

**APPENDIX C – DRAFT ACTION PLAN**

Appendix C - Draft SWMP Action Plan, North Tyneside Council

ID	Action Type		Action				Priority Ranking	Progress to Date	Complexity	Cost			Potential Funding Source	Timing		Responsibility	Other Stakeholders (in addition to Ward Members and Landowners)
	Type	Legislation	What?	Why?	How?	Where?				Investigation / Feasibility	Capital	Other		Timeframe	Approx. Duration		
1	Statutory Requirement	Financial / Resourcing	Ensure required skills and technical capability is in place to deliver FWMA 2010 / FRR 2009 requirements.	Increase skills in Council to deliver requirements under FWMA.	Upskilling training programme for appropriate individuals or departments (as determined by the partnership structure) alongside Consultancy Support in the short-term where required	North Tyneside	High	Moderate	Low	-	-	Unknown	North Tyneside Council / Defra	Medium	2 Years	North Tyneside Council	Environment Agency
2	Statutory Requirement	Communication / Partnerships	Internal proactive awareness raising of Local Flood Risk Management.	Raise awareness of surface water flood risk (and CDAs) amongst Planners and influence planning policies to prevent the creation of new risk areas.	Include planners and planning policy influencers in awareness raising activities as set out in the Communications Plan - ensure CDA information is clear and accessible	North Tyneside	High	Moderate	Low	-	-	<£25k	North Tyneside Council / Defra	Short	6 months	North Tyneside Council	Environment Agency
3	Statutory Requirement	Communication / Partnerships	<b>SWMP Recommendation 1</b> Actively engage with professional stakeholders to communicate findings of SWMP and local flood risk management.	Will encourage a partnership between all authorities with a responsibility for managing flood risk across North Tyneside.	Utilise the North Tyneside Flooding Task and Finish Group and consult with key NTC departments and stakeholders.	North Tyneside	High	Good	Low	-	-	Unknown	North Tyneside Council / Defra	Short	Ongoing	North Tyneside Council	-
4	Statutory Requirement	Flood and Water Management Act / Flood Risk Regulations	<b>SWMP Recommendation 2</b> Issue the SWMP to LRFs and use the SWMP to inform emergency response operations and update Incident Management Plans and Community Risk Registers.	Will encourage a partnership approach to role as LLFA and greater collective communication approach to community.	Utilise the North Tyneside Flooding Task and Finish Group and consult with key NTC departments and stakeholders.	North Tyneside	High	None / not much	Low	-	-	<£25k	North Tyneside Council / Defra	Short	3 months	North Tyneside Council	Environment Agency, Northumbrian Water
5	Statutory Requirement	Communication / Partnerships	<b>SWMP Recommendation 3</b> Design and gain buy-in to a Communication and Engagement Plan to actively engage with professional stakeholders to communicate findings of SWMP and local flood risk management.	Greater transparency within North Tyneside on role as LLFA and greater collective communication approach to community.	Produce a Communication Plan to identify how to effectively communicate and raise awareness of risk to different audiences using a clearly defined process for internal and external communication with stakeholders and the public.	North Tyneside	High	Good	Medium	-	-	<£25k	North Tyneside Council / Defra	Short	Initially 3 months -Ongoing review as part of LFRM Strategy Review	North Tyneside Council	Flooding Task and Finish Group Partners
6	Statutory Requirement	Communication / Partnerships	Actively engage political stakeholders.	Ensure political acceptance and buy in is achieved and that political influence is used positively to support and fund flood risk actions	Engage political stakeholders as appropriate within formal political structures and communication protocols - as determined in the Communication Plan	North Tyneside	High	Good	Low	-	-	<£25k	North Tyneside Council / Defra	Short	6 months	North Tyneside Council	-
7	Statutory Requirement	Flood and Water Management Act / Flood Risk Regulations	Develop a Local Flood Risk Management Strategy for North Tyneside.	A strategy will be in place to determine how local flood risk should be managed across North Tyneside	Develop, maintain, apply and monitor a Strategy for local flood risk management of the area.	North Tyneside	High	Moderate	Medium	-	-	<£25k	North Tyneside Council / Defra	Short	6 months	North Tyneside Council	Northumbrian Water, Environment Agency, Local Residents
8	Statutory Requirement	Flood and Water Management Act / Flood Risk Regulations	Take forward existing and future Local Flood Risk Management Actions (under FWMA 2010 and from SWMP) in collaboration with multiple LLFAs / stakeholders.	Co-ordinated delivery of local flood risk management within North Tyneside and across Tyne & Wear.	Take forward existing and future local actions in the SWMP through the North Tyneside Flooding Task and Finish Group. Take forward existing and future strategic actions in the SWMP, including those involving multiple LLFAs or other flood risk management authorities.	North Tyneside and Sub-Regional	High	Moderate	Medium	-	-	<£25k	North Tyneside Council / Defra	Medium	Ongoing	North Tyneside Council and neighbouring LLFAs	Environment Agency, Northumbrian Water
9	Statutory Requirement	Flood and Water Management Act / Flood Risk Regulations	Implement a standardised Flood Incident Log to record and investigate future flooding incidents.	Improved procedures and protocol for recording flood events. Will provide improved historically flood information to support ongoing and future flood mitigation schemes.	Implement a standardised flood incident log to record flood events. Educate departments involved in filling in the spreadsheet to ensure everyone involved understands the log and the methodology. It is recommended that the source of flooding be recorded, e.g. gully surcharging, to inform maintenance priorities.	North Tyneside	High	Moderate	Low	-	-	<£25k	North Tyneside Council / Defra	Short	6 months to implement the log - this could be done immediately. The training of staff may take more time to formulate and action but it should be completed within 6 months.	North Tyneside Council	-
10	Statutory Requirement	Flood and Water Management Act / Flood Risk Regulations	Revise/Improve Flood Incident Log.	Improved information on flood events and flood risk.	Revise the incident log as required to incorporate more information. Develop a GIS/web based database to create a spatial representation of the incidents logged.	North Tyneside	High	Moderate	Low	-	-	<£25k	North Tyneside Council / Defra	Medium	Ongoing	North Tyneside Council	-
