



The Metropolitan  
Glasgow Strategic  
Drainage Partnership

# **Surface Water Management Masterplan**

## **Summary and Actions**

**September 2016**

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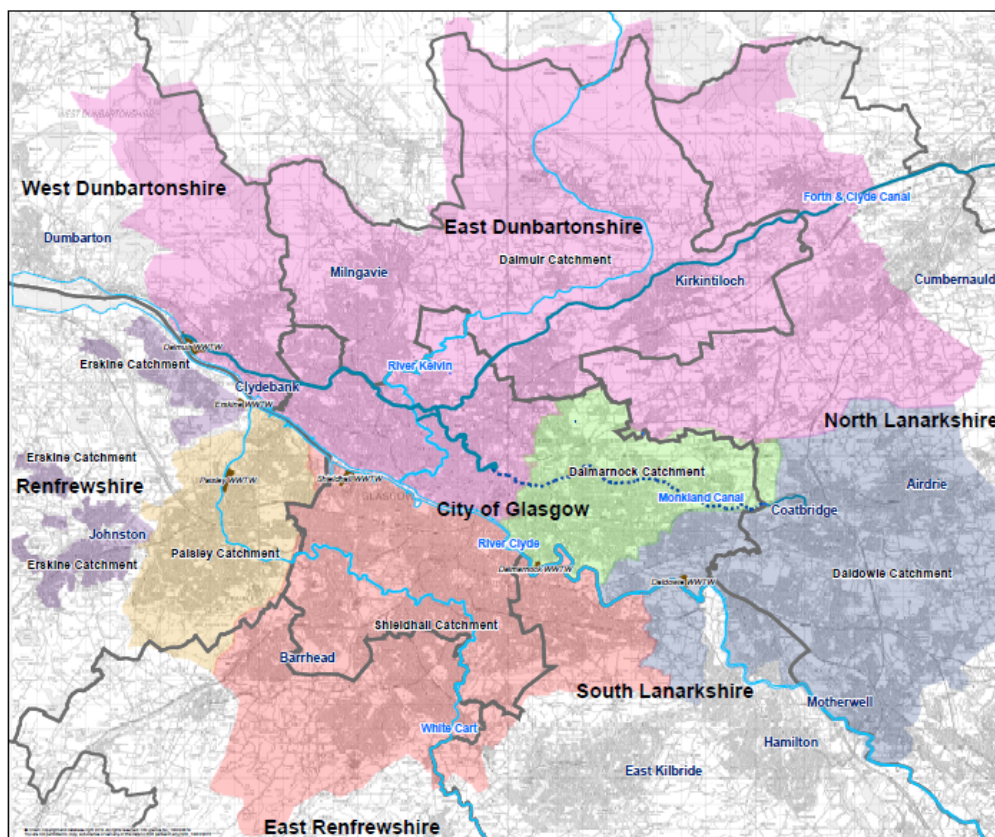
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## 1. MGSDP Area and Partners

### MGSDP Area

The Metropolitan Glasgow Strategic Drainage Partnership (MGSDP) is a non-statutory, voluntary, partnership between public bodies involved in managing surface water, water quality, flood risk, investment planning and economic development in a regulatory, service provision, asset management and / or infrastructure provision capacity.

The MGSDP area is taken as being the extent of the four main Glasgow wastewater treatment works (WwTWs), plus Paisley (Laighpark) WwTW and Erskine WwTW, as indicated by the shaded areas on the plan below.



**Figure 1:** Geographic Extent of MGSDP – showing WwTW catchments (shaded), local authority boundaries and primary watercourses.

The MGSDP recognises the complex nature of drainage and the management of rainfall and flooding, with many agencies responsible for different aspects of drainage systems. In addition, there is a duty on all public bodies to work effectively, efficiently, in an integrated manner and in the spirit of collaboration, to deliver best value.

As such, the MGSDP recognises that its aims and objectives cannot be met without the help and involvement of all key stakeholders / partners, meaning that a partnership approach is essential to tackle the challenges and deliver a drainage network that will facilitate growth and regeneration for decades to come.

