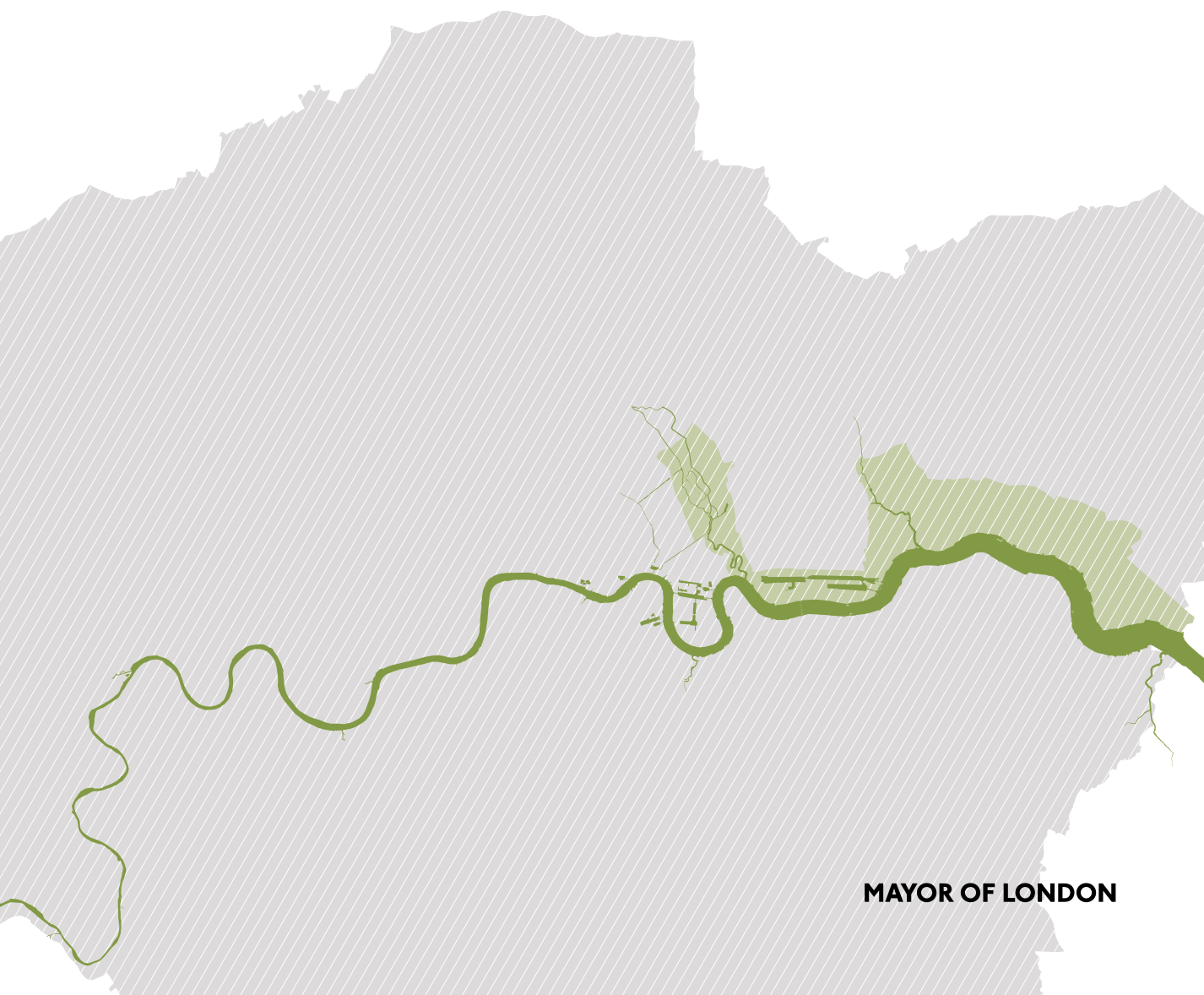


Green Enterprise District

East London

LONDON
DEVELOPMENT
AGENCY



MAYOR OF LONDON

Foreword

As London's most significant regeneration and growth opportunity, East London is pivotal to the city's transition to a low carbon economy. The Green Enterprise District work sets out a route map to create a thriving economic region, which could lead the world in developing and providing low carbon goods and services.

