

# 9. Environmental infrastructure



Enniscrone wastewater treatment works

## 9.1 Water, wastewater and drainage: context and legislation

Sligo County Council has a number of important roles in relation to the management and sustainability of water bodies and ground water systems throughout County Sligo. It is the Water Services Authority with responsibility to provide, operate, improve and extend the water services infrastructure as necessary, thus ensuring a sufficient supply of quality drinking water, wastewater treatment capacity and storm water drainage capacity in order to support the development of the County.

The Council has an equally important role in protecting the natural heritage and ecosystems and to achieve a clean, safe, healthy and sustainable environment. Water, wastewater and storm water infrastructure investment supports and facilitates balanced and sustainable development in County Sligo and it is particularly important that an appropriate share of this investment is targeted towards the development of the county's towns and villages in line with the Core Strategy and settlement structure outlined in Chapter 3 of this Plan.

Over the lifetime of the CDP 2005-2011, County Sligo has experienced substantial development pressure in certain areas, which has placed serious strain on the existing capacity for water supply, wastewater infrastructure and storm water infrastructure. Significant capacity issues still remain in many settlements.

The continued provision and effective operation of water services infrastructure is a key element in supporting economic growth and providing a satisfactory quality of life for existing and future residents within county Sligo through sustaining environmental quality. Infrastructural capacity is a key consideration in the planning approvals process for new developments within the county. The reality is that there are significant limitations on available resources, including financial and environmental, which dictate that investment must be focused in order to maximise potential benefit to the county in an environmentally sustainable manner.

### **Regulatory framework**

The Water Services Act 2007 provides the legislative framework, governing functions, standards, responsibilities and practice in relation to the planning, management and delivery of water services. This legislation

focuses on water and wastewater “in the pipe” as distinct from broader water resources and environmental issues (refer to Section 10.1 Water Quality).

The Drinking Water (No. 2) Regulations 2007 set out the standards and responsibilities relating to the provision and monitoring of a quality drinking water supply to consumers. The regulations also outline the Environmental Protection Agency’s (EPA) role in a supervisory capacity over local authority operations. The EPA reviews how the Council operates and manages its facilities, and may issue directions on upgrades required to existing facilities in order to achieve compliance with these regulations.

The Wastewater Discharge (Authorisation) Regulations 2007 empower the EPA to licence and regulate local authority wastewater treatment and collection systems. These licences specify both quality standards and volume of discharges permissible from plants and therefore may limit further development in some areas where environmental constraints exist. Some existing systems may also require significant investment to ameliorate the impacts of existing developments.

The Water Framework Directive, Nitrates, Habitats, Urban Wastewater and Shellfish Directives issued by the European Union will also directly impact on the Council’s ability to utilise existing water sources, and the capacity to treat and dispose of wastewater and associated bio-solids. In particular, they will limit the Council’s capacity to increase overall outputs from existing plants and development options for new facilities.

Sligo County Council’s Needs Assessment 2009, which covers the period from 2010-2012 and beyond, sets out a strategic investment programme of some 152 million euro. Schemes are prioritised, based on assessment criteria outlined by the DoEHLG, in order to determine the Water Services Investment Programme 2010 - 2012. Advancement of projects therein will depend on Department approvals and resource availability. A key constraint on such projects is the requirement that the Council fund a significant element of project costs from local resources, in accordance with the implementation of the National Water Pricing Policy.

The Council will also be required to prepare a Water Services Strategic Plan, as set out in the Water Services Act 2007, during the lifetime of this development plan. The Plan will set out a strategy for the provision of water services in the County taking cognisance of policies and objectives of this development plan, sustainable development, affordability, environmental constraints, service quality and regulatory criteria. The adoption of the Water Services Strategic Plan is a reserved function of the Council.

### Strategic water, wastewater and storm water drainage objectives

It is an objective of Sligo County Council to:

- SO-W-1** Improve water and wastewater services in those areas of the county where deficiencies exist at present, subject to the availability of resources and appropriate statutory approvals.
- SO-W-2** Carry out measures to address deficiencies in existing water and wastewater infrastructure, so as to ensure compliance with regulatory requirements and the objectives of the Water Framework Directive.
- SO-W-3** Preserve and further develop water and wastewater infrastructure in order to facilitate the growth of settlements at an appropriate rate which is consistent with the Core Strategy and the Settlement Structure.
- SO-W-4** Implement adequate surface water drainage measures and prohibit unsuitable development in flood-susceptible areas.
- SO-W-5** Prepare a Water Services Strategic Plan – in compliance with the Water Services Act – for the functional area of the Council. Such a plan may be prepared jointly with other water services authorities.

## 9.2 Water supply

The provision of an adequate water supply to serve the anticipated level of population growth within Sligo County requires monitoring and phased improvements concurrent with development needs. Sligo County Council has carried out significant investment in water infrastructure over the period of the previous plan. However, there are still significant deficits throughout the County in these services. As these deficits cannot be immediately addressed, the Council identifies the locations under the greatest development pressure and prioritises the upgrading of existing, or provision of new infrastructure in these areas. The locations are then categorised for servicing through the appropriate investment programme.

When deficits are identified, they are included in a priority listing. However, due to fluctuations in development pressure, this listing must be kept flexible and under constant review. In order to assist in the provision of infrastructure, and where it is deemed appropriate, the Council will enter into public-private partnerships (PPPs) with the private sector for the provision of infrastructural projects. The Council will also fund schemes through special development contributions under Section 48(2) (c) of the Planning and Development Act 2000 (as amended), as appropriate.



**Kilsellagh reservoir**

### 9.2.1 Sligo's water supply schemes and infrastructural needs

Currently there are eight schemes (listed below) supplying public water throughout Sligo, six of which are regional schemes.

