



# The Metropolitan Glasgow Strategic Drainage Partnership

The Metropolitan Glasgow Strategic Drainage Partnership (MGSDP) is a collaborative venture between Glasgow City Council, the Scottish Environment Protection Agency (SEPA), Scottish Water, Scottish Enterprise, Clyde Gateway, Clydeplan, South Lanarkshire Council, Scottish Canals, Renfrewshire Council, East Dunbartonshire Council, North Lanarkshire Council and Network Rail. The MGSDP Vision is to transform how the city region thinks about and manages rainfall to end uncontrolled flooding and improve water quality. This vision will be realised through partnership working shaped by the MGSDP Guiding Principles.

## Flood Risk Management Act Cycle 2 Planning and National Flood Risk Assessment / Potentially Vulnerable Areas Consultation

First published in December 2011, the National Flood Risk Assessment (NFRA) has provided Scotland with the knowledge and tools to assess the causes and consequences of flooding. The assessment has considered the likelihood of flooding from rivers, groundwater and the sea, as well as flooding caused when heavy rainfall is unable to enter drainage systems or the river network.

Now that we have reached the end of the first Flood Risk Management planning cycle, SEPA is working with key stakeholders to review and update the NFRA as part of preparations for the second planning cycle. This is a key requirement of the FRM (Scotland) Act 2009 which states that SEPA must carry out a NFRA every 6 years.

Reviewing the NFRA every 6 years is essential because SEPA and its stakeholder's understanding of flood risk is constantly developing and it is important that this knowledge is captured. This will ensure SEPA is working with the most up to date information to effectively support sustainable Flood Risk Management.

Since the publication of NFRA in December 2011 a number of changes will influence its re-release in 2018 including:

- Significant improvement in the understanding of flood hazard

- Consideration of communities across Scotland that have experienced flooding
- Improved receptor data reliability and availability
- Availability of climate change scenarios
- Updates to industry standard appraisal methods
- Research and development has refined understanding of impacts and influencing factors

The NFRA is the product used to guide the identification of Potentially Vulnerable Areas (PVAs) – the primary unit for managing strategic flood risk management activities. PVAs are being reviewed and updated within cycle 2 in line with the NFRA update. As there have been significant changes to the NFRA between cycle 1 and cycle 2 including advances in our modelling and mapping data and the methodology behind the assessment, a full re-designation of PVAs is being undertaken.

A national public consultation of the outputs will take place during late spring 2018, and the second NFRA and PVAs will be formally published on 22 December 2018.

For further information on SEPA's role in flooding visit - [www.sepa.org.uk/environment/water/flooding](http://www.sepa.org.uk/environment/water/flooding)

## Flooding project in Milton area of Glasgow complete

In September 2017, Scottish Water completed a major environmental improvement project which will reduce sewer flood risk to 32 properties in the Milton area of Glasgow.

The £3.1m investment in Mingulay Crescent and Scaraway Street, is part of a £250 million, five-year programme of work Scottish Water announced in February 2013 which will continue to improve river water quality and the natural environment of the River Clyde, enable the Greater Glasgow area to grow and develop, alleviate sewer flooding and deal with the effects of increased rainfall from climate change.

To minimise the risk of flooding in the area, amey Black & Veatch (aBV), Scottish Water's delivery partners, upgraded the local sewer network by increasing its capacity so that it can store more water during times of heavy rainfall. This was done by upsizing the existing sewer pipework and installing new storm overflow pipes.

Further information on this project is available on the Scottish Water website - [www.scottishwater.co.uk](http://www.scottishwater.co.uk)

## SEPA Publishes New and Updated Flood Risk and Land Use Planning Guidance

No one can stop the rain from falling or other extreme weather events that lead to flooding from occurring, but by considering the location, design, and layout of new developments, we can make sure that the decisions and investments we make today take account of the known risks and deliver high-quality sustainable places for Scotland.

