

# Your Tidal Thames website

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## Please note

- The text written in [this style](#) will be hyperlinks to other areas of the website once it is a functioning site. The text has been included in this way to illustrate where there will be links made from one web page to another.
- The text written in [this style](#) is a hyperlink to an external website or to download a document which is currently hosted online. These links are already live.

## Homepage

Top menu bar consisting of: Background, Tidal Thames Catchment, Enhancement projects, Contact us



## YOUR TIDAL THAMES

- 20% of all surface water in the EU is seriously threatened with pollution
- 50% of wetlands have endangered status
- Is this situation getting better or worse?

Nearly half the EU population live in water-stressed countries where demand for water can at times be greater than the available supply. Additionally, natural habitats are increasingly threatened by pollution or the demand for land, and hence biodiversity will certainly be affected. Environmental legislation seeks to limit or reverse these trends.

- What is [Your Tidal Thames?](#)
- What is the [European Water Framework Directive?](#)
- What can you do to [get involved or get more information?](#)

This website focuses on the issues and challenges that the tidal Thames faces. The aim is to develop an effective, deliverable and sustainable Catchment Plan to help achieve the Water Framework Directive (WFD) objectives for the tidal Thames by engaging the wide range of communities, residents, river users and interest groups and utilising your experience, concerns and expertise. We want you to be involved.



## Background



### 1.1 What are the Water Framework Directive and the Catchment Based Approach?

#### Water Framework Directive

We have historically under-valued the economic benefits of properly [functioning ecosystems](#), and the services that they provide (such as fisheries, erosion control, leisure amenities, pollution cleansing by salt marshes, etc.). Water is of course crucial to the functioning of all ecosystems. By several measures the UK is often far from the worst case, but the demand for water is growing here too, recent droughts and flooding indicate climate-linked risks, and water bodies may contain transient or more permanent pollutants, and may display associated ecological degradation.

By the mid-1990s nearly half of EU respondents were worried about ‘water pollution.’ There was no shortage of legislation, with previous waves based on setting limits dating back to the 1970s and 1980s, but compliance had not always been good. Reasons varied but it was believed that common threads were that the public perceived a lack of ‘ownership’ of the legislative process and that existing legislation was overly-complex. The [Water Framework Directive](#) was introduced to overcome these, and associated, challenges.

The [Water Framework Directive](#) (WFD) is European legislation which came into force in December 2000 and became part of UK law in December 2003. It requires member states to make plans to protect and improve the water environment. The Directive applies to all water bodies; these are defined as: Surface freshwater bodies (including lakes, streams, canals and rivers), Groundwater bodies, and Transitional (estuaries) and Coastal water bodies (TraC).

The Directive seeks to tackle both diffuse and point sources of pollution. Diffuse pollution originates from a variety of activities over a large area, for example urban and agricultural land use, domestic release into sewers, transport including road run off, ports and harbours, and industry. Point source pollution comes from a single, identifiable source for example a combined sewage outfall (CSO). As well as affecting water quality, diffuse and point source pollution has detrimental ecological effects and can affect the abundance and distribution

of plants and animals, profoundly changing the characteristics of the ecosystems upon which they depend.

In 2009 as part of the Environment Agency's (EA) implementation of the Water Framework Directive, the first [River Basin Management Plans](#) were produced – these set the environmental objectives for each body of water and summarised the programmes of measures needed to make improvements to water bodies.

The Environment Agency is now reviewing and updating the plans for England, and will publish revised plans in December 2015. In developing these plans, the Environment Agency holds formal consultations at three points in the river basin management planning process, [details of these consultations](#) can be found on the Environment Agency website.



[The Your Tidal Thames guide to the Water Framework Directive](#) – 0.19MB

### **Catchment Based Approach**

In March 2011 Richard Benyon, Minister for Natural Environment and Fisheries, announced the [Catchment Based Approach to delivering the Water Framework Directive](#). A catchment is an area of land where surface water from rain and melting snow or ice converges to a single point, where the waters drains into another waterbody, such as a river, lake, reservoir, estuary, wetland, sea, or ocean. The Thames River Basin is an area spanning 16,133km<sup>2</sup> from the source of the River Thames in Gloucestershire through London to the Southern North Sea. The freshwater Thames becomes the tidal Thames at Teddington all the way along its length it receives water from the rivers draining into it and the land surrounding it. The chemical, physical and biological characteristics of our water (water quality) is affected by every activity that takes place on land as well as through our actions in abstracting, using and returning water to rivers, the sea and the ground.

Catchments are the natural scale to consider this aspect of the environment. Through better coordinated action at the catchment level by all those who use water or influence land management, we can improve water quality for our own health and use and for the health of the aquatic habitats and associated animals. The Catchment Based Approach aims to explore better ways of engaging with people and organisations at a catchment level and encouraging greater local participation to achieve more for communities and the water environment.

In April 2011 the EA began piloting this approach in 10 catchments. In January 2012, a further 15 pilots, hosted by external organisations, were established. The Environment Agency website provides a map of all the [Water Framework Directive Management Catchments in England and Wales](#).

The Your Tidal Thames project was one of these pilots, hosted by Thames21 and Thames Estuary Partnership. At the launch of the Catchment Based Approach in 2011 Richard Benyon said that the pilots should:

*“Provide a clear understanding of the issues in the catchment, involve local communities in decision-making by sharing evidence, listening to their ideas, working out priorities for action and seeking to deliver integrated actions that address local issues in a cost effective way and protect local resources”*

In June 2013, Defra launched a [Policy Framework](#) to aid wider adoption of the Catchment Based Approach. The policy sets out the high level objectives for the approach, to establish Catchment Partnerships in every catchment in England where there is an interest in doing so to:

- Deliver positive and sustained outcomes for the water environment by promoting a better understanding of the environment at a local level
- Encourage a more transparent form of decision making, in support of local collaboration or partnership working, for both planning and delivery.

More information on the contributions that the Your Tidal Thames project makes in delivering the Catchment Based Approach see the [About us](#) page of this website.

## 1.2 The pilot year

During the pilot phase of the Your Tidal Thames project, in 2012 the project was co-hosted by Thames21 and the Thames Estuary Partnership (TEP).

**The Pilot Project aimed:** To develop an effective, deliverable and sustainable Catchment Plan to help achieve the Water Framework Directive (WFD) objectives for the tidal Thames by engaging the wide range of communities, residents, river users and interest groups and utilising their experience, concerns and expertise.

The [Catchment Based Approach](#) (CaBA) for the WFD requires local community involvement to be at the heart of the development of Catchment Plans. YTT wanted to ensure through effective stakeholder engagement that those connected with, or who care about the river, had an opportunity to have a say in the improvement of the tidal Thames. Achieving this engagement over an area as large as the tidal Thames, where there are so many diverse communities and river users was a challenge.

During the pilot year the Your Tidal Thames team engaged widely across the tidal Thames area. This was achieved by taking engagement to the community rather than trying to bring people together in one place at one time. The key engagement tool was a [Catchment Plan Template](#) which was made up of 5 sections and prompted people to give their views on the tidal Thames.

The titles of the sections in the Catchment Plan Template were:

1. In your view, what problems are affecting the tidal Thames?
2. What can be done to address these problems?

3. Action Plan - What should the target be to achieve and by when? Who else can help deliver this target? What part can you (or your organisation) play?
4. How do you use or relate to the tidal Thames?
5. Your Contact details.



Image © Ziggy Folkmanis



Image © Ziggy Folkmanis

With this as the basis for engagement the Your Tidal Thames Project Team sent an introductory email to the people on both organisations databases – a combined number of nearly 6000 people. As a result of this, and other engagement work such as events and conferences, we spoke directly to 1,412 people about the work of the project and reached a further 14,622 people via online and social media. By the end of 2012, 62 individuals and 53 organisations had provided their views for input to the Catchment Plan.



[Working Catchment Plan template](#) – 1.2MB

[Detailed information on the engagement approach](#) – 0.6MB

### 1.3 About us



## YOUR TIDAL THAMES

Since June 2013 the Your Tidal Thames project is now hosted by [TEP](#), [Thames21](#), [Thames Landscape Strategy Hampton to Kew](#) and [Thames Strategy Kew to Chelsea](#). These organisations aim to continue the work that started in 2012 and to develop a truly collaborative and effective catchment plan.

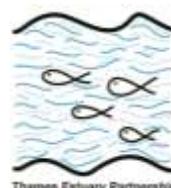
The partnership approach to this project has always been regarded as a great strength. TEP engages with, amongst others, local authorities, national agencies, industry, voluntary bodies, local communities and individuals. Thames21 engages with grassroots community groups, local residents and environmental volunteers. Thames Landscape Strategy Hampton to Kew engages with riparian boroughs, businesses and local residents within their area. Thames Strategy Kew to Chelsea engages with a diverse partnership of statutory and non-statutory organisations, local groups and individuals. Through working together we ensure the collaboration rather than duplication of networks of locally based delivery partners and provide a truly comprehensive engagement opportunity.

The following statement was issued in July 2013 and details what the partnership intends to achieve by working together:



Thames21, TEP, Thames Landscape Strategy and Thames Strategy Kew to Chelsea [Water Framework Directive Joint Statement](#) – 0.2MB

Thames21, TEP, Thames Landscape Strategy and Thames Strategy Kew to Chelsea have made an application to the [Catchment Partnership Fund](#) to set up this working model and seek funding for future Catchment Based Approach delivery.



## **Project Strategy Group**

As part of the Your Tidal Thames pilot project a multi-sector Strategy Group was formed. The Strategy Group is made up of an invited panel of people, representing groups and organisations that have a direct relationship with tidal Thames catchment issues. Your Tidal Thames organised and hosted two Strategy Group meetings over the course of the pilot year – one in June 2012 to launch the project, explain the issues and the team’s plans for the year; a second in December to present the findings and discuss where the group wanted the project to go next. In between meetings the group was kept up to date with progress and their advice sought via email. At the end of the pilot phase the Strategy Group made it very clear that they would like to continue to work together after 2012.



List of current members of the strategy group:

[Strategy Group](#) – 0.2MB

The Strategy Group is not a decision making forum, its role is to support the host organisations and to, refine and improve the process of developing the Catchment Plan. It is hoped that members of the group may be able to take the lead or help to implement some of the actions arising from the plan.

In 2013 the Strategy Group will meet to review the WFD investigations data made available by the Environment Agency, and any other relevant data as it becomes available.