The District is already home to exemplar new projects such as the London 2012 Olympic and Paralympic Games, the Sustainable Industries Park and the London Thames Gateway Heat Network. These add to existing strengths of the region such as Canary Wharf, ExCel, Rainham Marshes and the significant new development pipeline and land availability.

This summary document provides an overview of a detailed framework for the Green Enterprise District. The framework sets out the features, projects and systems that will characterise this low carbon economy region. One of the first roles of the proposed task force will be to develop strategies for communicating widely the District vision, and of course its achievements and successes.

Drawing in large-scale investment, the District can become an international hub for low carbon business and projects: generating energy from new sources; distributing energy more efficiently; and using waste as a resource.

Large scale retrofit works mean that the District will use energy very efficiently. New, visionary attractions and exhibitions will become part of the District, showing the world what the future could look like. All of this will be transformational.

We have done it before. The profits from the Great Exhibition of 1851 helped develop South Kensington where the juxtaposition of research, the arts and education based visitor attractions created a wonderful legacy. The Empire Exhibition of 1924 left us Wembley, and the Festival of Britain in 1951 was the catalyst for opening up the South Bank.

We can do it again. The additional investment needed to meet global climate change targets is £368 billion per year. Along with our partners, we are embarking on an adventure that could capture a slice of this for East London and achieve the transformation we need. We look forward to working with you to achieve this.

Peter Bishop

Deputy Chief Executive and Group Director
for Design, Development and Environment
London Development Agency
May 2010

Proposals for the Green Enterprise District have been developed in partnership with the organisations set out below, and with the support of a team of consultants lead by East Architecture, Landscape and Urban Design.

- London Boroughs of Havering, Barking and Dagenham, Newham and Tower Hamlets
- London Thames Gateway Development Corporation
- Homes and Communities Agency
- Institute for Sustainability
- Environment Agency

The full Green Enterprise District report can be found on the LDA website (www.lda.gov.uk). Email us on environment@lda.gov.uk if you would like to get involved, or if you have comments and further suggestions on realising the vision for the Green Enterprise District.

Building a thriving low carbon economy region

Our ambition is to build a region in East London that will gain international acclaim for its world-class work and pioneering role in the low carbon economy.

The Green Enterprise District (The District) has two complementary objectives:

- to build a vibrant economy focused on green enterprise
- to develop a sustainable environment that people want to live in and visit as well as work. The area will incorporate exemplar housing schemes, sustainable infrastructure networks, research and development projects and visitor attractions.

While the District is a defined geographical area, the boundaries do not imply exclusion. Where possible and appropriate cross-boundary initiatives will be encouraged. Similarly, the intention is that some of the projects, systems and ideas from the District will proliferate across the whole of London, achieving wider carbon reductions and contributing to London as a Low Carbon Capital.

Four themes contribute to the delivery of these objectives:

- Attracting green enterprise to East London
- Decarbonising enterprise and stimulating demand
- Positioning the District at the forefront of low carbon innovation
- Maximising the potential of green and open spaces and the District's waterways



The Low Carbon Environmental and Goods Services (LCEGS) sector is growing and becoming an increasingly significant part of the UK's economy.

The economic case

Three broad sub-sectors are particularly relevant to the District, helping create high value jobs and build supply chains.

- Environment (waste management and recovery and recycling)
- Renewable energy (biomass, wind, photovoltaic)
- Emerging low carbon (alternative fuel vehicles, alternative fuels, building technologies)

London and the South East have a strong employment base in the sector with plans in place for further skills and knowledge development. London's inward investment agencies are already working with a pipeline of nearly 30 LCEGS companies interested in locating in the District. These could generate in excess of 2,000 jobs and represent many of the following key employment sectors identified in the District framework:

- Automotives: alternative fuels; high efficiency internal combustion systems; and manufacture of hybrid and electric vehicles
- Building retrofit: skills and training centres; distribution hubs; manufacture, design, installation and maintenance of domestic boilers and micro combined heat and power (CHP)
- Waste management: recycling and reuse and energy from alternative fuels
- Wind power component manufacture and parts servicing
- Low carbon housing systems: off site housing production

At least an additional

6,000 jobs

Analysis suggests 40% growth potential in terms of jobs from 2007/2008 to 2014/2015 in London's LCEGS sectors. Capturing a significant proportion of this growth in East London could generate over 6,000 additional jobs for local people.

