

8. Delivering Improved Infrastructure



8.1 Transport

8.1.1. Context

Development Plan policy aims to integrate transport and land use to provide a sustainable framework for economic, social and cultural development. The peripheral location of County Sligo nationally and internationally, and its important regional role and location, mean that a strong transportation network is essential to improve the County's accessibility and linkages and to maximise the flow of economic and social vitality to and from its rural areas. The RPGs for the Border Region specifically support the development and upgrading of rail, road and air transport corridors connecting Sligo to the other parts of the Region.

Traffic growth in recent years in County Sligo has been influenced by rapid economic growth, increases in the number of households and the number of people at work, and growth in private vehicle ownership and use. Between 1991 and 2002, there was a 52% increase in the number of vehicles licensed in County Sligo. Despite this growth in vehicle numbers, access to transport remains limited for marginalized members of the rural population.

Many individuals have benefited from lifestyles built around the use of the car and car ownership is essential to many of those living in rural areas of the County. However, the aggregate effects of continually increasing traffic volumes can lead to serious economic, environmental and social problems, including traffic congestion, increased business costs and environmental pollution. Policies are therefore required to achieve a shift towards public transportation and a more efficient use of land. This chapter sets out policies for all forms of transportation. These policies are complemented by the settlement strategy (Section 3) and land use zoning objectives for selected settlements (Section 11).



Fig. 8.a Factors influencing traffic growth in County Sligo

8.1.1.1 General transportation objectives

- A. Promote the integration of transport and land use, by encouraging and consolidating development in a network of settlements with existing services and facilities.
- B. Promote forms of development that reduce dependence on private car transport, such as the provision of new employment opportunities within existing settlements.
- C. Promote increased use of and investment in public transport by means of appropriate land use planning measures close to existing transport nodes, routes and corridors.
- D. Promote an efficient, integrated, accessible and sustainable transport system for the County.
- E. Promote high-quality, flexible and responsive local transport services, particularly for rural communities.

8.1.2 Public transport

Public transport plays a key role in sustaining the vitality and viability of rural communities in County Sligo. Alongside the promotion of cycle facilities and pedestrian movements, quality bus and rail services can reduce car dependency within and between settlements.

Responsibility for local public transport is divided between the public and private sectors and the Council supports community transport services, in particular the Rural Transport Initiative (RTI), which is aimed at people who are excluded or who may become excluded because transport is not available, accessible or affordable to them locally.

8.1.2.1 Bus services

Bus services play a vital social role in rural communities, linking rural areas with settlements and essential services, such as schools and healthcare.

There are five categories of bus transportation currently serving County Sligo:

- seven Bus Eireann expressway long-distance services, linking Sligo with Dublin, Cork, Limerick, Galway, Athlone, Derry and Belfast;
- twenty-two Bus Eireann local commuter routes;
- Bus Eireann school bus services operated on behalf of the Department of Education and Science;
- private mini-bus services;
- eleven community bus routes, operated under the RTI.

Three RTIs serve County Sligo, funded under the NDP 2000-2006 - County Sligo Leader Partnership and Community of Lough Arrow Social Project (CLASP) - and Rural LIFT, a Community Transport project. These services provide access to transport for key target groups of the rural population, namely older people, people with disabilities, women at home, lower income groups and young people. According to Sligo County Development Board's *Rural Transport Service Audit and Needs Assessment*, 43% of these groups in rural Sligo could not make trips in 2002 due to a lack of suitable transport, thus leaving them at risk of social and economic exclusion. RTI community buses and car-sharing schemes provide door-to-door transport for passengers to towns, essential healthcare services and social facilities.

8.1.2.2 Rail network

Rail infrastructure in County Sligo consists of:

- the Sligo–Dublin line, used mainly for inter-city services;
- the disused line from Collooney to Bellaghy/Charlestown, which forms the northern section of the Western Rail Corridor, potentially linking Sligo and Galway/Limerick, with onward connections to Cork, Waterford and Rosslare.



The Sligo–Dublin rail line is a key strategic transportation link for the North-West. In recognition of this, Iarnrod Eireann has undertaken major upgrading works involving track renewal between Sligo and Carrick-on-Shannon (in 2002, under the *OnTrack 2000* investment programme), and platform lengthening at Sligo, Collooney and Ballymote stations. The frequency of service between Sligo and Dublin is planned to increase from three to five trains per day from December 2005, when new railcar sets will be introduced. By 2008, it is expected that new intercity trains will operate every two hours all day.

There are local, community-led proposals to develop a commuter rail service on the existing mainline between Ballymote and Sligo, with stops at Collooney and Ballysadare and scope for extensions to Boyle and Carrick-on-Shannon.

Together with the other local authorities in the West, Sligo County Council is seeking the reopening of passenger and freight services along the Western Rail Corridor. This route has been identified as a 'National Transport Corridor' in the NSS and its reopening is strongly supported by the RPGs. The proposal would provide an important north-south rail service in the West, with potential for internal regional linkages, connections to Dublin and a range of commuter services. It could involve reopening of the existing Ennis–Collooney Junction line and the introduction of a more direct link between Cork and Limerick would be achieved by rebuilding the abandoned Charleville to Patrickswell line. There are also calls for the reopening of the Sligo–Enniskillen–Belfast line. The promotion of Tobercurry and Ballymote as Key Support Towns, and Collooney and Ballysadare as smaller settlements with opportunities for growth, will serve to enhance the feasibility of the Western Rail Corridor and local commuter rail services.

8.1.2.3 Public transport objectives

- A. Promote the growth and development of settlements on existing public transport routes and along the Western Rail Corridor.
- B. Support the provision of public transport services by reserving land in suitable locations for public transport infrastructure and ancillary facilities, such as parking.
- C. Seek the ongoing upgrading of the Sligo–Dublin rail service for passengers and freight.
- D. Support the provision of a local commuter rail service on the existing mainline railway.
- E. Promote the development of the Western Rail Corridor, as a strategic transport corridor linking Sligo and the North-West with Mayo, Galway and Limerick.
- F. Support local, community transport services.

8.1.3 Road network

During the period 1991 to 2002, there was an increase of 88% in the number of persons in County Sligo who travelled to work, school or college by private vehicle. Sligo County Council relies on funding allocations from central government to meet this increased demand and to maintain high standards on roads throughout the County. The Council works with the National Roads Authority (NRA) to deliver objectives for National Routes and with the DoEHLG for the improvement of regional and local roads. Funding for non-national roads is also received from the Discretionary Improvement Grants Scheme, the EU Co-Financed Grants Scheme and the CLÁR Programme.