11	Statutory Requirement	Flood and Water Management Act / Flood Risk Regulations	Implement and populate a standardised Asset Register, prioritising surface water assets in those areas that are known to regularly flood.	Improved procedures and protocol for recording surface water assets and improved understanding and record of surface water assets.	Implement a standardised asset register structure as per the suggested template provided by Defra. Educate departments involved in filling in the register, need to ensure everyone involved understands the register, its purpose and the methodology. Populate Asset Register with Council-owned Surface Water / Drainage Assets	North Tyneside	High	Moderate	Medium	-	-	<£25k	North Tyneside Council / Defra	Short	6 months	North Tyneside Council	Environment Agency, Network Rail, NEXUS, Energy Operators + others as appropriate
12	Statutory Requirement	Flood and Water Management Act / Flood Risk Regulations	Formalise an Asset Register.	Improved information and access / visualisation of surface water assets.	Revise the Asset Register as required to incorporate more information, i.e. survey details and develop a GIS/web based- compatible database to create a spatial representation of the surface water assets.	North Tyneside	High	Moderate	Medium	-	-	<£25k	North Tyneside Council / Defra	Medium	Ongoing	North Tyneside Council	-
13	Statutory Requirement	Flood and Water Management Act / Flood Risk Regulations	Formalise the SUDS Approval Body (SAB).	Improved understanding, management and implementation of sustainable drainage schemes for new developments and re-developments, with wider benefits for reducing flood risk.	At present, monitor the development of National Standards, which are not likely to be implemented before March 2013.	North Tyneside	High	None / not much	Medium	-	-	-	North Tyneside Council / Defra	Medium	Ongoing	North Tyneside Council	-
14	Statutory Requirement	Flood and Water Management Act / Flood Risk Regulations	Work with Northumbrian Water to identify areas where sewer flooding impacts surface water flooding.	Improved understanding of sewer flooding across North Tyneside. Improved evidence for prioritising areas for flood mitigation.	Discuss existing sewer flood risk with Northumbrian Water and agree areas where sewer flooding is likely to impact surface water flooding, and therefore areas where flood mitigation actions should be prioritised.	North Tyneside	High	None / not much	Medium	-	-	<£25k	North Tyneside Council / Defra	Medium	Ongoing	North Tyneside Council	Transport / Highways Team and NWL
15	Statutory Requirement	Flood and Water Management Act / Flood Risk Regulations	Work with the Environment Agency to record and investigate groundwater flooding incidents and mechanisms.	Improved understanding of groundwater flood risk across North Tyneside. Evidence of management and recording of groundwater flooding events (now the responsibility of LLFAs).	Record and investigate groundwater flooding incidents (initially in conjunction with the Environment Agency) to identify flooding mechanisms and risk across North Tyneside.	North Tyneside	High	None / not much	Medium	-	-	<£25k	North Tyneside Council / Defra	Medium	Ongoing	North Tyneside Council	EA
16	Statutory Requirement	Flood and Water Management Act / Flood Risk Regulations	Identify and map all Ordinary Watercourses.	Improved knowledge of location and condition of ordinary watercourses (now the responsibility of LLFAs).	Identify and map all ordinary watercourses (non Main Rivers) in GIS. Information recorded should include the condition and function of the watercourses.	North Tyneside	High	Moderate	Low	-	-	<£25k	North Tyneside Council / Defra	Short	6 months	North Tyneside Council	Parks Team and EA
17	Statutory Requirement	Flood and Water Management Act / Flood Risk Regulations	Produce Flood Depth and Flood Hazard Maps as required under FRR 2009.	Improved understanding of flood depth and hazard across North Tyneside and compliance with FRR 2009.	Submit (and update where necessary) flood depth and hazard to Environment Agency by 22 June 2013.	North Tyneside and CDAs	High	None / not much	Medium	-	-	<£25k	North Tyneside Council / Defra	Medium	1 month	North Tyneside Council	-
18	Statutory Requirement	Flood and Water Management Act / Flood Risk Regulations	Develop a Flood Risk Management Plan for North Tyneside as required under FRR 2009.	Identification of flood risk management across North Tyneside and compliance with FRR 2009.	Produce and submit to the Environment Agency a Flood Risk Management Plan by 22 June 2015.	North Tyneside	High	Moderate	Medium	-	-	<£25k	North Tyneside Council / Defra	Medium	6 months	North Tyneside Council	Northumbrian Water, Environment Agency, Local Residents
19	Statutory Requirement	Flood and Water Management Act / Flood Risk Regulations	Work with the Environment Agency to incorporate any findings from the SWMP and PFRA and other fluvial / pluvial modelling projects.	Improved evidence of surface water flooding within statutory planning documents e.g. SFRA and any future modelling projects.	Ensure the findings and recommendations from the SWMP are incorporated into future revisions of the SFRA and other fluvial / pluvial modelling projects.	North Tyneside	High	None / not much	Medium	-	-	<£25k	North Tyneside Council / Defra	Medium	Ongoing	North Tyneside Council	Environment Agency
20	Generic Benefit	Financial / Resourcing	Identify local flood risk management funding opportunities through internal and external, existing and future, funding initiatives and mechanisms.	Improved understanding and identification of opportunities and mechanisms for acquiring future funding for local flood risk management activities and assist in identifying a programme for flood mitigation actions.	Collation and documenting of all potential funding routes (including Defra funding), including application requirements and timelrames.	North Tyneside	High	Moderate	Medium	-	-	<£25k	North Tyneside Council / Defra	Short	6 months	North Tyneside Council	Environment Agency
21	Generic Benefit	Investigation / Feasibility / Design	Validate SWMP model outputs.	Validate model outputs and gain resident 'buy in' to surface water flood risk in areas. Opportunities raise awareness of surface water flood risk with residents.	Investigate whether flooding incidents have occurred in LFRZs through undertaking a survey of local residents (e.g. mail drop, door knocking) and confirming drainage capacity assumptions with third party asset owners.	All CDAs	Medium	None / not much	Medium	<£25k	-	-	North Tyneside Council / Defra	Medium	1 Year	North Tyneside Council	Environment Agency (Main River, Fluvial), Northumbrian Water (Sewer), North Tyneside Council (Ordinary Watercourse, Surface Water and Highways), Network Rail and NEXUS (Railways), Others as appropriate
