

**Pre-feasibility Study** for a sustainable new 'eco-city' at **Northfleet Ebbsfleet**

for  
**Best Development**  
by  
**FARRELLS**  
September 2007

## Purpose of the pre-feasibility study

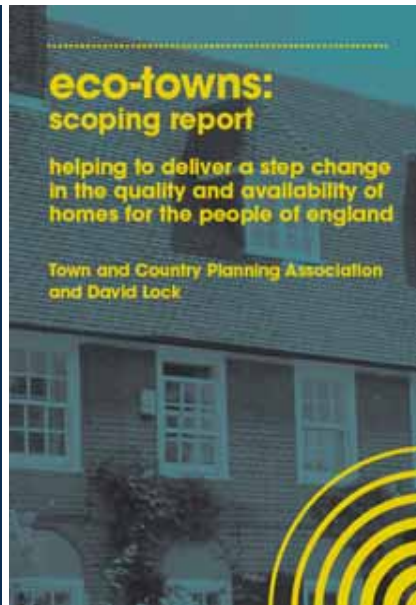
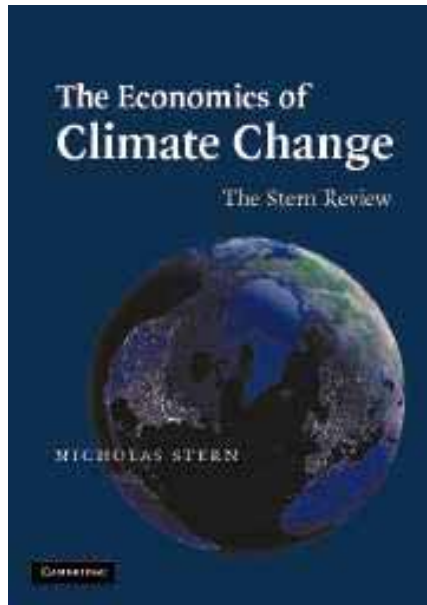
- To articulate a strategic concept for Northfleet Ebbsfleet
- To raise ambitions for the area
- To identify design concepts and strategies that require detail investigation
- To initiate a discussion with local community groups

# A sustainable new place in the Thames Estuary Park ...



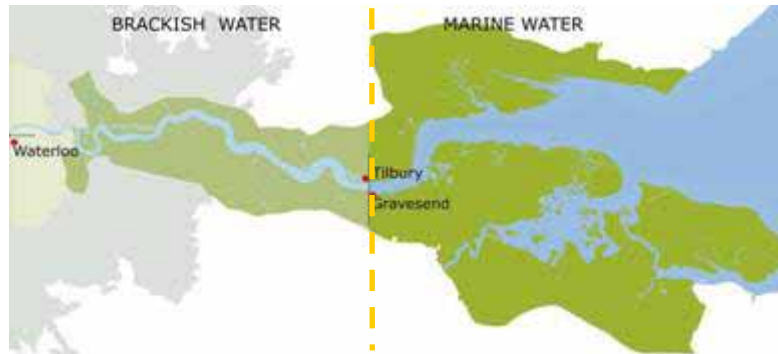
**'Port City'**

... setting a benchmarking nationally and internationally for sustainable community regeneration





...drawing on the area's *rich ecology* ...



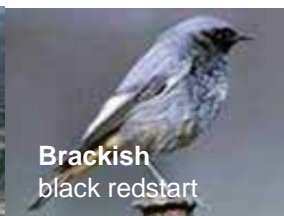
**1**  
Threshold of the Thames and the North Sea



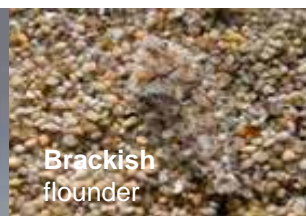
**2**  
The River Valley



**3**  
Estuary Marshes



**Brackish**  
black redstart



**Brackish**  
flounder



**Marine**  
redshank



**Marine**  
plaice

...its significant *maritime and urban heritage* ...



Gravesend circa 1814



Gravesend High Street circa 1900



Rosherville Gardens circa 1900

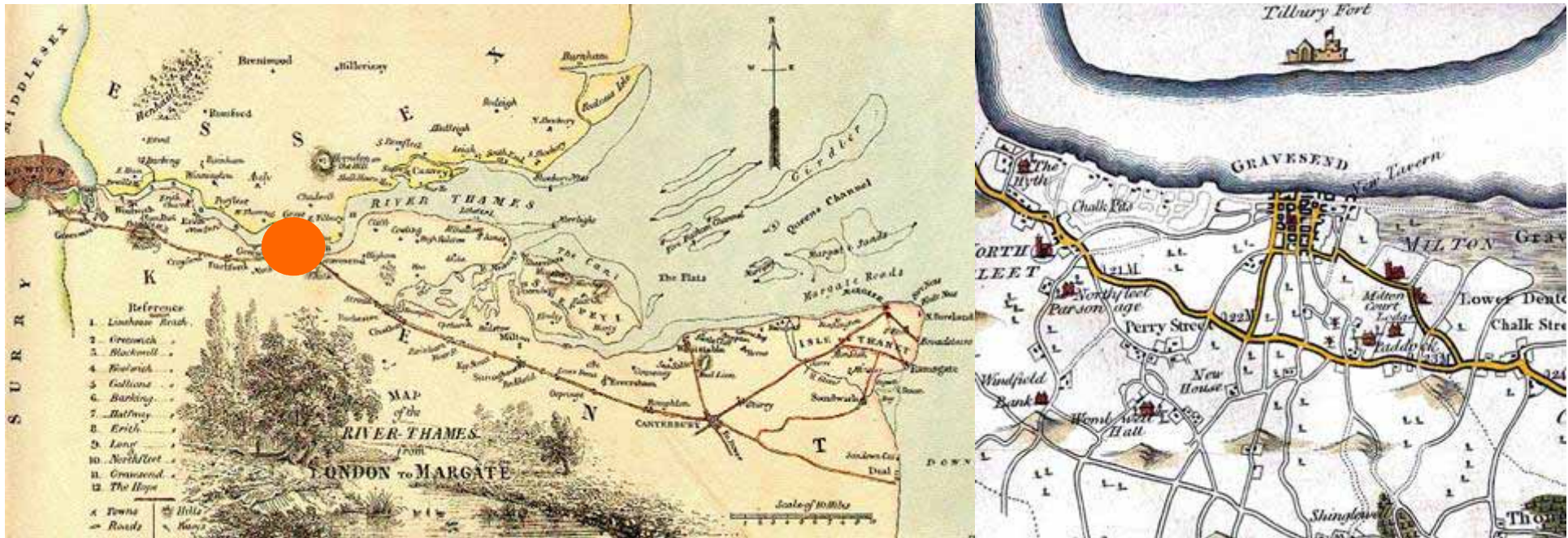


New Road 1925

set -



...historically a 'halfway house' between London and Dover ...