- Lough Talt RWSS
- Riverstown RWSS
- Lough Easkey RWSS
- Kilsellagh WTW
- North Sligo RWSS
- Cairns Hill WTW
- South Sligo RWSS
- Foxes Den WTW

There are two main sources of water supplying the Sligo and Environs area, namely Kilsellagh Reservoir and Lough Gill. The Sligo and Environs Water Supply Scheme is designed to provide for the domestic, agricultural and industrial water requirements of Sligo City and its outlying regions, such as Ballincar, Rosses Point, Strandhill and Ballintogher.

There is a water treatment plant at Kilsellagh and two plants treating water from Lough Gill – Cairns Hill and Foxes Den. The three water treatment plants have been, or are in the process of being upgraded to facilitate the improved treatment and overall quality of the water supply. A water conservation programme is being implemented within the Sligo and Environs area, to reduce “unaccounted-for water” (UFW) and to promote a more sustainable approach to usage.

In general, water supply facilities and drinking water quality throughout the county need to be improved to serve existing communities and accommodate planned growth. The proposed improvements to enhance Sligo's water supply schemes are outlined in Table 9.A on the next page.

**Table 9.A Proposals for water supply schemes in County Sligo, 2010–2017**

<b>Scheme</b>	<b>Treatment</b>	<b>Status</b>	<b>Design capacity (m<sup>3</sup>/day)</b>
<b>Carns Hill Water Supply Scheme</b>	microstraining, ozonization, filtration, chlorination, fluoridation	N/A – no upgrade proposed at present.	5,450 m <sup>3</sup> /day
<b>Foxes Den Water Supply Scheme</b>	dissolved air flotation, rapid gravity filtration, chlorination & fluoridation	Sligo & Environs WSS phase 3 works – upgrade design capacity from 11,000 to 16,500m <sup>3</sup> /day is dependant on future growth in the Sligo & Environs area	11,000 m <sup>3</sup> /day
<b>Kilsellagh Water Supply Scheme</b>	dissolved air flotation, rapid gravity filtration, chlorination & fluoridation	Dam upgrade works complete at Kilsellagh and new water treatment works at Kilsellagh will be operational in May 2010	4,500 m <sup>3</sup> /day
<b>Lough Easky Regional Scheme</b>	clarification, rapid gravity filtration chlorination, fluoridation	Strategic review of the existing Lough Easky scheme & minor upgrade work to be completed pending departmental approval	4,450 m <sup>3</sup> /day
<b>Lough Talt Regional Scheme</b>	chlorination, fluoridation	Construction of a new water treatment works, storage reservoirs and intake works	to be determined
<b>North Sligo Regional Scheme</b>	clarification, rapid gravity filtration, chlorination, fluoridation	Strategic review of the existing North Sligo scheme & minor upgrade work to be completed as part of the small scheme programme	2250 m <sup>3</sup> /day
<b>South Sligo Regional Scheme</b>	by Roscommon County Council	Strategic review of water supply to South Sligo area	1,000 m <sup>3</sup> /day
<b>Riverstown Regional Scheme</b>	chlorination	Minor upgrade work to be completed as part of the small scheme programme	500 m <sup>3</sup> /day

## 9.2.2 Water Conservation and Network Management Project

The DoEHLG's *National Water Study* (2000) found that up to 47% of all water produced by treatment plants surveyed was unaccounted-for and that in some areas of the country this level was much higher. Therefore, there is strong evidence that water conservation is a practical, realistic and economic way of meeting much of the extra demand for water.

Water conservation activities have been ongoing in County Sligo since 1999, with the commencement of the Lough Easky/Lough Talt Water Conservation Project, followed by the North Sligo Water Conservation Project in 2001. The Sligo County Water Conservation and Network Management Project (Phase 2) commenced in August 2006.

The County Sligo Water Conservation and Network Management Project is sub-divided into three stages. Stage 1 - Water Management Systems has been completed. Stage 2 - Implementation of Water Management Systems and Active Leakage Control is ongoing and has already achieved a reduction in water production of approximately 9,000 m<sup>3</sup>/day in the Sligo County and Borough areas.

Stage 3 is intended to further reduce the level of UFW through a programme of Network Mains Rehabilitation works. A detailed report on Stage 3 proposals has been submitted to the DoEHLG for approval. Sligo County Council also produced a Consolidated Rehabilitation Strategy Report in December 2008 recommending that the project is arranged into 11 phases. It is envisaged that Network Mains Rehabilitation Phase 1 (Sligo City) will commence in 2010 with Phase 2 (Lough Talt) to commence in 2011/2012 and subsequent phases to follow. These are subject to approval of funding by the DoEHLG.

The estimated cost of the first 5 phases of work is 22,897,408 euro. The payback period for the works, based on the estimated savings in water production costs and estimated savings on leak repairs per annum, is less than 21 years. Given that the design life of new rehabilitation works is in excess of 50 years it is considered that this work will represent a good return on investment. Similar savings are expected on subsequent phases of work.

## 9.2.3 Rural water supply and quality

Responsibility for group water schemes was devolved from the DoEHLG to local authorities in 1997. Group water schemes are generally permitted in cases where the Council does not propose to carry out a public scheme and the area can be served by the extension of the existing Council water mains. It is the policy of the Council to co-operate, encourage and advise in the provision of group water schemes in the County.

A number of rural dwellings and small communities throughout Sligo do not have the benefit of a public mains water supply system. These dwellings rely on group schemes and individual well supplies. It is an objective of the County Council to ensure that all rural water supplies comply with the EC (Drinking Water) (No.2) Regulations 2007.

Many private water users rely on groundwater sources that are prone to contamination from septic tank or farmyard effluent. Therefore the protection of underlying aquifers is important for the environmental quality of rural water supply. It is an integral part of the County Council's services to strive towards improving the quality and reliability of rural water supply. Currently there are 49 part-private GWSs which are supplied off public supply and 22 private GWSs, of which 12 are currently being operated by a DBO contractor. As part of the Rural Water Programme, Sligo County Council takes in charge a number of part-private group water supplies. These schemes are reviewed by Water Services and minor upgrade works are completed as part of the takeover agreement with each scheme.