22	Generic Benefit	Investigation / Feasibility / Design	Confirm flood risk to Critical infrastructure.	Refine understanding of flood risk. Improved evidence to prioritise localised drainage improvements.	Consider undertaking more detailed modelling where there is an existing or predicted surface water flood risk.	All Critical Infrastructure	High	Moderate	Low	<£25k	-	-	North Tyneside Council / Defra	Medium	6 months	North Tyneside Council	Public Realm / Environment Team
23	Generic Benefit	Investigation / Feasibility / Design	Determine resilience of Critical Services.	Refine understanding of flood risk to critical services. Improved evidence to prioritise localised drainage improvements.	Determine whether services (e.g. power, telecommunications) are resilient to surface water flooding through providing outputs of SWMP to critical services providers (including energy providers) and meet to discuss the overall resilience of service.	North Tyneside	High	Moderate	Low	<£25k	-	-	North Tyneside Council / Defra	Medium	6 months	North Tyneside Council	Public Realm / Environment Team and Utility Companies

Appendix C - Draft SWMP Action Plan, North Tyneside Council

ID	Action Type		Action				Priority Ranking	Progress to Date	Complexity	Cost			Potential Funding Source	Timing		Responsibility	Other Stakeholders (in addition to Ward Members and Landowners)	
	Type	Legislation	What?	Why?	How?	Where?				Investigation / Feasibility	Capital	Other		Timeframe	Approx. Duration			Lead Organisation
24	Generic Benefit	Investigation / Feasibility / Design	Review Emergency Response procedures.	Emergency Response procedures are based on best available information.	Determine whether current emergency response to widespread surface water flooding across North Tyneside are appropriate through reviewing the Multi-Agency Flood Plan in the context of the SWMP outputs.	North Tyneside	High	Moderate	Low	<£25k	-	-	North Tyneside Council / Defra	Short	3 months	North Tyneside Council	Environment Agency, Northumbrian Water, Network Rail, NEXUS and Emergency Services	
25	Generic Benefit	Communication / Partnerships	<b>SWMP Recommendation 4</b> Raise Community Awareness - undertake a letter drop.	Increase awareness of flood risk in communities, therefore improving resilience to flooding and encouragement to implement property-level mitigation measures.	Undertake a letter drop to highlight the improvement works that have been implemented as well as works that are planned for the future.	North Tyneside	High	Moderate	Low	-	-	<£25k	North Tyneside Council / Defra	Medium	3 months	North Tyneside Council	Information from Northumbrian Water and Environment Agency	
26	Generic Benefit	Communication / Partnerships	<b>SWMP Recommendation 4</b> Raise Community Awareness - hold a public meeting.	Increase awareness of flood risk in communities, therefore improving resilience to flooding and encouragement to implement property-level mitigation measures.	Hold a public meeting following the letter drop where residents can highlight any issues. This could include a talk from the key partner organisations – Environment Agency, Northumbrian Water and North Tyneside Council – on the work that is being undertaken and who is responsible. Such a meeting should also outline how residents can help themselves and highlight their responsibility for maintaining private drainage, soakaways, driveway drainage etc.	North Tyneside	High	Moderate	Low	-	-	<£25k	North Tyneside Council / Defra	Medium	3 months	North Tyneside Council	Environment Agency and Northumbrian Water where necessary	
27	Generic Benefit	Communication / Partnerships	<b>SWMP Recommendation 4</b> Raise Community Awareness - identify areas where Community Flood Plans may be effective and consider opportunities to develop these, in conjunction with the local community.	Increase awareness of flood risk in communities, therefore improving resilience to flooding and encouragement to implement property-level mitigation measures.	Increase awareness of flooding within communities at risk through letter drop, information portal and/or preparation of a Community Flood Plan for example.	Areas identified to be at risk throughout North Tyneside	High	Moderate	Low	-	-	<£25k	North Tyneside Council / Defra	Medium	1 year	North Tyneside Council	Environment Agency	
28	Generic Benefit	Communication / Partnerships	<b>SWMP Recommendation 4</b> Raise Community Awareness - develop an 'Information Portal'.	Increase awareness of flood risk in communities, therefore improving resilience to flooding and encouragement to implement property-level mitigation measures.	Develop an 'Information Portal' via the NTC website, for local flood risk information including links to the relevant Environment Agency web pages that provide advice on measures that can be taken by residents to mitigate surface water flooding to / around their property.	North Tyneside	High	Moderate	Low	-	-	Unknown	North Tyneside Council / Defra	Medium	1 year	North Tyneside Council	Get correct information from EA and NWL	
29	Generic Benefit	Flooding Mitigation Action	<b>SWMP Recommendation 5</b> Consider opportunities to promote awareness of property level thresholds.	Improved property-level resilience to surface water flooding.	Consider options and opportunities for promotion of property-level flood mitigation measures such as raising property-level thresholds in existing and new developments, particularly in those areas of higher flood risk.	Across North Tyneside, but particularly in CDAs	Medium	Moderate	Low	-	-	<£25k	North Tyneside Council / Defra	Medium	Ongoing	North Tyneside Council	Environment Agency	
30	Generic Benefit	Flooding Mitigation Action	<b>SWMP Recommendation 5</b> Property Level Thresholds - realise suitable, sensible and cost effective property thresholds.	Improved property-level resilience to surface water flooding.	Work with residents to realise suitable, sensible and cost effective property level resilience to potential flooding (through, for example raising property thresholds to 100mm), particularly in areas where roads / properties are known / identified to be susceptible to surface water flooding.	Across North Tyneside, but particularly in CDAs	Medium	Moderate	Medium	-	-	Unknown	North Tyneside Council / Defra	Medium	Ongoing	North Tyneside Council	Environment Agency	
31	Generic Benefit	Flooding Mitigation Action	<b>SWMP Recommendation 6</b> Raise the awareness of the options for implementing 'fix and forget' measures to individual properties.	Improved property-level resilience to surface water flooding.	Work with residents to raise the awareness of suitable, sensible and cost effective property level ('fix and forget') resilience measures, allowing self-help to take place.	Across North Tyneside, but particularly in CDAs	High	Moderate	Low	-	-	Unknown	North Tyneside Council / Defra	Medium	Ongoing	North Tyneside Council	-	