## Tidal Thames Catchment

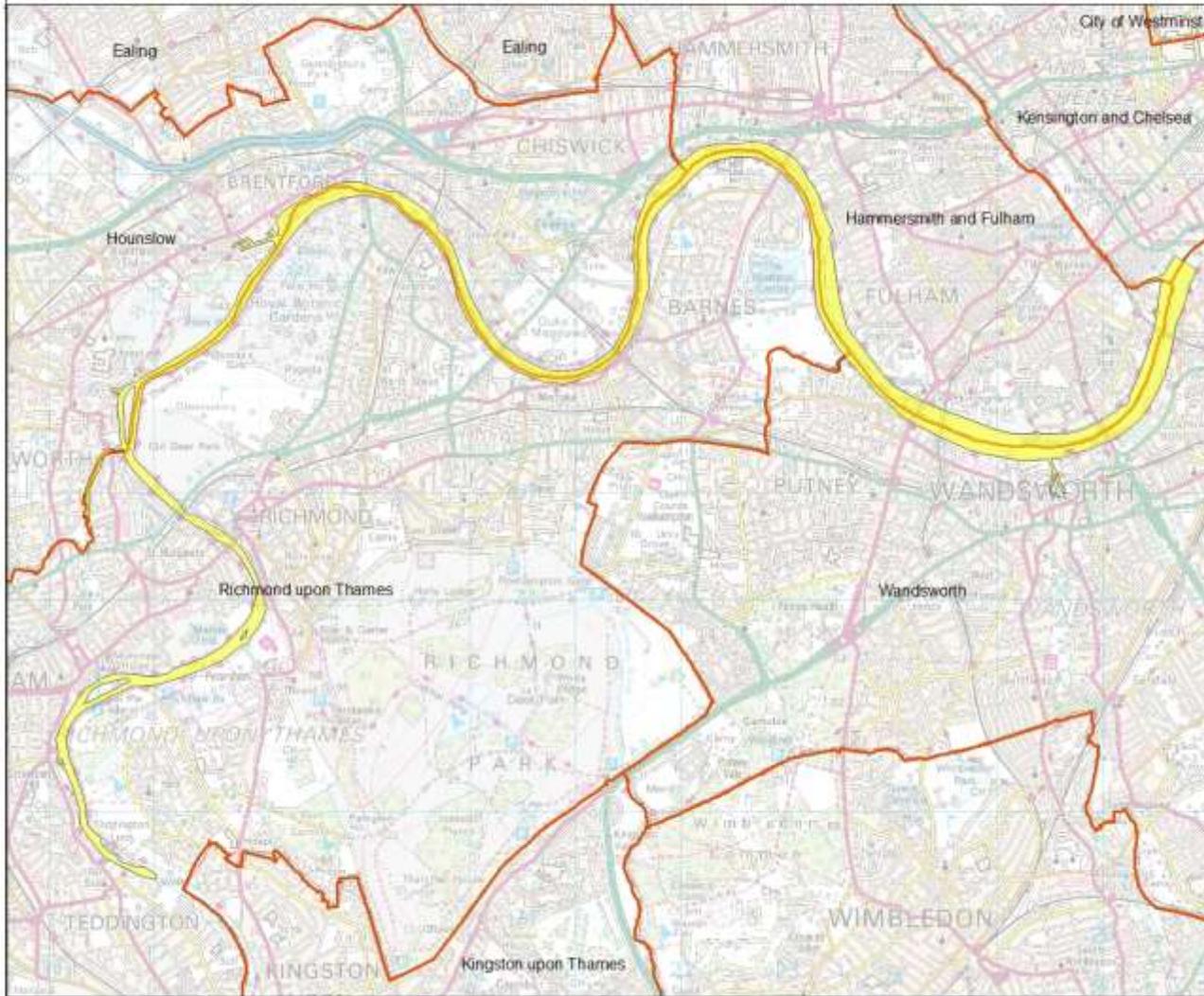
### 2.1 Project area



The Your Tidal Thames project covers the tidal area of the River Thames – from Teddington Lock near Richmond-upon-Thames downstream to Haven Point on the north bank of the Thames Estuary in Essex and Warden Point, on the Isle of Sheppey, on the south bank in Kent - a 90 mile stretch of river. Flowing right through central London, the tidal Thames is affected by the most densely populated urban area in Europe and is subject to a wide range of environmental pressures. Under the Water Framework Directive (WFD) the tidal Thames is classed as a Transitional (and Coastal) (TraC) water body. A Transitional water body is a Water Framework Directive term for water bodies that are intermediate between fresh and marine water, they include estuaries and saline lagoons. The tidal Thames is further split into three TRaC water bodies, as illustrated by the maps below:

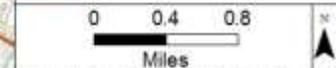
- Thames Upper - Teddington to Cremorne Gardens (near Chelsea)
- Thames Middle - Cremorne Gardens to Stanford-le-Hope (in Essex)
- Thames Lower - Stanford-le-Hope to Estuary (Haven Point on the north bank of the Thames Estuary in Essex and Warden Point, on the Isle of Sheppey)

### Thames Upper Water Body - Teddington to Cremorne Gardens (near Chelsea)



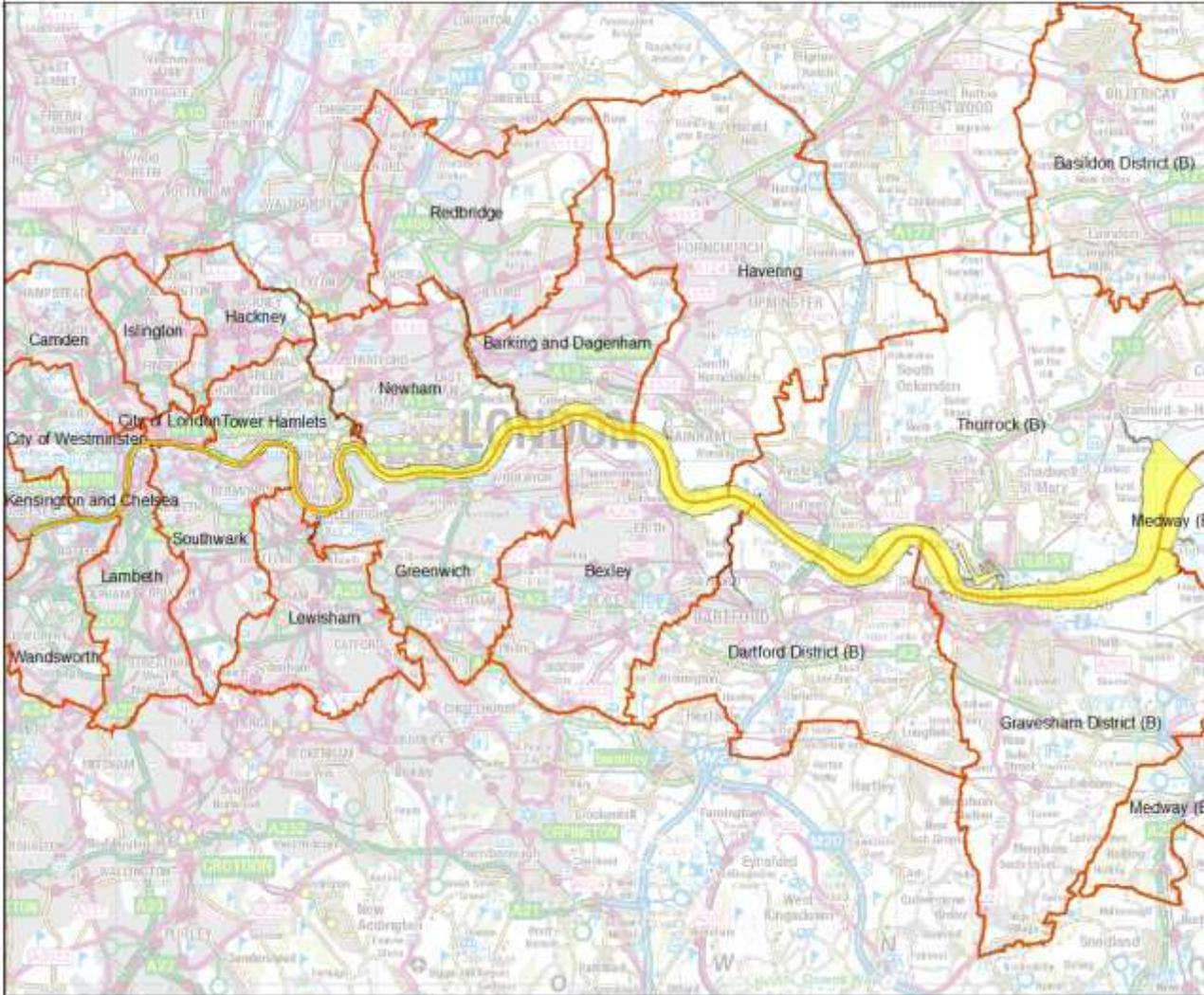
#### Legend

- Thames Upper Moderate Status
- London Boroughs



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**Thames Middle Water Body - Cremorne Gardens (near Chelsea) to Stanford-le-Hope (in Essex)**



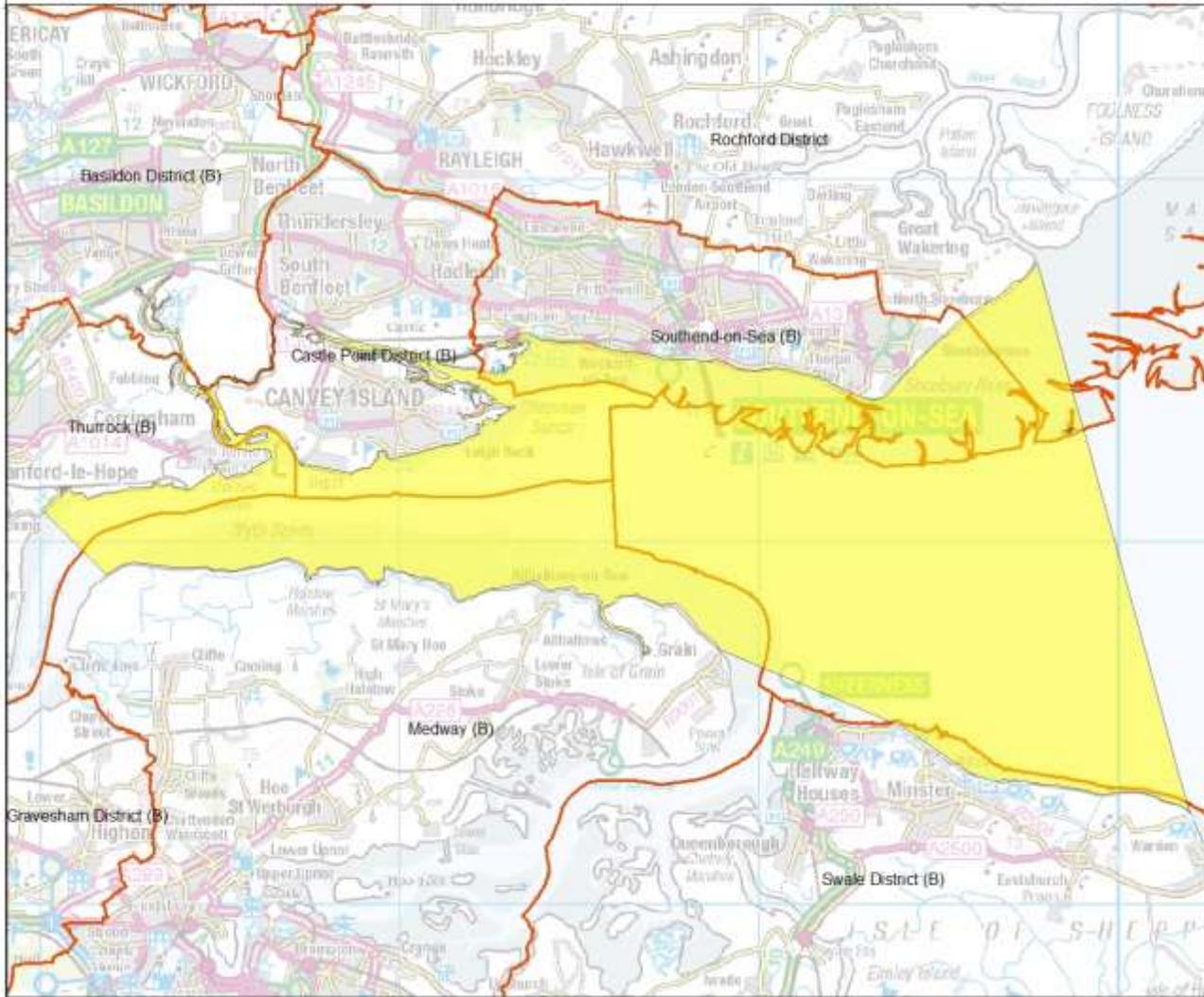
**Legend**

- Thames Middle Moderate Status
- London Boroughs

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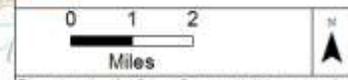
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**Thames Lower Water Body - Stanford-le-Hope (in Essex) to Estuary (Haven Point in Essex and Warden Point on the Isle of Sheppey)**



**Legend**

- Thames Lower Moderate Status
- London Boroughs



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All three of the tidal Thames water bodies - Thames Upper, Thames Middle and Thames Lower - have been designated as Heavily Modified Water Bodies (HMWB) in the [EA's River Basin Management Plan for the Thames River Basin District](#) which was published in 2009. The HMWB designation changes the status that the water body can achieve, with the ideal designation as having both 'Good Chemical Status' (GCS) and 'Good Ecological Potential' (GEP) rather than 'Good Ecological Status' (GES). These terms are defined in the table below.

Heavily Modified Water Body	A surface water body that does not achieve good ecological status because of substantial changes to its physical character resulting from physical alterations caused by human use, and which has been designated, in accordance with criteria specified in the Water Framework Directive, as 'heavily modified'.
Good chemical status (groundwater)	Means the concentrations of pollutants in the groundwater body do not exceed the criteria set out in Article 3 of the Groundwater Daughter Directive (2006/118/EC).
Good ecological potential	Those surface waters which are identified as Heavily Modified Water Bodies and Artificial Water Bodies must achieve 'good ecological potential' (good potential is a recognition that changes to morphology may make good ecological status very difficult to meet). In the first cycle of river basin planning good potential may be defined in relation to the mitigation measures required to achieve it.
Good ecological status	The objective for a surface water body to have biological, structural and chemical characteristics similar to those expected under nearly undisturbed conditions.



