, and a four storey Iron Mountain document storage facility.

Additional industrial accommodation in the form of a small workshop estate is located north of the Iron Mountain site with open land north of this which slopes to the river providing northerly views of the River Lea.

Core Area 1 adjoins the A12 via a short slip road (Gillender Street). The site covers 2.4 hectares.

Overview of site ownership

Iron Mountain hold the freehold interest in the southern section. Chiltern Transport (Bow) Limited hold an interest in the land to the north. Various leasehold interests also exist.

As the site is covered by a small number of freehold ownerships, it has the potential to be assembled in the short to medium term, and it is therefore likely that the development of this core area could be considered at an earlier stage than others.

6.2.5 Planning/ Development and Density Issues

PTAL/ Density range (Existing and Proposed)

The site currently has a PTAL of 3 to 4, which provides for a residential density of 450- 550 habitable rooms per hectare.

In terms of accessibility the site is in close proximity to a number of bus routes and is within walking distance of the DLR service and Bromley by Bow station.

The site has the potential to improve its PTAL to 5. This reflects infrastructure improvements including the potential new bus corridor which will run to the east of the A12 via Gillender Street and a new pedestrian/ cycle crossing of the River Lea adjacent to the A13.

The proposed PTAL provides 600-700 habitable rooms per hectare, meaning, in density policy terms at least, that a further intensification of residential development could take place.

Flooding

Core Area 1 is located within flood risk zone 3, with an annual probability of flooding from the sea greater than 1 in 200.

A flood risk assessment will need to be provided with any planning application and its consequences taken into account in the design. Such flood risk

may additionally require improvement/ continuation of services, the improving of flood defences and the implementation on non residential uses at ground floor levels. This would be considered in more detail towards the planning application stage.

Decant and relocation

LTGDC is keen to retain and enhance existing businesses in the Poplar Riverside area wherever possible. Core Area 1 has previously been designated for employment uses, and any redevelopment of the site would need to give strong consideration to the retention of business space.

Any existing businesses affected by redevelopment would need to be relocated or re-housed within the scheme where applicable.

6.2.6 Option Analysis

Planning policy has previously supported the retention of industry and employment in the Core Area 1.

The existing buildings of the old Fire station and the Iron Mountain warehouse have a distinct riverside industrial character and scale which should be preserved where possible.

These buildings, along with the smaller scale industries to the north however create a barrier to access the



river which should be noted with potential new development proposals.

Any residential or alternative development will need to take the existing character of the area to heart, whilst acknowledging the potential of the riverside to create an environment where people can both live and work.

The sloping of the site down towards the river creates a challenge in terms of levels, and gives the potential opportunity to explore taller buildings.

6.2.7 Preferred Option

Whilst the industrial character of the site and links with the river should be maintained, in the context of new, mixed development across the area, a more integrated mix of uses for this area with a higher density of smaller industrial units and workshop studios with residences is recommended.

The Core Area 1 masterplan shows buildings of between 2-7 storeys and 8-10 storeys with the taller buildings located away from the river edge fronting onto the A12.

Residential accommodation may well include provision of student accommodation, which links to the educational facilities to the north of Poplar in Stratford and other areas.

Employment uses should be incorporated within the site, and these may comprise workshops, small industrial uses or offices. Such development must be sensitive to any residential development stacked above and access and egress, hours of operation and types of uses must be carefully considered.

The proposed use for the site seeks to provide a mixed use environment which may encourage families given the amenity space of the river and the walking and cycling routes north and south of the site.

6.2.8 Phasing and Key Early Stages

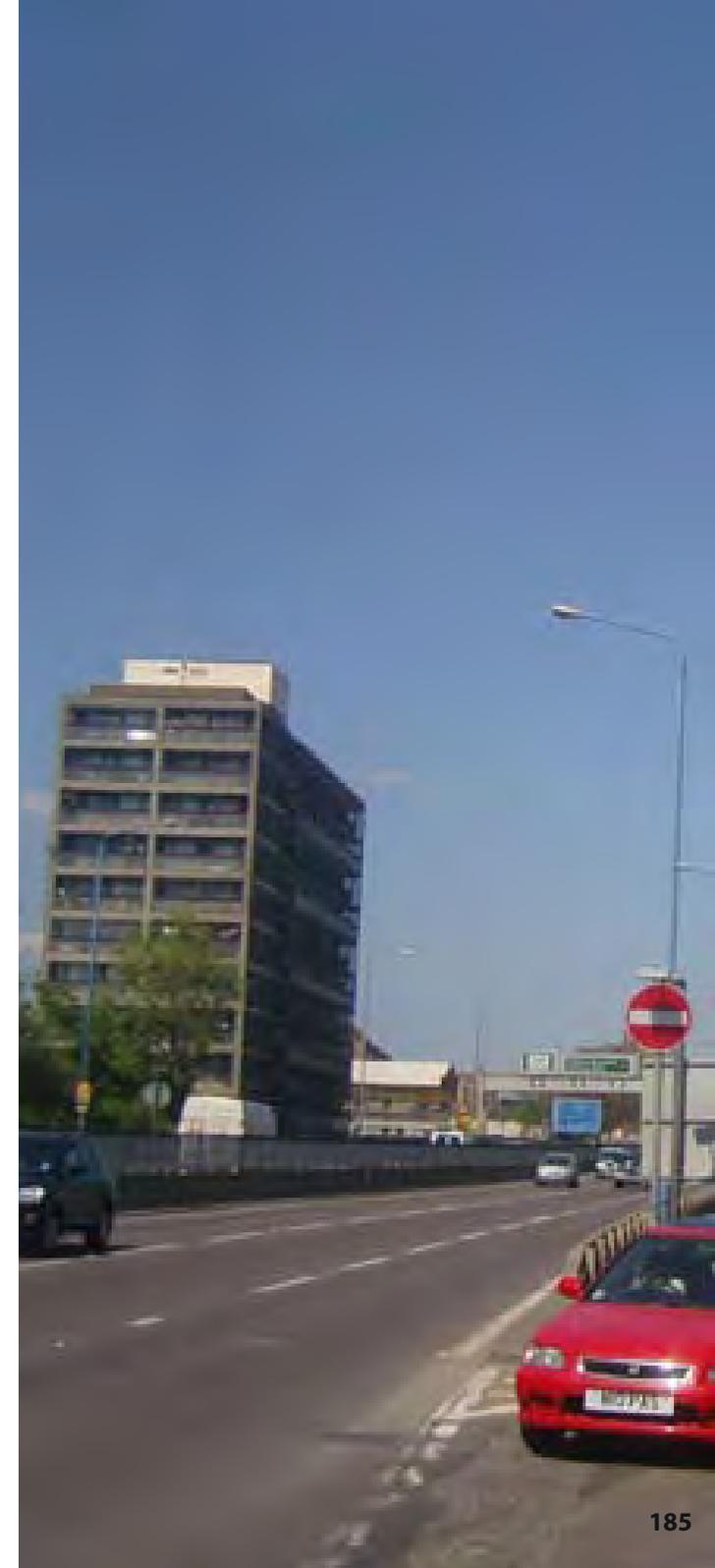
Depending on the scale of any proposal that comes forward for planning permission in conjunction with the masterplan, the potential to improve accessibility to the sites, and therefore residential densities, needs to be explored.

Any transport works that are required will be funded by the scheme and may include improved linkages to the A12 via car, walking and cycling. The new north-south bus route through the wider area may also be a significant factor in any redevelopment of Core Area 1.

Deliverability of the site relies on the control of the northern section, and this would comprise the first, or possibly only, phase. The larger buildings in the south of the site are likely to remain in situ.

6.2.9 Overall Timing

It is considered that Core Area 1 may come forward in the short term (2-4 years), and much of this will depend upon land ownership and any necessary transport improvement works.



A12 and Gillender Street junction



6.3.1A Barrier along the River Edge

Core Area 2 extends from the entrance to the Waste Transfer Depot on Gillender Street in the north to Leven Road to the south. It is currently occupied mainly by waste and recycling industries (car breaking/recycling) along Lochnagar and Ailsa Street and has an extremely poor environment. It is a 'no-go' area for the public and is a major detraction and barrier along the river edge.

The proposed Zetland Street to Lochnagar Street A12 crossing is a key west to east connection which will enable redevelopment of the Ailsa Street area. This is the result of many years of planning and numerous studies including the SPD of 2005 which, along with the LDA/WWMA 2003 study provide references for the following proposal.

The numerous previous studies have looked at ways to unlock the potential of the area which currently suffers from numerous barriers:

- poor connectivity, low PTAL rating
- multiple ownerships which makes coherent proposals difficult.
- heavy contamination and high remediation costs.
- flood defences and high repair and maintenance costs.

As a consequence the area is a high priority for LTGDC intervention and is the subject of a Green Book Appraisal to support the LTGDC's proposed CPO of relevant sites. This aims at unlocking the site by unifying the multiplicity of separate ownerships, to promote coherent development and assist economic viability. The timely combination of the new crossing and LTGDC's intervention, now provide the ingredients for coherent development of Ailsa Street which is vital to the regeneration of Poplar Riverside as a whole.

Lochnagar Street

6.3.2 Land Ownership, current uses:

The area around Lochnagar Street and Ailsa Street are currently in a multiplicity of ownerships with low grade industrial uses.

Key partners who have ownership and an interest in the development of the area are:

LBTH - who own certain sites, including Bromley Hall Referral School which is currently disused and to be replaced by a new 2FE primary school on the existing site or within the Ailsa Street area.

Leaside Regeneration - whose ownership includes the Old Library and Bromley Hall.

The Waste Transfer Depot though active is intended to be relocated, possibly to Fish Island, as part of the LBTH Waste Strategy, currently being developed.

6.3.3 Existing Environment

The poor environment of Ailsa Street reflects the current low status of the River Lea as a backwater. Strategic



Ailsa Street plan by Witherford Watson Mann architects prepared for LDA study 2003

6.3 Core Area 2 - Ailsa Street

- Proposed workshops/studios
- Proposed commercial
- Proposed retail
- Proposed residential
- Proposed primary school
- Proposed office
- Proposed community arts or workshops
- Proposed commercial or large retail
- Proposed commercial with hotel above
- Existing residential
- Proposed area for redevelopment in accordance with Poplar HARCA

- Proposed public soft landscaping
- Proposed public hard landscaping
- Proposed communal soft landscaping
- Proposed communal hard landscaping
- Proposed gardens
- Proposed school landscaping
- Proposed river edge
- Proposed new buildings
- Current developments
- Existing buildings

- Low rise 2-4 storey
- Medium rise 5-7 storey
- High rise 8-10 storey
- Current developments - low rise 2-4
- Current developments - medium rise 5-7
- Current developments - high rise 8-10
- Current developments - high rise 10+



Core area 2 and 2A proposed ground floor uses



Core area 2 and 2A proposed building outlines and open space



Core area 2 and 2A proposed massing

relocation of industries to areas where infrastructure and environmental conditions suit, will benefit the industries themselves and release this strategically important site for uses compatible with the changing status of the River Lea as a public amenity.

Gasometer HSE Zone

The southern part of the site including part of Bromley Hall School lies within the outer gasometer HSE risk zone. Any development within this area will require HSE approval as part of the planning process. Although current precedent indicates otherwise, there is a risk that development may be restricted.

Proposals develop from the opportunity offered by the new Zetland Road to Lochnagar crossing as a strategic connection. It provides direct access into Core Area 2 from the A12 and the communities to the west with potential for a cross river connection to Newham and Star Lane DLR to the east. The crossing is a first major step in unlocking the area although an infrastructure of connections are required for it to realise its potential.

The proposed new road link from Gillender Street to Leven Road connects to the eastern end of Lochnagar Street and knits it into the surrounding road network with potential for bus routes to Bromley-by-Bow and Canning Town.

The combination of road connections, public transport, and river location provide optimum conditions and development opportunity.

6.3.4 Key Principles

Proposals for this area are based upon a number of key principles:

- to enhance Lochnagar Street as an important public route by connecting it to the wider road network and east across the River Lea
- make the new road between Gillender Street and Leven Road a good connection for buses and a high quality pedestrian environment connecting public spaces which serve the local area
- integrate the proposal for a new pedestrian/cycle bridge at the eastern end of Lochnagar Street with a new open space on the river edge.
- create visual connections across the A12 from west to east
- optimise mixed residential development.
- lower buildings located towards the river, higher away from the river to avoid a wall of high rise along the river edge and to share the benefit of the river amenity with inland development
- tall buildings should mark important spaces or junctions to aid orientation.
- limit through traffic for non-residents
- retain and provide additional employment opportunity.

- concentrate commercial/retail uses to the A12 and Lochnagar Street.
- create open spaces and east-west landscape connections which connect the river to the A12 and beyond.
- integrate the requirement for 0.9 hectare of public open space and a hierarchy of communal and private amenity spaces.
- Integrate a new 2 form entry primary school with rapid delivery.
- provide access to and along the river edge.
- enhance existing and re-introduce river edge ecology. Create a 'soft river edge' to complement the hard river edge on the east side .

6.3.5 Thematic use areas

In line with the core philosophy, a mixed use environment is proposed which provides local amenities, responds to conditions of the wider area, promotes active and animated public realm throughout the day and night.

The mix of uses also responds to the need to promote employment alongside the requirement for mixed residential unit sizes and tenure.

A clear stratification of uses in plan and section, in conjunction with a clear hierarchy of public and private spaces can help to mediate between the A12 and the river.



6.3.6 A12 frontage

Commercial and retail uses should be located with primary frontages onto the A12, Lochnagar Street and other secondary west-east connections.

Larger scale offices with 'shop front type entrances and / or 'big box' showroom type retail should be encouraged along the A12 to help animate its edges, create a 'buffer' and a more active public realm. These can occupy the lower storeys with smaller unit size residential above. This is in line with the general principle of improving the identity of the A12 and its edges through taller (5-7 storeys, 8-10 at key locations) denser buildings, set back sufficiently to counter noise issues, but of a scale and proximity to provide a sense of enclosure and definition of space.