...and a significant destination for centuries, a place in its own right

...and its *strategic location*



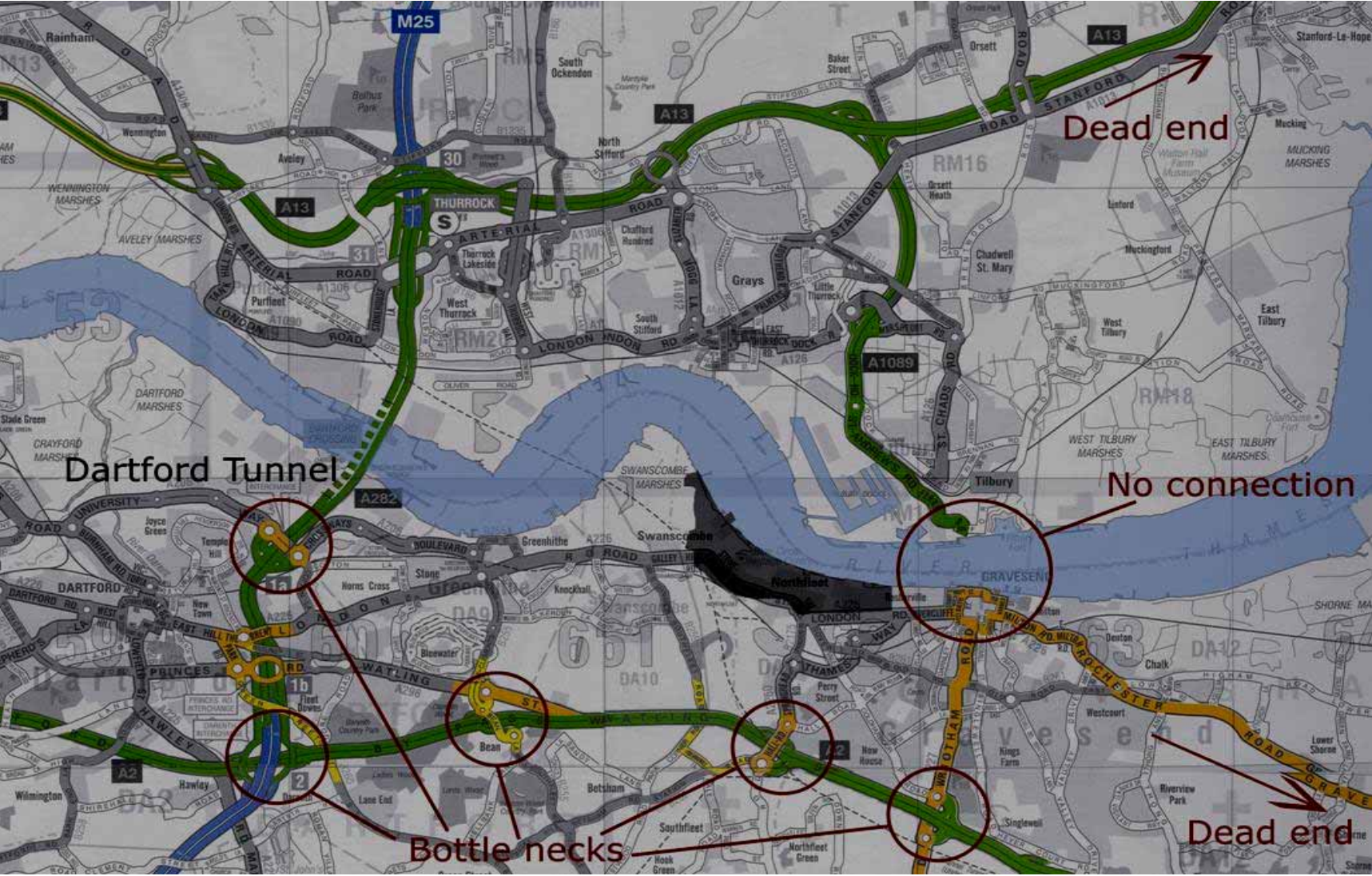
**The Port of London**

- 53 million tonnes of cargo p.a.
- Generating 35,200 jobs
- £3.4billion p.a. to the UK economy



## The Major Challenges ...

# Highway capacity...





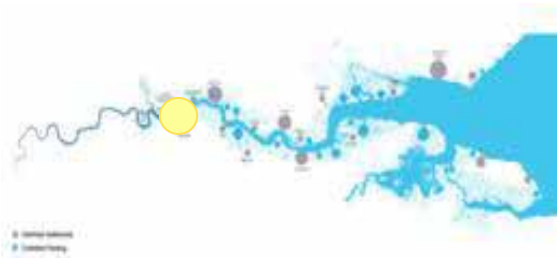
We have to properly take advantage of £6billion of recent investment in transport infrastructure...





# We have to devise long term solutions to climate change ...

## 1. Improve existing Barrier?



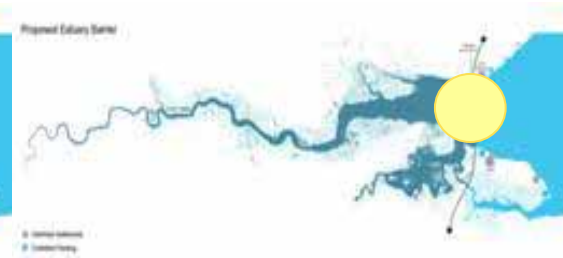
- Nearing the end of current life
- Only directly protects central London from flooding
- Relies on 10 km of raised flood embankments to be fully effective

## 2. Tilbury Barrier?



- More effective than Thames Barrier on flood risk grounds
- Not as effective as Outer Estuary Barrier
- Exacerbates 'downstream' flood scenarios

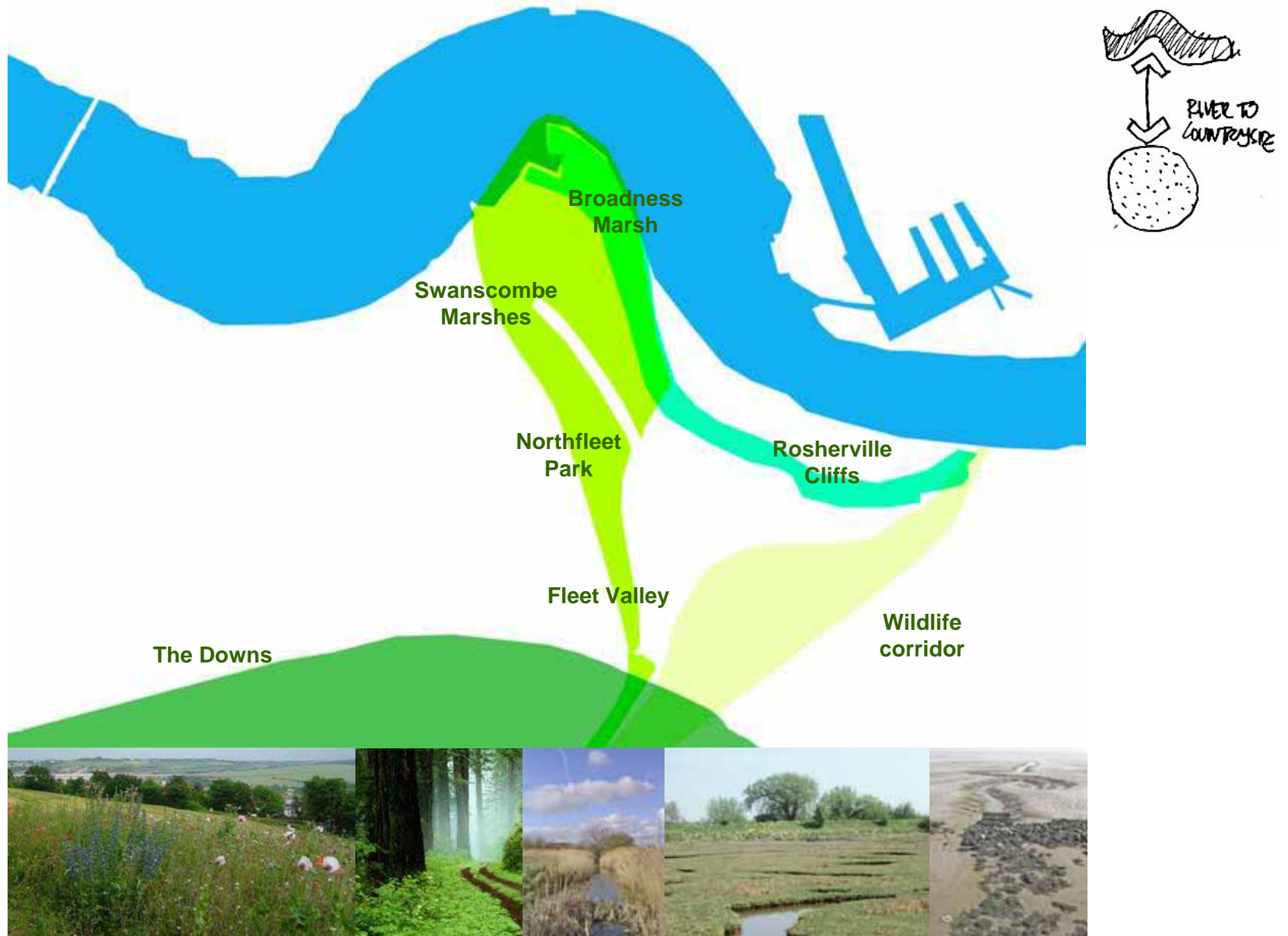
## 3. Estuary Barrier?



- Provides protection for Greater London and Thames Gateway
- Reduces need for flood embankments
- Impacts on river ecology need to be carefully considered

# Building an EcoCITY: *Ecology and the Environment*

Create a continuous ecological framework based on the River Thames and the Fleet ...