Further definitions of terms used in the Water Framework Directive can be found in the following Environment Agency Document

[Thames River Basin District, Annex N: Glossary](#) – 0.5MB

The designation of the three tidal Thames water bodies as heavily modified recognises that it will not always be possible to achieve Good Chemical Status or Good Ecological Status due to the overwhelming influence imposed by the social and/or economic uses of the tidal Thames, such as navigation, water storage, flood defence, land drainage etc. In common with the state in any major working estuary these have left significant physical alterations to the river's banks and tributaries, and a complex legacy of actual or potential sources of contamination. These issues are discussed further in the [Physical obstacles to designation of tidal Thames Water Bodies as Good](#) section of this website.

## 2.2 Current status as defined by the Environment Agency and the Water Framework Directive

Under the Water Framework Directive (WFD) the tidal Thames is divided into three water bodies - Thames Upper, Thames Middle and Thames Lower, all of which are designated as Heavily Modified Water Bodies (HMWB). Further information on the Water Framework Directive can be found in the [Water Framework Directive and the Catchment Based Approach](#) section on this website and a map of the Upper, Middle and Lower water body areas can be found on the [Project area](#) page of this website.

Each of the tidal Thames water bodies is assigned a [current condition status](#) by the Environment Agency based on the most recent investigations, completed in December 2012, and released in early 2013. The worst status is **Bad**, rising to **Poor**, **Moderate** and then **Good**, the best status a water body can be assigned. The Environment Agency's investigations look at ecology (fish, invertebrates, and plants), water chemistry, and morphology (shape and structure).



These investigations have led to all three tidal Thames water bodies (Upper, Middle and Lower) being classified as Moderate. The investigations have highlighted failures in the amount of freshwater flow (hydrology), the extent of the physical changes made to the estuary (morphology), contamination from heavy metals, herbicides and preservatives and deficiencies in some elements of ecology. These failures are briefly summarised on the pages of this website listed below and more information can be found on the [EA's website](#) or by downloading the EA Information Pack for the tidal Thames.

Further information can be found using the links below:

[Physical obstacles to designation of tidal Thames Water Bodies as Good](#)

[Chemical obstacles to designation of Thames Water Bodies as Good](#)

[Ecological obstacles to designation of tidal Thames Water Bodies as Good](#)

## 2.3 Physical obstacles to designation of tidal Thames Water Bodies as Good



Image © Ben Williams



Image © Port of London Authority

### Freshwater flow (hydrology)

The River Thames provides two thirds of London's drinking water, all of which is abstracted above the tidal limit at Teddington lock. Abstraction is the process by which water is removed from rivers - it is regulated by the Environment Agency. The tidal Thames is periodically affected by reduced freshwater flows over Teddington weir when flow is lowered, such as during an extended period without rainfall.

The amount of water that flows over Teddington weir is being investigated by Thames Water and the EA in the review of the [Lower Thames Operating Agreement \(LTOA\)](#). This review considers the amount of water that needs to flow over the weir in order to meet the environmental requirements of the river. The review has found that in dry periods the reduced flows over Teddington Weir can have an impact on the mixing of discharge from Mogden Sewage Treatment Works, which sit downstream of Teddington. If a heavy rainfall event occurs during such a dry period, untreated sewage sometimes enters the river. In turn this leads to an increased risk of a decreasing in dissolved oxygen levels.

The improvements that have recently been made to Mogden Sewage Treatment Works, the construction of the Lee Tunnel currently underway and the proposed [Tideway Tunnel](#) will significantly improve the dissolved oxygen impacts.

We as water consumers also have a role to play in being mindful about the amount of water we use. [Thames Water](#) have lots of water saving tips for households and businesses on their website - reducing your water usage will help protect the environment and also save you money on your water bill!



[Lower Thames Operating Agreement Description and Operation](#) – 0.09 MB

### Physical changes made to the estuary (morphology)

Land reclamation, national security, river side development and improvements to navigation have all led to the tidal Thames water bodies being significantly changed over hundreds of years. More recently, the estuary-wide raising of flood defences after the 1953 North Sea storm surge floods and the installation of barrages such as the Thames Barrier and the Barking Barrier have added to these changes.

Encroachment through riverside development has also meant that through central London the estuary is so narrow that there is now a tidal range of up to 7 meters, and the water flows incredibly fast.

Additionally the tidal Thames is heavily used for navigation which requires maintenance dredging when absolutely necessary, as well as larger capital dredging works when there are new ports or constructions on the river.

The result of all these physical modifications has been a reduction in available natural habitat on the intertidal Thames foreshore and along the banks of the river.

The Environment Agency strives to make improvements and to encourage the creation of space for habitat along the banks of the Thames wherever possible. Good examples of this can be found on the Greenwich Peninsula, Barking Creek and Deptford Creek. Technical details are outlined in the [Estuary Edges Guidance](#) which can be found on the Environment Agency's website.

The Thames Estuary Dredging Liaison Group, independently chaired and facilitated by the Thames Estuary Partnership, brings together all the organisations that have an interest in dredging the river to make sure that any dredging that takes place has the minimum impact on the estuary. Groups such as this, and regular communications between organisations that regulate the river such as the Environment Agency, the Marine Management Organisation and the Port of London Authority, help to reduce the impact of the varying activities that take place in the estuary. Further information on existing improvements made to the river can be found in the [Existing improvements](#) information on this website.

As with other elements of the WFD, the Environment Agency has also undertaken an investigation to look at the morphology of the tidal Thames. The results of this investigation explore the options and opportunities for improving the habitat due to the physical characteristics of the river. This is just the start of the process and we will be working with partners to take account of the financial, political, navigational and social barriers to these improvements. This information will be gathered through one to one meetings as well as through the Your Tidal Thames strategy group. Until the feasibility and deliverability of the options have been assessed the morphology results will not be published on this website. However, once complete they will be included.

## 2.4 Chemical obstacles to designation of Thames Water Bodies as Good



### Contamination from heavy metals, herbicides, preservatives and organic waste

The Thames Middle and Thames Lower water bodies are failing to achieve Good status (a definition of which can be found on the [Project area](#) page of this website) because of the presence of Diuron, Tributyltin Compounds (TBTs), Dissolved Inorganic Nitrogen, Polycyclic aromatic hydrocarbons (PAHs) and heavy metals. The Thames Upper water body is awaiting assessment for contamination from heavy metals, herbicides and preservatives.

These chemical contaminants might have lain buried in the sediments of some locations for decades, only to be disturbed at times of peak (flood) waters, or during developmental or dredging disturbances, when necessary, to the river bed.

The Thames Lower water body is also failing because of periodic reductions in the amount of Dissolved Oxygen. These are the result of point source pollution from Sewage Treatment Works and Combined Sewage Overflows which can release untreated sewage into the estuary which causes dissolved oxygen to drop to levels that damage plants and wildlife. A brief outline of each of these heavy metals, herbicides, preservatives and organic waste is given below. More information can be found in the EA's Information Pack on the tidal Thames:



[Tidal Thames information pack](#) – 0.2MB

### Diuron

Diuron was present in herbicides and was often used to control weed growth on highways and in public areas. The use of Diuron in herbicides has been banned in the UK since 2002 due to its harmful impact on the environment - particularly affecting aquatic invertebrates, and can lead to decreases in algae and vegetation. Historically, no routine monitoring for

this chemical has been carried out, on the tidal Thames. However, scientific research conducted in 2006 confirmed the presence of the chemical and in combination with other herbicides could account for 50% of phytotoxicity (toxic effects of chemicals on plants) in the estuary (Nash *et al*, 2006<sup>1</sup>). It is thought that the amount of this chemical in the river is reducing – a trend observed in other tributary London rivers that flow into the tidal Thames. However, this needs to be investigated further on the tidal Thames.

### **Tributyltin Compounds (TBTs)**

TBTs used to be added to products such as wood preservatives and anti-fouling paint for marine vessels, but has been banned by the International Maritime Organisation, since 2003, as it is very toxic to marine invertebrates and can negatively impact animals higher in the food chain such as marine mammals. However, these compounds are still sometimes present as an Ultra Violet (UV) stabiliser in PVC (to prevent their becoming opaque after prolonged exposure to the UV light that is found in sunlight). Investigations have suggested that some of the possible sources of TBT in the tidal Thames come from Sewage Treatment Works, surface and household drainage and potentially from historical sources linked to industry previously located on the tidal Thames.

### **Dissolved Inorganic Nitrogen**

There are high levels of Dissolved Inorganic Nitrogen (DIN) in all three of the tidal Thames water bodies following decades of overloading of nutrients from sources including agriculture and waste water. On the tidal Thames, however, these recorded high levels of DIN do not cause the ecological impacts usually associated with this nutrient – such as excessive or explosive growth of green seaweed or phytoplankton (this growth leads to a process known as '[eutrophication](#)'). As these impacts are not seen it is concluded by the EA that DIN is not having an ecological impact.

### **Polycyclic Aromatic Hydrocarbons (PAHs)**

Polycyclic Aromatic Hydrocarbons are a group of chemicals that occur naturally in coal, crude oil and gasoline. In the tidal Thames the levels of some PAH substances means that the water bodies do not meet Good Status. These substances are Benzo (ghi) perylene and indeno (123-cd) pyrene, Benzo (a) and (k) fluoranthene and Benzo (a) pyrene. Investigations suggest that some of the possible sources of PAH's in the tidal Thames might be the large Sewage Treatment Works, from road run off, and from historical sources linked to industry previously on the tidal Thames.

### **Heavy Metals**

Heavy Metals identified in the tidal Thames include Mercury and Copper. Investigations are on-going but it is thought that the contamination with Mercury is from a mixture of point and diffuse pollution, with some historical input from past industry that worked on the banks of the tidal Thames. Results for the Copper investigations are currently unreliable due to contamination of the water samples that were taken. These results are due to be reviewed by the Environment Agency.

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<sup>1</sup> Nash, S.M. Bengston, Goddard, J. and Müller, J.F. (2006) Phytotoxicity of surface waters of the Thames and Brisbane River Estuaries: A combined chemical analysis and bioassay approach for the comparison of two systems. *Biosensors and Bioelectronics* **21**, 2086–2093

### **Dissolved Oxygen**

Point source pollution of organic waste from Sewage Treatment Works and Combined Sewage Overflows (CSOs) impacts wildlife in the estuary. London's Victorian sewer network causes significant pollution from untreated sewage flowing into the estuary as it has insufficient capacity during times of heavy rainfall. This can happen following as little as 2mm of rainfall. The main purpose of the CSOs is to stop homes and businesses being flooded by sewage.

When untreated sewage enters the estuary it causes dissolved oxygen to drop to levels that damage plants and wildlife. This drop in oxygen levels occurs because micro-organisms begin to break down the sewage and in doing so they consume oxygen from the water. The Thames Tideway Tunnel aims to reduce the impact of this significant problem by capturing and treating most of the sewage currently discharged from the CSOs. You can find out more about the Tunnel on the [Thames Tunnel website](#) or follow them on Twitter to keep up to date or show your support [@ThamesTunnel](#).

## 2.5 Ecological obstacles to designation of tidal Thames Water Bodies as Good



Image © Thames Estuary Partnership



Image © Thames Estuary Partnership

### Fish

The tidal Thames has a wide range of fish species, with fully freshwater, estuarine and fully marine species present in the estuary. This variety of species means that the tidal Thames meets the targets for fish of the Water Framework Directive. However there are issues that affect the way fish move up the tidal Thames and access the freshwater tributaries that link with the Thames.

These issues include:

- structures that restrict or stop fish moving up rivers
- abstraction points, where water is taken out of the river, if not properly screened can also take fish and eels from the river along with the water
- thermal pollution from power stations and sewage treatment works outlets create a barrier to fish as species moving up river will not swim through water where there is a significant temperature change.

### Invertebrates

The Thames Middle and Lower water bodies are currently classed as Moderate for invertebrates, though investigations continue. At present, there is not enough data to properly assess invertebrate populations due to the number of years of data required. The reasons for classifying invertebrates as less than Good might be linked to some of the chemical failures, but this explanation has not been confirmed. Environmental factors such as salinity and the movement of sediments may also affect invertebrate populations.

### Invasive species

A number of invasive plants and animals have become established on the tidal Thames e.g. Chinese mitten crabs, Himalayan balsam and zebra mussels. Invasive species can have an impact on ecology and may have economic implications. Actions can be taken to reduce the impact of some of these species, but measures also need to be taken to reduce the likelihood of their spreading. The tidal Thames is an international port and the threat of more invasive species arriving and becoming established is particularly high. It is important that bio-security measures are undertaken by both commercial and domestic users of the estuary to reduce this threat. The [London Invasive Species Initiative](#) (LISI) helps to monitor the spread of invasive species in London and provides advice and guidance.