6.3.7 Lochnagar, west-east connections

Smaller scale creative 'shop front' type industries (such as workshops, studios, printers, IT repair etc) should be located on the ground floors of west to east routes, particularly Lochnagar Street, to animate the streets during the day. These uses can have residential units above.

As a key route it should be strengthened as much as possible as a public thoroughfare through mixed, active uses which help to attract people to and along it.

The new bridge and green public space at the eastern end of Lochnagar Street provide a strong destination to attract people along it and create footfall for more diverse uses. The eastern end of Lochnagar Street has also been identified as a preferred location for the new 2FE Primary School which is related to the local park, the river edge and away from the noise and dirt of pollution of the A12.

6.3.8 Hinterland - new north south connection

Residential blocks and entrances with local public spaces animate the central area along the Gillender Street to Leven Road connection. It is important that this new connection feels safe and active at night. Residential entrances and local amenities such as local shops, pub, cafe etc will give an active life to the street. Public open spaces should be accessible from this 'spine' route.

6.3.9 River edge

Development will be mainly residential within the quieter zone towards the river. New residential courtyard blocks define and integrate public and communal spaces which open and connect to the river edge. 3 sided courtyards maximise views to the river and introduces landscape which supports river edge ecology. The river edge should be accessible to the public and should offer a diverse range of landscape settings and experiences as part of the broader ambition of the Lea River Park.

6.3.10 Connections

The new north south road connecting Gillender Street to Leven Road is key to giving access to the area and forms an important intersection with Lochnagar street which in turns reinforces the west-east route from Zetland Road and the A12.

The proposed alignment of the new road differs from previous studies by taking a direct straight route between Gillender Street and Leven Road which not only provides views along it but is also easier for buses. More detailed design and modelling will be required for junctions particularly at the point where Gillender Street meets the A12.

A series of secondary connections run perpendicular to the Gillender Street to Leven Road 'spine' giving west-east road connections from the A12 and creating the local traffic 'loops' described earlier. They also define a tighter urban block structure which is closer to the historic street patterns which we have already observed are more pedestrian oriented in terms of their scale.

The area to the east of the new spine road, between road and river incorporates west-east landscape connections which provide direct views and pedestrian access to the river edge but no through access for vehicles except for maintenance and fire. It is important that a high level of permeability is achieved, through a car free zone which is landscape rather than road oriented, closer to the river edge.



6.3.11 Public realm and landscape connections

A hierarchy of differentiated public spaces complement the range of uses and connections west to east across the site. These transform from defined streets closer to the A12 to softer communal and public green open spaces close to the river edge.

Scale and character of spaces, use of materials and relationship to building uses and frontages should respond to and support the specific conditions of the area: Key principles are:

- contained and geometrical spaces to the west, more organic, expansive, and green spaces to the east
- permeable and active streets to the west; softer and greener open spaces towards the river. Defined edges and contained spaces to the west, more open, fluid and soft landscaped spaces related to residential courtyards to the east, capturing and enhancing river edge ecology
- optimise public access around and through residential blocks to increase permeability. Provide a range of alternative routes through the site via streets, courtyards and public gardens. It is important to introduce choices of routes - quieter, landscaped routes during the day, access via well lit, active streets at night.
- landscape connections to support visual and physical links with a consistent palette of materials to give a coherent character to the area.
- continuity of landscape and visual links between individual residential blocks to reinforce the sense of community and to avoid insular development
- wide pavements relating to non-residential frontages to the west; wide, open soft landscaped spaces for play, leisure and recreation, to the east
- a clear hierarchy of open spaces from public, to

communal to private relating to well defined fronts and backs to buildings, with clear boundaries and thresholds

- a thematic choice of materials related to site conditions: hard regular paving to streets; fluid, gravelly, monolithic materials closer to the river edge - i.e. tar and chip surfaces, resin and water bound gravels, granite setts etc. Materials should also relate to the Lea River Park palette
- provision of open spaces to comply with planning requirements including 0.9 hectares of public green open space related to new residential development.
- optimise views and connections to the river and along the river edge
- maintain EA requirement for a minimum 8 metre access strip along the river edge for flood defence maintenance
- support the principles of the Lea River Park Concept Study with a softer river edge to complement the harder edge related to the Fat Walk on the east bank.
- avoid the ground plane being taken over by car parking. By utilizing ground levels it is possible to accommodate the majority of LBTH requirement of 0.5 spaces per residential unit (private and affordable) within a semi-basement (undercroft) car park

Active street frontages and consistent building alignment define the west-east connections from the A12 as strong public thoroughfares for vehicles, cycles and pedestrians. Avenues of trees on the north side of streets, planted into wide pavements, reinforce the west-east connections. Future continuation of tree avenues further west across the A12 will help to reinforce the relationship between the two sides.

Wide segments of green public open spaces extend from the river edge westwards to the new spine road providing the opportunity for river edge ecology to permeate to the interior of the site. The most southerly open space

at the eastern end of Lochnagar Street is developed as a larger scale public space and local river edge park. Along with the new bridge this will provide a strong river edge destination to reinforce the main west-east connection and provide a setting for the preferred school location.

6.3.12 Building typologies - density, mass, scale

The street layout provides a permeable environment and defines the scale and grain of urban block structure designed to accommodate buildings capable of integrating a varied mix of uses, residential unit sizes and tenures.

The parallel requirements for optimum density (in line with planning policy), a significant proportion of large family units, 35% affordable housing, mix of uses and amount of public space within a high flood risk area, provide a complex set of requirements and conditions.

In order to achieve a diverse mix and to avoid 'zoning' of uses, we have looked towards 'perimeter courtyard apartment building types which have the capacity to combine uses and tenures within a dense urban environment, along with a mix of private and communal open spaces.

Key principles in defining buildings are to:

- optimise density in accordance with planning policy density matrices (LLVOAPF, London Plan, LBTH UDP/ draft LDF) related to PTAL ratings.
- mitigate flood risk by avoiding high risk uses on the ground storey, in particular avoid bedrooms on the ground floor of residential units - i.e. retail or commercial uses on the ground floor or maisonettes, town houses with bedrooms elevated above the flood plain
- avoid a wall of tall buildings along the river edge with privileged views which restrict views from buildings

set further back.

- grade heights of buildings from lower along the river, higher further back from the river
- tall buildings will be supported where they aid orientation, mark significant locations and/or are part of an orchestrated town centre cluster. They should not simply take advantage of prime locations to maximize development value, particularly if they disregard the river as a valuable public amenity
- incorporate uses at ground floor level which create active street frontages and increase natural surveillance along major thoroughfares
- provide good quality protected communal open spaces
- create frontages which clearly define streets and street edges
- provide spaces which are overlooked, safe and secure at all times of day
- develop a scale, mass and character of buildings along with a palette of materials which allows for differentiation to suit specific conditions but also creates a coherent and continuous overall character.
- follow a topographic order of buildings - 'landmark' buildings should mark key locations, junctions, spaces against a more neutral background of repetition, consistent lower roof lines which relate to the scale of local streets and smaller scale spaces.
- all buildings visible from the river edge to have a simple, robust quality, brick clad to recall the character of previous and existing Victorian industrial buildings

Density

The majority of the area is currently PTAL 2-3. If proposed connections and transport infrastructure are implemented, this rises to PTAL 4-5 indicating an approximate density of 450-550 habitable rooms/hectare as optimum contingent upon the delivery of public transport infrastructure with

the possibility of increase to be considered at planning stage. This figure is at the higher end of the 2-4 PTAL rating matrix and at the lower end of the 4-6 PTAL matrix discussed and endorsed by LBTH.

Building typology

The perimeter apartment block typology clearly defines street edges and open spaces within the public realm and also creates protected interiors to the urban block of sufficient scale to accommodate a hierarchy of open spaces from private gardens to communal and public spaces.

The Coin Street Iroko building by Haworth Tompkins is an exemplar of this type of building which integrates retail uses alongside large family 'town houses' with private gardens, smaller apartments above with access to communal gardens and play areas within a protected courtyard interior.

The proposed layout shows adaptations of this exemplar type to suit the specific site conditions with an arrangement of three sided courtyard blocks which give enclosure to communal spaces and also views to the river.

Mass, Scale

The perimeter block typology optimises open space to building footprint. 4-6 storey buildings achieve appropriate densities when combined with a few taller buildings which act as landmarks. The general case of 4-6 storeys is of a scale fitting to the scale of local streets and open spaces.

Taller buildings (8-10 storeys) are indicated at key locations as orientation points - junctions and key public open spaces.

10 storeys has been established as the maximum height through discussion with LBTH.



Precedent - the Coin Street iroko courtyard block by Haworth Tompkins integrates 'town house' maisonettes with flats and key worker accommodation around courtyards with private and communal space.

6.3.13 Proposed building uses and layout

The proposed layout indicates how these principles can be achieved within an urban design which creates a coherent community in its own right and also knits into the surrounding areas to serve surrounding communities in anticipation of future developments within the wider area.

The block layout shows buildings wrapping around the perimeter of the urban blocks, each with a combination of private gardens relating to large family units and raised apartments.

In response to flood risk issues it is not practicable or desirable to raise all residential uses above ground floor level. There is not enough demand for commercial/retail or industrial uses to occupy the whole of the ground floor. Ground level undercroft car parks kill public space. An alternative solution of 'town house' type maisonettes with entrances and private gardens at ground floor level overcomes this problem by locating living rooms on the ground, bedrooms above.

Gillender Street Junction

A three sided courtyard with commercial/retail uses on the ground, possibly first and second floor. It establishes a firm corner to mark the entrance into the new spine road. To the east a taller (8-10 storeys) residential and commercial building continues the scale of river edge industrial buildings to the north. It is perceived that this building will have a simple, robust quality, of brick which specifically relates to the adjacent buildings.

Bromley Hall and Old the Library.

New tree planting around Bromley Hall visible from the A12. The block is to and to refer to the hunting lodge setting of the original building. This is a building of great historic significance and deserves a special setting, possibly with public access to the building itself as a museum (should this fit with Leaside Regenerations overall vision for this building currently used as their offices).

New commercial development is shown wrapping the Old Library and Leaside's offices with residential units on the south facing wing.

Retail units could occupy the ground floors with frontages onto the A12 either side of the Library.

A12/Lochanagar

A 3 sided perimeter block with commercial/retail frontage onto the A12. Set back and screened from the existing A12. Commercial uses as a buffer up to 3-5 storeys with residential above within a 8-12 storey building marking the Lochanagar junction.

Shop front type workshops on the ground floor of the south wing facing onto Lochanagar street with two storeys of residential accommodation over. Generally south facing wings of blocks are lower than the others to optimise southern daylight into the interior courtyards.

Residential units on the north and east sides with 2-3 storey 'townhouse' type maisonettes on the ground with private gardens, apartments above. Note that residences with private gardens are not proposed for the south side because this results in north facing gardens.

The open space in the centre is of a scale to accommodate communal gardens, play spaces, and possible allotments.

Old Bromley Hall School site

A four sided perimeter block with similar arrangement to the A12/Lochanagar block .

Height increases from the south to the north east corner to mark the junction with Lochanagar Street. This would also provide an alternative location for a multi-storey 2 FE primary school to be integrated into the block with playground use of the open space within the block interior at ground floor level and rooftops of lower buildings.

A single storey school on this location is considered untenable because of its proximity to the A12 and because of the amount of land it would consume. A multi-

storey option integrated within a residential block with raised deck playspaces is a possibility and is considered acceptable by LBTH.

River edge

These are more compact versions of the 3 sided courtyard blocks with open sides towards the river to give views to the water and a continuation of river edge landscape into communal garden court spaces.

The composition of blocks are composed in response to the arc of the river. The orientation and spacing of the courtyard wings optimise views along the river north and south. Key corners are emphasised with uses such as local shops, pub, cafe.





6.4.1 A Strategic Position

The tram shed site has been identified separately and linked to Ailsa Street for a number of reasons:

- it occupies a strategic position on the edge of the river between the Ailsa street site and the proposed Poplar River park.
- It is one of the few significant historic buildings in the area.
- As a result of its important location and Iron Mountain's ambition to sell, it was considered as an extension to the LTGDC Ailsa Street CPO area. The future of this site is intimately connected to the development of the Ailsa Street site and they should be considered together.

Land Ownership, current uses:

The Tram shed is currently owned by Iron Mountain and used for document storage.

Historic - Existing

The Tram shed was one of a collection of industrial buildings on the edge of the river served by river wharfs. It was the terminus and maintenance depot for trams, followed by trolleybuses and then routemaster buses from 1959, closing in 1985.

The original depot, the part of most historic significance, occupied the southern part of the site - see historic map and has incrementally developed northwards along Leven Road. Though visible from Leven Road it is fenced and isolated. Its west facing elevation along Leven Road is impressive but does not offer anything to what may become an important thoroughfare in the future.

Gasometer HSE zones

The entire Tram Shed lies within the HSE outer zone and the southern portion within the HSE middle zone. indicating

that more sensitive uses should be located towards the southern end of the site. Consultation and approval from the HSE will be required for any residential development as part of the planning process.

6.4.2 The Proposal

Within the context of change of the Lower Lea Valley and the Lea Valley Park proposition buildings such as the Tram shed are important links between the industrial heritage of the area and present day use.

Originally buildings of this kind were never expected to be seen by the public. They were utilitarian buildings which served, and also celebrated their function. They now serve as memories of the industrial heritage which characterises the area today.

The reuse of the existing Tram Shed fits neatly into the ethos of the Lea River Park which focuses on reuse and recycling of the working riparian environment. This underpins our proposal that the original southern part of the Tram Shed could be retained with potential for community, public or employment use. It is suggested that it could become a performance venue, community arts centre, or a river related renewable energy museum suggested within 5th Studio's Lea River Park study.

Proposals show this aspiration combined with residential development on the northern part of the site which consists of a three sided courtyard block of 5-7 storeys similar to those along the river edge in core area 2. This is also the preferred location for the new 2FE Primary School

Density

With proposed connections and transport infrastructure the Tram Shed is on the cusp of PTAL 3 and PTAL 4 which indicates that similar densities to the Ailsa Street apply - approx 450-550 ha/h.

