

Infrastructure

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4.1.1 Introduction

- *Achieving spatial balance by developing the potential of areas will depend on enhancing capacity for the movement of people, goods, energy and information between different places. Improvements in terms of time and cost can reduce the disadvantage of distance. Physical networks of infrastructure such as roads, public transport, energy and communications are of particular relevance, since they themselves have a spatial impact and can also influence the location, timing and extent of development.*
- *Other economic infrastructure, such as water services and waste, and social infrastructure such as schools, health care and childcare, relate to particular locations and are also needed to support balanced regional development.*
- *Efficient, effective and cost competitive waste management facilities are essential if industrial and enterprise activity is to thrive and develop in a balanced way.*



The above comments are taken from the National Spatial Strategy. While they relate directly to infrastructural provision, if successful, there will inevitably be corresponding benefits to the environment, economy and quality of life. In Meath's case, the advantages to our economy, and in particular in improving our competitive edge is critical, as set out in the preceding chapter. The Council have and will continue to be proactive in constructing, upgrading and expanding out infrastructural facilities throughout the county. Although the Planning Authority is the statutory provider of a wide range of infrastructure, it is not the sole provider and thus it must work in an integrated, collaborative and innovative manner with other service providers, whether central government, semi-state bodies, private sector or a combination of all three.

GOAL

To promote and facilitate the provision of the necessary infrastructure to fully accommodate the demand for economic development and future population increases in an environmentally sustainable manner.

STRATEGIC OBJECTIVE

INFRA SO 1

To prepare a Thematic Spatial Strategy for Infrastructure which will identify and protect corridors for major strategic infrastructure in the County such as power, rail, road, water and waste.

Infrastructure within County Meath includes a wide variety of services and functions without which the County could not function socially or economically.

This chapter considers the provision of such infrastructure and incorporates the following sections dealing with the various aspects of physical infrastructure provision:

- a) Transportation
 - Public Transport (Bus & Rail), Walking & Cycling
 - Roads Infrastructure
- b) Water and Wastewater Services
 - Water Supply
 - Wastewater Treatment & Disposal
 - Water Quality
 - Flooding
- c) Waste Management
- d) Energy
- e) Telecommunications & Information Technology

4.2 TRANSPORTATION

4.2.1 Policy Context

Introduction

The timely provision of a full range of transportation services is critical if Meath is to continue to develop as an attractive location for business and residential development. Achieving spatial balance by developing the potential of areas will depend on enhancing capacity for the movement of people, goods, energy and information between different places. The attractiveness of particular locations depends on their relative accessibility and connectivity which in turn depends on the quality and quantity of the transport infrastructure. Although Meath County Council is only directly responsible for the development of some transportation modes, the Council will continue to provide those elements of the transportation system which are within its remit and to facilitate the development of those elements provided by others.



Meath County Council recognises that the current trends in transportation are unsustainable, in particular the relentless increase in private car traffic. The Council is strongly committed to the promotion of sustainable means of travel including public transport, walking and cycling, and the encouragement of modal change from private car use to these means. In planning for transport development, the Council will ensure that the needs of people with differing abilities are taken into account. The Planning Authority is also committed as outlined in the Economic Development Section, to reduce the degree of commuting in the first instance by facilitating the creation of additional jobs within the county for the resident population.

Integration of Land Use and Transportation Planning

There is a reciprocal relationship between transportation and land use, with the successful operation of one being very dependent on the successful planning and operation of the other. Transportation is based on supply and demand. The demand for transport is a derived demand. This demand is linked to economic growth and is created by land use planning related to population density and scale. Large urban areas which contribute to economic growth require a high standard of links between other urban areas and beyond. Supply is transportation's attempt to meet the

demand created by the different land uses. Factors such as time, speed, comfort and cost are taken into consideration when deciding on how to travel from one location to another. Supply must be cost effective as it attempts to meet demand although social, economic and environmental considerations will also be taken into account.

Transport is increasingly becoming a problem with the growth of urbanisation leading to a greater dependence on motorised transport. Measures need to be taken at a number of levels (national, regional and local) to mitigate the effects of transport, in particular private car traffic, and reduce the need and demand for travel. The extent to which policy succeeds in reducing the effects of transport depends on the level of co-ordination and integration of transport, environmental planning and economic policies. Decisions on land use and development must take account of existing and proposed public transport networks and support the emergence and development of new integrated transport systems.

It is a strategic aim of this Development Plan to co-ordinate transport and land use planning.

National and Regional Policy

This section outlines the policies and objectives which support the principles of the National Spatial Strategy, the Regional Planning Guidelines for the Greater Dublin Area, the Dublin Transportation Office's Transportation Strategy "A Platform for Change" and the Government's "Transport 21" programme.

Against the backdrop of increasing population levels and significant housing demand and supply, the existing transport and services infrastructure throughout the Greater Dublin Area has experienced a dramatic increase in pressure. Significant levels of investment has been directed into transport and services infrastructure by the Planning Authorities in association with the relevant Government Departments and transport agencies. The need to do this in a co-ordinated and integrated manner is recognised as being of particular importance

National and regional transport policy emphasises the need to reduce the demand for travel and the reliance on the private car in favour of public transport, cycling and walking. The concept of an integrated transport policy encompasses not only integration within and between different modes of transport, but also integration with environmental, social, recreational, economic, educational and health policies and objectives. No longer can the provision of transport facilities be considered or decided upon in isolation. Regard must be had to the consequential effects of such new facilities, whether on other existing transport infrastructure or on wider urban systems (influencing land use and economic patterns).

The RPGs emphasises:

- The need to continue to improve the international, national and local accessibility and connectivity of the GDA and the settlements within it;
- The need to reduce travel demand, and;
- The requirement to achieve a sustainable balance between public and private transport modes.

The integration of land use and transportation planning will be a pre-requisite in addressing these goals.