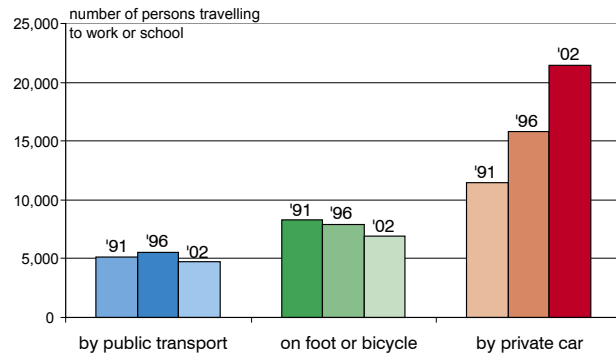


Fig. 8.b Means of travel to work, school and college in County Sligo

8.1.3.1 General road objective

- A. It is the objective of Sligo County Council to bring National Roads up to appropriate standards, as resources become available, and to continue improvement works on non-national roads so as to develop a safe and comprehensive road system for the county.

8.1.3.2 National Primary and Secondary Roads

Sligo County Council's Capital Roads Programme for National Routes is framed within the targets set out in the NRA's *National Roads Needs Study, 1998* and the *National Development Plan 2000-2006*. The NRA's Needs Study provides a basis on which future policy decisions for the development of the National Road network will be made over the period 2000 - 2019. Continuing improvements to the National Primary and Secondary road network will enable the catchment area of County Sligo to expand – particularly south to parts of Mayo and Roscommon, via the N17 and N4, and north to Donegal, via the N15. Improvements to the N16 will enhance connections to Enniskillen and, in addition, the Trans-European Network¹ cross-border route will improve links to Belfast and Northern Ireland. These improvements are expected to take place by 2010.

The NSS highlights the importance of the N17 (Sligo to Galway) and N15 (Sligo to Letterkenny) routes for the promotion of regional development. Although the National Routes comprise only 7% of the County's total road network, they carry the majority of its traffic.



N4 from Collooney to Sligo

¹The Trans-European Network is a European initiative aimed at improving transportation infrastructure between EU Member States, to overcome barriers to economic and social progress.

8.1.3.3 National Road objectives

- A. Facilitate programmed improvements to the National Road network and the provision of by-passes, as set out in Table 8.A.
- B. Restrict new access points onto National Roads, as outlined in Section 9 of this Plan, in order to maintain traffic capacity, minimise traffic hazard and protect and maximise public investment in such roads.
- C. Carry out a Route Selection Study for a Western By-Pass for Sligo City and Environs.
- D. Maintain the National Route bridge stock.

Table 8.A Strategic road proposals for the National Road network in County Sligo

Road number	Route	Description of work	Estimated completion time/ status - subject to NRA approval/ funding
N4	Cloonamahon to Castlebaldwin	realignment & upgrading	2009: completion* (preliminary design started in 2005)
N17	Tobercurry Bypass	construction	2008: completion*
N17	Collooney to Charlestown (including bypass at Bellaghy/Charlestown)	realignment	2007: CPO stage*
N15	Sligo City to Leitrim County boundary	realignment	2005: route selection completed
N16	Sligo City to Leitrim County boundary	realignment	2008: CPO stage*
N59	Ballysadare to Mayo County Boundary	improvements	ongoing
N4/N15	Sligo Western Bypass	new route	proposed for a Route Selection Study
Proposals for Western Distributor Road and Eastern Bridge Crossing and Distributor Road			Preliminary planning and design commenced in 2005. Subject to NRA/DoEHLG funding

*Note: the timeframe for all projects is subject to NRA approval.

8.1.3.4 Non-national roads

Regional and local roads make up 95% of County Sligo's road network and approximately 65% of the network has been restored to date under the Council's Multi-Annual Restoration Programme. Discretionary Improvement Grants and Special EU Co-Financed Grants provide funding for non-national road improvements, in which €25 million has been invested in County Sligo since 1995. Sligo's extensive non-national road network comprises 214 km of regional roads and 2,280 km of local roads. These provide an important road system throughout the County and it is the policy of the Council to manage these roadways in an economic and efficient manner with a particular emphasis on safety.



**Regional Road R292
at Tully, near Strandhill**

8.1.3.5 Non-national roads: objectives

- A. Identify local priorities for road improvements in conjunction with the preparation of local area plans and other land use plans.
- B. Implement the roads and traffic management objectives of adopted local area plans/land use plans, subject to the availability of funding.
- C. Improve road access to Sligo Regional Airport.
- D. Continue investment in local roads infrastructure in County Sligo, in order to improve access to peripheral areas of the County and promote social inclusion.
- E. Carry out improvement works on non-national roads, as set out in Table 8.B.

Table 8.B Schedule of non-national road improvements

Road number	Route
R284	Carrowroe to Roscommon County Boundary (serving Ballygawley, Soeey, Drumnacool and Geevagh)
R287 & R290	Rathrippin to Ballygawley, Ballintogher to Dromahair (serving Lough Gill)
R292	Entire length from Sligo City to Ballydrehid, including realignment of the junction of Burma Road and the R292 in Strandhill
R293	Ballymote to Castlerea (serving Gorteen)
R294	Cloonloo to Tobercurry to Lough Talt (on the Ballina to Boyle Road, also serving Gorteen)
R296	Ballymote to Bunnannaddan to R294
R297	Dromore West to Enniscrone to Sligo County Boundary (linking the N59)
R286	Molloway Hill to Hazelwood
R291	R291/N15 junction to Ballincar
various bridges	On non-national road network

8.1.4 Cycle and pedestrian movements

Cycling and walking play minor roles as modes of transport in County Sligo due to long trip distances. For short trips they are cost effective, non-polluting and highly flexible modes of transport that foster improved health and wellbeing. The provision of designated cycle routes, walking trails/pathways and improved road surfaces also supports tourism by facilitating cycling and walking holidays and enhancing the local tourism product. Providing for the needs of cyclists and pedestrians is therefore an important element of an integrated transport system for County Sligo.

8.1.4.1 Cycling and walking objectives

- A. Promote walking and cycling as sustainable transport modes and healthy recreational activities throughout the County.
- B. Promote cycle and pedestrian-friendly development layouts, infrastructure and facilities when considering proposals for new development.
- C. Promote and provide for the integration of pedestrian and cycle facilities (i.e. bicycle parking) at public transportation nodes and village/town centers.
- D. Plan and make provision for the safe and efficient movement of cyclists and pedestrians in and around built-up areas.



Landing at Sligo Airport

8.1.5 Airports

County Sligo is served by Sligo Regional Airport and Knock International Airport, which are of strategic importance as a means of access to the County and are critical to the success of the local and regional economy. Knock Airport is located just 20 km from Tobercurry and a 45-minute journey from Sligo City. The promotion of Tobercurry and Ballymote as Key Support Towns, and Bellaghy as a local centre of enterprise, is reinforced by their proximity to Knock Airport and the availability of direct access to an international business and tourism market.

