

# Ravensbourne River Corridor Improvement Plan

September 2010

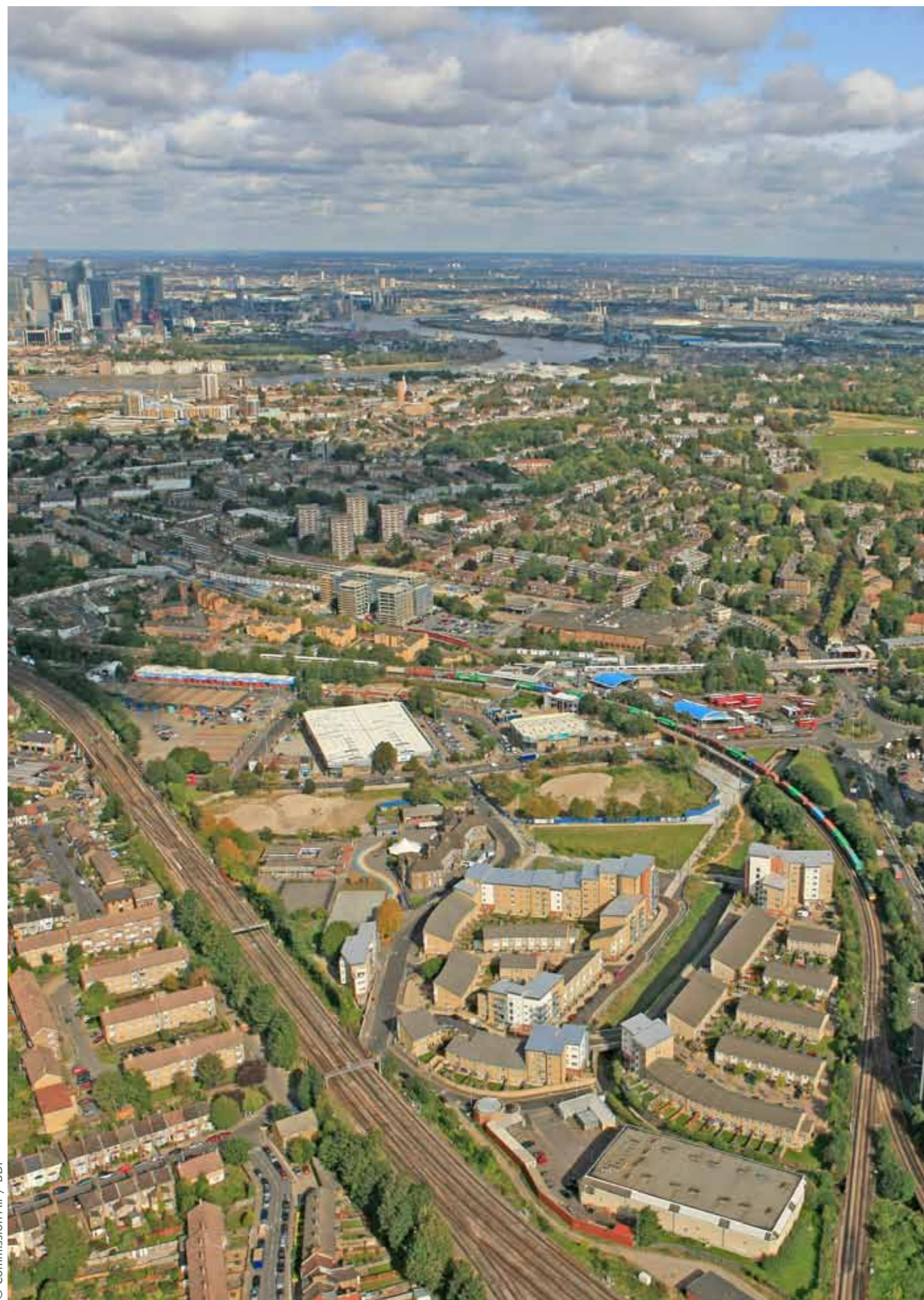


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# 1 Introduction

Considered the largest regeneration project in Europe, the Thames Gateway is London's major focus for regeneration over the coming 20 years with 120,000 new homes expected to be built and 180,000 new jobs created<sup>1</sup>. As part of the Thames Gateway, the London Borough of Lewisham plans 18,165 net additional new dwellings in the next 15 years to meet local housing need and comply with the London Plan requirements<sup>2</sup>. Whilst considering future regeneration it is important to acknowledge that, as with many other urban areas, Lewisham's historic development has been and will continue to be greatly influenced by its rivers.

Back in Norman times, Lewisham's rivers and streams were important to the development of the agricultural and economic centres of Catford, Lewisham and Deptford. At present and in the near future it is along the Ravensbourne River and exactly these town centres that most development is expected. However as these urban areas have needed to expand in the last few decades, they have witnessed the river's gradual alteration from an open green river corridor, rich in habitat, to a heavily constrained artificial channel, hidden away 'out of sight and out of mind'. This has long constrained the potential of the rivers and has had a strong impact upon our ability to reduce flood risk and mitigate the potential impacts of climate change; the wildlife the river can support; as well as our opportunity and accessibility to use and enjoy the river. Although recent urban development have neglected their importance, future urban regeneration in the borough will need to restore its relationship with Lewisham's rivers to support its long term sustainability.

The phenomenal pressures for growth in London and the likely impacts of climate change are challenges that demand a joined-up approach to the design and management of new and existing urban areas. With the ambition to regenerate Lewisham in a sustainable way and bring the river back to the heart of the borough, the London Borough of Lewisham and the Environment Agency have worked in partnership to produce the Ravensbourne River Corridor Improvement Plan. The plan stimulates an integrated approach to urban and environmental planning during the (formal and informal) development process.

As policy makers try to strike a balance between development targets and environmental quality, the idea of green infrastructure has emerged nationwide to support the growth of more sustainable communities in the future. Following this important development, the Ravensbourne River Corridor Improvement Plan adheres to key London strategic and local policies such as the London Plan, the East London Green Grid Framework Supplementary Planning Guidance, the London Rivers Action Plan as well as London's Natural Signatures published by Natural England. This plan will also help deliver objectives of the European Water Framework Directive (WFD) and the Thames River Basin Management Plan which aims to improve river environments for communities and wildlife. This plan is also an action from the Environment Agency Thames Catchment Flood Management Plan to successfully manage flood risk and a changing climate long term.

<sup>1</sup> East London Green Grid Primer, Greater London Authority, 2006

<sup>2</sup> Lewisham Core Strategy, 2010



### Focus of the report

As the character of Lewisham continues to evolve, new opportunities to enhance the natural, urban and suburban qualities require strong guidance and decision making. The guidance set out in the Ravensbourne River Corridor Improvement Plan is based on the distinctive nature of the different areas that characterise the river corridor. By acknowledging each distinctive area this plan will provide specific, design guidance. This plan will also provide general design guidance for the whole catchment.

This Plan provides this specific guidance for the area of the Ravensbourne corridor that lies within the boundary of the Thames Gateway to especially focus and influence areas of planned growth and investment.

However, it should be noted, that the vision and main objectives behind this document as well as the management guidance and good practice examples are valid and need to be considered throughout any development in the borough and further upstream along the Ravensbourne, Pool or Quaggy.

### Status of the report

This is a “live” plan which provides the evidence for the policies set out in the Lewisham Local Development Framework<sup>3</sup>, as well as providing guidance to residents, developers, designers, planners and stakeholders to ensure that the opportunities presented by development proposals help make local visions and aspirations materialise on the ground. This plan will evolve and adapt to changing conditions, needs of our community and status of the Ravensbourne River.

As such, the London Borough of Lewisham and the Environment Agency encourage planning applicants to undertake early pre-application discussions, and engage local communities in the future planning of development along the rivers of the borough.

As the aims of this Plan intend to support significant economic, environmental and social benefits to the community, the implementation of this plan will be monitored and reported annually through the London Borough of Lewisham’s Annual Monitoring Report. A separate Actions List is being produced to prioritise actions and ensure successful delivery of the vision. This plan will evolve and adapt to changing conditions, needs of our community and status of the Ravensbourne River.

## 2 Lewisham’s River Landscape

The Ravensbourne River is a tributary of the River Thames, 11 miles (17.4 km) in length with a total catchment area of 180 km<sup>2</sup>. The river flows from the London Borough of Bromley through Lewisham into Deptford Creek, forming the boundary between the London Borough of Lewisham and Greenwich. Its history, as well as its challenges for the future are described in this chapter.

### 2.1 History

As with many other settlements in the world, the two first settlements (in what is now known as the London Borough of Lewisham), were strongly dependent on the river and the names of both settlements reveal this clearly. In ancient Saxon times the village of Lewisham was called Levesham, meaning the house among the meadows<sup>4</sup>. Deptford, on the other hand, began life as a ford of the Ravensbourne River.

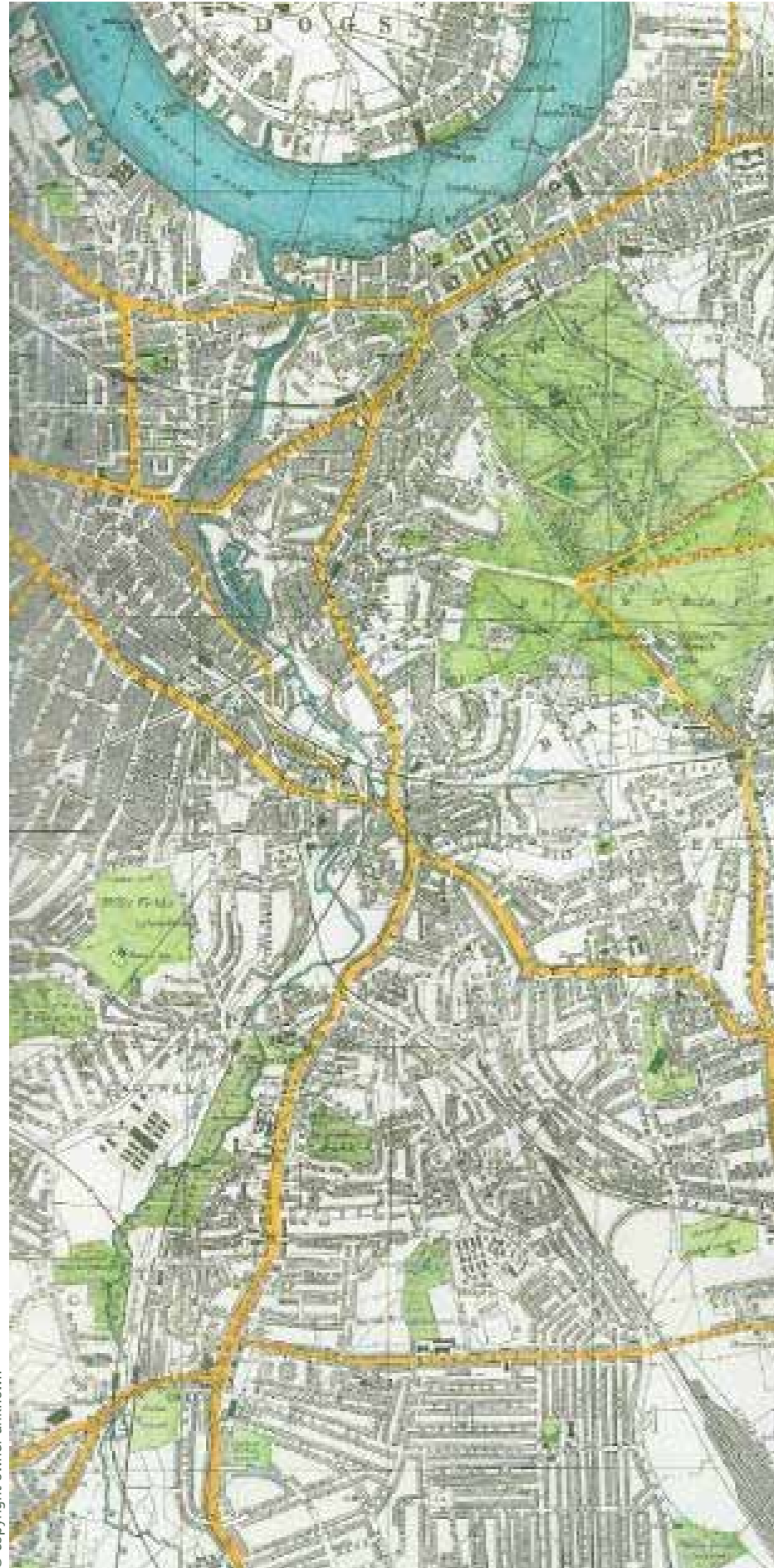


Between the eleventh and eighteenth century, Deptford and Lewisham were strongly related to the river with early development and industry along the waterfront, including watermills, gravel pits, fishing wharves, and shipbuilding. From the 16th century onwards until its closure in the 19th century, the proximity of Royal Dockyard created by Henry VIII at Deptford gave employment to many small shipbuilders on the part of the Ravensbourne called the Creek. Towards the end of this period there was further industrial development of mills, gasworks, breweries, and chemical works along the river. However, the majority of the river courses in the borough were still part of the countryside and were used for agricultural purposes. During this time the river, although the source of work and wealth, was respected and seen as highly dynamic and dangerous, as it was regularly flooding, shoaling and shifting its course.

