



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.

Local Flood Risk Management Plans Published

As required by the Flood Risk Management (Scotland) Act 2009, Local Flood Risk Management Plans (LFRMPs) for Scotland were published by 22nd June 2016.

The Clyde and Loch Lomond (CaLL) Local Plan District (LPD) LFRMP was published by Glasgow City Council on behalf of a partnership comprising 10 local authorities - Argyll and Bute Council, East Dunbartonshire Council, East Renfrewshire Council, Glasgow City Council, Inverclyde Council, North Lanarkshire Council, Renfrewshire Council, South Lanarkshire Council, Stirling Council and West Dunbartonshire Council – SEPA and a number of other responsible authorities - Scottish Water; Forestry Commission Scotland; and Loch Lomond and the Trossachs National Park Authority.

The CaLL LFRMP is available to download from the GCC website <http://www.glasgow.gov.uk/clydeandlochlomond>

The LFRMP should be read in conjunction with the Flood Risk Management Strategy that was published for the CaLL area by SEPA in December 2015 and available here <http://apps.sepa.org.uk/FRMStrategies/>

This first LFRMP for the CaLL area provides more detail on how and when the actions identified in the Strategy will be delivered over the first Flood Risk Management planning cycle from 2016 to 2022, to reduce the risks and impacts of flooding, prepare and protect ourselves and our communities, and make a real difference to recovering from any future flood events.

Flood Risk Management (Scotland) Act 2009:

Clyde and Loch Lomond
Local Plan District

Local Flood Risk
Management Plan
June 2016



Published by: Glasgow City Council

Local Flood Risk Management Plans and Flood Risk Management Strategies will be updated every six years.

Scotland's largest urban nature park awarded £4.5m lottery funding

Scotland's largest urban heritage nature park has been given a major boost after the project was awarded £4.5 million funding from the Heritage Lottery Fund. The Seven Lochs Wetland Park project is a partnership between Glasgow City Council, North Lanarkshire Council, Forest Enterprise Scotland, Scottish Natural Heritage and The Conservation Volunteers Scotland, working alongside local communities to bring together 16km² of lochs, parks, nature reserves and woodlands between Glasgow and Coatbridge.

The £6.8 million project sets out how the area's heritage buildings, wildlife habitat and archaeology will be improved, protected and brought together to create a new attraction of national significance in the central belt. The project will protect and enhance biodiversity and manage surface water, while promoting health and wellbeing and economic regeneration.

Further information on the Seven Lochs Wetland Park can be found on the GCVGN website - <http://gcvgreennetwork.gov.uk/news/massive-cash-boost-for-seven-lochs>

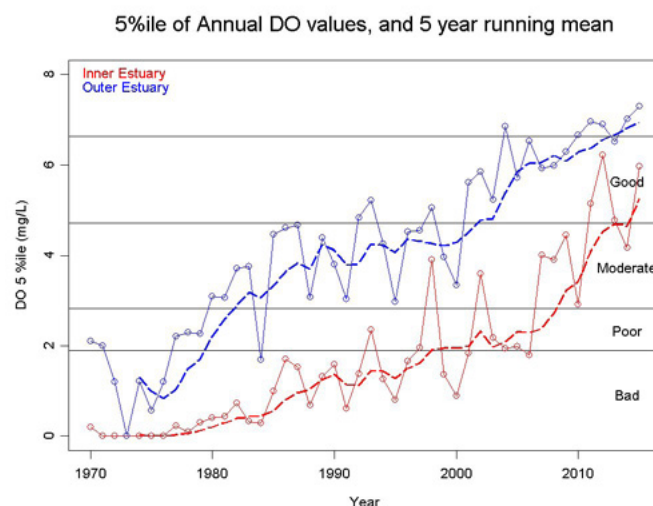
River Clyde Tidal Weir Study

Water quality in the Inner Clyde Estuary (Bowling to Tidal Weir) has been steadily improving over the last 10 years. This is good news, but why do we still have periodic significant fish kills occurring in the vicinity of the tidal weir? That is a dilemma that SEPA has been considering for several years now.