The preference of investors of commercial and employment generating developments to date, has been for Metropolitan Area locations, because the Hinterland Area was perceived as remote with access to a small market for the range of necessary ancillary economic inputs and outputs, including skilled labour. The aim of the transport strategy of the Regional Planning Guidelines is to integrate all markets in the Hinterland so as to create the largest market area with the lowest feasible travel costs.

To address this, the RPGs promote a strong settlement hierarchy focussing on a small number of urban centres, that may potentially exhibit the characteristics and critical mass necessary to attract such investment. The main justification for the development of certain towns in the Hinterland Area is that they have the best levels of regional accessibility and connectivity which will improve the marketability of these locations for inward investment and job creation. A greater balance will be achieved within these centres where the scale of residential development is more closely matched by job creation, thereby reducing travel demand in terms of journey distances. In tandem, and in particular in the short to medium term, while commuting remains high, commuting journeys from the Hinterland Area to the Metropolitan Area should, as far as possible, be transferred from the private car to public transport. In the making of policy decisions that will affect commuting travel to the Metropolitan Area, such as the improvement of major radial routes, the relevant authorities should seek to incorporate measures that would dissuade commuting by private car and encourage the use of public transport.

The strategy recognises that, throughout much of the Hinterland Area, due to the dispersed nature of the population and the services they may wish to access, the use of the private car will continue to be essential and that appropriate road improvements will be required to facilitate this use.

The guiding policy framework for the Metropolitan Area (which includes the Dunboyne / Clonee / Pace Corridor) is that public transportation and other sustainable modes of transport, such as walking and cycling, should be given priority over the requirements of the private car in all relevant policy and decision making.

The Dublin Transportation Office (DTO) Transportation Strategy "A Platform for Change" provides a comprehensive framework for addressing accessibility and connectivity within the Metropolitan Area of the GDA and connectivity between the Metropolitan Areas and the main settlements in the Hinterland Area.

The DTO Strategy has two interdependent elements;

- i) Infrastructure & Service Improvements, to increase the supply of transport, including a substantial expansion of the public transport network, some strategic road construction and traffic management, and;
- ii) Demand Management, to reduce the growth in travel through the application of land-use and other policies while maintaining economic progress, and which is designed to encourage a transfer of trips, especially in peak periods, from the private car to sustainable modes of transport (such as public transport cycling and walking).

It is recommended that Local Authorities should, in consultation with the DTO, the NRA and public transport operators, prepare Integrated Framework Plans for Land Use and Transportation Plans

(IFPLUTs) for their main settlements. Such plans would include the provision of adequate and sustainable public transport services and public transport related facilities such as park and ride facilities, feeder bus services, traffic management and bus priority facilities, pedestrian and cycling facilities and the provision of parking and parking management frameworks that are appropriately scaled to the land use planning context. Such plans should have regard to the existing and future local transport requirements including links to towns and locations outside the immediate Local Authority area and the region.

Transport 21 is the Government's 10 year Transport Plan and it includes the delivery of the rail service to Navan on a phased basis. The first phase will be a spur from the Maynooth line at Clonsilla to serve Dunboyne / Pace Interchange. The second phase will extend the service to Navan. The proposed time frames for the first and second phase are 2010 and 2015 respectively. The delivery of this strategic infrastructure will strengthen transport links and will complement the M3 Motorway scheme, which is under construction. The Section 49 Contribution Scheme has been adopted, with 2010 as the indicative date for delivery of rail to Dunboyne / Pace.

4.2.2 Meath's Profile

Over the last decade Meath has experienced unprecedented residential growth. However, as is evidenced in Section 2 'Settlement Strategy', this population is largely located within the county's commuter belt. The CSO statistics show high levels of commuting from Meath's Metropolitan Area, the Hinterland and urban centres within both.

Commuting, in particular, from the Hinterland to the Metropolitan Area, is unsustainable as it will inevitably be predominantly car based. In addition, significant levels of traffic (short distance trips) are associated with and generated in respect of home-school trips and are also proving unsustainable not only from an environmental point of view but also from a health perspective.

The NIRSA Socio Economic Profile which was based on an analysis of the 2002 Census indicated that a relatively small number of people travel to work by bus (13,433) and train (1,081) compared to the motor car, either as driver or passenger (52,730). The Small Area Population Statistics do not differentiate between work and education related trips. The Socio Economic profile has indicated that 6.2% of workers in the county use either a bus or train to get to work, whilst 50% of all children aged between 5 – 12 years were taken to school by car, as were 26% of all second level students. This analysis gives an overview of the difficulties to be overcome in the future development of the county.

4.2.3 Strategic Policy Direction

STRATEGIC POLICIES

Integration of Land Use & Transportation Planning

INFRA SP 1

To provide for the efficient movement of goods and people in the interest of commerce and enterprise.

INFRA SP 2

To promote land use planning measures which facilitate transportation efficiency, economic returns on transport investment, minimisation of environmental impacts and a general shift towards the use of public transportation throughout the county.

INFRA SP 3

To promote the location of quality employment and residential developments in proximity to each other in order to reduce the demand for travel and dependence on private car transport whilst development must be increasingly related to a significantly enhanced public transport system.

INFRA SP 4

To promote higher residential development densities within growth centres as facilitated by the DoEHLG Residential Density Guidelines for Planning Authorities, september 1999, as amended, so as to support viable public transport services.

Public Transport

INFRA SP 5

To ensure that the development of designated major centres in the county located on strategic transportation corridors occurs in a compact and self sustaining manner, and facilitating the economic provision of public transport.

INFRA SP 6

To promote a high quality, sustainable and integrated transport system and to encourage co-ordination between all agencies involved, directly or indirectly, in the provision of transport services (Dublin Transportation Office (or whoever replaces that office), Bus Eireann, Iarnrod Eireann, the National Roads Authority, adjoining Local Authorities and private transport companies).

INFRA SP 7

To facilitate transport modes alternative to the private car, including good public transport links between the development centres in the County and the Metropolitan Area to reduce commuting by car and to better integrate those centres into the overall economy of the Greater Dublin Area.

INFRA SP 8

To give priority to the implementation of recommendations presented in the DTO's Platform for Change and subsequent reviews; in particular the inclusion and preparation of IFPLUTs, where relevant.