In August 2017, SEPA published new and updated guidance relating to flood risk and land use planning. Although primarily intended for internal SEPA purposes, the guidance is published online so that anyone can access and understand the framework used to guide planning consultation responses. The guidance is based on Scottish Planning Policy and duties under the Flood Risk Management (Scotland) Act 2009.

SEPA guidance and advice notes relating to development management and flood risk are available on the SEPA website -

<https://www.sepa.org.uk/environment/land/planning/>



## Winter Flooding Awareness Campaign

Whilst flooding can happen at any time during the year, particularly as climate change is predicted to bring more frequent and intense summer rainfall events, SEPA's Winter Flooding Campaign, which will run from December 2017 through to March 2018, is aimed at providing the public with advance notice of potential flooding. Through a new suite of winter marketing materials and a strategic approach to communicating, this campaign is able to more accurately target communications activity to those at risk of flooding, and provide up to 3 days notice of potential flooding, giving people more time to prepare and take action.

In order for this campaign to be accurate and effective, SEPA is working with the Scottish Flood Forecasting Service, a partnership between SEPA and the Met Office, to monitor the likelihood and impacts of flooding. If significant or severe flooding is imminent, the campaign will be activated and messages will be broadcast to the areas at risk. Messages will be advertised on both national and local radio stations, on social media and online and will also be shared with key partners and flood action groups for further dissemination.

The communications activity complements SEPA's Floodline Service - [www.floodlinescotland.org.uk](http://www.floodlinescotland.org.uk) which provides free messages to customers when SEPA issues a Flood Alert, Flood Warning or Severe Flood Warning in their area at any time of the year, and will encourage more people to sign up to the service.

For more information on the campaign contact Rebecca DeVivo, [rebecca.devivo@sepa.org.uk](mailto:rebecca.devivo@sepa.org.uk)

For more information on what we can all do to reduce the risks and impacts of flooding, visit the MGSDP website - [www.mgsdp.org](http://www.mgsdp.org)

Screenshot of the Floodline website interface. The header includes the Floodline logo, contact number 0345 988 1188, and navigation links: Home, About Floodline, Your home, Your business, Your travel, Report-a-Flood, Resources, Flood Warning Schemes. A central banner reads "PLAN AHEAD FOR FLOODING THIS WINTER." with a "Find out more" button. Below the banner are sections for "LIVE flood updates" (dated 30/01/2018 15:29:54), "Floodline 24/7 UPDATES SIGN UP NOW", and "Making a Flood Kit (with voiceover)". The footer states "Floodline is operated by the Scottish Environment Protection Agency" and provides social media icons for Facebook, Twitter, YouTube, and LinkedIn.



## Camlachie Burn Improvements Project Underway

Enabled by funded from the Glasgow City Region City Deal - [www.glasgowcityregion.co.uk](http://www.glasgowcityregion.co.uk) - and Scottish Government Flooding Capital Grant contribution, the Camlachie Burn Improvements Project is a £4.5million project that will refurbish two sections of the burn in the east end of Glasgow. This will have the effect of removing two partial restrictions to flow in the watercourse which will improve the potential to convey flows from the east end, resulting in a reduction in flood risk and will help to facilitate regeneration in the area.

The works on Shettleston Road, to the east of the The Forge Market, will replace an existing 300m section of culvert, which is in poor condition, with a new 120m section of culvert and 180m section of open-channel forming a new water feature along a stretch of Shettleston Road. The construction activities also include traffic management, diversion of existing services, installation of landscaping features to the new open-channel section and provision of a culvert trash screen.

The Biggar Street site is located to the south of a former chemical works and north of the Forge Retail Park. This location is downstream of the confluence of the Camlachie Burn and the Carntyne Burn which flows from the north east side of Glasgow. The works involve replacing 110m of existing open-channel section of the

Camlachie Burn that is in poor condition with a new open-channel section aligned on a more favourable gradient. The construction activities also include formation of a new access road, crossing a main sewer pipe and provision of a new culvert trash screen.