32	Generic Benefit	Flooding Mitigation Action	<b>SWMP Recommendation 6</b> Work with residents to realise suitable, sensible and cost effective property level 'fix and forget' measures, particularly in areas where properties are known / identified to be susceptible to surface water flooding.	Improved property-level resilience to surface water flooding.	Work with residents to realise suitable, sensible and cost effective property level ('fix and forget') resilience measures.	Across North Tyneside, but particularly in CDAs	High	Moderate	Low	-	-	Unknown	North Tyneside Council / Defra	Medium	Ongoing	North Tyneside Council	-	
33	Generic Benefit	Flooding Mitigation Action	<b>SWMP Recommendation 7</b> Ongoing Improvements to the Maintenance of the Drainage Network - increasing enforcement powers.	Existing drainage systems are maximised and operating at full potential, to ensure flooding is not exacerbated through blocked or part-working networks.	Gullies that are known to flood could be painted to encourage residents to check if they are blocked and to avoid parking directly over them thereby preventing access for gully clearing team. The EA 'yellow fish' scheme operates in a similar manner, whereby key drainage infrastructure is painted with a yellow fish logo, where it is thought to drain directly to a watercourse.	North Tyneside	Medium	Moderate	Low	-	-	Unknown	North Tyneside Council / Defra	Medium	Ongoing	North Tyneside Council	-	
34	Generic Benefit	Flooding Mitigation Action	<b>SWMP Recommendation 7</b> Ongoing Improvements to the Maintenance of the Drainage Network - increasing enforcement powers.	Existing drainage systems are maximised and operating at full potential, to ensure flooding is not exacerbated through blocked or part-working networks.	Encourage gully cleansing contractors to use powers to enforce movement of parked cars to ensure all gullies are regularly cleared.	North Tyneside	Medium	Moderate	Low	-	-	Unknown	North Tyneside Council / Defra	Medium	Ongoing	North Tyneside Council	Northumbrian Water, Environment Agency, Local Residents	
35	Generic Benefit	Flooding Mitigation Action	<b>SWMP Recommendation 7</b> Ongoing Improvements to the Maintenance of the Drainage Network - improved coordination of gully cleansing rounds.	Existing drainage systems are maximised and operating at full potential, to ensure flooding is not exacerbated through blocked or part-working networks.	Coordinate timing of gully cleansing rounds to ensure that they do not coincide with school opening and closing times and other peak times that would prevent gaining access to gullies.	North Tyneside	Medium	Moderate	Low	-	-	Unknown	North Tyneside Council / Defra	Medium	Ongoing	North Tyneside Council	Northumbrian Water, Environment Agency, Local Residents	
36	Generic Benefit	Flooding Mitigation Action	<b>SWMP Recommendation 7</b> Ongoing Improvements to the Maintenance of the Drainage Network - targeted maintenance of drainage network.	Existing drainage systems are maximised and operating at full potential, to ensure flooding is not exacerbated through blocked or part-working networks.	Improved and targeted maintenance, i.e. focus attention on gullies within CDAs.	North Tyneside	Medium	Moderate	Low	-	-	Unknown	North Tyneside Council / Defra	Medium	Ongoing	North Tyneside Council	Northumbrian Water, Environment Agency, Local Residents	
37	Generic Benefit	Flooding Mitigation Action	<b>SWMP Recommendation 7</b> Ongoing Improvements to the Maintenance of the Drainage Network - targeted maintenance of drainage network.	Existing drainage systems are maximised and operating at full potential, to ensure flooding is not exacerbated through blocked or part-working networks.	Develop/enhance database of all NTC owned flood/drainage assets (in line with FWMA requirements).	North Tyneside	Medium	Moderate	Low	-	-	Unknown	North Tyneside Council / Defra	Medium	Ongoing	North Tyneside Council	Northumbrian Water, Environment Agency, Local Residents	
38	Generic Benefit	Flooding Mitigation Action	<b>SWMP Recommendation 7</b> Ongoing Improvements to the Maintenance of the Drainage Network - targeted maintenance of drainage network.	Existing drainage systems are maximised and operating at full potential, to ensure flooding is not exacerbated through blocked or part-working networks.	As LLFA, NTC must record and investigate incidents of flooding, it is recommended that the source of flooding be recorded, e.g. gully surcharging, to inform maintenance priorities.	North Tyneside	Medium	Moderate	Low	-	-	Unknown	North Tyneside Council / Defra	Medium	Ongoing	North Tyneside Council	Northumbrian Water, Environment Agency, Local Residents	
39	Generic Benefit	Flooding Mitigation Action	<b>SWMP Recommendation 8</b> Consider opportunities to promote rainwater harvesting in both new and existing development.	Potential for localised reduction in peak surface water discharge during rainfall events. Is likely to have positive sustainability and water conservation impacts, and provides educational opportunities where systems are fitted to schools / public buildings.	Consider options and opportunities for promotion of rainwater harvesting systems in existing and new developments and potential incentive schemes for developers / commercial properties to install these. This may be linked to the Council's sustainability checklist.	North Tyneside	Medium	None / not much	Low	-	-	Unknown	<£25k	North Tyneside Council / Defra	Medium	Ongoing	North Tyneside Council	Environment Agency
40	Generic Benefit	Flooding Mitigation Action	<b>SWMP Recommendation 8</b> Rainwater Harvesting - retrofitting of rainwater harvesting schemes.	Potential for localised reduction in peak surface water discharge during rainfall events. Is likely to have positive sustainability and water conservation impacts, and provides educational opportunities where systems are fitted to schools / public buildings.	Consider retrofitting rainwater harvesting systems on NTC owned properties, such as schools, for example, which offer educational opportunities as well as local surface water flood mitigation.	North Tyneside	Medium	None / not much	Low	-	-	Unknown	North Tyneside Council / Defra / Private Sector Funding	Medium	Ongoing	North Tyneside Council	Environment Agency	
