

TITLE: Wellhouse Crescent Flooding
Surface Water Management Opportunities Workshop 2

LOCATION: Microsoft Teams Meeting (due to Covid-19 Pandemic)

DATE: Friday 14th May 2021 Time: 10.00am- 12.30pm

Notes of Meeting

Present:

Martin Wilkie-McFarlane (MWM)	Wellhouse Housing Association Director
Craig Hart (CH)	Glasgow City Council Roads Maintenance Technician
David Hay (DH)	Glasgow City Council Engineering Group Manager
James Murray (JM)	Glasgow City Council MGSDP Manager
Mic Ralph (MR)	Glasgow City Council Transport and Planning Manager
Emilie Wadsworth (EW)	Green Action Trust Strategy & Development Manager
Neil Beveridge (NB)	Scottish Water Value & Benefits Team
Kieran Downey (KD)	Scottish Water Flooding Manager
Martin Hagen (MH)	Scottish Water Intervention Manager
Arshid Karim (AK)	Scottish Water Catchment Planner
David Winter (DW)	Scottish Water Wastewater Service Strategy Team Lead
Nicola Currie (NC)	M2 Civil Engineer
Lee Haywood (LH)	M2 Civil Engineer
Richard McGowan (RMcG)	M2 Project Principal
Michael McWhinnie (MM)	M2 Design Lead
Ricky Mitchell (RMit)	M2 Project Technical Lead (Newhills Road Project)
Wayne Potter (WP)	M2 Senior Hydraulic Modeller

Introduction			
NB welcomed everyone to the meeting and recapped the overall objective to progress Surface Water Management (SWM) opportunities to reduce flooding around Wellhouse Crescent.			
MR offered apologies on behalf of Emma Thomson who was not able to make the meeting today.			
Review of Actions from previous meeting on 23rd April 2021			
MM provided an update on actions raised at the previous meeting.			
	Action	Owner	Update
1	Complete table of potential SWM measures from meeting presentation and circulate for comment / acceptance.	SF / MM	MM updated table and issued via email on 27 th Apr 2021.

2	<p>Develop a plan for future meetings to discuss and agree the extent of the SWM measures to be designed. This meeting plan needs to consider the various SWM interventions and the particular stakeholders that need to be engaged with. Discuss and agree at meeting on 14th May. Also use this meeting to discuss 1 or more SWM measures to test the process.</p>	SF/MM/ AK/MH/ JM	MM noted that there is a slide in today's presentation where this will be discussed in more detail.
3	<p>Discuss content from this meeting with colleagues in Glasgow City Council maintenance.</p>	JM	<p>JM discussed with roads colleagues. Biggest concern is permeable surfacing for adopted roads. There are challenges with design performance and maintenance. This is also exacerbated by utility companies having the right to dig up adopted roads and not reinstating them properly. GCC will not adopt permeable surfaces for adopted roads. MR noted that parking at sides of roads is adopted and utility companies have the right to cross. Private areas and non adopted parking areas could be used for permeable paving.</p> <p>JM noted that GCC have some examples of highway rain gardens and are still on a learning curve around the implementation and maintenance of these. MR noted that GCC have limited maintenance budgets. Any interventions would need to be grouped so that maintenance could also be grouped.</p> <p>JM also spoke with education colleagues around property level measures. They have green roofs at Hillhead Primary although this has not been a good experience due to maintenance contractor going burst which resulted in problems with maintenance. Newhills Secondary is an older school and record drawings should be contained in Mitchell Library. It also provides additional support and learning and pupils would be sensitive to construction and loud noises. Any construction there would need to be during holidays. There is also the Aultmore Primary Campus. Newhills Road becomes very busy at school drop off and pick up times and any construction cannot impede access.</p>
4	<p>Identify any quick wins that could be progressed to make noticeable reduction in flooding impact.</p>	SF/MM/ AK/MH/ JM	MM noted that there are some slides in today's presentation where this will be discussed in more detail.