## 2.6 Current issues highlighted by the tidal Thames community

During the [Pilot year](#) of the Your Tidal Thames project in 2012 the project sought to find out what the tidal Thames community felt about the river – what do people cherish and value, what are people’s concerns, what do they see as the current pressures on the river, what improvements would the community like to see and where are the opportunities for improvements to be made. Details of this engagement process can be found on [The Pilot year](#) page of this website.



Highlighted below are the concerns that the tidal Thames community raised during the pilot year. It is worth being mindful that at the time that these views were collected the information from the Environment Agency on the [Physical](#), [Chemical](#) and [Ecological](#) obstacles to designation of the Thames as Good was not available, as this was not released until early 2013. Therefore the tidal Thames community were presented with a blank canvas and were asked to tell us their concerns. If you would like to read a more detailed discussion of the issues outlined here please see the Your Tidal Thames Final Project Report from the 2012 pilot year and read Chapter 5:



[YTT Final Project Report 2012](#) - 1.4MB

The work of the Your Tidal Thames project to hear and understand the concerns of the tidal Thames community is still continuing – please let us know your concerns via our form: [Tell us your views about the tidal Thames](#) or [Contact us](#).

### **Development, redevelopment and riverside planning**

The need for development and economic growth is recognised but there is a lot of concern over missed opportunities arising from new development and redevelopment of existing structures. Many people feel that green infrastructure, open vistas and connected green spaces should be better integrated into all riverside development plans. There is also a need to maintain a balance between residential and river related development.

### **Access along and onto the river**

The tidal Thames is a very valuable resource - as a tourist attraction and recreational amenity and access is considered vital for connecting communities to the river. A useful resource for people wishing to gain access onto the Thames is the Port of London Authority's [Boating on the Thames website](#). Concerns over access are in some ways linked to redevelopment and riverside planning – where development might disrupt the continuity of the Thames Path or access onto the river. In addition concerns about access were also expressed in terms of the lack of maintenance of existing steps and stairs, an overall lack of access points for people wishing to use boats on the river, and also limited information about access points.



Image © Port of London Authority

### **Water quality, sediment, pollution and litter**

The greatest area of concern in terms of water quality, sediment, pollution and litter focuses on the impact of sewage discharge through Combined Sewage Overflow (CSO) events and domestic misconnections. London has a Victorian sewer system in which rainwater and sewage both drain into the same pipes – this is known as a combined system – when it rains and there is too much rainwater and sewage in the pipes then this combined waste is released directly into the tidal Thames. This is known as a Combined Sewage Overflow (CSO) event. These are considered to be unacceptable in the 21st Century and are seen as responsible for most water quality issues, sewage debris and fish kills on the tidal Thames as well as having implications on public health for recreational river users and the Thames shellfish fishery. The tidal Thames community also expressed concern over the amount of floating and foreshore litter in the tidal Thames, and also over dredging – with some of the respondents feeling that there is too much dredging, whilst others feel there is not enough.

### **Habitat and wildlife**

Habitat is becoming a limiting factor in the tidal Thames achieving good ecological potential within the Water Framework Directive (WFD). Therefore habitat restoration will almost certainly be needed to enable species to cope with the effects of climate change as well as background sea level rise through isostatic rebound. Sea level rise threatens intertidal habitats - as water levels get higher, intertidal habitats will be lost. Concern from the tidal Thames community also focuses on an overall lack of habitat along the river, and a lack of refuges for fish and high tide roosts for birds, particularly within the central stretches of the river.



Image © Thames Estuary Partnership

### Public perception and education

Public perception of the tidal Thames appears to be mixed. Some people see it as a ‘dirty old river’ – dead, dirty and to be ignored as much as possible. This perception is hard to overcome when floating litter persists and raw sewage flows into the water during heavy rain events. However other people see the tidal Thames as a system that has fully recovered over the last 40 years and is now clean. The reality is somewhere in between. In addition many people do not understand the fundamental nature of an estuary or what role it plays in their landscape. They believe that the estuary is dirty because it’s brown instead of blue.

### Flooding

Much more development is expected in the Thames Estuary region but alongside this there is a need for more space to be created for flood waters in order to avoid flooding causing damage to homes and infrastructure. Making space for water can be achieved through restoring and creating habitats, such as tidal marshes, which are naturally designed to cope with flood waters. The tidal Thames community view of flooding is mixed, with some people identifying a need for greater flooding capacity through restoration and creation of habitat, and others voicing concerns over flooding of marginal areas, especially where flooding naturally occurs, e.g. along the Hammersmith Thames Path. This highlights the need for greater understanding of the function of floodplains and the need for managed flooding to be allowed to occur in some areas.



### River traffic

Greater use of the river for transport is seen as a positive step in reducing congestion on London’s roads and in increasing people’s connection with the river. However, this development will need to be carefully managed and should be implemented in a sustainable way as some of the tidal Thames community raised concerns over the impacts of having too much traffic on the river. The tidal Thames community is also keen to see river traffic fares becoming more affordable. Further engagement with river operators, the [PLA](#) and [London River Services](#) is needed on this issue.



## 2.7 Existing improvements

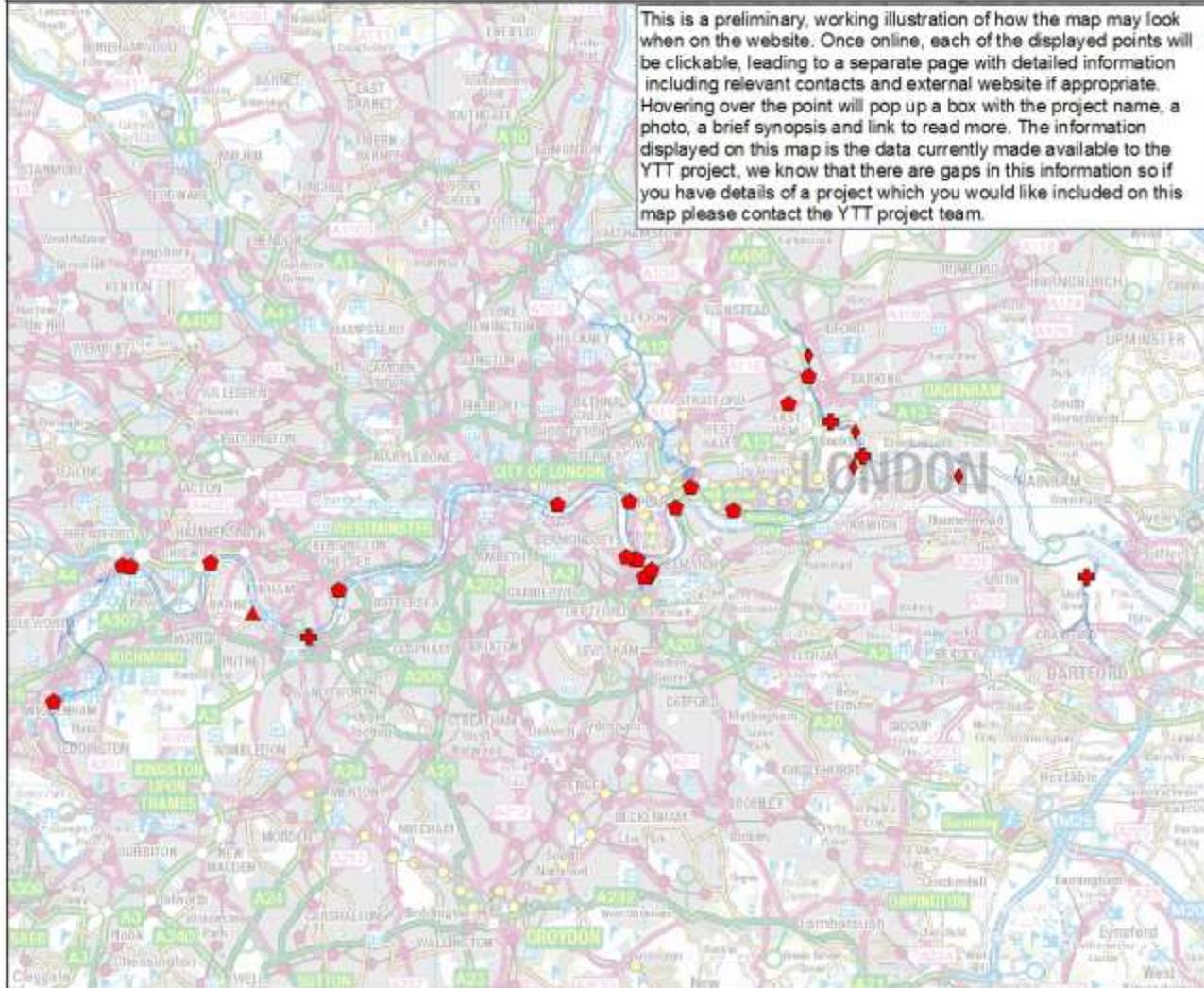
The tidal Thames has a long history of improvements through collaborative and partnership working which have helped to enhance and clean-up London's iconic river. The map below identifies where improvements have been made in the past – by clicking on each point you can find out more about each project, including some background information and the project progress.

Are you aware of improvements that have been made to the tidal Thames that are not listed here? Please [Tell us your views about the tidal Thames](#) and we will add them to this map. We are interested to find out about improvement projects that have been completed or ones that have started and are on-going.

**Planning gains - Completed and On-going Improvements made through Planning and Development**



This is a preliminary, working illustration of how the map may look when on the website. Once online, each of the displayed points will be clickable, leading to a separate page with detailed information including relevant contacts and external website if appropriate. Hovering over the point will pop up a box with the project name, a photo, a brief synopsis and link to read more. The information displayed on this map is the data currently made available to the YTT project, we know that there are gaps in this information so if you have details of a project which you would like included on this map please contact the YTT project team.



**Legend**

Planning Gains

Category

- Fish passage
- Habitat Enhancement
- Habitat Restoration
- Modify Structure
- Tidal Thames Catchment

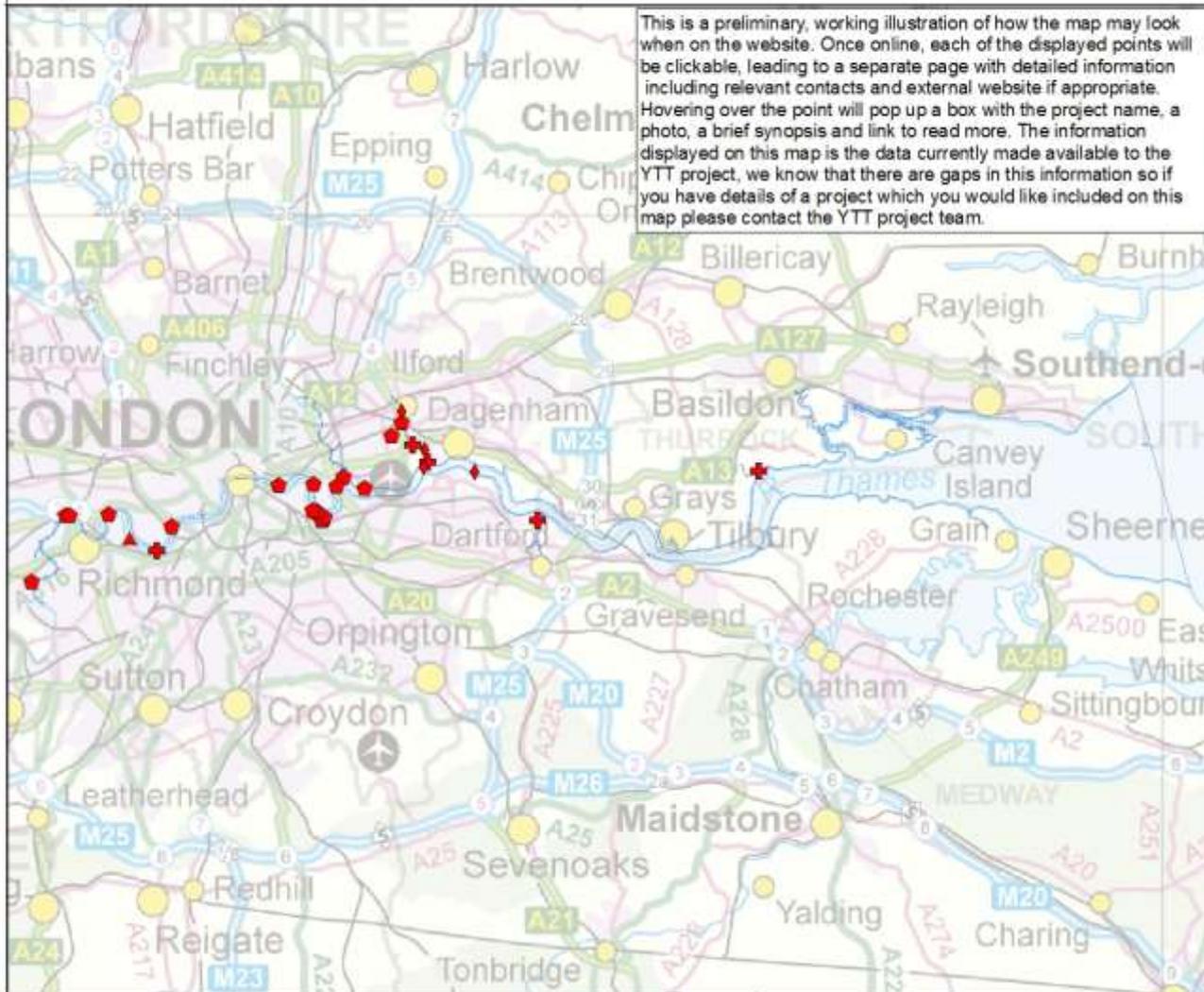
0 0.9 1.8  
Miles

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**Planning gains - Completed and On-going Improvements made through Planning and Development**