41	Generic Benefit	Flooding Mitigation Action	<b>SWMP Recommendation 8</b> Rainwater Harvesting - installation of rainwater harvesting schemes in new development.	Potential for localised reduction in peak surface water discharge during rainfall events. Is likely to have positive sustainability and water conservation impacts, and provides educational opportunities where systems are fitted to schools / public buildings.	Explore the potential opportunities for the installation of rainwater harvesting systems on new or regenerated development areas (in particular where there is high footfall / potential for use).	Across North Tyneside, but with focus towards new development sites	Medium	None / not much	Low	-	-	Unknown	Developers / Community Infrastructure Levy / Section 106 Agreements / Private Sector Funding	Medium	Ongoing	North Tyneside Council	Environment Agency	
42	Generic Benefit	Flooding Mitigation Action	<b>SWMP Recommendation 9</b> Water Butts - installation of water butts for all new development.	Potential for localised reduction in peak surface water discharge during rainfall events. Is likely to have positive sustainability and water conservation impacts.	Consider installation of water butts for all new development. This ties in with the SUDS hierarchy and reduces peak discharges to surface water.	North Tyneside	Medium	None / not much	Low	-	-	Unknown	Developers / Community Infrastructure Levy / Section 106 Agreements / Private Sector Funding	Medium	Ongoing	North Tyneside Council	Environment Agency	
43	Generic Benefit	Flooding Mitigation Action	<b>SWMP Recommendation 9</b> Water Butts - retrofitting water butts to existing developments.	Potential for localised reduction in peak surface water discharge during rainfall events. Is likely to have positive sustainability and water conservation impacts.	Consider retrofitting water butts on all existing development. This provides supplementary benefits beyond regeneration and redevelopment sites (volumetric reduction with opportunity for complimentary water quality improvements).	Across North Tyneside, but with focus towards CDAs	Medium	None / not much	Low	-	-	Unknown	North Tyneside Council / Defra / Private Sector Funding	Medium	Ongoing	North Tyneside Council	Environment Agency	
44	Generic Benefit	Flooding Mitigation Action	<b>SWMP Recommendation 9</b> Water Butts - promotion of water butts.	Potential for localised reduction in peak surface water discharge during rainfall events. Is likely to have positive sustainability and water conservation impacts.	Consider promoting the use of water butts and provide information (either directly or through links to external websites) on potential costs, installation and benefits.	North Tyneside	Medium	None / not much	Low	-	-	<£25k	North Tyneside Council / Defra	Medium	Ongoing	North Tyneside Council	Environment Agency	

Appendix C - Draft SWMP Action Plan, North Tyneside Council

ID	Action Type		Action				Priority Ranking	Progress to Date	Complexity	Cost			Potential Funding Source	Timing		Responsibility	Other Stakeholders (in addition to Ward Members and Landowners)
	Type	Legislation	What?	Why?	How?	Where?				Investigation / Feasibility	Capital	Other		Timeframe	Approx. Duration		
45	Generic Benefit	Policy Action	<b>SWMP Recommendation 10</b> Ensure Development Control Policy incorporates Surface Water Flood Risk.	Mid-long term reduction in the consequences of flooding.	Through Development Control Policy, ensure that in LFRZs SWMP mapped outputs are used to require developers to demonstrate compliance with NPPF by ensuring development will remain safe and will not increase risk to others, where necessary supported by more detailed integrated hydraulic modelling. For example, development in CDAs to contribute to measures to reduce surface water flood risk in the CDA through Section 106 or Community Infrastructure Levy.	All development areas across North Tyneside	High	Moderate	Low	-	-	<£25k	North Tyneside Council / Defra	Medium	LDF Plan Period	North Tyneside Council	-
46	Generic Benefit	Communication / Partnerships	<b>SWMP Recommendation 10</b> Development Control Policy - Driveway / Garden Repaving - surface water runoff within property boundary.	Flood risk to properties and surrounding properties is not exacerbated through implementing hardstanding, impermeable surfaces.	Encourage residents to ensure that paved areas in front gardens drain onto flower beds rather than running onto the highway.	North Tyneside	High	Moderate	Low	-	-	<£25k	North Tyneside Council / Defra	Medium	Ongoing	North Tyneside Council	-
47	Generic Benefit	Communication / Partnerships	<b>SWMP Recommendation 10</b> Development Control Policy - Driveway / Garden Repaving - raise awareness of options.	Flood risk to properties and surrounding properties is not exacerbated through implementing hardstanding, impermeable surfaces.	Raise awareness of the options for installation and maintenance of permeable surfaces within property grounds.	North Tyneside	High	Moderate	Low	-	-	<£25k	North Tyneside Council / Defra	Medium	Ongoing	North Tyneside Council	-
48	Generic Benefit	Communication / Partnerships	<b>SWMP Recommendation 10</b> Development Control Policy - Driveway / Garden Repaving - information portal.	Flood risk to properties and surrounding properties is not exacerbated through implementing hardstanding, impermeable surfaces.	Provide an information portal that residents can consult for further information on permeable paving and other SUDS measures, including links to other organisations (e.g. Environment Agency) who can provide 'best practice' guidance and examples.	North Tyneside	High	Moderate	Low	-	-	Unknown	North Tyneside Council / Defra	Medium	Ongoing	North Tyneside Council	-
49	Generic Benefit	Financial / Resourcing	<b>SWMP Recommendation 10</b> Development Control Policy - Driveway / Garden Repaving - education of Council staff.	Flood risk to properties and surrounding properties is not exacerbated through implementing hardstanding, impermeable surfaces.	Education/training of Council staff to ensure that planning officers: • are aware of the existing planning permissions, guidance and best practice; • are in a position to educate the public if enquiries are made regarding planning permission to change their drive/garden; and • can identify/enforce for non-compliance or non permitted conversion (in particular in CDAs where it exacerbates the problem).	North Tyneside	High	Moderate	Low	-	-	Unknown	North Tyneside Council / Defra	Medium	Ongoing	North Tyneside Council	-
50	Generic Benefit	Policy Action	<b>SWMP Recommendation 11</b> Develop, maintain and update the draft Action Plan to meet local flood risk management priorities.	Established procedure for managing and agreeing on future flood mitigation and management.	Review and update the draft Action Plan quarterly (every 3 months) to review and agree ongoing and future flood management actions.	North Tyneside	High	None / not much	Medium	-	-	<£25k	North Tyneside Council / Defra	Medium	LDF Plan Period	North Tyneside Council	-