INFRA SP 9

To support and facilitate the development and expansion of public transportation infrastructure in the county in consultation with Iarnród Éireann, Bus Éireann and other public transport stakeholders. This shall have regard to the needs of the rural community to have improved access to public transportation facilities inclusive of public safety in accessing same.

INFRA SP 10

To ensure that the widest spectrum of needs, including pedestrians, cyclists and those with differing levels of ability are taken into account in the design and planning of transport infrastructure and services.

Road Network

INFRA SP 11

To ensure the protection of the existing roads infrastructure while improving the capacity and safety of the road network to meet future demands.

Protection of Heritage

INFRA SP 12

To have regard to the natural, archaeological and cultural heritage of the county in the pursuit of objectives relating to the provision of transport infrastructure.

4.3 PUBLIC TRANSPORT

This section outlines the strategic policy approach of Meath County Council with respect to the promotion of rail, bus, walking and cycling as alternates to the private car.

4.3.1 Rail

At present, County Meath is poorly served by rail infrastructure with commuting services to Dublin available only at stations located in Enfield, Laytown and a limited service provided from Gormanston. There are stations located immediately adjoining the County which are also used by Meath residents – Maynooth, Clonsilla, Drogheda and Balbriggan.

Notwithstanding the relatively poor services which exist at these stations, they are well utilised, as is evidenced by the demand for park and ride facilities within their vicinity and by the spatial dispersion of people who travel to work by train, which are generally clustered around the southern

and eastern part of the county. Furthermore, the greatest increases in residential development can also be closely correlated to the availability of rail within the general area.

In devising its policies and in the preparation of the LAPs pertaining to these areas, the Planning Authority must be aware of such strong influences, recognising and planning for the integration transportation and land-use activities.

Transport 21 includes the delivery of the rail service to Navan on a phased basis. The first phase will be a spur from the Maynooth line at Clonsilla to serve Dunboyne / Pace Interchange. The second phase will extend the service to Navan. The proposed time frames for the first and second phase are 2010 and 2015 respectively. The delivery of this critical infrastructure will strengthen the transport links and will complement the M3 Motorway scheme.

The full feasibility study of Phase 1 Clonsilla to Dunboyne/Pace Intersection with the M3 Motorway (7.5 km in length) was completed by Iarnród Éireann under the guidance of a Technical Steering Committee comprising Iarnród Éireann, Meath County Council, Fingal County Council and the DTO. This study was published in January 2005. The line will provide stations at Hansfield in Fingal, Dunboyne and a park and ride facility at the M3 Interchange at Pace. The purpose of the Feasibility Study was to assess the economic/financial viability of the rail extension to Dunboyne / Pace Interchange. In addition to the preparation of the Feasibility Study, the Outline Scheme Design for robust capital and operational costs was progressed in tandem. The total cost of reopening this section of line and acquiring the rolling stock is estimated at €156m. Work on the detailed design and the preparation of a Railway Order is underway with a view to completing the project by 2010 as provided for in Transport 21. Phase 1 will be carried out in conjunction with Fingal County Council and will be partly funded by a Supplementary Development Contributions Scheme as allowed for under Section 49 of the Planning & Development Acts.



Phase 2 of the scheme which will link Dunboyne & Pace Interchange to Navan will be implemented by 2015. Meath County Council & CIE will jointly carry out a scoping study for this particular section of the rail line following the terms of reference being drawn up.

Whilst Meath County Council does not have a direct role in the provision of a rail line, it is actively promoting the development of the railway line from Clonsilla to Dunboyne/Pace and on to Navan in conjunction with Fingal County Council and Iarnród Éireann. The Development Plan will ensure, that the outline design route from Clonsilla to Dunboyne and onto the Pace Interchange will be reserved free from development whilst the existing alignment from Pace Interchange to Navan will be similarly protected from development which could prejudice its future delivery.

It is recognised that there a real danger that other forms of development will preclude the realisation of transportation projects that are essential to the realisation of the overall development strategy. It is therefore important that potential routes for all possible key transportation measures are identified as a matter of urgent priority. Following identification of such routes, it is equally important that reservations for the routes are identified and protected free from other, incompatible forms of development. In line with the precautionary principle, all potential reservations should be protected,

until it is clear as to whether such reservations will be required. This is particularly important in existing built-up areas, where the 'window of opportunity' may close rapidly. The reservations will require to be incorporated into the Development Plan. In the light of the commitment in Transport 21 to reopen rail services to Navan by 2015, a strong policy stance is required to ensure the alignment is protected from further development and that this protection also extends to potential station and park and ride sites along the route.

4.3.2 Bus

The *Regional Planning Guidelines for the Greater Dublin Area* recommend that priority should be given to the provision, extension and facilitation of bus based public transport in the Hinterland Area in terms of inter town regional services as well as connections to Dublin City and internal town services in the main Hinterland towns. Bus priority measures should be considered in the planning and delivery of road infrastructure projects. It is recommended that the planning of these projects be pursued within the framework and vision of the Platform for Change and its forthcoming review.



There has been significant improvements to the quality and frequency of bus commuter services to and from the urban centres of the county to Dublin and to other regional centres. Presently there are two Quality Bus Networks under construction / constructed in the Meath area - the Dunshaughlin QBC and Bracetown QBC. Further improvements to the Quality Bus Network should be prioritised and implemented to enhance the capacity and journey-time reliability in the Metropolitan Area.

Bus Eireann currently operate both Commuter and Expressway services to and from all major employment centres within the County to Dublin. The high level of service also reflects the fact that other national expressway services to the north west and west are routed through the county. Bus Eireann also provides public transport services linking population centres in the county and adjoining counties such as Drogheda to Navan, Navan to Kells and Navan to Trim. Bus Eireann's commuter network into Dublin City Centre is constantly innovating and improving to meet the changing demographic profile of the Greater Dublin Area.