This became a challenge for the MGSDP to consider and the partnership has undertaken a jointly funded study over the past 18 months to better understand the key issues. To date the study has conducted site surveys and measurements, followed by computer modelling to identify a very complex area of mixing around the tidal weir structure, which can result in a challenging environment and varying levels of risk to ecology and migratory fish.

The study has also found that siltation of the Upper Estuary at the City Centre, following the termination of dredging upstream of Glasgow Science Centre, appears to be positively influencing water quality (primarily Dissolved Oxygen (D.O.)) However, this improvement may not continue in the long term and may start to reduce or even deteriorate. The termination of dredging may also increase flood risk long term.

The Clyde has been extensively modified by man over the centuries and is changing, albeit slowly. As water users and managers of the river, we need to better understand these changes and what we have to do to sustainably utilise the river in the future. The MGSDP is the best placed entity to consider these challenges, and further survey work and analysis is planned.



Graph showing rise in dissolved oxygen (DO) levels (5 year rolling average) in the Clyde Estuary from 1970 to 2015

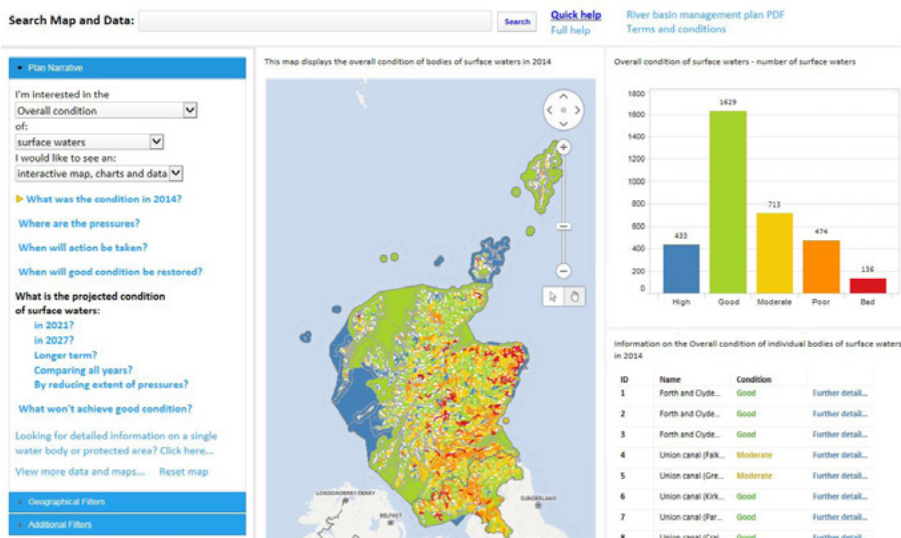
Second River Basin Management Plans Now Available

River basin management planning is about protecting and improving Scotland's water environment in a way that balances costs and benefits to the environment, society and economy. The Scottish Environment Protection Agency (SEPA) recently published Scotland's second set of river basin management plans that set out a route map for protecting and improving Scotland's water environment over the next 12 years.

The plans - one covering the Scotland river basin district and another covering the cross-border Solway Tweed river basin district - are available on the SEPA website alongside a new interactive web tool, the Water Environment Hub, which provides the detailed data and information.

www.sepa.org.uk/environment/water/river-basin-management-planning/the-current-plans/

Although many of Scotland's waters are in a good or excellent condition, others are under significant pressure. The plans set out what the Scottish Government, SEPA, Scottish Water, local authorities and all Scotland's other public bodies will do to tackle these pressures and improve the condition of the affected rivers, lochs, estuaries, coastal waters and groundwater.

