



Developing a local flood risk management strategy

Annex 4: Ranking of receptor vulnerability

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This note sets out the proposed ranking of receptor vulnerability to facilitate the prioritisation of the process of preliminary flood component analysis

Introduction

The aim is to identify the receptors that are vulnerable to flooding should it occur. The vulnerability will depend on a number of factors, including use etc. Stakeholders will have differing view about what constitutes vulnerability, which is why they should be involved in the ranking process. The assessment process should be based on factors such as; development need, the vulnerability of people and communities, the needs of first level responders, the need to maintain and operate community facilities during and after floods and the impact of flood on different environments.

Using available sources of data and best available mapping techniques the stakeholders should agree a ranking system and then rank all known receptors prior to establishing the likelihood of flooding.

Tables 1 - 3 provide an initial list of the different types of receptor and their vulnerability with respect to local communities. Stakeholders may use and adapt the list to identify who is responsible for each receptor, the roles they play and whether or not their responsibilities should be classed as duties, powers or voluntary. They may then review the vulnerability category, adding additional receptors as required.

An initial assessment (very low (VL), low (L), medium (M), high (H) and very high (VH) provides a starting pont.

Table 1: Prioritisation of receptor vulnerability (transport infrastructure)

Transport infrastructure	Infrastructure and buildings	Data available	Community vulnerability category	Stakeholder reference number	Responsibility Organisation and type (D, P, V)
Road transport	Motorways		H		
	Main roads		H		
	Side roads		L		
	Bus stations		M		
	Bus depots		M		
	Car parks (ground level)		M		
	Car parks (underground)		M		
	Car parks (multi storey)		L		
Rail transport	Railways		M		
	Rail tunnels		H		
	Trams/light rail/metro		M		
	Trams/light rail/metro tunnels		H		
	Stations (Rail/light rail/tram/metro)		M		
	Depots (Rail/light rail/tram/metro)		M		
Other transport infrastructure	Airport/Heliport		H		
	Pedestrian tunnels		H		
	Bridges		H		

Table 2: Prioritisation of receptor vulnerability (community infrastructure)

Community infrastructure	Infrastructure and buildings	Data available	Community vulnerability category	Stakeholder reference number	Responsibility Organisation and type (D, P, V)
Emergency response	Command Centres		VH		
	Police stations		VH		
	Fire stations		VH		
	Ambulance stations		VH		
	THW				
	Emergency dispersal points		VH		
	Hospitals and medical centres		H		
Electricity	Storage for sand, sandbags and pumps		H		
	Generating plant (including heat and power)		VH		
	Substations		VH		
	Overground transmission		M		
telecommunications infrastructure	Underground transmission		M		
	Cell phone stations		VH		
Gas	Telephone exchange		VH		
	Gas plants		H		
	Gas facilities		H		
Oil/fuel	Gas transmission infrastructure		M		
	Oil/fuel facilities		H		
	Oil/fuel transmission infrastructure		M		
Water supply and distribution	Heating transmission infrastructure		M		
	Water treatment plants.		VH		
	Water distribution facilities (reservoirs and pumping stations)		H		
Sewage and sewerage	Water distribution transmission infrastructure		H		
	Sewage treatment plants		H		

Community infrastructure	Infrastructure and buildings	Data available	Community vulnerability category	Stakeholder reference number	Responsibility Organisation and type (D, P, V)
	Sewerage transmission infrastructure, overflows and pumping stations		H		
Water infrastructure	Flood controls		H		
	Dikes				
	Walls				
	Culverts		H		
	Sluices				
	Pier				
	Weirs				
	Dams		VH		

Table 3: Prioritisation of receptor vulnerability (other receptors)

Other receptors	Infrastructure and buildings	Data available	Community vulnerability category	Stakeholder reference number	Responsibility Organisation and type (D, P, V)
Potential sources of pollution	Installations requiring hazardous substances consent		M		
	Sites used for waste management and facilities for hazardous waste		H		
	Landfill		M		
	Other solid waste recycling and treatment facilities		L		
	Waste oil storage and recycling facilities		M		
	Dredged materials storage and recycling facilities		VL		
	Minerals working and processing (except for sand and gravel working).		L		
	Industry with pollution risk		M		
	Filling stations		M		
	Brownfield and polluted sites		M		
	Agricultural and forestry land and buildings		L		
Residential	Basement dwellings		H		
	Buildings used for: dwelling houses; student halls of residence;		M		
	Caravans, mobile homes and park homes intended for permanent residential use.		H		
	Sites used for holiday or short-let caravans and camping, subject to a specific warning and evacuation plan.		M		
	Unofficial/illegal caravan and camping grounds		M		
	Residential care homes		H		
	Children's homes		H		
	Social services homes		H		
Hostels		H			

Other receptors	Infrastructure and buildings	Data available	Community vulnerability category	Stakeholder reference number	Responsibility Organisation and type (D, P, V)
Residential (continued)	Prisons,		H		
	Non permanent prison cells like police stations or courts		M		
	Hotels		M		
Non residential properties	Non domestic basements (Leisure/commerce/churches etc.		M		
	Nurseries/kindergarden		M		
	Schools		M		
	Health centres		M		
	Administrative buildings and depots		L		
	Offices		L		
	Industry		L		
	Storage and distribution facilities		L		
	Restaurants/cafes/takeaways/drinking establishments		M		
	Theatres/nightclubs/leisure facilities		M		
	Military bases		VL		
	Zoos, veterinary surgeries and animal shelters		H		
Cultural heritage	Museums		H		
	Libraries		M		
	Listed buildings		L		
	Monuments		L		
	Street art		L		
Amenity space	Amenity open space		VL		
	Nature conservation and biodiversity		VL		
	Outdoor sports and recreation and essential facilities such as changing rooms.		L		