Whilst Navan has a relatively good local bus service connecting the ever expanding environs of the town to the town centre, there have also been increased frequencies of local bus services largely as a result of the establishment of Flexibus, Meath Accessible Transport Ltd. Flexibus run a daily route between Trim and Navan to assist passengers who wish to access education, training or employment. Regular weekly services run between a number of towns and villages while Dial-A-Ride services are available from a number of centres. The improvement in public transport between larger towns and between villages and towns is of paramount importance to reduce isolation and improve linkages between the town and outlying areas.

4.3.3 Park and Ride Facilities

The purpose of 'park and ride' is to integrate the car with public transport and to encourage commuters to leave their cars at 'park and ride' facilities and continue their journey by public transport. This policy will help to encourage car commuters to transfer to public transport, thereby reducing congestion and promoting public transport. All proposed 'park and ride' sites will be assessed to ensure that cars accessing them do not unduly add to local congestion. The policy is

in line with Dublin Transportation Office recommendations and will promote the achievement of sustainable development.

Public Transport Policies (See also Strategic Policy Direction)

POLICIES

INF POL 1	To promote, facilitate and co-operate with other agencies in securing the reopening of the Dublin to Navan railway line and rail services.
INF POL 2	To protect and safeguard the former Clonsilla - Navan rail route and surrounding lands against encroachment by inappropriate uses which could compromise its future development as a rail facility.
INF POL 3	To encourage and facilitate the preparation of a Scoping Study for Phase II of the Navan to Dublin Rail Line.
INF POL 4	To support the improvement of existing rail infrastructure i.e. Dublin / Sligo route with increased suburban services to Enfield and Kilcock and to explore the possibility of the Navan / Drogheda line accommodating passenger services.
INF POL 5	To support the improvement of the existing Dublin – Drogheda rail service which serves the urban settlements of Laytown and Gormanston and to seek to have the proposed electrification of this rail line extended to Drogheda.
INF POL 6	To work with Iarnród Éireann to improve existing facilities at Laytown and Gormanston stations and to seek the provision of a railway station at Bettystown with associated park and ride facilities.
INF POL 7	To actively seek to utilise Section 49 of the Planning and Development Act's 2000 - 2006 to secure contributions from developers towards the capital costs of providing and / or upgrading of strategic public transport infrastructure services or projects in the County.
INF POL 8	To support the provision of a more regular and efficient express bus service throughout the county and encourage public-private partnership in the provision of more widespread non-urban bus services.
INF POL 9	To support initiatives which provide greater accessibility by bus between rural towns /villages with their more remote hinterlands to facilitate improved access to economic, educational and social activity within the county.

INF POL 10	To co-operate with the Dublin Transportation Office (or whoever replaces that office), the Quality Bus Network Office, Bus Eireann, private operators and other appropriate transport bodies in the implementation of an agreed QBN programme and to provide an improved service delivery in the Meath area delivering more sustainable travel patterns at local and regional level.
INF POL 11	To ensure that new developments in all Moderate and Large Growth Towns are laid out so as to facilitate the provision of local bus services.
INF POL 12	To promote the provision of public transport interchange facilities at appropriate points on the public transport network in co-operation with the Dublin Transportation Office (or whoever replaces that office) and the public transport providers.
INF POL 13	To encourage initiatives to ensure that people with limited or no access to private transport in areas, including rural areas, with no usable public transport and people with reduced mobility, are able to access the full range of employment, retail, cultural and leisure facilities.
INF POL 14	The Planning Authority shall ensure that the preparation of the revised Development Contribution Scheme adequately provides for the needs of public transport. In particular, regard will be had to the provision of bus corridors and lanes, bus interchange facilities (including car parks for those facilities), infrastructure to facilitate public transport, cycle and pedestrian facilities and traffic calming measures commensurate with the needs of the County.

OBJECTIVES

INF OBJ 1	To maintain the reservation of the former Dublin - Navan rail line free from development.
INF OBJ 2	To protect from development any lands required for the upgrading of existing railway lines or stations or the provision of new railway stations throughout the County.
INF OBJ 3	To facilitate and encourage the upgrading of existing railway stations.
INF OBJ 4	To facilitate the provision of park and ride facilities at Dunboyne rail station, Pace Interchange, Enfield, Laytown, Gormanston and the reservation of adequate lands to provide for park and ride facilities at Navan and Bettystown. In the event of further growth in the south Drogheda Area, the Council will explore the need for park and ride facilities and the reservation of land for this purpose as appropriate.

INF OBJ 5	To facilitate the provision of Park and Ride facilities at appropriate points on the public bus network in co-operation with the Dublin Transportation Office (or whoever replaces that office) and the public transport providers. The individual Local Area Plans shall identify suitable sites accordingly.
INF OBJ 6	To investigate the provision of the reopening of the Hill of Down Station and the provision of park and ride facilities.
INF OBJ 7	To secure the development of new Quality Bus Corridors and the extension and improvement of existing Quality Bus Corridors.
INF OBJ 8	To provide bus priority measures on existing and planned road infrastructure, where appropriate.
INF OBJ 9	To require Mobility Management Plans and Traffic Assessments for proposed trip intensive developments.

4.4 WALKING AND CYCLING

Meath County Council recognises cycling and walking to be healthy, safe, ecologically sound and socially just forms of movement. Walking and cycling are the most sustainable modes of transport available in terms of their low environmental impacts. An essential element of any integrated transport system is to provide for the needs of cyclists and pedestrians. The increased provision of cycle lanes and safer facilities for pedestrians is identified as a key action in the Government's, Sustainable Development – A Strategy for Ireland, the Dublin Transportation Office's A Platform for Change, the Department of the Environment, Heritage & Local Government's Residential Density Guidelines and the European Charter of Pedestrian Rights.

Walking constitutes the majority of trips for non-car-owners, women and children. Even quite modest changes in walking habits will therefore have an impact on overall energy use. At distances less than 0.5 km, the vast majority walk, but at a distance of 1km, which non-car-users generally walk, most car users rely on their vehicles. Walking requires relatively little investment to make it attractive, particularly if planned and designed into a new development from the outset. In providing for pedestrians, Meath County Council will design for, and ensure accessibility for, the mobility impaired in keeping with the Barcelona Declaration and the European Charter of Pedestrian Rights.



