

# Barking Town Centre Energy Action Area

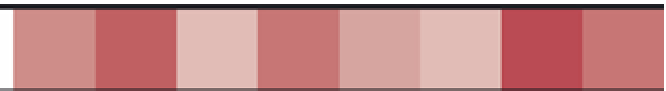
Jennifer Dearing, Corporate  
Director of Regeneration

March 2007



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The London Borough of  
**Barking & Dagenham**



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# Barking and Dagenham

- Outer London Borough in East London
- In heart of the Thames Gateway
- 25,000 new homes over next 15 years

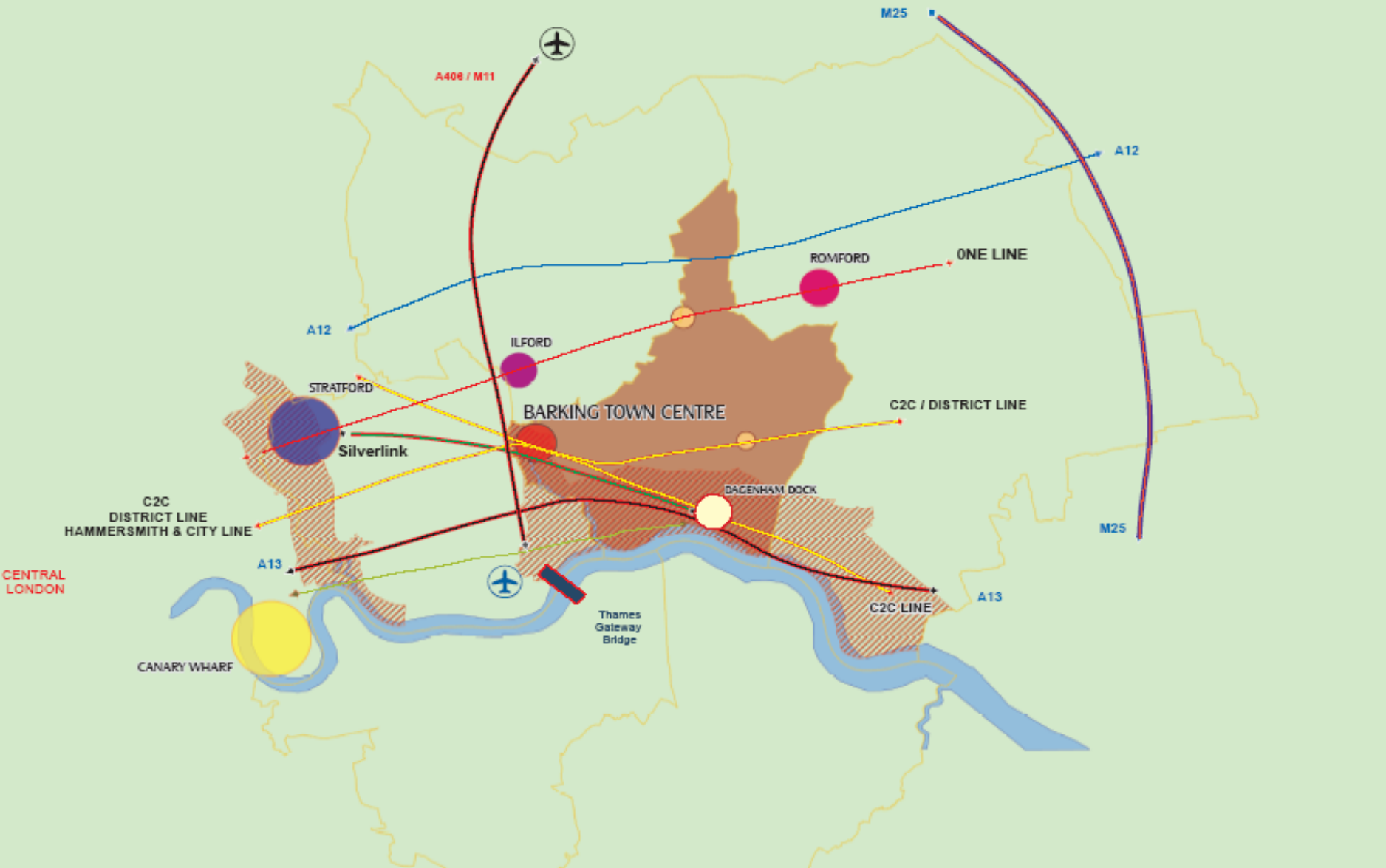


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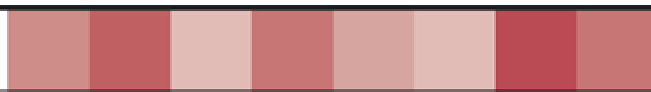


