



The Metropolitan Glasgow Strategic Drainage Partnership

The Metropolitan Glasgow Strategic Drainage Partnership (MGSDP) is an innovative and collaborative venture between local authorities (Glasgow City Council leading), the Scottish Environment Protection Agency (SEPA), Scottish Water, Scottish Enterprise, Clyde Gateway, South Lanarkshire Council and Scottish Canals that will upgrade and modernise the Glasgow area's drainage and sewerage network, reduce flooding and support urban development requirements while improving water quality and the environment.

New flood maps for Scotland

Sharing more information than ever before

New flood maps for Scotland have been published which present the most comprehensive national information on flood hazard and flood risk. The maps mark a significant milestone in our understanding of flooding and share more information than ever before on the sources and impacts of flooding.

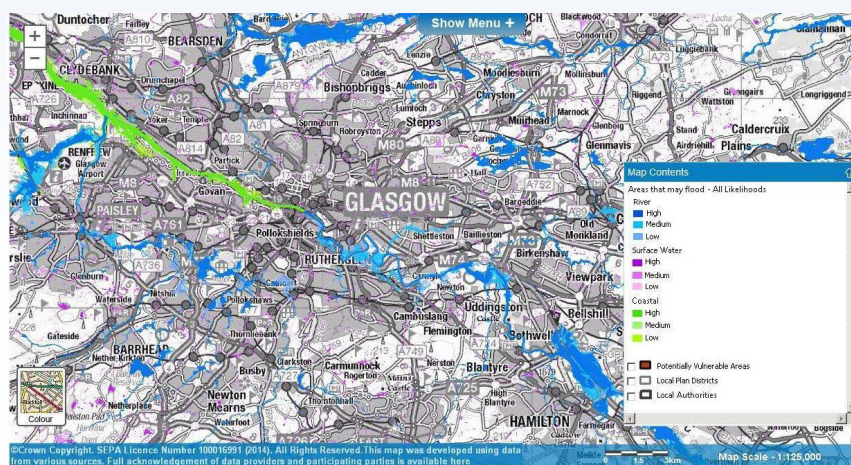
The new flood maps, published by SEPA, help to raise awareness of flooding by showing where flooding can happen and its impact on the community when it does. Understanding how flooding can affect your life is the first step in taking action to reduce your own risk of flooding and start preparing for its impacts when it does happen.

The maps are also a key tool for SEPA, local authorities, Scottish Water, the National Park Authorities and Forestry Commission Scotland in the developing Scotland's first co-ordinated plans to manage flood risk. Information developed for the flood maps will be used to progress Flood Risk Management Strategies, published by SEPA in 2015, and Local Flood Risk Management Plans, published by local authorities in 2016.

What do the maps show?

The new flood maps have a lot of new features and pieces of information compared with previous flood maps which should help you find the information you are looking for and also gain a better understanding of how flooding can impact on your community. New maps include:

- An improved flood extent map that includes three likelihoods of flooding and surface water;
- Flood depth and velocity maps for areas that contain the greatest risk to the impacts of flooding;
- An impacts of flooding map showing the number of people, types of properties, and community services and specific environmental sites at risk of flooding;
- A flood defence map which shows national information on formal flood prevention schemes;
- The first national natural flood management maps showing the areas where working with our natural landscape to manage flooding could be most effective;
- A national groundwater map showing areas where groundwater may contribute to flooding.



Like the MGSDP Vision of changing how we think about and manage flooding, the flood maps are a result of the Flood Risk Management (Scotland) Act 2009 which takes a more sustainable approach to tackling flooding in Scotland. The Act changed the way in which public bodies work together bringing about more partnership working so we can improve our knowledge and understanding of flood risk and be more proactive and co-ordinated in our responses to how we manage it. The MGSDP is engaged in the flood risk management planning process and will be an active partner in planning for a surface water management network to meet the demands of climate change and reduce the risks and impacts of flooding.

What action can you take now?

One of the best ways to tackle flooding is to be prepared. SEPA's Floodline service provides free, advanced flood warning messages direct to your phone and advice on what to do before and after flooding. Call 0845 988 1188 or visit Floodline to register for free.

PREPARE FOR FLOODING

A QUICK GUIDE

- If flooding looks likely call **Floodline** on **0845 988 1188** or visit **www.sepa.org.uk/floodupdates**
- Prepare a flood plan and put together a family flood kit
- Consider flood protection products that can be fitted to your property.
- Familiarise yourself with how to shut off gas, electricity and water supplies.
- Keep a list of useful contact numbers including your **Floodline quick dial code**.
- Check you have adequate insurance against flooding
- Move important documents and valuable items to a higher place.
- Move vehicles out of the flood risk area
- Charge your mobile phone
- Put your safety first
 - Do not walk, drive or swim through a flood
 - Do not walk on sea defences, riverbanks or across bridges.
 - Avoid any form of direct contact with flood water
 - Stay away from power lines and electrical wires
 - Pay attention to flood warning messages from SEPA

Floodline
0845 988 1188
FOR ADVANCE FLOOD WARNINGS

Flood forecasting pilot project Surface water flood forecasting pilot in East End of Glasgow

A pilot project to explore the potential for providing real time surface water flood alerting within urban communities is currently underway in the East End of Glasgow, the venue for many of the Commonwealth Games 2014 events.