... to unite all watershed habitats and ecologies



# Northfleet Ebbsfleet should be made a showpiece for the implementation of the UK Biodiversity Action Plan

A key role in the wider plan for the Thames Estuary Park

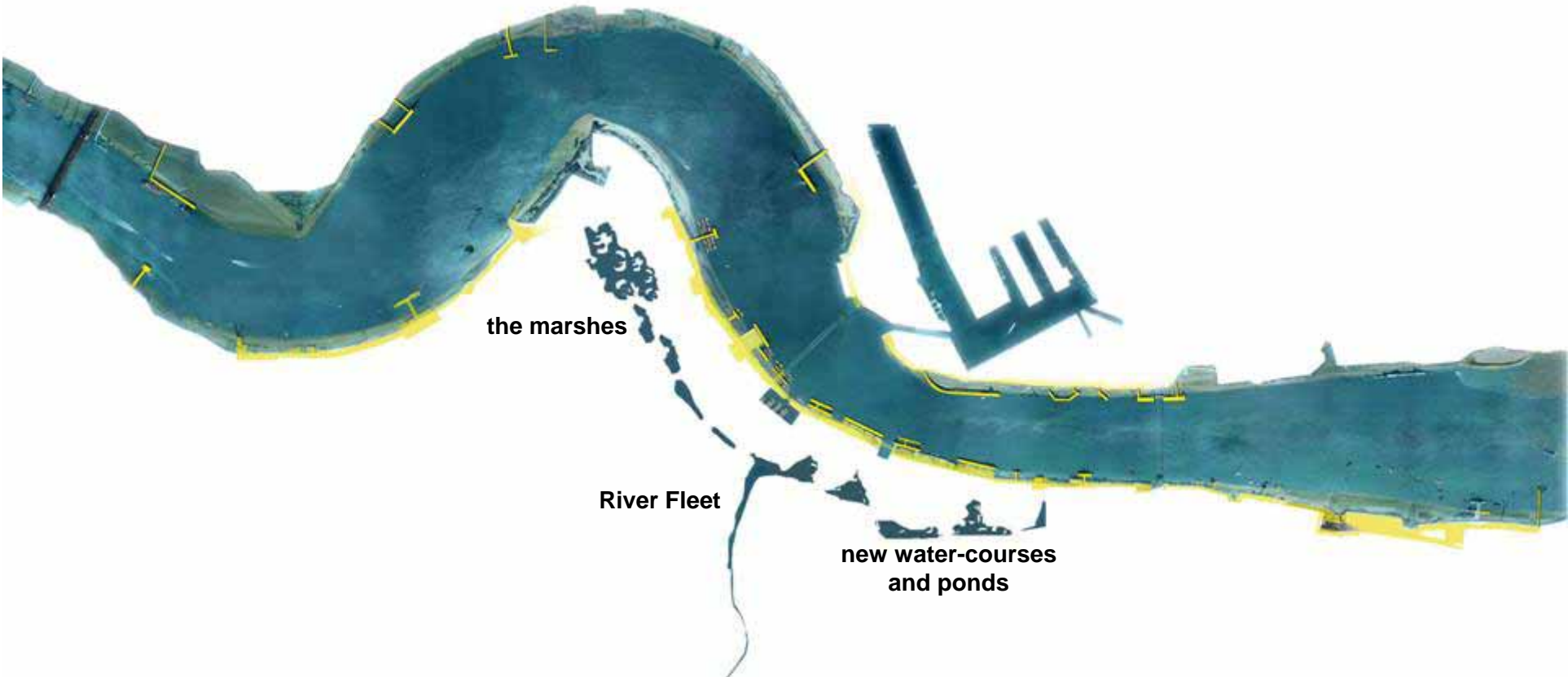


“... perhaps over 50% of National Priority Biodiversity Action Plan species could benefit from the creation of a new *Thames Estuary Park*”

Dr. Mike Wells, Director, Biodiversity By Design

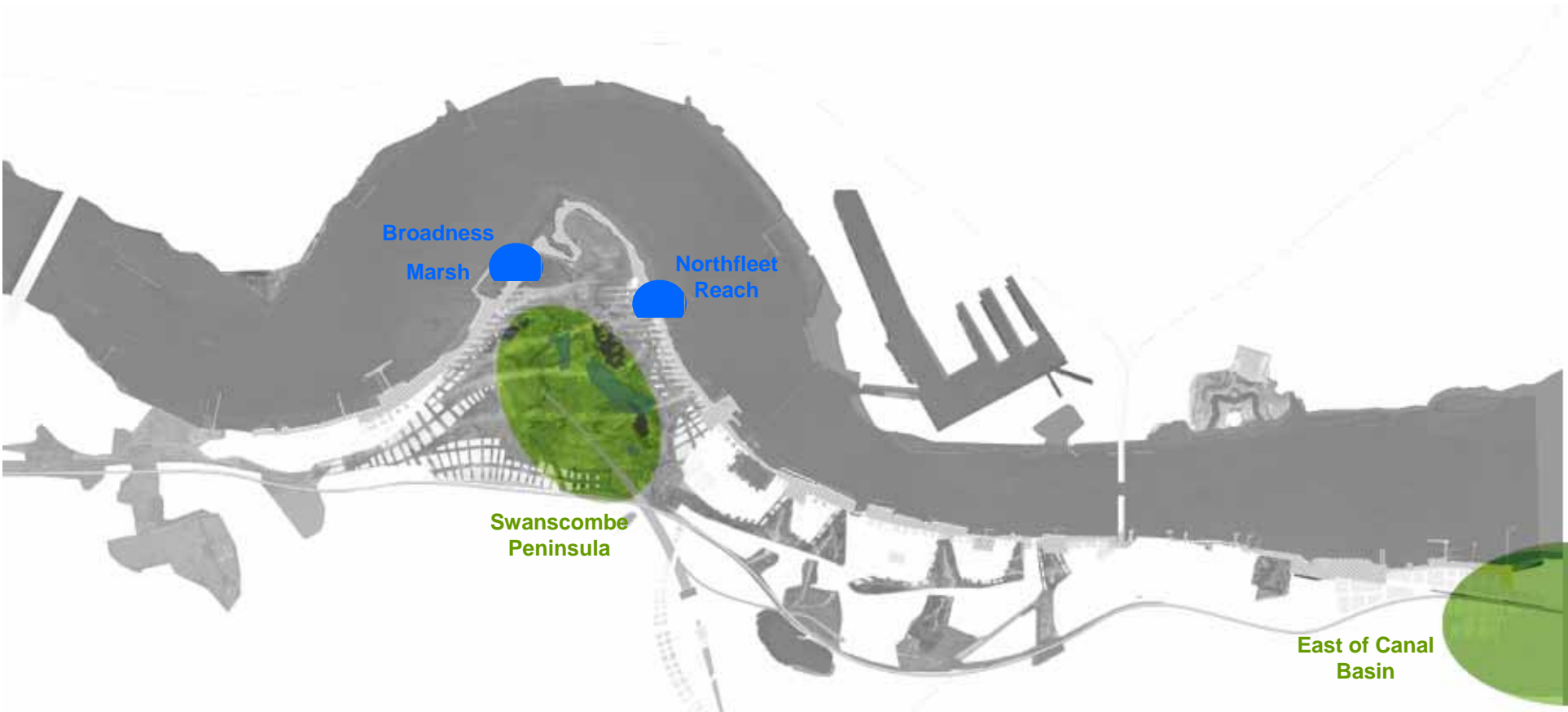


# Integrate a system of water collection and explore natural purification

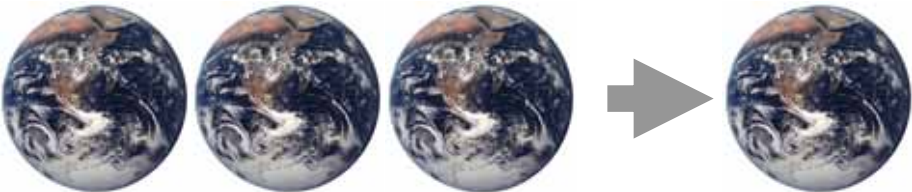




Provide access to small scale agriculture and local food production



# Harness renewable energy



Pre-feasibility Study for a sustainable eco-city at Northfleet - Ebbsfleet

- Solar arrays on all roofs could provide 25% of our energy requirements
- Tidal power technology is evolving all the time – investigate the use of small turbines on the site
- Urban wind power generation
- Renewal local materials in construction
- New environmental industry as an employment generator – energy from waste



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# Maximise the potential to create the jobs of the future at Northfleet





“We desperately need more homes – and we desperately need to cut carbon emissions to tackle climate change ... new eco-towns could build low carbon design into the fabric of the community, not just into individual houses”

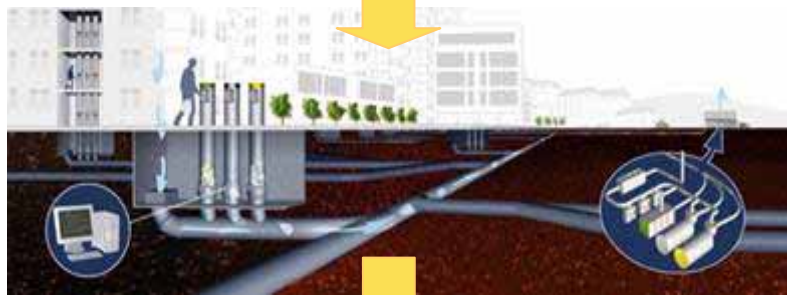
Yvette Cooper, Housing Minister, Department of Communities and Local Government