Sligo Regional Airport is located at Strandhill, 8 km from Sligo City. Aer Arann provides two daily flights in each direction between Dublin and Sligo. The Airport has a 1200-metre long runway, capable of handling airliner and executive aircraft. The 30-minute flight time between Dublin and Sligo is of benefit to commuters, tourists and business interests. The Airport is owned and managed by Sligo North-West Airport Co. Ltd., which is developing a high-quality business park on adjacent lands and examining the feasibility of extending the runway to cater for a wider range of modern aircraft. The Airport is supported by Sligo County Council and Irish government capital and marketing grants.

8.1.5.1 Airports objective

- A. Promote and support improved access to and expansion of Sligo Regional and Knock International Airports, so as to secure a better level and frequency of service and promote Sligo's accessibility to tourists and businesses, both nationally and internationally.

8.1.6 Port and harbours

Sligo Port is one of seven ports in the BMW Region, six of which are located in the east of the Region and therefore closer to UK and European markets. The primary cargoes shipped to Sligo Port are coal, slack, timber and fish meal, with metal scrap being the main export. The Port can facilitate ships up to 3,200 dwt. Sligo's throughput is approximately 38,000 tonnes a year, which was equivalent to 0.12% of national cargo passing through Irish ports in 1998. Improved National Road access to east coast ports continues to reduce cargo transport from Sligo Port, where there was a drop of 40% in throughput cargo tonnage between 1988 and 1998.

While the significance of Sligo Port in national terms is quite low, it remains important in the regional and local economy, supporting local industry and providing a sustainable import and export transportation facility.

Harbours, piers and shipways along the Sligo coast provide marine access for the fishing industry and recreational boat users. The DCMNR provides partial funding for the improvement of piers and harbours, but there is no funding provision for maintenance. The Council has recently carried out substantial improvement works to the Mullaghmore Harbour Breakwater and Coney Island Pier, and is hoping to carry out improvements at Raghly Harbour. A yacht haven is proposed at Rosses Point, with berthing facilities for recreational and commercial users. The proposed works include dredging of the basin to facilitate non-tidal berthing and the provision of an access bridge (refer also to 6.2 Coastal Zone Management).

8.1.6.1 Port and harbours objectives

- A. Continue to support the development and operation of Sligo Port.
- B. Improve road and rail access to the Port, in order to boost its viability as an international freight port.
- C. Assist Rosses Point Yacht Club and the local community in the development and management of a local yacht haven facility, as resources become available.
- D. Carry out improvement works on Coney Island Pier and at Raghly Harbour and maintain and improve other piers and harbours, as resources allow.
- E. Support the role of harbours, piers and shipways in facilitating fishing, marine leisure, recreation and other activities.

8.2 Water, sewerage and drainage

8.2.1 Water supply and drinking water quality

The provision of an adequate water supply to serve the anticipated level of population growth within Sligo County requires conscientious monitoring and phased improvements concurrent with future development.

Due to lack of investment in water and wastewater infrastructure over many years, there are very serious deficits throughout the County in these services. As these deficits cannot be quickly 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 Small Schemes Programme, the Major Schemes Programme or the Serviced Land Initiative Programme.

As and when deficits are identified, a priority listing is compiled. 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, where it is deemed appropriate, the Council will enter public-private partnerships (PPPs) with the private sector for the provision of infrastructural projects. The Council will fund schemes through special development contributions under Section 48(2)(c) of the Planning and Development Act 2000.

8.2.1.1 Sligo's Water Supply Schemes and infrastructural needs

Currently there are nine schemes supplying public water throughout Sligo, six of which are regional schemes.

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. Water from Lough Gill and Kilsellagh Reservoir supply this scheme, with treatment plants located at Carns Hill and Foxes Den. The dam at Kilsellagh has undergone a major overhaul and pipelines from Kilsellagh to Farnacardy were upgraded. A new treatment plant is planned for Kilsellagh Reservoir.

The highest possible standards are required for water quality and supply including:

- providing an adequate supply for firefighting;
- reduction of leakage in the existing distribution system;
- providing an adequate supply to eliminate disruption to consumers over summer months;
- elimination of restrictions on residential, commercial and industrial development.

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 8.C.



Kilsellagh reservoir, North Sligo

Table 8.C Water Supply Schemes in County Sligo, 2004 – existing and proposed

Scheme	Treatment	Existing or proposed	Planned population to be served	No. of group schemes served
Ballymote Regional Scheme	clarification, rapid gravity filtration, chlorination, fluoridation	Ballymote currently supplied from Lough Talt regional supply scheme.	2,500	n/a
Lough Easky Regional Scheme	clarification, rapid gravity filtration, chlorination, fluoridation	no improvements proposed at present	4,900	15
Lough Talt Regional Scheme*	microstraining, chlorination, fluoridation	upgrading of treatment works and storage reservoirs proposed	8,950	56

* This will be subject to further upgrades during to 2007-2012 and beyond.

Table 8.C Water Supply Schemes in County Sligo, 2004 – existing and proposed (continued)

Scheme	Treatment	Existing or proposed	Planned population to be served	No. of group schemes served
North Sligo Regional Scheme	clarification, rapid gravity filtration, chlorination	Mullaghmore Water Supply construct reservoir	3,620	25
Carns Hill Water Supply Scheme	microstraining, ozonization, chlorination, fluoridation	no improvements proposed at present	7,300	11
Foxes Den Water Supply Scheme)*	dissolved air flotation and rapid gravity filtration, chlorination & fluoridation	no improvements proposed at present	11,350	
Kilsellagh Water Supply Scheme	n/a	upgrading of dam at Kilsellagh, new pipelines from Kilsellagh to Farranacardy and proposed water treatment plant at Kilsellagh	n/a	n/a
South Sligo Regional	by Roscommon County Council	no improvements proposed at present	1,550	5
Calry Water Supply	chlorination	no improvements proposed at present	125	
Rosses Point Water	microstraining and chlorination	no spare capacity; supply from Kilsellagh reservoir is being increased as part of the Sligo Environs Scheme	2,500	
Riverstown	chlorination	none	450	1

* This will be subject to further upgrades during to 2007-2012 and beyond.

8.2.1.2 Water conservation projects

The DoEHLG's *National Water Study* (2000) found that up to 47% of all water produced by treatment plants surveyed is unaccounted for and that in some areas of the country this level is 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. Sligo County Council has received funding to implement conservation projects to reduce the rates of unaccounted-for water (UFW) and projects are currently underway on the Lough Talt, Lough Easky and North Sligo Water Supply Schemes. To date, leak detection work has yielded water loss savings of almost 243,000 gallons per day at Lough Talt and 148,000 gallons per day at North Sligo.