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**Legend**

Planning Gains

**Category**

- ▲ Fish passage
- Habitat Enhancement
- Habitat Restoration
- ◆ Modify Structure
- ▭ Tidal Thames Catchment

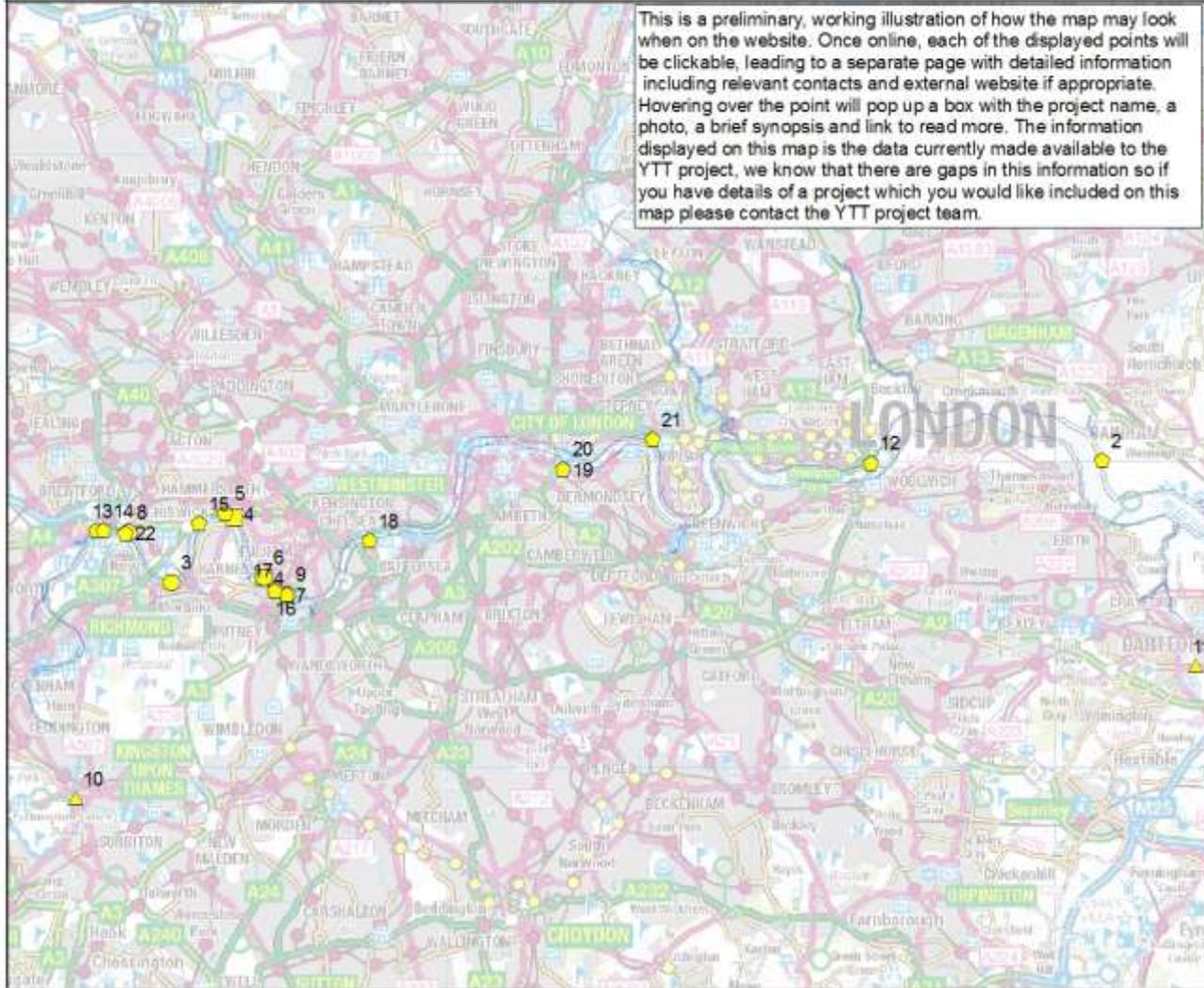
0 2 4  
Miles

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**Project gains - Examples of Completed and On-going Improvements made by Locally Active Organisations**



This is a preliminary, working illustration of how the map may look when on the website. Once online, each of the displayed points will be clickable, leading to a separate page with detailed information including relevant contacts and external website if appropriate. Hovering over the point will pop up a box with the project name, a photo, a brief synopsis and link to read more. The information displayed on this map is the data currently made available to the YTT project, we know that there are gaps in this information so if you have details of a project which you would like included on this map please contact the YTT project team.



**Legend**

**Project Gains**

**Category**

- Access
- Education
- Estuary wide Case Study
- Fish passage
- Habitat Enhancement
- Tidal Thames Catchment

0 0.8 1.6  
Miles

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Map No	Approx. year	Project name	Involvement	Improvements	Stage	Contact	Website	Category
1	2008	Estuary Edges	<p><b>Works:</b> EA; Biodiversity by Design Ltd, Salix River and Wetlands Services Ltd, Beckett Rankine Ltd and EcoSchemes Ltd.</p> <p><b>Steered by:</b> TEP</p> <p><b>Also involved:</b> Natural England; Essex Wildlife Trust; London Wildlife Trust; Kent Wildlife Trust; Thames Gateway South Essex; Buglife; EDAW; Greater London Authority Biodiversity Team; RSPB; Port of London Authority</p>	Ecological design guidance for developers to promote bioengineered improvements to riverwalls and embayments when the opportunity arises through riverside developments and regeneration e.g. Deptford Creek and Barking Creek.	Completed and guidance is used by the EA and developers	Thames Estuary Partnership and EA	<p><a href="http://www.environment-agency.gov.uk/cy/busnes/sectorau/100745.aspx">http://www.environment-agency.gov.uk/cy/busnes/sectorau/100745.aspx</a></p> <p><a href="http://www.thamesweb.com/projects-introduction/72-estuary-edges.html">http://www.thamesweb.com/projects-introduction/72-estuary-edges.html</a></p>	Estuary wide Case Study
2	2008	Mulberry Barges - bird nesting sites	EA and Thames21	Creation of bird nesting sites on Mulberry Barges by placement of gravels into pans on the decks of the concrete barges	Completed	Thames21	<a href="http://www.thames21.org.uk">www.thames21.org.uk</a>	Habitat Enhancement
3	2012-14	Towpath improvements in the London Borough of Richmond upon Thames	LBRuT, West London River Group, Towpath Group, Mortlake Group, Barnes Residents Group. TSKC	A 30K grant from Viridor Credits brought in by TSKC and some match funding from LBRuT saw granite surfacing laid along the Towpath at Mortlake together with access improvements and new benches in 2012. Following on from success of phase 1 this highlighted the need to continue the resurfacing from the High Street to Barnes Bridge to create an accessible route for buggies and encouraging the use of the Towpath as opposed to the Highway. Work is starting in June 2013. Further work proposed to continue with Towpath near the Leg of Mutton and access improvements to Jubilee Gardens. This is dependent on further funding.	Stage 1 completed. Phase 2 started. Phase 3 Proposed but dependent on funding.	Thames Strategy Kew to Chelsea	<p><a href="http://www.thamesstrategy-kewtochelsea.co.uk/">http://www.thamesstrategy-kewtochelsea.co.uk/</a></p> <p><a href="http://www.wlrg.org.uk/">http://www.wlrg.org.uk/</a></p>	Access

4	14/02/2012	Interpretation panels	Historic Building Group, Friends of Bishops Park, HAMS. TSKC	A new historical interpretation Panel has been installed by Hammersmith Bridge 2012. A new panel will be installed in 2013 in Bishops Park and another planned by Broomhouse Drawdock if further 5K funding can be identified.	1st panel complete, 2nd panel due to be installed by end of 2013 and third panel in 2014 if further funding can be identified.	Thames Strategy Kew to Chelsea	<a href="http://www.thamesstrategy-kewtochelsea.co.uk/">http://www.thamesstrategy-kewtochelsea.co.uk/</a> <a href="http://www.wlrg.org.uk/">http://www.wlrg.org.uk/</a>	Education
5	2013-2014	Furnivall Gardens	TSKC Friends of Furnivall Gardens, Parks Team LBHF	Native hedge planting along Park/Road boundary, Tree planting and guards to replace dead trees ring barked by dogs. Interpretation Boards, seats and bins. TSKC successfully bid for 20K for the Friends of Furnivall Gardens through WREF. Work to start Autumn 2013 and will use contractor's from the LBHF	Ongoing	Thames Strategy Kew to Chelsea	<a href="http://www.thamesstrategy-kewtochelsea.co.uk/">http://www.thamesstrategy-kewtochelsea.co.uk/</a> <a href="http://www.wlrg.org.uk/">http://www.wlrg.org.uk/</a>	Habitat Enhancement
6	2013-2015	Bishops Park	TSKC Friends of Bishops Park, The Hammersmith Society and the Hammersmith and Fulham Historic Buildings Group, and Parks team at LBHF	Remove old rotten Toe boarding along River boundary, Install an accessible free draining gravel path along River path and paint historical railings along River frontage. TSKC successfully bid for 40K from Viridor Credits to put towards the improvement works. Removal of toe board will commence in Autumn 2013 and further improvements will be carried out as more funding becomes available. It is estimated that a further 150K is required to complete all works.	Ongoing	Thames Strategy Kew to Chelsea	<a href="http://www.thamesstrategy-kewtochelsea.co.uk/">http://www.thamesstrategy-kewtochelsea.co.uk/</a> <a href="http://www.wlrg.org.uk/">http://www.wlrg.org.uk/</a>	Access
7	2013-2015	Carrara Wharf	TSKC Carrara Wharf Residents group Highways team at the LBHF	Install 2 new raised planter beds and plant with prickly plants to screen the river wall and deter antisocial behaviour. Carry out repairs to River wall and install new steps in addition to existing ramp that takes users away from the River. TSKC successfully bid for 10K from WREF for repairs to River wall and planters. The Highways team at LBHF have agreed to pay for the new steps. Further funding required to paint railings along river frontage Work to start in Autumn 2013	Ongoing	Thames Strategy Kew to Chelsea	<a href="http://www.thamesstrategy-kewtochelsea.co.uk/">http://www.thamesstrategy-kewtochelsea.co.uk/</a> <a href="http://www.wlrg.org.uk/">http://www.wlrg.org.uk/</a>	Access