Planning can encourage walking to become the principal method for shorter journeys through arranging land uses and by utilising good urban design. Providing a comprehensive network of safe, well-lit and convenient footpaths (both road-side and segregated) within new residential

areas with links to schools, local neighbourhood centres, public transport stops and workplaces will encourage people to walk.

Cycling will be encouraged through the provision of off-road cycle routes and traffic management measures that give cyclists priority. Cycle routes need to be well provided for in terms of parking infrastructure at the destination. The "Provision of Cycle Facilities; National Manual for Urban Areas" will be the basis for informing the design of cycle facilities.

POLICIES

INF POL 15	To promote and facilitate the development of cycling and walking facilities in the County.
INF POL 16	To encourage the successful incorporation of safe and efficient cycleways, accessible footpaths and pedestrian routes into the design schemes for town centres/neighbourhood centres, residential, educational, employment, recreational developments and other uses.
INF POL 17	To require that adequate covered facilities for the secure parking of bicycles be provided at convenient locations close to public transport nodes and public transport interchanges.
INF POL 18	To require a full range of facilities for cyclists such as convenient and secure bicycle parking, showers and lockers in substantial new commercial / office developments and other people attractors.
INF POL 19	To prioritise the movement of pedestrians and cyclists in proximity to public transport nodes.
INF POL 20	To improve facilities for pedestrians and access facilities for people with special mobility needs in line with the aims of the European Charter of Pedestrian Rights.
INF POL 21	Signal controlled pedestrian facilities shall have an audible signal and dished kerbs with tactile paving to assist people with a visual or mobility impairment in crossing roads.
INF POL 22	To provide cycle ways, where appropriate, as part of all road improvement / redesign schemes.
INF POL 23	To ensure, where possible, that cycleways and footpaths are effectively separated from major vehicular carriageways.
INF POL 24	To require planning applications to demonstrate the development proposal's accessibility for pedestrians and cyclists.

4.5 ROAD

County Meath is well serviced by the national road network with the M1 Dublin - Belfast (and former N1, now R132), the N2 Dublin - Derry, N3 Dublin to Ballyshannon and M4 Dublin to Galway, Castlebar and Sligo (and former N4), all traversing through the county linking the Dublin Metropolitan Area to the regions. The national secondary roads N51 and N52 are medium distance through-routes connecting important towns. County Meath is very reliant on its road infrastructure for intra and inter county movement and access. The growth of population and especially the increase in the number of vehicles on the roads has in many areas of the county created severe congestion on this critical roads infrastructure.

Since the 2001 County Development Plan, there have been marked improvements in these key strategic transport links;

- The completion of the M1 Motorway in June 2003 which enhances the accessibility of Drogheda Environs and the East Meath urban centres to the main transport link between Dublin & Belfast.
- Construction of the N2 Ashbourne Bypass to M50 Junction Bypass was finished in May of last year.
- The M3 Motorway, providing for bypasses of Dunboyne, Dunshaughlin, Navan and Kells is under construction with a 4 year completion programme.
- The M4 Motorway linking Kilcock – Enfield – Kinnegad was opened on December 12th 2005.
- The existing N2 & N3 National Primary Roads and N51 and N52 National Secondary Roads are subject to ongoing improvements in terms of overlays for pavement strengthening, junction improvements, traffic calming, low cost safety measures, etc. Phase 2A of the Navan Inner Relief Road has been completed whilst Phase 2B commenced construction in 2006 with the combined effect of bypassing this National Secondary Route from Navan town centre.
- There are several projects currently under construction in relation to improvements to the Regional road network in the County, including the R161 (Navan to Trim), the R158 (Trim – Summerhill – Kilcock) and the R150 (Duleek – Julianstown). In all cases, the first phase of each project has now been completed.

During the lifetime of this County Development Plan (2007 – 2013), it is expected that further progress will be made to the existing road network. Navan, Kells, Dunshaughlin, Dunboyne, and Slane will be by-passed thereby benefiting their urban environments.

The development of the national road network is primarily for national inter-urban traffic i.e. to provide ready access for ports, airports, etc. Although responsibility for National Roads comes under the auspices of the National Roads Authority, Meath County Council is responsible for providing and carrying out major upgrading and improvements to National Roads in the County. These works include the provision of pavement overlay to existing roads, the provision of new sections of road and the provision of bypass roads or relief routes to towns on these routes where their provision is necessary on planning, traffic or environmental grounds. The Regional Planning Guidelines outline that it is therefore vital that measures are promoted to safeguard the capacity and use of national roads for this primary purpose by discouraging use by commuter traffic. The RPGs further recommend that new access onto this network should be avoided to maintain the level of service

on these roads. The RPGs suggest that the measures to be pursued by Local Authorities include the introduction of policy measures including mobility management plans and direct measures such as the provisions of bus lanes on national routes particularly on the approaches to and in the vicinity of urban areas in the Hinterland as well as the Metropolitan area.

Although the strong emphasis of the strategy is firmly based around sustainable public transport modes, it is appreciated that some improvements to the road network will be needed over the coming years. The proposal to develop an outer orbital route is included as a key objective of the Regional Planning Guidelines for the Greater Dublin Area and was also identified in previous strategies including the Strategic Planning Guidelines for the Greater Dublin Area and A Platform for Change. Its importance is given more prominence within the context of the sustainable regional planning strategy and the importance attached to providing improved accessibility and connectivity between large growth towns in the Hinterland Area. The RPGs recommend that measures be undertaken in the short term to identify and preserve a corridor or corridors including possible alignments particularly within the vicinity of urban areas such as Drogheda, Navan, Trim and Kilcock. The construction of an alignment should be prioritised in the medium term after the completion of the strategic Public Transport and Road Infrastructure projects. It is understood that the NRA are currently re-examining the Dublin Outer Orbital Route Strategic Study prepared by Oscar Faber in association with Roughan O'Donovan – Maunsell Alliance Consulting Engineers in 2001. Transport 21 provides for the undertaking of “the feasibility and planning work on the Dublin Outer Orbital Road”. However, no completion date is given for this project.