51	CDA-specific benefit	Flooding Mitigation Action	<b>Backworth Hotspot/CDA</b> Consideration of preferred options by NTC and their local partners through the North Tyneside Flooding Task and Finish Group to determine options to be taken forward for further consideration.	Potential for reduction in surface water flooding during and following rainfall across the CDA.	Detention Basins, Ponds and Wetlands - storage of surface water in the upper catchment would have the benefit of reducing flooding to the west of the railway, thus reducing the extent of flooding. A feasibility study and associated modelling would be required to determine the exact requirements for any storage.	Backworth Hotspot/CDA	Medium	None / not much	Medium	<£25k	£250k - £500k	-	North Tyneside Council / Defra	Medium	TBC	North Tyneside Council	-
52	CDA-specific benefit	Flooding Mitigation Action			Increasing Drainage System Capacity - increased conveyance to the east (downstream) of the embankment has the potential to reduce the ponding to the west, which has the potential to reduce the flooding of the properties. In order to undertake this, a feasibility study would be required to determine the size of culvert(s) needed to pass flow beneath the embankment and also the potential downstream impact of passing additional flow downstream.		Medium	None / not much	Medium	<£25k	Unknown	-	North Tyneside Council / Defra / NEXUS	Medium	TBC	North Tyneside Council	NEXUS and Network Rail
53	CDA-specific benefit	Flooding Mitigation Action			Improved Maintenance Regimes – changes to, or improvements to the maintenance regime on the local watercourses may increase the conveyance capacity of the system, reducing the area of flooding.		Medium	None / not much	Low	-	<£25k	-	North Tyneside Council / Defra	Medium	TBC	North Tyneside Council	-
54	CDA-specific benefit	Flooding Mitigation Action			Incorporation of Overland Flow Routes – the incorporation of overland flow routes in the upper catchment could be used to divert flow away from the area identified as being at risk in the lower catchment.		Medium	None / not much	Low	<£25k	Unknown	-	North Tyneside Council / Defra	Medium	TBC	North Tyneside Council	-
55	CDA-specific benefit	Flooding Mitigation Action			Provision of Online Storage - storage of surface water within the existing watercourse networks to the upstream would have the benefit of reducing flooding to the west of the railway, thus reducing the extent of flooding. A feasibility study and associated modelling would be required to determine the exact requirements for any storage.		Medium	None / not much	Medium	<£25k	£250k - £500k	-	North Tyneside Council / Defra	Medium	TBC	North Tyneside Council	-
56	CDA-specific benefit	Flooding Mitigation Action			Land Management Practices - changes to land management practices in the upper catchment may have the possibility of reducing the rate of runoff, thus reducing the flooding potential to the downstream. An initial review of land use and potential for change in the upper catchment would be required. In order to implement any changes to land management, NTC may need to make financial contributions to landowners.		Medium	None / not much	Low	<£25k	Unknown	-	North Tyneside Council / Defra	Medium	TBC	North Tyneside Council	-
57	CDA-specific benefit	Flooding Mitigation Action	<b>Killingworth Hotspot/CDA</b> Consideration of preferred option by NTC and their local partners through the North Tyneside Flooding Task and Finish Group to determine whether the option should be taken forward for further consideration.	Potential for reduction in surface water flooding during and following rainfall across the CDA.	Increasing Drainage System Capacity - discussions should be held with NWL to determine whether there is potential to increase/improve the capacity of the local surface water sewer network. NWL have previously confirmed that there is an evolving strategy examining reducing surface water flooding risk in the Killingworth area, utilising an increased volume at Killingworth Lake.	Killingworth Hotspot/CDA	Medium	None / not much	Medium	-	Unknown	-	North Tyneside Council / Defra	Medium	TBC	North Tyneside Council	-
58	CDA-specific benefit	Flooding Mitigation Action	<b>Monkseaton Hotspot/CDA</b> Consideration of preferred option by NTC and their local partners through the North Tyneside Flooding Task and Finish Group to determine whether the option should be taken forward for further consideration.	Potential for reduction in surface water flooding during and following rainfall across the CDA.	Increasing Drainage System Capacity - discussions should be held with NWL to determine whether there is potential to increase/improve the capacity of the local surface water sewer network.	Monkseaton Hotspot/CDA	Medium	None / not much	Medium	-	Unknown	-	North Tyneside Council / Defra / NWL	Medium	TBC	North Tyneside Council	Northumbrian Water
59	CDA-specific benefit	Flooding Mitigation Action	<b>Percy Main North Hotspot/CDA</b> Consideration of preferred options by NTC and their local partners through the North Tyneside Flooding Task and Finish Group to determine options to be taken forward for further consideration.	Potential for reduction in surface water flooding during and following rainfall across the CDA.	Detention Basins, Ponds and Wetlands - storage of surface water in the upper catchment, particularly around the West Chirton development area may have the benefit of reducing flooding in the Percy Main North area. A feasibility study and associated modelling would be required to determine the exact requirements for any storage.	Percy Main North Hotspot/CDA	Medium	None / not much	Medium	<£25k	£100k - £250k	-	North Tyneside Council / Defra	Medium	TBC	North Tyneside Council	-
60	CDA-specific benefit	Flooding Mitigation Action			Increasing Drainage System Capacity - discussions should be held with NWL whether there is any potential to improve connectivity with the surface water sewer network in the area (subject to capacity) to alleviate flooding in Percy Main North.	Percy Main North Hotspot/CDA	Medium	None / not much	Medium	-	Unknown	-	North Tyneside Council / Defra	Medium	TBC	North Tyneside Council	-
61	CDA-specific benefit	Flooding Mitigation Action			Incorporation of Overland Flow Routes - there may be potential to divert overland flows within the catchment upstream of Percy Main in the West Chirton and Billy Mill areas to reduce the risk of flooding. A feasibility study, including modelling would be required in the first instance to identify the potential for such an option.	Percy Main North Hotspot/CDA	Medium	None / not much	Medium	<£25k	Unknown	-	North Tyneside Council / Defra	Medium	TBC	North Tyneside Council	-