8	2013-2015	Strand on the Green	TSKC Parks team at the London Borough of Hounslow and the Strand on the Green Residents Association	Upgrade the existing tarmac footpath along the frontage of Strand on the Green to rolled gravel. Carry out improvements in Park that will include new entrance railings and gates, demolish an old disused building, tree planting, refurbish new play area. Further funding to be sought but Parks team have 50K plus towards improvements in play area. Consultation with residents in progress. 50k funding towards play area. Approx. £150K required for footpath and an additional £100K towards playground improvements. Play areas works should commence in early 2014	Ongoing	Thames Strategy Kew to Chelsea	<a href="http://www.thamesstrategy-kewtochelsea.co.uk/">http://www.thamesstrategy-kewtochelsea.co.uk/</a> <a href="http://www.wlrg.org.uk/">http://www.wlrg.org.uk/</a>	Access
9	2013-2015	Drawdocks	TSKC, Highways team LBHF, Hammersmith and Fulham Historic Buildings Group, The River Thames Society.	Planting to improve environment and water quality. Install Historical interpretation panel and smoothing out slipway to improve access. 5K funding to carry out planting. Further funding required for information panel and access improvements		Thames Strategy Kew to Chelsea	<a href="http://www.thamesstrategy-kewtochelsea.co.uk/">http://www.thamesstrategy-kewtochelsea.co.uk/</a> <a href="http://www.wlrg.org.uk/">http://www.wlrg.org.uk/</a>	Habitat Enhancement
10	2013	European eel passes	The Wandle Trust, Kingston Uni, EA	Addition of eel passes that opens up stretches of rivers for eel migration/population	Completed	ZSL/Wandle Trust	<a href="http://www.zsl.org">www.zsl.org</a>	Fish passage
11	2013	European eel passes	NW Kent Countryside Partnership	Addition of eel passes that opens up stretches of rivers for eel migration/population	Completed	ZSL	<a href="http://www.zsl.org">www.zsl.org</a>	Fish passage
12	2011 - present	North Woolwich green wall modules	Thames21 and Kings College London	Green Wall modules placed in two locations at North Woolwich - one set on sheet piling and another set on concrete river wall. These modules are part of a Living Walls pilot project led by Thames21. The modules are being monitored by King College London from 2012 to 2014	Ongoing	Thames21	<a href="http://www.thames21.org.uk">www.thames21.org.uk</a>	Habitat Enhancement
13	2011 - present	Brentford Ait green wall modules	Thames21 and Kings College London	Green Wall modules placed onto sheet piling along Brentford Ait. These modules are part of a Living Walls pilot project led by Thames21. The modules are being monitored by King College London from 2012 to 2014	Ongoing	Thames21	<a href="http://www.thames21.org.uk">www.thames21.org.uk</a>	Habitat Enhancement
14	2011 - present	Kew green wall modules	Thames21 and Kings College London	Green Wall modules placed onto a concrete river wall at Kew. These modules are part of a Living Walls pilot project led by Thames21. The modules are being monitored by King College London from 2012 to 2014	Ongoing	Thames21	<a href="http://www.thames21.org.uk">www.thames21.org.uk</a>	Habitat Enhancement
15	2009 - present	Chiswick Eyot habitat improvement and management	Thames21, Old Chiswick Protection Society, WWT London Wetland Centre	Removal of Himalayan Balsam - presence has changed from abundant to rare from 2011 to 2013 (measured by London Flora project). Increase plant biodiversity through a change in vegetation management. Bank stabilisation	Ongoing	Thames21	<a href="http://www.thames21.org.uk">www.thames21.org.uk</a>	Habitat Enhancement

				work to reduce erosion and protect the banks from burrowing.				
16	2011 - present	Swan Draw Dock green wall modules	Thames21 and Kings College London	Green Wall modules placed onto a concrete river wall in Swan Draw Dock. These modules are part of a Living Walls pilot project led by Thames21. The modules are being monitored by King College London from 2012 to 2014	Ongoing	Thames21	<a href="http://www.thames21.org.uk">www.thames21.org.uk</a>	Habitat Enhancement
17	2006 - 2009	Swan Draw Dock habitat improvement, habitat management and silt management	Thames21 and local volunteers	Reedbed management within Swan Draw Dock to maintain the open water area of the dock. Planting of native wetland edge species into gravel planters. Management regime set up with local volunteers to enable more regular opening of the sluice into the dock to improve sediment management and instillation of a litter boom to prevent accumulation of litter in the dock.	Completed	Thames21	<a href="http://www.thames21.org.uk">www.thames21.org.uk</a>	Habitat Enhancement
18	2011 - present	Battersea Park green wall modules	Thames21 and Kings College London	Green Wall modules placed onto a concrete river wall by Battersea Park. These modules are part of a Living Walls pilot project led by Thames21. The modules are being monitored by King College London from 2012 to 2014	Ongoing	Thames21	<a href="http://www.thames21.org.uk">www.thames21.org.uk</a>	Habitat Enhancement
19	2007	St Saviours Dock habitat rafts	Thames21 and local volunteers	5 habitat rafts were installed in 2007; they are designed to provide roosting/resting/nesting space for water fowl. The rafts also include spaces that have been colonised by plants. Planters were pre planted with native wetland plants but have eventually colonised by plants growing from seed brought in by the river.	Completed	Thames21	<a href="http://www.thames21.org.uk">www.thames21.org.uk</a>	Habitat Enhancement
20	2011 - present	St Saviours Dock green wall modules	Thames21 and Kings College London	Green Wall modules placed onto sheet piling in St Saviours Dock. These modules are part of a Living Walls pilot project led by Thames21. The modules are being monitored by King College London from 2012 to 2014	Ongoing	Thames21	<a href="http://www.thames21.org.uk">www.thames21.org.uk</a>	Habitat Enhancement
21	2004 - 2011	Limekiln Dock habitat rafts	Thames21 and PLA	3 habitat rafts were installed in 2004 with the support of the Port of London Authority. The rafts were designed to provide roosting/resting/nesting space for water fowl. The rafts also included spaces that were colonised by plants. Planters were pre planted with native wetland plants but were eventually colonised by plants growing from seed brought by the river. The original rafts degraded and were damaged, they were removed in 2010. A single replacement raft was put back into the dock in 2011.	Completed	Thames21	<a href="http://www.thames21.org.uk">www.thames21.org.uk</a>	Habitat Enhancement

22	2013	Oliver's Ait Habitat Improvement	PLA	Oliver's Ait management plan- repair the failing revetments and improve the health of the trees and vegetation. Good habitat for two rare snails has been achieved on the ait, and plans continue to repair the revetment in keeping with their needs	Ongoing	PLA	<a href="http://www.pla.co.uk/display_fixe_dpage.cfm/id/4138">http://www.pla.co.uk/display_fixe_dpage.cfm/id/4138</a>	Habitat Enhancement
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In addition to these improvements which have occurred at specific locations there are also important examples of estuary wide improvements, many of which are quite unique examples of good practice that are worthwhile models for uptake elsewhere. These improvements are summarised below

### **Fisheries management in the inner estuary – An example of sustainable fisheries management through relationship building and dialogue with Thames fishermen**

The Thames estuary is a very important nursery ground for fish – it is the largest new bass nursery on the East Coast and one of the largest sole nurseries in England & Wales. Historically fishing in the estuary was not effectively regulated. However the Environment Agency as part of a national pioneering project provided new information on the fish ecology of the Thames estuary, which has been actively used since 1992. This wealth of data on local juvenile fish led to the creation of the Tidal Thames Fisheries Action Plan which promoted the nursery status of the estuary. This action plan incorporated the principle of a “low take zone” - balancing a low level of sustainable exploitation against nursery protection in the inner estuary.

Initial dialogue with commercial fishermen was met with strong protest, the Thames Estuary Partnership (TEP) provided a neutral forum for discussion and fishermen began to understand the quality of the local data and become convinced that the inner estuary was very important as a nursery ground. In 2000 a voluntary agreement was reached and in 2009 formal sea fisheries byelaws were published. During the interim period all parties adhered to the voluntary agreement, with fishermen demonstrating a high degree of commitment and self-enforcement.

Fisheries in the inner estuary are managed through a number of parties working closely in partnership. These parties include [Kent & Essex Inshore Fisheries and Conservation Authority \(IFCA\)](#), [EA](#), [Metropolitan Police Marine Policing Unit](#), [Port of London Authority](#), [London Port of Health Authority](#) and commercial and recreational fishermen. This case study illustrates how 'low take zones' can be developed in estuaries and also demonstrates the value of neutral organisations such as the Thames Estuary Partnership (TEP) in the establishment of such sites.

### **Dredging and Sediment Liaison Group (DSLGL) – An example of sustainable development through multi-sectoral collaboration**

The DSLGL was formed in 2001, following a Thames Estuary Partnership EU funded best practice study of international port processes called ‘Port Cities.’ Before this the PLA, as the local regulator of maintenance dredging, had no requirement to consult over dredging activities. In the late 1990’s a number of parties approached the PLA and pressed for a new system of dialogue.

The DSLGL became a regular group meeting, facilitated through the Thames Estuary Partnership, and trust, environmental data and dredging proposals were shared across the group. Now all maintenance dredging proposals in the Thames Estuary are discussed

through this group which is facilitated through the Thames Estuary Partnership. This enables spatial and temporal environmental sensitivities, such as local fish spawning and nursery use, to be fully reflected in management options, wherever possible.

The DSLG has also developed a sustainable maintenance dredging regime, built entirely upon consensus management and a high degree of engagement with people outside the group. The DSLG is considered an exemplar of good integrated management practice.

### **The Environment Agency's Encroachment Policy – An example of sustainable development through national policy**

A steady process of building out onto the Thames foreshore, called encroachment, has been shown through the archaeological record to have been occurring since at least the Neolithic Era. Over time the process has accelerated, for example the river at Tower Bridge is now only a quarter of its width in Roman times.

By the mid 1990's the Environment Agency had developed a planning policy approach, based in concerns for ecology and flood risk management, to discourage further encroachment unless it was for a genuine river related purpose. The PLA uphold this when dealing with development applications. The foreshore provides vital feeding grounds for birds as well as specialized feeding and refuge habitats for invertebrates and fish – both adults and juveniles that migrate upstream with the tide. Active promotion of the policy to developers, local authorities and the general public through environmental education initiatives has led to a robust and more sustainable position.

The banks of the Thames will always be under pressure from development and the aggregated impact of even small encroachments affect the ecology of the Thames foreshore. It is important that the Environment Agency's encroachment policy continues to be implemented along the whole of the tidal Thames and to be promoted in estuaries nationwide.

### **Thames21's clean-up work along the tidal Thames – An example of working with local communities to make significant improvements to river cleanliness**

Thames21 is an environmental charity, which has been working with volunteers across London to improve London's waterways since 1994. Thames21 engages volunteers in practical activities that help to clean-up and enhance waterways across London. On the tidal Thames Thames21 runs clean-up events at low tide, and with the help of tens of thousands of volunteers, and the support of the Port of London Authority, Thames21 has made a major contribution to helping to clean up London's iconic river.

Thames21 conducts surveys of the litter along the tidal Thames using a specifically designed rapid appraisal technique to assess the litter on the Thames foreshore. The rapid appraisal technique divides the Thames foreshore into 250m lengths, each of which is awarded a grade from A to D depending on the amount of litter on the foreshore – taking into account immobile and mobile pieces of litter. These surveys have shown a 71% improvement in the cleanliness of the tidal Thames over the last 10 years. In 2012 there were 5 sites awarded a

Grade D compared with 29 sites in 2003 - a reduction from 7% to 1% of all sites surveyed. Also in 2012 9% of the sites surveyed were unsatisfactory achieving a Grade C or worse as opposed to 21% in 2003.

In addition, the PLA, with Thames21, manages passive debris collectors on the tidal Thames which collect litter that floats in the river. There are 9 passive debris collectors on the tidal Thames, combined they collect between 200 and 300 tonnes of litter from the tidal Thames annually.

The work of Thames21, supported by the Port of London Authority, and the enthusiasm of volunteers across London is a great example of how long-term local community action can help to significantly improve the cleanliness of a major city river.



## 2.8 Existing Planning Policy Guidance



The underpinning aims of the Water Framework Directive (WFD) for sustainable development and improvement of water quality have already been embedded in national and metropolitan policy for a very long time.

Where sustainable solutions are not being implemented or incorporated in riverside planning from an early stage is generally an indicator that the relevant local authorities lack either the resource or the capacity to implement them. This was echoed throughout interviews with Local Authorities during the pilot phase. This situation is perceived as worsening since the post-2008 economic downturn and consequent cuts in local authority budgets.

Failure to plan sustainably can also indicate a lack of understanding, or willing, from a developers' point of view. Raising awareness; increasing the knowledge and resource within this sector and finding a way to integrate sustainable solutions with the needs of developers could make great contributions to sustainable development, and therefore to meeting the Water Framework Directive (WFD) water quality targets. The main concerns of the construction and development sector would most likely revolve around their perception that environmentally friendly solutions will automatically imply higher costs, will invoke more stringent monitoring and will necessitate the mobilisation of more legal resource in order to navigate the various statutory licences. This may be the current case in the short term, but several of the documents reviewed highlight the mutual benefits of developing in an environmentally informed, and thus sustainable, approach which would cut costs and improve profits in the longer term.

For example The Mayor's Biodiversity Strategy (2002) shows how by achieving biodiversity aims; other aims such as reducing air pollution are automatically achieved. Examples of how this may benefit businesses financially are championed by partnerships such as [The Cross River Partnership](#) whose engagement with businesses in Central London highlight how money can be shaved from their bottom line by installing simple environmentally friendly solutions in either existing buildings (e.g. green roofs which reduce the need for artificial

cooling in hot weather and capture rainwater runoff, as well as providing a range of habitats for urban wildlife) or as part of development plans (e.g. rain gardens which are shallow depressions, with absorbent, yet free draining soil, they are planted with vegetation that can withstand temporary flooding and filter and clean water running off pavements).