In recent years, Scotland has suffered from regular episodes of surface water flooding caused by intense rainfall in urban areas and drainage systems. This was particularly evident in the significant surface water flooding in Glasgow in 2002 and recent events during the summers of 2011 and 2012, which highlighted the need to improve capabilities in surface water flood forecasting in urban areas.

Yet, this is not any easy task. Real time surface water flood forecasting in urban areas is very challenging due to the fact that rainfall events are often highly localised and runoff and drainage processes in these areas are highly complex. At present there are no formal surface water

forecasting tools in operational use and SEPA is committed to increase our understanding of surface water flooding mechanisms and has taken this project forward in partnership with the James Hutton Institute and the Centre of Expertise for Waters (CREW).

Developing surface water flood forecasting tools in urban communities is an emerging research area with other ongoing projects taking place across the UK and Europe. This pilot aims to lead the way by reviewing the latest developments in forecasting this type of rainfall and identifying the best available data to assist with this type of modelling. A pilot project to explore the potential for providing real time surface water flood alerting within urban communities is currently underway in the East End of Glasgow, the venue for many of the Commonwealth Games 2014 events.

After the pilot project is complete we will assess whether the surface water flooding tools that have been developed are suitable, robust, can be used in other areas and if they can be incorporated into SEPA's flood warning service, [Floodline](#).

Scotland's Largest Wastewater Tunnel

Scotland's largest wastewater tunnel to be built in Glasgow

It was announced in September that a [3.1 mile-long waste water tunnel](#), Scotland's largest, is to be built in the south of Glasgow as part of the biggest upgrade of the city's waste water network in more than a century.

Scottish Water confirmed that, after detailed investigations, it is to construct a sewer tunnel running between Queen's Park and Craigton industrial estate via Pollok and Bellahouston parks.

The £100m tunnel, which will be the biggest storm water storage tunnel in Scotland, will resolve water quality issues in some of the city's watercourses and reduce sewer flooding risk at key locations in the area served by Shieldhall Waste Water Treatment Works. It will be a major part of Scottish Water's £250m, five-year programme of work announced in February to upgrade the waste water network in the Glasgow area.

The biggest investment in the network since Victorian times, the upgrade will improve river water quality and the natural environment of the River Clyde and its tributaries, enable the Greater Glasgow area to grow and develop, alleviate sewer flooding and effects of climate change.

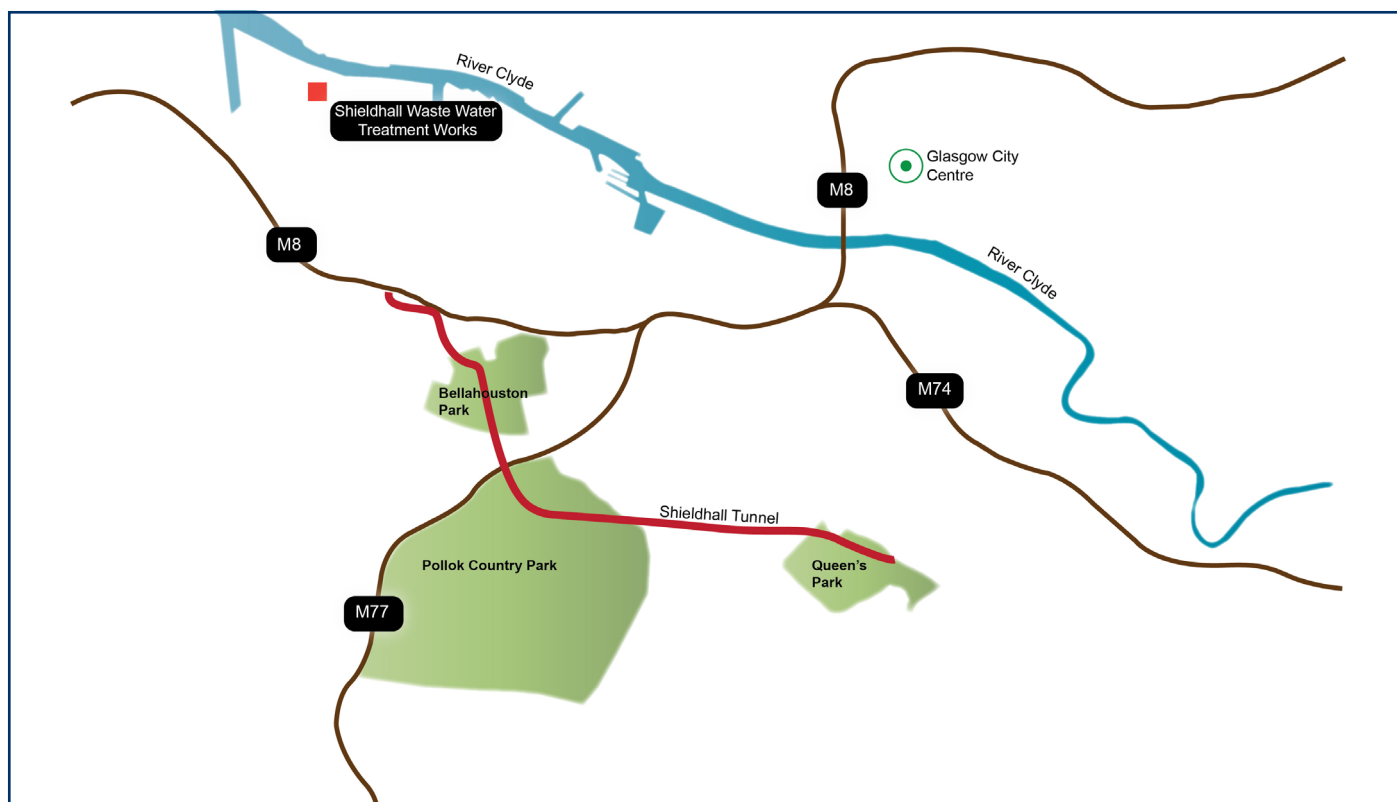
Scottish Water's investment in the tunnel, and the overall environmental improvement scheme, follows years of collaboration and studies by the MGSDP.