1930 map of core area 2 and 2A



The last trolleybus outside the Tramshed, September 1959 (source: <http://www.skylineaviation.co.uk/buses/trolley.html>)

- Proposed Workshops/studios
- Proposed Retail
- Proposed Residential
- Proposed School
- Proposed Office
- Proposed community arts or commercial



Core area 2A proposed ground floor uses

- Proposed public soft landscaping
- Proposed public hard landscaping
- Proposed communal soft landscaping
- Proposed gardens
- Proposed school landscaping
- Proposed river edge
- Proposed new buildings
- Current developments
- Existing buildings



Core area 2A proposed building outlines and open space

6.4 Core Area 2a - Tramshed

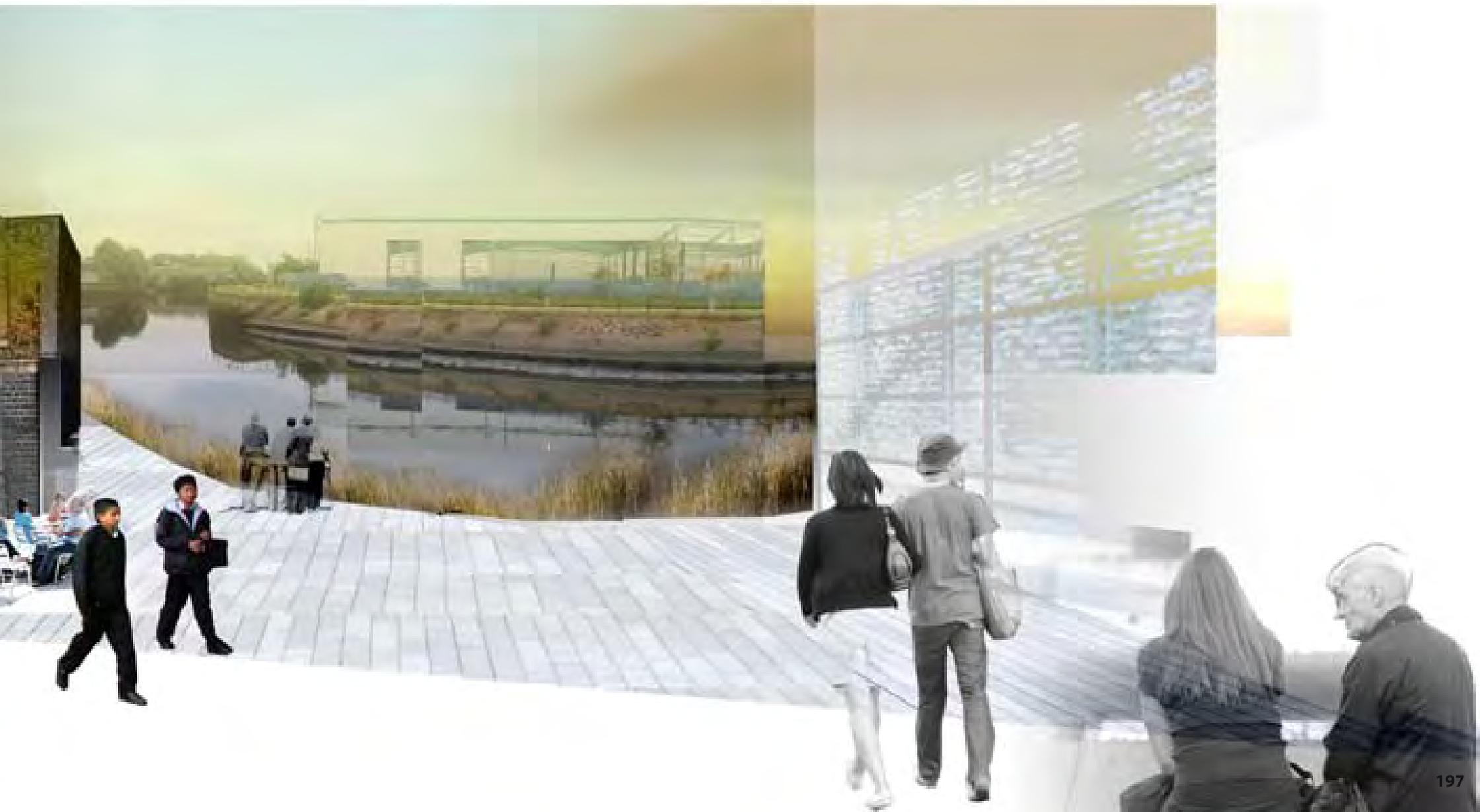
- Low rise 2-4 storey
- Medium rise 5-7 storey
- High rise 8-10 storey
- Current developments - low rise 2-4
- Current developments - medium rise 5-7
- Current developments - high rise 8-10
- Current developments -high rise 10+



Core area 2A proposed massing

The Tram shed is an important link between the industrial heritage of the area and present day use





Public space

Public use of the Tram Shed supports the principle of the River Link public space on the river at Devon's Wharf and a destination as part of the Lea River Park.

New Primary School

Demolition of the northern end of the Tram Shed could provide an alternative location for the new 2FE primary school required by LBTH. Subject to land acquisition within an appropriate time frame this location has key advantages relative to the Bromley hall site:

- it is located further away from the poor environment of the A12
- it is at the eastern end of Lochnagar Street and accessible from both west and east of the A12 once the new crossing is in place
- relates directly to the proposed open space at the eastern end of Lochnagar Street - see above
- it is close to the river and the new Lea River Park. A dedicated river crossing between the school and the ecology 'nose' on the east bank could give access to a walled river ecology garden
- a two storey school with a compact footprint can be related to larger and more varied external play areas.
- the school could share public facilities within the Tram Shed and vice versa
- there is less overlooking from surrounding residences

For these reasons this location is preferred as a setting for a new school but is dependent upon the Tram Shed being available within the proposed timeframe. The recent decision by LTGDC to extend the Ailsa Street CPO area to include the Tram Shed indicates that this will be possible.

6.4.3 Property Current Situation - Core Areas 2 and 2A

Description of the existing site

Core Area 2 comprises a broad mix of uses including

commercial and industrial uses, with some retail.

Leaside Regeneration Limited operate from and manage refurbished buildings on site, and the Container Futures sea container commercial accommodation. Cleanaway Limited operates a Waste Transfer facility to the north of the site, and the remainder comprises a multiplicity of commercial based uses.

The site is broadly flat, but does have some internal levels issues, and the comprehensive redevelopment being proposed will also require improvements to the river wall.

The area covers 4.87 hectares in total, and when taken to include Core Area 2a, the Iron Mountain Tram Shed site, the total is 6.11ha.

Overview of site ownership

LTGDC has submitted a Green Book Appraisal to the Treasury in order to secure the funding required to acquire the various land ownerships on site.

The site vests in over twenty separate ownerships, and it is likely that LTGDC's Compulsory Purchase powers will be required to bring the entire site into one ownership.

Details of this process will be made available as LTGDC progresses.

Some of the major landowners have submitted plans for smaller schemes over the years, but via this Delivery and Implementation Strategy, LTGDC is adamant that only comprehensive redevelopment should come forward.

Core Area 2a is owned freehold by Iron Mountain, who operate the buildings on site for document storage. The main building is a former Tram Shed and has excellent links to the history of the area. It may be possible to redevelop this site as part of the Poplar Riverside DIS, and it may therefore add to the total number of residential units and commercial spaces being provided at Ailsa Steet.

6.4.4 Transport, Development and Density Issues

PTAL/ Density range (Existing and Proposed)

The site currently has a PTAL of 3, which provides for a residential density of 350 - 400 habitable rooms per hectare.

In terms of accessibility, the site is in close proximity to a small number of bus routes. It is also within walking distance of Bromley-by-Bow station, although the route is hazardous, particularly at night.

Core Area 2 is restricted in terms of easterly movement as it has no direct route across River Lea to the Cody Road Industrial Estate and beyond to the Star Lane DLR station.

LTGDC has secured funding for a major junction improvement for Lochnagar Street, which will provide a significant benefit to accessibility to and from the A12 and allow for the site to be comprehensively redeveloped.

Along with the proposed north-south bus route through the sites, the Masterplan's suggested infrastructure improvements provide for a PTAL of 4, which could allow for 500-600 habitable rooms per hectare.

Flooding

Core Area 2 is located within flood risk zone 3, with an annual probability of flooding from the sea greater than 1 in 200.

A flood risk assessment will need to be provided with any planning application and its consequences taken into account in the design. Such flood risk may additionally require improvement/ continuation of services, the improvement of flood defences and the implementation on non residential uses at ground floor levels. This would be considered in more detail towards the planning application stage.

Decant and relocation

LTGDC is keen to retain and enhance existing businesses in

the Poplar Riverside area wherever possible. Core Area 2 is currently designated for and used by mixed employment uses, and the masterplan includes a reinstatement over and above the existing floor area of commercial space.

Any existing businesses affected by redevelopment would need to be relocated or re-housed within the scheme where applicable. Given the nature of many of the existing uses, it is likely that most will need to relocate elsewhere, and consideration must be given to this.

6.4.5 Option Analysis

Given the Lochnagar Street junction improvement, redevelopment to the density levels suggested will rely on the successful implementation of the north-south road and a new bus route along it.

These infrastructure improvements, allied to the site assembly process, will allow for the comprehensive redevelopment of the site, in conjunction with the masterplan [and Green Book Appraisal notional scheme].

The area will be able to become a compact residential-led mixed use development, comprising retail and commercial elements in order to create a location where people can live and work.

Retail provision will be kept to serving the needs of the immediate population, so as not to detract from other local retail centre including Chrisp Street. Commercial space may comprise workshops, offices, larger warehouse type retail space or small industrial units.

The London Borough of Tower Hamlets is committed to providing a two form entry primary school on the site and this must form part of any scheme that emerges.

6.4.6 Preferred Option

The Core Area 2 masterplan shows buildings of between 2 to 8 storeys with the taller buildings located away from

the river edge.

The scheme will provide over 900 units and incorporate 0.8 hectares of open space, with commercial uses and maisonettes at ground floor in order to mitigate flood risk and provide for a balanced community.

A mix of commercial uses is also suggested, including office, workshops, retail and hotel.

6.4.7 Phasing and Key Early Stages

LTGDC is currently attempting to acquire the site and remediate it, and if this is a successful process, development partners will be able to work with a site free of most constraints. There remain issues relating to ground levels and river wall treatment.

Given LBTH's ownerships in the southern part of the site, the potential exists for development here to form a first phase. LBTH are committed to delivering a two form entry primary school on the Ailsa Street site, it this may fall within their own land ownership.

The potential also exists to incorporate the Iron Mountain document storage facility (former Tram Shed), whose redevelopment or refurbishment may also form an early phase.

It is likely that the phasing of the scheme would continue from south to north, allowing LTGDC and LBTH sufficient opportunity to relocate the Waste Transfer Station in the north.

6.4.8 Overall Timing

It is considered that Core Area 2 may come forward in the medium term (5-7 years), given that the acquisition process may potentially be lengthy. Certain large areas within single ownerships may come forward much earlier.





6.5.1 An Impermeable Island

The Nairn Street is entirely owned by Poplar HARCA. It is contemporaneous and of similar building types to North and South Teviot estates - 4-5 storey brick courtyard buildings which have been through a cycle of refurbishment but now considered due for renewal.

It occupies a key corner at the junction of the A12 and Abbott Road but due to the poor surrounding environments is an impermeable 'island', difficult to get to and difficult to move around within. It turns its back on the public realm and is inward looking reinforced by a planting zone which separates it from the A12 and Abbott Road. Whilst this may have originally been for good reason in order to provide a buffer between residences and the noise and dirt of the A12 it has helped to reinforce its isolation.

Roads which once ran through the area, Nairn street in particular have been severed, new roads (e.g. Abbott Road) are perceived as dead ends.

The one point of relief is the small triangular public space which connects the estate to the terrace of Victorian houses on the north side of Abbott Road.

Poplar Harca's 'Reshaping Poplar' highlights this area for potential renewal and recent discussions with highlight their enthusiasm for cohesive change in the context of new developments within the core area, Ailsa Street in particular.

6.5.2 Proposal

Future renewal of the estate would give the opportunity to knit the area back into the surrounding fabric and create a more open, active and permeable environment.

Nairn Street

Key principles are to:

- extend Nairn street and Leven road into and through the area
- integrate the A12 widening proposal with active frontages along the western edge
- extend the southern edge of buildings southwards towards Abbott Road to make a more compact junction following removal of the underpass
- develop building types, mix of uses, mass and scale similar to those proposed for the Ailsa street site to reinforce a sense of integration rather than separation
- respond to the proposed new junction and crossing at the A12 /Abbott Road intersection.

Connections:

The historic map shows Nairn Street as a strong north south connection between Bromley Hall Road and Abbott Road. In the event of future redevelopment it is important to reintroduce this north south connection. An extension of Leven Road westwards is currently being proposed by LBTH and would help to improve permeability through the site, particularly if it connects to the local access road proposed as part of the A12 widening strategy. This would create another a series of local 'loops' to improve local movement.

Uses

The pattern of uses reflects those of the Ailsa Street proposal with:

- commercial or showroom type retail along the A12, with smaller unit residential above. A major showroom or office frontage to mark the corner of the A12 and Abbott Road junction.