# No waste should be exported from Northfleet Ebbsfleet

*Landfill*



*ENVAC  
Waste  
Management  
System*



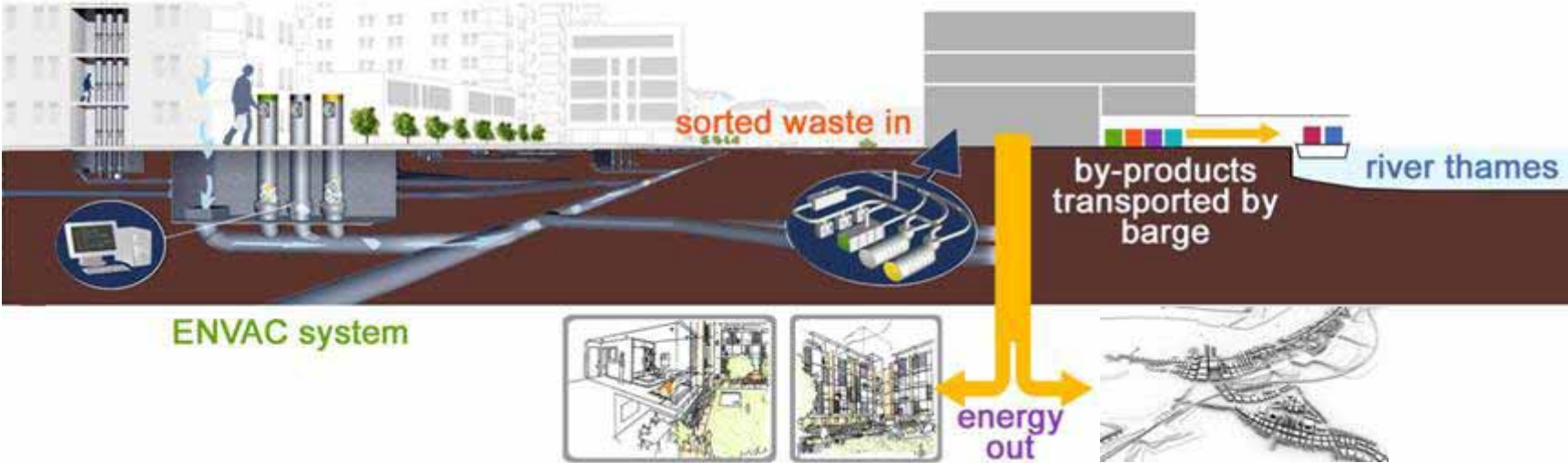
*Waste  
Recovery  
Plant*



- New development should integrate waste and energy technology at the outset
- Maximise opportunities to create energy and by products from waste



# Integrate new energy-from-waste technology at the outset



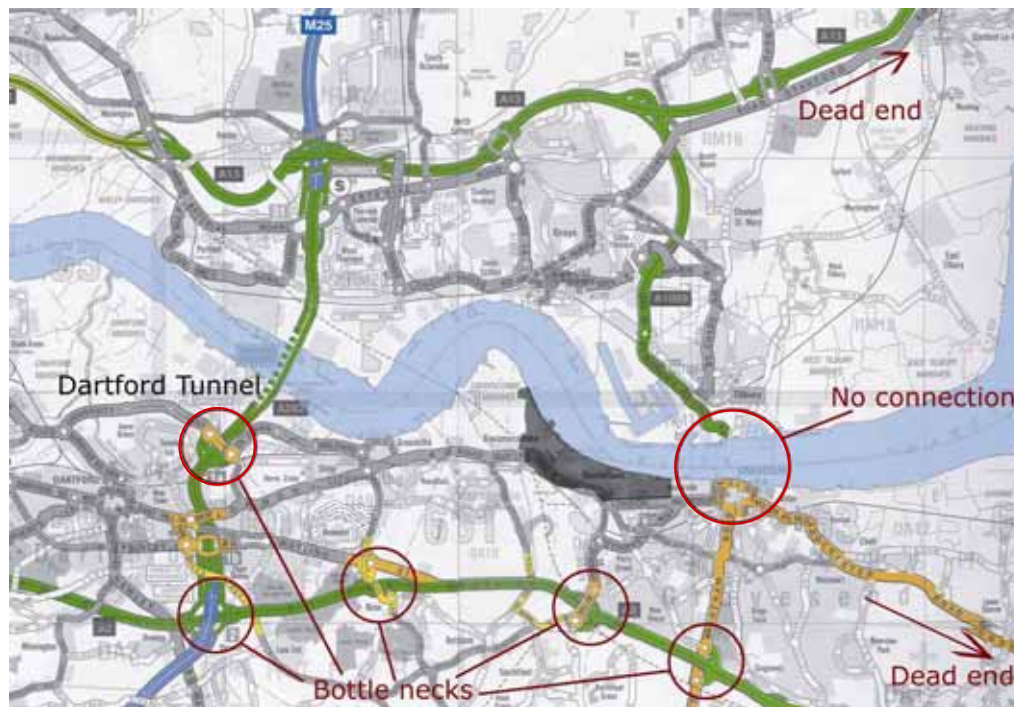
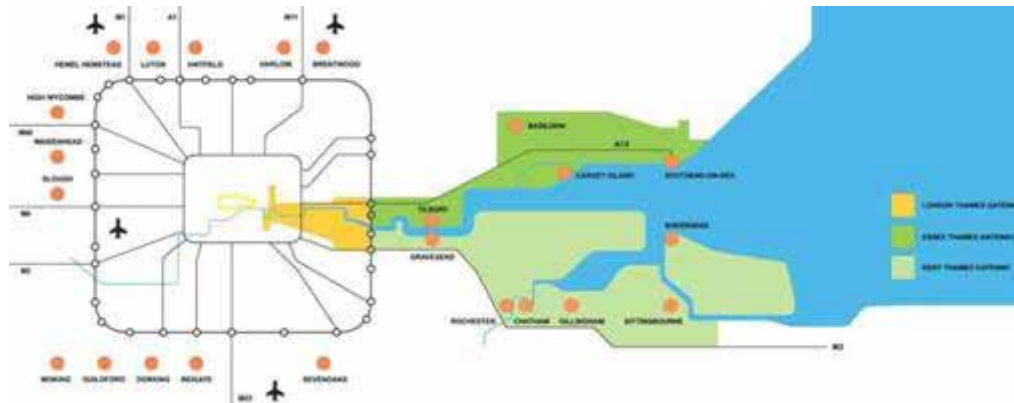


# Build zero-carbon new homes

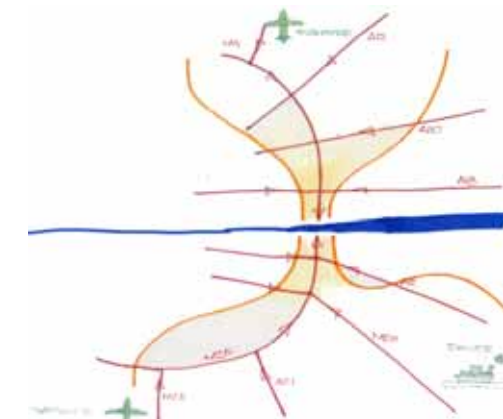


# Building an EcoCITY: *A Movement Plan*

# Road capacity is a major constraint ....



- The Highways Agency is a major constraint on development – road based transport takes precedence in determining development density
- Northfleet Ebbsfleet is on the UK's strategic network, but is not able to benefit from this proximity
- The Dartford Tunnel is a 'bottleneck' that is holding back ambition of the area

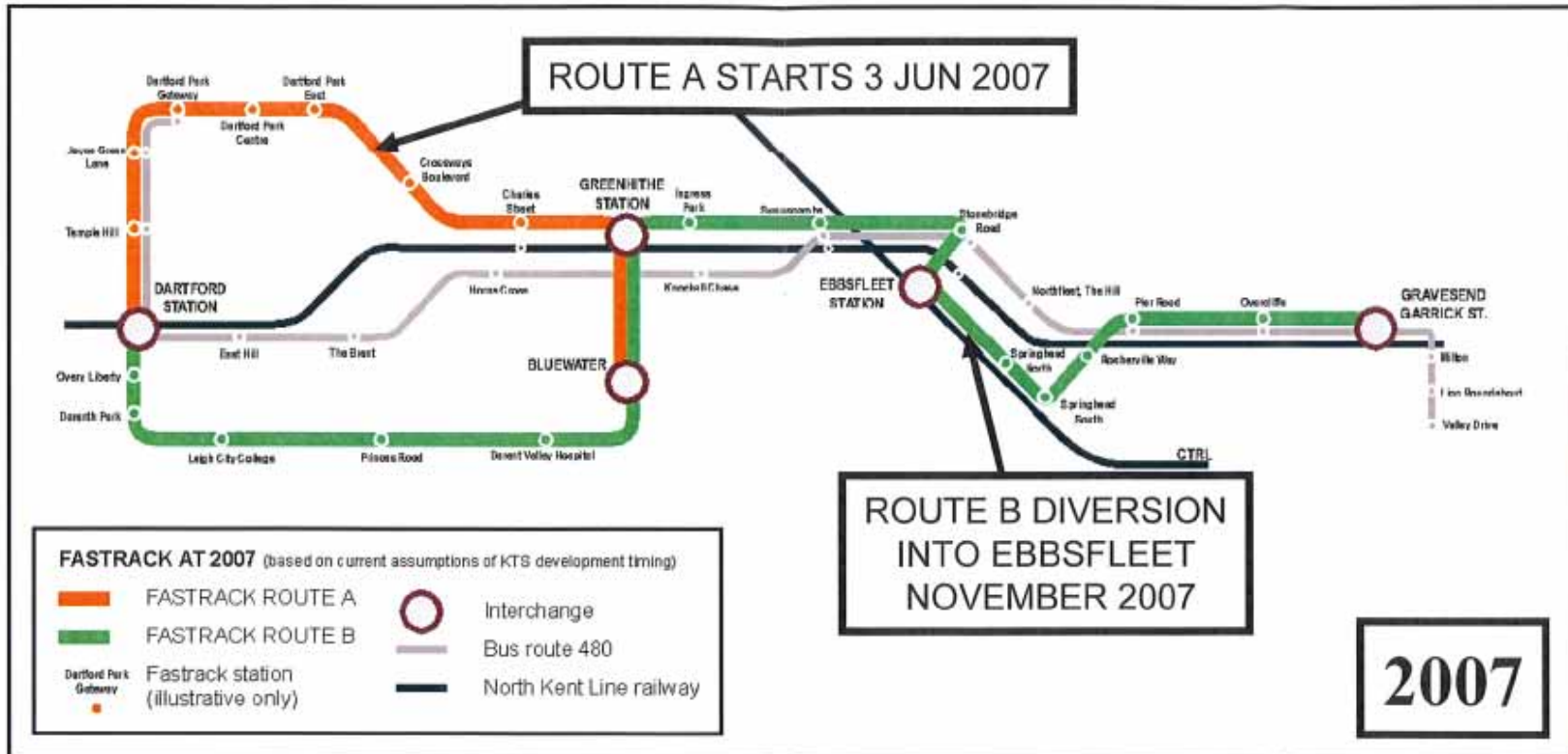




... our people movement strategy should be holistic ...

