Northern Ireland
Environment Agency

River Basin Management Plans

Programme of measures

Key Sectors — Urban Development

Pressure Type — Diffuse and Point Source Pollution

www.ni-environment.gov.uk
Northern Ireland Environment Agency

Introduction

Whilst this section is entitled urban development it is equally relevant to development in what are primarily rural areas.

Rain water, falling upon impermeable surfaces (roads, pavements, yards and roofs), washes pollutants into the drainage system ultimately finding their way to the water environment. Sustainable drainage systems (SuDS) are a vital tool that can be used to reduce both pollution and the quantity of run-off. They mimic a more natural water cycle using a number of techniques including:

- reducing the area of impermeable surfaces to allow infiltration at source;
- using systems such as artificial ponds or wetlands to allow for some treatment and attenuation before the runoff is discharged back into the water environment.

Many everyday products are used increasingly often in rural and urban households (for example medicines and cleaning products) which contain a wide range of chemicals that may be harmful to our water environment. There are many potential sources including regulated, unregulated or accidental releases such as:

- contamination from applying pesticides to recreational areas, roads, paths, railways or gardens;
- accidental misuse or inappropriate disposal of products.

In addition, misconnection between the sewerage system and surface water drains may result in untreated wastewater entering the environment, rather than going to wastewater treatment works. Incorrect plumbing could mean that wastewater from dishwashers, washing machines, sinks, baths and even toilets is flushed directly into a local river.

What causes the environmental impact?

The key pollutants from urban drainage are:

- sediment (e.g. soils, grit and silt) washed off the streets during heavy rain and from construction sites;
- nutrients, organic matter, ammonia and faecal pathogens – associated with misconnection of sewers into surface water drains, sewer chokes and discharges, and faeces from pets and urban wildlife; and
- toxic substances (oils, toxic metals, rubber, and exhaust particles from motor vehicles), spillages and leaks from oil and chemical stores, disposal of waste materials such as paints, oils, lubricants and pesticides.

There are other environmental impacts associated with the volume of water which flows from our urban areas:

- flooding is exacerbated by the rapid runoff of rain from impermeable urban surfaces; and
- runoff to combined sewers exacerbates sewage pollution by causing storm overflows to operate more frequently and sewers to discharge.


Belfast

What action are we already taking?

Key legislation

Several pieces of legislation control potential pollution arising from activities of this sector including:

- The Water (Northern Ireland) Order 1999
- Groundwater Regulations (Northern Ireland) 2009
- European Community Regulation on Registration, Evaluation and Authorisation of Chemicals (REACH) (EC 1907/2006)
- Food and Environment Protection Act 1985 (FEPA)
- The Control of Pesticides Regulations (Northern Ireland) 1987.

The legislation is covered in detail in the key sectors on Industry & Other Business and Agriculture.

Roads (Environmental Impact Assessment) Regulations (NI) 1999

These Regulations implement the European Council Directive 97/11/EC of 3rd March 1997 on the assessment of the effects of certain public and private projects on the Environment, in respect of those proposals to construct new roads and to improve new roads to which the Directive applies. The Regulations follow closely the provisions of the corresponding regulations in operation in Great Britain.

Policy and best practice

Development control

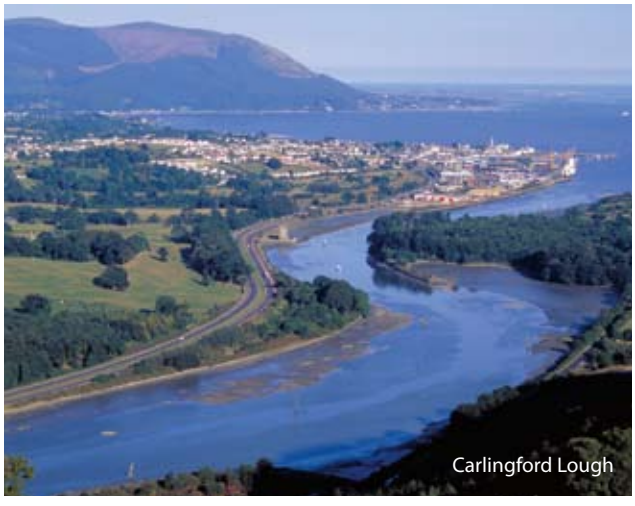
NIEA encourages the use of SuDS in all responses to planning and permitted development applications. SuDS are promoted in the DOE Planning Service Planning Policy Statement 15 (PPS 15) titled 'Planning and Flood Risk'. PPS15 provides information about the principles underpinning SUDS and the possible advantages it may offer in alleviating flood risk in Northern Ireland. New developments are now served by separate sewerage systems although in some areas these feed into older parts of the network which may be combined. NIEA encourages the use of sustainable drainage systems that are intended to slow down the rate at which rainfall enters the drainage system.