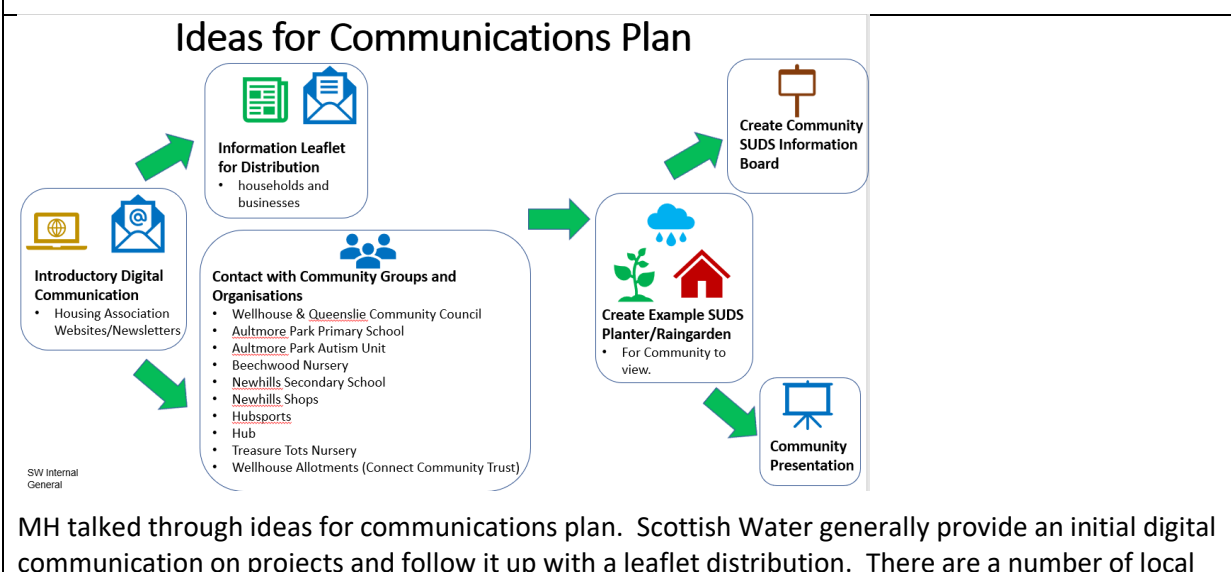
5	In parallel to the other actions, develop a communication strategy and associated material (maximising use of existing info) for engaging with communities / customers / tenants with regard to the SWM measures being considered.	SF/MM/ AK/MH/ JM/HA's	MM noted that there is a slide in today's presentation where this will be discussed in more detail.
6	In parallel to the other actions, agree a number of pilot locations for SWM Raingardens / SUDS Planters with the Housing Associations. Design and Implement.	SF/MM/ AK/MH/ HA's	MM noted that there are some slides in today's presentation where this will be discussed in more detail.

Agree Plan for Future Meetings

Type of measure	Scottish Water	Glasgow City Council	Housing Association	Others
Rain gardens (property)		Margaret Orzell (Housing)	Martin Wilkie-McFarlane (WHA) John McMorrow (Easthall Park HA)	Emily Wadsworth (Green Action Trust)
Rain gardens (non-property)	Grant Vanson/ Annelies McMillan (FRM Team)	Seamus Connolly (Parks) James Murray (FRM)		Emily Wadsworth (Green Action Trust)
Roadside retrofits (bioretention, tree pits)		Mic Ralph (Transport Planning) Brendan Frankgate (Roads)	Martin Wilkie-McFarlane (WHA) John McMorrow (Easthall Park HA)	
Permeable surfaces	Grant Vanson/ Annelies McMillan (FRM Team)	James Murray (FRM) Mic Ralph (Transport Planning)		
SuDS planters (property)		Margaret Orzell (Housing)	Martin Wilkie-McFarlane (WHA) John McMorrow (Easthall Park HA)	Emily Wadsworth (Green Action Trust)
Detention basins/ storage	Grant Vanson/ Annelies McMillan (FRM Team)	Seamus Connolly (Parks) James Murray (FRM)		Emily Wadsworth (Green Action Trust)
Swales	Grant Vanson/ Annelies McMillan (FRM Team)	Seamus Connolly (Parks) Mic Ralph (Transport Planning) James Murray (FRM) Brendan Frankgate (Roads)		Emily Wadsworth (Green Action Trust)
Green roofs		Joe Nelson (Education Estates)		
Rainwater harvesting (new developments)	Mark McCullagh/ Glen Hunter (Customer Connections)		Martin Wilkie-McFarlane (WHA) John McMorrow (Easthall Park HA)	

MM talked through Engagement Matrix which outlined attendees proposed for different elements of surface water management. MR and Emma Thomson to be included in any elements involving discharge from roads and roads maintenance.

