



Our vision for the Thames Gateway

A showcase for sustainable development



creating a
better place

We are the Environment Agency. It's our job to look after your environment and make it a better place – for you, and for future generations.

Your environment is the air you breathe, the water you drink and the ground you walk on. Working with business, Government and society as a whole, we are making your environment cleaner and healthier.

The Environment Agency. Out there, making your environment a better place.

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Our vision for the Thames Gateway

Transforming the Thames Gateway into an area of thriving and prominent communities has become the UK's most exciting and important development project.

The Government's Sustainable Communities Plan has set targets for 120,000 new homes and 180,000 new jobs in the Gateway by 2016.

These plans should be seen as an opportunity, rather than as a threat to our environment. Large-scale expansion of this kind means we can plan for the future in a way that doesn't happen with piecemeal development.

The Environment Agency has a leading role in ensuring the Gateway provides a healthy, safe and attractive environment for the people who live and work there.

It is essential that we plan now to deal with the main environmental pressures of such a big development. To do this we are working closely with planning authorities, developers and local groups so growth in the Gateway protects and enhances the environment.

We want the vision of sustainable communities to become a reality

By applying high environmental standards throughout this development, we can build a Gateway that is a showcase for environmental good practice.

Properties that are built to make savings in energy and water are not only environmentally sound, but also provide the buildings with extra selling points. Building a network of parks, waterways and open spaces will also provide areas for the community to enjoy.

The Government has already committed to achieving these high environmental standards throughout this development. These standards cannot be an optional extra – they have to be integral to the planning and building process.

The Thames Gateway can be a clean, green place where people want to live. It can also become a shining example of how modern urban living can reduce its impact on the environment.

ENVIRONMENT AGENCY



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The issues

Reducing flood risk

Over 1.25 million people live and work in the protected Thames floodplain in London and Thames Estuary. The new development will increase this to 1.5 million.

Living in the floodplain is never without risk, but careful preparation can help reduce this risk.

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Providing clean water

The people in the Gateway must be supplied with the water they need, without damage to the environment.

To protect our rivers and streams from pollution, we need higher standards in sewage treatment to deal with the increased amount of sewage.

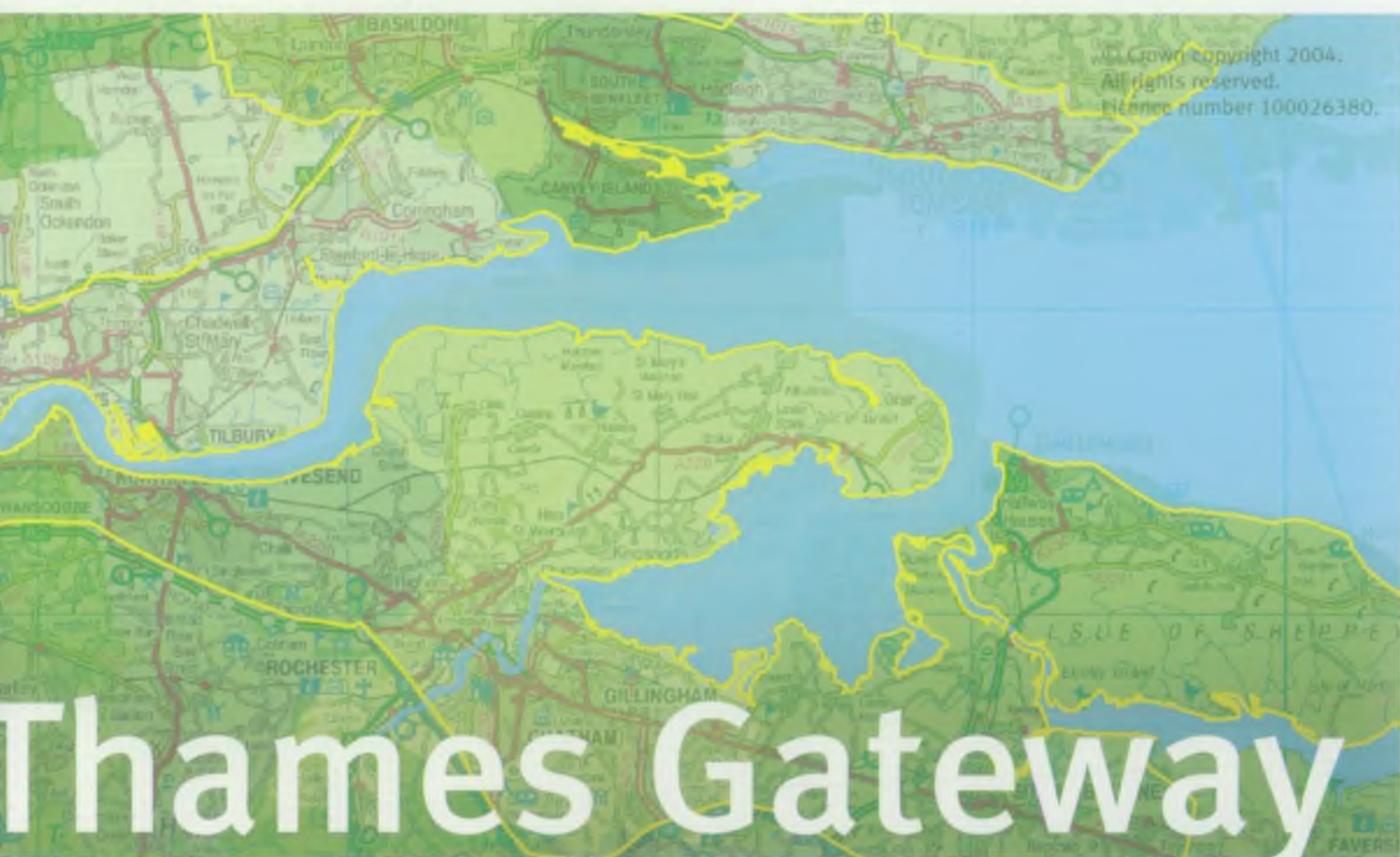
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Managing waste and contaminated land