The project started on site in October 2017 and is expected to be completed early 2019.



Location of construction works at Biggar St and Shettleston Road

## Partnership Agreement for North Glasgow Integrated Water Management System Formally Approved

On 30th November, Glasgow City Council formally gave approval to entering into a partnership agreement with Scottish Canals and Scottish Water to facilitate the integrated project delivery of the North Glasgow Integrated Water Management System (NGIWMS).

This is an innovative system that will use the Forth and Clyde Canal and new technology to tackle the capacity - and therefore potential flooding - issues that on occasion face the sewer network in the north of the city. In addition, the NGIWMS will allow for land release for the development of over 2,500 homes in the area at sites such as Cowlares, Hamiltonhill, 100 Acre Hill and Ruchill Hospital.

The £4.7million project - part-funded by the Glasgow City Region City Deal - will use the capacity of a section of the canal to store and transport surface water from North Glasgow to the River Kelvin.

Using the canal to store over 55,000 cubic metres of flood storage during storms will be achieved by automatically reducing water levels - through Glasgow's SMART City platform - in the canal 24 hours ahead of a forecasted storm / flood event. Such action reduces the area required to be set aside on development sites for

flood storage and so increases the number of potential new homes on those sites.

In addition to managing flood risk and facilitating regeneration of the north Glasgow area, including Sighthill, the new water management SuDS will safeguard water quality, improve habitat for wildlife and deliver infrastructure to facilitate green infrastructure improvements funded by the European Regional Development Fund (ERDF) Scottish programme for 2014-2020, which is led by Scottish Natural Heritage (SNH) on behalf of the Scottish Government.

Funding for the project is being provided from the Scotland's 8th City - the Smart City initiative - [www.scottishcities.org.uk/workstreams/8th-city](http://www.scottishcities.org.uk/workstreams/8th-city)

This ambitious initiative, also within the ERDF 2014-2020 programme, involves Scottish cities working together to expand their Smart City capabilities and deliver priorities through innovation, integration of service delivery, and improved community engagement.

Pre-construction activities to deliver the NGIWMS commenced late 2017 with the main construction works to start in early 2018.

## South Dalmarnock Regional SuDS Pond Fully Operational

Following construction of the South Dalmarnock Regional SuDS pond itself in 2014, the final section of connecting pipework to direct surface water flows from the wider Dalmarnock catchment, was completed in autumn 2017.

Delivered by Clyde Gateway, the South Dalmarnock SuDS Pond represents a phased approach by the MGSDP partners to deliver strategic, sustainable drainage to facilitate regeneration in the east end of Glasgow by providing surface water management infrastructure ahead of development. The SuDS pond was constructed as the first phase, as part of the remediation of the former Dalmarnock power station site in 2014.

Following this, complex land ownership / access issues and existing underground services meant that the subsequent phases of the project have taken time to finally complete. However, in autumn 2017, contractors successfully constructed the final connection to earlier phases of surface water drainage pipework for the A728 Clyde Gateway and wider catchment, at the junction with Dalmarnock Road.

The SuDS pond provides a blue-green approach to attenuating surface water runoff, with future development of the former power station site adjacent to the pond, to partially utilise capacity in the pond.



South Dalmarnock SuDS Pond

## Cuningar Loop Woodland Park and Footbridge Win ICE Scotland Saltire Award

The Institution of Civil Engineers (ICE) Scotland's annual awards, run in partnership with the Saltire Society, celebrate outstanding engineering achievements in Scotland.

The 2017 Community Award was awarded to the Cuningar Loop Woodland Park and Footbridge, with the judges impressed by how the regeneration of the 15-hectare site had transformed a vacant, derelict and unusable stretch of land into a popular community woodland park, complete with an extensive path network, adventure play facilities, a bike skills area, Scotland's first bouldering park, a woodland workout, large meadow and picnic areas, an outdoor classroom, a riverside boardwalk and 99m span footbridge that links the park to the 700 homes on the site of the 2014 Commonwealth Games Athletes' Village.