## Water supply policies

It is the policy of Sligo County Council to:

- P-WS-1** Ensure an adequate, sustainable and economic supply of good quality water for domestic, commercial and industrial use, subject to compliance with the requirements of the Habitats Directive.
- P-WS-2** Conserve water supplies through the minimisation of leakage and wastage in the interests of efficiency and sustainability.
- P-WS-3** Promote public awareness and involvement in water conservation measures.
- P-WS-4** Co-operate, support and advise in the provision and management of group water schemes in the County.
- P-WS-5** Promote the inclusion of water conservation and sustainability measures so as to minimise the use of potable water in new developments.
- P-WS-6** Existing and future population within the County shall be served with clean and wholesome drinking water. It is Council policy to ensure that all drinking water complies with the European Union Drinking Water Directive 98/83/EC as given effect in Irish law by the European Communities (Drinking Water) (No.2) Regulations 2007, as may be amended, and to implement the relevant recommendations set out in *The Provision and Quality of Drinking Water in Ireland – A report for the Years 2007-2008* (EPA Office of Environment Enforcement, 2009).

## Water supply objectives

It is the objective of Sligo County Council to:

- O-WS-1** Complete the construction of the new water treatment plant at Kilsellagh, subject to compliance with the requirements of the Habitats Directive.
- O-WS-2** Complete the planning and construction of the new water treatment plant at Lough Talt subject to compliance with the requirements of the Habitats Directive.
- O-WS-3** Extend the existing water treatment plant at Foxes Den (depending on future growth in the Sligo and Environs area), subject to compliance with the requirements of the Habitats Directive.
- O-WS-4** Carry out a strategic review of both North Sligo and Lough Easky Regional Water Supply Schemes. Any development that occurs through the implementation of this policy shall be subject to compliance with the requirements of the Habitats Directive.
- O-WS-5** Continue to advance the Water Conservation Programme in the County area.
- O-WS-6** Improve the water supply to the South Sligo Area.
- O-WS-7** Implement the requirements of the EC (Drinking Water) (No. 2) Regulations 2007.
- O-WS-8** Provide an adequate water supply for fire fighting, where feasible.
- O-WS-9** Continue to implement the annual Rural Water Programme. Any development that occurs through the implementation of this policy shall be subject to compliance with the requirements of the Habitats Directive.
- O-WS-10** Advance all the schemes listed on the Water Services Investment Programmes, subject to compliance with the requirements of the Habitats Directive.

## 9.3 Wastewater treatment

The provision of wastewater treatment infrastructure is imperative to facilitate the economic, social, and physical development of the county and to support settlement growth. In addition, the continued improvement and provision of this infrastructure is necessary to meet the requirements of the Urban Wastewater Treatment (Amendment) Regulations 2004. There are 30 major wastewater treatment schemes within the county, of varying size and complexity.

There is a need to upgrade and improve the network and treatment facilities of a number of towns and villages throughout Sligo County. However, it should be noted that not all zoned lands in settlements need necessarily be serviced within the lifetime of this plan. This is because the zoning of land takes a longer term view with regard to development potential which may exceed the targets set out in the Core Strategy. Land use plans also incorporate a residential zoning overhead (generally 50%) to allow for an element of choice and to facilitate the release of adequate land for residential development. Therefore not all zoned lands should necessarily be viewed as appropriate for development within the lifetime of this plan. Zoned lands will be serviced subject to funding availability and compliance with the Core Strategy.

The Sligo Main Drainage Scheme has provided Sligo City and surrounding areas with adequate treatment and drainage capacity to serve up to 50,000 PE (population equivalent), thereby allowing for future development and growth. Furthermore, a Serviced Land Initiative scheme was completed in the Teesan-Lisnalurg Area. To ensure EU standards are maintained and all areas are serviced appropriately, there is a need for further upgrading of drainage infrastructure in some of the outlying areas of the environs, such as Ballincar, Cregg, Rosses Point, Carrowroe and Cummeen.

There has been significant investment in wastewater treatment facilities throughout the County since 2005. New wastewater treatment facilities were constructed in Carney, Dromore West, Coolaney, Gorteen, Ballysadare, Aclare and Cloonacool.

A new wastewater treatment plant (WWTP) was constructed in Enniscrone as part of the 20-year operation and maintenance contract of six additional WWTPs, namely Ballysadare, Aclare, Cloonacool, Dromore West, Coolaney and Easky.

The Water Services Section of the Council has submitted wastewater discharge licence applications to the EPA for all of the WWTPs in County Sligo. The Council will be required to comply with the EPA licensing requirements.

As part of the Sludge Management Plan for County Sligo, which was endorsed by the Department, sludge generated from public sewerage schemes throughout the County and from private treatment systems (including individual septic tanks and on-site systems serving one-off housing) can be transported to a sludge hub centre at the Sligo Main Drainage Centre at Finisklin for treatment and disposal. To facilitate the sludge collection process, two satellite stations have been completed in County Sligo at Ballymote and Enniscrone.

### 9.3.1 Prioritisation of investment

The areas to be prioritised for wastewater infrastructure have been identified in the Sligo County Council Needs Assessment 2009. Schemes will be progressed under the Major Schemes Programme, with any schemes with a cost of less than 1m euro being progressed under the Small Schemes Programme.

The Water Services Investment Programme is a national multi-annual approach to investment in water infrastructure which is part-funded by the Exchequer. The marginal cost (non-domestic) element is funded by Sligo County Council and subsequently recovered locally via consolidated water pricing. The Needs Assessment process will inform the development of the Water Services Investment Programme 2010–2012 in order to adequately address the specific environmental and economic pressures that have emerged in recent years. The objectives of the Programme are to ensure that the timing and scale of investment will facilitate development, ensure compliance with statutory requirements for drinking water and wastewater treatment and maintain environmental sustainability.