Communications Plan



community groups who we could engage with. Potential to create example rain gardens/SUDs planters that we could then use to engage with customers and the community.

MWM noted that information from last meeting was presented recently to the Wellhouse Housing Association Board Meeting and they are keen to be involved and happy to support all communications. Wellhouse Housing Association would be happy to use The Hub to promote surface water management measures and also for hosting any public meetings. Could potentially showcase permeable paving in car park.

MWM pointed out that many members of the community are not digitally connected and this will need to be taken into account with any communications. Facebook would probably be the best medium for digital communications. MWM noted that Local Community council is one of the most active in Glasgow. MWM also confirmed that Wellhouse Housing Association is the landlord of the shops on Newhills Road and nursery at The Hub, so can help with communications there. Wellhouse Housing Association publish a quarterly newsletter and can include information there on surface water management.

Both GCC and Scottish Water have internal teams who can help with communications. MWM would be the point of contact for Wellhouse Housing Association communications.

JM noted that GCC will be able to support through communications channels, in addition to the MGSDP itself. We need to consider an agreed consistent / central point of communications so people know where to go for the latest info. We will need to include the local MP and MSP in any communications.









EW noted that Green Action Trust are in the process of appointing several new rain gardens project officers, one of which would be able to help raise awareness and with community design. EW shared link to the ten thousand rain gardens project: <https://www.10kraingardens.scot/>

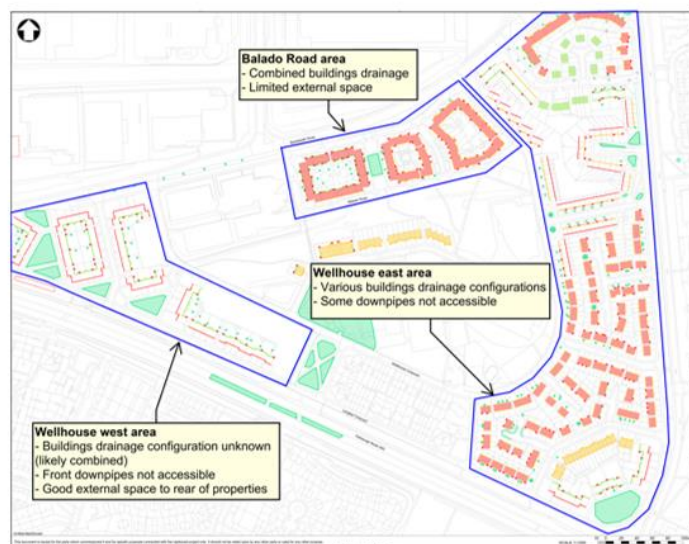
LH shared link to resources from Philadelphia's Water Department who successfully met their 10-year target for managing rain water <https://water.phila.gov/blog/2020-soak-it-up-call-to-action>

Review of Quick Win Opportunities – Raingardens

Quick Win SWM - Rain Gardens

Assessment of Existing Property Drainage

-  Properties with combined foul and storm drainage within property boundary.
-  Properties with separate foul and storm drainage within property boundary. Both systems discharge to combined sewer.
-  Properties with separate foul and storm drainage within property boundary. Storm system discharges to surface water sewer.
-  No information available.
-  Development areas with existing SuDS measures.
-  Properties where access to rainwater downpipes is restricted and will require intrusive works.
-  Properties where rainwater downpipes are external but with limited adjacent space for retrofit SuDS measures.
-  Properties where rainwater downpipes are external and there is adjacent space for retrofit SuDS measures.