	Small Neighbourhood	Medium District	Large Town	X Large City / Sub Region	XX Large Region	XXX Large Inter Regional
<p>Common Practice</p> <p>Predict and Provide - The Car is King</p>						
<p>Best Practice</p> <p>Roads to Prosperity &amp; The Ten Year Plan</p>						
<p>Innovation</p> <p>Transport + Movement, Urbanism &amp; Climate Change</p>						
<p>Experimentation</p>						

# Beyond Phase 1 ...





## .. reduce dependence on car-based trips



Consider the application of emerging and new movement technology including:

- Mind map navigation technology for pedestrians and cyclists
- Parry People Mover, centrally controlled micro-cab technology
- Parisian 'Velib' cycle share system
- Oystercard technology to cover local trips across all modes
- Vehicle sharing
- Shuttle between Ebbsfleet Station and Ocean Village
- Public transport powered by hydrogen fuel cells
- High speed water-based transport

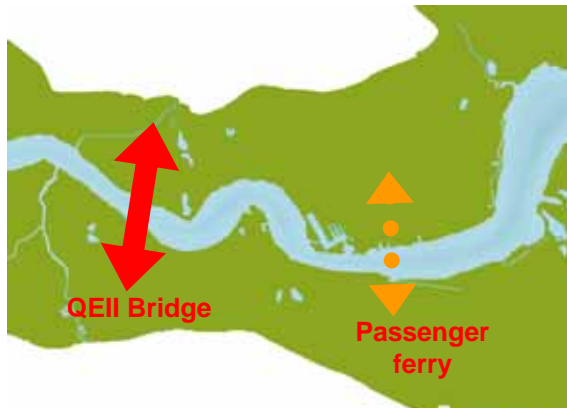


# Improve physical connections across the river ... .. Create **ONE** place

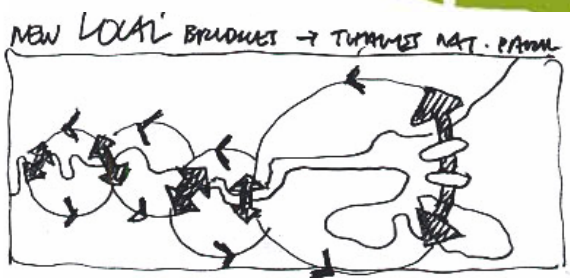
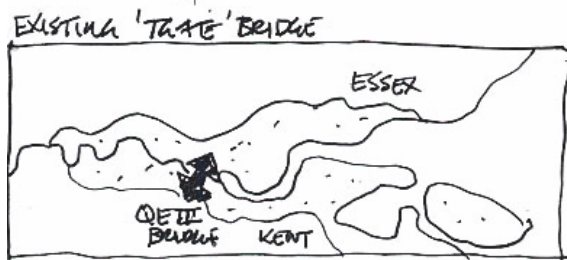


- Connect the regeneration opportunities on both sides of the river
- Low level bridges creating communities on Kent and Essex coasts to complement the regional significance of the QEII Bridge at Dartford
- Northfleet becomes an ecoCITY within the wider Thames Estuary Park

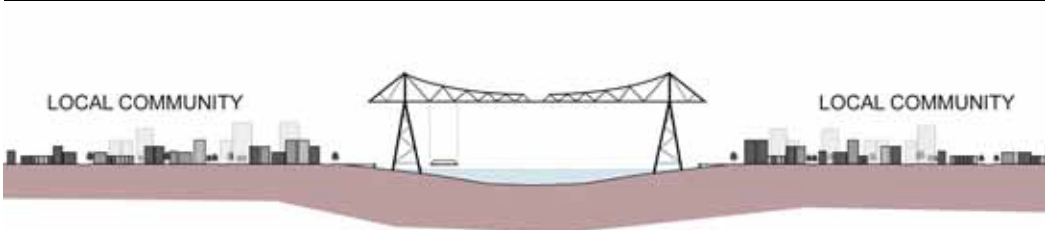
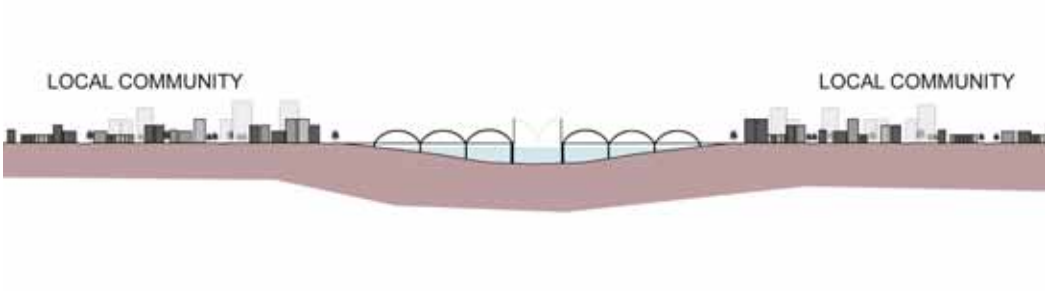
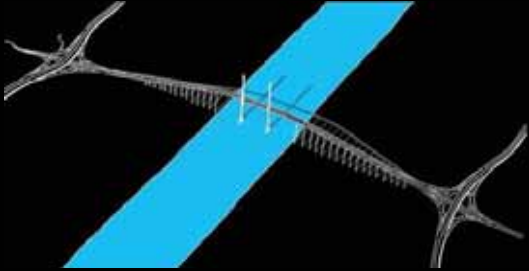
**Existing** Thames Gateway connections