[The Mayor's Biodiversity Strategy \(2002\)](#) – 2.7MB

In addition, The London Plan (2011), which must be implemented by Local Authorities, lays out the Mayor's vision for a city of economic growth which simultaneously improves the environment for the health and benefit of all. It has two key policies which recognise the WFD. Policy 7.28 Restoration of the Blue Ribbon Network details how river restoration can be achieved through capital and redevelopment projects. Through collaboration with the EA, a London River Restoration Plan and database of opportunities has been compiled and is regularly updated. Also, Policy 5.14 Water Quality and Wastewater Infrastructure details how water quality must be improved with regard to the Thames River Basin Management Plan and adequate wastewater infrastructure must be maintained to ensure this whilst meeting the needs of the population.

#### **Pilot Project Existing Policy Review**

Due to the plethora of management strategies, policies and projects that have been consulted on within London during the Your Tidal Thames pilot year (2012) many of the YTT stakeholders stated that they have 'consultation fatigue' – that they no longer want to talk about the issues and that they want to see action on the ground. Therefore, in response to this, existing strategies and policies for management of the Estuary were reviewed as part of the pilot phase to provide a baseline and context; to identify where progress is lagging and where future resources could be allocated.

[Management Guidance for the Thames Estuary](#), published in 1999, was the first report to include all of the relevant aspects necessary for integrated river management throughout the Thames Estuary, and thus to operate at the scale of 'landscape' as required within Water Framework Directive (WFD). This report identified twelve guiding 'principles for action' aimed at conserving or enhancing the estuary's biodiversity, natural and built heritage, and economic prosperity. These principles were a product of the strong partnership of organisations, agencies and individuals that worked together through extensive consultation to produce this guidance.

Six subsequent documents published in the following years were reviewed chronologically to see how they compared the baseline document, specifically to see:

- How the guidance may have changed,
- What has been carried through to the present and applied
- Where the gaps are, if any
- How they align with WFD

Culminating with Estuary Edges, published in 2008, which was reviewed to see where bioengineered and biotechnical engineered design could be applied geographically, should the opportunity arise. Check the [Estuary Edges Ecological Design Guidance](#) for more details.

By reviewing iterations of guidance issued in these documents it has been possible to identify what has changed overall and where progress has been made.

National and metropolitan policies in the National Planning Policy Framework (2012), the Mayor's Biodiversity Strategy (2002) and [The London Plan](#) (2011) were also reviewed to see how these align with previously mentioned Thames management guidance documents.



[National Planning Policy Framework](#) – 0.8MB  
[The Mayor's Biodiversity Strategy \(2002\)](#) – 2.7MB  
[The London Plan \(2011\)](#) – 27MB (In separate chapters)

Additionally, local strategy documents were reviewed to provide a geographical context and to show how principles for action and planning policies could lead to practical ideas that allow individuals and organisations to take direct responsibility for their local section of the river.

These local strategies included:

- [Thames Landscape Strategy Hampton to Kew](#) (2012)
- [Thames Strategy Kew to Chelsea](#) (2002)
- [Thames Strategy East](#) (2008)

Visual timelines were developed to display this review work according to the 12 guiding principles laid out in the 1999 management guidance. Two examples of these can be downloaded here:



[Biodiversity timeline](#) – 1.5MB  
[Sustainable Commercial Use timeline](#) – 1.6MB  
[Guidelines on how to use these timelines](#) – 0.2MB

In addition, many other documents found by the project team and suggested by members of the Strategy Group were reviewed, summarised and taken into account. These summaries can be seen here:



[Literature review of existing management strategies, policies and projects](#) – 0.4MB

## 3. Enhancement Projects

### 3.1 Proposed improvements

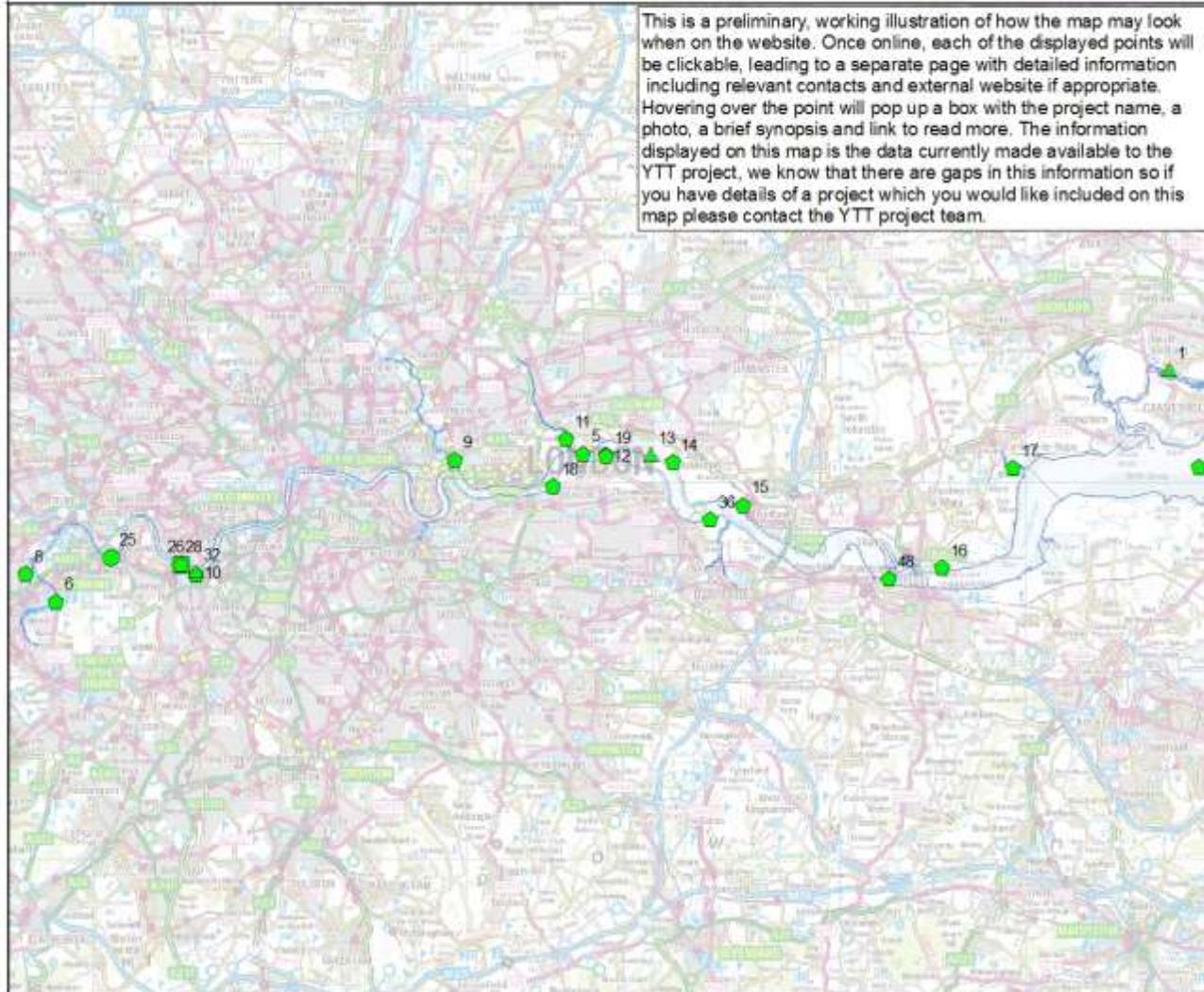
The tidal Thames community suggested a wide range of solutions to the issues raised in the Your Tidal Thames (YTT) Working Catchment Plan, varying from projects with specific locations to estuary wide improvements which could be applied almost anywhere that an opportunity arises.

#### **Specific Project Ideas**

This map shows all of the specific ideas for potential improvements that were submitted during the pilot year (2012).

Click on the different points to see details of the project, the organisations involved, information on which WFD failures that it could address, and the water body that it would improve.

**Possible Opportunities – Opportunities for Improvements Submitted during the YTT Pilot Phase**



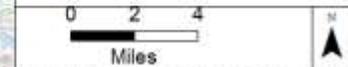
This is a preliminary, working illustration of how the map may look when on the website. Once online, each of the displayed points will be clickable, leading to a separate page with detailed information including relevant contacts and external website if appropriate. Hovering over the point will pop up a box with the project name, a photo, a brief synopsis and link to read more. The information displayed on this map is the data currently made available to the YTT project, we know that there are gaps in this information so if you have details of a project which you would like included on this map please contact the YTT project team.

**Legend**

Possible opportunities

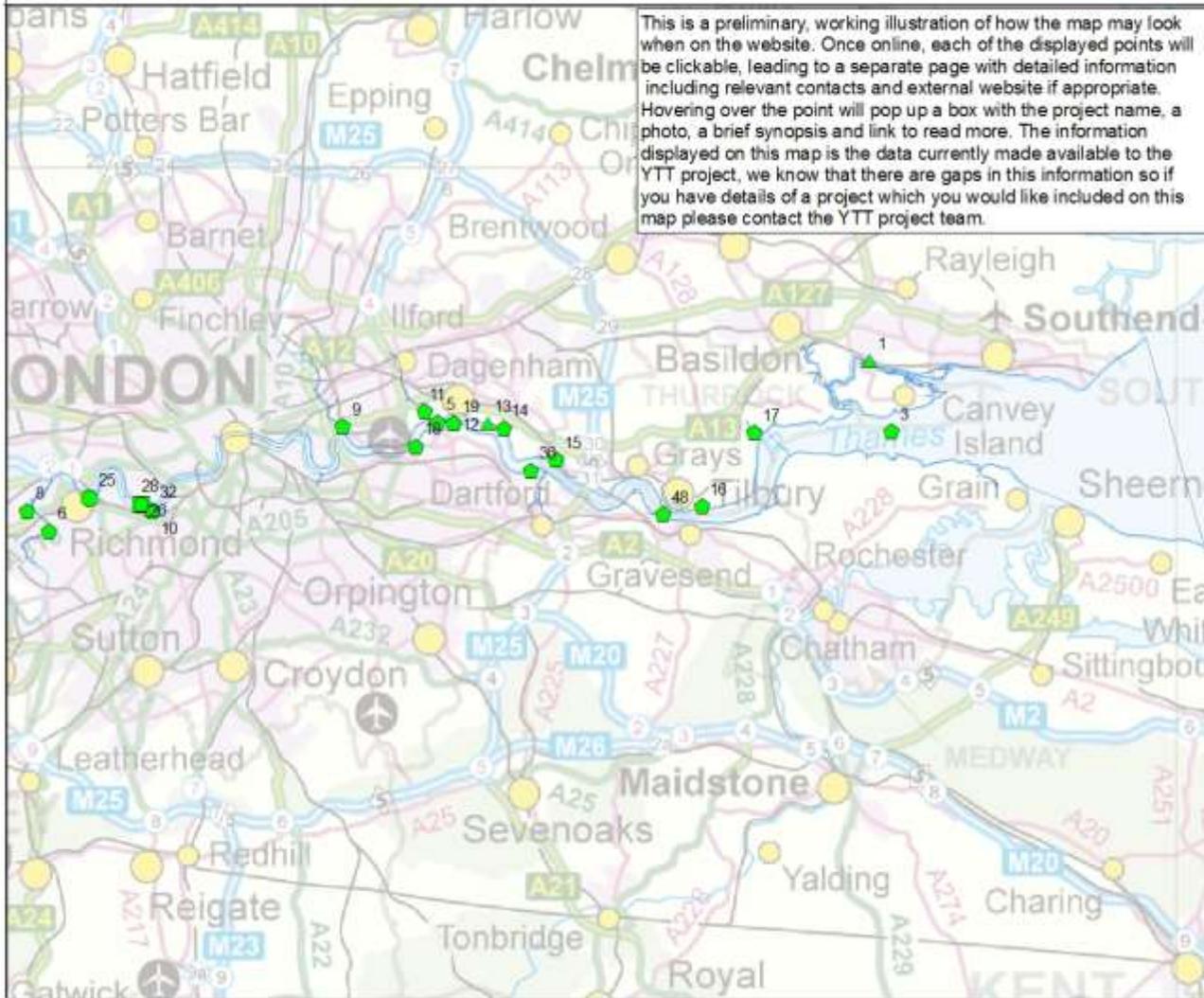
**Category**

-  Access
-  Education
-  Fish Passage
-  Habitat Enhancement
-  Invasive Species
-  Policy
-  Sediment Management
-  Water Quality
-  Tidal Thames Catchment



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**Possible Opportunities – Opportunities for Improvements Submitted during the YTT Pilot Phase**



This is a preliminary, working illustration of how the map may look when on the website. Once online, each of the displayed points will be clickable, leading to a separate page with detailed information including relevant contacts and external website if appropriate. Hovering over the point will pop up a box with the project name, a photo, a brief synopsis and link to read more. The information displayed on this map is the data currently made available to the YTT project, we know that there are gaps in this information so if you have details of a project which you would like included on this map please contact the YTT project team.