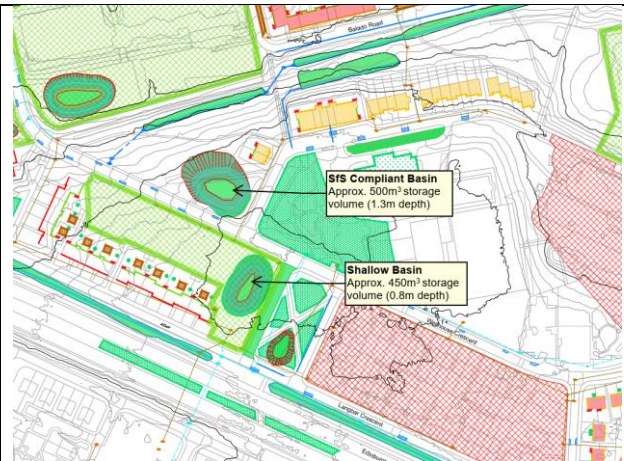
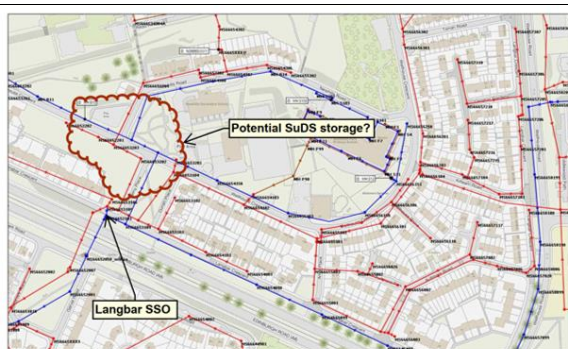
MM talked through quick win opportunities for rain gardens/planters and explained that typically planters have an external volume of 1m³ although usable volume would be less. Single downpipes can generally accommodate around 50m² of roof. A 50m² roof would typically require around 0.25m³ to store a 5mm rainfall event.

MM shared plan showing opportunities in the Wellhouse area. The Wellhouse West area was identified as somewhere that suDS planters/ rain gardens could be installed at the rear of buildings as they have external downpipes and there is a lot of space. MM noted this area could potentially be used as a demonstration. MWM agreed that older buildings in the Wellhouse West area would make a good demonstration site and would also help Wellhouse Housing Association in engaging with residents to improve back courts. KD noted the roof areas in the Wellhouse West area could potentially have an impact on both flooding onset and impact. KD would like to see us progress this area as it would provide multiple benefits, could be used as an exemplar and provide a learning opportunity. MWM noted that Wellhouse Housing Association would be keen to support and that we would need to speak with customers when we come to do the work.

It was agreed the Wellhouse West area should be developed further to try and realise the opportunities.

MR queried if soil conditions have been tested to see if infiltration will work effectively. AK responded that no Ground Investigation has been undertaken at this stage but desk top studies using historical boreholes will be undertaken as we progress. AK believe that the area is likely to be of a clay soil type and not a good candidate for infiltration. MWM noted that some ground investigation has taken place on vacant sites. MR queried if desk top study would pick up any contaminated ground. AK confirmed that contaminated ground issues would be assessed as part of any desktop study. DW provided link to British Geological Survey website which provides access to historical boreholes <http://mapapps.bgs.ac.uk/geologyofbritain/home.html>

Review of Quick Win Opportunities – Langbar Storm Sewer Overflow (SSO)



MM explained there is currently an overflow from the surface water system into the combined sewer at Langbar Crescent. This is an historic overflow and there are no records of when or why it was created. MM noted the hydraulic modelling predicts disconnecting the SSO would reduce out of sewer flooding around Wellhouse from 2488m³ to 1769m³ in a 30year return period (719m³/29% reduction).

KD queried why there was an SSO and what implications would be for the watercourse if the SSO was removed. JM noted that there are no records of why the SSO was created but we would need to understand the impact on the watercourse if it were to be removed.

KD queried whether the culvert could take more flow and noted that it was not a good idea to spill from a watercourse to a combined sewer. KD asked if there are any projects on the Camlachie Burn.

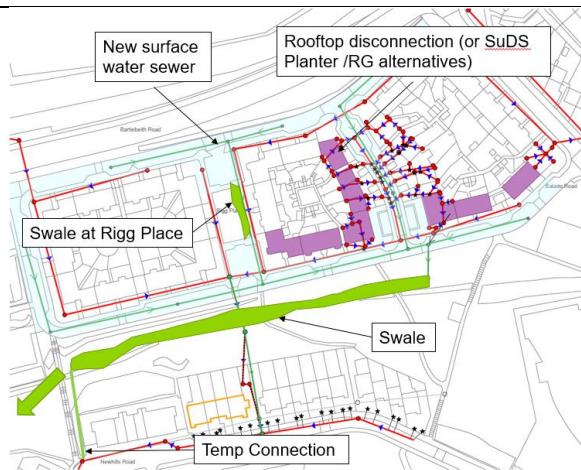
JM noted that there was a project undertaken to realign a section of the Camlachie Burn downstream at Shettleston. GCC also have plans to undertake Surface Water Management on the Camlachie Burn in Barlanark Park. Land at park recently sold to CCG Construction who have

development plans for the area. Need to work with CCG Construction to implement surface water management at the park.