8.2.1.3 Rural water supply and quality

Many rural dwellings and small communities throughout Sligo do not have the benefit of a 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 consumers have good-quality water supply in their homes¹.

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.

¹ EC (Drinking Water) Regulations, 2000

8.2.1.4 Water supply and conservation: objectives

- A. Provide Sligo County with an adequate and reliable water supply system from which to accommodate an increase in domestic, commercial and industrial consumption.
- B. Improve the quality and reliability of rural water supply schemes.
- C. Provide support for the funding of water supply infrastructure, as identified by the Council.
- D. Enter PPPs for the provision of necessary infrastructure, as appropriate.
- E. Improve and extend the water supply schemes outlined in Table 8.C and as needs arise.
- F. Safeguard the following drinking water sources by restricting afforestation, agricultural, commercial, industrial and domestic development within their catchments:
 - Bellanascarrow Lake
 - Lough Easky
 - Lough Talt
 - Lough Gill
 - Kilsellagh Source Catchment
 - Gortnaleck and Lyle streams
 - Calry Source Catchment
 - Riverstown Source Catchment
 - Group Water Scheme Source Catchments
- G. Facilitate the implementation of water conservation projects, which reduce leakage in existing water distribution systems.
- H. Promote public awareness and involvement in water conservation measures.
- I. Ensure that all drinking water within the County complies with the highest EU standards applicable.
- J. Meter all commercial premises and charge for water usage on a quantitative basis.
- K. Ensure that grease-traps are installed in all commercial premises where food is prepared.
- L. Provide dual flush toilets in all future Council housing developments.

8.2.2 Sewerage

As stated in Ireland's *National Development Plan 2000-2006*, strategic environmental and economic objectives are needed for the development of wastewater services infrastructure. Under the EU Urban Wastewater Treatment Directive, secondary treatment of wastewater in urban areas needs to be provided for by 2005.

Currently a National Urban Wastewater Study is being carried out to assess wastewater infrastructure and requirements. This involves the collection and analysis of data on urban drainage schemes, including wastewater treatment systems, and the development of criteria and physical indicators for the review and assessment of wastewater needs and monitoring programmes.

8.2.2.1 County Sligo's wastewater systems and infrastructural needs

There is a need to upgrade and improve the network and treatment facilities of a number of towns and villages with existing sewerage schemes throughout Sligo County.

The Sligo Main Drainage Scheme will provide Sligo City and surrounding areas with adequate treatment and drainage capacity to serve up to 50,000 population equivalent, thereby allowing for future development and growth. To ensure EU standards are maintained and all areas are serviced ap-

appropriately, there is a need for further upgrading of drainage infrastructure in some of the outlying areas of the environs, such as Ballincar, Rosses Point and Cummeen.

Proposed treatment works and extensions to drainage infrastructure throughout County Sligo are outlined in the Table 8.D below:

Table 8.D Proposed sewage treatment plants and extensions

Town/ Scheme	Existing design PE*	Current loading PE	Existing outfall / treatment	New design PE	Remarks
Aclare	150	250	septic tank	750	new treatment works proposed
Ballinacarrow	250	160	extended aeration	1500	new treatment works proposed
Ballinafad	150	130	septic tank & peat based percolation system	n/a	none
Ballincar / Cregg / Rosses Point Main Drainage Scheme	n/a	n/a	n/a	5,000	2005: planning phase; proposal to pump wastewater from Rosses Point (Ballincar, Cregg, Rosses Point WWTW) into Sligo Main Drainage - 5,000 PE
Ballinode / Hazelwood Main Drainage Scheme	n/a	n/a	n/a	n/a	no preliminary report carried out yet
Ballintogher	150	260	septic tank & peat-based percolation system	400	developer-driven scheme
Ballygawley	n/a	n/a	n/a	n/a	new treatment works proposed
Ballymote	3000	2,500	extended aeration	n/a	none
Ballysadare	575	1600	holding tank, sea outfall	4,500	construction of new treatment works commenced in 2005
Bunannaddan	80	230	septic tank	600	developer-driven scheme
Carney	150	340	septic tank & peat-based percolation system	1,500 to 2,000	new treatment works proposed
Carrowroe Main Drainage Scheme	n/a	n/a	n/a	n/a	none
Castlebaldwin	100	100	septic tank & peat-based percolation system	400	developer-driven scheme
Cliffony	250	700	extended aeration	1,500	new treatment works proposed and approved to go to planning
Cloonacool	n/a	n/a	n/a	500	new treatment works proposed (phase 1 – 500 PE)
Collooney	1400	1,100	extended aeration	5,000	from 2007-2012
Coolaney	350	310	oxidation ditch	2,500	new treatment works proposed (PPP)***

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Table 8.D Proposed sewage treatment plants and extensions (continued)

Town/ Scheme	Existing design PE*	Current loading PE	Existing outfall / treatment	New design PE	Remarks
Culfadda	150	140	extended aeration	n/a	none.
Cummeen Main Drainage Scheme	n/a	n/a	n/a	3,000	2005: planning phase; proposal to pump wastewater from Cum- meen into Sligo Main Drainage - 3,000 PE
Curry	400	180	extended aeration	n/a	none
Dromore West	250	315	extended aeration	2,500	new treatment works proposed (PPP)***
Drumcliff	150	70	septic tank & peat- based percolation system	n/a	none
Easky	450	630	extended aeration	n/a	none.
Enniscrone	1400	2700	extended aeration	5,000	upgrade of existing WWTW**
Geevagh	250	85	extended aeration	n/a	none
Grange	280	470	extended aeration	2,500	new treatment works proposed
Gurteen	600	570	extended aeration	n/a	new treatment works proposed
Monaster- redan	400	120	extended aeration	n/a	none
Mullaghmore	320	1300	holding tank, sea outfall	3,000	new treatment works proposed
Riverstown	600	460	extended aeration	n/a	none
Rockfields	50	100	septic tank	250	developer-driven scheme
Rosses Point	1500	1700	holding tank, sea outfall	5,000	Proposal to pump wastewater from Rosses Point (Ballincar Cregg, Rosses Point WWTW) into Sligo Main Drainage 5,000 PE
Sligo Main Drainage Scheme	n/a	n/a	new wastewater treatment plant at Finisklin	50,000	n/a
Strandhill	1500	1,700	oxidation ditch	4,500	upgrade of existing WWTW
Teesan / Lisnalurg Main Drainage Scheme	n/a	n/a	n/a	5,500	2005: planning phase; proposal to pump wastewater from Teesan/Lisnalurg into Sligo Main Drainage - 5,500 PE
Tobercurry	1400	1,900	Imhoff tank, perco- lating tank, tertiary treatment	5,000	upgrade of existing treatment works pro- posed

* PE – Population Equivalent. ** WWTW – Waste Water Treatment Works. *** PPP – public-private partnership.
Current Loading PE includes existing connections and granted planning applications.