6.5 Core Area 3 - Nairn Street



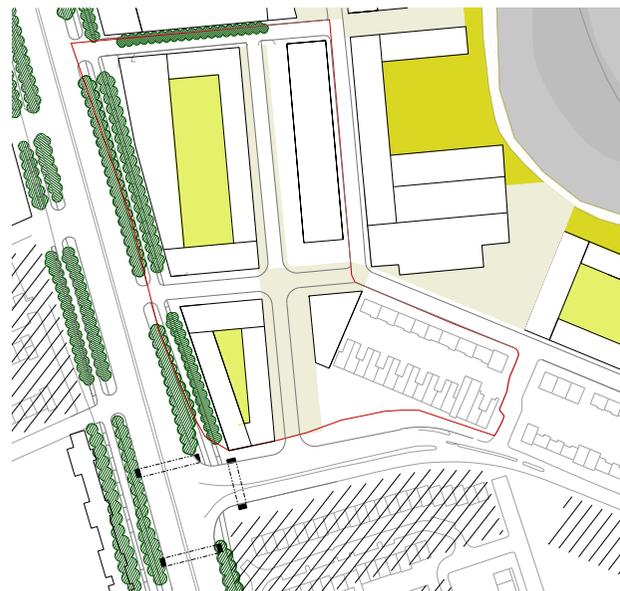
- Proposed Workshops/studios
- Proposed Commercial
- Proposed Retail
- Proposed Residential
- Proposed Community arts
- Proposed School
- Proposed Office
- Proposed Community arts or workshops
- Existing residential
- Existing retail
- Proposed area for redevelopment in accordance with Poplar HARCA

- Proposed public soft landscaping
- Proposed public hard landscaping
- Proposed communal soft landscaping
- Proposed communal hard landscaping
- Proposed river edge
- Proposed new buildings
- Existing buildings

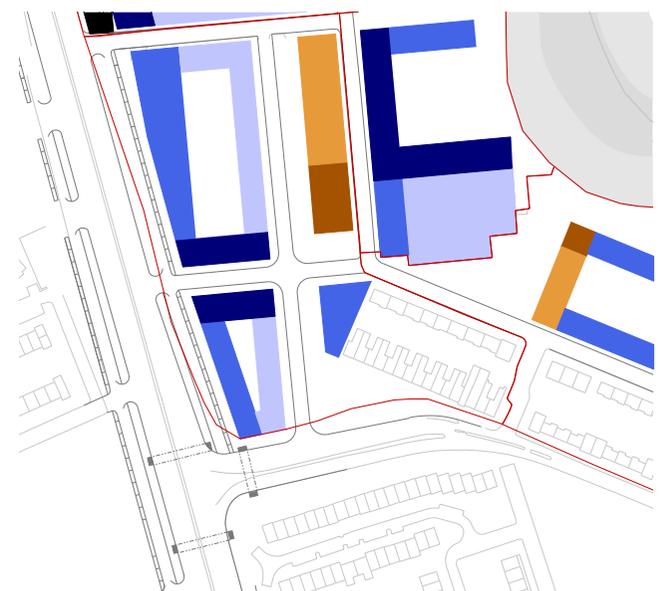
- Low rise 2-4 storey
- Medium rise 5-7 storey
- High rise 8-10 storey
- Current developments - low rise 2-4
- Current developments - medium rise 5-7
- Current developments - high rise 8-10
- Current developments - high rise 10+



Core area 3 proposed ground floor uses



Core area 3 proposed building outlines and open space



Core area 3 proposed massing

- A local provision shop at the junction of Nairn street and the Leven Road extension.
-
- residential to the remainder of the area to the east interspersed with small workshops/studios at ground floor level.

Density, mass, scale

The area is again on the cusp of the PTAL 1-3 and 4-6 bands indicating a similar density to Ailsa Street (site 2) of 450- 550+ habitable rooms /hectare.

Buildings are shown as generally 5-7 storeys along the A12, lower further west. Two 8 - 10 storey buildings relate to the A12 and to the junction of the A12 and Abbott Road.

Building typology

Following the Ailsa Street principles simple courtyard type apartment buildings give clear definition to street edges and protected interiors of either open garden courts or covered stair courts.

Public space

A new public space to the west of the Victorian terrace links Nairn street to Leven Road, creates a local focus and access to the Tram Shed.

6.5.3 Property Current Situation

Description of the existing site

Core Area 3 is currently an estate of mixed tenure housing set out in 4 to 5 storey courtyard buildings in an interlinked L-shaped configuration.

The site is bounded by Nairn Street and Abbott Road and located directly to the south of the Ailsa Street site (Core Area 2). The western edge of the site abuts the A12, and as the site curves towards Leven Road it forms an L shape.

The area covers 2.29 hectares.

Overview of site ownership

Core Area 3 is owned by Poplar HARCA, including the existing housing stock. As part of its 'Shaping Poplar' vision document, Poplar HARCA welcomes opportunities to bring forward improvements to its stock, including the potential for complete or partial redevelopment where applicable.

6.5.4 Transport, Development and Density Issues

PTAL/ Density range (Existing and Proposed)

The site currently has a PTAL of 3, which provides for a residential development density 450 habitable rooms per hectare.

In terms of accessibility the site is in immediate proximity to two bus routes. In addition, there are two DLR services in the surrounding area. The site however has limited access to the wider provision of public transport facilities in the area as it has no direct access to the east of river Lea or to the west of the A12.

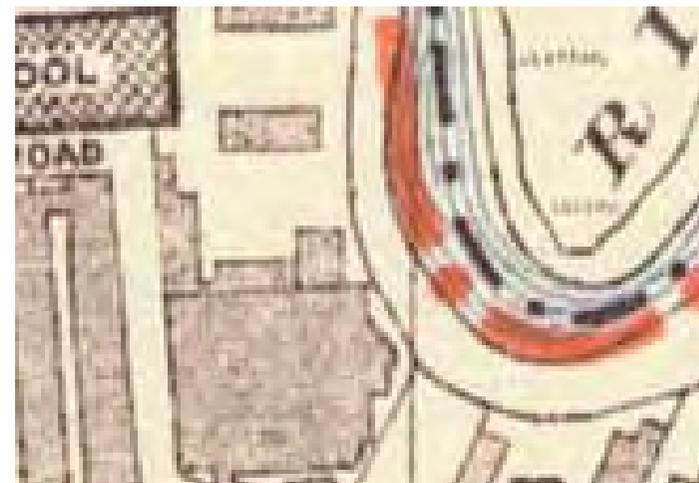
The proposed scheme shows an improved PTAL of 3 to 4. This reflects infrastructure improvements such as the potential new bus corridor running north of the site and south of Core Area 2 running between Zetland Street and Lochnager Street and the proposed new pedestrian/cycle bridge across River Lea at Lochnager Street.

Such improvements are designed to overcome any existing barriers to movement within and between the core areas through opening up the area to greater transport accessibility. The proposed PTAL provides for a residential density of 450 to 550 habitable rooms per hectare.

Flooding

Core Area 1 is located within flood risk zone 3, with an annual probability of flooding from the sea greater than 1 in 200.

A flood risk assessment will need to be provided with any planning application and its consequences taken into



1930 map pf core area 3

account in the design. Such flood risk may additionally require improvement/ continuation of services, the improvement of flood defences and the implementation on non residential uses at ground floor levels. This would be considered in more detail towards the planning application stage.

Decant and relocation

LTGDC is keen to retain and enhance existing businesses in the Poplar Riverside area wherever possible. Core Area 1 has previously been designated for employment uses, and any redevelopment of the site would need to give strong consideration to the retention of business space.

Any existing businesses affected by redevelopment would need to be relocated or re-housed within the scheme where applicable.

Most of the accommodation on site is residential, and LTGDC, LBTH and Poplar HARCA are strongly committed to ensuring efficient relocation of residents wherever necessary.

6.5.5 Option Analysis

Given the discreet size, shape, nature and position of the site, a continuation of residential use in the main is suggested. Any alterations to the site will need to consider the proposed transport improvements, and the improved density levels that they provide.

In order to ensure a continuation of improvement throughout the whole area, it is likely that the minimum requirement for this site will be the refurbishment of building externalities and communal areas.

The treatment of the western (A12) boundary is important in any redevelopment of the site, and in line with the proposal to widen the road in a boulevard style, Core Area 3 no longer needs to be inward facing and could open up to the west, possibly with the inclusion of active frontages at ground floor level.

A wholesale redevelopment of all or part would need to be undertaken in conjunction with Poplar HARCA.

6.5.6 Preferred Option

The Core Area 3 masterplan involves the development of commercial or showroom type retail along the A12 with residential units above. Residential space should be provided within the density range if it can be improved with the proposed transport works, and should be in keeping with the residential proposals for the other Core Areas.

Retail provision is allocated at the junction of Nairn Street and the Leven Road extension, which is likely to comprise convenience or comparison shopping to serve the local populace.

A significant showroom space or office frontage is proposed to mark the corner of the A12 and Abbott Road junction.

Residential accommodation will be provided to the remainder of the area to the east with small workshops/studios at ground floor level.

A new public space to the west of the core area would link Nairn Street to Leven Road.

6.5.7 Phasing and Key Early Stages

The first stage of work is likely to be a detailed investigation into the potential to improve accessibility to the sites, and therefore residential densities. The PTAL improvements suggested in the masterplan are not huge, however, so it is possible that redevelopment could take place without extensive work. For the continuity of the redevelopment of the overall Core Areas, the transport improvements suggested in the masterplan are highly desirable.

The key issue with the timing of redevelopment on the site is the decanting of existing tenants. There is a mix of tenants on site, including owner occupiers and secure rented tenants, and detailed discussions would be required with Poplar HARCA as property owner and manager to explore the potential for any redevelopment strategy.

In practise, all or part of Core Area 3 may come forward with other Core Areas, most likely Core Area 2, or with the inclusion of the Iron Mountain storage facility to the south of Ailsa Street (the former Tram Shed).

Taken as a stand alone site, it is likely that a comprehensive redevelopment would have to be broken down into more than one phase in order to allow for the decant of existing tenants. Any displaced tenants may need to be re-housed as part of the scheme.

6.5.8 Overall Timing

Principally due to existing resident relocation, it is considered that Core Area 3 may come forward in the medium term (4-7 years).

Bromley Hall Road - apparent dead end





6.6.1 Parkland Proposal

The existing site is owned by National Grid and occupied by active gasometers which are scheduled to be decommissioned in 2016 followed by a period of decontamination. The majority of the site is vacant and currently used for car storage. The three gasholders are prominent structures on the skyline and are a part of a series which pepper the Lower Lea Valley as reminders of its industrial legacy and as key points of orientation.

Though prominent the site forms a major barrier between Aberfeldy estates and the river at the heart of Poplar Riverside. A high brick wall forms the boundary with Leven Road and is particularly bleak.

6ha regional park

The LLVOAPF identified this location for a new local district park of 6 hectares to contribute to the much needed open space provision within the Borough and to serve the expected increase in population within the area.

The Lea River Park Design Framework (5th Studio February 2008) identified and developed the Poplar River Park as one of 6 new open spaces linked by the Fatwalk as part of a new linear park stretching from Olympic Park to the Thames.

The proposal

Core Area 4 includes the forecourt to the Tram Shed, Devon's Wharf and the new amenity space of Poplar River Park. Its boundaries have been defined in order to provide 6 hectares of public open space as well as new residential development.

The LLVOAPF showed a park along the river edge with residential development separating it from residential communities to the south and east. The proposal shown on the right follows the principles of the Lea River Park

Leven Road Gasometers

Framework which shows the park extending between the river edge and Abbott Road with a direct visual and physical connection to existing residential areas and east-west road connections which feed into it. A wide opening forning onto Leven road is formed around the central decommissioned gasometer which is proposed to be transformed into a vertical garden with the retained frame acting as a gigantic trellis and supporting recreational uses such as climbing and abseiling.

The main park is connected to the public space at Devon's Wharf which is one of a series of differentiated spaces along the edge of the river which transform from hard edged at Devon's Wharf to ordered reed bed, finally breaking out the river bank to create stepped terraces opposite the ecology park on the east bank.

The Park is conceived as being educational as well as recreational. Education will be integrated into the park implicitly through river edge ecology and more explicitly as a showcase for experimental technologies in renewable energy production and a possible visitor centre integrated as part of the residential development to the west.

Grass and hard surface courts for a range of sports are shown along the southern edge of the park served by changing facilities within the new residential development within core area 5.

Two courtyard residential blocks are shown along the western edge fronting onto Leven Road. These are shown as between 5-7 storeys in height to reflect the mass and scale of residential blocks on the edge of the park within core area 5. The block closest to the tram Shed may contain the visitor centre facing both into the park and onto the new public space at Devon's Wharf.

6.6 Core Area 4 - Gasometers And New River Park



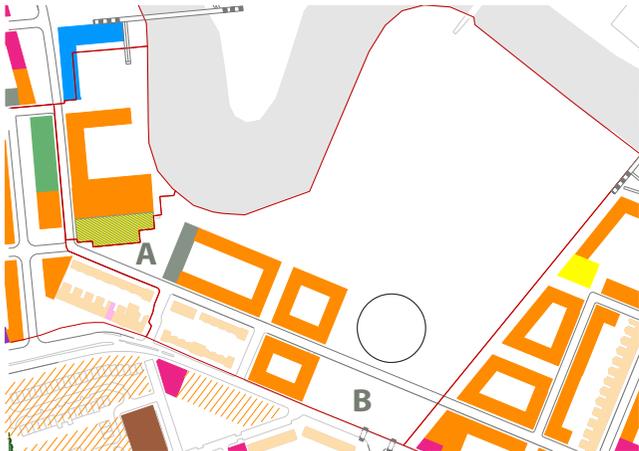
Park visualisation (Source : Lea River Park Design Framework document February 2008 produced by 5th Studio for LTGDC)



- Proposed workshops/studios
- Proposed commercial
- Proposed retail
- Proposed residential
- Proposed community
- Proposed primary school
- Proposed office
- Proposed community arts or workshop
- Existing residential
- Proposed area for redevelopment in accordance with Poplar HARCA

- Proposed public soft landscaping
- Proposed public hard landscaping
- Proposed communal soft landscaping
- Proposed gardens
- Proposed river edge
- Proposed new buildings
- Current developments
- Existing buildings

- Low rise 2-4 storey
- Medium rise 5-7 storey
- High rise 8-10 storey
- Current developments - low rise 2-4
- Current developments - medium rise 5-7
- Current developments - high rise 8-10
- Current developments -high rise 10+



Core area 4 proposed ground floor uses



Core area 4 proposed building outlines and open space



Core area 4 proposed massing





6.6.2 Property Current Situation

Description of the existing site

Leven Road Gasworks is a key site for the future of the area. The site currently consists of industrial accommodation including three operational gasholders to the south west of the core area, located off Leven Road. National Grid own and operate the site, which supplies gas to the wider area.

The area covers 8.4 hectares in total.

Overview of site ownership

The freehold of the site is owned by National Grid Limited.