MM noted the hydraulic model predicts that disconnection of the SSO increases flooding in Barlanark Park from 1300m³ to 1425m³.

KD thinks we need to seriously pursue removal of the SSO as it is likely that increased flooding in the park would make no material difference although this would have to be checked. KD asked if it may be possible to just disconnect the SSO without doing any other work at this time. MWM noted that Wellhouse Cres has had both foul and surface flooding in the past and we must not add to that risk. WP responded that storage has been added to alleviate the flooding at Wellhouse. MM noted that we would still need to provide storage of around 950m³ in the Wellhouse area to prevent flooding detriment there. This is proposed to be in the form of surface SUDS measures. RMcG recapped that we would need to provide storage around Wellhouse before we could disconnect the SSO. Action to further investigate removal of SSO at Langbar Crescent so that we can understand the impact of any flooding detriment and how long flooding would be there.

Other Opportunities – Newhills Road



RMit provided some background to the issues and proposals around Newhills Road which is to the north of Wellhouse. It is thought that the existing combined sewer was re-routed when the houses were built and this has resulted in a kink in the sewer that contributes to flooding. Proposals are to remove kink in the sewer and also remove surface water from the upstream catchment. Looking to remove roof drainage from 50 properties. Also new surface water sewer and swale is proposed to pick up road and roof drainage. Initially the swale would return attenuated flow to the combined sewer but in the future it would connect into the surface water management measures proposed for Wellhouse.

MR noted that if the swale takes roof and road drainage then a Section 7 Notice can be used to gain access to land. If a swale takes only road drainage from an adopted road then it becomes more difficult to get access to use land.

RMit highlighted that some of the roads are steep and asked if there is potential to use the roads to convey overland flow. MR noted that legally it is possible to discharge from a public road onto private land but that it is not legal to discharge from private land onto public roads. MR offered to have an offline discussion with RMit around the use of roads for overland flow. JM noted that

existing road gullies on east-west section of Balado Rd are on the north side of the road, so would need to be re-profiled to shed sheet flow of to the south.

RMit highlighted the opportunity to maximise the surface water management opportunities around Newhills Road to help the wider area and feed into the wider strategy. MM noted the potential for a SUDS corridor running from Newhills Road down through the Wellhouse area. KD noted this could be made as a feature for public space. DH suggested the swale at Newhills Road have a capacity greater than 30year return period to provide maximum benefit.

Discussion

Actions from meeting were discussed and are listed in the following action log.

ACTION LOG:

Item	Action	Owner	Action Due
1	Update engagement matrix	MM	21/5/21
2	Quick win opportunities for surface water management to focus on Wellhouse west area. M2 to progress discussions with Wellhouse Housing Association (WHA).	MM/MWM	30/5/21 (agree with WHA)
3	Langbar SSO – Detriment impact at Barlanark park to be investigated to understand impact on adjacent properties. Understand the flooding impact and how long flooding will remain. Recommendations for interventions to be identified.	MM/AK/JM	19/6/21 (agree SW/GCC detriment reporting)
4	Camlachie Burn – Opportunities for Surface Water Management Plan in woodland area at Barlanark Park (note env. Constraints e.g. badger set). Recommendations for interventions to be identified	MM/AK/JM	19/6/21 (GCC feedback re earlier investigations)
5	Discussion on potential for using roads infrastructure for interventions at Newhills Road. RMit to meet with MR to discuss.	RMit/MR	19/6/21
6	Update and distribute meeting plan for future meetings	MM	19/6/21
7	In parallel to the other actions, develop a communication strategy and associated material (maximising use of existing info) for engaging with communities / customers / tenants with regard to the SWM measures being considered.	SF/MM/AK/ MH/JM/HA's	30/5/21 (strategy) 30/6/21 (material)
8	In parallel to the other actions, agree a number of pilot locations for SWM Raingardens / SUDS Planters with the Housing Associations. Design and Implement.	SF/MM/AK/ MH/HA's	30/5/21 (agree) 30/8/21 (implement)