Note: The Council is trying to address a deficit that exists in the provision of sewerage facilities, which is constrained by funding. Where there appears to be a deficit in capacity or where there are no specific proposals for a scheme, this would indicate a lower priority. However, this does not present a development constraint in the case of a serious development proposal, which includes for the provision, either in part, or in whole, of the necessary sewage treatment facilities.



New sewage treatment works under construction in Ballysadare

A Sludge Management Plan for County Sligo has been submitted to the DoEHLG for approval. All sludge generated from public sewerage schemes throughout the County and from private treatment systems (excluding individual septic tank systems serving one-off housing) will have to be transported to a hub centre at the Sligo Main Drainage Centre at Finisklin. To facilitate the sludge collection process, it is intended to provide five satellite stations around the County at the following locations: Ballymote, Enniscrone, Tubbercurry, Collooney and Grange.

8.2.2.2 Rural sewage 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 very important that these systems are properly installed and regularly monitored and maintained to avoid environmental damage (see Section 9.9 Drainage Development Guidelines). They should be designed and installed in accordance with the EPA guidance manuals relating to treatment systems for single houses, small communities, business, leisure centres and hotels. The Serviced Land Initiative (SLI) was introduced in late 1997 as a measure to accelerate housing provision by increasing the availability of serviced land. The SLI programme gives settlements and districts that cater for an increase in housing development the opportunity to be connected to a main drainage scheme. The schemes approved for Sligo are outlined in Table 8.E below.

Table 8.E Sewerage schemes approved under Serviced Land Initiative, 2001

Scheme name	No. of housing units
Ballinacarrow Sewerage	250
Cliffony Sewerage	250
Grange Sewerage Improvement	500
Strandhill Sewerage	400
Teesan/Lisnalurg Sewerage	1,200
Tobercurry Sewerage	500
Total	3,100

8.2.2.3 Sewage disposal objectives

- A. Ensure full compliance with the EU Urban Wastewater Treatment Directive with regard to sewerage effluent and strive to fully comply with the Directive by 2005.
- B. Have regard to the findings of the National Urban Wastewater Study in relation to the County of Sligo.
- C. Facilitate the development of towns and villages and provide the County with a cleaner environment by improving and extending sewerage infrastructure as set out in Table 8.D, subject to the availability of funding.
- D. In relation to sludge management, provide satellite sludge stations at Ballymote, Enniscrone, Collooney, Tobercurry and Grange and ensure that there is sufficient land available for these works.
- E. Accelerate the servicing of development land through the SLI programme, as set out in Table 8.E, and consider additional schemes in conjunction with the preparation of statutory land use plans.
- F. Strictly control the siting of septic tanks/PETS and promote public awareness on the issue of correct installation, monitoring and maintenance.
- G. Where existing settlements are not currently served with public sewerage schemes (or served by existing public sewerage facilities that have reached capacity) and schemes are not planned for the next five years, the Planning Authority will give consideration to granting planning permission for private communal sewerage schemes. Such schemes shall be purpose-designed, appropriate in scale, specification and capacity to the needs of users and shall be subject to legally-binding maintenance and bonding arrangements agreed with the County Council.
- H. Ensure that all commercial premises install grease traps where food is being prepared.

8.2.3 Surface water drainage

Due to its impervious surfaces, the built environment can create an increase in surface water run-off. The majority of towns and villages in County Sligo are able to cope 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. Stormwater 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.

The discharge of stormwater run-off and rainwater into foul water sewer drainage systems is prohibited.

8.2.3.1 Surface water drainage objectives

- A. Promote the provision and use of separate foul and surface water drainage systems.
- B. 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.
- C. Generally protect wetland areas and floodplains from development, with the possible exception of appropriately designed development that is not sensitive to the effects of flooding, provided it does not reduce the floodplain area or otherwise restrict flow across floodplains – e.g. parks, sports pitches.

8.3 Waste management

8.3.1 Waste management hierarchy

In recent years, on average 88% of the 2.3 million tonnes of household and commercial waste produced in Ireland has gone to landfill, while only 12% has been recycled. Over-generation of waste and low levels of recovery have led to the implementation, at EU and national level, of a more sustainable approach to waste management that follows a waste hierarchy model. This model emphasises waste prevention, minimisation and reuse/recycling in preference to disposal to landfill, which is the least preferred option.

The Waste Management Act 1996 enables several local authorities to come together to adopt a common waste management plan. In 2001, a waste management plan was adopted by the six Connaught local authorities (Galway, Leitrim, Mayo, Roscommon and Sligo County Councils and Galway City Council). The Plan identified the facilities that are required in Sligo County in order to facilitate the prevention, minimisation and reuse of waste. The Council's commitments under the *Connaught Waste Management Plan 1999-2004* are set out in Table 8.F. These commitments will be met in tandem with the provision of educational programmes on, inter alia, environmental awareness and litter prevention.

8.3.2 Waste collection

Municipal waste is collected by the private sector in Sligo City and County. Sligo County Council has adopted a pay-per-quantity system for the collection of municipal waste. The Council manages the private sector through the enforcement of Waste Management legislation and conditions associated with Waste Collection Permits.

8.3.3 Commercial packaging waste

Under the Waste Management (Packaging) Regulations 2003, commercial packaging waste may no longer be disposed of to landfill. Almost 40% of municipal (household and commercial) waste is from packaging. The new Regulations require businesses (manufacturers, importers, wholesalers and retailers) to segregate specified packaging materials arising on their premises, and arrange for their collection for recycling by authorised waste operators. The specified packaging materials are: glass, paper, fibreboard, steel, aluminium, plastic sheeting and wood. The new Regulations, in association with the above waste recycling measures, will assist greatly in the achievement of compliance with the EU Packaging Directive, which is based on the *polluter pays* principle, and requires recycling of 50%-65% (by weight) of packaging waste by the end of 2005.

8.3.4 Construction and demolition waste

Construction and demolition (C&D) are two of the main sources of waste. For prevention and minimisation purposes, it is envisaged that development proposals will have to specify measures for reducing waste, mitigating the impact/generation of waste and, where possible, reusing aggregates on site or in other construction projects. Measures may also be incorporated into the licensing procedures for industry to encourage a reduction in environmental impact.