As the Gasholders are still in use, the redevelopment of the site relies on their decommissioning, which may come forward as part of National Grid's ongoing strategic property review. LTGDC understands from its latest discussions that this is currently considered for 2016.

If the site can be determined as surplus to National Grid's requirements and decommissioned, it would become developable. It would however still require acquisition and remediation commensurate with its intended end use.

Key routes connect Aberfeldy estate to the river

6.6.3 Planning, Development and Density Issues

PTAL/ Density range (Existing and Proposed)

The site currently has a PTAL level of 2, which if it were applicable would provide for residential development at a density of 350 habitable rooms per hectare.

In terms of accessibility, the site is within walking distance of six bus routes, one DLR station and Canning Town station which has access to the Jubilee Line services. As with other core areas however, the area is restricted as it has no direct access to the east of River Lea, and the A12 causes movement restrictions to the west.

The proposed PTAL provides 700 habitable rooms per hectare, meaning, in density policy terms at least that a further intensification of residential development could take place.

Flooding

Core Area 4 is located within flood risk zone 3, with an annual probability of flooding from the sea greater than 1 in 200.

A flood risk assessment will need to be provided with any planning application and its consequences taken into account in the design. Such flood risk may additionally require improvement/ continuation of services, the

improvement of flood defences and the implementation of non residential uses at ground floor levels. This would be considered in more detail towards the planning application stage.

Decant and relocation

National Grid is the only operator on site, although there may be short term storage and operational leases and licenses. It is not clear how National Grid sees its decant from the site working, and whether it will be in whole or part once the Gasholders are decommissioned.

A comprehensive redevelopment of the site may include the retention of some commercial uses, and National Grid may wish to remain on site in some form or other, and this should be considered nearer the time. If the company is able to move from the site entirely, there are no other title issues relating to development.

6.6.3 Option Analysis

The key deliverable for this site is the Lea River Park, which will take up 6 hectares.

The remainder of the site will provide residential led mixed use accommodation. Residential uses here will be able to benefit from the proximity of the park and the river, which together will create a good location for attractive residential blocks.



An exciting public laboratory and showcase for experimental technologies in sustainable energy production

Given the flood risk issues, ground floor uses remain sensitive, and any commercial and leisure uses should pay deference to the tranquillity and users of the park, and ensure that they are serviced and accessed away from the open space.

It is important to note that part of the site lies within the Health and Safety Executive (HSE) consultation zones. Whilst decommissioning of the gasometers is potentially on the horizon, any new development prior to that date will require consultation with the HSE which may have implications of the type and quantum of development possible.

6.6.4 Preferred Option

The Core Area 4 masterplan shows residential courtyard buildings of between 5 to 7 storeys fronting onto Leven Road to the west and towards the river to the east.

The masterplan keeps the largest gasholder frame in situ to mark the entrance to this new amenity space. This will ensure a landmark for the area and a link to its history. The potential for it to be internally developed may also be explored.

6.6.5 Phasing and Key Early Stages

The main key to the site is ownership and ground conditions. Once these are resolved, the site requires little other work, and, given the amount of development envisaged, may come forward in one or two phases.

Depending on the scale of any proposal that comes forward for planning permission in conjunction with the masterplan, the potential to improve accessibility to the sites, and therefore residential densities, will be explored.

Any transport works that are required will be funded by the scheme and may include a new bus corridor to the east of the A12 via Gillender Street in the north and a new pedestrian/cycle bridge across River Lea to Bidder Street providing a link to the planned Star Lane DLR station.

6.6.6 Overall Timing

Core Area 4 is likely to come forward in the longer term (9+ years).

This will depend largely upon the decommissioning of the gasholders, remediation requirements and any necessary transport improvement works.





6.7.1 A Direct River Crossing

The proposal for a new direct cross river connection to the key transport interchange of Canning Town, gives this southern most area a high degree of potential for change and for it to play a vital role in linking the residential areas further west, to and across the river. Improved links to Canning Town and relationship to the river also make this area very desirable for development.

Land Ownership, current uses:

Unlike other core area sites, this site already has a mix of uses - residential, retail, industrial which closely relate to its historic past (see 1933 map). Industrial uses are located along the river edge and Lanrick Road; residential inland, around Oban Street, Portree Street and west of the A13/Abbott Road junction (Currie and Dunkeld site).

Poplar HARCA own the majority of the residential locations in the area which include the Fortrose Close Estate, Oban House, Currie and Dunkeld, with the remaining Victorian terraces along Oban Street and Portree Street in private ownership.

The industrial area consists of separate ownerships - Blackwall Trading Estate, Business Serve Ltd, TfL. Of these only the Blackwall Trading Estate is active.

A small cluster of retail units are located at the junction of Oban street and Abbott Road, providing a local centre.

Existing

The historic map (1933) shows the area knitted into the west-east grain of terraced streets which connected main north south thoroughfares to industries and wharves along the river edge.

A school existed on the current site of Oban House which was evidently a community focus surrounded by public spaces shared by industries and residential streets which had a strong symbiotic relationship, now lost.

As elsewhere within the core and wider areas the vestigial street pattern remains in part. It is most evident in the intact rows of Victorian terraces whose direct relationship with the street edges is experienced as a welcome relief within the context of more recent developments - eg Fortrose Close Estate which has a highly ambiguous relationship to the public realm. Rather, this estate retreats from the main street edges is inward looking and is another local 'island'. It is possible to walk through, but, unlike the surrounding streets one feels unwelcome to do so.

For the same reason the corner shops at the junction of Oban street and Abbott Road gives a real sense of place within the context of otherwise poorly defined streets edges and corners.

The industrial areas no longer relate to the residential streets and create a physical and visual barrier to the river.

Vacant sites indicate the radical shift in dependency on river transport and economy of the area which has taken place over time. On the opposite bank Mayer Parry Wharf, which is protected, will remain in operation for the foreseeable future. Unlike many of the new industries within Cody Campus, the activities at Mayer Parry are noisy and dirty which will affect new residential areas close by.

The southern most vacant site, adjacent to the A13 is owned by TfL and has been identified as the landing point for the new bridge link to Canning Town

Vacant sites along Lanrick Road have created a backwater within the south eastern corner of the core area.

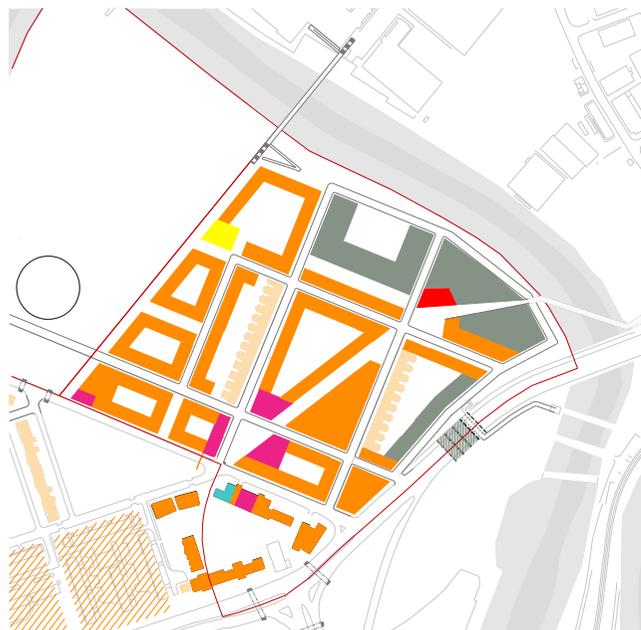
Currie house, to the south of Abbott Road is disused but remains a landmark building. Poplar Harca's current planning application for this site will bring this corner back into use with a new landmark tower marking the junction of the A13 and Abbott Road.

6.7 Core Area 5 - Fortrose Close, Lanrick Road

- Proposed workshops/studios
- Proposed commercial
- Proposed retail
- Proposed residential
- Proposed community
- Proposed hotel
- Existing residential
- Proposed area for redevelopment in accordance with Poplar HARCA

- Proposed public soft landscaping
- Proposed public hard landscaping
- Proposed communal soft landscaping
- Proposed communal hard landscaping
- Proposed gardens
- Proposed river edge
- Proposed new buildings
- Current developments
- Existing buildings

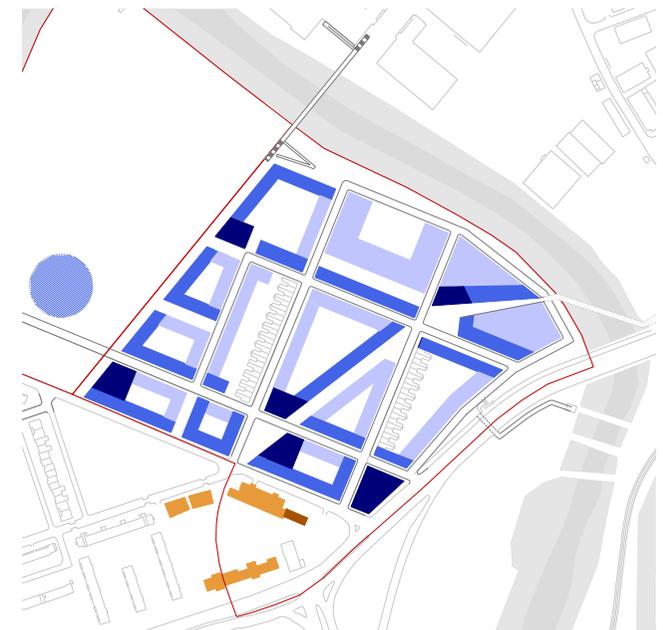
- Low rise 2-4 storey
- Medium rise 5-7 storey
- High rise 8-10 storey
- Current developments - low rise 2-4
- Current developments - medium rise 5-7
- Current developments - high rise 8-10
- Current developments -high rise 10+



Core area 5 proposed ground floor uses



Core area 5 proposed building outlines and open space



Core area 5 proposed massing

Gasometer HSE zones

The entire area lies within the HSE consultation zones. Although planned decommissioning of the gasometers is likely in 2016, any new development prior to that date will require consultation with the HSE.

Development to the west adjacent to the new park lies on NG land and so will not be affected as this can only happen following decommissioning of the gasometers. Phasing therefore plays a vital part in planning this area.

6.7.2 Proposal

The proposal for this area is based on the need to create a direct connection to the new bridge identified in previous sections in order to unlock the area and improve its PTAL rating.

Key principles:

- create a direct connection from Abbott road to Canning Town via a new pedestrian/cycle bridge. There should be a clear, direct visual connection which makes the location of the bridge clear from the main thoroughfares.
- the connection to the proposed cross river bridge to Bidder street should be equally direct.
- provide phasing to accommodate and integrate industrial uses and future smaller scale industries.
- provide strong, direct connections to Abbott Road, the river and the future Poplar River Park.
- respond to existing uses and future developments on the east side of the river - for example new residential development at Crown Wharf and the existing industrial activities at Mayer Parry Wharf.
- reinforce existing and historic street patterns
- retain existing Victorian terraces



1930 map of core area 5



Riverside core area 5

- avoid a 'wall' of tall, dense development along the river edge which would create a barrier. Grade heights of buildings from generally lower towards the river, higher further away.
- continue the 'soft' river edge ecology to complement the harder edge related to the 'Fatwalk' on the east side in line with the Lea River Park Strategy.
- propose a phasing strategy which will allow cohesive incremental development as sites become available.

Connections

The plans illustrate the longer term aspiration for the roads and building layouts to integrate a direct connection from Abbott Road to the new bridge and extension of the existing grid street pattern.

In order to make the new bridge to Canning Town as accessible as possible it is vital to create a direct straight connection between the Abbott Road/Blair Street junction and ramped access to the new bridge at the northern end of Portree Street.

In the shorter term the bridge can be accessed via Oban Street and Portree Street, visibility from Abbott Road is considered to be such a key factor in the success of the bridge connection that any future development of the Fortrose Close estate should include a diagonal route as a main public thoroughfare. It is shown as a wide pedestrian and cycleway connecting a series of public spaces from a new 'square' with retail uses on Abbott Road, to the river edge. Also, the proposal shows roads as an extension of the historic street pattern which increases permeability and gives clear, direct views and access to the river edge and the new park.

Demolition of Oban House provides the opportunity to re-align the north south section of Oban Street to provide a direct east west connection between the new park and the bridge as another vital connection. Re-alignment is necessary to achieve this connection without the need to demolish any part of the Victorian terraces. The new alignment also gives a direct connection to Lanrick Road.

Leven Road is shown extended east to the A13. In turn Oban Street and Portree Street are shown extended to the river edge for servicing and access to residences and smaller scale industries.

Lanrick Road is shown serving new developments in the south east corner which incorporate smaller scale industrial uses on the ground floor and also links to a new connection under the A13 formed by the opening up of one of the existing viaduct arches.

To the west, Oban Street and Leven Road provide primary pedestrian and cycle connections to the park edge. Vehicles will be allowed to access the residential buildings which overlook the park but will not be allowed to the park edge or within the park itself.

The eastern edge of the new park extends to a line which allows for a wide pedestrian and cycleway continuing the alignment to the new bridge to Bidder street. In the long term, it is envisaged that this route connects to the Bridge link from Dee Street to Brownfield Street.

Uses

With the new bridge connections and improved connectivity across the A13 and adjacency to the new park, this area, currently isolated, will be well served to develop as a dense mixed use residential area.

Thematic uses show residential development combined with small scale retail units to add to the existing at the junction of Oban street and Abbott Road and with smaller scale industrial uses along the river edge.

Improved connectivity increase PTAL ratings to 4-6 indicating residential densities of 550+ habitable rooms /hectare.

Buildings are shown as generally 5-7 storeys with higher buildings marking significant locations - the connection of Oban Street to the new park, the new public space at Abbott Road, junctions with the A13.



View from Fortrose Close Estate towards Lanrick Road and the point where the new bridge will begin



Entrance to the Blackwall Trading Estate



Abbott Road looking east

There is a general gradient of building heights: lower towards the river, higher towards Abbott Road. Scale of buildings fronting onto Abbott Road are shown as 7 storeys, possibly higher at certain points to match the scale of buildings proposed by Poplar HARCA for the Currie and Dunkeld site.