**Possible** Thames Gateway connections



# Explore different options for the location and type of connection ...





... including ferries, light rail, pedestrian and cycle links



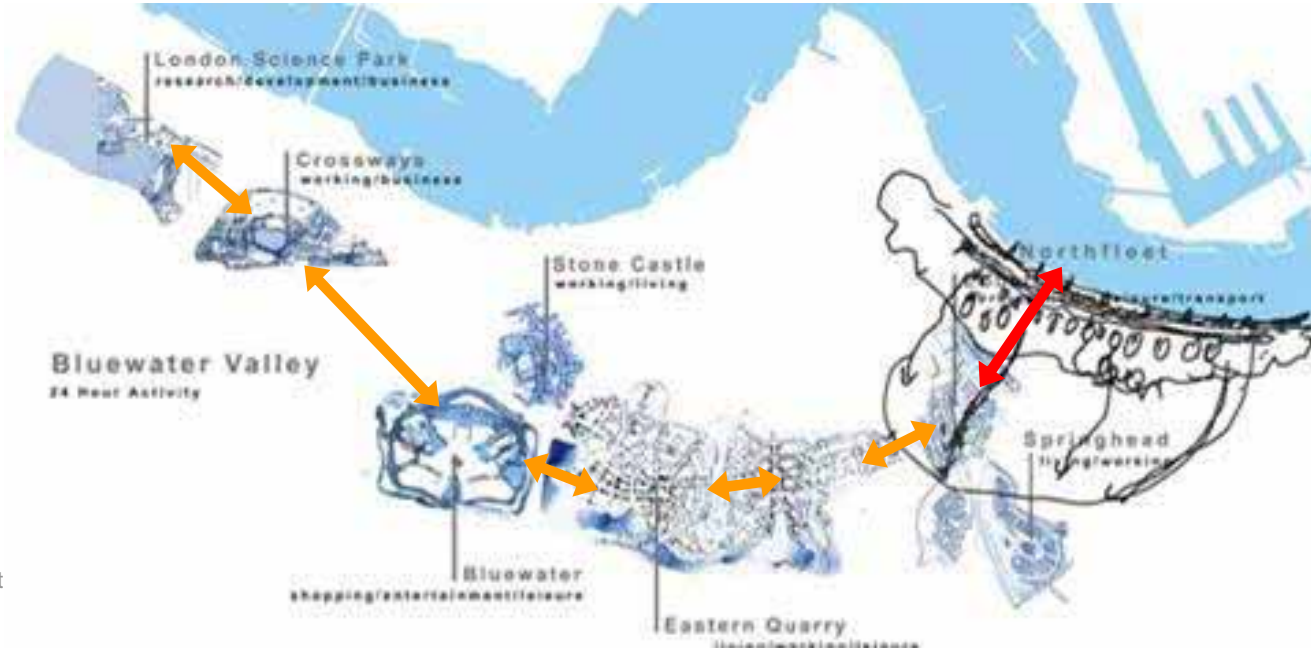


# Strengthen links to local communities existing and new

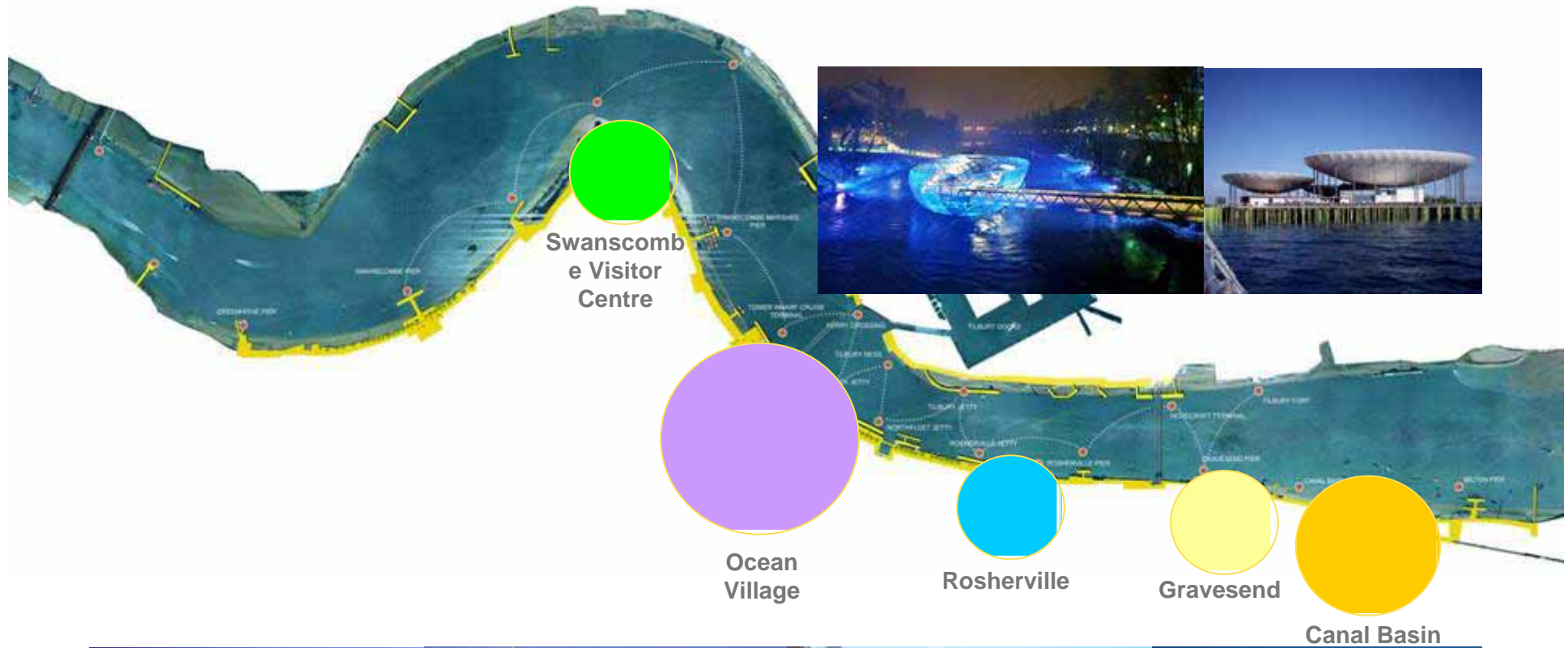
1  
Integration with local communities



2  
A continuous route connecting to 'Bluewater Valley'



A continuous route along the water with a range of destinations ...



... a series of activities and public spaces ...



Create a continuous 'high street'





# A continuous public realm integrating existing and new



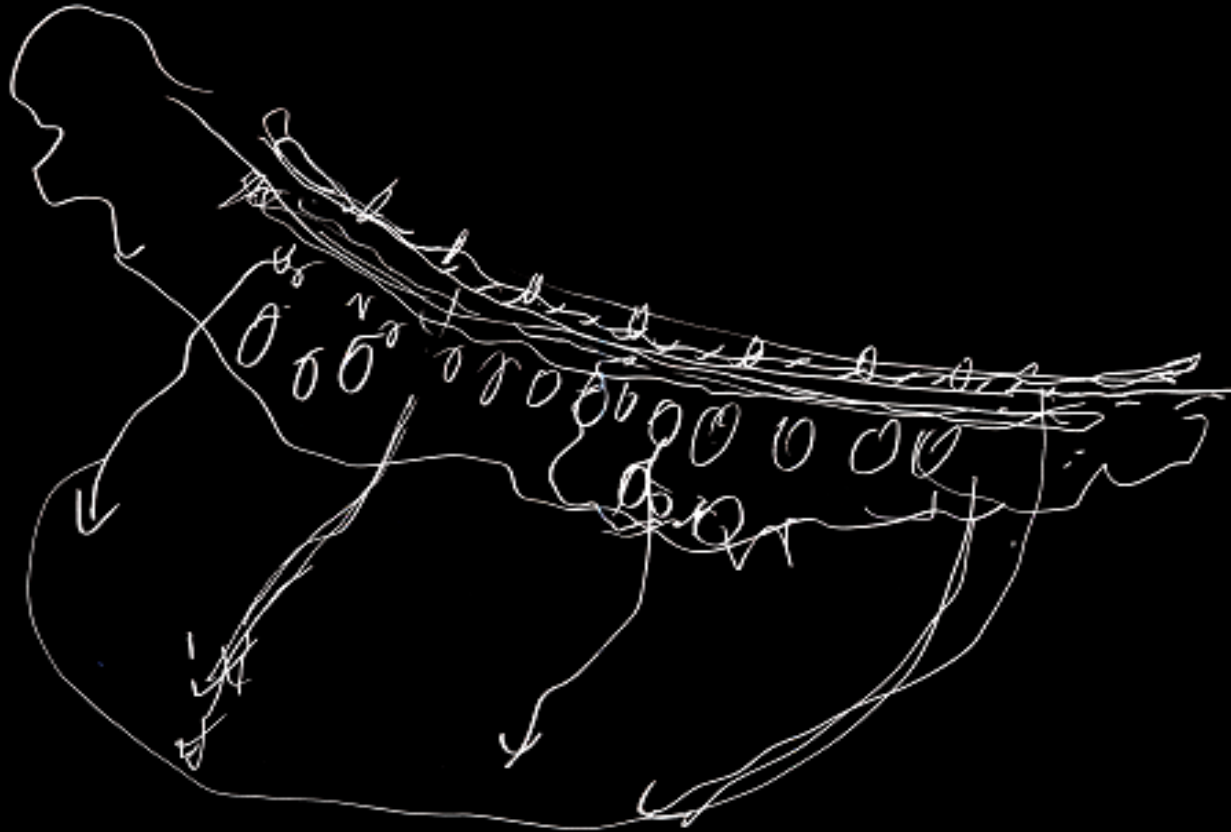
## Building an EcoCITY: *Built Form*

# Respond to the scale of the river and the landscape

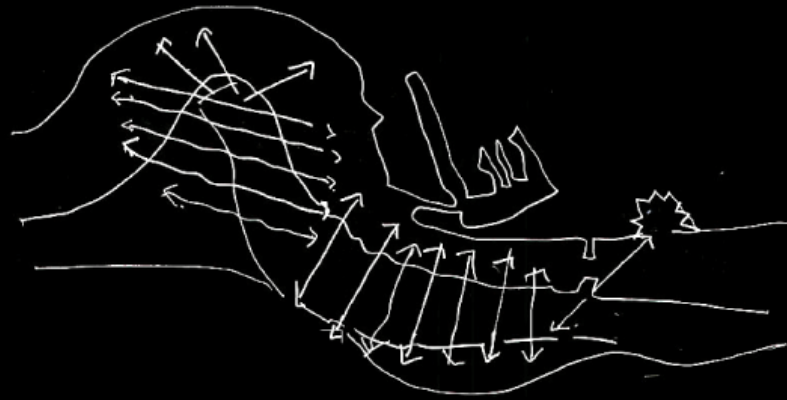




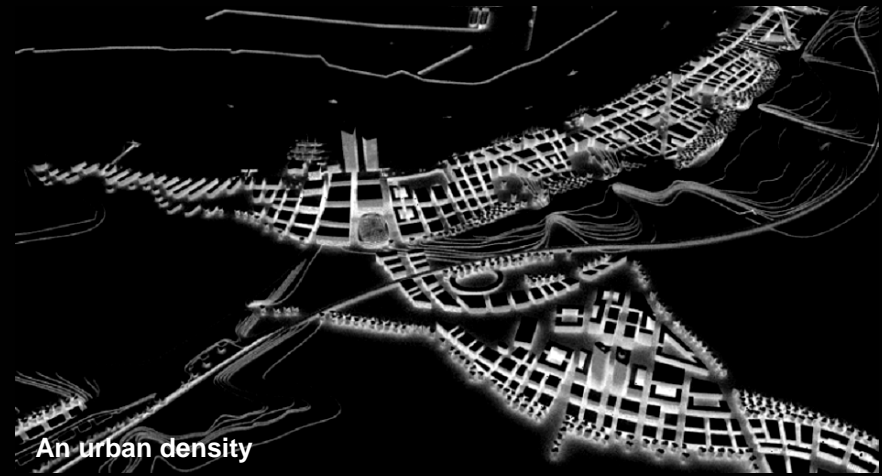
Address the river positively – create a *cityscape* on the Thames