62	CDA-specific benefit	Flooding Mitigation Action	<b>Percy Main South Hotspot/CDA</b> Consideration of preferred options by NTC and their local partners through the North Tyneside Flooding Task and Finish Group to determine options to be taken forward for further consideration.	Potential for reduction in surface water flooding during and following rainfall across the CDA.	Detention Basins, Ponds and Wetlands - storage of surface water in the upper catchment, particularly around the West Chirton development area may have the benefit of reducing flooding in the Percy Main North area. A feasibility study and associated modelling would be required to determine the exact requirements for any storage.	Percy Main South Hotspot/CDA	Medium	None / not much	Medium	<£25k	£500k - £1000k	-	North Tyneside Council / Defra / Developers	Medium	TBC	North Tyneside Council	Developers
63	CDA-specific benefit	Flooding Mitigation Action			Increasing Drainage System Capacity - discussions should be held with NWL whether there is any potential to improve connectivity with the surface water sewer network in the area (subject to capacity) to alleviate flooding in Percy Main North. Furthermore, discussions should also be held with NEXUS to determine the technical feasibility of introducing culverts beneath the metro line to increase downstream conveyance, subject to modelling.		Medium	None / not much	Medium	-	Unknown	-	North Tyneside Council / Defra / NWL	Medium	TBC	North Tyneside Council	Northumbrian Water and NEXUS
64	CDA-specific benefit	Flooding Mitigation Action			Incorporation of Overland Flow Routes - there may be potential to divert overland flows within the catchment upstream of Percy Main in the West Chirton and Billy Mill areas to reduce the risk of flooding. A feasibility study, including modelling would be required in the first instance to identify the potential for such an option.		Medium	None / not much	Medium	<£25k	Unknown	-	North Tyneside Council / Defra / Developers	Medium	TBC	North Tyneside Council	Developers

Appendix C - Draft SWMP Action Plan, North Tyneside Council

ID	Action Type		Action				Priority Ranking	Progress to Date	Complexity	Cost			Potential Funding Source	Timing		Responsibility	Other Stakeholders (in addition to Ward Members and Landowners)			
	Type	Legislation	What?	Why?	How?	Where?				Investigation / Feasibility	Capital	Other		Timeframe	Approx. Duration			Lead Organisation		
65	CDA-specific benefit	Flooding Mitigation Action	<b>Wallsend North Hotspot/CDA</b> Consideration of preferred options by NTC and their local partners through the North Tyneside Flooding Task and Finish Group to determine options to be taken forward for further consideration.	Potential for reduction in surface water flooding during and following rainfall across the CDA.	Detention Basins, Ponds and Wetlands - storage of surface water in the upper catchment, specifically in the Station Road East, Station Road West and East Benton Farm development areas would have the benefit of reducing flooding in the Chicken Road area. A feasibility study and associated modelling would be required to determine the exact requirements for any storage.	Wallsend North Hotspot/CDA	Medium	None / not much	Medium	<£25k	£500k - £1000k	-	North Tyneside Council / Defra / Developers	Medium	TBC	North Tyneside Council	Developers			
66	CDA-specific benefit	Flooding Mitigation Action	<b>Wallsend North Hotspot/CDA</b> Consideration of preferred options by NTC and their local partners through the North Tyneside Flooding Task and Finish Group to determine options to be taken forward for further consideration.	Potential for reduction in surface water flooding during and following rainfall across the CDA.	Increasing Drainage System Capacity - discussions should be held with NWL whether there is any potential to improve connectivity with the surface water sewer network in the area (subject to capacity) to alleviate flooding in Wallsend North.	Wallsend North Hotspot/CDA	Medium	None / not much	Medium	-	Unknown	-	North Tyneside Council / Defra / NWL	Medium	TBC	North Tyneside Council	Northumbrian Water			
67	CDA-specific benefit	Flooding Mitigation Action			De-culverting Watercourse(s) - it has been identified that there may be potential to de-culvert the watercourse to the east of Chicken Road and provide flood storage within the park to the east. Although the costs for this would be significant, there could be major benefits including a reduction in flooding, meeting WFD objectives and providing other environmental benefits. Any such consideration would require an initial feasibility study (including modelling) and would be subject to detailed design, prior to construction.		Medium	None / not much	High	£50k - £100k	£500k - £1000k	-	North Tyneside Council / Defra / NWL	Medium	TBC	North Tyneside Council	Northumbrian Water			
68	CDA-specific benefit	Flooding Mitigation Action			<b>Wallsend South Hotspot/CDA</b> Consideration of preferred option by NTC and their local partners through the North Tyneside Flooding Task and Finish Group to determine whether the option should be taken forward for further consideration.		Potential for reduction in surface water flooding during and following rainfall across the CDA.	Increasing Drainage System Capacity - discussions should be held with NWL whether there is any potential to improve connectivity with the surface water sewer network in the area (subject to capacity) to alleviate flooding in Wallsend South area. Furthermore, discussions should also be held with NEXUS to determine the technical feasibility of introducing culverts beneath the metro line to increase downstream conveyance, subject to modelling.	Wallsend South Hotspot/CDA	Medium	None / not much	Medium	-	Unknown	-	North Tyneside Council / Defra / NWL / NEXUS	Medium	TBC	North Tyneside Council	Northumbrian Water / NEXUS
69	CDA-specific benefit	Flooding Mitigation Action	<b>West Monkseaton Hotspot/CDA</b> Consideration of preferred options by NTC and their local partners through the North Tyneside Flooding Task and Finish Group to determine options to be taken forward for further consideration.	Potential for reduction in surface water flooding during and following rainfall across the CDA.	Detention Basins, Ponds and Wetlands - storage of surface water in the upper catchment would have the benefit of reducing flooding. A feasibility study and associated modelling would be required to determine the exact requirements for any storage.	West Monkseaton Hotspot/CDA	Medium	None / not much	Medium	<£25k	£250k - £500k	-	North Tyneside Council / Defra	Medium	TBC	North Tyneside Council	-			