Rocque’s map of 1746 shows how development in Deptford and the then village of Lewisham was closely related to the rivers and how little built development outside of these first settlements.

<sup>3</sup> The Lewisham LDF Core Strategy sets out the vision, objectives, strategy and policies that will guide public and private sector investment to manage development and regeneration in the borough between 2011 and 2026.

<sup>4</sup> Daniel Lysons, The Environs of London: volume 4: Counties of Herts, Essex & Kent (1796), pp. 514-36



Bacon's Atlas map indicates that, during the early twentieth century, substantial stretches of the river still followed a more natural gently meandering course, despite the growth of the urban area.

From the nineteenth century, as drainage techniques had improved, industrialisation and the construction of railways brought rapid urbanisation and most of the borough was built-up. Lewisham was transformed from a small village into a suburb of London, with the building of new Victorian terrace estates, the appearance of waterworks and the beginnings of noticeable river channel modifications. A sewer was constructed between St. Mary's Church and Bell Green due to severe sewage problem in the 1850s and in Deptford both sides of the Creek were fully revetted, confining the river to its present position.

The 1920s and 1930s saw more major new estates being built in Lewisham and Catford, where significant works to straighten and deepen the river began. In September 1968, after a week of heavy rain, the Ravensbourne burst its banks from Loampit Vale through Lewisham and all the way up to Beckenham. The Pool River flooded up to Bell Green, and the Quaggy overflowed. These events reinforced the decision to put substantial lengths of the river into concrete channels and underground culverts during the 1960s and 1970s to minimise the damage and impact which flooding could cause to the then more heavily urbanised area. At the time this was perceived as the best way to manage and control the river, as well as to reduce the risk of flooding by conveying water as quickly as possible downstream. Over 50% of the rivers in the Ravensbourne catchment are now artificial and there are over 70 culverts

This strategy not only displaced the problem instead of solving it, but it also had a significant negative impact on biodiversity, the quality of Lewisham's rivers and their role in urban life. Concrete channels and culverts throughout the borough have made the river incapable of supporting plant and animal life as the very shallow depths of water during normal conditions prevents the natural migration of fish. These concrete infrastructures have also broken natural links between green spaces and have added little value to urban public and private spaces. This has caused public attitudes towards the river to change as a result, seeing it more as an eyesore that should be hidden out of sight.

As the space for rivers has been minimised and sometimes hidden, urban development in the last decades has tended to expand too close to the river's edge ignoring the presence of the river and the way it functions. As a result original flood plains and natural river habitats have been lost, the potential risk and amount of damage caused in more extreme flood incidents has increased and essential safe access for general maintenance as well as inspection and repair of flood defence structures have often been prevented by buildings and structures at the river's edge.

Considering concrete channels, culverts and other similar flood defence structures only have a limited time span before they require repairs and eventually replacement, the management cost of this large infrastructure has become a main concern. A recent study carried out by the Environment Agency has highlighted that 'like for like' replacement of all structures on the Ravensbourne that are not owned by them could cost £193 million<sup>5</sup>. The current estimate is that these assets have a residual life of between 15 and 30 years with regular maintenance<sup>6</sup>. These estimates are broad brush; however, they do provide an indication of the large sums of money involved.

With climate change causing wetter winters and hotter drier summers, we have come to the realisation that concrete channels and culverts are a vulnerable and inappropriate solution to the demands and potentials of our rivers. Because the prediction of climate change impacts will never be exact, flexibility and adaptability of the river environment is fundamental to flood management. Bringing back space for water and vegetation is now considered as the best approach to bring back flexibility when managing flood risk but also when trying to re-establish river habitats as well as cutting down on the soaring temperatures, increasing pollution levels and the need for even more air conditioning<sup>7</sup>.

<sup>5</sup> Figures taken from Environment Agency Asset Management Plan, April 2008

<sup>6</sup> Environment Agency - Catchment Flood Management Plan - Policy Unit Ravensbourne

<sup>7</sup> [http://www.bbc.co.uk/weather/features/understanding/urban\\_heat\\_islands.shtml](http://www.bbc.co.uk/weather/features/understanding/urban_heat_islands.shtml)





Lewisham Town Centre during flooding in 1968.

During the last ten years the London Borough of Lewisham and the Environment Agency have started to promote new methods of managing rivers which demonstrate greater acknowledgement of not only their social, ecological and economic value but also the natural cycles of flooding. River naturalisation schemes at Brookmill Park, Chinbrook Meadows, Cornmill Gardens and Ladywell Fields have taken the river out of their concrete beds and built in storage capacity for the rivers to flood open spaces safely. This has enabled plants to benefit from the water before it drains away, creating a more diverse and rich natural environments along the river Quaggy and Ravensbourne.

River restoration benefits for the general quality of life have been widely welcomed by residents in the area. They have brought back the presence and importance of rivers in Lewisham's landscape as well as in people's hearts and minds .

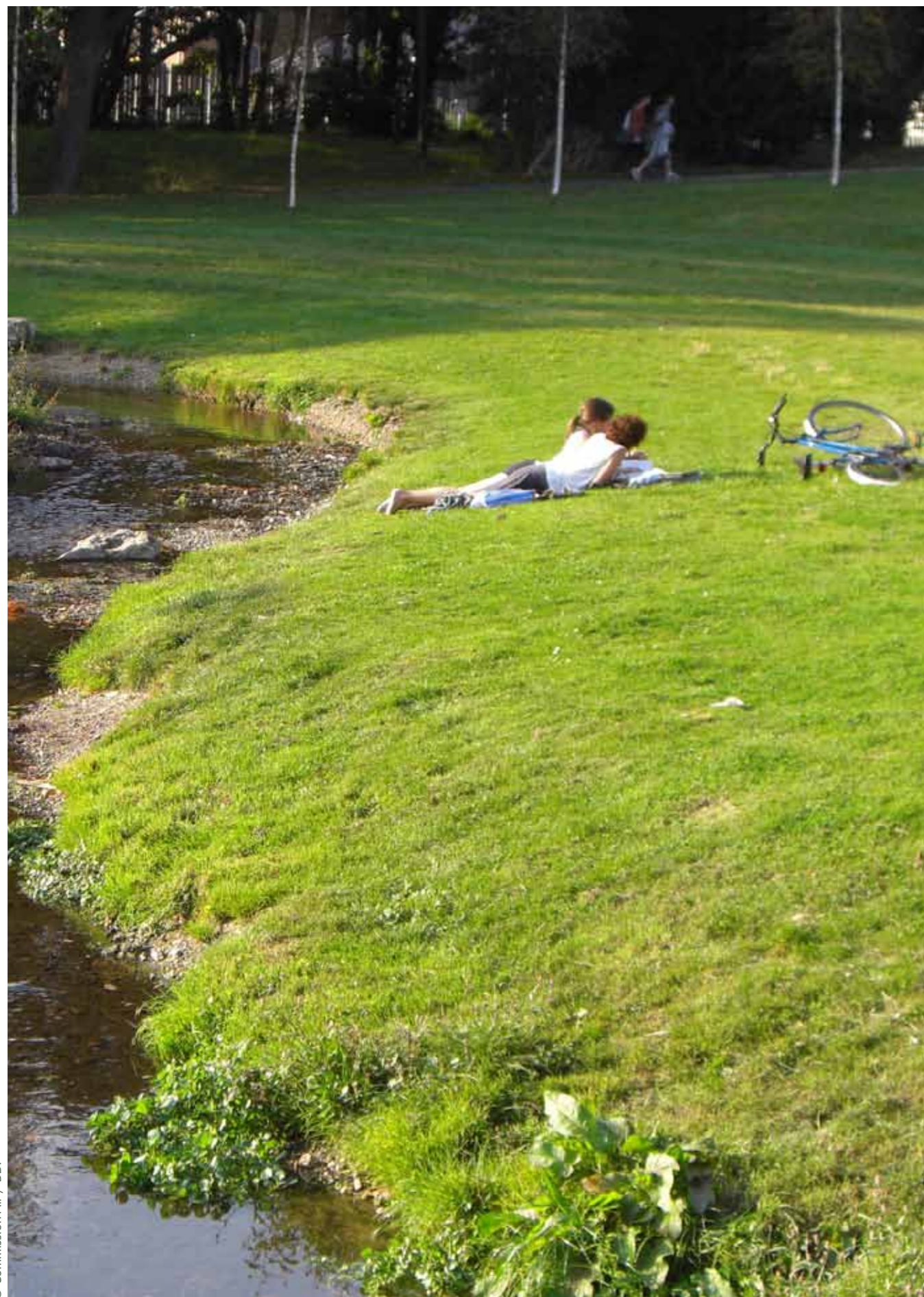
## 2.2 Challenges

Urban areas like Lewisham are very likely to be affected by both surface water drainage flooding and flooding directly from the river. Proper measures and actions are needed to mitigate the changing climate to ensure the impacts of flooding can be minimised to avoid large scale flooding incidents like those in September 1968 in Lewisham and Catford town centres. According to the Environment Agency's Lewisham Borough: Environmental Summary, there are over 20,000 properties (16% of all properties) at risk from river and tidal sources up to now. For the properties at risks of flooding, approximately 83% are classified as having a low likelihood of flooding, and 8% are classified as having a significant likelihood of flooding.

To fully restore Lewisham's rivers ecological, social and economic function and deal with the increasing threat of flooding, a few challenges will need to be overcome in the future. Different and innovative solutions will be essential to deal with space constraints and drainage requirements to make sure overflows of water are possible without causing damage to private as well as public property. Pragmatic solutions will be needed to improve the biodiversity of the river and sufficient resources for maintenance will be vital to retain its value. River maintenance can be expensive but clear maintenance agreements will help prevent improper development, unnecessary expenses and most importantly contribute to the best possible safety should flooding occur during sudden, powerful downpours. For maintenance to be possible, safe and frequent access to the river is a requirement that needs to be integrated when development proposals are considered in the future.

Each solution will be determined by the specific location, the available space and the type of uses and activities existing or planned. Pragmatic solutions based on an multidisciplinary approach will be essential to the success of any future development along the rivers. The Environment Agency and the London Borough of Lewisham are confident these challenges can be overcome if future development is considered carefully in partnership and with all disciplines involved. Both organisations are committed to stimulate and be part of this during the planning application process to make this possible.





## 3 Vision for the Ravensbourne River Corridor

A vision is adopted in this plan to reflect the aspirations for the Ravensbourne River in shaping the Borough as a better to live, work, relax and visit. This Plan seeks to use opportunities from regeneration and positive planning to:

**Bring the Ravensbourne River back to the heart of Lewisham, becoming a distinctive and attractive focal point that brings together not only wildlife but also local communities promoting healthy living whilst reducing flood risk and the impacts of climate change.**

By working in partnership with stakeholders the following objectives will help deliver the vision:

### **Enhance and maintain the unique image and identity of the Ravensbourne**

- Strengthen the image and identity of local communities along the river by stimulating development that enhances the landscape and urban characteristics of the river corridor.
- Generate value and a sense of local ownership by providing high quality public spaces as well as stimulating public and community facilities along or nearby the river corridor.
- Stimulate community facilities, as well as commercial and residential development along the river to acknowledge the river positively.

### **Reduce and manage flood risk and deal with a changing climate**

- Raise awareness of the expected increased risk of flooding and extreme weather conditions and encourage appropriate adaptation and mitigation measures.
- Maximise opportunities from regeneration to reconsider the location, layout and design of riverside sites to help reduce and manage flood risk both to the site and the wider community.

### **Ensure an attractive, safe and secure river corridor for people and wildlife**

- Use environmentally sensitive designs to enhance the river environment for wildlife, providing better conditions for habitats to flourish and adapt to climate change.
- Provide high quality public open space along the river, encouraging opportunities to access, leisure, cultural and sport facilities.
- Encourage safe and legible cycling and pedestrian routes along and across the river corridor taking into consideration any negative impact onto wildlife and private property.
- Use environmentally sensitive designs that support the interest of water related activities such as fishing, canoeing and boating.

After describing the character areas along the area that encompasses this plan in chapter 4, chapter 5 provides the specific design guidance which will help deliver the above objectives and vision. Chapter 6 then provides further guidance on the long term management of the river environment.