### 9.3 Wastewater treatment

Proposed treatment works and extensions to drainage infrastructure throughout County Sligo are outlined in the Table 9.B below. An examination of the wastewater situation shows that there is some capacity for treatment in the following towns and villages: Aclare, Ballysadare, Carney, Cloonacool, Coolaney-Rockfield, Culfadda, Curry, Dromore West, Enniscrone, Gorteen, Monasteraden, Riverstown, Sligo City and the Teesan/Lisnalurg area, Easky and Geevagh.

**Table 9.B Proposed wastewater treatment plants and extensions in County Sligo**

Town/Scheme	Current design PE*	Existing outfall / treatment	New design PE	Remarks
<b>Aclare</b>	750	inlet works, aeration tank, clarifier, sludge holding tank	n/a	new treatment works completed in 2005, part of O&M contract
<b>Ballinacarrow</b>	250	extended aeration	500	new treatment works proposed
<b>Ballinacorney</b>	150	septic tank & ABR, peat-based percolation system	350	new treatment works proposed
<b>Ballinacorney / Cregg / Rosses Point Main Drainage Scheme</b>	1,500	holding tank, sea outfall at Rosses Point	5,000	new collection system to be completed to pump wastewater from Rosses Point (Ballinacorney, Cregg, Rosses Point WWTW**) into Sligo Main Drainage – 5,000 PE
<b>Ballinodan / Hazelwood Main Drainage Scheme</b>	n/a	n/a	n/a	drainage masterplan has been developed
<b>Ballintogher</b>	200	aeration tanks & peat-based percolation system	500	new WWTW to be completed as part of small scheme programme.
<b>Ballygawley</b>	n/a	n/a	450	new treatment works and collection system proposed
<b>Ballymote</b>	3,000	inlet works, extended aeration, clarifier, sludge holding tanks, satellite hub centre.	n/a	design review to be completed and upgrade of the existing WWTW to be completed
<b>Ballysadare</b>	4,500	new inlet works, aeration tanks, clarifier, storm tank and sludge holding tank	n/a	new treatment works completed in 2005, part of O&M contract
<b>Bunnannaddan</b>	80	septic tank	350	new WWTW to be completed as part of small scheme programme.
<b>Carney</b>	2,500	new inlet works, aeration tanks, clarifier, and sludge holding tank	n/a	new treatment works completed in 2007.
<b>Carrowroe Main Drainage Scheme</b>	n/a	n/a	4000	proposed new collection system to be completed.
<b>Castlebaldwin</b>	100	septic tank & peat-based percolation system	n/a	n/a
<b>Cliffony</b>	450	extended aeration	1100	new treatment works proposed
<b>Cloonacool</b>	750	inlet works, aeration tank, clarifier, sludge holding tank	n/a	new treatment works completed in 2005, part of 20-year O&M contract
<b>Collooney</b>	1,400	extended aeration, clarifier	n/a	preliminary report to be completed for upgrade of the existing WWTW

\* PE – Population equivalent    \*\* WWTW – Wastewater Treatment Works    [continues on the next page]

## 9. Infrastructure

**Table 9.B continued**

Town/Scheme	Current design PE*	Existing outfall / treatment	New design PE	Remarks
<b>Coolaney</b>	2,500	new inlet works, aeration tanks, clarifier, storm tank, sludge holding tank	n/a	new treatment works completed in 2007, part of 20-year O&M contract.
<b>Culfadda</b>	150	extended aeration	n/a	spare capacity in the existing plant
<b>Cummeen Main Drainage Scheme</b>	n/a	n/a	3,000	proposal to pump wastewater from Cummeen into Sligo Main Drainage - 3,000 PE
<b>Curry</b>	400	extended aeration	n/a	spare capacity in the existing plant
<b>Dromore West</b>	2,500	new inlet works, aeration tanks, clarifier, storm tank, sludge holding tank	n/a	new treatment works completed in 2007, part of 20-year O&M contract
<b>Drumcliff</b>	150	septic tank & peat-based percolation system	n/a	review of this scheme to be completed
<b>Easky</b>	450	extended aeration	n/a	upgrade works completed in 2008, new pumping station to be completed in early 2010, part of 20-year O&M contract
<b>Enniscrone</b>	5,000	new inlet works, aeration tanks, clarifier, storm tank and sludge holding tank, sludge hub centre	n/a	new treatment works completed in 2008, part of 20-year O&M contract.
<b>Geevagh</b>	250	extended aeration	n/a	upgrade works completed in 2009 as part of small scheme programme
<b>Grange</b>	280	extended aeration	2,500	new treatment works proposed
<b>Gorteen</b>	2,500	new inlet works, aeration tanks, clarifier, storm tank and sludge holding tank	n/a	new treatment works completed in 2008
<b>Monasteraden</b>	400	extended aeration	n/a	none
<b>Mullaghmore</b>	320	holding tank, sea outfall	1,600	new treatment works proposed
<b>Riverstown</b>	600	extended aeration	n/a	spare capacity in the existing plant
<b>Rathcormack</b>	n/a	n/a	n/a	funding will be sought from the DoECLG to assess the feasibility of providing public wastewater treatment
<b>Rockfield</b>	250	extended aeration plant	n/a	new scheme completed in 2007
<b>Sligo Main Drainage Scheme</b>	50,000	new pumping station, new inlet works, aeration tanks, clarifiers, storm holding tanks tank and sludge hub centre	n/a	new treatment plant completed in 2009
<b>Strandhill</b>	1,500	oxidation ditch	4,500	upgrade of existing WWTW
<b>Teesan / Lisnalurg Main Drainage Scheme</b>	5,500	pumping station and associated pipework	n/a	all work associated with this scheme were completed in 2009
<b>Tobercurry</b>	1,400	Imhoff tank, percolating tank, tertiary treatment	5,000	upgrade of existing treatment works proposed

\* PE – Population equivalent    \*\* WWTW – Wastewater Treatment Works

## 9.3.2 Rural wastewater disposal

In rural areas, much of the wastewater produced is treated and disposed of on-site by means of individual septic tanks and proprietary effluent treatment systems (PETS). It is essential that these systems are properly designed, installed and maintained to avoid environmental pollution (see Section 12. Development Management Standards). All such proposals shall be in compliance with the Environmental Protection Agency's *Code of practice for Wastewater Treatment and disposal Systems serving Single Houses* (2009). Where appropriate, other developments shall be in compliance with the EPA's document *Waste water Treatment Manuals – Treatment systems for small communities, business, leisure centres and hotels* (1999).