5-7 storeys are considered appropriate for frontages overlooking the park. Generally lower heights are shown on south and east facing sides of blocks to respond to scale of local streets and increase light into interior courtyards.

The longer term proposal shows new apartment buildings fronting onto Abbott Road to replace the existing low density buildings. This is regarded as part of the gradual transformation of Abbott Road from a traffic route to a major residential thoroughfare as new communities develop to the east. The change from industry to mixed residential of those areas place Abbott Road at the centre of a dense residential district rather than on the edge with a corresponding shift in role and status.

Currie and Dunkeld

Poplar Harca's proposal for a high tower on the Currie and Dunkeld site is considered acceptable in terms of the general principles of this study in that it is a 'special case' location which marks the important junction of Abbott Road and the A13 and is close enough to Canning Town to be read as part of a high rise cluster which relates to the town centre.

Building typology

Following the principles described in the Ailsa Street proposal, simple courtyard type apartment buildings are proposed to give clear definition to street edges and offer protected interiors of either open garden courts or covered stair courts. Blocks of a scale to provide generous communal garden courts, also include private gardens related to lower storey 'town house' type maisonettes with flats above.

The retention of existing Victorian terraces offer variation in building type and scale which should be complemented by regularity and homogeneity in new buildings to create

a sense of cohesion.

Towards the river, hybrid buildings are indicated which show smaller scale creative or workshop type industries on the ground floor and residential above.

The building opposite Mayer Parry Wharf is a special case, in response to its location opposite noisy industry. It is shown as a three sided building with an open court facing the river. Workshops face into the court at ground floor level with residential units above facing away from the river.

Generally, light industrial uses at ground floor are appropriate to maintain a sense of the industrial character of the area related to the river and also a part of flood risk mitigation.

Public open spaces

A new public space is shown at the intersection of Blair Street, Abbott Road and Oban Street to emphasise the importance of this junction as the focus for the local community and as part of the public route to the bridge. Small scale retail or a cafe/pub face onto this space.

A second 'square' of a different character marks the important junction of Oban street, Portree Street and Lanrick Road and the beginning of the bridge with access to the river edge.

6.7.3 Phasing

Multiple land ownerships will make it difficult to develop the whole area in a single phase. Particular sites will be become available before others and at unpredictable times. A coherent phasing strategy is essential to make sure that key elements which benefit the wider area, such as the new bridge, can be put in place at an early stage and that development of individual sites contribute towards a coherent overall plan.

Phase 1

Because of its strategic importance to the whole Poplar Riverside area it is considered imperative that the bridge link is put in place at the earliest possible stage. Early acquisition of the TfL site would make this possible.

Possible first phase(s) deliver the new bridge and direct connection to Abbott Road through the Fortrose Close Estate, partially redeveloped as part of Poplar Harca's overall plan for the area.

This phase may also include:

- demolition of Oban house, re-alignment of Oban Street to connect to Lanrick Road. The formation of this connection requires demolition of the industrial unit and end terrace house.
- Extension of Leven Road to the A13.
- Development of river edge sites next to the bridge
- Retention of the Blackwall Trading estate as a 'buffer' to the Mayer Parry Wharf industries on the opposite side of the river.
- The new route to the bridge and related public spaces.
- Development of Lanrick Road.
- New connection under the A13 via opening up of existing arches.

Subsequent phases include:

Phase 2

Development of the east side of Abbott Road towards Poplar River Park (by Poplar HARCA)

Phase 3

Development of area on the edge of the Park within NG land ownership following decommissioning of the gas holders.

6.7.4 Property Current Situation

Description of the existing site

Core Area 5, unlike the other core areas, already comprises a mix of uses including residential, retail and industrial.

Industrial accommodation is located along the river edge and Lanrick Road. Residential accommodation is provided on Oban Street, Portree Street and west of the A13/Abbott Road junction. Two small retail units are located at the junction of Oban Street and Abbott Road.

The industrial areas no longer relate to the residential streets and create a physical and visual barrier for residents. Some of the commercial space is let, but some vacant, which shows a contrast to the Cody Road Industrial Estate on the other side of the river.

The area covers 10.63 hectares in total.

Overview of site ownership

Poplar HARCA own the majority of the residential areas, although there is a mix of tenancies, with some owner occupiers in situ. The commercial areas are in separate ownerships.

Blackwall Trading Estate and Transport for London hold significant interests in the site. TfL own the south eastern section, which is currently underutilised.



Site assembly for comprehensive redevelopment would need to start with the key landholdings, and possibly be undertaken in conjunction with Poplar HARCA.

6.7.5 Planning, Development and Density Issues

PTAL/ Density range (Existing and Proposed)

The site currently has a PTAL of 4, which provides for a residential density of 550 - 600 habitable rooms per hectare.

In terms of accessibility the site is in close proximity to a number of bus routes. It is also within walking distance of the DLR service and Canning Town station, although the route is not straightforward.

As with other core areas however, Core Area 5 is restricted in terms of lateral movements as it has no direct access to the east of the River Lea. Given the site's development potential and proximity to Canning Town, the potential for improved linkages south and east would be highly beneficial.

The proposed infrastructure improvements in the masterplan provide for a PTAL of 5, which could allow for circa 700 habitable rooms per hectare.

Flooding

Core Area 5 is located within flood risk zone 3, with an annual probability of flooding from the sea greater than 1 in 200.

A flood risk assessment will need to be provided with any planning application and its consequences taken into account in the design. Such flood risk may additionally require improvement/ continuation of services, the improvement of flood defences and the implementation on non residential uses at ground floor levels. This would be considered in more detail towards the planning application stage.

Decant and relocation

LTGDC is keen to retain and enhance existing businesses in the Poplar Riverside area wherever possible. Core Area 5 has previously been designated for employment uses, and any redevelopment of the site would need to give strong consideration to the retention of business space.

Any existing businesses affected by redevelopment would need to be relocated or re-housed within the scheme where applicable.

6.7.6 Option Analysis

Redevelopment proposals suggested within the masterplan are reliant on significant transport improvements. The construction of a new cross river connection to the key transport interchange of Canning Town and improved connectivity across the A13 are the major requirements.

These infrastructure improvements will provide the southern area with a significant opportunity for change and will additionally provide a link to the residential areas further west whilst enhancing the access of all areas across the river.

The area will be able to become a compact residential led mixed use development, capitalising on the site's higher PTAL and urban feel.

It is important to note that part of the site lies within the Health and Safety Executive (HSE) consultation zones. Whilst decommissioning of the gasometers is potentially on the horizon, any new development prior to that date will require consultation with the HSE which may have implications of the type and quantum of development possible.



6.7.7 Preferred Option

The masterplan proposal is to provide a dense residential led mixed use development, with small scale retail units and smaller scale industrial uses along the river edge.

The development is largely centred around the creation of a direct connection from Abbott Road to Canning Town.

The Core Area 5 masterplan shows buildings of between 5 to 7 storeys with the taller buildings located away from the river edge.

6.7.8 Phasing and Key Early Stages

Depending on the scale of any proposal that comes forward for planning permission in conjunction with the masterplan, the potential to improve accessibility to the sites, and therefore residential densities, needs to be explored.

Any transport works that are required will be funded by the scheme and may include a new pedestrian/cycle bridge across River Lea adjacent to A13 providing a route to Canning Town and potential new bus corridors running alongside the eastern and northwestern boundaries of the core area.

As with other sites that have existing tenants, recourse to Compulsory Purchase may be required and this will be considered by LTGDC where appropriate.

6.7.9 Overall Timing

It is considered that Core Area 5 may come forward in the medium term (5-7 years), but certain areas may come forward much earlier. Much of this will depend upon land ownership, the completion of CPOs and any necessary transport improvement works.





7.0 The Proposed strategy

7.1.1 Introduction

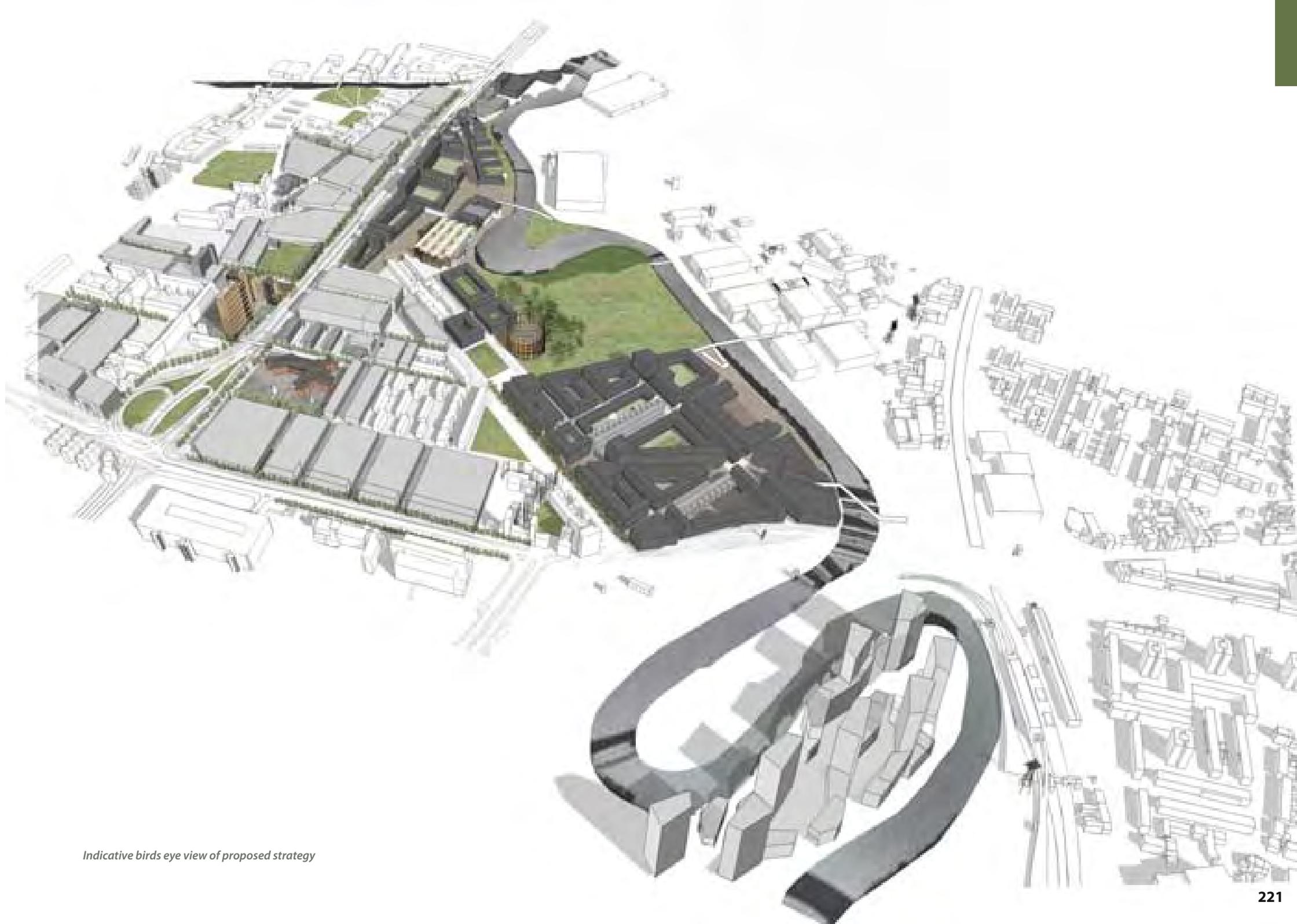
This section summarises the overall strategy for the core areas and the wider area combined. It is intended to be used as a 'pull-out' which gathers key drawings into one section.

The drawings are as follows (generally the existing drawing appears on the left hand page and the proposed on the right) :

- Existing and proposed figure ground building footprints
- Existing and proposed building outlines and landscaping
- Existing and proposed road network strategy
- Proposed massing
- Proposed ground floor uses and local centres

Phasing strategy drawings are included indicating projects to be carried out over a series of timescales:

- Short term: present to 2012
- Medium term: 2012 - 2018
- Long term: 2018 - 2025