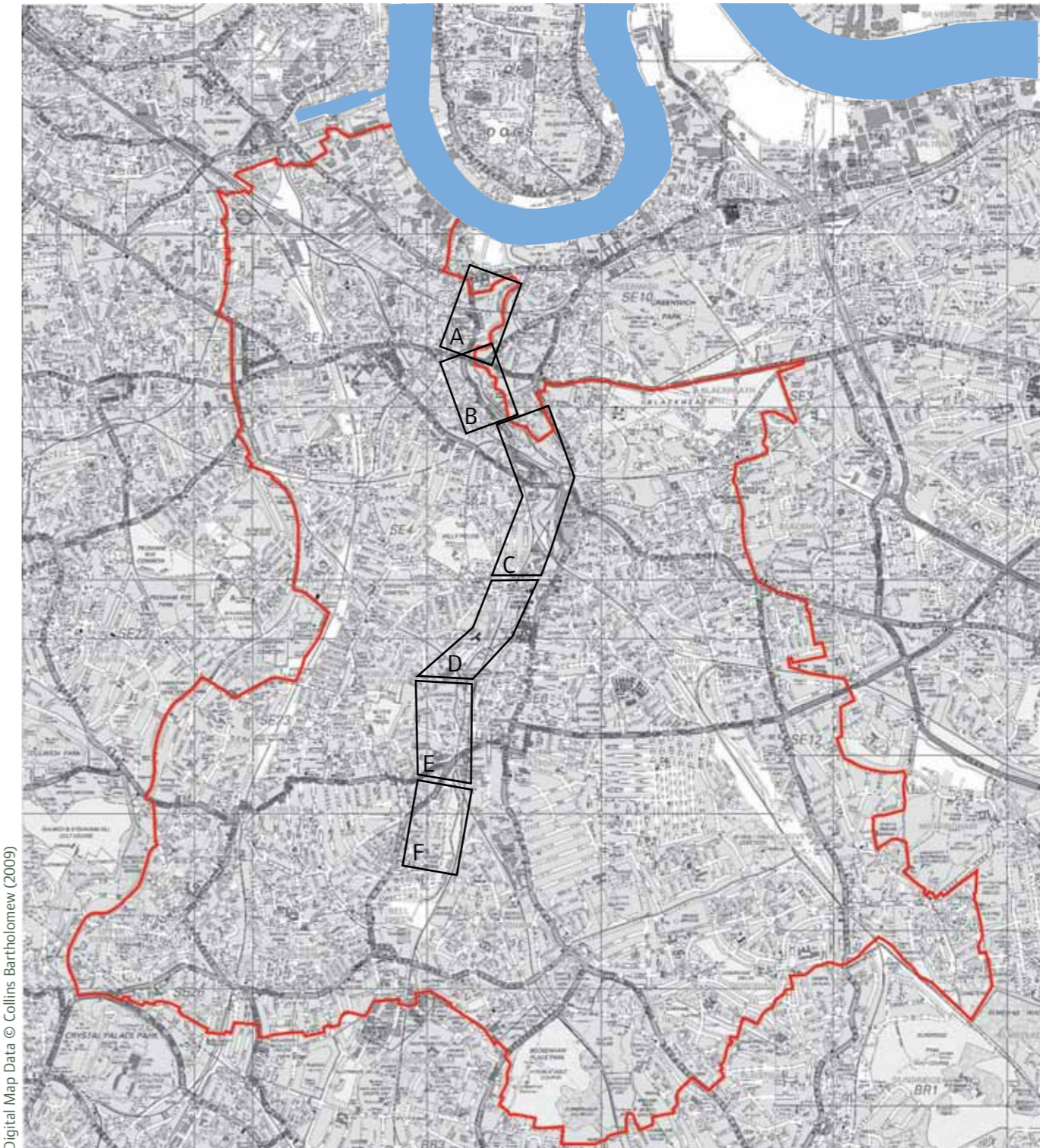
# 4 Character Areas along the Ravensbourne River

## 4.1 A river corridor with a unique image and identity

Considering the significant length and central location of the Ravensbourne through Lewisham, the river has the potential to play an even more important role in defining the character of the borough. Improvements to the river corridor offer a unique opportunity to enhance the distinct urban and suburban landscapes, strengthening the image and identity of communities along the river.

New waterside developments have the potential to enhance the use, enjoyment and setting of the River. This can be achieved by integrating land and water; opening up access to, from and along the river, exploring the added value and use of water space; and viewing the waterway, cycle paths and environs as part of the public realm to unlock the economic, environmental and social benefits of the River.

This chapter highlights the different urban and suburban characteristics of the environment along the Ravensbourne River so that these are considered and enhanced when opportunities arise. The stretch of the Ravensbourne River that this plan focuses on flows along six areas with distinct character and function within Lewisham. The characteristics of these areas, described one by one below, highlight not only the spatial quality of the river itself but also how the built and natural environment around it is defined, used and experienced. These key characteristics then inform the design principles to which any future development should be tested, to help deliver the three main objectives underlying the vision for the Ravensbourne River. These principles are highlighted in chapter 5.



Digital Map Data © Collins Bartholomew (2009)

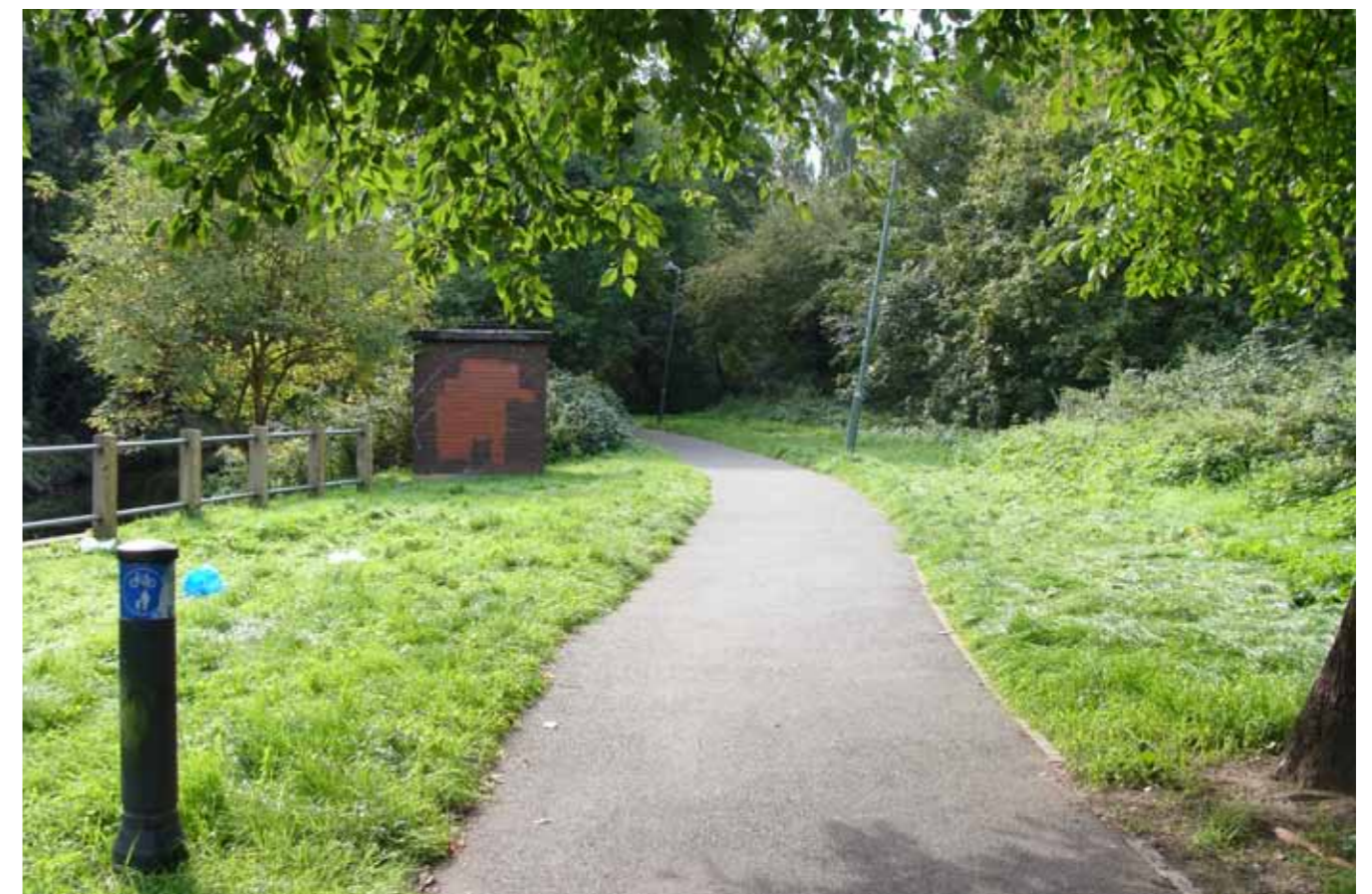
- Character Areas
- A Deptford Creek
  - B Brookmill Park and Broadway Fields
  - C Lewisham Town Centre
  - D Ladywell Fields
  - E Catford Railway Stations
  - F River Pool Linear Park



#### 4.2 Riverview Walk and River Pool Linear Park

About 300 metres south of Catford Hill, the Ravensbourne emerges from beneath the railway to the east, and the River Pool passes over a small weir and beneath a footbridge to meet it. The combined rivers continue flowing northwards (as the Ravensbourne River, although the greater flow comes from the Pool River) through a strip of woodland of willows and sycamore, with a dense growth of nettles below emerging into small but more formal and open parkland just before Catford Road. The river is largely canalised but has been broken out in places.

The suburban residential area west of the linear park is hidden behind mature vegetation and does not overlook the park, contributing to a more informal and natural looking river environment. Riverside habitats include woodland, wetlands and some of the best neutral grasslands in London. It is a good place for bird watching at any time of year, and one of very few sites in Lewisham where five species of warblers can be seen or heard on a summer stroll<sup>8</sup>. South of the confluence of both rivers, between the River Pool and the railway, an informal path and a wide tarmac cycleway run more or less parallel through an extensive area of rough grassland with scattered scrub of bramble and hawthorn. This cycle and pedestrian link is part of the Waterlink Way which connects a number of parks and green spaces in South East London, while following the Pool and Ravensbourne Rivers. These good connections stimulate short and long distance walking and cycling along the Park, offering important informal outdoor sports and recreational activities to the community.



<sup>8</sup> London Regional Landscape Framework / May 2009 (page 109)

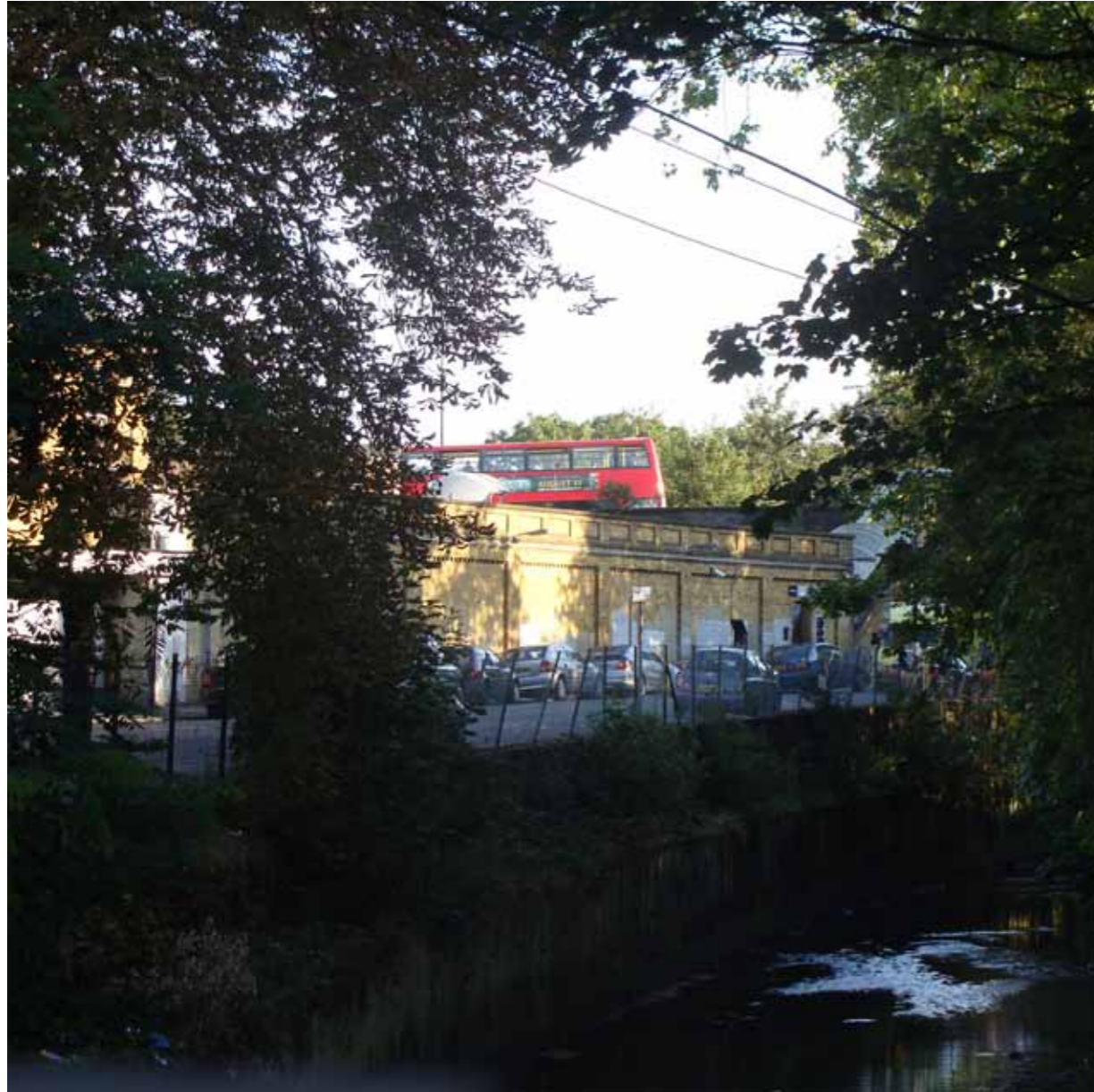


### 4.3 Catford Railway Stations

The river flowing between both Catford Stations and railway tracks suffers from concrete channelling, limited space alongside it and complete coverage south of the South Circular Road.