The Mayor is committed to placing London at the forefront of the national and global transition to a more sustainable future and this work runs in parallel with the Low Carbon Capital study which examines pan-London low carbon markets, how to stimulate these and reduce barriers to investment.

The choice of location

- Located in Thames Gateway; Europe's largest urban regeneration project of its type
- Covering 48km² of land in East London
- Spanning 6 London Boroughs
- Incorporating much of London Thames Gateway

Why here?

Actively green

The District is in the Thames Gateway; a national priority for urban regeneration, the largest regeneration project of its type in Europe and already designated an 'eco-region'. The District can build on significant development and momentum from current green projects, for example the London 2012 Olympic and Paralympic Games, the London Thames Gateway Heat Network and the London Sustainable Industries Park. Plans are in place for enhanced public transport systems and large-scale exemplar housing schemes.

High public land ownership

Significant public land holdings put the public sector in a strong position to enable the delivery of green enterprise projects on their land.

Excellent links and communications

The proximity of the river connects the District to Europe and beyond. The excellent rail network creates huge potential for increased trade and freight activity. City Airport provides a fast connection to a global audience, delivering thousands of visitors to the area every year. The District and airport are well connected to the financial centre at Canary Wharf.

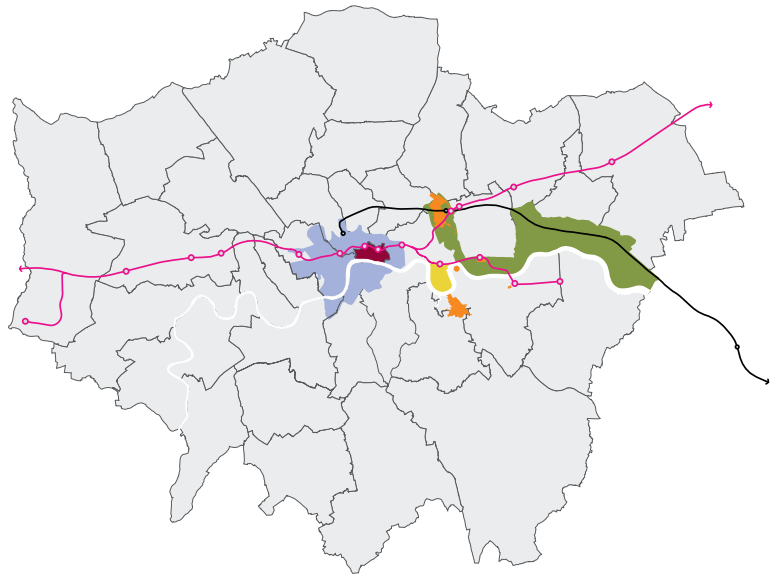
Protected industrial land use

The Green Enterprise District contains the largest concentration of protected industrial land use in London. This will help stimulate growth of the low carbon economy by making it easy to locate industrial uses within the District. The industrial sites typically hug the river edge, supporting the proposal for increased river to rail freight. Wharves are part of this protected area; these could play a leading role in serving the District and beyond.

The following pages set out the key features of the Green Enterprise District framework. The delivery team's role will be to work with public and private sector partners to bring forward these proposals and demonstrate to London, the UK and the world that the District is a first choice destination for green investment.

Key:

-  Green Enterprise District
-  City of London
-  Central London
-  Greater London
-  Canary Wharf
-  2012 Olympics
-  Crossrail
-  Channel Tunnel Rail Link



The area identified spans six London Boroughs and much of the London Thames Gateway. It contains a high concentration of sites designated for industrial land use and extensive brownfield sites. Rainham Marshes embodies many desirable environmental qualities and visitor attraction credentials.

Achieving Green Enterprise District objectives

1. Attracting green enterprise

Supportive District governance

Partners are committed to the delivery of the District objectives through appropriate and fit for purpose governance structures. It is proposed that a 'task force' is formed of representatives from all key partners. The task force will simplify and align the various partnerships active in the District, and through a range of projects and programmes, be responsible for:

- the delivery of projects and initiatives that advance the District concept
- supporting East London's existing green enterprises
- stimulating demand for green goods and services
- promoting and positioning the District on the world stage.

Incentives to attract enterprise

Partners will work together to ensure existing powers are used coherently and effectively to promote the objectives of the District. Partners will also consider the scope for additional incentives with the aim of encouraging suitable enterprise to locate in the District as well as stimulating demand for the products of enterprises and industries located there.

