Item 2

22nd September 2026

Glasgow City Council

Net Zero and Climate Progress Monitoring City Policy Committee

Report by George Gillespie, Executive Director of Neighbourhoods, Regeneration and Sustainability

Contact: David Hay

FLOOD RISK MANAGEMENT UPDATE

Purpose of Report:

To provide an update on flood risk management activities and the associated capital investment programme and to set out proposals for a Property Flood Resilience initiative.

Recommendations:

The Committee is recommended to:

1. Note the report.
2. Refer the Property Flood Resilience initiative to the City Administration Committee for approval once detailed proposals are developed.
3. Receive a flood risk management update in September 2027.

Ward No(s):	Citywide: ✓
Local member(s) advised: Yes ☐ No ✓	consulted: Yes ☐ No ✓

1. Introduction

1.1. A Flood Risk Management update report was presented to the Net Zero and Climate Progress Monitoring City Policy Committee on 23 September 2025.

1.2. This report provides an update on the following flood risk management and climate resilience activities over the last 12 month period:

- Flood Risk Management (Scotland) Act 2009 Cycle 3;
- Strategic Flood Risk Assessment;
- Scottish Government 26/27 Capital Funding;
- Property Flood Resilience Initiative;
- Surface Water Management Plans;
- Watercourse Maintenance; and
- Hydraulic Modelling.

2. Flood Risk Management (Scotland) Act 2009 Cycle 3

2.1. On 18 December 2025, SEPA published the National Flood Risk Assessment (NFRA) 2025 report. The table below sets out the number of properties at a medium risk from flooding within Glasgow.

Total properties at risk of flooding in 2025	52,900
Residential properties at risk of flooding	49,100
Non residential properties at risk of flooding	3,800
Percentage of total properties that are in areas at risk	15%
Properties at risk of River / Fluvial flooding	6,200
Properties at risk of Tidal flooding	1,700
Properties at risk of Surface Water (Pluvial) & Small Watercourse flooding	47,800
Forecast properties at risk of flooding by 2100	82,000

2.2. Preparations for Cycle 3 (2028 – 2034) are ongoing. Recent activity has included joint SEPA and Glasgow City Council workshops to review the long-term aim for each Potentially Vulnerable Area, agree short-to-medium term objectives and develop actions.

3. Strategic Flood Risk Assessment

3.1. A key activity for the Flood Risk Management team during the last 12 month period was preparing the Strategic Flood Risk Assessment (SFRA) to support the emerging City Development Plan 2 (CDP2) and ensure flood risk is properly considered in future land-use planning. The assessment

responds to National Planning Framework 4 Policy 22 and SEPA guidance, focusing on avoiding increased flood risk by steering vulnerable development away from areas of flood hazard. Glasgow is one of the first Council's to complete an SFRA in line with the new SEPA guidance.

3.2. The SFRA confirms that Glasgow's main flood risks arise from river, surface water and tidal sources, with flood mechanisms complicated by the city's dense urban environment, culverted watercourses, sewer network and overland surface water flows. The assessment draws on SEPA flood mapping, climate change allowances, detailed hydraulic modelling, flood risk management plans, reservoir inundation mapping, Scottish Water information and other partnership datasets.

3.3. Stage 1 established the overall SFRA methodology, collated available information and identified evidence gaps such as the level of protection provided today by the White Cart Water Flood Protection Scheme (as noted in paragraph 7.1 below, there is an ongoing workstream to update the White Cart Water hydraulic modelling). SEPA approval was secured for Stage 1, thereby allowing the CDP2 Evidence Report to pass the Scottish Government Gateway review.

3.4. Stage 2 assessed 569 candidate development sites to inform site allocation against NPF4 Policy 22 principles, flood extent screening, reliance on flood protection infrastructure, surface water drainage options, reservoir and canal inundation risk, and risks linked to orphaned drainage infrastructure. Engagement is ongoing with SEPA to secure agreement on the site allocation outputs from the SFRA.