Indicative birds eye view of proposed strategy



Existing figure ground plan

7.2 Figure Ground

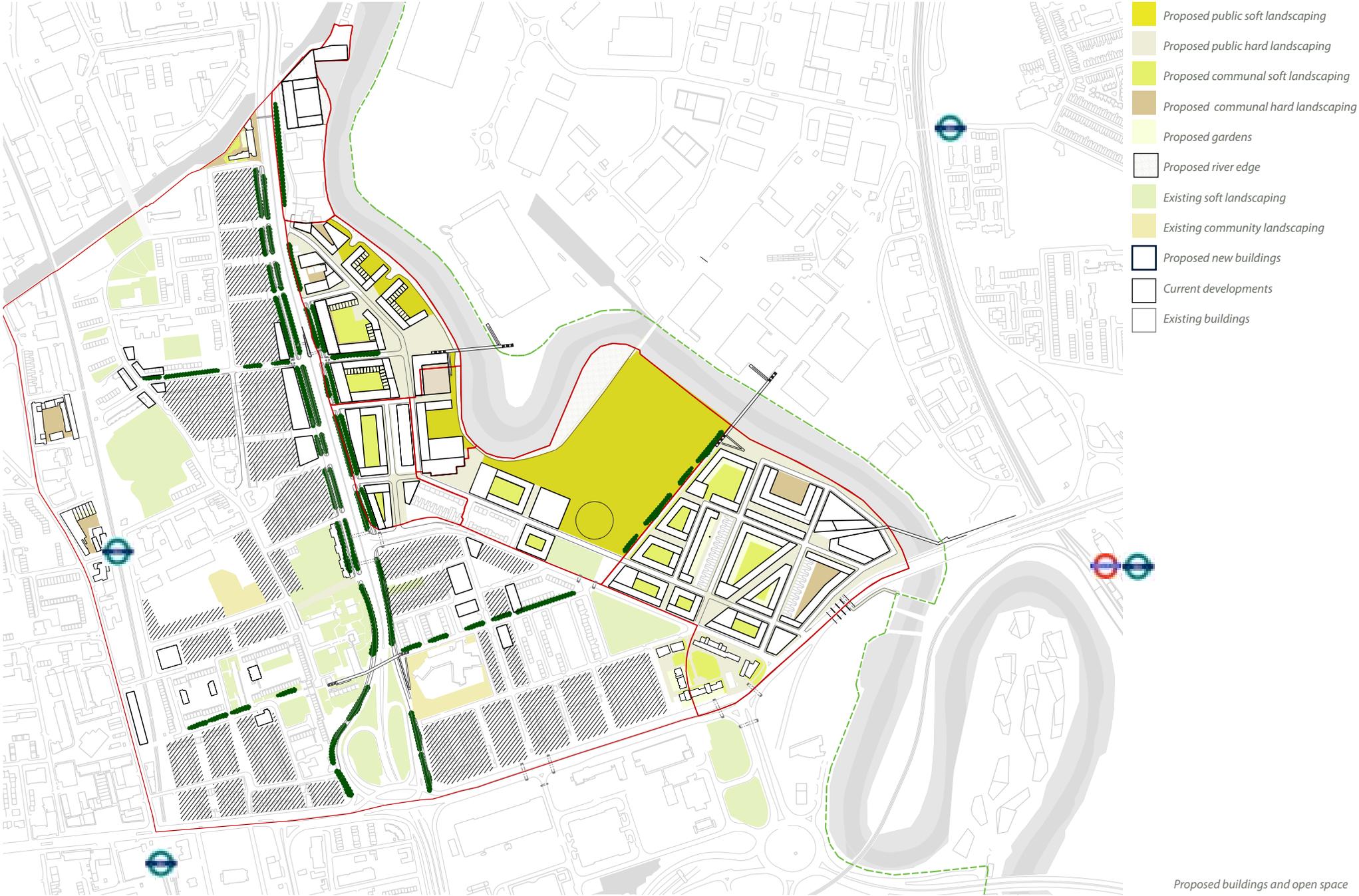


Proposed figure ground plan



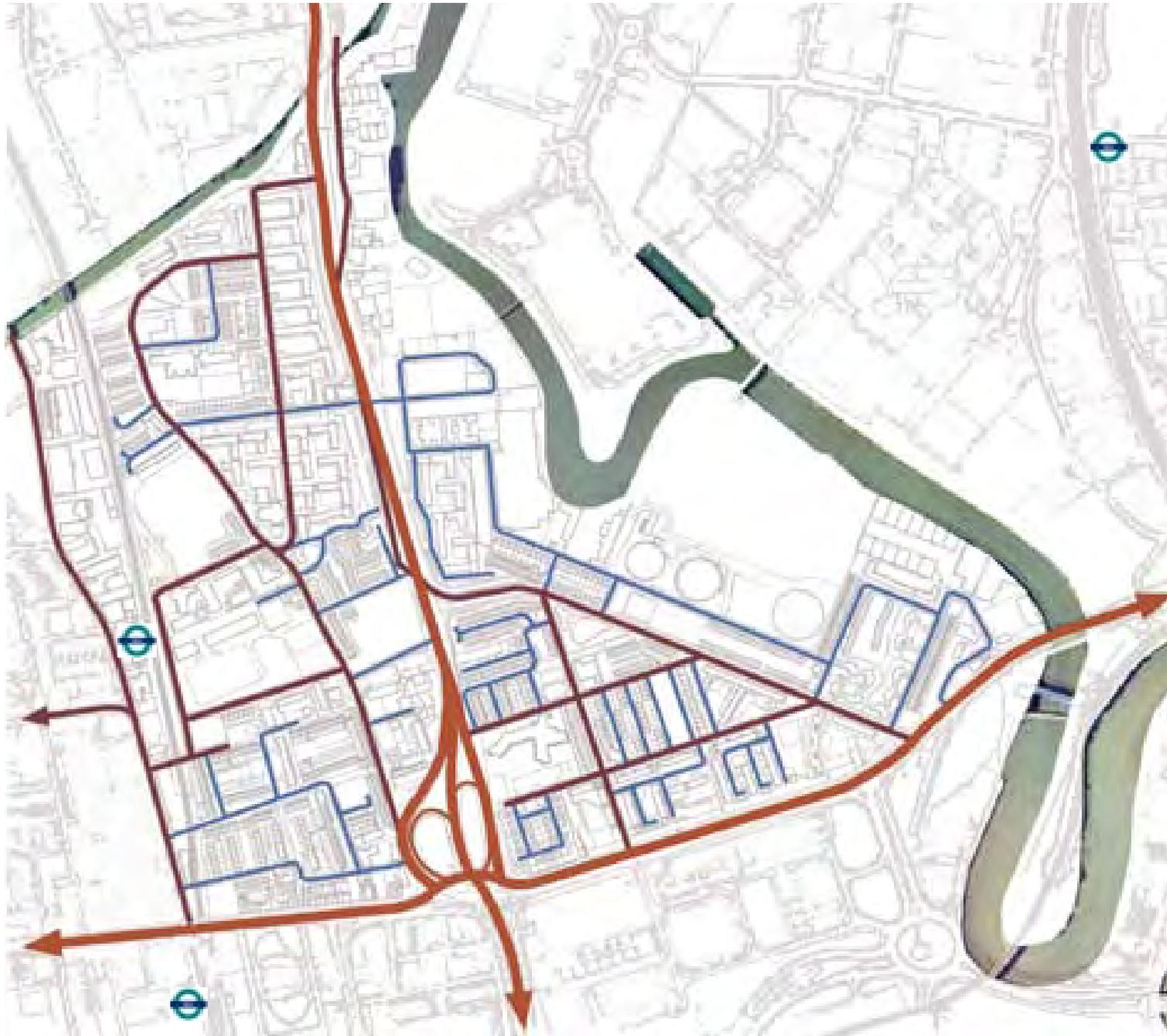
Existing buildings and open space

7.3 Open Space Strategy



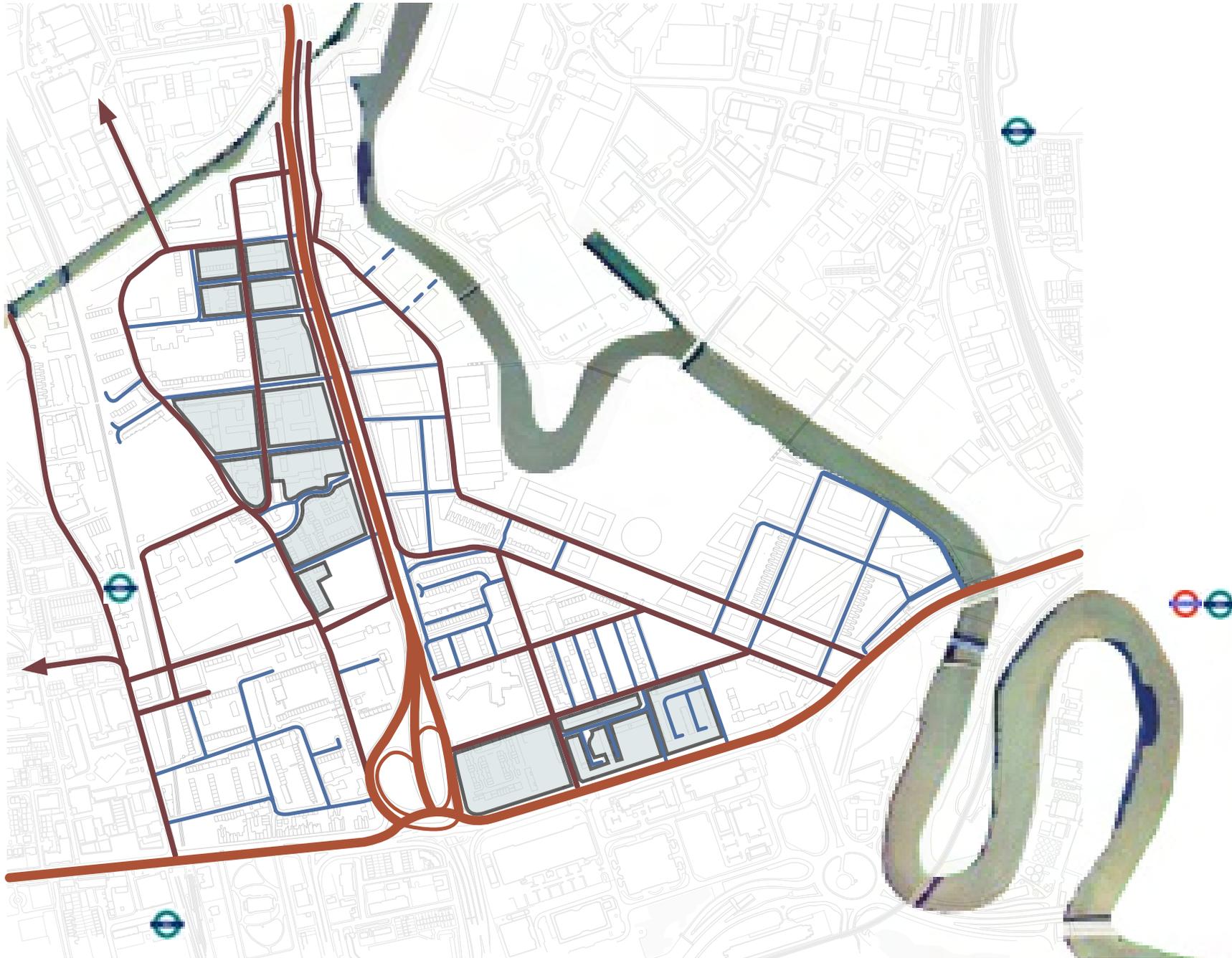
- Proposed public soft landscaping
- Proposed public hard landscaping
- Proposed communal soft landscaping
- Proposed communal hard landscaping
- Proposed gardens
- Proposed river edge
- Existing soft landscaping
- Existing community landscaping
- Proposed new buildings
- Current developments
- Existing buildings

Proposed buildings and open space



Existing road network

7.4 Road Network Strategy

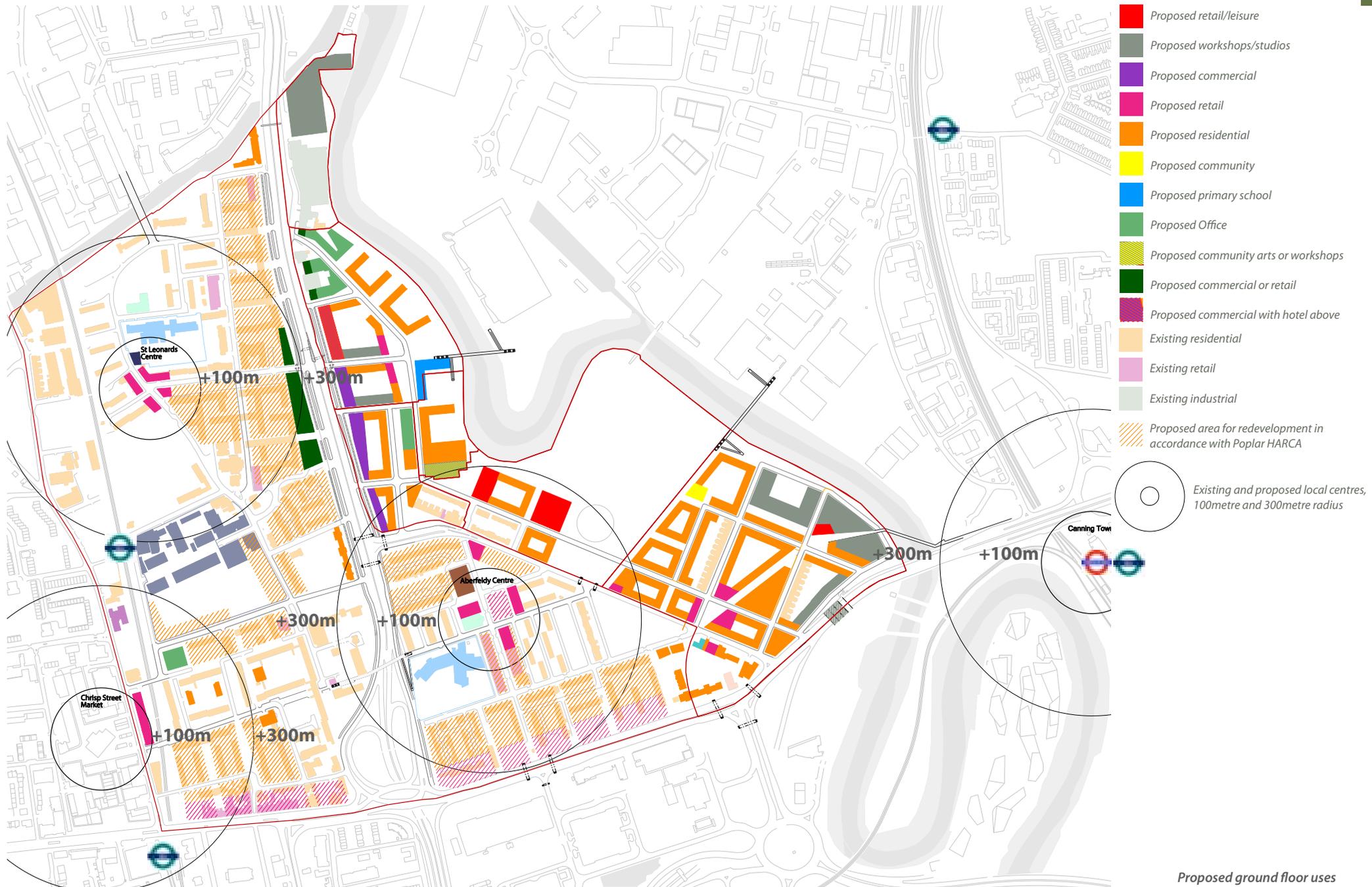


Proposed road network



Proposed massing

7.5 Massing & Uses Strategies



Phasing: Short Term - 2012

High Priority

- **Bridge link:**

- A12 pedestrian bridge (££)
- Improvements to Brownfield street (£)
- Pedestrian/cycle bridge across River Lea (££)
- Fatwalk connection under A13 (££)
- New crossing at Abbott Road and Dee Street (£)

- **Core areas 2, 2A:**

- Ailsa Street+Tram shed CPO and development, new open space by river and flood defenses (£££)