As the South Circular Road rises over Catford Bridge the traffic dominated environment is segregated and to some extent hidden from the river. Mature trees adjacent to the river on the north side of the South Circular Road provide an unexpected but welcomed green environment adjacent to the Catford Bridge Station.

The large commercial buildings, concrete surfaced car park and the general lack of vegetation south of the A205 on the other hand, completely undermine the site's prominent position and the presence of the river only contributing to the hard and hostile car dominated environment of the South Circular Road. The sense of orientation along the pedestrian and cycle network (part of the Waterlink Way) at this point is lost as the general layout and private nature of this development does not acknowledge the public route and access underneath Catford Bridge and the railway bridge further south. Although the legibility and access of the river is weak, the link it provides to Riverview Linear Park and underneath the South Circular Road is an important asset.



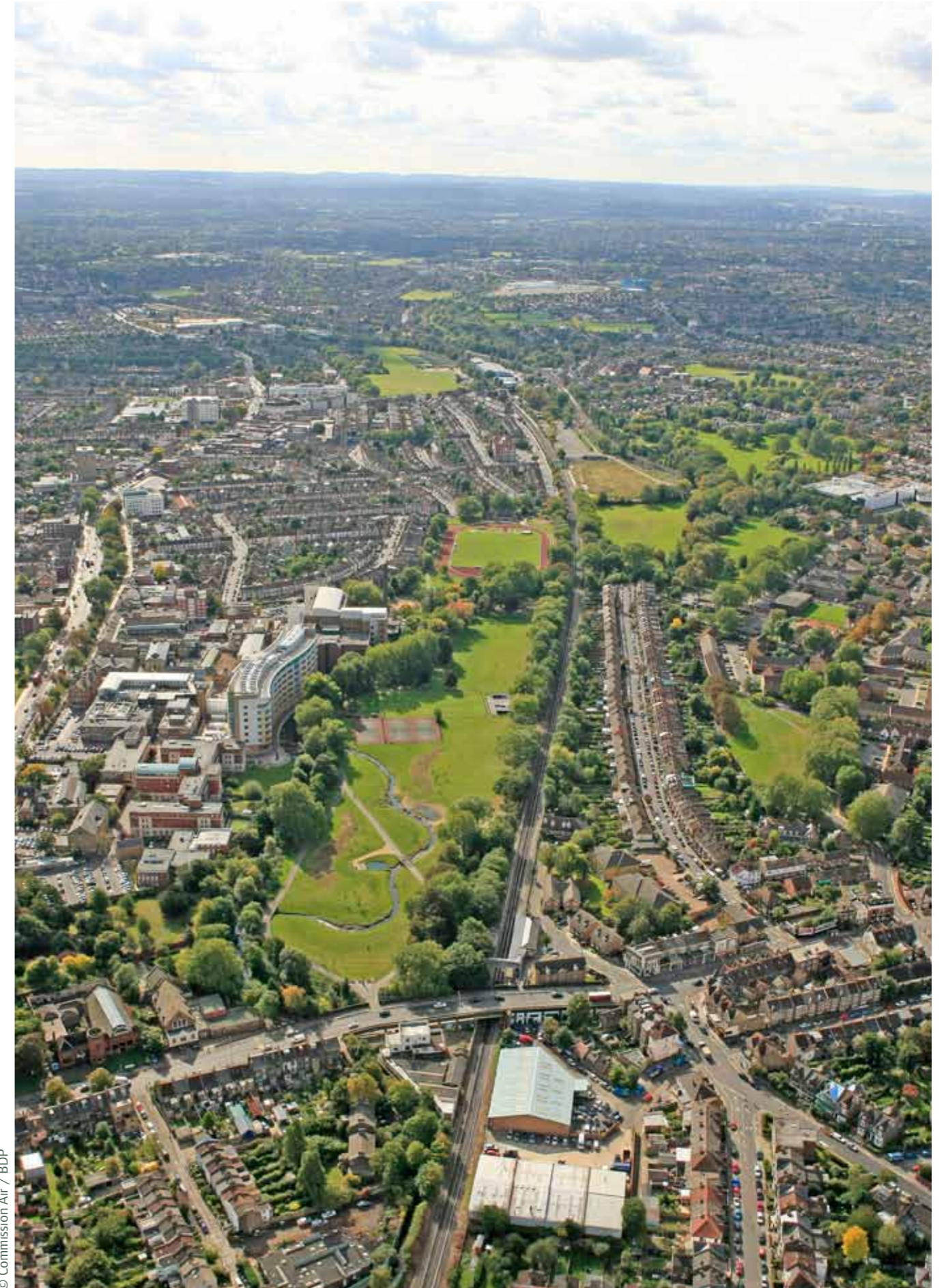


#### 4.4 Ladywell Fields

Ladywell Fields is the largest formal public park running beside the Ravensbourne River situated alongside the railway line between Ladywell and the Catford Bridge and Catford railway stations. The park is recognised as a Site of Importance to Nature Conservation and is characterised as a linear parkland with mature trees and a flat to gently rolling landform which rises towards Manwood Road and Blythe Hill Fields. The river itself is one of the most important features of Ladywell Fields and although mostly canalised, the Environment Agency has restored parts of the river with stands of scrub, interspersed with tall herbaceous vegetation, rough grassland and a few mature trees. Fish shelters, riffles and weirs were also provided to ensure suitable habitats for fish during low water flow. This has attracted a variety of fish and birds to the park amongst others mallards, moorhens, kingfishers, eels and sticklebacks.

A public foot/cycle path run the length of the park creating an attractive link from residential areas to key facilities such as University Hospital Lewisham, Prendergast Ladywell Fields School as well as Ladywell and Catford railway stations. Together with the many outdoor sport facilities available, the enhancement to the river and the presence of the railway, Ladywell Fields is a well used, lively and attractive green public space.

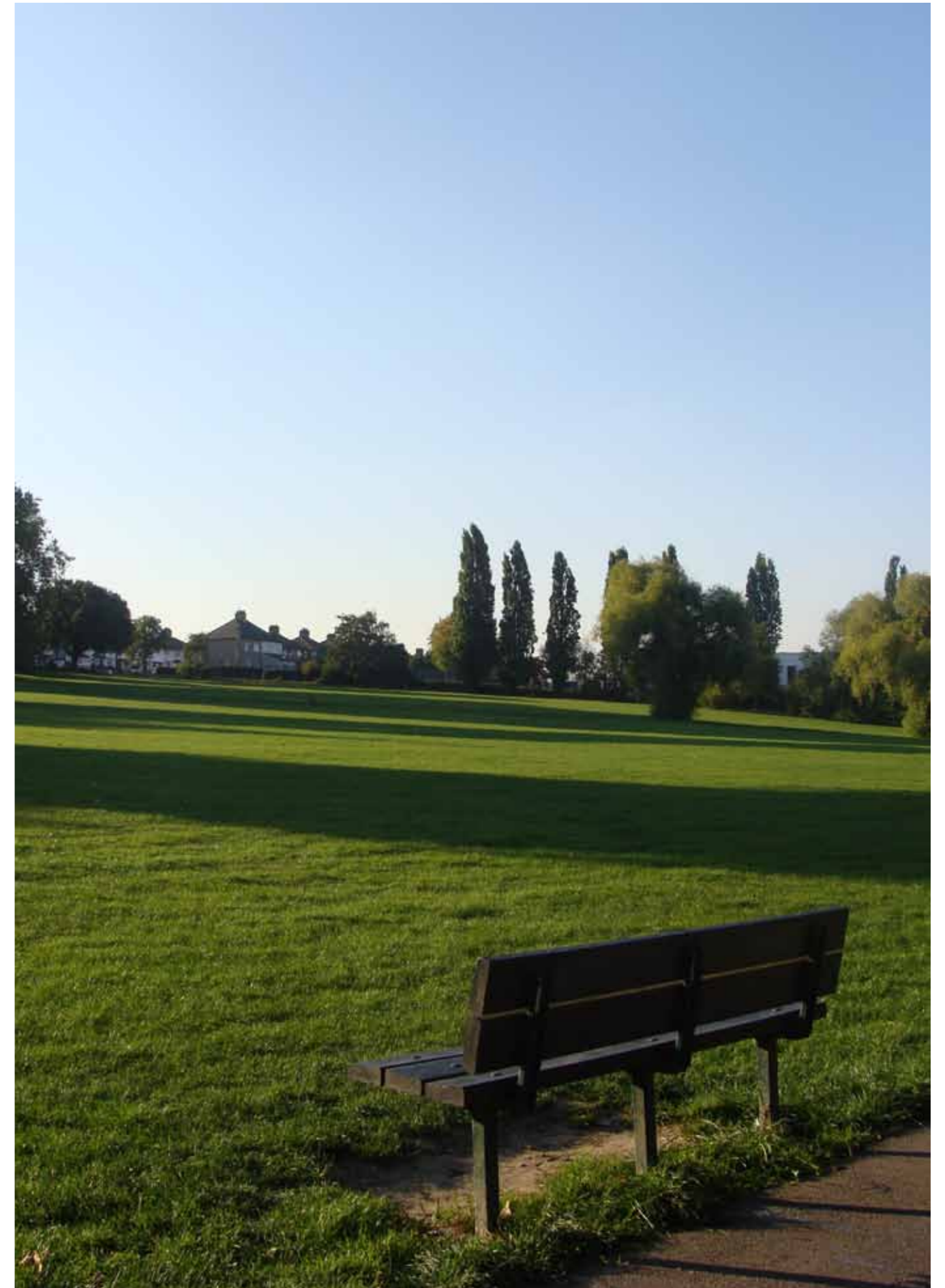
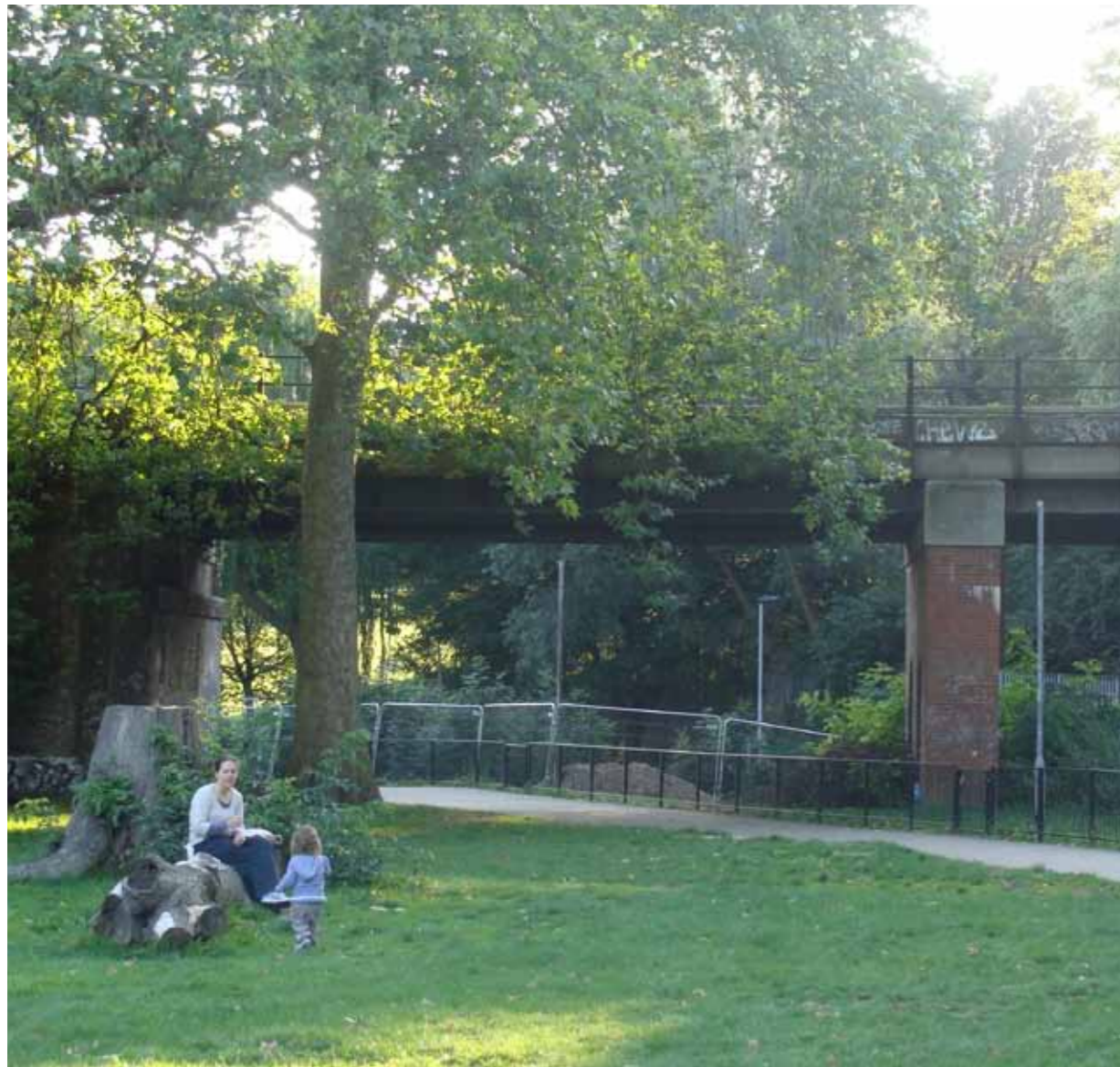
University Hospital Lewisham's new Riverside Ward Building is the most dominant building overlooking the park. Although it is the most prominent landmark on Ladywell Fields, it also works as a visual barrier between the park and Lewisham High Street. Access to the park through Lewisham Hospital is not legible and needs improvement. The park is generally not overlooked by residential development or vehicular access which adds an informal and more secluded feel to the park which can compromise the feeling of safety, especially during the evening.