2. Decarbonising enterprise and stimulating demand

Low carbon energy infrastructure

A sustainable low carbon infrastructure network across the area will achieve extensive carbon savings, generate a significant number of jobs and attract low carbon economy enterprise. The infrastructure will allow enterprise and residential properties to operate at environmentally efficient levels.

- Low carbon energy generation, biomass combined heat and power and waste to energy plants are the most feasible large-scale energy generation schemes. Using disused wharves will allow delivery of fuel by river freight.



- Generation at individual building level is encouraged via domestic turbines and solar panels. Smart grid systems allow a 2-way flow of energy and smart meters enable informed energy use. Sites and buildings with excellent low carbon credentials can be ready for occupation by tenants.

The London Thames Gateway Heat Network is a significant first step towards sustainable energy infrastructure in the District.

Turning waste into a resource

Waste is increasingly valued as a resource to generate energy and valuable materials and products from recycling. Opportunities for its use are being explored across London and further afield. East London has a strong history of waste processing. The infrastructure and existing industrial land designation lend themselves well to showcasing innovative solutions for waste treatment and the role of waste in the resource chain. The area has the capability for international leadership in this field and the partnership will focus on achieving this, working closely with the London Waste and Recycling Board.

Expanding the retrofit industry

The retrofit economy is growing with a huge potential market in London; a programme is required to address the industrial nature of the District and aid the ambition to be an exemplar area in low carbon performance.

- A District wide programme of industrial building retrofit will build upon the LDA's existing energy efficiency programmes focused on bringing residential, public and commercial buildings up to suitable environmental performance levels. The proposals address the whole compound and operational systems, as well as the building itself, to maximise carbon savings across the operation.
- Retrofit hubs would provide valuable distribution centres that retrofitters can use as a single source for their materials/products.
- Retrofit skills and training programmes are run within the District at CEME, Havering and Barking and Dagenham Colleges.

Achieving Green Enterprise District objectives

continued

The industrial retrofit programme addresses the local industrial nature of the District and will aid the ambition to be an exemplar area in low carbon performance that could be replicated in other parts of London and beyond.

River freight

Two million tonnes of cargo are moved between wharves on the Thames every year and significant additional capacity exists for river freight. Of London's 50 protected wharves, most are in the District; an opportunity for concentrated river to rail freight and a lively industrial river edge in East London. The Thames provides commercial opportunities from mainland Europe, logistical benefits, reduced carbon emissions and a unifying address that all business can share.



3. Positioning the District at the forefront of low carbon innovation

There are a number of existing high quality and large scale attractions within or nearby the District such as the London 2012 Olympic and Paralympic Games and its Legacy, the O2 arena, Rainham Marshes and ExCeL. These present an opportunity for the District to showcase and demonstrate sustainability solutions for the future to both a professional and non-professional audience. This would both raise the profile of the District on a national and international stage but also inform and educate visitors on the benefits of low carbon living and working. The Royal Docks is an ideal location for an attraction with obvious access benefits, a number of Olympic events being run from Excel as well as a unique, beautiful dock-side location.

The LDA is in discussions on a proposal for a sustainability showcase in the Royal Docks. This will raise the profile of the District as a destination for green investment as well as provide a focus for learning and inspiration around sustainability solutions for cities.



Achieving Green Enterprise District objectives

continued

4.

Maximising the potential of green and open spaces and the District's waterways

The landscape network

Green spaces and the District's waterways can be improved by establishing a robust bio-diversity network that builds on the successful East London Green Grid programme and maintains pedestrian and cycle links through the District. Proposals include new and improved footbridges, crossings and footpaths, green verges, swales and tree planting. The Thames is an important part of the landscape. These proposals have the potential to transform the visual character of the area into a highly distinct one and form part of the integral visitor attraction to the area.

Local food network

The District has a lot of brownfield land which is currently unused awaiting redevelopment which can be used for temporary food production. This would mitigate the carbon emissions associated with intensive food production and long distance food transportation, and the increasing costs of fresh food. It would also animate currently disused areas throughout the District. Opportunities for permanent food growing sites will also be explored.

Interim uses

After the London 2012 Olympic and Paralympic Games, great swathes of land will be available for interim uses before development takes place. There is an opportunity for renewable energy production, such as via solar panels or growing biomass and piloting of new and prototype sustainability technologies.