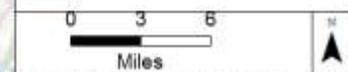
**Legend**

Possible opportunities

**Category**

- Access
- Education
- ▲ Fish Passage
- Habitat Enhancement
- Invasive Species
- Policy
- Sediment Management
- ★ Water Quality

Tidal Thames Catchment



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## Estuary Wide Solutions

Ideas submitted during the pilot year which could be applied to the whole estuary were discussed in the final project report together with the [Current issues highlighted by the tidal Thames community](#). Discussion was divided into a number of themes which are summarised below.

### Redevelopment and riverside planning

There is public perception of a lack of commitment by Local Authorities (LA) to include habitat creation and local community use in redevelopment and riverside planning. However, from speaking to Local Authorities we have found that the real problem is not a lack of commitment but a lack of resources and funding. The Environment Agency tries to work closely with developers and Local Authorities to ensure that development is sympathetic to the needs of the river and does not compromise flood defences. Early engagement with riverside developers is very important in this process. However, there also needs to be an improvement in the recognition of the value of the Thames across a wider range of sectors. This could be investigated through an ecosystems services approach which would seek to evaluate the services that species and habitats that occur within the tidal Thames provide for us either individually or in combination and place an economic value on them. For example saltmarshes are known as ‘kidneys’ of the coasts, filtering and cleaning the water and stripping carbon from the atmosphere. If the tidal Thames could be assessed for its economic value and environmental value in the face of climate change, understanding of the vital role it plays would increase.

If you are interested in influencing the way that planning and development is undertaken in your local area then you might be interested in finding out more about the work that Local Authorities are currently doing. More information on this can be found on your Local Authorities website or the [Government’s Planning Portal](#).

### Access to the riverside, onto the river and onto the foreshore



Image © Thames21



Image © Thames Estuary Partnership



Image © Ben Williams

The creation of the Thames Path took years of consultation and hard work and is now widely celebrated, but it still needs protection and there are wider improvements that need to be made to improve overall access along and onto the river. There is a strong sense by the tidal Thames community that access should be held in higher regard during development and regeneration planning. The tidal Thames community also suggested that better coordination and management is the key to improving access for walkers, cyclists and river users alike – this requires bringing together relevant organisations such as the [Local Authorities](#), [Port of London Authority \(PLA\)](#), [RYA](#), [National Trails](#), [Sustrans](#) and the [EA](#).

## Water quality, sediment, pollution and litter

The engagement done by the Your Tidal Thames project in the pilot year has shown strong support for the Thames Tideway Tunnel combined with Sustainable urban Drainage Systems (SuDS) as the best solution to improving the water quality of the tidal Thames. This needs to be supported by robust measures to prevent domestic misconnections from occurring.

[Domestic misconnections](#) occur when plumbing is incorrectly installed into homes resulting in untreated waste water draining directly into rivers. The [Environment Agency](#), [Water UK](#), a number of the water companies and others are working together in partnership to try to deal with this issue. The problem of litter in the river is being tackled by Thames21, with the support of the Port of London Authority and thousands of volunteers. The contradicting views over dredging illustrate the need for greater understanding of this issue. The [Dredging and Sediment Liaison Group \(DSLGL\)](#), facilitated by the Thames Estuary Partnership is working collaboratively to develop consensus around the management of maintenance dredging in the Thames estuary. In addition, the PLA has adopted a higher level of surveying to manage the conservancy of navigation which reduces the PLA's own navigational dredging. River users are informed by the updated charts from the surveys, and dredging is only done when absolutely necessary.

## Habitat and wildlife



Along the whole of the tidal Thames redevelopment of riverside areas is seen as an opportunity by the Environment Agency and local communities for habitat creation to be completed as part of the development package. [Estuary Edges Design Guidance](#) for Developers was developed by The Thames Estuary Partnership (TEP) with the Environment Agency and lays out how improvements can be made to habitat along the banks of the Thames, including setting back defences, and creating intertidal terraces and intertidal planters. Strengthening the existing Environment Agency Encroachment Policy is perceived to be important in improving fish refuge along the whole of the tidal Thames. On the upper stretches of the tidal Thames, creation and enhancement of habitat is led by the [Thames Landscape Strategy Hampton to Kew](#) who have recently completed an exhaustive three year consultation with their local stakeholders. The resulting [Strategy Review](#) lays out the aspirations of the local community and a suite of projects which would provide habitat refuges for birds and fish. In addition, given the urbanised nature of the tidal Thames, there are many more opportunities for habitat creation in the outer estuary linking in with [Greater Thames Marshes Nature Improvement Area](#) (GTM NIA). The GTM NIA is a three year project, in 2012 – 2015, aiming to deliver connectivity through habitat restoration

activities. Through a partnership approach it will add value to existing initiatives and fundraise for future habitat work beyond 2015 to link in with WFD.

### **Public perception and education**

Access and signage are a vital element in public environmental education. The tidal Thames community suggested that more interpretation is needed to give Thames walkers information on the patch of water and surrounding area they are looking at. Education through schools is also a very valuable way of changing people's perceptions and understanding of the estuary. Bespoke practical and theoretical education of river ecology, landscape scale processes and urban environments was suggested by the tidal Thames community as necessary in the school curriculum to truly help connect future generations more closely to the natural environment. Many organisations are providing river based education. The [Thames Learning Group](#) (TLG) is an initiative from over 100 education centres located along the entire Thames, from source to sea, helping local schools and families to maximise the benefit from the river. The TLG website is a portal designed to help teachers, individuals and families find ideas and locations for school visits, events and resources.

### **Flooding**

Managing flood risk on the tidal Thames is a challenge, with London, a densely populated urban area, covering so much of the catchment. The [Thames Estuary 2100 Flood Risk Management Plan \(TE2100\)](#) provides a framework for tidal flood risk management until 2100.

### **River Traffic**



Image © Thames Estuary Partnership



Image © Port of London Authority



Image © Thames Estuary Partnership

The tidal Thames has a long history of being busy with river traffic including passenger, recreational and freight (rubbish transport and construction materials) which are transported to and from west London by river significantly reducing air emissions and traffic on the roads. The PLA supports industry use of the river in a number of ways, including via the Safeguarded Wharves policy within the London plan which uses existing wharves and preserves them from development for this use. Further development of passenger transport along the river is generally seen as a positive step but it will need to be carefully managed and implemented in a sustainable way. The tidal Thames community is keen to see river traffic fares becoming more affordable with prices more in line with those for buses and tubes.

### 3.2 Examples of suggested Project Ideas in early stages of development

Following the completion of the pilot phase of Your Tidal Thames (YTT), the team were eager to help realise the Thames community's aspirations of delivery and successfully applied for a small grant from Big Lottery Fund to continue the engagement started through YTT and to scope the feasibility for delivery of some of the project ideas.

Two specific community locations suggested to YTT were already significantly progressed and showed high potential to involve local residents and businesses to take practical action to improve their local natural environment and recreational amenities. These project ideas were selected as the focus of for the small amount of funding available at the start of 2013.

#### **Erith Saltings**

Erith Yacht Club (EYC) and the local community who use their facilities were concerned about the health of the last known remaining reed saltings on the southern shore of the Thames, located on EYC land. Erith Yacht Club have been trying for years to get funding for a larger project to protect the saltings but do not have the experience, contacts and expertise to get it off the ground. They submitted a detailed proposal to the pilot project and requested our help in improving the habitat and sustainable local access to nature. YTT set up a meeting between EYC, EA and YTT to discuss the options available to them. This involved explaining to EYC how the reed saltings erode and move backwards as part of the natural fluctuation in an estuary. However, the sea wall stops their backwards migration and therefore the saltings will naturally erode away with time.

One suggestion by EYC is to build a slipway that will naturally provide some protection to the edge of the saltings stand. In line with the EA Encroachment Policy the foreshore lost due to the construction of the new slipway must be replaced and new habitat created nearby. EYC and the EA identified areas of redundant dry land on EYC property that could be converted into valuable and active foreshore to offset the construction. Even though this project is in the very early stages of development, it is a clear demonstration of collaboration and community led action to improve river habitat and therefore water quality.

#### **Greening the tidal Thames river walls**

The central part of the River Thames, with bare flood defence walls is lacking in green areas which can help encourage biodiversity along this part of the river. Green walls within the estuary have long been known to be beneficial to wildlife and have been part of the Environment Agency's guidance to developers for several years (see [Estuary Edges Design Guidance](#)). They are especially needed within the central stretch of the river where tides are high, currents fast and there is little opportunity for vegetation to take hold. They also make the river walls more attractive and help educate the public about flora and fauna in the river.

Through YTT liaison with the [Cross River Partnership](#) (CRP), who work closely with Business Improvement Districts (BIDs) in Central London, an opportunity was identified to work together to create more green river walls through the city. Thames21 have been trialling the installation of Green Wall Modules (structures which enable plants to grow on steel

sheet piling) thus improving an urban river environment. Through further engagement with CRP and their stakeholders we have started to scope the feasibility of developing sustainable plans for additional green walls modules to be installed between Tower Bridge and Hammersmith and Fulham, which could be sponsored through BIDs with local residents and schools, monitoring the growth on these units.



CRP is committed to helping local businesses become more environmentally aware and sustainable through green projects. BIDs are funded and chosen by the local businesses themselves.

#### 4. Contact us

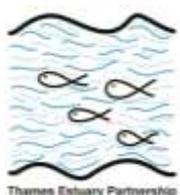


**Thames21** - Alice Hall  
Walbrook Wharf  
Upper Thames Street  
London  
EC4R3TD

[alice.hall@thames21.org.uk](mailto:alice.hall@thames21.org.uk)

020 7213 0160

[www.thames21.org.uk/](http://www.thames21.org.uk/)



**TEP** - Amy Pryor  
Office for the Vice-Provost (Research)  
Room 117,  
26 Bedford Way  
London  
WC1H 0AP

[a.pryor@ucl.ac.uk](mailto:a.pryor@ucl.ac.uk)

02076798855

[www.thamesweb.com](http://www.thamesweb.com)



**Thames Landscape Strategy** - Jason Debney  
Holly Lodge  
Richmond Park  
Richmond TW10 5HS

[jjrdebney@gmail.com](mailto:jjrdebney@gmail.com)

02089400654

[www.thames-landscape-strategy.org.uk](http://www.thames-landscape-strategy.org.uk)



**Thames Strategy Kew to Chelsea** – Ruth Hutton  
Hammersmith & Fulham Council  
5th Floor, Town Hall Extension  
King Street  
London.  
W6 9JU

[Ruth.Hutton@lbhf.gov.uk](mailto:Ruth.Hutton@lbhf.gov.uk)

02087532507

[www.thamesstrategy-kewtochelsea.co.uk](http://www.thamesstrategy-kewtochelsea.co.uk)

#### 4.1 Tell us your views about the tidal Thames

Please tell us your views about the tidal Thames using the form below, or by [Contacting us](#).

**1. In your view, what problems are affecting the tidal Thames?**

You can be as technical, site specific or general as you like.

**2. What can be done to address these problems?**

If you have an idea of a solution to address a problem faced by the tidal Thames please add it here

**3. Action Plan**

What should the target be to achieve and by when?

Who else can help deliver this target? What part can you (or your organisation) play?

Please indicate if you work for the organisation you talk about and whether a solution is just an idea or a commitment to complete the suggested action.

**4. How do you use or relate to the tidal Thames**

Please provide some background about how you use, interact with and value the tidal Thames

## 5. Your contact details

Name:

Organisation:

Email:

Postcode:

Telephone:

*Please provide your postcode. It will only be used to evaluate the distribution of individuals/organisations who have contributed towards the Plan.*

Would you like to be kept updated with project progress?  Yes  No

Would you like your name and/or your organisations name to appear in an appendix of the Catchment Plan?

- Yes, please include my name and my organisation's name
- Yes, please include only my name
- Yes, please include only my organisation's name
- No, please do not include my name or my organisation's name

*Please note: Your details will be stored on a Your Tidal Thames database. Under the Data Protection Act, we have a legal duty to protect all information we collect from you. We will not pass your details on to any other organisation. You can ask us to remove your details from our database at any time.*