The park can be divided into three areas: the northern, middle and southern fields. The northern fields is characterised by large open areas with dense bank side trees, mature trees along the railway, wetland and ornamental shrubs. This part of the park enjoys the benefits of enhancements to the river embankment which have brought the river in closer interaction with visitors. These enhancements were achieved via a EU Life Environment Fund called QUERCUS (Quality Urban Environment for River Corridor Users and Stakeholders). It is now the most visited part of the fields due to its close proximity to the station, residential areas, Lewisham High Street and University Hospital Lewisham.

The middle and southern fields feel less well overlooked and used than the upper park with some currently underused, fragmented and featureless open spaces. However, the middle field enjoys large expanses of flat grassland used for informal football games and large mature trees along the river and the public foot/cycle path. Ladywell Fields is now the less overlooked and most secluded parts of the field, however this could change in the future with the development of the former Catford Greyhound Stadium site. The southern field on the other hand enjoys large expanses of open gently rolling grassland and secluded facilities such as a bowling green and tennis courts located between the railway and the river. The London Borough of Lewisham has secured funding from the London Development Agency to make further investment in the middle and southern fields to improve the facilities and make further enhancements to the river that will benefit wildlife and the public interaction with nature. This work is now underway and is due for completion in Spring 2011. This will be added as a good practice example to this plan.







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#### 4.5 Lewisham Town Centre

Lewisham Town Centre is a busy transport interchange area in which its roundabout and railway viaducts act as significant barriers to east-west and north-south movement. River Quaggy and Ravensbourne meet in this location, both rivers are partly covered and the traffic dominated environment overwhelms the public realm experience. To ensure the prosperity and economy of the town centre in the future, it will undergo comprehensive change in the future as set out in the Lewisham Town Centre Area Action Plan with key regeneration priorities for the area<sup>9</sup>. This includes dealing with the substantial severance arising from major infrastructure as well as improving the ease, safety and attractiveness of links and public realm. The River plays a major role in delivering these objectives and ensuring flooding and general climate change measures are considered around the confluence of the Ravensbourne and Quaggy.

The river environment in Lewisham Town Centre is the largest area of the river corridor which suffers most from concrete channelling, limited space alongside it, channel coverage and generally poor environmental quality. The northern entrance to the town centre is characterised by a mix of 1980 development, Victorian terrace housing and new high density development. The river is limited by the concrete channel, the Docklands Light Railway (DLR) itself, residential development on Armoury Road, Lewisham train station platforms and the Tesco store at Conington Road. Adding to these physical limitations, most of the developments alongside the river do not address the river positively making the use and experience of the pedestrian and cycling routes a missed opportunity. The river environment is very hard in character with little vegetation and habitats. The area also suffers from large amounts of litter on the banks of the river and entrance area to Lewisham train station. As part of the ongoing town centre regeneration sites have been cleared and temporary landscaping introduced.



<sup>9</sup> The Lewisham Town Centre Area Action Plan (AAP) will set out policies and proposals for development in the town centre. It proposes major redevelopment opportunities and pedestrian, traffic and transport infrastructure improvements. The AAP will guide where and how development should take place over the next five-to-ten years and it will be used by the Council to determine planning decisions.



The only semi-naturalised and partially restored channel in Lewisham Town Centre lies to the south western end of the transport interchange at Cornmill Gardens. This new public space provides an attractive and high quality open space that creates strong linkages to the transport interchange and the retail centre from residential areas. The Gardens have successfully brought wildlife close to the town centre and have made the river a focal point. See image below of Cornmill Gardens.

Further south, the river meanders in a concrete channel and through weirs passing underneath several railway viaducts along the backs of residential properties, a nature conservation area, office blocks and employment areas all hidden away from main public access. The Waterlink Way is unable to follow the river at this stage due to railway viaducts and private landownership. This is the point at which the legibility of the river as well as the cycling and pedestrian access and safety along it, is most weak.

The last major flood from the Ravensbourne and its tributaries was in September 1968. Heavy rainfall within the catchment caused the river to burst its banks, creating widespread flooding of residential and commercial properties in the Borough. The photograph above shows flooding within Lewisham Town Centre during this incident. Less severe river flooding was also recorded in 1977, 1992 and 1993.





#### 4.6 Brookmill Park and Broadway Fields

The river at this stretch has a bit more space enjoying partly naturalised embankments flowing mostly besides the DLR and public green open spaces which provide a linear pedestrian and cycling access along the river. This part of the river provides a strong and welcomed contrast to the more hard and constraint urban landscapes of the Creek and Lewisham Town Centre. Deptford Bridge and Elverson Road DLR stations anchor this area and the attractive civic buildings and family terraced housing in combination with large higher density apartment blocks at each end provide this area with enough movement, density and interest whilst still feeling very local in its nature.

The river flows mostly along the eastern edge of Brookmill Park, a small but mature linear park which provides valuable green open space in a part of the Borough which is lacking in accessible green space. The large trees and small lake provide some useful wildlife habitat, but by far the most important feature in nature conservation terms is the rerouted river which, since the extension of the DLR to Lewisham, meanders through the park in a two-staged channel. The gentle sloping edges and gravelly bed with pools and riffles provide many niches for aquatic plants and animals. The natural embankment of the river at this western side has also created a stronger and more attractive and interactive relationship between park users and the river. Unfortunately, the river flowing along Broadway Fields does not enjoy the same treatment and its embankments have been kept as a vertical-sided concrete channel. Developer contributions (section 106) from the Seager Distillery development will contribute towards river restoration in this area.

Brookmill Park's western brick wall protects the park from the traffic on Brookmill Road adding to the sense of enclosure and tranquillity along this part of the river which not only offers attractive and comfortable seating spaces and children play facilities but also cycling and pedestrian links along the river. Broadway Fields, on the other hand, is a more open and urban open space with sports and play facilities for youngsters exposed to activity along Brookmill Road, providing access and views to and from Deptford Bridge DLR Station.

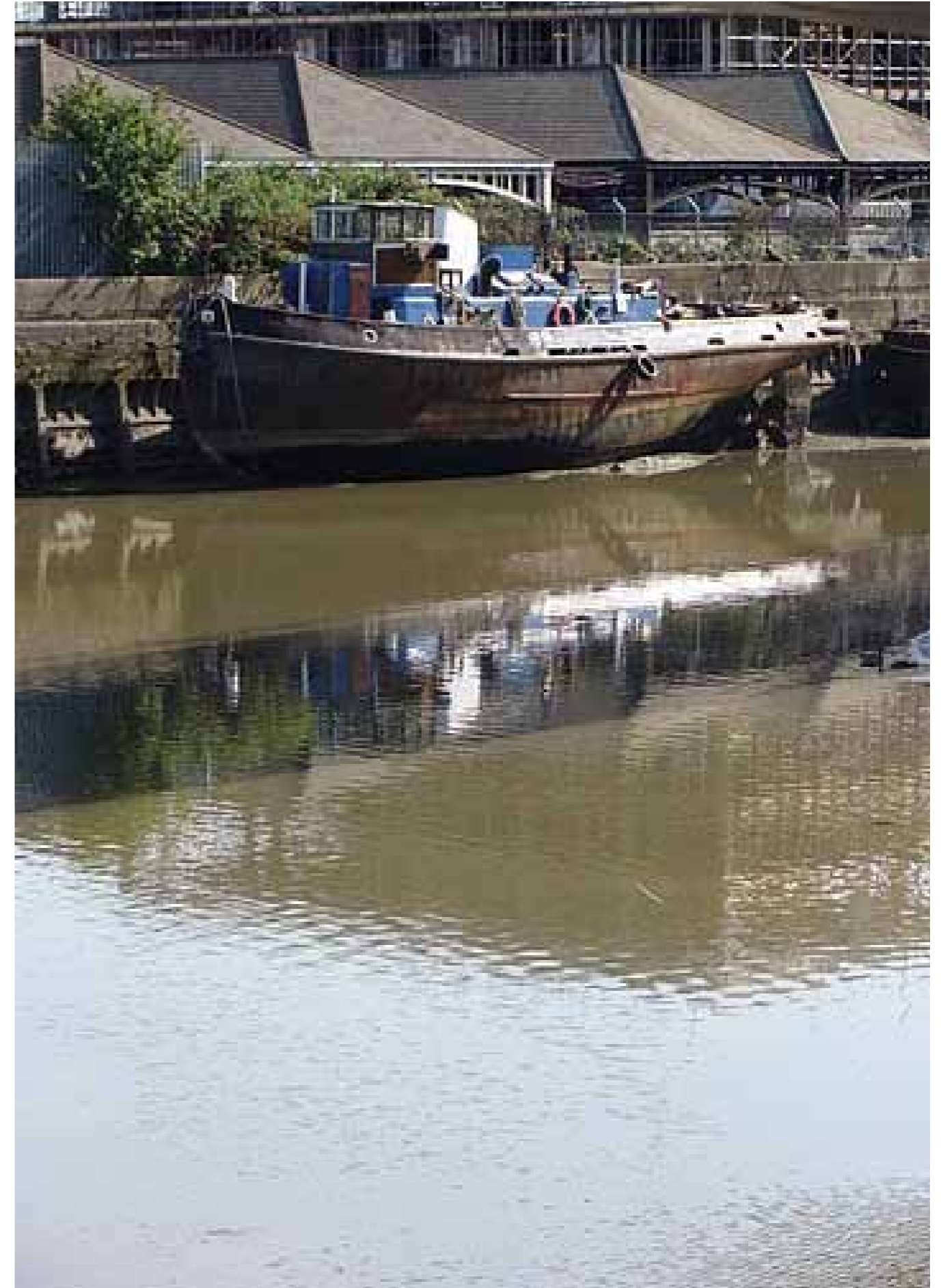




#### 4.7 Deptford Creek

In contrast to the rest of the Ravensbourne, Deptford Creek is a deep and broad tidal river bounded by walls of timber fendering and steel piling. The wide expanses of mud exposed at low tide in combination with the low levels of artificial lighting and restricted public access along the river, create an interesting urban landscape that supports a surprising variety of flora and fauna which is considered of nature conservation importance. The limited public access to Deptford Creek and the private/communal nature of backyards adjoining the river, contribute hugely to this unusual natural urban oasis.

The scale and massing as well as arrangement of buildings and spaces in the area in combination with the strongly meandering character of the river also makes the area distinctive. The large footprint of buildings and the brick walls at pavement edge on Creekside hide the river from the public whilst the private inner courtyards adjacent to the river embankment provide a sense of openness and light along the river. Church Street and Creekside as well as Norman Road and Greenwich High Road provide the main vehicular access for the area leaving most vehicular traffic away from the Creek, leaving only areas for vehicular servicing and parking along the Creek, contributing to the sense of tranquillity in the area.





The meandering of the river, as well as the lack of public access along the length of the river and the limited crossings of the river, reinforce the non linear and almost mysterious and unexpected experience of the Creek. The sudden and contrasting views to the Creek from Halfpenny Bridge and Creek Road reveal strongly the natural as well as the historical value of the area. The colourful house boats on the Creek, old wharfs, distinctive lifting and railway bridges and viaducts, the elevated and meandering DLR as well as Mumford Mill and Thames Water Pumping Station Building frame and add great interest to the river at this tidal stretch. The strong residential community living in the Crossfields Estate, as well as the art studios, and the community/education facilities at Lewisham College, Laban Centre and Creekside Centre add to the rich interest of the area.

The contrast and mix of water, mud, brick buildings and the translucent materiality of the Laban Centre reinforces an exquisite contrast of lighting that underpin the subtle yet dramatic nature of the Creek.

The last time flooding from the River Thames estuary was recorded within the Borough was in January 1928. A storm surge tide overtopped the flood defences, which at the time were not built as high as they are today.



## 5 Design Guidance

This chapter provides general and specific design guidance for each character area to deliver the three objectives underpinning the vision for the Ravensbourne River.

### 5.1 General design guidance

The following general guidance applies to all sites next to rivers.

An attractive, safe and secure river corridor for people and wildlife

- Ensure buffer areas along the river's edge are created, maintained and managed when new development along the river is proposed. This shall allow for a balance of undisturbed low maintenance areas, but shall provide for access, amenity and flood storage use where appropriate.
- Ensure invasive species such as but not limited to Japanese knotweed and Himalayan balsam are eradicated.
- Ensure that sympathetic and appropriate lighting is used to avoid a negative impact to bat commuting and foraging routes.
- Promote bird and bat nesting and roosting sites, as well as niches for invertebrates build into all new developments through incorporation of ledges, crevices and boxes wherever possible.