8.3.5 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. There are currently no facilities for treating hazardous waste in Sligo or Connaught. The movement of hazardous waste shall be controlled using the appropriate waste management legislation.



Tobercurry Waste Recycling Centre

Table 8.F Existing and proposed waste management facilities and services in Sligo

<p>Door-to-door/kerbside collection. This involves the collection of recyclables from individual households and was introduced in Sligo City in 2003. At present (2005), kerbside collection exists on most collection routes in the County, with all collectors offering a pay-by-use collection service.</p>
<p>Bring-bank network. There are currently 39 recycling banks located around the County, with nine of these in Sligo City. 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.</p>
<p>Waste recycling centres</p> <p>A waste recycling centre will be provided within Sligo City. In 2005, a new facility opened in Tobercurry, catering for the following waste streams:</p> <ul style="list-style-type: none"> ■ 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, household chemicals, medicines etc.; ■ green garden waste; ■ light construction and demolition waste; <p>Obsolete fridges and freezers are accepted for recycling and safe disposal as part of an all-Ireland collection scheme formulated by the DoEHLG. In total, 600 units have been collected up to July 2005 and the free collection of these units will continue as part of the implementation of the Waste Electrical and Electronic Equipment (WEEE) Directive. From mid-August 2005, WEEE will be accepted free of charge by retailers (on a like-for-like product basis) and at Sligo recycling centres.</p>
<p>Source segregation and dual collection of organic kitchen waste. A source-separated organic kitchen waste collection system shall be introduced in accordance with the Waste Management Plan for the Connaught Region.</p>
<p>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.</p>
<p>Green waste composting. A green waste composting facility shall be provided in Sligo in accordance with the Waste Management Plan for the Connaught Region. This proposed facility will involve the shredding and composting of garden waste and organic waste delivered by householders to the site and green waste collected at other recycling stations. The resultant compost can then be used directly by the local authority in parks maintenance, site landscaping, landfill restoration etc.</p>
<p>Biological treatment of organic kitchen waste. One centre providing this type of treatment is planned in Sligo – this may be part of the Sligo Main Drainage Facility at Finisklin, Sligo City. Organic kitchen waste may be treated by composting or by anaerobic digestion producing biogas and compost.</p>
<p>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.</p>
<p>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.</p>

8.3.6 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 2005-2008*. 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.

8.3.7 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.

8.3.8 Waste management objectives

- A. Implement the *Connaught Waste Management Plan* and provide, or assist the private sector in the provision of the necessary waste management infrastructure, as outlined in Table 8.F.
- B. Encourage the involvement of the private sector in the provision of waste management facilities.
- C. Co-operate with other agencies in ensuring the safe disposal of hazardous waste.
- D. Promote measures to reduce the production of waste.
- E. Incorporate 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 large developments, site-specific waste plans will be required.
- F. Examine the feasibility of energy recovery from large sewage treatment facilities.
- G. Require all new developments to provide waste management facilities commensurate with their nature and scale, with waste collection points that 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 – including residential, commercial and industrial developments, neighbourhood centres, and all shopping and retail areas.
- H. Enforce the Waste Management (Packaging) Regulations 2003.
- I. Implement the *Litter Management Plan 2005-2008*.
- J. Continue the employment of an Environmental Education Officer to promote reduction, recycling, reuse and proper management of solid waste.

8.4 Energy and telecommunications

8.4.1. Electricity

Nationally, the demand for electricity has grown by approximately 40% in the last decade and projections suggest that the load will more than double in the next 25 years. There are difficulties in meeting the demand in rural areas in particular, as a result in extremities of the network and more dispersed population patterns.

In the past, Sligo has been poorly represented on the national grid, with no high-voltage lines (i.e. 220 or 400 kV). This has acted as a constraint to investment and employment creation by bulk energy users. However, the Electricity Supply Board (ESB) now proposes to reinforce the high-voltage electricity infrastructure in Counties Sligo, Roscommon and Leitrim, by providing a new 220 kV line from the existing Flagford 220 kV station in Co. Roscommon, near Carrick-on-Shannon, to a new 220/110 kV substation in east Sligo, together with associated 110 kV line developments. This reinforcement will improve quality of supply and provide security and capacity of supply to service future industrial, commercial and domestic development. Work on the project commenced during 2004 and is programmed for completion by mid-2006.

8.4.1.1 Objectives for the provision of electricity

- A. Facilitate the provision of new high-voltage electricity infrastructure in County Sligo.
- B. Promote the maintenance and upgrade of electricity infrastructure throughout the County.

8.4.2 Renewable energy

The government policy in relation to the reduction of greenhouse gas emissions is set out in the *National Climate Change Strategy*, 2000. The concept of energy efficiency promotes more sustainable forms of energy production, including the greater exploitation of wind, hydro, solar and tidal power sources. In 1997 renewable energy comprised only 3.6% of electricity generated in Ireland, as compared with 13.9% in the EU¹. Ireland is required to produce at least 13.2% of its electricity from renewable sources by 2010, under an EU Directive adopted in September 2001². County Sligo has the resources to generate 2.25% of the State's renewable energy potential through wind energy, wood biomass (short rotation forestry and forest residue) and small-scale hydroelectric power generation, as outlined in Table 8.G.

Sligo County Council recognises the contribution that alternative energy sources can make towards limiting pollution associated with the generation of electricity (emissions of carbon dioxide, sulphur dioxide, nitrogen oxides and smoke) and it is the policy of the Council to promote renewable and alternative energy sources in an environmentally acceptable manner.

Table 8.G Renewable energy resource available in County Sligo expressed in megawatts per annum

	Wind (MW)	Wood biomass		small hydro-power plant (MW)	total renewable energy resource available (MW)
		short rotation forestry (MW)	forest residue (MW)		
Sligo	3,040	59	1	2.5	3,103
State	135,570	2,118	40	71.6	137,800
% of State	2.24%	2.79%	2.50%	3.49%	2.25%

Source: based on data from *Total Renewable Energy Resource in Ireland*, Electricity Supply Board International (ESBI) & European Technology Support Unit (ETSU), 1997

¹Source: International Network for Sustainable Energy (INFORSE) - Pan-European Sustainable Energy Seminar, 2003

²EU Directive 2001/77/EC



Wind farm at Kingsmountain, West Sligo

8.4.2.1 Wind energy

Sligo's mountainous landscape and exposed location on the western seaboard combine to create the ideal conditions for the generation of wind power. The wind energy resource available in the County is capable of generating 3,040 MW of power per annum and 0.8% of this potential has been harnessed since the commissioning, in 2003, of Sligo's first windfarm at Kingsmountain (Ox Mountains). The wind energy potential available in the County is set out in Sustainable Energy Ireland's *Wind Atlas for Ireland*.¹

It is an objective of the Council to achieve a reasonable balance between: (a) responding to government policy on renewable energy; and (b) enabling the wind energy resources of the County to be harnessed in an environmentally sustainable manner.