70	CDA-specific benefit	Flooding Mitigation Action			Increasing Drainage System Capacity - discussions should be held with NWL whether there is any potential to improve connectivity with the surface water sewer network in the area (subject to capacity) to alleviate flooding in West Monkseaton.		Medium	None / not much	Medium	-	Unknown	-	North Tyneside Council / Defra / NWL	Medium	TBC	North Tyneside Council	Northumbrian Water			
71	CDA-specific benefit	Flooding Mitigation Action			Improved Maintenance Regimes - on-going works in the area by NTC suggest that improved maintenance of the watercourse may provide betterment to the (potential) flood effected areas.		Medium	None / not much	Low	-	Unknown	-	North Tyneside Council / Defra	Medium	TBC	North Tyneside Council	-			
72	CDA-specific benefit	Flooding Mitigation Action			Incorporation of Overland Flow Routes - the incorporation of overland flow routes in the upper catchment could be used to divert flow away from the area identified as being at risk in the lower catchment.		Medium	None / not much	Low	<£25k	Unknown	-	North Tyneside Council / Defra	Medium	TBC	North Tyneside Council	-			
73	CDA-specific benefit	Flooding Mitigation Action			Provision of Online Storage - a pond or basin located on the green area near Fairfield Green, upstream of the culverted watercourse may manage flooding and also have added ecological and amenity value.		Medium	None / not much	Medium	<£25k	£250k - £500k	-	North Tyneside Council / Defra	Medium	TBC	North Tyneside Council	-			
74	CDA-specific benefit	Flooding Mitigation Action			Land Management Practices - given that the upper catchment to the west of West Monkseaton (and east of Shremoor) is predominantly rural, then there may be opportunities to change land management in a way that will reduce runoff. An initial review of land use and potential for change in the upper catchment would be required. In order to implement any changes to land management, NTC may need to make financial contributions to landowners.		Medium	None / not much	Low	<£25k	Unknown	-	North Tyneside Council / Defra	Medium	TBC	North Tyneside Council	-			
75	CDA-specific benefit	Flooding Mitigation Action			<b>West Moor East Hotspot/CDA</b> consideration of preferred options by NTC and their local partners through the North Tyneside Flooding Task and Finish Group to determine options to be taken forward for further consideration.		Potential for reduction in surface water flooding during and following rainfall across the CDA.	Detention Basins, Ponds and Wetlands - storage of surface water in the upper catchment, specifically in the Killingworth Moor and Killingworth Village areas would have the benefit of reducing flooding in the area. A feasibility study and associated modelling would be required to determine the exact requirements for any storage.	West Moor East Hotspot/CDA	Medium	None / not much	Medium	<£25k	£250k - £500k	-	North Tyneside Council / Defra	Medium	TBC	North Tyneside Council	-
76	CDA-specific benefit	Flooding Mitigation Action						Increasing Drainage System Capacity - discussions should be held with NWL to determine whether there is potential to increase/improve the capacity of the local surface water sewer network. NWL have previously confirmed that there is an evolving strategy examining reducing surface water flooding risk in the Killingworth area, utilising an increased volume at Killingworth Lake. Given the presence of fields to the west of the railway embankment, preliminary discussions with Network Rail and landowners would assist with the determining of increasing conveyance beneath the track (through culverts) and providing flood storage to the west of the railway line.		Medium	None / not much	Medium	-	Unknown	-	North Tyneside Council / Defra / NWL / Network Rail	Medium	TBC	North Tyneside Council	Northumbrian Water / Network Rail
77	CDA-specific benefit	Flooding Mitigation Action	Provision of Online Storage - see comments in relation to increasing drainage system capacity. In addition, there is potential for surface water attenuation within the Balliol East development area.	Medium		None / not much		Medium		-	Unknown	-	North Tyneside Council / Defra / Developers	Medium	TBC	North Tyneside Council	Developers			
78	CDA-specific benefit	Flooding Mitigation Action	<b>West Moor West Hotspot/CDA</b> Consideration of preferred options by NTC and their local partners through the North Tyneside Flooding Task and Finish Group to determine options to be taken forward for further consideration.	Potential for reduction in surface water flooding during and following rainfall across the CDA.	Detention Basins, Ponds and Wetlands - storage of surface water in the upper catchment, specifically to the west of Killingworth Moor and at Burradon and Weetslade would have the benefit of reducing flooding. A feasibility study and associated modelling would be required to determine the exact requirements for any storage and may incorporate storage within the Weetslade and Whitehouse Farm development areas.	West Moor West Hotspot/CDA	Medium	None / not much	Medium	<£25k	£100k - £250k	-	North Tyneside Council / Defra / Developers	Medium	TBC	North Tyneside Council	Developers			
79	CDA-specific benefit	Flooding Mitigation Action			Increasing Drainage System Capacity - discussions should be held with NWL to determine whether there is potential to increase/improve the capacity of the local surface water sewer network. NWL have previously confirmed that there is an evolving strategy examining reducing surface water flooding risk in the Killingworth area, utilising an increased volume at Killingworth Lake.		Medium	None / not much	Medium	-	Unknown	-	North Tyneside Council / Defra / NWL	Medium	TBC	North Tyneside Council	Northumbrian Water			
80	CDA-specific benefit	Flooding Mitigation Action			Provision of Online Storage - see comments in relation to increasing drainage system capacity. In addition, there is potential for surface water attenuation within the Weetslade and Whitehouse Farm development areas.		Medium	None / not much	Medium	-	Unknown	-	North Tyneside Council / Defra / Developers	Medium	TBC	North Tyneside Council	Developers			
81	CDA-specific benefit	Flooding Mitigation Action			Land Management Practices - given that parts of the upper catchment to north of West Moor West are rural (i.e. to the west of Killingworth, Burradon and Weetslade), there may be opportunities to change land management in a way that will reduce runoff. An initial review of land use and potential for change in the upper catchment would be required. In order to implement any changes to land management, NTC may need to make financial contributions to landowners.		Medium	None / not much	Low	<£25k	Unknown	-	North Tyneside Council / Defra / Developers	Medium	TBC	North Tyneside Council	Developers			