The Green Enterprise District is thriving

The Green Enterprise District is leading the establishment and growth of London's green market. The area hosts an array of businesses, programmes and initiatives compatible with green objectives, and is constantly strengthening in this respect.

1. The London 2012 Olympic and Paralympic Games

Planned as the most sustainable Olympics ever, the Games will leave a robust sustainable infrastructure of walking and cycling networks, public transport, high quality green and open spaces and energy generation systems.

2. Lower Lea Valley Sustainable Utilities Infrastructure project

This project, led by the Institute for Sustainability catalogues existing and planned infrastructure in the Lower Lea valley, including waste/recycling facilities, water, heat, power, telecoms/IT, key heat loads, key heat generators. Development, timing and infrastructure demands are being assessed. Stakeholders will be able to identify opportunities for planning and bringing forward infrastructure in a more sustainable way.

3. Sustainability showcase

The Landmark site has been identified for a sustainability showcase, in line with the theme to position the District at the forefront of low carbon innovation. This proposal will demonstrate how science and technology can enable a more sustainable future for cities.

4. ExCeL Exhibition Centre

This well-established international exhibition centre has excellent green credentials and attracts a vast number of low carbon related events. The unique setting and proximity to City Airport makes it highly attractive for enterprise, especially research and development companies.

5. Royal Docks and London Thames Gateway Heat Network

Until they closed in 1981, The Royal Docks were a major piece of London's infrastructure. During the 1980s and 1990s The London Docklands Development Corporation undertook work to improve local transport and promote new residential and commercial developments in the area. Several major projects have been implemented including the opening of London City Airport. Key sites available for development include Silvertown Quays, the Albert Basin, and Silvertown Way.

The largest project of its type ever undertaken in the UK, the London Thames Gateway Heat Network aims to deliver the heating and hot water to the equivalent of 120,000 homes, saving 67,000 tonnes of CO₂ emissions annually

and enhancing the District's reputation for sustainable energy systems. The first phases of the Network will focus on the Royal Docks.

6. University of East London

The university runs several research and development programmes into sustainable development through the Sustainability Research Institute. It has strong links with development, for example its involvement with testing green and brown roof systems. The proximity of the Royal Docks makes it well placed to contribute to the research and development aspect of the District.

7. Barking Riverside

An exemplar housing development for approximately 26,000 new residents with schools, health facilities, food production areas and sustainable transport links. The scheme embodies many environmentally sound principles and encourages bio-diversity. It helps maintain the momentum for the DLR extension into Dagenham.

The Green Enterprise District is thriving

continued

8. London Sustainable Industries Park and the Institute for Sustainability

The London Sustainable Industries Park at Dagenham Dock aims to create the UK's largest concentration of environmental industries and technologies. With 125,000 sq m of BREEAM excellent standard business space, it provides a national focal point for businesses delivering waste to energy projects, combined heat and power schemes, recycling and reprocessing facilities and renewable energy technologies.

The Institute for Sustainability is an independent, private sector led charity created to significantly advance the UK's ability to deliver solutions for a sustainable future. The aim is for the Institute to open an exemplar research centre at the London Sustainable Industries Park.

9. Ford

Employing 4,000 people, Ford Dagenham celebrated 80 years of manufacturing in 2009. The 475 acre complex majors in diesel engine design and manufacture, producing over one million units per annum. The plant's energy supply is supported by two wind turbines, producing 6.7 million kilowatt

hours of clean electricity and saving 6,500 tonnes of CO₂ emissions per annum.

10. CEME (Centre of Engineering and Manufacturing Excellence)

A partnership between the LDA, Ford Motor Company, and Barking and Havering Further Education Colleges provides technical training facilities for secondary through to higher education, conference facilities and an incubation centre for technology small businesses. It presents a major opportunity to promote green manufacturing and technology in the District and beyond.

11. Rainham Marshes – 'Wildspace for a World City'

One of the largest remaining wetlands in the upper Thames estuary, this area incorporates a Site of Specific Scientific Interest (SSSI) and the RSPB's award-winning visitor centre and will form part of 'Wildspace - for a World City'. At 800 hectares, Wildspace will be the jewel in the Green Grid: a model of sustainable development celebrating the wildlife and diversity of the Thames Marshes, providing extensive access along the Thames and contributing to the social and economic regeneration of London Riverside.