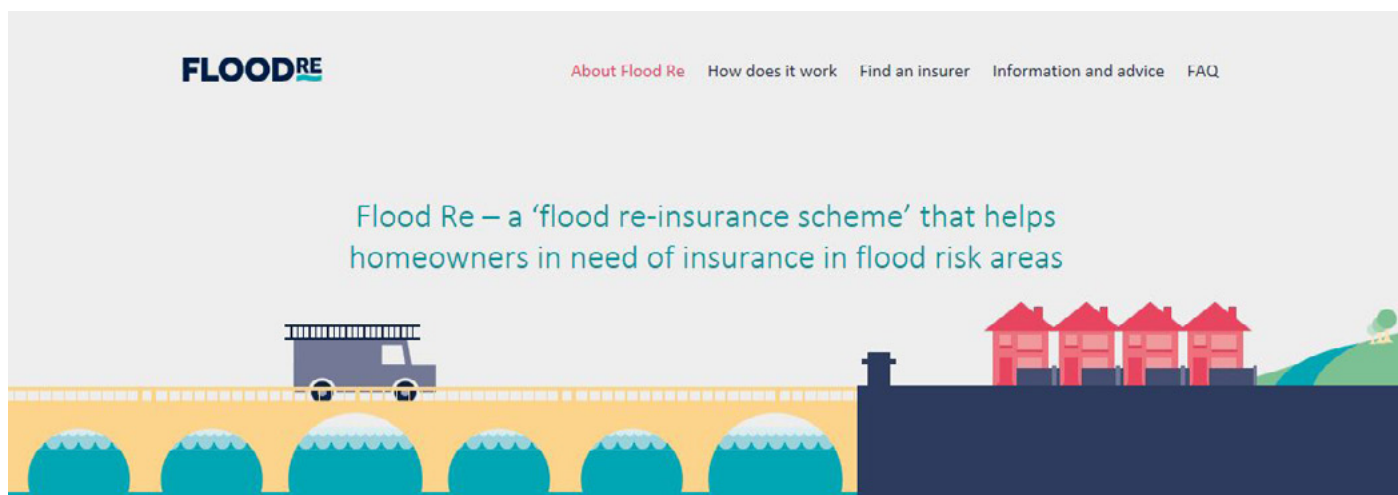


Water environment hub webpage

The plans also explain the major contributions others will make to enable Scotland to achieve its goals, including businesses, land managers and voluntary groups and organisations, working together to build and strengthen the partnership approach established over the last few years.

Working together will also help identify, and make use of, opportunities to contribute to wider goals, including those for fisheries, flood risk management, improved resilience to climate change, biodiversity, forestry and sustainable land use.

Flood Re Scheme Now in Place to Help Homeowners in Flood Risk Areas



One of the devastating impacts in the aftermath of flooding can be that people may struggle to find affordable insurance for homes.

To address this issue, the UK Government has been working closely with insurers in the UK to deliver a new way of dealing with and offering flood cover on home insurance through a not-for-profit scheme that's funded by insurers.

This scheme, known as Flood Re (www.floodre.co.uk), became available at the start of April 2016 and will be in place until 2039. The scheme will:-

- Enable homeowners to find affordable insurance if an eligible property is at risk of flooding;

- Help tenants to find affordable contents insurance if you live in an eligible property;
- Help local authorities and communities across the UK to be better prepared for flooding;
- Create a 'level playing field' for UK insurers, which means they can still offer homeowners an affordable range of appropriate policies to those homes at risk of flooding.

It is estimated that, over time, Flood Re will benefit over 350,000 households across the UK by providing access to more affordable insurance.

For further information on this scheme, visit the website <http://www.floodre.co.uk/>

Elite Athletes Conquer Eight Locks and a Hard Race on Glasgow's Canal

The toughest open water swimming race in the UK returned to Glasgow's Forth & Clyde Canal on April 9th, with almost 200 elite athletes taking on the challenge of swimming uphill. Now in its second year, Red Bull Neptune Steps saw the athletes take on a 420m sprint-swim up Maryhill Locks, climbing the eight locks that dominate the famous stretch of the canal and tackling obstacles ranging from cargo nets to canal barges on their way to the finish line.

Cheered on by a crowd of more than 2500, Glaswegian Mark Deans battled his way past swimmers from as far afield as Sweden and Poland to be crowned the Neptune Steps champion for the second time.

Steve Dunlop, Chief Executive of Scottish Canals, said: "We were delighted to welcome Red Bull Neptune Steps back to Glasgow again and what better way to celebrate the Year of Innovation, Architecture and Design than by transforming a scheduled monument into the venue for a world-class, high-octane adventure race?"

"Scotland's canals attract 22 million visits each year from cyclists, walkers, runners, boaters, paddlers and anglers from around the world and are a major part of the nation's leisure and tourism industry. By using these 200-year-old assets in new and exciting ways, they can create jobs, stimulate business and help drive regeneration across urban and rural areas."



