

Our City, Our River



How will the climate change in the East Midlands?

Hotter, drier summers, milder, wetter winters and more frequent extreme weather events are the headline findings of future climate modelling.



UK Climate Projections 2009 data for the East Midlands suggests that, under a medium emissions scenario, by the 2050s the region may see:

- **An increase in summer mean temperatures of around 2.5°C, and of winter temperatures of around 2.2°C;**
- **A 14% increase in winter mean precipitation;**
- **A 16% decrease in summer mean precipitation.**

(Source: UKCP09 - <http://ukclimateprojections.defra.gov.uk>)

This case study describes how Derby City Council is working with the Environment Agency to reduce the high level of flood risk from the River Derwent to central Derby, whilst simultaneously maximising the economic value of this important natural asset. A Masterplan 'Our City, Our River' has been developed to identify where flood defences can be improved through careful integration into new developments, without resorting to building high flood walls. As the risk of flooding is likely to increase over time due to climate change, these proposed measures are vital in protecting large numbers of people and property.

The Masterplan represents a commitment to:

- reduce flood risk in Derby
- protect the City's heritage
- promote sustainable economic development
- help create attractive and vibrant areas along the river.

The Masterplan arises out of a need to improve flood defences without increasing the height of flood walls to 2.5m. Instead a wider corridor is planned to allow for considerate spatial planning.

www.climate-em.org.uk/projects/well-adapting-east-midlands

Background

A 1 in 100 year flooding event could have a devastating effect in the Lower Derwent Valley, where 3,600 properties are at risk in the event such a severe flood occurs.

The Masterplan is a key step in safeguarding thousands of people and properties along the river banks, from Darley Abbey Mills in the north, to Derby Junction Railway Bridge in the south.

In Derby, rising waters during a severe flooding event would spill over existing flood defences along the River Derwent and have significant impact. Residential communities, businesses, local energy and transport infrastructure (such as major routes in and out of the City Centre), and the Derwent Valley Mills World Heritage Site would all be



Riverside foot/cycle path in Derby city.

affected. Should a severe flooding event take place, effects on local transport routes would make it difficult for emergency services to gain access.

It can take a significant amount of time to recover from a flood.

Although insurance is paid to those who are covered, local communities may need to be moved temporarily or even permanently, while some local businesses may be forced to close. Essential utilities (such as sewers and electricity) and other local services may also be heavily affected.

What we are doing

The Masterplan is extremely important because it ensures that Derby gets the infrastructure it needs to reduce flood risk and, at the same time, provides extensive opportunities for regeneration. The idea is to increase water conveyance through the city without massive physical barriers.

At this stage, the Masterplan outlines an overall guide for how a

number of key 'Opportunity Sites' can be developed over the next 20 years. These Opportunity Sites would benefit from both traditional and more innovative flood defences, where the defences could be incorporated into street layouts, parks and new developments.

The need for this new approach has been encouraged by a number of factors, in particular:

- Regeneration and redevelopment in Derby are major priorities for the City Council and its partners. Encouraging investment along the River Derwent will enable further sustainable regeneration in Derby.
- Raising the height of existing flood defences would have a negative impact on the riverside and City environment. Tall defence walls would create a visual and physical barrier between local communities, the river and the City. They would also increase the risk of flooding at Darley Abbey Mills.
- Flood risk management projects need to be delivered through partnership working, including the private sector. While government funding will cover a proportion of the cost of flood defence measures, local authorities and local investors will be encouraged to help fund initiatives which will see benefits for the local area while helping to redevelop communities and deliver positive outcomes for all involved.



Existing flood defence wall along Derwent River in Chester Green.