Pressure for future wind farm development is likely to be concentrated in upland and coastal areas and in offshore locations, particularly where energy providers can access the national electricity grid.

The development of wind energy has potential benefits for the County as a whole, including employment creation, assisting rural development by providing an additional source of income for farm families and local communities, and reducing dependence on oil and other imported fuels.

The siting of wind turbines requires careful consideration. While turbines located on elevated sites tend to have a higher output, they also have a significant visual impact. Visual obtrusiveness depends on the location, layout, size, number, design and colour of the turbines, as well as the subjective perceptions of the viewer.

In assessing proposals for wind farms, the Council will require detailed information to Environmental Impact Assessment (EIA) standard. Assessment in accordance with government guidelines will have regard to visual impact (including the scarring effect of access roads), noise, electro-magnetic interference, ecological impact, safety (including aircraft safety and navigation) and land use implications. Proposals will generally be discouraged in or close to pNHAs, cSACs, SPAs, designated Sensitive Rural Landscapes, Visually Vulnerable Areas, Scenic Routes, protected views, ZAPs and existing towns and villages.

More detailed guidelines and standards for wind farm proposals are to be found in Section 9 of this Plan.

¹ Sustainable Energy Ireland's *Wind Atlas for Ireland* is available at: <http://www.sei.ie>



Ballysadare Falls and hydro-power facility

8.4.2.2 Hydroelectric power

Turbines driven by falling water have the potential to generate hydroelectric power. County Sligo has the resources to generate 2.5 MW of power per annum from small hydroelectric plants. At present, the County has several small-scale hydroelectric power stations, at least one of which holds a Power Purchase Agreement with the ESB until December 2010.

In assessing development proposals for hydroelectric power stations, the main considerations are:

- integration of the facility into the riverscape;
- non-interference with fish and wildlife;
- safe and sensitive undergrounding of power lines;
- the effect on the landscape and ecology.

The Council will also consider the consultation document *Guidelines for Construction and Operation of Small-Scale Hydroelectric Schemes and Fisheries* (June 2005, Engineering Division, Central and Regional Fisheries Board, DCMNR).

8.4.2.3 Wave-generated energy

Ireland has made significant advances in the research and development of wave-generated energy and County Sligo's extensive coastline has potential for this form of development. (Refer to subsections 6.2.8 and 6.2.9.)

8.4.2.4 Energy from biomass and waste

Biomass fuels and waste, and the technologies used to convert their energy to electric power, vary widely, and include:

- gasification or combustion of fuels, such as wood, short-rotation wood coppice, energy crops, straw, forestry by-products, solid agricultural wastes (e.g. poultry litter, spent mushroom compost), and municipal solid waste;
- anaerobic digestion of animal slurries, sewage, abattoir waste, etc.

The Council will therefore consider each proposal on its merits, subject to proper planning and environmental considerations. County Sligo has the resources to generate 60 MW of power from wood biomass through short rotation forestry and forest residue, as indicated in Table 8.G.

The Council will encourage the production of trees for biomass and other initiatives for the generation of renewable energy. Burning of such biomass has a neutral greenhouse gas effect and the important advantage of providing the opportunity for farmers to diversify into new crops. Power generation from this source does not suffer from the lack of consistency in supply that affects wind power.

8.4.2.5 Solar energy

In recent years, the use of solar energy in Ireland, in addition to ground-source heating systems, has provided sustainable sources of energy for buildings and reduced the demand for electricity supply from the national grid. Such initiatives will be encouraged in the future.

8.4.2.6 Objectives for renewable energy

- A. Support the *National Climate Change Strategy 2000* by facilitating measures to reduce emissions of greenhouse gases.
- B. Encourage the production of energy from renewable sources and facilitate suitable developments in appropriate locations throughout the County, subject to adequate measures for the mitigation of environmental impacts.
- C. Facilitate sensitive wind farm developments in suitable locations, having regard to government guidelines and the need to protect, inter alia, designated heritage sites, designated Sensitive Rural Landscapes, Visually Vulnerable Areas, Scenic Routes and scenic views.
- D. Encourage and facilitate other forms of renewable energy production, conversion and capture, including hydro-power, wave-generated energy, biomass, solar technology and energy-efficient building design/servicing. All such development proposals will be assessed in accordance with strict location, siting and design criteria.

8.4.3 Gas

Sligo is not served by gas infrastructure at present. The government decided in 2001 that, in principle, and subject to more detailed analysis, the gas network should be extended to County Sligo from the Mayo-Galway transmission pipeline (from the Corrib Gas Field off the coast of Achill), via either Ballina or Castlebar.

Bord Gáis anticipates that the extension of the gas network to Sligo will be re-examined after 2006. The extension would require substantial grant aid and would be subject to financial viability assessment and the approval of the Commission for Energy Regulation.

8.4.3.1 Objective on gas

- A. Support the development of offshore gas fields and secure the extension of the natural gas pipework to County Sligo.

8.4.4 Telecommunications

Intensive digitisation offers a competitive advantage in attracting economic development and investment. It also offers more flexible working arrangements, enabling people to work and communicate internationally from their homes. As outlined in Section 5.3.1 and as highlighted by the WDC (*Update on Telecommunications in the Western Region, 2002*), the movement away from labour-intensive manufacturing industry to the skilled service sector of the economy has major policy implications for the provision of infrastructure, particularly the provision of telecommunications. Sligo County Council acknowledges the importance of the telecommunications sector and, in particular, the development of broadband telecommunications, in terms of capitalising on investment opportunities.



Mast at Cloonagashel, Ballymote

Sligo is relatively well covered with low-capacity satellite telecommunications infrastructure, but Sligo City, Tobercurry and Ballymote are the only areas in the County served by higher-capacity fixed, wireless or DSL (digital subscriber line) telecommunications infrastructure¹. Strandhill (including Sligo Airport and Business Park), Rosses Point, Ransboro and Ballysadare have recently been approved under the County and Group Broadband Scheme with completion due in late 2005/early 2006.