Glaswegian Mark Deans crowned the Neptune Steps champion for the second time

North Renfrew Flood Prevention Scheme Completed



North Renfrew FPS pumping station

A new flood prevention scheme that will protect more than 300 homes and businesses in North Renfrew is now up and running. The £10m North Renfrew Flood Prevention Scheme comprises a 3m high embankment and a new underground pumping station at the Mill Burn at Fingal Road.

The embankment, which runs westward for 1km from Ferry Road, provides a barrier against direct flooding from the Clyde. The pumping station will ensure that tidal surges on the Clyde do not cause the Mill Burn to overflow and flood local properties.

The new scheme will see an end to periodic flooding which has required sandbagging of many homes and businesses in the area at least once a year. The combination of tidal surges and overflow from the burn has created flooding problems in the north end of Renfrew since the area was reclaimed from the river 300 years ago.

The investment will provide locals with protection against flooding events that have a 0.5% chance, including an

allowance for climate change, of happening in any given year.

Speaking at the completion of the works, Councillor Eddie Devine, convener of Renfrewshire Council's Environment policy Board, said: "This new scheme will provide a high level of protection for homes and businesses in the north of Renfrew. It will mean an end to residents' worries and the considerable resources that have to be spent on sandbagging and clearing up the streets when flooding occurs."

Councillor Mark Macmillan, Leader of Renfrewshire Council, said: "As well as protecting families and homes, we hope that this new scheme will encourage businesses to invest in the local area.

"Along with the economic regeneration that will come with the planned Renfrew-Yoker bridge, Renfrew's status as Scotland's first town centre Simplified Planning Zone and the Airport Investment Zone, this scheme will boost business confidence in the town."



North Renfrew FPS pumping station

Summerhill Road Flooding Project Completed

An important environmental improvement project in the Drumchapel area of Glasgow has been completed.

Scottish Water has invested about £1.2m in major improvements to the waste water infrastructure in the Summerhill Road area, which will help tackle sewer flooding issues that have affected the area.

The project, which started in August 2015 and was carried out by Scottish Water's alliance partner aBV, involved the installation of new storage, in the form of three large pipes each about 80 metres-long, which will be utilised during heavy rainfall when there is insufficient capacity in the existing sewer network downstream.

This project will enable two properties which have been affected by internal flooding, and four affected by external

flooding, to be removed from the sewer flooding register.

This project will significantly reduce the risk of future occurrences of sewer flooding in the area which have on occasion impacted a number of properties.



Construction works at Summerhill Road

Scottish Water Project Uncovers Medieval Castle in Glasgow

The centuries-old remains of two castles have been discovered in Glasgow during Scottish Water's £250m upgrade of the city's waste water infrastructure.

Archaeologists are describing the discovery of a hitherto unknown 12th or 13th century medieval castle in Partick, and a little-known castle built on the same site 400 years later, as the most historically significant in the city for a generation.

Scottish Water was carrying out preparatory work ahead of the installation of a key piece of infrastructure, as part of its £250m upgrade of Glasgow's waste water infrastructure, when the discoveries were made.

Archaeologists unearthed a series of features, including ditches, a well and several stone walls.

They believe some of these are the remains of the 17th century Partick Castle and a 12th or 13th century castle, used by the bishops of Glasgow, which was built on the same site.

There is documentary and antiquarian evidence that the 17th century castle existed, and that the bishops of Glasgow spent time in what was then rural Partick in the 12th century, but the archaeological discoveries are being described by experts as "the first hard, tangible evidence" that either castle existed.

The archaeologists' painstaking excavations also uncovered fragments of pottery, metalwork, leather, glass and animal bones, estimated to have a date range of between the 12th and 17th centuries.

They say it is also "remarkable" that the ruins survived the amount of industrial activity in the area over the centuries,



Archaeological investigations underway – Picture by SNS

when Glasgow was at the forefront of the industrial revolution and became the 'second city of the Empire.

The remains of the castles and artefacts have lain beneath ground used for an engine works, an industrial laundry, the old Partick Central Railway Station, a metal scrapyard and a foundry, which were built and operated in the area in the 19th and 20th centuries.