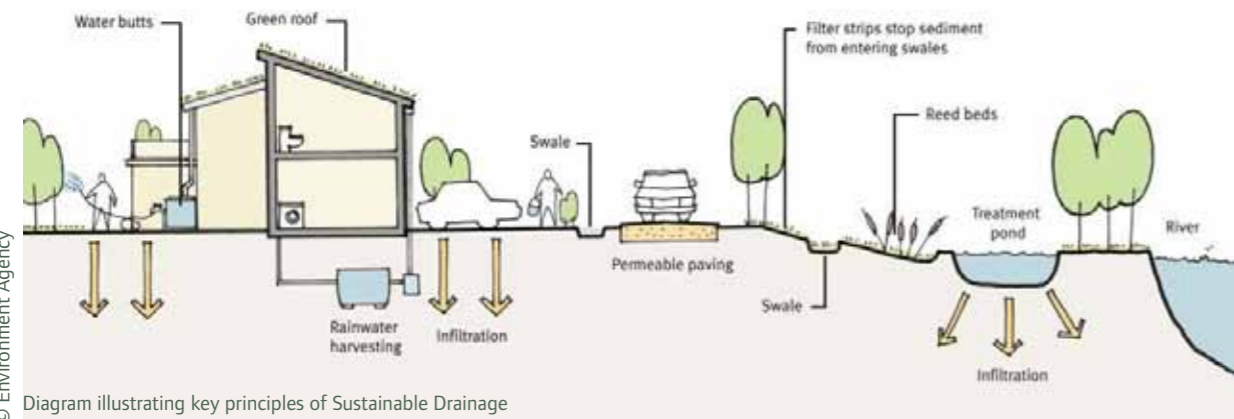


© Commission Air / BDP



## Reduce flood risk and deal with a changing climate

- Suitable provision should be provided on-site to allow for the inspection and maintenance of the Ravensbourne River and associated flood risk management structures.
- Where there is available land on or near to the site, it may be possible to compensate a loss of floodplain storage from an increased built footprint
- Provide living roofs and walls on buildings, both to compensate for any loss of brown field habitat or to create new ones and help manage surface water<sup>10</sup>.
- A Flood Risk Assessment should be produced as early as possible in the design of the development. Successful, cost effective flood risk design requires the assessment and necessary mitigation measures to inform, and be carefully integrated into, the overall site layout and design.
- Site design and layout should be informed by the latest Environment Agency flood maps and Lewisham's Strategic Flood Risk Assessment.
- Ensure new development considers climate change in design and layout. · Provide reduction of surface water run-off (in high, medium and low flood risk areas) by introducing rainwater holding facilities in hard surfaces and roofs.
- Encourage sustainable consumption of drinking water within buildings as well as for external watering/irrigation.
- Where evidence is provided that the assessed development is located in an area of low, medium or high annual probability of flooding (subject to plans being approved by the EA) and where the ground level of buildings, car parks and access routes are above flood level, an appropriate assessment of how new buildings will react to flooding (including the use of resilient construction where necessary) to mitigate residual risk must be provided to relevant statutory bodies (London Borough of Lewisham and Environment Agency).



© Environment Agency  
Diagram illustrating key principles of Sustainable Drainage

## 5.2 Specific design guidance

The following pages describe specific guidance for the areas where most development is expected to take place. Specific guidance highlights key issues which need to be considered to bring back the river as a distinctive and attractive focal point that promotes healthy living and addresses climate change.

### 5.2.1 Pool River Linear Park

A river corridor with a unique image and identity

- Enhance the functionality and visual appearance of the entrance to the park and the view to the river from Catford Hill, taking into account its informal/rural character.
- Protect and enhance river edge and vegetation.
- Enhance pedestrian paths and meeting/resting areas making sure they feel safe.

An attractive, safe and secure river corridor for people and wildlife

- Improve the legibility to the river and the park from Catford Hill and Riverview Park. Trees and planting should help provide a clear boundary treatment to the park adding more definition and enclosure to the park.
- Naturalise the embankments of the river further to improve development of habitats.

Reduce flood risk and deal with a changing climate

- Ensure green infrastructure is multi-functional to provide flood relief, cooling of the urban heat island, health benefits as well as quality places.



<sup>10</sup> More information on Environment Agency website [www.environment-agency.gov.uk/greenroofs](http://www.environment-agency.gov.uk/greenroofs)



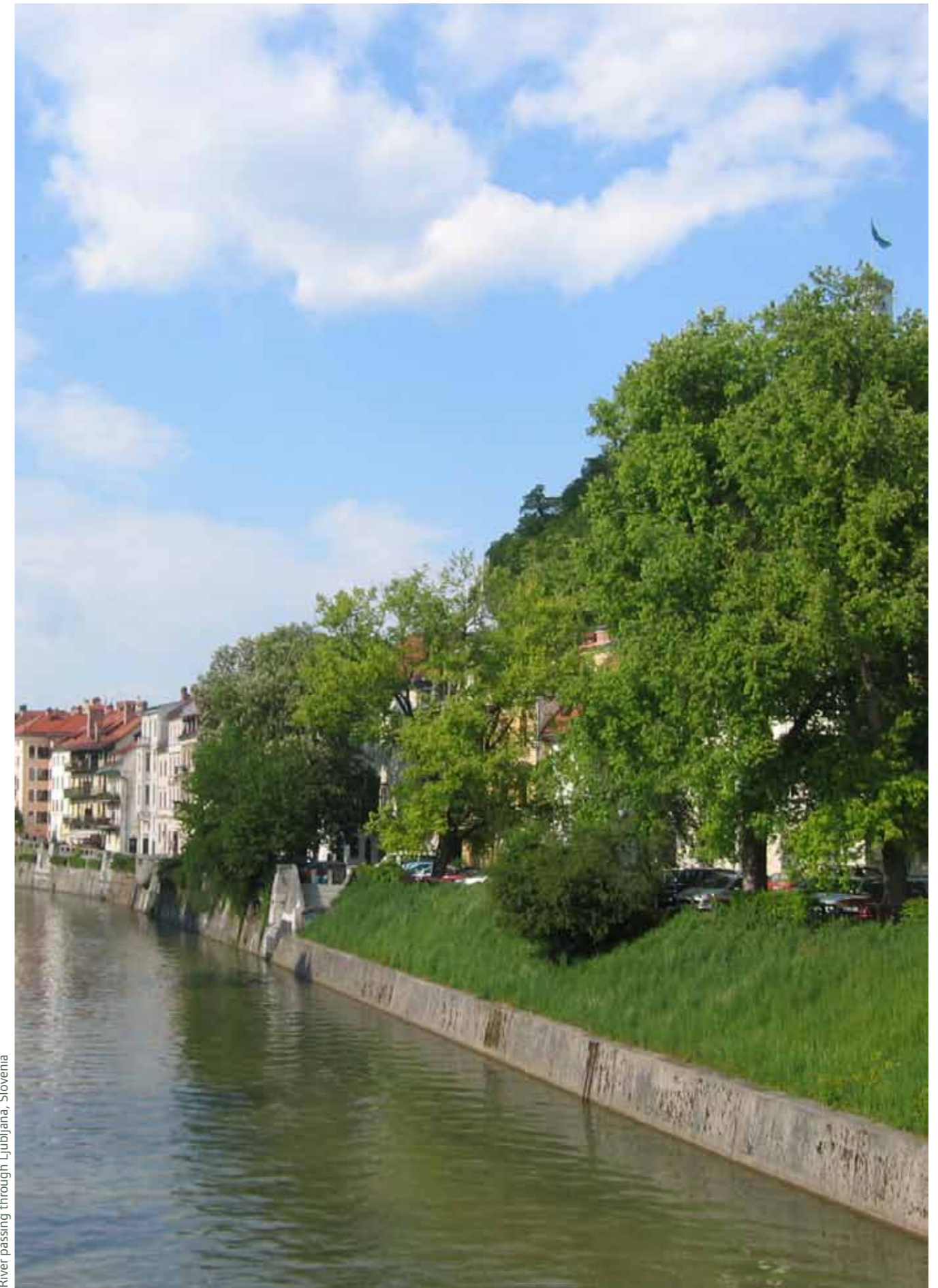
### 5.2.2 Catford Railway Stations

A river corridor with a unique image and identity

- Preserve and enhance the railway arches on the western edge of the site and stimulate the use of them to help provide activity and overlooking where possible.
- Promote a more intense use of the Halfords site stimulating a mixed use development that overlooks and announces Catford's railway stations whilst at the same time revealing and restoring the river environment.
- Create an attractive and safe station environment using the river as its main asset. Enhance the public realm and the presence of the river by improving embankments where possible and providing resting and overlooking facilities along its way

An attractive, safe and secure river corridor for people and wildlife

- Improve access and legibility of the Waterlink Way under the South Circular Road and through industrial area south of the South Circular Road.
- Encourage opening up the river south of the South Circular Road to add value to future development as well as to the experience of the river as a corridor.
- Reduce the severing effect of the network of railway viaducts leading to Catford Station improving the environment especially during the evening turning them from intimidating spaces into safe passageways with appropriate lighting which does not affect bat commuting routes. This could include for example a lighting treatment with no light spill, cowled or angled or with low sodium pressures.
- Promote uses and activities along pedestrian and cycling routes to help provide safe public spaces along the river corridor and at Catford's main public transport node.
- Provide and actively stimulate cycling through the provision of safe and well overlooked cycling parking areas next to both railway stations.
- Protect and enhance the Green Corridor and Site of Importance to Nature Conservation along the railway. Protect as far as possible other existing trees on the site when redevelopment is proposed.



Different ways to improve embankments are possible



Reduce flood risk and deal with a changing climate

- Protect and enhance the Green Corridor and Site of Importance to Nature Conservation along the railway to also help with cooling of the Catford Railway Stations and South Circular Road in warm weather providing health benefits as well as flood relief.

### 5.2.3 Ladywell Fields

A river corridor with a unique image and identity

- Enhance and protect the role of the upper fields of Ladywell Park as the heart of the park providing the most formal meeting point and main access to University Hospital Lewisham and Ladywell Railway Station and cafe.
- Enhance the more informal landscape character and functionality of the middle field of Ladywell Fields making the most of its more secluded and tranquil atmosphere as well as its open nature.
- Enhance the more local and residential character of the lower field of Ladywell Park whilst also formalising the entrance and boundary treatment to the park at this end.

An attractive, safe and secure river corridor for people and wildlife

- Naturalise the embankments of the river to improve further development of habitats.
- Ensure buffer areas along the river's edge are created, maintained and managed when new development along the river is proposed. This shall allow for a balance of undisturbed low maintenance areas, but shall provide for access and amenity use where appropriate.
- Improve the legibility to the river and the park from surrounding neighbourhoods, especially from Chudleigh Road as well as Lewisham High Street and University Hospital Lewisham. Trees and planting along key routes to the park could help provide visual clues as well as clear signage.
- Improve safety and security for park users especially during the evening using lighting as well as promoting use of the park by different users.

Reduce flood risk and deal with a changing climate

- Ensure green infrastructure is multi-functional to provide flood relief, cooling of the urban heat island, health benefits as well as quality places.
- Development surrounding Ladywell Fields should provide reduction of surface water run-off (in high, medium and low flood risk areas) by introducing rainwater holding facilities in hard surfaces and roofs.

### 5.2.4 Lewisham Town Centre

A river corridor with a unique image and identity

- Use the river as key catalyst for the urban regeneration of Lewisham Town Centre allowing the river to act as an 'organiser of an address' and a key generator of a sense of place.
- Encourage a high quality boundary treatment of the river, along its boundaries, creating an attractive and robust embankment which expresses the intrinsically urban nature of this part of the river corridor whilst allowing the river to bring nature back to Lewisham Town Centre.
- Encourage built-in parking solutions in new developments adjacent to the river to increase land use efficiency making sure primary conditions for successful public space are created to contribute to more legible and strong urban landscape structure.
- Create more attractive and accessible river environments at the edge of the town centre providing a variety of public spaces that for example relate to the open nature of the river in front of Tesco and the more secluded and tranquil nature of the river environment behind Molesworth Street.
- Encourage a more positive relationship between private properties (adjacent to the river) and the river especially along Wearside, Odell Walk, Waterway Avenue and Armoury Road. The potential of the river to increase the amenity and monetary value of these properties can be further exploited.
- The regeneration offers a unique opportunity to create a riverside quarter in Lewisham Town Centre focused around the confluence of the Ravensbourne and Quaggy.