4. Scottish Government 26/27 Capital Funding

4.1. For the 26/27 financial year, the Scottish Government agreed with COSLA a different funding model, resulting in Glasgow City Council receiving £2.304 million of capital funding for flood resilience activities. This funding comes from the annual £42 million allocation provided to local authorities to support delivery of actions flowing from the Flood Risk Management (Scotland) Act 2009. The revised allocation methodology moved away from flood scheme-specific distribution and instead applied a formula that considered Annual Average Damages from flooding.

4.2. The additional funding has been allocated across a range of the flood resilience activities identified by the Scottish Government. A breakdown of the allocation is provided in the table below.

Activity	£
Property Flood Resilience Scheme	850,000
Culvert / SuDS Capital Maintenance	750,000
Nature Based (Blue-Green) Solutions	254,000
Modelling (White Cart & Tidal Clyde)	200,000
General Flood Resilience Activities	150,000
White Cart Water Capital Maintenance	100,000
Total	**2,304,000**

4.3. The Council is required to report to the Scottish Government on the use of the funding, with a summary return due during February 2027 outlining expenditure and planned activities.

4.4. This Scottish Government funding is in addition to ~£14.5m capital funding already allocated to climate resilience projects being managed by the Flood Risk Management team including the final three MGSDP City Deal interventions, Camlachie Burn culvert works and the Water Environment Fund grant received from SEPA for the Glasgow Lost Rivers project.

5. Property Flood Resilience Initiative

5.1. The September 2025 Flood Risk Management update reported that a Property Flood Resilience (PFR) pilot for Glasgow was under development, recognising that there are properties in the city vulnerable to surface water flooding where, because of the density of development, it is unlikely that sufficient flood storage can be provided within the sub-catchment to significantly lower the risk. PFR measures, including flood doors, smart air bricks and non-return valves, were identified as a practical means of reducing the risk of floodwater entering individual buildings and improving recovery following flood events. Officers have now completed their review of PFR approaches currently operated by other Scottish local authorities to inform the preferred delivery model for Glasgow. This identified a range of approaches as summarised below.

Approach identified	**Number of other Scottish local authorities**
Grant schemes	3
Subsidy / cost-price product support	5
Scheme-specific PFR delivery	2
Community resilience / assessment-led approaches	2

Approach identified	Number of other Scottish local authorities
Advice, planning and general flood risk management measures	19
Total	**31**

5.2. The review highlights that several Councils are already taking proactive steps to support residents and businesses to mitigate flood risk through the installation of PFR measures.

5.3. Having considered the approaches adopted elsewhere in Scotland and the practicalities of delivery within Glasgow, Officers consider that the most appropriate way forward is to develop a targeted Property Flood Resilience initiative drawing on elements from a range of existing models, rather than replicating any single local authority approach. Particular attention will be given to directing support towards properties identified through existing flood risk evidence, including Surface Water Management Plans and other recognised sources of flood risk information.

5.4. The emerging proposal would be assessment-led, ensuring that any recommended measures are proportionate to the level and source of flood risk affecting individual properties. Support would focus on practical measures capable of reducing flood damage and improving recovery following flood events. Consideration will also be given to aligning Property Flood Resilience measures with wider housing retrofit and climate adaptation programmes where appropriate.

5.5. Officers propose that the initiative be introduced initially as a time-limited pilot programme. This approach would enable operational arrangements, resident demand, supplier capacity, installation quality and overall effectiveness to be evaluated before any decision is taken on longer-term implementation. Subject to approval, it is envisaged that the pilot would operate for an initial 12-month period, following which a further report would be presented to Committee setting out the outcomes achieved and recommending whether the initiative should be continued, modified or discontinued.

5.6. Detailed eligibility criteria relating to flood vulnerability, assessment requirements, quality assurance procedures and monitoring arrangements will be developed as part of the development phase and presented to the City Administration Committee for approval. The emerging proposal will be developed around a standard grant contribution of up to £5,000 per eligible residential and business property. This level of grant is in line with the maximum grants offered by other local authorities operating a comparable initiative. Consideration is also being given to an enhanced grant of up to

£7,500 where additional financial assistance is required, for example to a household already qualifying for certain Council Tax reductions. Consideration will be given to ensuring that support is directed towards those properties and communities most likely to benefit from intervention, whilst maintaining a proportionate and administratively efficient scheme.