The RPGs also advocate that the outer orbital route should be complemented by the upgrading and redesignation of the N52 and N80 routes which connects into the Belfast-Dublin radial at Dundalk and the Waterford/Wexford-Dublin radial at Enniscorthy. The combined effect of these strategic initiatives should make it easier to market the potential of the large towns as major economic investment locations, and fulfil the aims of bringing jobs closer to the Hinterland population, reducing commuting growth, and delivering job and service access in peripheral areas.

4.5.1 Regional and Local Roads

Regional and local roads serve an important economic role and also have valuable social and community functions. These roads are often the sole means of access for local economic activity.

Non-national roads play a very important economic role because of:

- The dispersed nature of the population and industrial development;
- The importance of tourism and agriculture as generators of wealth and employment, and;
- The increasing attention being given to rural development and urban regeneration.



The origins of the extensive road network are clearly linked to the low density of the population and the scattered nature of the population due to what was a very agricultural based economy. There was also a low level of urbanisation and while there have been moves away from agriculture over the decades, there has been increased urbanisation over the last 10 - 20 years.

The network of non-national roads provides mobility within and between local economies and provides vital links to the strategic national road network and the ports and airports which are our links with the wider European economy.

Meath County Council has responsibility for the carrying out of maintenance and improvement works on these roads financed from their own resources and/or supplemented by State grants.

The Government's Traffic Management Guidelines 2003, recommend a series of tools to assist in providing the details and frameworks necessary to plan for development, namely Traffic Assessments and Employee Mobility Plans.

POLICIES

INF POL 25	To promote road and traffic safety measures in conjunction with Government Departments and other agencies through the provision of appropriate signage, minimising or removing existing traffic hazards and preventing the creation of additional or new traffic hazards.
INF POL 26	To support major road improvements by reserving the corridors of any such proposed routes free of developments, which would interfere with the provision of such proposals.
INF POL 27	To implement a programme of road construction / improvement works and local measures to improve road safety closely integrated with existing and planned land uses.
INF POL 28	To co-operate with the National Roads Authority and other Local Authorities to provide the Dublin Outer Orbital Route as proposed in the Regional Planning Guidelines and Transport 21.
INF POL 29	To safeguard the capacity and safety of the National road network by restricting further access onto National Primary roads and National Secondary roads outside of restricted speed limits which correspond with identified development boundaries in line with the National Roads Authority policy, "statement on Development Management and Access to National Roads", May 2006, as amended.
INF POL 30	To co-operate with the NRA in the upgrade of existing Interchanges on the National Routes where appropriate, and to restrict development immediately adjacent to Interchanges to provide for the future enlargement of Interchanges.
INF POL 31	To provide for and carry out the improvements to sections of regional roads and county roads that are deficient in respect of realignment, structural condition or capacity, where resources permit and to maintain that standard thereafter.
INF POL 32	To regulate, control and improve signage throughout the county.

INF POL 33 Safety audits shall be carried out on “all road schemes on national roads” in accordance with the NRA Design Manual for Roads and Bridges : HD 19 Road Safety Audits & HA 42 Road Safety Audit Guidelines.

INF POL 34 To require developers to provide a detailed Transport and Traffic Assessment, as carried out by competent professionals in this field, where new developments will have a significant effect on travel demand and the capacity of surrounding transport links. Where a Transport and Traffic Assessment identifies necessary on and off site improvements for the development to be able to proceed, the developer will be expected to fund the improvements by entering into a formal agreement with the Council. A Transport and Traffic Impact Assessment may be required as part of any development proposal which impacts on an existing junction of a National Route. Any additional works required as a result of the Transport and Traffic Assessment shall be funded by the developer.

Transport Assessment shall be carried out to assess the predicted impacts of a development in accordance with the guidelines given in the joint DoEHLG / Dept. of Transport / DTO publication “Traffic Management Guidelines”, Section 1.11.

The thresholds for Transport Assessment are as follows:

- Traffic to and from the development exceeds 10% of the traffic flow on the adjoining road;
- Traffic to and from the development exceeds 5% of the traffic flow on the adjoining road where congestion exists;
- Residential development in excess of 200 dwellings;
- Retail and leisure development in excess of 1,000 m²;
- Industrial development in excess of 5,000 m², and;
- Distribution and warehousing in excess of 10,000 m².

INF POL 35 To balance the requirement for an appropriate level of off-street car parking facilities against factors of accessibility to means of transport alternative to the private car applying at particular development locations, in the overall interest of sustainable land use practice.

OBJECTIVES

INF OBJ 10 To develop and implement, in consultation with the National Roads Authority, a programme for the upgrading, improvement and maintenance of the National Road network within the county.

INF OBJ 11 To develop and implement, in consultation with the Department of Environment, Heritage and Local Government a programme for the upgrading, improvement and maintenance of the non national road network in the county.

INF OBJ 12 To implement a programme of traffic and parking management measures in towns and villages throughout the county, as resources permit.

INF OBJ 13 To secure the provision of an appropriate level of vehicle parking facilities in new developments in accordance with the standards set out in Chapter 10.

INF OBJ 14 To facilitate and secure the provision of the following proposed National Road schemes in Co. Meath.