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# Barking Town Centre regeneration

- 7,000 new homes planned over the next 15 years;
- A thriving economy — new shops, bars and restaurants;
- Improvements to transport links;
- New cultural and leisure facilities;
- New employment opportunities for local people.



Master plan of the new town square on London Road



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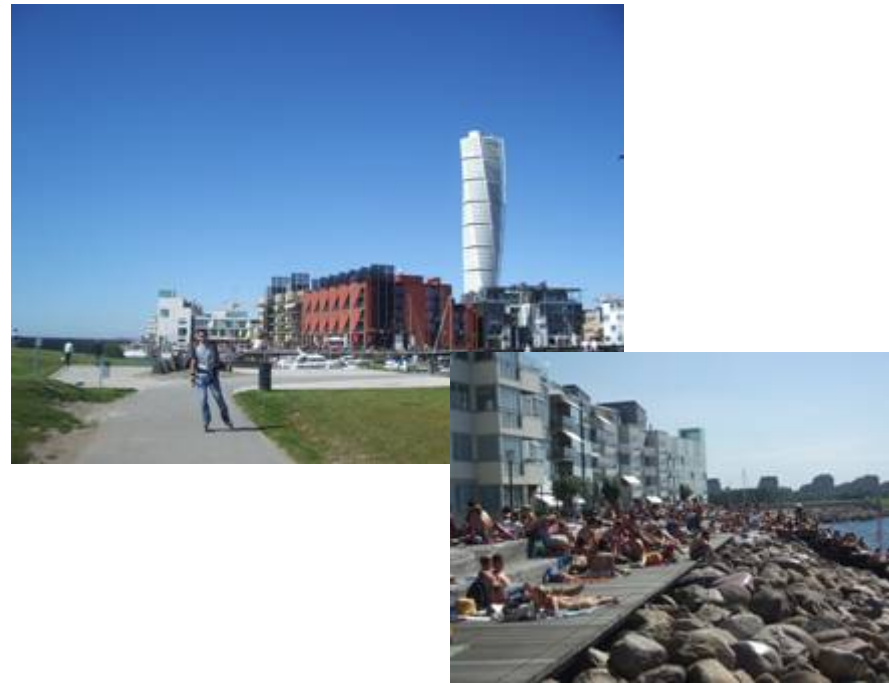
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# Barking Town Centre Energy Action Area

- Barking Town Centre - one of 4 pilot 'Energy Action Areas' in London;
- 'Well-defined geographical area acting as showcase low-carbon community' (Mayor's Energy Strategy 2004);
- Barking to demonstrate best practice in low carbon regeneration.

**Malmo in Sweden has become a beacon of sustainability thanks to its area wide sustainable energy strategy**



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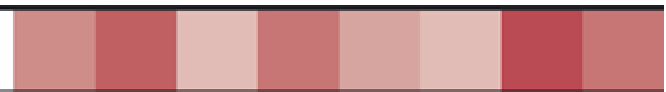
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# How We Started

- Just following building regulations was not an option for us;
- Council assessed potential for reducing energy consumption in new developments;
- 6 'low carbon options' were modelled and costed;
- Town centre wide district heating with on-site electricity generating renewables recommended.



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# Our Vision

Area wide strategy to reduce carbon emissions from new developments by 32%:

- 22% reduction by connecting to a low carbon district heating network;
- 10% reduction through on-site electricity generating renewables.