### Wastewater policies (I)

It is the policy of Sligo County Council to:

- P-WW-1** Ensure sustainable collection, treatment and discharge of wastewater effluent generated within the County.
- P-WW-2** Ensure that developers provide effective drainage systems with separate foul and surface water networks.
- P-WW-3** Ensure that effluent/sludge is treated and disposed of in accordance with the required EU standards.
- P-WW-4** Promote the sustainable use of wastewater treatment facilities.
- P-WW-5** Strive to provide adequate wastewater treatment capacity to facilitate development in County Sligo. The provision of such infrastructure will only be pursued where the planning authority is satisfied that it is necessary and in accordance with the requirements of the Core Strategy and the Settlement Structure of the County.
- P-WW-6** Facilitate appropriate proposals from private developers to extend existing public wastewater infrastructure networks, where such proposals would result in the servicing of lands zoned in accordance with the Core Strategy. Any such proposal shall be assessed on a case-by-case basis.
- P-WW-7** Ensure that public wastewater treatment infrastructure is in place, with adequate capacity, prior to developments being occupied.
- P-WW-8** All proposals for on-site treatment systems shall be designed, constructed and maintained in accordance with the Environmental Protection Agency's *Code of Practice for Wastewater Treatment and Disposal Systems Serving Single Houses (PE≤10)*. (2009) and/or *Treatment Systems for Small Communities, business, Leisure Centres and Hotels*, and any guidance documents issued by the County Council.
- P-WW-9** As relevant and as appropriate, seek to implement the relevant measures for individual water bodies set out in the Western River Basin Management Plan and the Shannon and North-Western International River Basin Management Plans and the associated Programmes of Measures.
- P-WW-10** Prohibit the discharge or disposal of domestic wastewater from one-off houses, following treatment, to surface water bodies.
- P-WW-11** Ensure that adequately designed grease-traps are installed and maintained in all commercial premises where food is prepared.
- P-WW-12** Ensure that adequately designed oil interceptors are installed in all commercial developments that include car-parks or other oil- and petrol-related activities.
- P-WW-13** Regulate discharges to local authority sewerage schemes to protect and improve groundwater and surface water quality in accordance with the requirements of the Water Framework Directive.

[continues on the next page]

## Wastewater policies (II)

It is the policy of Sligo County Council to:

- P-WW-14** Ensure tertiary treatment (phosphorus removal) is provided in proposed upgrades to existing or new local authority wastewater treatment infrastructure.
- P-WW-15** Discourage the use of pumping stations in private developments. Storm overflows from pumping stations serving private developments will not be permitted.
- P-WW-16** Promote the establishment of a satisfactory management structure in relation to existing in-situ private wastewater pumping stations.
- P-WW-17** Development proposing to connect to the public wastewater treatment system shall not be permitted unless the planning authority is satisfied that adequate capacity is available.

Exceptions to this policy will be considered in cases where works on upgrading the wastewater facilities have commenced and will be completed within a reasonable timeframe. In such cases, appropriate conditions shall be applied to planning permissions to ensure that the proposed development and the upgrading works are suitably phased.

- P-WW-18** In cases where a settlement is not served by a public wastewater treatment plant, or where no spare capacity exists in an existing wastewater treatment plant, individual developments proposing to use on-site wastewater treatment will be considered subject to appropriate scale, assessment, design and conditions, taking groundwater vulnerability into account.

Any such permitted development shall be subject to legally binding maintenance and bonding arrangements agreed with the planning authority and shall be required to connect to the public wastewater treatment plant when/if adequate capacity becomes available.

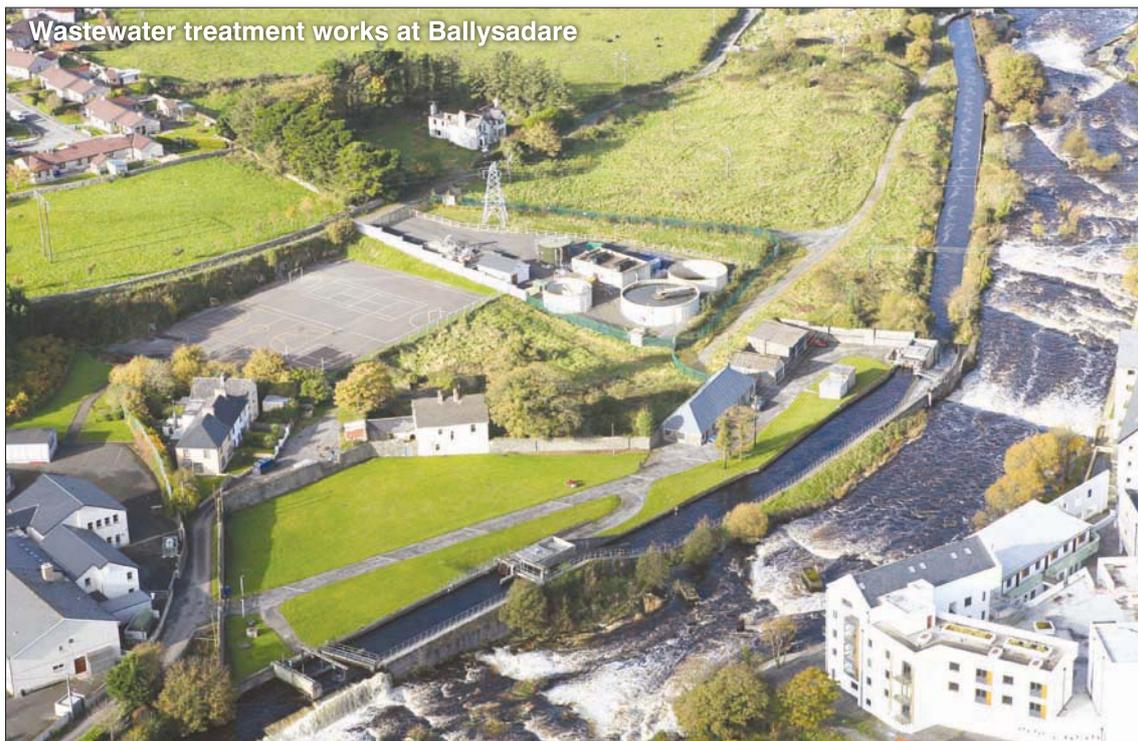
However, communal on-site wastewater treatment systems (i.e. systems servicing more than one residential unit, commercial premises etc.) will not be permitted in any case.