## MGSDP Partners

The current, core, MGSDP partners are identified below:-



## 2. MGSDP Objectives, Vision and Guiding Principles

### Objectives

The MGSDP has five over-arching Objectives, recognising the need to continue to adapt to climate change and urban development as part of the strategy of how we drain and enhance our urban landscapes:-

1. Flood risk reduction.
2. River water quality improvement.
3. Enabling economic development.
4. Habitat improvement.
5. Integrated investment planning.

Further detail on the MGSDP Objectives is available on the MGSDP website – [www.mgsdp.org](http://www.mgsdp.org)

### Vision

The MGSDP 2060 Vision, to provide a strategic focus to deliver the Objectives, is:-

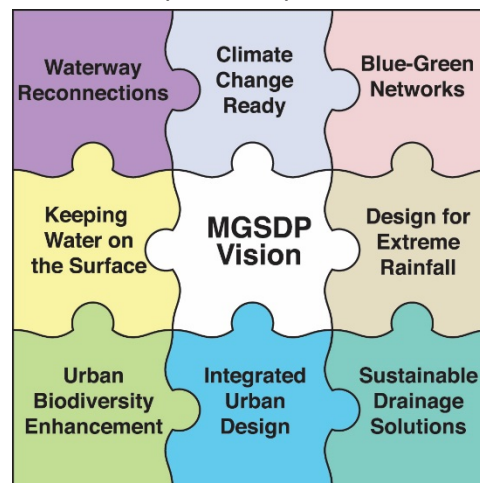
***“to transform how the city region thinks about and manages rainfall  
to end uncontrolled flooding and improve water quality”***

The Vision and Objectives provide a strategic focus for the MGSDP partners to embed into their respective organisations, and to work together to provide a functional and appropriate drainage service to the public and business communities.

### Guiding Principles

The MGSDP Vision and Objectives will be delivered through collaborative, partnership working shaped by the MGSDP Guiding Principles:-

- **Enhancement of our urban biodiversity and landscape;**
- **Reconnection to our waterways;**
- **Design for the severity of the rain;**
- **Presumption that water will be kept on the surface;**
- **Creation of integrated blue-green networks;**
- **Integrated urban master planning and design;**
- **Sustainable and affordable drainage solutions;**
- **Climate-change ready.**



**Figure 2:** The MGSDP Guiding Principles

Further detail on the MGSDP Guiding Principles is available on the MGSDP website – [www.mgsdp.org](http://www.mgsdp.org)

### NPF3 National Development Status

The MGSDP is a Scottish Government NPF3 National Development as it is deemed a nationally significant exemplar of catchment-scale water and drainage infrastructure planning, with the aim to better service existing communities, unlock potential development sites and to build greater resilience to long-term climate change. Projects will be delivered within the lifetime of NPF3, ensuring that aspirations for regeneration and growth are supported by improved infrastructure capacity:- <http://npfactionprogramme.com/national-developments/07-the-metropolitan-glasgow-strategic-drainage-partnership/>

### **3. Surface Water Management Challenges and Actions**

Over the past 10 years, there has been extensive work carried out by the MGSDP to understand and mitigate the effects of flooding throughout the city, enable economic growth and improve the water quality of watercourses.

Ongoing project delivery over the next six years will see almost a doubling of the investment to date across the partnership area, and further long-term delivery, guided by partner regulatory and investment / funding cycles and the Flood Risk Management (Scotland) Act 2009, will ensure that an integrated, innovative, approach will continue for decades to come to tackle key challenges.

It is, however, recognised that much of the implementation work to date has been to bring the key parts of the current drainage system up to the standards required 'today' and the need remains to provide a level of resilience to the anticipated effects of future changes in climatic conditions and of continued urban creep, whilst continuing to deliver the MGSDP Vision and Objectives.

Through 2016 the MGSDP considered the main challenges for the metropolitan Glasgow area – flooding, river basin management planning, a predominantly combined sewer network, system capacity, climate change, urban creep, population change, housing demand, lack of existing watercourses, retrofit in urban areas, low permeability soils and 'traditional' 'grey' infrastructure solutions - , and identified 24 key Actions to address these challenges.

The primary purpose of the MGSDP Surface Water Management Masterplan is to summarise these Actions to be delivered going forward to address the main surface water related challenges facing the metropolitan area, and to maintain momentum in delivery of the MGSDP Vision:-

#### **Action 1**

Raise awareness of the latest guidance documents and best practice.