- **Core area 5**

- First phase (Lanrick Road/Portree St) (£££)

- **Gillender Street link**

- New road connecting Gillender street and Leven Road

- **Aberfeldy link:**

- Pedestrian crossing Aberfeldy Street to Nutmeg Lane (£)
- New Health and Wellbeing Centre (££)

- **Lochnagar link:**

- New Lochnagar crossing (2009) (£)

- **River link:**

- New river edge square (££)

- **Core area 4:**

- Possible Poplar River Park first phase (related to Fatwalk)- pending negotiation with NG) (£££)

Medium Priority

- **Canal link:**

- Uamvar Street to Empson Street vehicular bridge (£££)
- Extend Teviot Street to Spey Street (£££)

- **Lochnagar connection :**

- New pedestrian bridge to Cody campus (££)

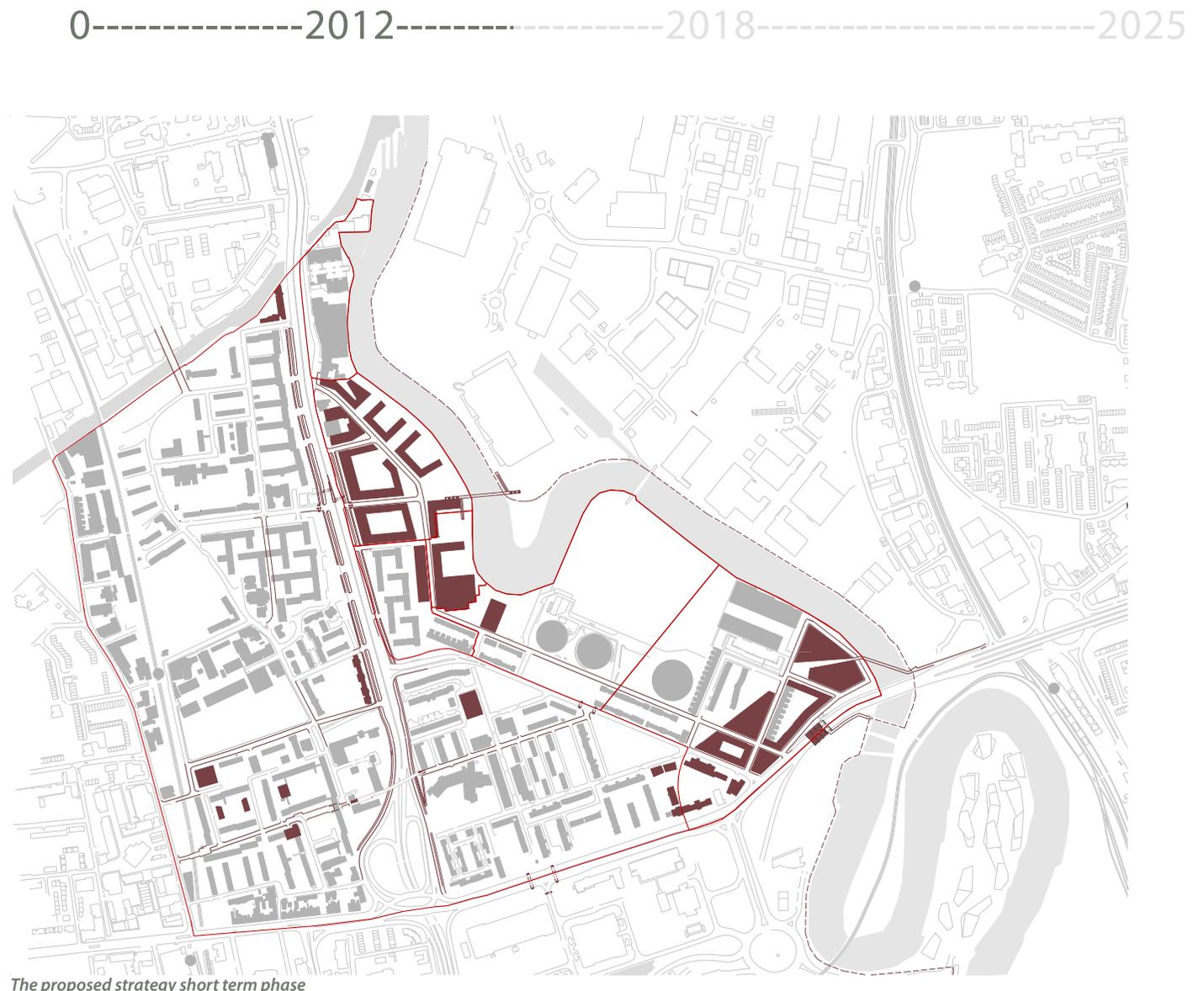
Low Priority

- **A12 Boulevard:**

- A12 widening first phase (Ailsa street and Lochnagar junction) (££)

- **River link:**

- Jolly's Green shared pedestrian/ bus route (related to HARCA A12 development)
- Improvements to Burcham Street (£)



The proposed strategy short term phase

High Priority

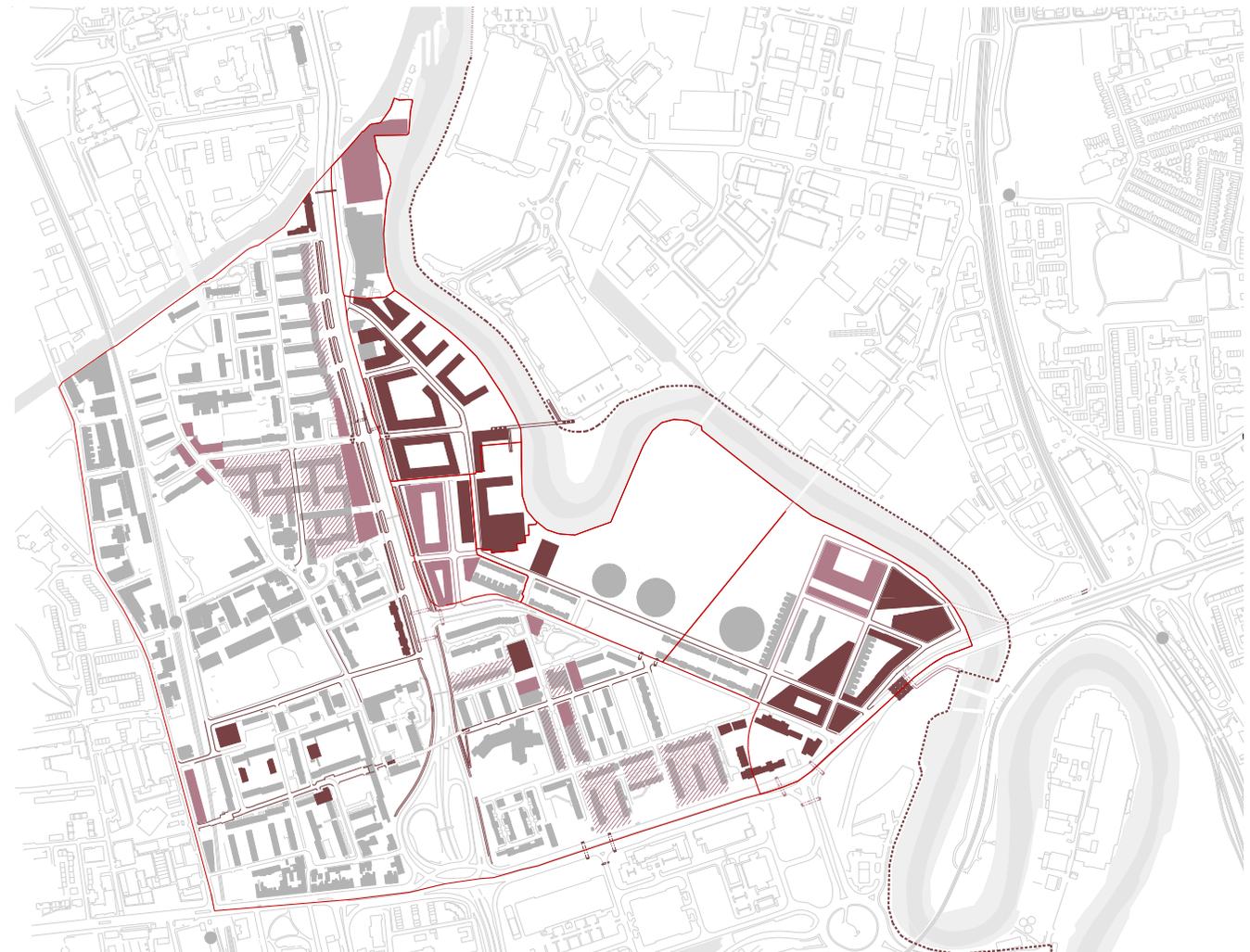
- **Core area 3:**
 - Redevelopment of Nairn Street estate (£££)
 - Extend Nairn Street to Abbott Road (£££)
- **Core area 5:**
 - Second phase: redevelopment of Blackwall Industrial estate site (£££)
- **Aberfeldy link**
 - HARCA develop Aberfeldy estate in accordance with Reshaping Poplar (£££)
- **Canal link**
 - Develop Zetland Street/St... Leonard's St... Centre: first phase - New retail+community facilities (£££)
 - HARCA develop North and South Teviot estates to be phased in accordance with Reshaping Poplar (£££)

Medium Priority

- **Core area 1**
 - New buildings (£££)
- **A13**
 - Crossing at A13 /Leamouth Road junction (£)
- **Aberfeldy link**
 - Existing local centre enhanced (£££)
- **River Link**
 - A12 crossing at Abbott Road (£)

Low Priority

- **A12 Boulevard**
 - A12 widening related to A12 crossing and HARCA redevelopment of Teviot and Aberfeldy estates (££)
- **Chrisp street**
 - New retail east of the DLR (££)



The proposed strategy medium term phase

Priorities: Long Term - 2025

High priority

- **Core area 4:**

- Poplar River Park: First/second phase following decommissioning of gasholders (2016) (£££)

- New buildings along southern edge of park (£££)

- **Core Area 5:**

- (Oban Street/Leven Road): Third phase following decommissioning of gasholders (2016), new buildings (£££)

Medium priority

- **River link**

- Bridge from park across River Lea to Bidder Street (££)

Low priority

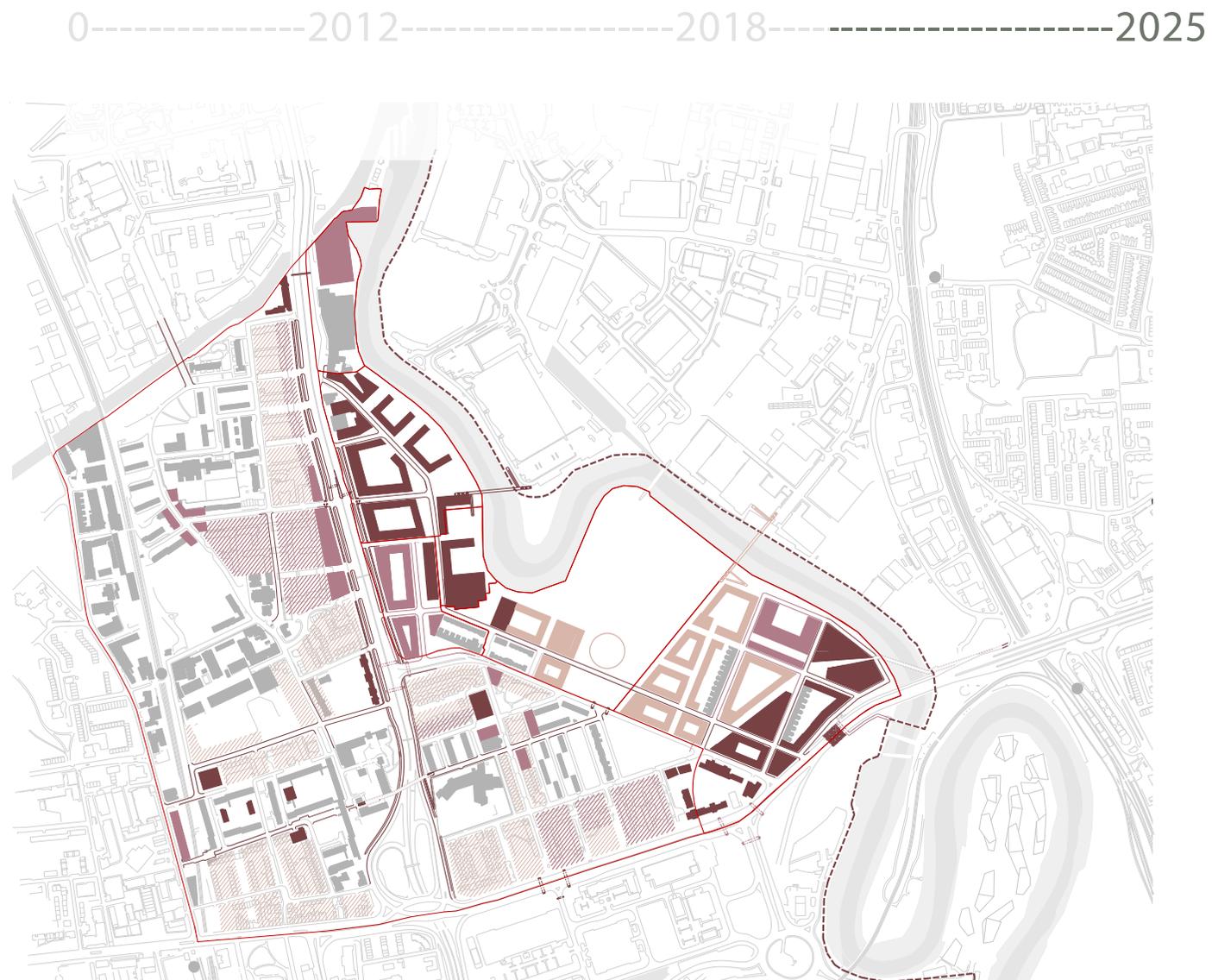
- **A12 Boulevard**

- A12 widening: final phases

- **A13 link**

- Commercial/retail frontages developed

- Traffic calming to reduce speed



The proposed strategy long term phase