- P-WW-19** In cases where capacity exists, all proposed developments will be required to connect to the public wastewater treatment plant.
- P-WW-20** Development shall be accompanied by financial contributions to facilitate the provision of wastewater treatment infrastructure with adequate capacity that will ensure compliance with the provisions of the relevant River Basin Management Plan(s) and the Habitats Directive.
- P-WW-21** Implement the relevant recommendations set out in the document *Urban Wastewater Discharges in Ireland for Population Equivalents Greater than 500 Persons – A Report for the Years 2006 and 2007* (EPA Office of Environment Enforcement, 2009) where feasible, and to examine the feasibility of connecting unsewered areas, including individual properties/premises currently serviced by septic tanks, to existing and planned sewer networks subject to the availability of resources.,

## Wastewater objectives

It is the objective of Sligo County Council to:

- O-WW-1** Complete the construction of the new wastewater treatment plants at Tobercurry, Grange, Strandhill and Ballinafad.
- O-WW-2** Complete the planning and construction of the new wastewater treatment plant at Ballintogher, Bunnanadden, Cliffony, Ballinacarrow, Mullaghmore and Ballygawley, subject to necessary approvals and compliance with the requirements of the Habitats Directive.
- O-WW-3** Complete the construction of a wastewater collection system to pump wastewater from Rosses Point, Ballincar and Cregg into Sligo Main Drainage.
- O-WW-4** Complete the planning stage for upgrade works to Collooney and Ballymote WWTPs, subject to necessary approvals and compliance with the requirements of the Habitats Directive.
- O-WW-5** Facilitate the sustainable development of towns and villages by improving and extending wastewater infrastructure as set out in Table 9.B, subject to the availability of necessary funding and compliance with the Core Strategy and Settlement Structure for the County.
- O-WW-6** Achieve compliance with the Urban Wastewater Treatment (Amendment) Regulations 2004 with regard to wastewater collection, treatment and discharge and implement the relevant recommendations set out in the document *Urban Wastewater Discharges in Ireland for Population Equivalents Greater than 500 Persons – A Report for the Years 2006 and 2007* (EPA).
- O-WW-7** Implement the Sludge Management Plan for the County.
- O-WW-8** Achieve compliance with the requirements of the Water Framework Directive.



## 9.4 Surface water drainage

Due to its impervious surfaces, the built environment will create an increase in surface water run-off. The majority of towns and villages in County Sligo are coping with surface water run-off either through natural dissipation into nearby watercourses or through the installation of artificial drainage systems. The presence of natural environment, incorporating woodlands and wetlands, aids in retaining surface water, thereby helping in the regulation of stream flows. Storm water retention facilities provide temporary storage for surface water that is in excess of the capacity available in downstream channels. This method is considered to be in accordance with better practice guidelines and will be encouraged in County Sligo. Individual developments facilitated under the guidance of this development plan shall be obliged, in all cases where surface water drainage measures are required, to provide a surface water drainage system separated from the foul drainage system.

In the case of one-off rural dwellings or extensions, except in circumstances where an existing surface water drainage system is available to the proposed development site and which, in the opinion of the planning authority, has adequate capacity to accommodate the identified surface water loading, surface water shall be disposed of, in its entirety, within the curtilage of the development site by way of suitably sized soak holes. In the case of driveways, drainage measures shall be provided to a detail acceptable to the planning authority so as to avoid run-off from the site to the adjoining public road.

For all other greenfield developments, in general it is the policy of Sligo County Council to require the limitation of surface water run-off to pre-development levels. Where a developer can clearly demonstrate that capacity exists to accommodate run-off levels in excess of greenfield levels, the planning authority will give consideration to such proposals on a case by case basis. In the case of brownfield development, while existing surface water drainage measures will be taken into account, some attenuation measures may be required, at the discretion of the planning authority. In line with the above, Sligo County Council will consider all drainage proposals consistent with SDS (Sustainable Drainage Systems).

### Surface water drainage policies

It is the policy of Sligo County Council to:

- P-SW-1** Require the provision and use of separate foul and surface water drainage systems.
- P-SW-2** Ensure that developments are kept at an appropriate distance from watercourses, to protect them from contamination, allow for natural drainage and facilitate channel clearing maintenance.
- P-SW-3** Preserve and protect the water quality of natural surface water storage sites, such as wetlands, where these help to regulate stream flows, recharge groundwater and screen pollutants (such features also provide important habitat functions).
- P-SW-4** Protect wetland areas and floodplains from development.
- P-SW-5** Prohibit the alteration of natural drainage systems and, in the case of development works, require the provision of acceptable mitigation measures in order to minimise the risk of flooding and negative impacts on water quality (including run-off, erosion and sedimentation).
- P-SW-6** Protect drainage characteristics of river channels and streams that can facilitate surface water drainage, by ensuring that development is kept at an appropriate distance from stream banks and/or adequate protection measures are put in place.
- P-SW-7** Promote storm water retention facilities for new developments and existing catchment areas, particularly where developments are proposed in proximity to an existing open water course or stream.
- P-SW-8** Encourage and, where appropriate, require that the permitted flow from a development to a public storm water drain or watercourse is restricted/equal to the natural run-off rates from the undeveloped site.