5.7. Further development of the pilot will address a number of detailed operational questions before final proposals are presented for approval. This will include confirmation of who will be eligible to apply, including whether the grant should be limited to residential property owners, registered social landlords and businesses with a leasehold interest of more than 12 months. The detailed design will also consider how the scheme can manage cashflow for residents and businesses, including whether payment should be made in arrears following installation or whether alternative arrangements are required to avoid excluding applicants who may be unable to fund works upfront. Appropriate evidence requirements will be developed to confirm that approved PFR measures have been installed before grant funding is released, supported by proportionate fraud prevention, audit and recovery arrangements to protect public funds.

6. Surface Water Management Plans

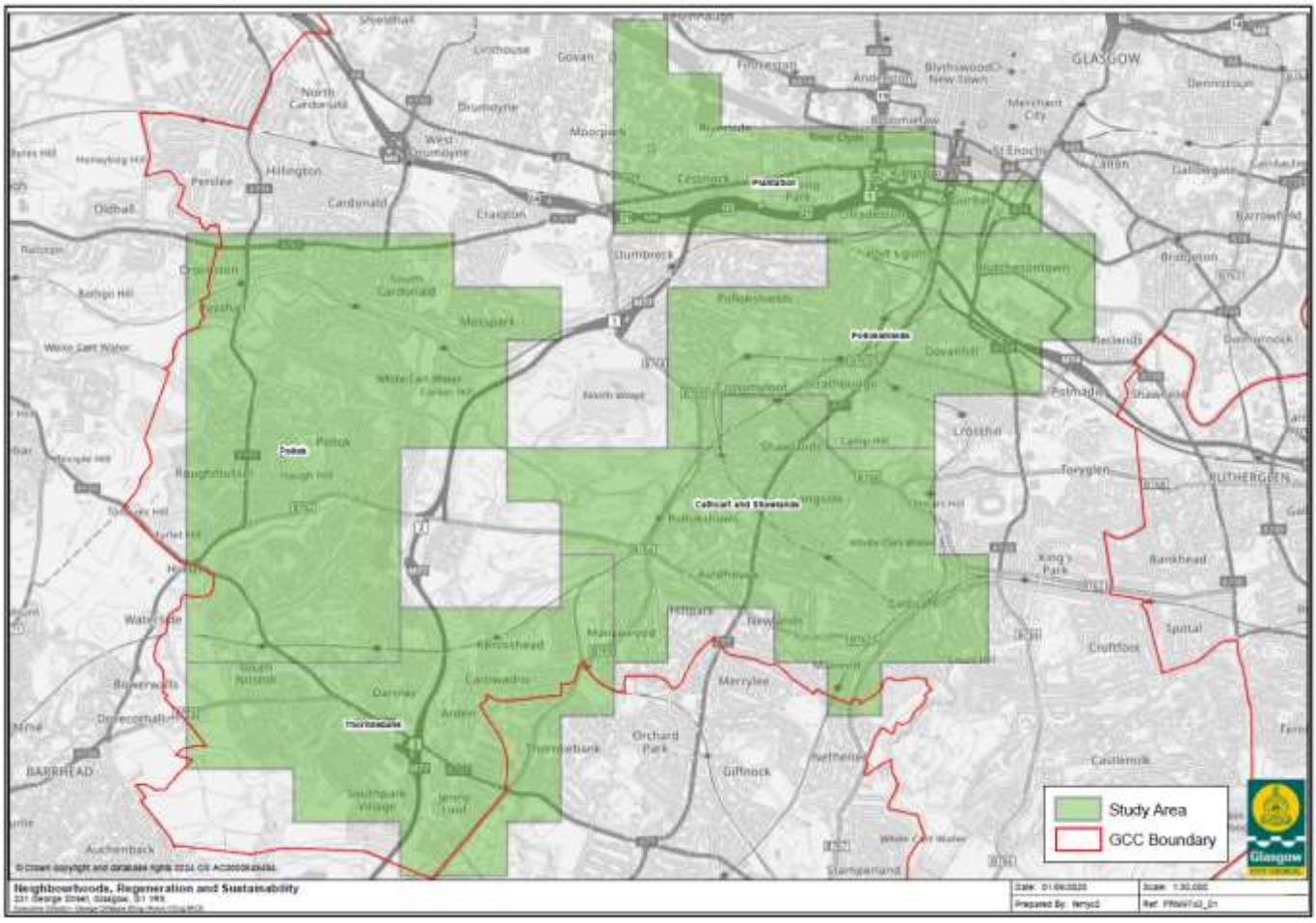
6.1. The development and delivery of surface water management plan (SWMP) interventions have continued including:

- Drumchapel SWMP Phase 2A - Works were completed in December 2025 to increase drainage capacity at the junction of Summerhill Road and Pitmilly Road to reduce the risk of flooding to residential properties.
- Drumchapel SWMP Phase 2B – Project development has continued to create a flood storage basin at Pitmilly Road to reduce the risk of flooding to residential properties. Committee approval was granted on 6 August 2026 to enter an excambion negotiation with Wheatley Homes to swap the Pitmilly Road site for a GCC owned site in Milton. The draft construction tender package for the basin works was received on 21 August 2026 for review and comment. Site works are scheduled for spring 2027.
- Yokermains SWMP - Project development has continued to reduce the risk of surface water flooding in the Waldemar Road and Wykeham Road areas including swale and raingarden detailed design, non-intrusive below ground utility surveys and scheduling trial trenches to confirm the location of below ground utilities.
- City Centre Conduit – A consultancy contract is being procured to assess the technical and economic case for constructing a new surface water conduit, or series of conduits, through Glasgow city centre to the River Clyde. The study responds to the city centre's high proportion of impermeable surfaces, reliance on a Victorian combined sewer network, and limited remaining natural watercourses, all of

which contribute to surface water flood risk, constrain regeneration, and increase pressure on the sewer system during storm events.

6.2. A different approach is being piloted for the next phase of SWMPs, which seeks to accelerate the identification of feasible interventions and provide an evidence-led basis for progressing the highest ranked options to schematic design and delivery. The following five SWMP areas across south Glasgow, shown in the below figure, are being bundled together into a single consultancy contract:

- Pollokshields
- Plantation(Ibrox and Kingston)
- Pollok
- Thornliebank
- Cathcart & Shawlands



6.3. Existing flood risk information, asset data and local constraints will be collated at the outset to establish a baseline understanding of each SWMP area. This will allow potential intervention locations to be identified early. Detailed hydraulic modelling, previously undertaken at this stage, is being deferred following a value for money assessment.

6.4. The methodology will then progress from a broad long-list of potential interventions to a prioritised short-list through agreed assessment criteria,

including likely flood risk reduction, deliverability, cost, maintenance implications, community impact, vulnerability, Scottish Index of Multiple Deprivation, links to wider projects and opportunities to deliver multiple benefits. Stakeholder input, including from GCC services, Scottish Water and SEPA, will be built into the shortlisting process to help focus effort on the most practical and beneficial options.

7. Watercourse Maintenance

7.1. Over the last 12 months, watercourse maintenance has focused on the Camlachie and Stand Burns.

- Camlachie Burn Phase 3 – The tender was issued to remove silt build-up in the culvert between Shettleston Road and Biggar Street and install a penstock at Alma Street to activate the Camlachie Burn Overflow. Although no fully compliant tenders were received, consideration is currently being given to awarding a contract for part of the tendered scope to raise buried manholes and install the penstock. This will allow a simplified silt removal contract to be retendered and discussions are ongoing with specialist contractors to inform the pricing structure and disposal options.
- Stand Burn (Robroyston) - Maintenance and investigation work has been progressed including ditching to remove significant silt accumulation and root cutting within the culverted section. These works are facilitating the surface water connection to the Stand Burn from the East Balornock Phase 7 social housing development. Further investigation is being scheduled in the vicinity of the Wallacewell Play Area to inform the strategy to resolve a collapsed culvert, which is directing surface water into the combined sewer.