#### **Action 2**

Contribute to the development of new and updating of existing guidance documents and surface water management / SuDS policy.

#### **Action 3**

Identify opportunities to improve the morphology of watercourses, such as through daylighting / de-culverting and introducing meanders. Avoid culverting existing open watercourses.

#### **Action 4**

Identify sites where existing separate drainage systems could be disconnected from the combined network, or attenuated to reduce peak flows.

#### **Action 5**

Identify potential for retrofit surface water management implementation to attenuate / remove surface water.

#### **Action 6**

Consider maintenance / renewal / regeneration programmes (property and infrastructure) to identify opportunistic disconnection from the existing combined network, or attenuation.

**Action 7**

Review existing open areas / public space to consider potential to better manage surface water.

**Action 8**

Ensure the message of a strong presumption against accepting surface water into the combined sewer is applied, enforced and appropriately recorded.

**Action 9**

Scottish Water Development Planning team to undertake proactive engagement with local authority Planning departments to understand strategic development plans and assess potential capacity challenges.

**Action 10**

Identify ways to incentivise individuals and organisations to retrofit SuDS. Consider the potential to allow a reduction in surface water charge if a % of contributing area is disconnected or attenuated.

**Action 11**

Ensure appropriate allowance for climate change increase in rainfall / runoff, using the best available guidance, to ensure projects adequately reflect long term impacts.

**Action 12**

Raise awareness of the challenge of urban creep, to promote understanding of the cumulative impact that it has.

**Action 13**

Identify ways to ensure more rigorous enforcement of existing legislation to resist urban creep and the potential impacts. Opportunities should be taken to promote the installation of surface water management measures to 'offset' additional areas of impermeable surface.

**Action 14**

Actively promote the use of the canal network as a point of discharge for surface water flows, through suitable SuDS, and as a route to manage exceedence events.

**Action 15**

Identify areas where historic watercourses could be reinstated, or 'new' watercourses / conveyance routes / conduits created, and test feasibility. Focus on areas of the city / sub-catchments that are no longer served by a watercourse or where historic watercourses have been 'lost', such as Govan and North Glasgow.

**Action 16**

Ensure collaborative working with upstream partners, and consider all opportunities for natural flood management (NFM) measures.

**Action 17**

Identify and implement opportunities for retrofit in-curtilage measures, including at individual property scale.



**Action 18**

Utilise British Geological Society data to identify areas with greatest potential for infiltration measures to be effective.

**Action 19**

Identify opportunities to increase awareness of a need to deliver a better balanced mix of blue, green and grey infrastructure.

**Action 20**

Partners to endeavour to include project scope items to quantify the impact of 'green' interventions.

**Action 21**

Consider whether existing costing and option selection processes give appropriate weight to the added benefits of green and blue infrastructure.

**Action 22**

Confirm the processes / delivery mechanisms that the MGSDP principles have been embedded in, including collaborative / integrated working and which organisation is responsible for them (e.g. surface water management plans, land use planning, sewer network management etc), and consider opportunities for improvement.

**Action 23**

Undertake a high level assessment of the future 'needs' of the drainage system and whether the programme of current and future projects will deliver the MGSDP Objectives and Vision.

**Action 24**

Quantify the benefits being delivered by current MGSDP interventions - ie what is the reduction in flood risk, how much surface water is being removed / reduced in the sewers, how much new habitat / green space is being delivered etc.

The MGSDP partners are committed to flood risk and surface water management in an integrated, collaborative and sustainable manner, aligned with the MGSDP Guiding Principles, to deliver this long-term masterplan for a resilient and growing metropolitan area for the next 50 years, and in line with the aspirations of the partners and the Clyde and Loch Lomond - Local Plan District - Flood Risk Management Strategy and Local Flood Risk Management Plan.

Over the coming years, the MGSDP partners will monitor the implementation of the Vision and Objectives, aligned with the Guiding Principles.

Key to the successful delivery is for the MGSDP partners to embed the MGSDP Vision, Objectives and Guiding Principles, including collaborative / integrated working, into partner 'business as usual' processes.

Further detail on the MGSDP is available on the MGSDP website – [www.mgsdp.org](http://www.mgsdp.org)