Wharves

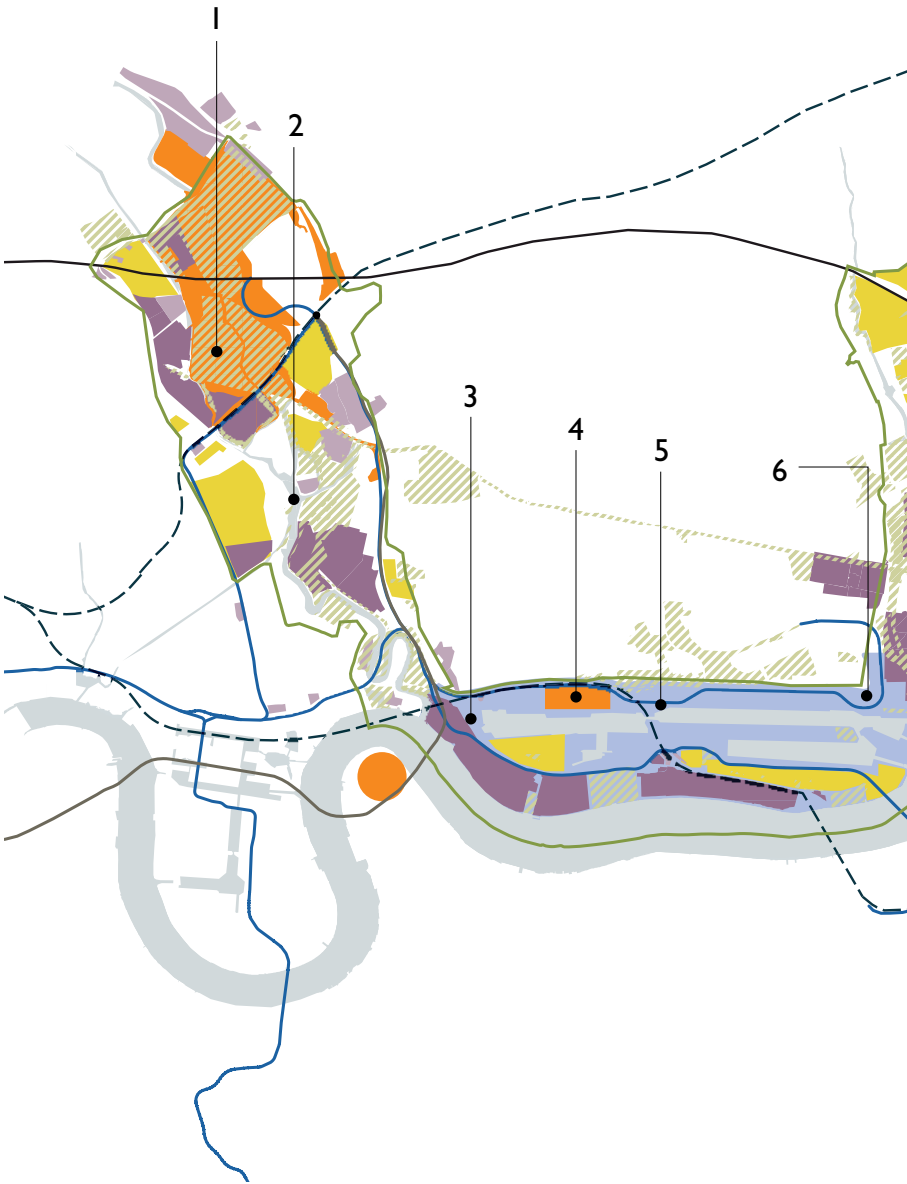
Of London's 50 protected wharves, the majority lie along the District's river edge; presenting an opportunity for concentrated river freight and a lively industrial river edge in East London.

Industrial land use

The Green Enterprise District contains the largest concentration of protected industrial land use across London. East London is in a position to be a focus for much of London's industry, supporting the idea for a strong low carbon industry here. The industrial sites typically hug the river edge; their location supports the proposal for increased river freight.

Key:

- Green Enterprise District
- Strategic Employment Land
- Other industrial land
- Residential area
- The Royal Docks
- Olympic venues
- Green space
- Channel Tunnel Rail Link
- Crossrail (Planned)
- Docklands Light Railway
- Jubilee Line



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