The award comes as figures were released showing that the park has been visited by more than 175,000 visitors since being fully opened to the public in March 2016, a figure that is above the expectations of all involved.

For further information on the Cuningar Loop, visit the website <http://scotland.forestry.gov.uk/visit/cuningar-loop>

For further information on the ICE Scotland Saltire Awards, visit the website [www.ice.org.uk/about-ice/near-you/uk/scotland/awards/saltire-awards](http://www.ice.org.uk/about-ice/near-you/uk/scotland/awards/saltire-awards)



View across the footbridge from the Games Village towards the Cuningar Loop



## City Region Green Network Strategy Launched

Launched in September 2017 by Glasgow & Clyde Valley Green Network, A Green Network Strategy for the Glasgow City Region has been developed to drive forward ambitious plans to create a Glasgow City Region wide 'Green Network' by 2050.

The Strategy estimates that for every £1 spend on Green Network and Green Infrastructure development that at least £2.14 in benefit is returned. This will bring a multitude of benefits to the region, creating healthier lifestyles, enhancing biodiversity and helping the region adapt to climate challenges.

For further information on the GCVGN, and to download a copy of the document, visit the website - [www.gcvgreenetwork.gov.uk](http://www.gcvgreenetwork.gov.uk)



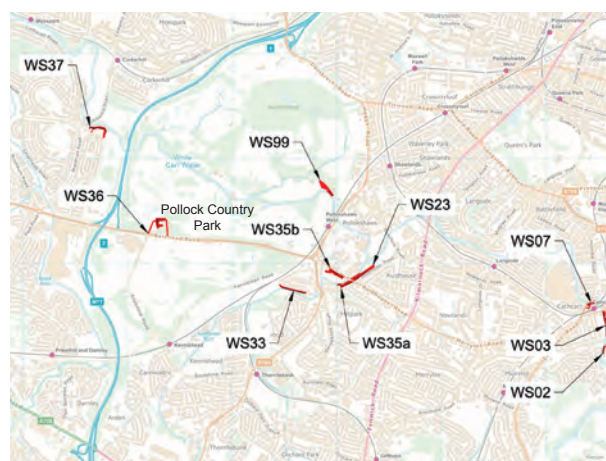
## White Cart Water Flood Prevention Scheme - Phase 3

Phases 1 and 2 of the White Cart Water Flood Prevention Scheme were completed by late 2011 as part of Glasgow City Council's strategy, working with other key stakeholders, to reduce flood risk to residents and businesses in the south side of Glasgow.

In 2017, Glasgow City Council secured funding to enable the completion of the third and final phase of the scheme. This phase involves the construction of 9 sections of flood defence - a combination of flood defence walls and embankments which will provide direct flood defence along sections of both the White Cart Water and Auldhouse Burn.

Through 2017 the project team has been finalising the design, and undertaking surveys etc. They also held a public exhibition in late October to provide information on the proposed works. RJ McLeod has recently been appointed as the contractor to undertake the works, with a view to a site start in the spring of 2018.

Further information on the White Cart Water Flood Prevention Scheme Phase 3 works, is available on the project website - [www.whitecartwaterproject.org](http://www.whitecartwaterproject.org)



Location of Phase 3 Works

For more information on our work to deliver the MGSDP Vision, visit our website at: [www.mgsdp.org](http://www.mgsdp.org)



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



[www.scottishwater.co.uk](http://www.scottishwater.co.uk)



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



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



[www.clydeplan-sdpa.gov.uk](http://www.clydeplan-sdpa.gov.uk)



[www.scottishcanals.co.uk](http://www.scottishcanals.co.uk)



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



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



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



[www.networkrail.co.uk](http://www.networkrail.co.uk)



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