## 9.5 Waste management

The large amount of waste produced by humans must be significantly reduced or recycled in a manner that is least damaging to the environment so as to increase more sustainable living. Waste comes from a wide range of sources, including construction, industrial activities, agriculture and households. The level of interest in waste minimisation and effective waste management has dramatically increased in recent years. Diverting waste from landfill is one of the greatest waste management challenges facing our Country.

The Connacht Waste Management Plan (2006-2011) was adopted by the six Connacht local authorities (Galway, Leitrim, Mayo, Roscommon and Sligo County Council and Galway City Council). The plan re-emphasises the waste management targets to be achieved in order to comply with national and EU targets, namely: recycle 48%, thermally treat 33% and landfill 19% of our waste.

Almost one third (30%) of Sligo's household waste was recycled in 2008, which was an increase in comparison to the amount recycled in 2007. However, in order to reach the ambitious target of 48% recycling of household waste, the continued roll-out and use of the 'third bin' for organic waste is essential.

It is expected to continue to work with waste collectors and others to increase the percentage of organic waste diverted from landfill. There are ever-increasing demands placed on organisations and households, but the need for proper waste management continues to be of paramount importance for economic, legislative and environmental reasons.

### 9.5.1 Municipal waste infrastructure

There is a continuing need to avoid the production of waste at source and to try and divert as much as possible from landfill. This diversion of waste is achieved through the provision of facilities and services, followed by education and enforcement. The bring-bank network, civic amenity sites, composting site, kerbside recycling, home composting and the introduction of a separate organic waste collection – all help divert waste from landfill. Sligo County Council will continue to examine ways of managing waste in a more efficient manner.

Dry recyclable wastes are catered for at the two recycling centres located in Sligo town and Tobercurry. The use of these facilities continues to grow and complement the separate kerbside collection of dry recyclable materials, which is available throughout Sligo.

Adequate infrastructure is in place in County Sligo to cater for the quantities of dry municipal waste produced, and the challenge now is to maintain and increase their use by both domestic and commercial customers. Glass is diverted from landfill via a network of 40 recycling/bring-bank sites located throughout Sligo town and county.

Organic kitchen waste makes up approximately 30% of all household waste generated. Home composting is a positive and simple option to deal with this waste stream. The Environment Section continues to promote the use of home composters and offers them for sale at a subsidised rate. Home composting and the introduction of the 'third bin' for organic kitchen waste will greatly increase the diversion of this waste from landfill, thus increasing Sligo's recycling rates.

Landfill is the least desirable option in dealing with waste, and is at the bottom of the EU waste hierarchy. However, landfill is required to deal with the waste that cannot be recycled, composted or thermally treated, which is estimated to be 19% of all waste generated in Connacht.

A greater percentage of landfill capacity is required until the necessary infrastructure is put in place to recycle, compost and in particular thermally treat waste. We also have to continue to deal with historic situations and the environmental problems caused by historic (i.e. closed) landfills. There is a need to carry out risk assessments on closed landfills and to implement the necessary measures to reduce any of the environmental impacts which may be associated with the landfill.

## 9.5.2 Construction and demolition waste

As 2.6 million tonnes of construction/demolition waste is produced annually in Ireland, with only an estimated 43% recycled, Sligo County Council will seek to promote the recycling and reuse of construction/demolition waste, which will help reduce the demands of the construction industry for aggregates. The Council will examine the scope for recovery of construction and demolition waste from local authority projects, as well as the use of recycled construction materials in site development, road building and other infrastructural projects.

Measures may also be incorporated into the licensing procedures for industry to encourage a reduction in environmental impact. Construction and demolition waste management plans are to be submitted as part of certain development proposals. Extractive developments are encouraged to incorporate C&D recycling facilities, which would facilitate the use of recovered materials in the restoration of sites, subject to compliance with environmental legislation.

## 9.5.3 Hazardous waste

Sligo County Council will co-operate with other agencies in relation to the planning, organisation, authorisation and supervision of the disposal of hazardous waste. The anticipated provision of a hazardous waste collection facility at Tobercurry Recycling Centre will assist in diverting hazardous waste to the appropriate recovery and disposal facilities. The movement of hazardous waste shall be controlled using the appropriate waste management legislation.

## 9.5.4 Green waste

Green garden waste is a bulky waste fraction that should be diverted from landfill. Sligo County Council completed the construction of a green waste composting facility at Ballysadare. This facility opened in June 2008 and is accepting green waste and selling peat-free compost generated at the site.

## 9.5.5 Litter control

Litter has a negative effect on our environment, with implications for tourism and investment. To counteract litter pollution, it is the policy of the County Council to implement the Litter Management Plan 2007-2010. Initiatives under this Plan include:

- enforcement;
- establishing a partnership between the Council and community groups in tackling litter management;
- promoting environmental education through schools and community groups;
- highlighting litter problem areas and developing initiatives to solve litter problems in those areas.

## 9.5.6 Energy recovery

Energy recovery is a further method of waste management, which is generally applied to landfills. Although no landfills will be operated within County Sligo, energy recovery can be harnessed from biogas, a renewable and environmentally-friendly fuel resource produced in large sewage treatment projects.

**Box 9.C Existing and proposed waste management facilities and services in Sligo**

**Door-to-door/kerbside collection.** This involves the collection of recyclables from individual households and was introduced in Sligo City in 2003. It is proposed to extend this service by rolling out the third bin which caters for organic waste.

**Bring-bank network.** There are currently 40 recycling/bring-bank sites located around the county, with some of these in Sligo City. It is proposed to increase the number of these facilities. There has been an upgrading of the bring-bank network in rural areas and extension to villages with a population greater than 200. The recycling banks currently provide facilities for glass and aluminium cans.