Scheme Name	Description of Works
Dunshaughlin QBC(Phase 2)	Conversion and widening of carriageway to provide for bus lane on southern approach to Dunshaughlin
N51 - Navan Inner Relief Road-Phase 2(b)	Junction improvement
N51 - Navan Inner Relief Road-Phase 2(a)-two way conversion	Pavement reconstruction and redesign
N51 - Dunmoe realignment –Phase 1	Construction and strengthening
N52 - Glebe Bridge	Replacement of existing stone arch bridge on N52 between Kells & Ardee
N3 - Arch Bar Junction	Junction improvement and strengthening
N3 - Clowanstown	Pavement reconstruction and strengthening
N52 - Carlanstown	Pavement reconstruction and strengthening
N3 - Navan Streets	Pavement reconstruction and strengthening
N3 - Kells Road, Railway crossing to Newgate	Pavement reconstruction and strengthening
N3 - John Street / Castle Street-Kells	Pavement reconstruction and strengthening
N2-Rath to Crickstown	Pavement reconstruction and strengthening
M1 Landscaping	Landscaping
Julianstown (Old Road)	Strengthening and traffic calming scheme
N2 Balrath Junction	Junction improvement and strengthening
Bracetown QBC	Signage and lining on newly constructed bus lane

INF OBJ 15 To support major road improvements and proposed national road schemes by reserving the corridors of any such proposed routes free of developments, which would interfere with the provision of such proposals.

Scheme Name	Description of Works
M3-Clonee to north of Kells Motorway	60 km PPP Motorway. Includes by-passes of Dunboyne, Dunshaughlin, Navan & Kells
N2 Slane by-pass	N2 Slane Bypass incorporating new bridge over the River Boyne

INF OBJ 16 To upgrade, improve, strengthen and re-align the following Regional Roads:

Road No.	Location	Road No.	Location
R150	Duleek-Kilsharvan (Phase 2)	R155-48	Ratoath Inn-Commons Lane
R161	Navan-Trim	R156-228	Sarney-Dunboyne
R158	Trim-Summerhill-Kilcock	R125-28	Mullagh-Phepotstown
R154	Trim-Scurlockstown	R154-384	Southern approach to Batterstown
R153-R161 (Phase 2)	Dublin Road - Trim Road in Navan connecting N3 with R161	R156-260-	Boylans Bridge-Loughsallagh
R153	Navan-Balrath Cross	R157-26	Ash Hill to Kildare co. boundary
R154	Patrickstown-Oldcastle	R125-162	Ninemilestone-Kilbrew Lane
R125/R155	Junction of Dunshaughlin / Fairyhouse Roads in Ratoath	R125-157	Moulden Bridge-Village Green
R162	Boynabough	R125-101	Dunshaughlin-Drumree
R163-L142	Newrath Big (Kells Area)	R156-213	Hatchet towards Dunboyne
R154-66	Patrickstown	R157-33	Carton Wall-Offaly Bridge
R164-L 141	Feebog	R125-162	Ninemilestone-Kilrue Lane
R165-21	Rathlagan	R125-118	Lagore Cross-Bonestown
R195-24	Oldcastle	R155-0	Curagha School-Robinsons Cross
R163-L120	Sydenrath	R132-322	Via Smithstown
R164-156	Piercetown/Fordstown	R108-79	Via Gibblockstown, Tullog & Hodgestown
R154-20	Oldcastle	R150-18	Via Mornington & Donacarney Little townlands
R159	Summerstown	R163-4	Via Rushwee and Castlepark townlands
R159	Glegarrow	R150-142	Via Garballagh & Mullaghfin townlands
R160	Brannockstown	R108-10	Via Beymore and Calliaghstown townlands
R160	Ardanew	R152-16	Via Carranstown
R156	Batterstown	R108-53	Via Aghteelin & Mullaghteelin townlands
R156	Summerhill Road, Trim	R150-192	North of Kentstown
R159	Possextown	R162-127	South of Wilkinstown
R159	Baconstown	R153-29	Brownstown
R159	Trim Road(Rathmolyon)	R162-118	Wilkinstown
R156	Robinstown	R150-176	Kentstown
R156	Isaacstown	R154-384	Northbound from Woodpark
R401	Park	R125-194	Fieldstown Bridge - Donaghmore Church

INF OBJ 17

To liaise with Kildare County Council in the identification, design, reservation and delivery of the section of the Maynooth Outer Relief Road located within the administrative area of Meath County Council.

4.6 WATER SERVICES – WATER SUPPLY, SEWERAGE AND DRAINAGE

Background

Water supply and wastewater treatment and disposal are critical infrastructural requirements for any development, in particular those of an urban nature. The provision of such services should compliment and facilitate the sustainable development of the county in line with the Council's adopted settlement hierarchy and prioritisation of economic dynamic clusters. The strategic assessment for water services must also be cognisant of water quality status in surface waters designated to serve development centres.

GOAL

To protect the environment while ensuring the highest possible standards in the provision of a range of services that is essential for urban development and the safety of the population.

Department of the Environment, Heritage and Local Government (DoEHLG)

The DoEHLG has a major role in the provision and development of the country's physical infrastructure. The legislative and policy framework in place is to ensure the delivery of water services infrastructure in a cost-effective manner so as to achieve sustainable, economic and social development. The actual provision of water and wastewater services is the responsibility of the Local Authorities, and in some instances co-operation is required from neighbouring authorities. Funding for infrastructure programmes is sourced primarily from the Major Investment Programme.

In each instance, the DoEHLG funds a certain percentage with the remainder of funding coming from the Local Authority. The Local Authorities funds can be recovered from domestic and non-domestic planning levies or through the national water pricing policy.

The DoEHLG's Programme for Water and WasteWater Services is essentially divided into two main elements:

- Major public water and waste water (sewerage) schemes, and;
- Rural water services and group schemes.

As part of the overall Water Services Investment Programme (WSIP), there are a number of targeted initiatives with specific objectives. These relate to:

- Water Conservation;
- Sludge Management;
- Serviced Land Initiative, and;
- Rural Towns and Villages Initiative.

Meath County Council is required to prepare an assessment of needs for Water Services capital works. The main purpose of the assessment is to develop an overall strategic investment plan for the county for the medium term to meet projected demand and to set out a programme of works to meet identified water services needs. The principal objectives of the programmes are to provide an adequate supply of water, complying with drinking water regulations for domestic, industrial, agricultural and other uses and to provide a safe disposal of sewage and other water borne wastes. An important objective in the programme is to meet the requirements of the EU Urban WasteWater Treatment and Drinking Water Directives. The Rural Water Programme aims at redressing quality and capacity deficits in rural water supplies. The Water Services Investment Programme 2005-2007 for Meath was announced in October 2005, the estimated cost of which is €286m.