The discoveries were made in the Castlebark Street area on the north bank of the River Kelvin, just before it joins the River Clyde, during preparations for a £3m, Scottish Water project to install a new Combined Sewer Overflow (CSO) that will contribute to the improvement in the environmental water quality in the River Kelvin.

This project and the Summerhill Road project are part of the biggest investment in the Greater Glasgow area's waste water infrastructure in more than a century to improve river water quality and tackle flooding.

Discovering the Clyde Project

Discovering the Clyde is a 5-year programme that's designed to improve understanding of how humans have created, been affected, changed and been changed by the River Clyde. The programme will generate information for a broad range of users and interested parties; from cultural heritage managers to planners and historic environment researchers; from academics to the public. A series of projects will examine aspects of the river from its source to the sea. Users are encouraged to use the website www.discoveringtheclyde.org.uk to discover new ways of looking at the river, and start to create new ideas about the heritage of this amazing 176km long thread of history.

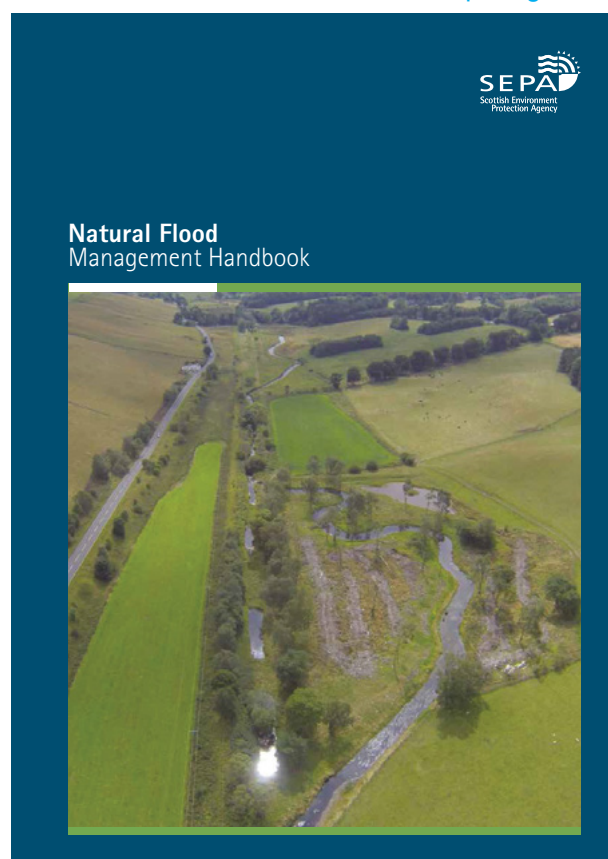
SEPA Publishes Guidance on Natural Flood Management

Projected climate change over the next century, pressure of population growth, and the impact of recent flooding has shown that new, more sustainable, ways to manage flooding are needed. A key element of sustainable flood risk management involves finding ways to manage flooding at its source, rather than solely focusing on traditional engineering further down the catchment. This can include, for example, riparian planting, reinstating flood plains, restoring coastal areas or returning watercourses back to their natural shape.

To facilitate this, SEPA published, in January, a Natural Flood Management Handbook. This details how natural flood management can play an important role, as part of a suite of measures, to help reduce the risks and impacts of flooding events while simultaneously delivering many other benefits.

Natural flood management typically involves a catchment wide approach based on measures that work with natural features and processes to manage sources and pathways to slow and / or store runoff, and covers a spectrum of techniques from full-scale restoration of the course of a river or intertidal habitat to smaller scale land management measures such as upland drain blocking. In addition to benefits to flooding, these techniques can incorporate, and contribute to, improvements in biodiversity, water quality, and carbon storage which in turn can improve access to wildlife, health and wellbeing, recreation, and jobs.

The Natural Flood Management Handbook is available to download from the SEPA website www.sepa.org.uk



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



www.glasgow.gov.uk



www.scottishwater.co.uk



www.sepa.org.uk



www.clydegateway.com



www.clydeplan-sdpa.gov.uk



www.scottishcanals.co.uk



www.southlanarkshire.gov.uk



www.renfrewshire.gov.uk



www.northlanarkshire.gov.uk



www.networkrail.co.uk



www.eastdunbarton.gov.uk

www.mgsdp.org