The tunnel will be 4.65m in diameter, big enough to fit a double-decker bus inside and more than five times as long as the Clyde Tunnel. Work is expected to start in mid-2014 and take three and a half years to complete, including preparatory work, mine working consolidation and utility diversion work.

Mr Geoff Aitkenhead, Scottish Water's Asset Management Director, said: "Following the launch in February of our five-year programme of investment to transform the Greater Glasgow area's waste water infrastructure, we are delighted to be able to confirm this key part of the programme.

"The Shieldhall tunnel will resolve large-scale water quality problems in the River Clyde and its tributaries, provide aesthetic screening to overflows into watercourses such as tributaries of the Clyde and White Cart Water and reduce the risk of sewer flooding in Aikenhead Road and Curtis Avenue in Mount Florida and Robslee Drive, Robslee Road, Robslee Crescent and Orchard Park Avenue in Giffnock.

"The tunnel will increase system capacity and alleviate pressure on the existing network by providing additional storm water storage." Deputy First Minister Nicola Sturgeon, Cabinet Secretary for Infrastructure, Investment and Cities, said: "The improvement of Glasgow's sewerage network is essential to its future economic growth, a cleaner environment and to resolve long-standing flooding issues."



River Basin Planning

River Basin Planning

A supplementary paper and consultation has recently been published on [Improving the physical condition of Scotland's water environment](#). This consultation, published by SEPA, supports the river basin planning process in Scotland by setting out the actions needed to address the impacts of physical changes to the water environment. These impacts include: culverting, engineered banks and shores, fish barriers and straightened channels, and affect around a quarter of Scotland's rivers, lochs and coastal waters.

A number of organisations, such as SEPA, Rivers and Fisheries Trusts of Scotland (RAFTS), Forestry Commission Scotland and local authorities have responsibility for delivering the actions set out in the plan. It illustrates that delivering the required

improvements in a co-ordinated partnership approach, can provide a range of environmental, social and economic benefits for Scotland. In conjunction with the plan, SEPA also published a digest of consultation responses. This summary report explains how comments received have been used to help shape the finalised plan.

When the consultation on this plan was opened, four pilot catchment projects were also launched. These projects are helping to develop the implementation approach, combining actions which improve the physical condition of the water environment and also deliver natural flood management measures.

Progress updates on these projects can be found on the SEPA website.



The principles and strategic direction set out in this plan are also being used to develop the programme of measures for the second river basin management plans. The SEPA River Basin Management Plan Interactive Map may be found here - <http://gis.sepa.org.uk/rbmp/>.

For additional information visit our website at www.mgsdp.org for more information on our work to deliver the MGSDP Vision.



www.glasgow.gov.uk



www.scottishwater.co.uk



www.sepa.org.uk



www.gcvsdpa.gov.uk



www.clydegateway.com



www.scottishcanals.co.uk



www.southlanarkshire.gov.uk

www.mgsdp.org