The following initiatives² are supported by Sligo County Council, which is targeting full coverage of broadband connectivity throughout the County:

- **Ireland's Broadband Strategy (2003):** this report outlines the government's action plan regarding the deployment of broadband throughout the country. The government's *Broadband Action Plan (2003)* will focus on towns with population in excess of 1,500 people that are currently without broadband. These are to be linked to high-speed Internet access as part of a €140 million spending programme by government in partnership with local authorities. Outside towns of this population size, the Group Broadband Scheme will help provide high-speed connectivity.
- **Group Broadband Scheme:** provides funding for the provision of broadband services to small, underserved rural or remote areas and particularly for community organisations.
- **Metropolitan Area Network (MAN):** a network of ducting and fibre-optic cable laid within a metropolitan area, which can be used by a variety of businesses and organisations to provide services including telecommunications, Internet access, television, telematics and CCTV.
- **School Broadband Access Programme:** in a joint approach, the telecommunications sector and the government has provided funding for the roll-out of broadband to all primary and secondary schools in the country.
- **Recommendations for Underground Telecommunications Cable Works for Road, Commercial and Residential Schemes:** sets out recommendations for the provision of duct-and-cable infrastructure for new developments and improvement schemes. These include commercial schemes, such as business parks and office centres, and residential developments.

With regard to mobile phone network development, the physical infrastructure and structures needed to provide this service must be developed in a strategic way that minimises the impact on

¹ Broadband providers in County Sligo can be found at the DCMNR's Broadband Information website: www.broadband.gov.ie

² Details of these initiatives can be found at the DCMNR's website: www.dcmnr.gov.ie

the environment and takes public opinion into account. Good siting and design need to become an integral part of the planning system, respecting not only environmentally sensitive areas, but also the wider context.

Antennae, their support structures, power lines, equipment containers and access roads will be assessed with respect to safety, siting and design criteria and the mitigation of intrusive impacts. In all circumstances, the sensitivity to the context of the proposed development requires consideration. Site conditions, safety aspects, technical constraints, landscape features and capacity requirements affect the design of such installations.

Options to reduce the negative visual effect of such structures include:

- mast and/or site sharing;
- installation on existing buildings and structures;
- camouflaging/disguising techniques to integrate telecommunications equipment into the design, scale, colour and/or texture of existing buildings and landscape;
- using small-scale equipment.

Proposals in the following areas will be permitted only on the basis of absolute necessity, visual mitigation, mast or tower design and site restoration following obsolescence:

- cSACs, SPAs, pNHAs
- designated Sensitive Landscapes, Visually Vulnerable Areas and Scenic Routes.

It is the policy of the Council to achieve a balance between facilitating the provision of telecommunications services in the interests of social and economic progress and sustaining residential amenities, environmental quality and public health. Proposals for telecommunication masts and infrastructure shall comply with the DoEHLG's *Telecommunications Antennae and Support Structures Guidelines 1996* and any subsequent revisions. The Council will use the sequential approach in terms of factors to be taken into account in the control of telecommunications structures in built-up areas, as outlined in the Guidelines. The following series of "tests" will be applied to development proposals for telecommunications infrastructure on sites in or near residential areas, education facilities, hospitals, child care facilities or nursing homes:

- is an existing utilities site available, such as an electricity substation?
- has the mast/antenna been designed and adapted for the specific location?
- are possible sites in commercial or retail areas available?
- is an existing tall building or structure available?

As an immediate means of achieving reduced exposure, base stations and mobile phone telecommunications masts should not generally be constructed within one kilometre of smaller towns, villages, residential areas, schools, community facilities, hospitals, childcare centres or nursing homes, and not within 400 metres of private dwellings.

Only as an absolute last resort should freestanding masts be located within or in the immediate surrounds of smaller towns/villages or close to residential areas, education facilities, hospitals, childcare facilities or nursing homes. The applicant shall provide satisfactory evidence that this is the only location possible to meet specific requirements and that all other alternatives have been examined but are not capable of being exploited for stated specific reasons. Commercial competition in this instance will not be acceptable as a reason for locating in these areas.

Proposals shall be accompanied by a statement and supporting evidence of compliance with the International Commission on Non-Ionising Radiation Protection (ICNIRP) Guidelines or the equivalent European pre-standard 500166-2 conditioned in licensing arrangements with the DCMNR. Any permission granted will be conditioned with respect to time limitation, replacement of obsolescent technology with more environmentally acceptable designs, bonding arrangements and site restoration on cessation of service.

In the vicinity of larger towns, developers should endeavour to locate in industrial estates.

In areas outside of towns/villages, masts should be placed in tree groupings or forestry plantations where such features exist, provided that the antennae are clear of obstruction and so long as ancillary facilities, such as access roads, do not impact negatively on the landscape. The developer will be required to retain a cordon of trees around the site, which will not be felled during the lifetime of the mast, with the written agreement of the owner.



Mast clustering at Cunghill, Lavagh

In unforested areas, softening of the visual impact should be achieved through judicious choice of colour scheme and through the planting of shrubs, trees etc. as a screen and backdrop.

In general, proximity to Protected Structures, archaeological sites and other monuments should be avoided. Any proposals affecting Protected Structures or within ACAs shall have due regard to the guidance provided in the DoEHLG's *Architectural Heritage Protection Guidelines for Planning Authorities 2005*.

Where existing support structures are not unduly obtrusive, the Council will encourage co-location of antennae on existing support structures, masts and tall buildings. Applicants must satisfy the Council that they have made every reasonable effort to share with other operators and to minimize adverse visual impact. Where it is not possible to share a support structure, the developer should share the site or an adjacent site so that masts and antennae may be clustered.

Development proposals for telecommunication structures must have regard for aircraft safety and navigation.

8.4.3.1 Objectives for telecommunications

- A. Support a programme of broadband connectivity throughout the County by liaising with telecommunication service providers.
- B. Support the Irish Central Border Area Network (ICBAN) and Digiweb Ltd. in their bid for funding under INTERREG for wireless telecommunications for the towns of Tobercurry and Ballymote.
- C. Pursue the inclusion of the Key Support Towns (Ballymote, Tobercurry and Enniscrone) and Key Satellite Villages (Collooney, Ballysadare, Strandhill and Grange) in the Government's Broadband Strategy and Plan, including the provision of Metropolitan Area Networks (MANs) or other wireless technologies.
- D. Support the design and construction of a MAN network for Sligo and Environs in order to improve broadband linkages throughout the County.
- E. Support and facilitate take-up of the Group Broadband Scheme and the School Broadband Access Programme. Support, by planning condition where appropriate, the development of underground telecommunications broadband infrastructure for road, commercial and residential schemes, as set out in the government's recommendations.
- F. Have regard to Government guidelines on telecommunications infrastructure, including *Telecommunications Antennae and Support Structures – Guidelines for Planning Authorities 1996* (DoEHLG) and any subsequent revisions.
- G. Protect areas of significant landscape importance from the visual intrusion of large-scale telecommunications infrastructure.
- H. Ensure that telecommunications infrastructure is adequately screened, integrated and/or landscaped, so as to minimise any adverse visual impacts on the environment.