The new and existing communities will need to manage their waste responsibly. All waste produced through construction and demolition must be reduced, reused and recycled.

Much of the Gateway contains previously developed land, some of which has been left polluted for years. These sites need to be brought safely back into public use.

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Thames Gateway

Building sustainable communities

The Gateway can be a showcase for high environmental standards. Through careful planning from the start, properties can be built to make big savings in energy and water usage.

We want the Gateway to boast a network of parks, waterways and open spaces. These will be areas for people to enjoy. They will also be places for wildlife to thrive.

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The Gateway as it is today

- Extends for 40 miles along the River Thames, from the London Docklands to Southend in Essex and Sheerness in Kent
- 1.6 million residents in approximately 700,000 households
- Supports 500,000 jobs
- Contains 80,600 hectares of land
- 17 per cent of this land is brownfield

Source: Office of the Deputy Prime Minister

Achieving our vision

Our experts provide advice on planning and building to the highest environmental standards. Through our knowledge and expertise we can help you manage and deal with the environmental pressures facing this development.

Working together we can turn this environmental vision for the Gateway into a reality.

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Building in an area of flood risk is not impossible or unusual. London and the Thames Estuary already have some 500,000 properties (worth £126 billion) at risk from tidal and river flooding.

The Environment Agency works hard to protect these properties from flooding. London and the communities along the Thames Estuary are already protected by one of the best tidal defence systems in the world. This integrated system includes over 185 miles of floodwalls, embankments and nine tidal barriers, one of which is the Thames Barrier.

This world-class defence system will provide a high standard of protection for many years. However, rising sea levels and more winter storms caused by climate change will only increase the frequency and severity of flooding in the future.

We are already seeing a steady increase in flood risk. In the 20 years since it was built, the Thames Barrier has been raised 92 times to prevent flooding. More than half of these closures were in the last five years.

We have set-up the Thames Estuary 2100 project, which will produce a flood risk management strategy for the estuary for the next 100 years. We are consulting widely on the best mix of defences and flood management measures, and will announce our draft proposals by 2008.

The options

The new development in the Gateway will mean more property will be at risk from flooding. By working together we can make sure ways of reducing flood risk are included in the development's planning and design.



d risk

With imaginative design, new ways of managing flood risk can benefit the environment and local communities.

While we are working to reduce the number of dangerous floods, we must sometimes allow land to flood in order to prevent more serious damage. This will allow us to direct flood waters to where they cause the least harm, and where we are most prepared to deal with them.

For example, parks and open spaces should be placed in areas at highest risk, so these areas are flooded rather than homes and businesses. Hospitals, schools and nursing homes should be placed in areas of lowest risk.

Our experts have come up with alternative ways of limiting flood risk that can be more sustainable than the traditional barriers and walls:

- Natural buffer zones along the riverside, avoiding defences being built on the water's edge
- Ponds, wetlands and ditches can all act as temporary reservoirs after rainstorms, reducing the amount of water running directly in drains and rivers.
- Providing open green spaces to be flooded naturally

With imaginative design, new ways of managing flood risk can benefit the environment and local communities. They can also be cheaper than traditional barriers and river walls.