An attractive, safe and secure river corridor for people and wildlife

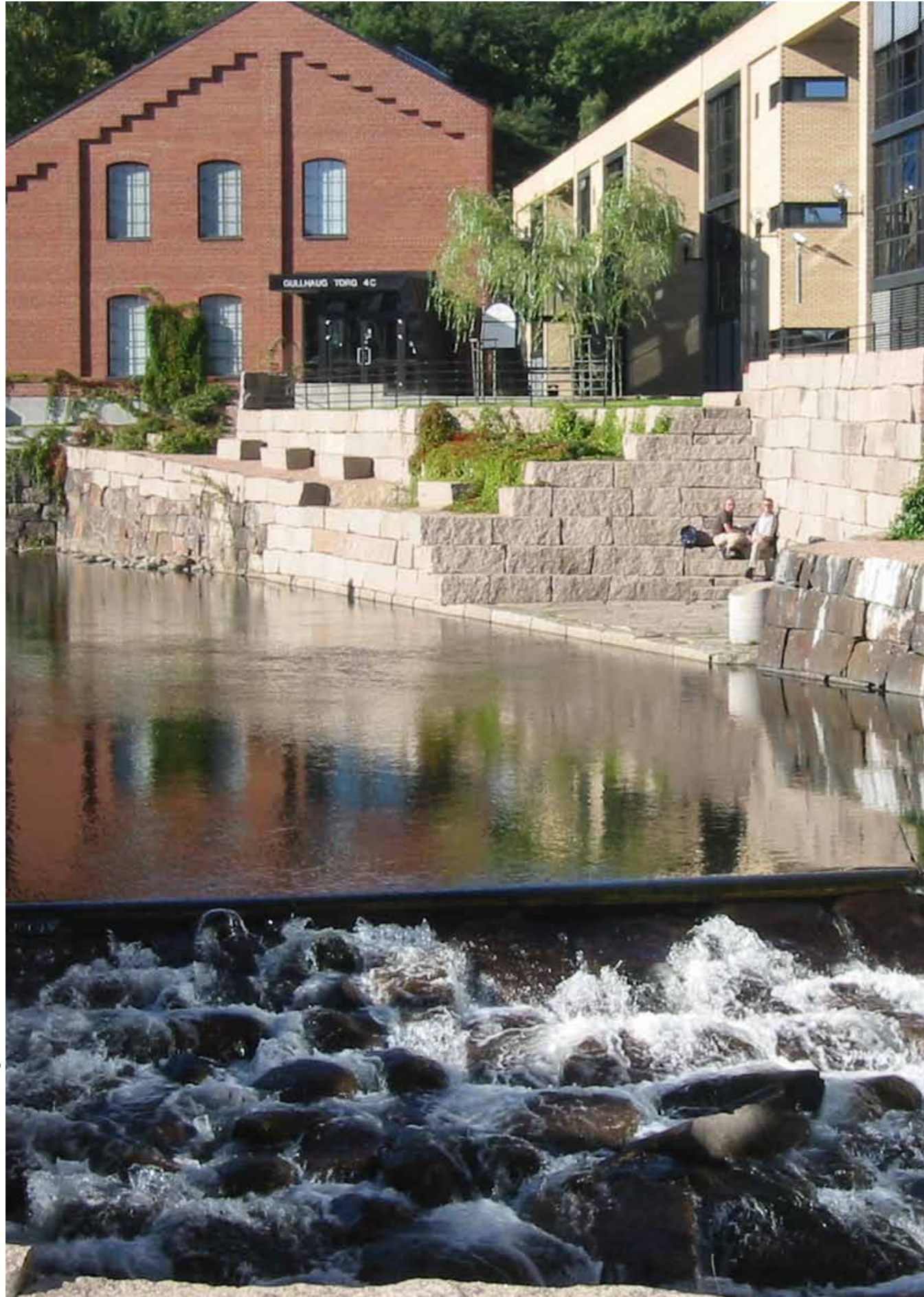
- Create strong and welcoming pedestrian and cycling entrances to Lewisham Town Centre and Lewisham Public Transport Interchange improving routes and embankments along the river and creating attractive and comfortable public spaces around it.
- Reduce the severing effect of the network of railway viaducts which slice through Lewisham Town Centre and the Ravensbourne transforming the environment from intimidating spaces into bright, safe passageways which in turn unleash the inward investment potential of the area.
- Potential to use vacant railway viaduct spaces and new landscaped areas for community events
- Create a diversity of attractive and safe public spaces along the river corridor placing key entrances and frontages especially along main routes into the town centre and public transport interchange.

© Chris Dorely-Brown photo. Yuko Shirai's Canal Wall. Commissioned & funded by Shoreditch Trust with PEER Gallery / Bloomberg



Animating inactive frontages onto pedestrian/cycle paths along waterways has a positive impact on the experience of Regents Canal.





Development maximising its footprint, use as well as the value of acknowledging the river.

- Improve the legibility of the Waterlink Way creating more direct, safe and clear access routes along the river.
- Increase interpretation boards in the town centre on the river, its history and future
- Promote the high quality riverside space in Cornmill Gardens for visitors, shoppers and residents
- Provide interpretation boards in Cornmill Gardens showing how the restored channel looks in high rainfall events
- Restore or enhance the river where possible (embankments and or base) to encourage the river to develop and sustain biodiversity sustainable river management.
- Protect and enhance the Green Corridor and Sites of Importance to Nature Conservation along the railway/river and encourage a stronger relationship between the river environment and these sites.
- Encourage public spaces and pedestrian and cycling routes to overlook the Green Corridor and Sites of Importance to Nature Conservation (especially around Lewisham Stations and Molesworth Street).
- Ensure clean river water providing above ground conveyance of stormwater.

#### Reduce flood risk and deal with a changing climate

- Ensure redevelopment of Lewisham town centre creates a new “riverside quarter” and maximise opportunities for improvements at the confluence of the Ravensbourne and Quaggy
- Create space for water as far as is possible to minimise flood risks in Lewisham Town Centre by integrating river restoration as part of the future redevelopment of the public realm in Lewisham Gateway.
- Protect foul sewers from surcharge allowing the river Quaggy and Ravensbourne to replace the stormwater sewer wherever possible. Below ground storage systems should only be adopted where silt access is prevented and simple management and inspection can be assured. Wherever possible run-off should leak into below ground storage through permeable surfaces.
- Encourage trees and planting in Lewisham Gateway and Lewisham transport interchange to help with flood storage, moderate warm temperatures and provide shade and shelter to users and passers-by.



### 5.2.5 Brookmill Park and Broadway Fields

A river corridor with a unique image and identity

- Create more interaction between Broadway Fields and the river improving the presence of the river using the most appropriate methods to naturalize the river embankment.
- Provide more formal and informal seating areas along the river to strengthen the perception of Brookmill Park and Broadway Fields not just as local parks but also as destinations along the river.
- Stimulate a more positive relationships between Stephen Lawrence Centre and Brookmill Park improving the articulation of entrances, windows and boundary treatments which acknowledge the idea of 'community building within the park'.

An attractive, safe and secure river corridor for people and wildlife

- Restore river embankments along Broadway Fields encouraging flora and fauna to flourish within and along the edge of the river.
- Improve boundary treatment of Broadway Fields at both sides of the river. Create a more open and attractive boundary treatment along Deals Gateway and Deptford Bridge DLR station and stronger boundary treatment along Brookmill Road.
- Improve legibility and quality of entrances to Brookmill Park from neighbouring residential areas as well as from Deptford Bridge and Elverson Road DLR Stations keeping the understated and local nature of the park.

Reduce flood risk and deal with a changing climate

- Safeguard land that is required for current and future flood risk management.
- Make more space for water and consider the opportunity to re-create a functional floodplain along Broadway Fields.
- Use more trees and planting at Broadway Fields to help with flood storage, moderate warm temperatures and provide shade and shelter to users and passers-by.
- Introduce seating areas in areas with shade and fountains with drinking water, especially for users of Broadway Fields.





### 5.2.6 Deptford Creek

A river corridor with a unique image and identity

- Cherish the hidden nature of Deptford Creek by protecting and enhancing its short, sudden and dramatic views, maintaining its detachment from main vehicular access routes and its restricted pedestrian cyclist access and non linear experience.
- Safeguard the natural habitat of specific flora and fauna maintaining the limited artificial lighting along the river as well as safeguarding sun and natural lighting keeping the open feel created by courtyards, set-backs as well as scale and massing of buildings along Deptford Creek.
- Maintain and enhance the character of Deptford Creek's embankment by using timber cladding to sheet piling and providing biodiversity terraces to enhance its natural habitat.
- Maintain the consistently robust and earthy materiality of buildings along Deptford Creek and protect the strong contrast this provides with landmark community buildings such as the Laban Centre.
- Protect and enhance buildings and sculptural objects depicting the rich past and present history of Deptford Creek.



An attractive, safe and secure river corridor for people and wildlife

- Enhance pedestrian and cycling experience and legibility to Deptford Creek from south of the river as well as from New Cross to Greenwich taking into account limitations and characteristics of the public realm and avoiding clutter of street furniture and carriageway/pavement surface markings.
- Improve pedestrian and cyclist access and safety to the Creek, providing new crossing and lighting where appropriate and stimulating more activities and overlooking along key route such as Halfpenny Bridge.
- Protect the wildlife, especially bat population, controlling light pollution into the Creek.
- When tidal wall renewal is required/proposed, terraced Creekside planting should be introduced.
- Support and stimulate community ownership and environmental education at the Creekside Centre.
- Retain and maintain existing slipways and moorings
- Consider the potential for new moorings (subject to ecological and flood risk considerations)
- Protect and enhance existing special destinations like the Laban Centre, Lewisham College and Creekside Centre and create new ones where the opportunity arises.

Reduce flood risk and deal with a changing climate

- As part of new developments along the Creek, refurbishment or replacement of the embankment frontages should be encouraged to improve the condition to increasing the level of protection they provide.







## 6 Management Guidance

### 6.1 General principles

Just as the design of new development is important for the Ravensbourne to reach its full potential, the long term management of biodiversity and flood risk in any new development along the river edge should be ensured as part of landscape management plans. The following general principles should be followed:

- Retain and improve the management of existing waterside habitats and features of wildlife value, as well as other nature conservation sites within the river corridor.
- Selective tree and shrub clearance is required to allow more light into the river where appropriate.
- Should loss of habitat be unavoidable, mitigation will be required on site, or in exceptional circumstances off-site.
- Where possible, allow for natural colonisation rather than planting. Native species are the priority.
- Ensure buffer areas along the river's edge are maintained and managed when new development along the river is proposed. This shall allow for a balance of undisturbed low maintenance areas, but shall provide for access and amenity use where appropriate.
- Ensure invasive species such as but not limited to Japanese knotweed and Himalayan balsam are eradicated. They can damage flood defence structures, lead to a decline in native species due to habitat destruction and competition for food and light.
- Capable of exposing weaknesses in flood defence structures, buildings, foundations, concrete and tarmac; legislation puts a duty of care on landowners to be proactive in the control and eradication of Japanese Knotweed.
- Ensure that sympathetic and appropriate lighting is used to avoid a negative impact to bat commuting and foraging routes.
- Incidents that cause damage or danger to the natural environment of the Ravensbourne River Valley should be reported to the Environment Agency Incident Hotline (0800 80 70 60). Example of causes of damage or danger are pollution to water or land by illegal dumping of hazardous waste or large amounts of industrial waste, incidents at waste sites such as landfill, transfer station, poaching or illegal fishing, fish in distress or dead fish, watercourse blocked by vehicle or fallen tree causing risk of flooding, Illegal abstraction from watercourses, unusual drop in river flow and collapsed or badly damaged river banks.
- The use of the Incident Hotline should be promoted providing information in home owners packs, through local media reports and new signage when considered appropriate.
- Flood defence options along the Ravensbourne corridor will involve a number of options from raising defence walls, raised earth embankment to in channel enhancements to full scale river restoration and making space for water.





## 7 Good Practice

This chapter provides information on sites next to the Ravensbourne which have delivered river restoration successfully. These sites are examples of good practice and show what can be achieved through positive planning and partnership working hoping to raise awareness of the added value that schemes like these generate not only for the benefit of the environment and local community but also businesses.





## 7.1 Ladywell Fields

Techniques:	Re-meandering, backwater and pond construction
Project end date:	September 2008
Length:	200m
Cost:	£400,000
Upstream grid reference:	TQ372737
Designer:	Building Design Partnership (BDP)
Contractor:	Fergal Contracting
Partners:	London Borough of Lewisham and Environment Agency

### Site background

The Ravensbourne River at Ladywell Fields formerly ran only along the edge of the park, had been artificially widened, its banks toe-boarded, whilst also hidden behind railings and dense vegetation. As a result it had become largely unnoticed by most park users and was considered to have little ecological value. The park itself lacked features and facilities and was under-used, and only 44% users felt safe there. Works were proposed as part of QUERCUS (Quality Urban Environments for River Corridor Users and Stakeholders), a partnership between the London Borough of Lewisham, Chester City Council and 's-Hertogenbosch part-funded through the EU's LIFE Environment Programme which aimed to enhance river corridors and establish them as attractive features of urban environments.

### Objectives

The main objective of the project was to re-meander the river through the centre of the park, increasing the profile of the river within the park, improve the quality of habitats for wildlife whilst encouraging a well used public open space which would be seen as an important local resource in order to create a busy and potentially self policing place;

### Design

A new meandering v-shaped channel was excavated through the centre of the park intending to divert around half of the river's flow. A backwater and a pond were also excavated adjoining the new meandering channel. Excavated earth material was re-used to create terraces and other landscape improvements which in some cases were delivered with help of members of the public.

A new entrance from Ladywell Road, a footbridge and new footpaths were constructed to improve accessibility for members of the public. Railings adjacent to the original channel and footpath were also removed.