In June 2008 the Department of the Environment Planning Service commissioned a review of the Permitted Development (PD) rights provided by the Planning (General Development) (Northern Ireland) Order 1993 (the GDO) in relation to non-householder development. Under the Review the preferred option included - Permitted development rights would be more restrictive in sensitive areas and the use of buffer zones removing permitted development rights around European sites should be considered.

New road construction and development

Roads Service has designed SuDS into several new road systems. Current guidance promoted includes 'The SuDS manual' on design and construction standards. This manual provides best practice guidance on the planning, design, construction, operation and maintenance of SuDS to facilitate their effective implementation within developments. SuDS will be embraced, for the regulation of storm drainage, for all new motorways, dual carriageways and improvements to roads of that standard and above, where technically and economically feasible.

Roads Service has many examples of SuDS drainage systems implemented on its principal road networks e.g. in the North Eastern River Basin District SuDS have been provided on the A8 Belfast to Larne Road. The SuDS systems in this scheme feature filter drains which filter out solids and distribute the discharge evenly to a waterway, infiltration trench (stone backfilled trench). Retention ponds are also a feature of SuDS on this route with some ponds incorporated into the centre of roundabouts to reduce landtake.


Carlingford Lough

Guidelines

Pollution Prevention Guidelines

There are a range of Pollution Prevention Guidelines (PPG) that have been produced jointly by agencies across the UK, that relate to the control of pollution in urban areas including activities relating to construction and domestic properties. For example:

- PPG1 provides a basic introduction to pollution prevention and advises businesses and individuals of their responsibility for compliance with environmental regulations and signposts to other PPGs.
- PPG 2 guidelines are intended to assist those responsible for 'Above ground oil storage tanks'.
- PPG 3 advise on the 'Use and design of oil separators in surface water drainage systems' fitted to surface water drainage systems to protect the environment from pollution by oils namely diesel, petrol and engine oil;
- PPG 4 provides guidance on 'Disposal of sewage where no mains drainage is available' noting disposal for chemicals, oils, solvents or paint brush cleaning fluids can impair the treatment process and may even cause damage, discharge of grease may also reduce the efficiency of the treatment process;
- PPG 5 These guidelines cover construction and maintenance works in, near or liable to affect surface waters and groundwaters;
- PPG 6 'Working at construction and demolition sites' is intended specifically to assist those in the construction and demolition industry with responsibility for managing the environmental impact of their activities. Compliance with these should minimise the effect of the work on the environment;
- PPG 8 'Safe Storage and disposal of used oils' are intended to help everyone that handles used oils including disposal of domestic used oils such as engine oil and vegetable oil;
- PPG 13 'Vehicle washing and cleaning', this good practice guidance will help prevent pollution from vehicle washing and cleaning using automatic wash systems, high pressure or steam cleaners and washing by hand.

Northern Ireland Environment Agency (NIEA) general guidelines have been produced to prevent pollution at home and good general practices should be observed in the domestic environment including oil tanks /boilers and connections to sewers. General guidance on pollution prevention can be obtained from the Pollution Prevention Pays series of publications.

The NIEA Oil Care Campaign exists to help people avoid causing oil pollution incidents and aims to minimise the environmental impact of oil and fuels throughout their lifecycle, by promoting safe practices for handling, delivery and storage of oil and the proper collection of used oil. A number of Oil Care Campaign advisory publications are available.

Further information on above guidelines and campaign is available on the NIEA website (www.ni-environment.gov.uk).