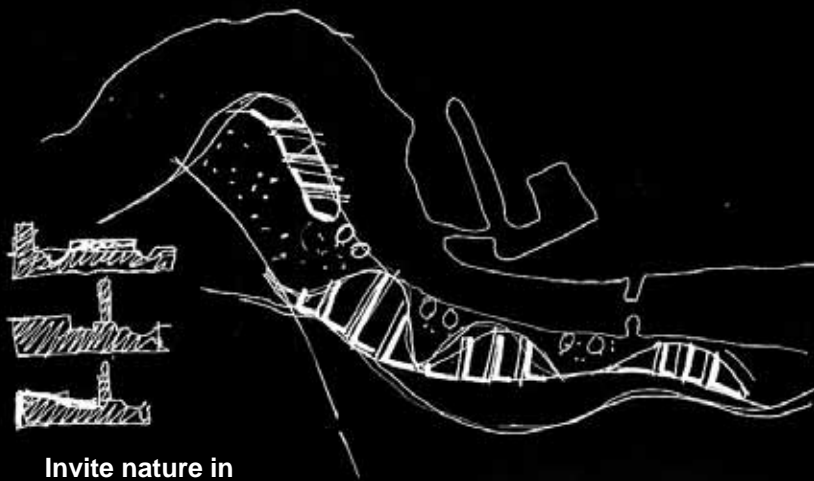
# Built form reinforces the identity of place ...



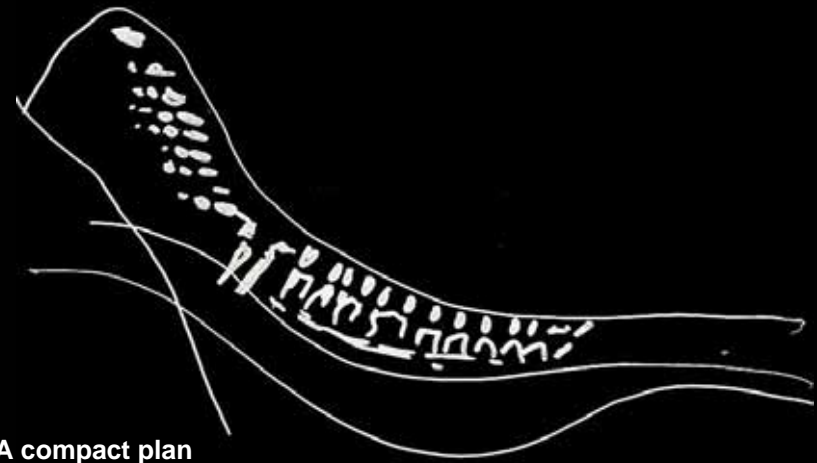
Respond to the River's geometry



An urban density



Invite nature in



A compact plan

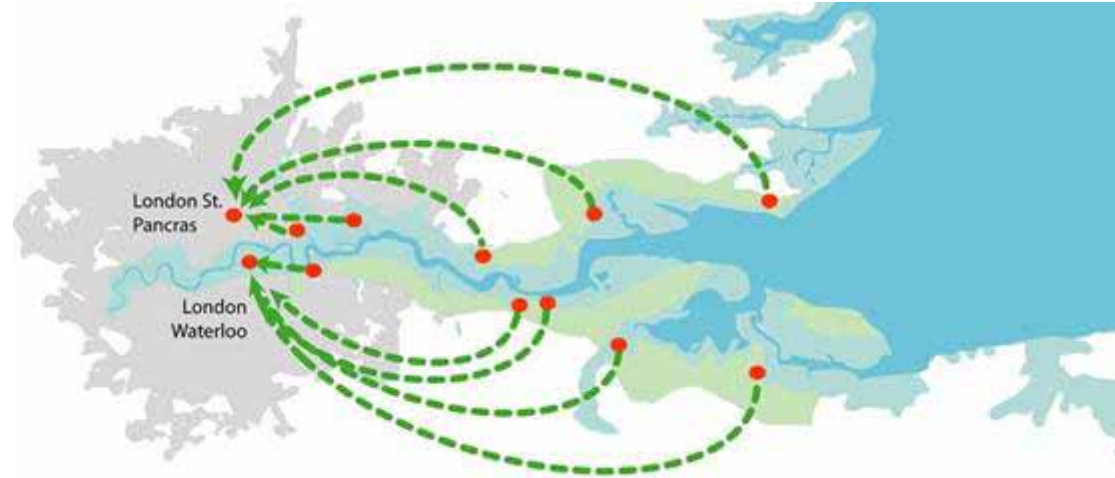
# Create an iconic presence at Ocean Village