## Barking Town Centre Energy Action Area Implementation Plan



This Implementation Plan was co-funded  
by the London Energy Partnership



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# How We Plan To Do It

- District heating is the most cost effective way to reduce carbon emissions in large geographical areas;
- Excellent low carbon heat sources near Barking:
  - Waste heat from Barking Power Station;
  - 90,000 tonnes of refuse derived fuel from near-by plant.

- Also can provide heat for Barking Riverside



**Barking Power Station could produce enough heat for potentially 150,000 homes**



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# The need for electricity-generating renewables

- Heating needs of buildings met by district heating in the long-term;
- Only photovoltaics and wind turbines will give further carbon savings;
- Technical discussions with developers - massive learning process for planning staff



Small scale wind turbines and PVs on a rooftop



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# Implications of Energy Action Area for developers

- This Guide sets out the communal heating and renewable energy requirements;
- More technical guidance provided on individual developments to ensure compatibility with wider community heating network plans.

## A Guide to the Barking Town Centre Energy Action Area



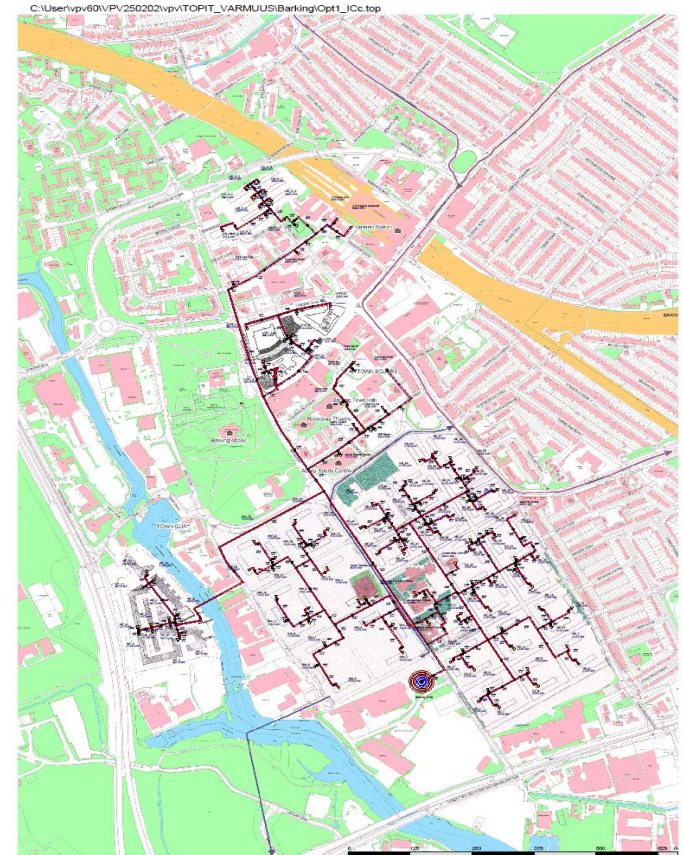
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# Technical design of the network

- Poyry Energy Limited currently designing the community heating network;
- Isolated communal heating networks will be developed first as developments come forward;
- Isolated networks to be joined up by Energy Services Company (ESCo) once low carbon heat becomes available from either Barking Power Station or new waste-to-energy CHP.



Initial map of network



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# Next Steps

Poyry will also undertake the business case for a Barking ESCo that includes:

- Our own buildings linked into heat network;
- Role of ESCo (building and operating network, selling heat etc);
- Type of ESCo (private or/ and public);
- Capital investment in network;
- Revenue from heat sales;
- Securing customer base.



# Challenges

- Embedding sustainable energy within regeneration programme involves a lot of work:
  - Very technical issues for staff to master;
  - New skills set required – ‘energy planning’ is new activity for councils & regeneration agencies
- District heating network is a very big scheme – huge project for Council to manage;
- Partnership working with other public sector bodies and developers;
- Education & communication – CHP and renewables bring controversy (laying heat pipe network & visible structures on buildings)

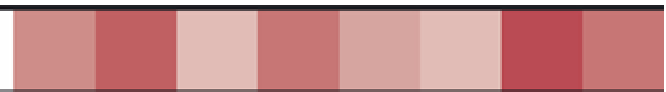


# Thank you



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