**Waste recycling centres.** There are two waste recycling centres in Sligo catering for the following waste streams:

- recyclable waste – glass, metal, packaging, dry recyclables from domestic sources etc. (feed to local materials recovery facilities)
- bulky waste – wood and metal waste, white goods etc.;
- priority/hazardous waste – batteries, waste oils etc.;
- green garden waste;
- light construction and demolition waste;

Waste electrical goods are accepted free of charge at these facilities. It is proposed to extend the waste streams accepted at these facilities, one example being the inclusion of hazardous waste.

**Materials recovery facility.** One such facility exists in Sligo City. This sorts and bales recyclable waste from door-to-door collection systems and bring-banks. It also processes source-segregated recyclable waste from commerce and industry.

**Construction and demolition waste.** This is one of the largest sources of waste. A facility will be provided within the County, to deal with the segregation and crushing of construction and demolition waste for reuse.

**Transfer station.** This involves the compaction and transfer of residual waste. The private sector currently provides a materials recovery facility and waste transfer station within Sligo City.

**Ballysadare composting facility.** This facility opened in June 2008 and is accepting green waste and selling peat free compost generated at the site.

**End-of-life vehicle recycling facilities.** There are a number of these facilities in Sligo where members of the public can now bring their scrap cars (free of charge).

**Waste management policies (I)**

It is a policy of Sligo County Council to:

- P-WM-1** Promote reduction, recycling, reuse and proper management of all waste through practices which limit environmental pollution.
- P-WM-2** Liaise with and encourage the private sector, semi-state and voluntary groups to actively pursue initiatives which involve recycling and/or reuse. Minimise unnecessary consumption of depletable natural resources and, through the proper reuse and recycling of waste, divert as much waste from landfill as possible.
- P-WM-3** Promote the development of facilities in accordance with the waste hierarchy principle, which involves a shift toward preventive and waste minimisation measures, while developing recycling and reuse, disposal with energy recovery and, as the last option, disposal of residual waste to landfill. [continues on the next page]

## Waste management policies (II)

It is a policy of Sligo County Council to:

- P-WM-4** Promote measures to reduce the production of waste and encourage the recycling of construction and demolition waste and the reuse of aggregates and other materials in future construction projects.
- P-WM-5** Require the incorporation of waste reduction/minimisation measures in the design and construction of developments, particularly those that are likely to give rise to large amounts of C&D waste. For certain developments, site-specific waste plans will be required.
- P-WM-6** Require all new developments – including residential, commercial and industrial developments, neighbourhood centres, shopping and retail areas – to provide adequate storage for the three segregated municipal waste types (organic, recyclable and land-fill waste) and incorporate waste management facilities commensurate with their nature and scale. Waste collection points shall have adequate access to provide for loading and further division after recycling on site, in order to facilitate the achievement of high recycling levels, as specified in the Waste Management Plan.
- P-WM-7** Encourage and enforce initiatives under Waste Management Regulations made under the Waste Management Acts 1996 to 2010 and implement the *polluter pays* principle, *proximity* principle, *precautionary* principle and the principle of *shared responsibility* in all waste management initiatives and investigations.

## Waste management objectives

It is the objective of Sligo County Council to:

- O-WM-1** Implement the Connacht Waste Management Plan and strive to provide, or assist the private sector in the provision of the necessary waste management infrastructure required for the achievement of the targets.
- O-WM-2** Make appropriate provision for a bring bank centre for glass and cans in each village.
- O-WM-3** Co-operate with other agencies in ensuring the safe disposal of hazardous waste by implementing the relevant provisions of the National Hazardous Waste Management Plan 2008-2012.
- O-WM-4** Examine the feasibility of energy recovery from large sewage treatment facilities.
- O-WM-5** Strive to implement the Litter Management Plan 2007-2010 and successor plans.
- O-WM-6** Where resources allow, carry out risk assessments in accordance with the EPA published code of practice *Environmental Risk Assessments for Unregulated Waste Disposal Sites* for any historic unregulated waste disposal sites identified and develop appropriate remediation plans for such sites.
- O-WM-7** Promote the roll-out and encourage the use of the third bin for organic waste.
- O-WM-8** In relation to any proposals for development of lands that may be contaminated or filled with waste (e.g. reclaimed/filled lands), require the applicants to engage specialist environmental consultants to investigate and assess the presence and extent of contamination, and to recommend remediation measures for agreement with the Local Authorities.
- O-WM-9** Require the preparation of Waste Management Plans for the construction stages of developments where deemed necessary.

# 10. Environmental quality



## 10.1 Water quality

Water quality includes surface water, groundwater, estuarine and coastal waters. The main sources of water pollution are agriculture, forestry, industrial discharges, wastewater treatment plant discharges and effluent discharges from unserviced developments. It is the objective of Sligo County Council to control the aforementioned developments and activities, through planning and development policies and through the enforcement of national water quality legislation, to ensure they do not adversely affect water quality.

Water quality monitoring and management is governed by the EU Water Framework Directive (WFD - EC/2000/60/EC) and provides for water management on the basis of River Basin Districts (RBDs). The functional area of County Sligo falls within three of these RBDs: the Western RBD, Shannon International RBD and the North-Western International RBD. In accordance with the provisions of the Directive, waters fall into five status categories: bad, poor, moderate, good and high. The WFD requires that our waters achieve at least good status and that none of our waters deteriorate by 2015.

The overall objectives of a river basin project are:

- to establish an integrated monitoring and management system for all waters within a River Basin District,
- to develop a dynamic programme of management measures and
- to produce a River Basin Management Plan (RBMP).

The Management Plans will identify the specific environmental objectives to be achieved by the end of 2015 and the programme of measures, which are the actions that will be taken to achieve the objectives.

Sligo County Council is responsible for the implementation of the RBMPs. Development plan policy must have due regard for the programme of measures detailed in the Management Plans. The RBMPs came into effect in July 2010.