8. Hydraulic Modelling

8.1. Preparation works are ongoing to obtain updated hydraulic models for the Tidal Clyde and White Cart Water.

- Tidal Clyde – The River Clyde Flood Model Phase 2 update will refresh and enhance the 2020 River Clyde Flood Model. The scope includes collation of tidal gauge and storm records and after verifying the benefits, transferring the existing model into a new solver (TUFLOW FV). The model development stage will update ground model and estuary bed parameters, review topographic and flood defence information, revisit floodplain roughness, define tidal and fluvial boundaries, incorporate wind and pressure parameters, calibrate and validate the model, and review the interaction of peak river and tidal water levels. Scenario modelling will then test present-day and climate change flood assessment events, including defended and undefended scenarios, with final outputs, including GIS shape files, supporting future flood risk management, adaptation planning and development assessment decisions.

- White Cart Water - The proposed scope is to commission an updated hydrological assessment and new linked 1D/2D hydraulic model for the White Cart Water catchment, including the Auldhouse Burn, Brock Burn and Levern Water. The work will review flood history, undertake site inspections and topographic surveys, update hydrological inputs using current Flood Estimation Handbook (FEH) methods and available hydrometric data, and construct a new model capable of assessing present-day and the impact of climate change on flood risk. The model will test defended and undefended scenarios across a range of flood probabilities, support assessment of the standard of protection provided by existing flood defences and produce mapping to inform future flood risk management decisions, asset planning and development assessment.

9. Policy and Resource Implications

Resource Implications:

Financial:	All activities are funded from existing budgets.
Legal:	Legal support continues to be provided to the flood risk management programme for construction contracts, grant agreements and property transactions.
Personnel:	Approval has been granted to recruit a 2yr fixed term Officer to support the development and implementation of the Property Flood Resilience initiative and to fill the vacant Flood Risk Officer post to support delivery of capital projects.
Procurement:	Technical support and civil engineering construction contracts are normally procured via existing frameworks.
Council Strategic Plan:	Specify which Grand Challenge (s) and Mission (s) the proposal supports. Where appropriate the relevant Commitment can also be listed. Grand Challenge 3 > Mission 2 > Commitment 9. Deliver sustainable urban drainage and promote nature-based solutions to manage flooding and pollution.
Equality and Socio-Economic Impacts:	

Does the proposal support the Council's Equality Outcomes 2025-29? Please specify.	There is not a direct relationship between the flood risk management programme and the Equality Outcomes.
What are the potential equality impacts as a result of this report?	Flood risk management interventions usually have no significant impact to a minor positive impact.
Please highlight if the policy/proposal will help address socio-economic disadvantage.	Yes, as vulnerability to flooding is increased where households are unable to afford comprehensive insurance cover.

Climate Impacts:

Does the proposal support any Climate Plan actions? Please specify:	The flood risk management programme supports delivery of all the Climate Plan adaptation actions to mitigate the risk of flooding.
What are the potential climate impacts as a result of this proposal?	The flood risk management programme supports adaptation to mitigate the risk of flooding.
Will the proposal contribute to Glasgow's net zero carbon target?	The flood risk management programme seeks to deliver blue-green infrastructure to minimise the carbon footprint of the construction process.

Privacy and Data Protection Impacts:

Are there any potential data protection impacts as a result of this report Y/N	No
If Yes, please confirm that a Data Protection Impact Assessment (DPIA) has been carried out	

10. Recommendations

10.1. The Committee is recommended to:

1. Note the report.

2. Refer the Property Flood Resilience initiative to the City Administration Committee for approval once detailed proposals are developed.
3. Receive a flood risk management update in September 2027.