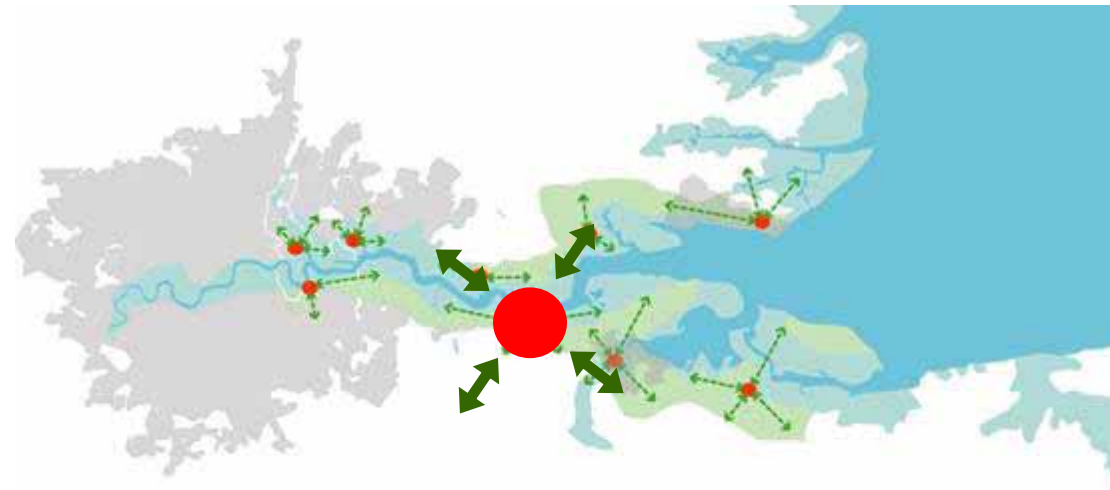


## Building an EcoCITY: *Activities and Land Use*

# Develop Northfleet Ebbsfleet as a sustainable city – not a commuter town dependent on Central London

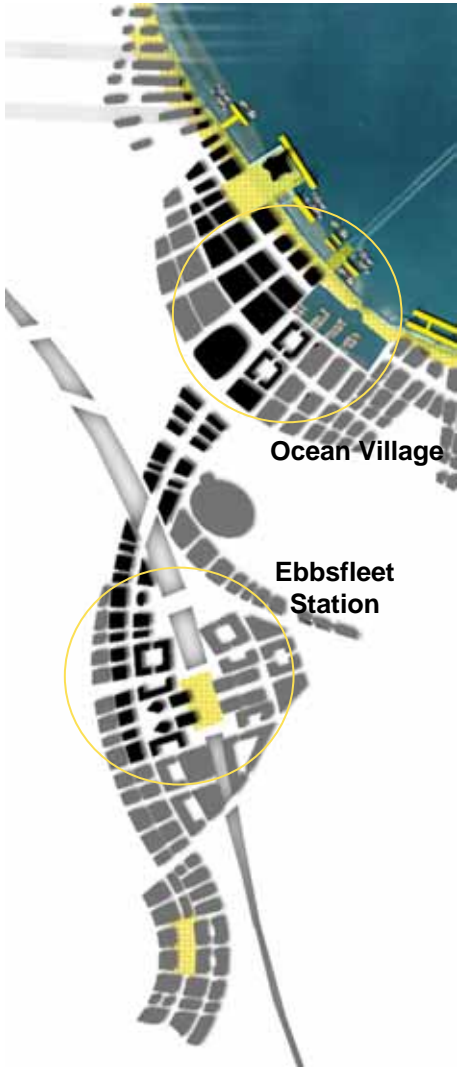


*At present - commuting out*



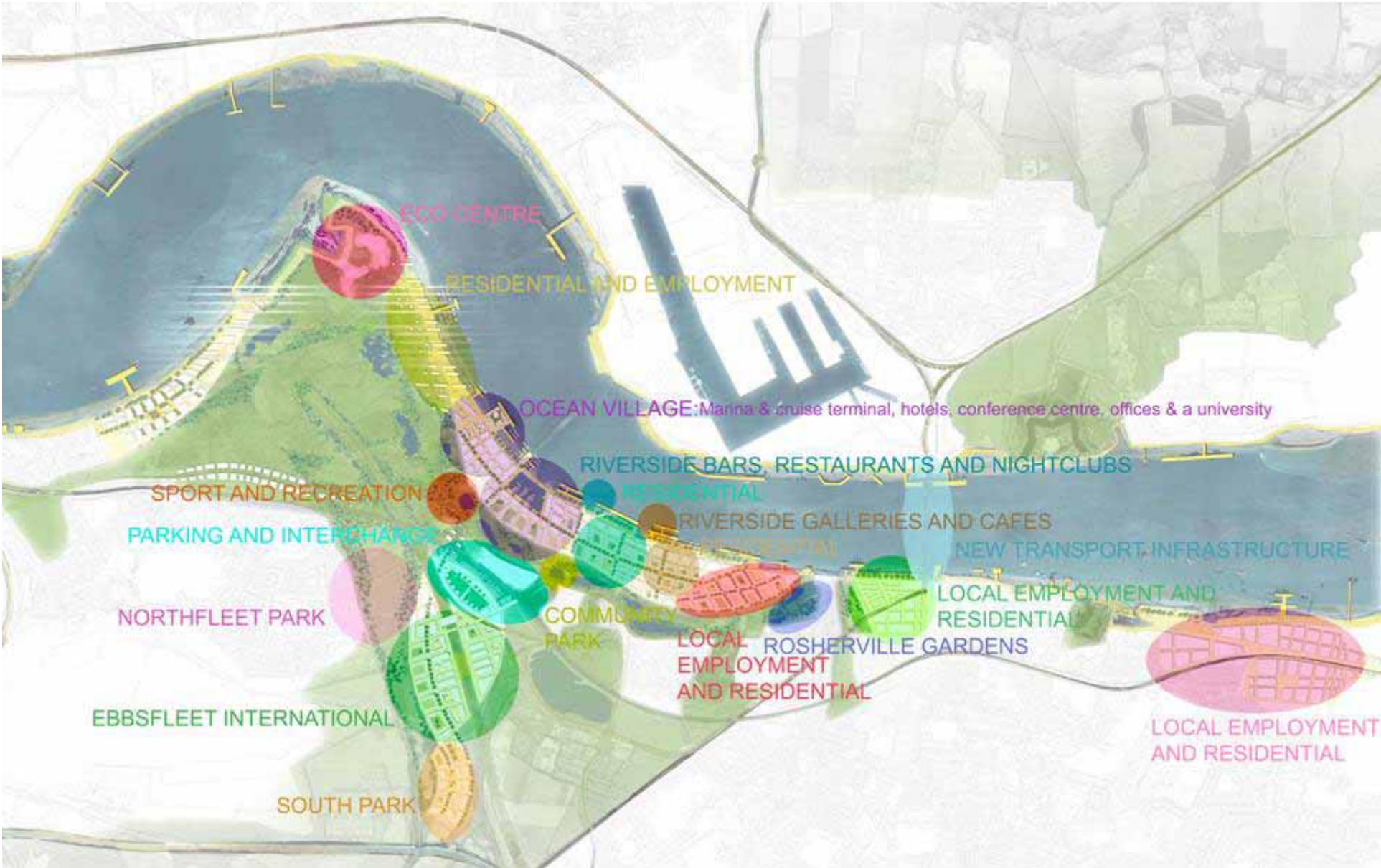
*The future - sustainable local centres*

# Focus commercial and office uses on the link to Ebbsfleet Station





# Create a sustainable community with new local employment





If we developed at Greenwich Peninsula densities, we would be creating a new city of **41 million sq. ft.**



**Stratford**

- ≈ 35 ha (entire site – 600 ha)
- ≈ 3,600 homes
- ≈ 50,000 jobs



**Greenwich**

- ≈ 73.5 ha
- ≈ 10,000 homes
- ≈ 27,000 jobs



**Northfleet Ebbsfleet**

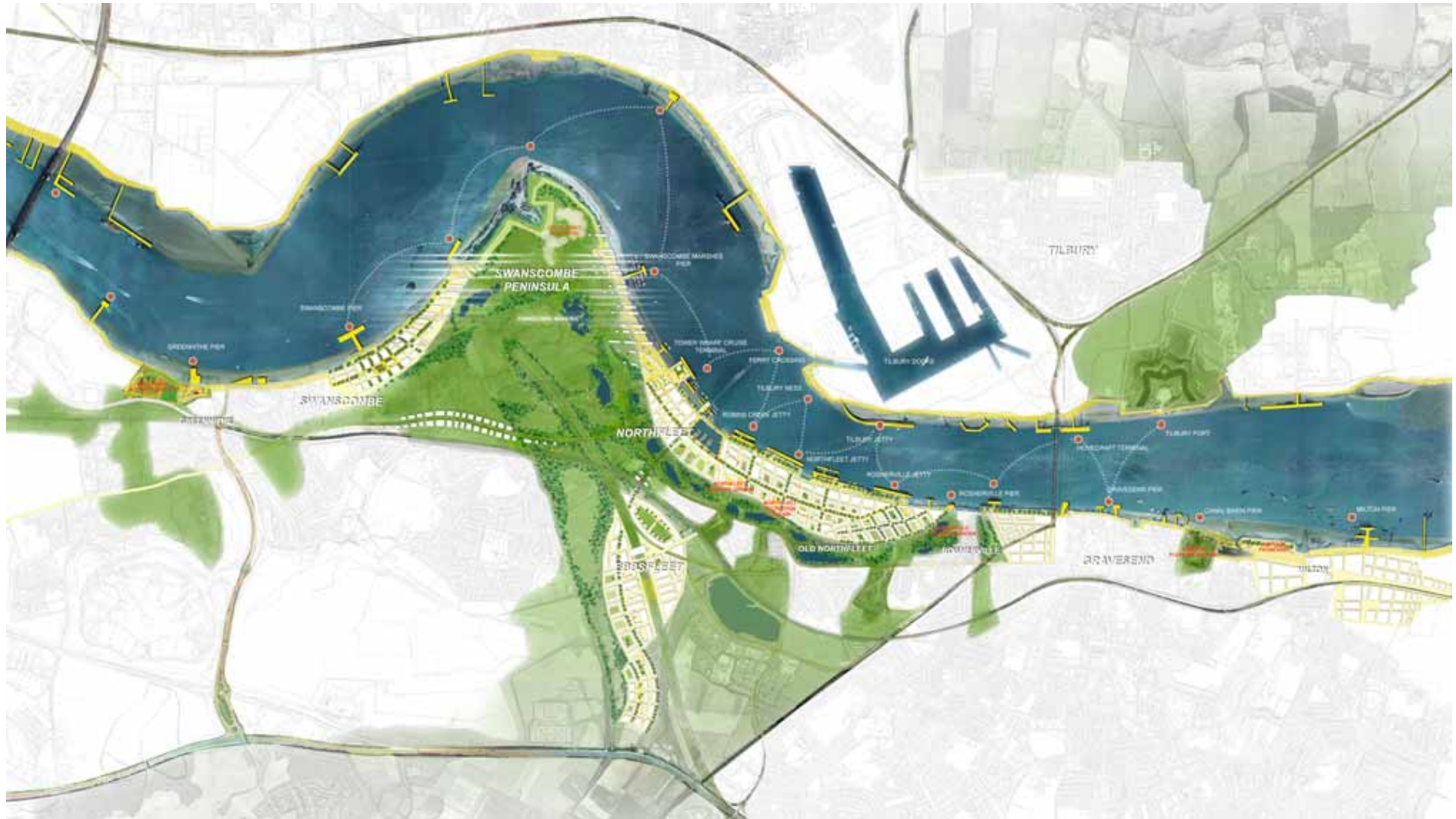
- ≈ 164.8 ha
- ≈ 25,000 homes
- ≈ 60,000 jobs approx

A new *eco-city* within the Thames Estuary Park





# A new *eco-city* within the Thames Estuary Park



# A new *eco-city* within the Thames Estuary Park



## Building an EcoCITY: *The Way Forward*

- Acquire a strategic landholding in the area
- Refine development quanta in conjunction with King Sturge and write a comprehensive brief for the area
- Undertake detail commercial appraisal
- Set up a consultation strategy in conjunction with a political advisor
- Appoint Peter Brett Associates to devise a comprehensive Travel Plan
- Commission a Masterplan study to comprehensively test ideas put forward in this Pre-feasibility Study