Sutcliffe Park in Lewisham doubles as a flood storage area, protecting 600 properties from flooding

providing clean

Despite being considered a wet climate, England and Wales has less water per head than some African countries. In South East England the average person uses 18 more litres of water a day than people in the rest of the country - a total of 182 litres per person.

We already have a shortage of water in this part of the country. It is not clear whether there will be enough water available in 20 years without using new and costly methods that may damage our environment. Longer, drier summers, a growing population and the increased development in the South East will only add to the current pressures on the water supply.

If we want enough water for the growth in the Thames Gateway, decisions will have to be made now about the water supply infrastructure.

The options

One of the most pressing issues for managing our water resources is the current leakage rate in London. The ageing Victorian pipeline system desperately needs updating – it is losing enough to provide 1.2 million people with water each day.

Thames Water is treating this situation seriously and is intending to restore the supply-demand balance by 2007 through a number of measures, including replacing some of the water mains.

We may need to consider using processed seawater to help when existing water supplies are unable to meet demand. There is almost an endless supply of water from the sea, but making it drinkable is expensive and energy intensive.



Rainwater recycling: designs like these can make water savings of up to 25 per cent



water

Saving water through innovative designs

Better public awareness of the water shortages we are experiencing is essential. But the way housing is designed can help to save water.

- Water meters in every home will help people cut the amount of water they use and their bills
- Low-flush toilets, waterless urinals, spray taps and rainwater recycling in larger developments can make water savings of up to 25 per cent. These appliances can be installed at no extra cost to the building of a new home
- Houses can be designed so rainwater is used to water gardens and flush toilets



Wastewater systems

An increase in population will inevitably increase the amount of sewage. The infrastructure for wastewater should be planned and implemented ahead of any new development.

With more wastewater being produced, we will need higher treatment standards so as not to pollute our rivers and streams.

Substantial investment is already needed to upgrade London's Victorian sewerage system. Easily overloaded with rainfall during storms, the system causes large amounts of raw sewage to be released into the tidal section of the River Thames.

The ecological consequences can be severe. In August 2004 heavy rainfall led to appalling pollution events killing tens of thousands of fish. Although not always as serious as this incident, discharges happen 50 to 60 times per year.



managing waste and cont

The UK is running out of space to dispose of the waste it produces. To deal with this, we must all be committed to the principles of reduce, reuse and recycle to minimise the amount of waste we throw away.

The Thames Gateway must have a plan for waste management. This starts with reducing the amount of waste produced in the building of new communities.

Construction and demolition accounts for nearly a quarter of all waste in the UK. We want builders and developers to make significant reductions by separating their waste and reusing and recycling the aggregates.



Minimising household waste in the Gateway

The amount of waste generated by UK households is forecast to almost double by 2020. Unless we take action now the Gateway could be one of the areas with the biggest increase of waste by volume.

The Gateway's residents can be supported and guided towards living on the principle of producing minimum levels of waste. We can really make a difference by making recycling easier and cheaper for everyone.

- People in the Thames Gateway will need convenient access to recycling facilities
- Where possible, new homes should be designed to encourage composting and include space for collecting recycled household waste
- Councils should pilot charging schemes for household waste, with incentives for reusing and recycling more waste

The way we deal with waste is changing. Although the amount we produce is increasing, higher safety standards mean that many sites used for waste disposal are being closed. New regulations such as the Landfill Directive mean the Thames Gateway will need new facilities and more waste reprocessing plants fast.



aminated land

Waste facts

- London produces 4 million tonnes of household waste each year – more than half a tonne for every person
- There are only two landfill sites in London and the Thames Gateway. Most of the waste produced here is transported to sites 50 miles outside of the capital
- It takes over 30 years for a disused landfill site to stabilise sufficiently to use the land for any kind of development

Cleaning up contamination

So far 80 per cent of new building in the Gateway has been on brownfield land. Often this has been left polluted by industry.

We are advising on the best ways to bring these sites safely back into public use by either disposing of or treating the hazardous waste on site. This work is allowing the land to be reused after many years of being left derelict and dangerously contaminated.

We work with local authorities to make sure this work is carried out to the highest standards. These standards are legally enforceable.

At London Riverside, a public-private venture is developing the site of an old power station and waste tip at Barking Reach, London's largest brownfield site. The development will provide up to 10,800 homes, a school and community facilities, and will give local people access to the riverside.