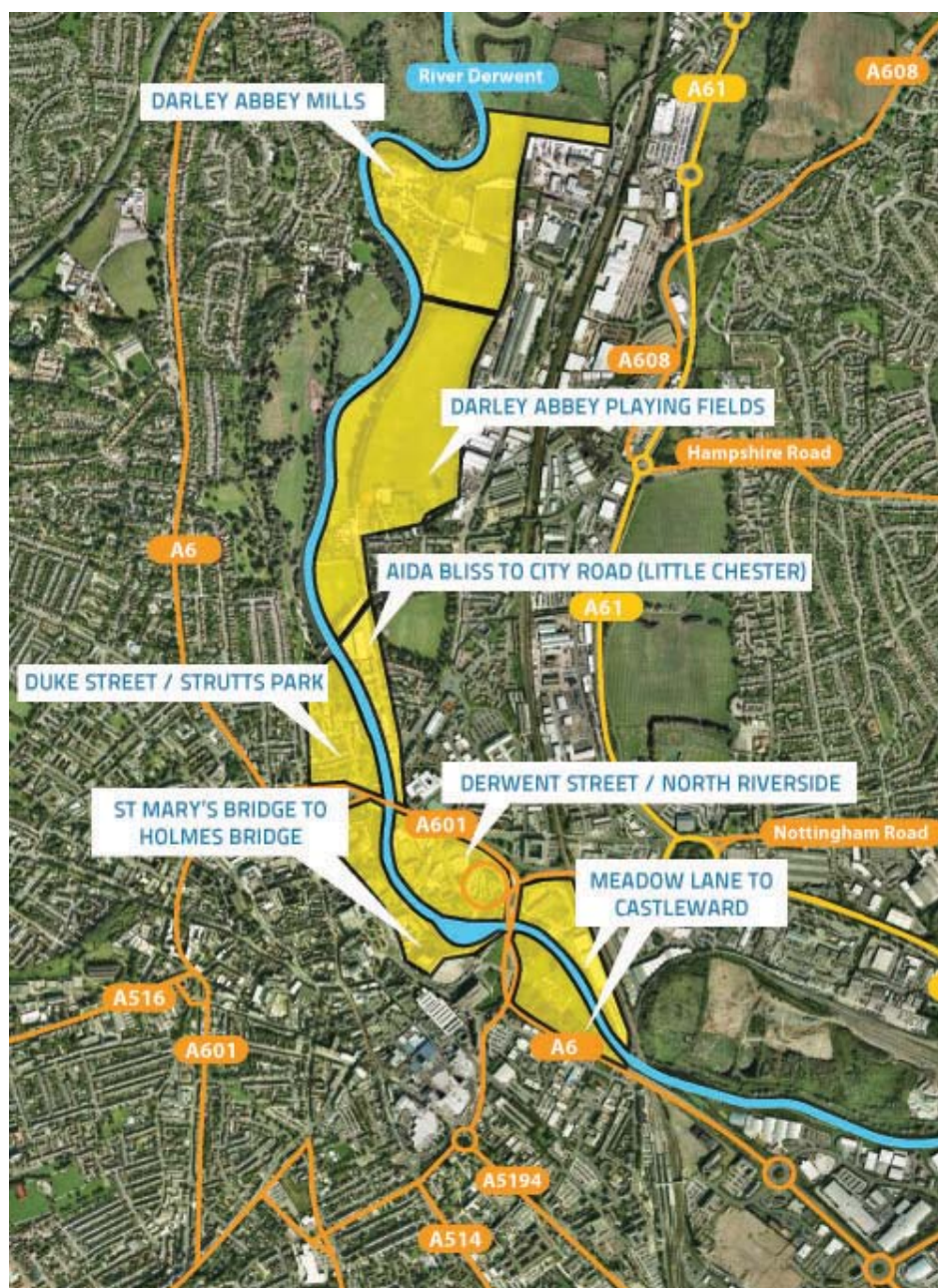
Opportunity Sites

At each Opportunity Site the potential to improve existing flood defences has been explored. There is a proposal to introduce defences which are part of street layouts, parks and new buildings. Green solutions, such as embankments, would also be used where possible, improving public spaces and providing better access to parkland and wildlife.

Where proposed, integrated defences will minimise disruption for local people and are less of an eyesore than a tall flood defence wall.

Seven key areas (shown below) have been identified as key Opportunity Sites;

- **Darley Abbey Mills**
- **Darley Abbey Playing Fields**
- **Aida Bliss to City Road (Little Chester)**
- **Duke Street / Strutt's Park**
- **St Mary's Bridge to Holmes Bridge**
- **Derwent Street / North Riverside**
- **Meadow Lane to Castleward**



World Heritage Site at Darley Abbey Mills.

Extract from 'Our City, Our River, Jan 2012': 'In delivering improved flood defences in Derby consideration needs to be given to climate change. Where defences are integrated with new development it is likely that the height of the defences needs to make an allowance for future climate change as future adaptation of the defence would not be possible.'

For detailed information about the proposals at each of these sites visit:

www.ourcityourriver.co.uk/opportunity_sites.html

Adapting to Climate Change Derby City Council

Our City, Our River



Cathedral Green Swing bridge designed to swing out of the way in the event of river levels rising.

Next Steps

A public consultation process on the Masterplan was held in early 2012 to enable local people, businesses, landowners, etc. to respond to the proposals put forward. The Masterplan was approved by Derby City Council's Cabinet in July 2012. This document will now be a material consideration in determining planning applications. It is estimated that the cost of implementing the Lower Derwent Flood Risk Management scheme (of which the Masterplan is a major part) could cost in the region of £83m, with the cost of the scheme being reduced by collaborative working between DCC, the EA and private developers. Further work on the detail of delivering the Masterplan (including the costs) will take place over the next 30 months. The Council also intends to lobby central government to try to secure more funding in order to be able to complete the scheme more quickly.

Further Information

A dedicated website about the Masterplan can be found at this link, which includes a short film about the proposals.

www.ourcityourriver.co.uk

Contact Details

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For more information about adaptation in Derby, please visit the website below:

www.derby.gov.uk/environment-andplanning/sustainability/climate-change

One of a series of case studies about adaptation to climate change, developed as part of the Well Adapting East Midlands project and supported by Climate East Midlands. Other case studies can be viewed at the web address below.

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