The Health and Safety Executive Northern Ireland promote guidance on the safe disposal of pesticides used for non-agricultural purposes through their Approved Codes of Practice including 'The safe use of pesticides for non-agricultural purposes' (www.hseni.gov.uk/pesticides_safe_use.pdf).

What improvements will current measures achieve?

The current measures are not adequate to prevent further deterioration due to urban drainage. Reducing urban pollution enhances rivers, so that they will become a community asset, improving the quality of life for large numbers of people. It should be an essential part of urban regeneration.

The challenge for this river basin management plan is to promote good practice on urban drainage and to encourage all stakeholders to take active responsibility for drainage of surface water thereby reducing pollution and alleviating flooding.

As well as delivering benefits for the water environment, SuDS can also directly enhance the urban environment by providing additional green space and enhancing biodiversity.

Domestic householders must adopt good practice with respect to disposal to drains and sewers in order to put into practice a source control over potentially polluting products.

What further actions will deliver environmental improvements?

The following tables summarise the existing/ planned measures and supplementary measures for Urban Development.

Key Sector: Urban development

Pressure Type: Diffuse and point source pollution

Summary of existing and planned measures

Improvement Required	Actions	Delivery mechanism	Lead Department / Agency	Support Provider	Deadline for delivery of mechanism (year end)
Reduction in pollution and flood risk	Control pesticide sale, supply, storage, advertisement and use	Food and Environment Protection Act 1985 (FEPA) - Part III	DARD		In place
		The Control of Pesticides Regulations (Northern Ireland) 1987	DARD		In place
	Assess potential environmental impacts of new roads	Roads (Environmental Impact Assessment) Regulations (NI) 1999	DRD		In place
	Encourage use of SuDS through development control	DOE Planning Service Planning Policy Statement 15	DOE		In place
	Control pollution in developed areas	Pollution Prevention Guidelines	DOE		In place
	Adopt SuDS for all new motorways, dual carriageways and improvements to roads of that standard and above, where technically and economically feasible	Guidance for Sustainable Drainage Systems (CIRIA manual C697 on design and construction standards)	DRD	NIEA	In place
	Restrict use of chemicals for manufacturing, importing and distribution or sale	The REACH Enforcement Regulations 2008	HSE	NIEA	In place

Key Sector: **Urban development**

Pressure Type: Diffuse and point source pollution

Summary of supplementary measures

Improvement Required	Actions	Delivery mechanism	Lead Department / Agency	Support Provider	Deadline for delivery of action (year end)
Reduction in pollution and flood risk	Introduce wider use of SuDS in appropriate circumstances	(Draft) Strategy to promote the uptake of SuDS in NI. 'Managing Stormwater'	DOE	DRD, NIW, RA	2010 - Subject to ministerial approval
	Grant planning permission only for proposals where SuDS are provided as an integral element of the overall scheme design (new residential developments of 10 or more dwellings)	Updated planning policy PPS7	PEPG	Planning Service	2010
	Require hard standings in certain situations to be either porous or permeable	Planning (General Development) Order (Northern Ireland) 1993	Planning Service	PEPG	2011
	Consider use of buffer strips for development adjacent to rivers and lakes	Review of Non-Householder Permitted Development Rights	DOE Planning Service	DRD, NIW	2012
	Develop a strategy to identify water quality problems caused by misconnections and take actions to resolve the problems	UK Good Practice Document - Investigation and rectification of drainage misconnections Education and awareness raising	DOE	DRD	2012
Control of diffuse and point sources of pollution	Review diffuse pollution sources and options for control	The Groundwater Regulations (NI) 2009 Groundwater Daughter Directive (GWDD) Article 6	NIEA		2012
	Assess diffuse loads and allow for their prioritisation of new actions	Diffuse pollution screening and modelling tool	NIEA		2012
	Promote and adopt good practice with respect to storage, use and disposal of hazardous chemicals including oil, garden and household chemicals, paint and detergent	Education and awareness raising Pollution Prevention Guidelines Oil Care Campaign	NIEA		2012
		The safe use of pesticides for non-agricultural purposes	HSENI	NIEA	In place

Our aim is to protect, conserve and promote the natural environment and built heritage for the benefit of present and future generations.

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