The Thames Gateway can be used to showcase new, green construction methods and efficiency standards. Environmental features built into a property's design are an attractive selling point. They are better for the environment, cheaper to run and are also homes people can truly be proud of.

We want all new homes and businesses in the Gateway to be built and run to the best standards in energy and water efficiency. Not only will this reduce their impact on the environment, it will also help secure London's water supply and cut bills for residents.

Code for Sustainable Buildings

Building, maintaining and occupying homes causes nearly 50 per cent of CO₂ emissions in the UK (source: Defra). From April 2006 all new homes receiving Government funding will have to meet the Code for Sustainable Buildings.

The code sets new, higher standards for energy efficiency, water efficiency and waste management. It also sets out how houses should be built using more environmentally friendly construction methods.



The Environment Agency's Red Kite House in Oxfordshire is a shining example of environmental design

As part of their Local Development Frameworks, we are asking local authorities to promote the code and apply it to private residential building. The Government is currently examining whether parts of the code can be written into Building Regulations.

The code is due to be launched in early 2006. It will use the Gateway as an example of how it can be implemented across the rest of the country.



mmunities

Over 50,000 hectares of green space in the Gateway – equivalent to the size of Greater Manchester – are to be improved and added to.

Developing green spaces

Green spaces are a vital part of the character of the Thames Gateway and will be the lungs of the new communities. They are places for recreation and relaxation, and havens for wildlife. They can filter pollution and, if designed well, can reduce the risk of flooding.

Over 50,000 hectares of green space in the Gateway – equivalent to the size of Greater Manchester – are to be improved and added to. This green space will be part of the Green Grid – a national network of open spaces, waterways, parks and woodland.

The Government has already committed to the Green Grid as the setting for new and existing housing and commercial development. Nearly £20 million of funding has been provided to projects, including:

- Restoration of Erith and Crayford Marshes, with links to Dartford Marshes
- The London Riverside Conservation Park at Rainham Marshes
- Environmental enhancements to the River Roding at Barking, including new walkways and cycle paths



The Gateway is to form part of the Green Grid: a network of open spaces, waterways, parks and woodland

We are working with local authorities, local regeneration partnerships, private sector developers and voluntary groups to provide the new and existing communities in the Gateway with a better place to live.

achieving our vision

We would like to see the Gateway as a model for sustainable development – something the UK can be proud of in years to come. We would like a development with environmental standards, with an attractive environment and with an open, accessible riverside. It should be a place where people want to live.

Our vision will only be achieved by working in partnership with others. Please contact us to find out more about how together we can make the Gateway a better place to live. Our contact details are on the back page.

Transforming the Thames Gateway

What we want to see

Managing flood risk

- A flood risk assessment is carried out for every development within the floodplain at the earliest stages of planning. This will inform decisions on the location of housing, shops and public services and plans for managing the flood risk.
- As well as using traditional flood barriers and walls, we use alternative ways of reducing flood risk. These include natural buffer zones next to the river and wetlands that can act as temporary reservoirs after rainstorms.
- Sustainable drainage systems are used where possible to slow down the rate of water running into drains and rivers.

Providing clean water

- Water saving appliances are installed in all new developments, making water savings of at least 25 per cent.
- Investment in London's ageing pipelines to cut the amount of water leakage. Sustainable ways of providing enough water for the Gateway are implemented.
- Public awareness is raised about the lack of water available for the South East, encouraging people to cut their water use.



The role of the Environment Agency

As a statutory consultee on planning applications, we provide detailed advice on a range of issues:

- Flood risk management
- Remediation of contaminated land
- Waste management
- Resource efficiency
- Sustainable construction
- Biodiversity
- Climate change

We are also responsible for managing flood risk and water resources planning.

Managing waste and contaminated land

- Builders and developers separate the waste they produce, and recycle and reuse aggregates.
- Homes are designed to provide space for storage and sorting of waste, making it easier for people to recycle.
- New neighbourhoods are designed to encourage kerbside recycling and collection. They should have community composting schemes and waste handling facilities.
- Councils in the Gateway pilot charging schemes for household waste, with incentives for reusing and recycling.
- Brownfield land is brought safely back to public use through the highest standards. These standards are legally enforceable.

Building sustainable communities

- Government provides the construction industry with targets for water and energy efficiency in the new developments.
- Green spaces for recreation, relaxation and wildlife are planned into the design of the Gateway, as part of the national Green Grid.

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or about your environment?**

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