### Subsequent performance<sup>15</sup>

Ladywell Fields has been transformed from its previously characterless and formless landscape into a diverse, popular and accessible public open space, with surveys indicating that the public's perception of the park in terms of recreational value and safety has improved.

Now 78% visitors feel safe, and use of the park has increased over two and a half times. The creation of a new gravel-bedded river channel through the centre of the park has also brought about significant improvements in biodiversity, with survey results indicating a near 100% increase in the number of species present in the park (in particular fishing birds), which are benefiting from the greater range of habitat types now present following the restoration works.





Before restoration



Immediately after restoration



Several years after restoration

## 7.2 Cornmill Gardens

Techniques:	Removing concrete channel, bank re-profiling
Project location:	Lewisham, South East London
Project end date:	2007
Length:	Approx 100m
Cost:	Approx £350,000
Upstream grid reference:	TQ381757
Designer:	Building Design Partnership (BDP),
Contractor:	Skanska
Partners:	London Borough of Lewisham and Environment Agency

### Site background

Before the regeneration of this site, this section of the Ravensbourne flowed through an area known as the Sundermead Estate. The river had been constrained within a narrow concrete channel as part of an historic flood defence scheme. This, together with high steel railings and overgrown vegetation had resulted in a neglected river possessing little ecological or local community interest. The river restoration scheme formed part of the 'Urban Renaissance in Lewisham' programme which aimed to create a new public open space within the Town Centre.

### Objective

To remove the river from its concrete banks and create an attractive public open space.

### Design

Following the preparation of design proposals and a full public consultation, a masterplan was developed for the whole site. The concrete walls of the river were removed and replaced with more natural re-graded banks interspersed with steps and wooden platforms to improve river bank access. A puddle –clay liner was constructed to help restore flows. Gravels were introduced into the bed of the river. These were sized to ensure that they could move in the channel with respect to the flow conditions, thus creating natural habitat features for wildlife. Marginal areas were planted with native species such as Rush (*Juncus effusus*) and Yellow flag Iris (*Iris pseudacorus*) whilst a wildflower mix was sown along the banks. An overflow storage area which retains water during high flows was designed into the scheme by lowering an open space alongside the river.

### Subsequent Performance<sup>16</sup>

Flood management within the channel should have been improved through a combination of making space for water by re-profiling the bank and creating additional storage on the floodplain. The area demonstrates how river restoration can be an integral part of a regeneration programme the helps to create a more attractive, diverse and accessible public open space with a natural river able to support a range of wildlife; mallards and moorhens have already been cited.

### Awards

2008 Civic Trust Award  
 2008 Waterways Renaissance Awards (Commendation - Area based Regeneration Category)  
 2007 Landscape and Amenity Award (Best Streetscape Project)

<sup>16</sup> Review of the scheme by the River Restoration Centre - 2009. Taken from London Rivers Restoration Action Plan <http://www.therrc.co.uk/lrap.php>





# Appendix 1

## Relevant planning policy

### 1 European Policy

**European Water Framework Directive  
Thames River Basin Management District, River Basin Management Plan, Environment Agency (2009)**

<http://wfdconsultation.environment-agency.gov.uk/wfdcms/en/thames/Intro.aspx>

This plan is about the pressures facing the water environment in this river basin district and the actions that will address them. It has been prepared under the Water Framework Directive, and is the first of a series of six-year planning cycles.

On page 53: The Ravensbourne falls within the “London catchment” described as “highly urbanised ... The majority of rivers are designated heavily modified and there is a distinct lack of natural river processes throughout the catchment. The modification of rivers including in-stream structures has led to loss of habitat diversity and the creation of barriers for fish migration. Water quality remains a significant issue in this catchment. The highly urbanised nature exacerbates the pollution pressures particularly through increased surface water run-off, storm sewage overflows and misconnections, alongside effluent from sewage treatment works. These issues, the presence of invasive species and physical modification pressures, give rise to poor water quality and habitat diversity for a number of rivers, as well as varied biological quality throughout the catchment.”

### 2 National Policy

**National Planning Policies - Department of Communities and Local Government  
Planning Policy Statement (PPS) 1 Delivering Sustainable Development (2005) and PPS1  
Planning & Climate Change - Supplement to PPS1 (2007).**

This supplement sets out the Government's objectives for the planning system, and the key principle and objectives that should underpin the integration of sustainable development into local planning policy. Planning for sustainable development includes the following key areas:

- Social cohesion and inclusion
- Protection and enhancement of the environment
- Prudent use of natural resources
- Sustainable economic development

“The condition of our surroundings has a direct impact on the quality of life and the conservation and improvement of the natural and built environment brings social and economic benefit for local communities.” PPS1

Planning should seek to maintain and improve the local environment and help to mitigate the effects of declining environmental quality through positive policies on issues such as design, conservation and the provision of public space” PPS1



### **PPS9 - Biodiversity and Geological Conservation (2005) and Planning for Biodiversity and Geological Conservation: A Guide to Good Practice (2006)**

“promote sustainable development by ensuring that biological and geological diversity are conserved and enhanced as an integral part of social, environmental and economic development, so that policies and decisions about the development and use of land integrate biodiversity and geological diversity with other considerations” PPS9

“Local authorities should consider how local sites can be protected and enhanced. The Core Strategy will indicate how the authority and its partners intend to promote biodiversity and geological conservation. Good practice would be to include a strategy for local sites which would include positive proposals for protection and enhancement and how they will work to this end with landowners and developers of these sites.” PPS9

“Embracing nature conservation in the development process is an important element in the promotion of an urban renaissance in our towns and cities” PPS9

### **PPS12 - Local Spatial Planning (2008)**

“Spatial planning is a process of place shaping and delivery. It aims to:

- produce a vision for the future of places that responds to the local challenges and opportunities, and is based on evidence, a sense of local distinctiveness and community derived objectives, within the overall framework of national policy and regional strategies;
- translate this vision into a set of priorities, programmes, policies, and land allocations together with the public sector resources to deliver them;
- create a framework for private investment and regeneration that promotes economic, environmental and social well being for the area;
- coordinate and deliver the public sector components of this vision with other agencies and processes [e.g. LAAs];
- create a positive framework for action on climate change; and
- contribute to the achievement of Sustainable Development.” PPS12

### **PPS25 - Development and Flood Risk (revised 2010)**

#### **PPS25 Supplement - Development and Coastal Change Practice Guide (2010)**

Sets out Government policy on development and flood risk.

On page 8, Para 22: Landowners have the primary responsibility for safeguarding their land and other property against natural hazards such as flooding. Individual property owners and users are also responsible for managing the drainage of their land in such a way as to prevent, as far as is reasonably practicable, adverse impacts on neighbouring land. Those proposing development are responsible for:

- demonstrating that it is consistent with the policies in this PPS and those on flood risk in the LDD;
- providing a Flood Risk Assessment demonstrating:
  - whether any proposed development is likely to be affected by current or future flooding from any source;
  - satisfying the LPA that the development is safe and where possible reduces flood risk overall;
  - whether it will increase flood risk elsewhere; and
  - the measures proposed to deal with these effects and risks. Any necessary flood risk management measures should be sufficiently funded to ensure that the site can be developed and occupied safely throughout its proposed lifetime;

- designs which reduce flood risk to the development and elsewhere, by incorporating sustainable drainage systems (see Annex F) and where necessary, flood resilience measures (see Annex G); and
- identifying opportunities to reduce flood risk, enhance biodiversity and amenity, protect the historic environment and seek collective solutions to managing flood risk.

On page 8, Para 23: These matters can affect the value of land, the cost of developing it and the cost of its future management and use. They should be considered as early as possible in preparing development proposals.

## **3 Regional Planning Policy & guidance links**

### **London Plan, Greater London Authority (2008)**

The following policies are relevant to the Ravensbourne River Corridor Improvement Plan

#### *Policy 4C.6 Sustainable growth priorities for the Blue Ribbon Network*

The uses of the Blue Ribbon Network and land alongside it should be prioritised in favour of those uses that specifically require a waterside location. These uses include water transport, leisure, recreation, wharves and flood defences. For sites that are not suitable or not needed for these priority uses, developments should capitalise on the water as an asset and enhance the Blue Ribbon Network in order to improve the quality of life for Londoners as a whole, as well as for the users of the development”

Para 4.157: The following locations, which are identified as Opportunity Areas or Areas for Intensification include or adjoin parts of the Blue Ribbon Network: Lewisham, Catford and New Cross. Relevant Water Spaces are Ravensbourne and River Quaggy.

#### *Policy 4A.13 Flood risk management*

Where development in areas at risk from flooding is permitted, (taking into account the provisions of PPS25), the Mayor will, and boroughs and other agencies should, manage the existing risk of flooding, and the future increased risk and consequences of flooding as a result of climate change, by:

- protecting the integrity of existing flood defences
- setting permanent built development back from existing flood defences to allow for the management, maintenance and upgrading of those defences to be undertaken in a sustainable and cost effective way
- incorporating flood resilient design
- establishing flood warning and emergency procedures.

Opportunities should also be taken to identify and utilise areas for flood risk management, including the creation of new floodplain or the restoration of all or part of the natural floodplain to its original function, as well as using open space in the flood plain for the attenuation of flood water.

The Mayor will, and boroughs and other agencies should, take fully into account the emerging findings of the Thames Estuary 2100 Study, the Regional Flood Risk Appraisal and the Thames Catchment Flood Management Plan.

Para 4.96 “There is a strong link between good design and the attraction to economic investors to help create a prosperous city (Objective 3). Areas of social exclusion are usually associated with poor, hostile environments and far better, more inclusive design must form part of their regeneration (Objective 4).”



#### *Policy 4C.3 The natural value of the Blue Ribbon Network*

The Mayor will and boroughs should protect and enhance the biodiversity of the Blue Ribbon Network by:

- resisting development that results in a net loss of biodiversity
- designing new waterside developments in ways that increase habitat value
- allowing development into the water space only where it serves a water-dependent purpose or is a truly exceptional case which adds to London's world city status
- taking opportunities to open culverts, naturalise river channels
- protecting the value of the foreshore of the River Thames.

Wider biodiversity issues are covered by Policy 3D.14.

#### *Policy 4C.22 Rivers, brooks and streams*

The Mayor will, and boroughs should, in discharging their development control and other duties, ensure that rivers, brooks and streams of all sizes are protected, improved and respected as part of the Blue Ribbon Network and as valuable entities in themselves. In particular, measures should be taken to improve the habitat and amenity value of such waterways.

### **Thames Catchment Flood Management Plan**

#### **Thames Catchment Flood Management Plan - Ravensbourne Policy Unit**

Our flood risk management approach for this type of catchment is outlined below.

- We need long-term adaptation of the urban environment. There are massive opportunities to reduce flood risk through redevelopment. In most areas we need to change the character of the urban area in the floodplain through re-development. It must be resilient and resistant to flooding and result in a layout that re-creates river corridors
- We are seeking to re-create river corridors through redevelopment so that there is space for the river to flow more naturally and space in the floodplain where water can be attenuated
- We will be seeking to build flood defences as redevelopment occurs and as part of an overall catchment plan. This is because more attenuation and more space in the river corridors are needed for defences to be sustainable. This is more complex but represents better value for society in the long-run even if it is more costly for the Environment Agency today
- These areas are very susceptible to rapid flooding from thunderstorms. Emergency response and flood awareness are particularly important

### **London Rivers Action Plan, the River Restoration Centre (2009)**

"The 21st Century will be shaped by climate change and the need for more sustainable approaches to urban living. The modern challenge is to restore and improve London's rivers in ways that improve flood risk management; support sustainable regeneration; enhance wildlife habitat; help the city adapt to a changing climate and, by so doing, contribute to a better quality of life for Londoners." "River restoration, as part of a package of changes to the way we design and manage the green spaces in London, can make a significant contribution to lessening the unpleasant impacts of climate change for both humans near rivers and the wildlife that relies on the habitats they provide." Building climate change adaptation into river restoration projects can produce multiple benefits including:

- Better flood management;
- Improving habitats and corridors for river wildlife;
- Ensuring that urban development recognises that rivers and associated green spaces are an important part of urban regeneration."

Other relevant regional documents are listed below:

- **The Thames Gateway Delivery Plan, 2007,**
- **Thames Gateway Parklands Vision, 2008,**
- **Mayor of London, Making Space for Londoners,**
- **Connecting with London's nature – Mayor's Biodiversity Strategy,**
- **Greenspace Information for Greater London, Framework Document, 2005**



To deliver the vision behind the Ravensbourne River Corridor Improvement Plan requires early pre application discussions. Please contact Lewisham planners and the Environment Agency to discuss any proposals for development on sites close to the Ravensbourne. For further information or contact details please see below:

[www.lewisham.gov.uk](http://www.lewisham.gov.uk)

Planning Information Service, London Borough of Lewisham  
020 8314 7400 or email: [planning@lewisham.gov.uk](mailto:planning@lewisham.gov.uk)

[www.environment-agency.gov.uk/developers](http://www.environment-agency.gov.uk/developers)

[www.environment-agency.gov.uk/planning](http://www.environment-agency.gov.uk/planning)

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020 7091 4003 or email [planning.se@environment-agency.gov.uk](mailto:planning.se@environment-agency.gov.uk)