Regional Planning Guidelines

The RPGs acknowledge the significant level of investment that has been directed into the services infrastructure by Planning Authorities in association with the relevant Government Departments in response to the increased population growth and significant housing demand.

The RPGs request Planning Authorities to:

- Facilitate the continued investment in water conservation;
- Liaise and cooperate with each other and other relevant bodies to expedite the development of a major new long-term source to ensure security of water supply to the Greater Dublin Area;
- Ensure the implementation of the Greater Dublin Strategic Drainage Study recommendations and facilitate the major investment in sewer rehabilitation, and;
- Ensure the timely implementation of objectives of the EU Water Framework Directive recognising the importance of maintaining water quality and quantity throughout the region by promoting the sustainable use of water in order to maintain it as a key ingredient in ecosystems.

The Regional Planning Guidelines for the Greater Dublin Area contains six strategic goals, each accompanied by a number of objectives that strive to realise these goals. As they pertain to water services infrastructure, the following goals, objectives and recommendations have been extracted from the Strategy.

- 1) Goal 4 seeks "to promote sustainability", and have regard to water frameworks and waste management.
- 2) Objective 4.1 seeks "to consolidate settlements in order to ensure piped water networks are viable and manageable, and the utilisation of private wells is minimised; to minimise the need for septic tanks and to avoid unserviced urbanisation above aquifers."
- 3) Objective 4.2 seeks "to co-ordinate settlement pattern with strategic plans for (a) water resource management and (b) waste management and disposal."
- 4) Recommendation 8.7: Progress should be maintained in the implementation of all planned and programmed sanitary services infrastructure projects.
- 5) Recommendation 8.10 : Planning for the provision of long-term water supplies to the built up area of Dublin and parts of the Hinterland area should progress as a priority. Continued investment in mains rehabilitation is also essential.

- 6) Recommendation 8.11: Further development of the Boyne and Barrow systems to supply water should be progressed.
- 7) Recommendation 7.10 states that when zoning additional lands for residential use, Planning Authorities should select only lands conforming to three stated criteria, one of which set out below is identified potential for servicing by water supply, drainage, etc. Except for limited provision for local needs, lands that do not conform to these criteria should not be zoned.

In devising its own strategy, policies and objectives, the Planning Authority must have regard to the above guidance.

Local Policy Context

Over the life of the 2001 - 2007 County Development Plan and against the backdrop of considerable population increases and record levels of new residential development, the existing sanitary services infrastructure of the county experienced a dramatic increase in pressure and is now struggling to cater for the scale and pace of development. The 1999 Water Services Needs Assessment was developed on the assumed population of Co. Meath in 2011 of 150,000 people. This population has been exceeded by 2005 and is projected to grow to 207,000 – 210,000 people by 2013. Whilst responding to this growth in the form of significant investment directed into the services infrastructure, the continued growth of the county is restricted in the short term by a lack of capacity in both water and wastewater infrastructure in various locations throughout the county.

Meath County Council must pursue, through its Development Plan, a strategy that ensures the availability of water supply and wastewater collection and treatment infrastructure to accommodate the planned levels of growth expected for the County. To this end, Meath County Council is required to prepare an assessment of needs for Water Services capital works. The main purpose of the assessment is to develop an overall strategic investment plan for the county for the medium term to meet projected demand and to set out a programme of works to meet identified water services needs.

An integrated approach to planning for the provision of water services is essential to the delivery of the proposed settlement and economic development strategy. Having regard to the revisions to the settlement hierarchy proposed in tandem with the level of housing units to be allocated in each centre contained in this Development Plan, it was considered necessary to review the prioritisation of individual projects contained in the 1999 Water Services Needs Assessment. It is imperative that the necessary water services infrastructure is available in the Large Growth and Moderate Growth Towns as a matter of priority. In May 2004, the DoEHLG rolled out the national Water Services Investment Programme to cover the 2005 – 2007 period. The national WSIP only included 6 of the 26 schemes listed in the adopted Water Services Needs Assessment. If a scheme is not included in the current WSIP, it stands little chance of receiving DoEHLG funding. The need to prioritise projects is therefore ever more important.

It is noted that Meath County Council have prepared a Draft Water Services Investment Programme Assessment of Needs (2007 – 2013) in accordance with Circular L2/06 as issued by the DoEHLG in the summer of 2006. The new Water Services Investment Programme Assessment of Needs reflects and complements the policies and objectives of this Development Plan and shares the same timeframe.

4.6.1 Water Supply

In addition to the anticipated residential and economic growth, the main drivers of change in the operating environment in which water services are provided since the adoption of the 2001 - 2007 Meath County Development Plan include:

- The Government's Framework for Water Pricing;
- New Project Management and Service Procurement approaches;
- Increased Environmental Standards imposed by European and National Legislation, and;
- Improving levels of service where these are deficient.

The water supply resources in Meath are provided either by surface or ground water abstraction i.e. from rivers, lakes and boreholes. With difficulties arising in increasing abstraction levels from the main rivers to meet demand, it is evident that greater dependence will be placed on groundwater to satisfy the increasing demand particularly to the east and south east of the county.

The servicing of certain urban centres in the south east of the county (Ashbourne, Dunbooyne / Clonee / Pace Corridor, Ratoath, Dunshaughlin and Kilcock) and along the east coast (Drogheda Environs, Bettystown, Laytown, Mornington East, Donacarney and Julianstown) currently depends on the allocation of agreed capacity or volume from adjoining Local Authorities. Due to the distance of these towns from major drainage catchments, providing services has and continues to create difficulties for their continued development. Providing these services is difficult on both economic and technical grounds necessitating regional solutions involving the co-operation of adjoining Local Authorities.

The Housing Strategy has identified 29,508 additional housing units will be constructed in the Meath area from January 1st 2007 to December 31st 2013. Further, there are anticipated demands from industrial, business and commercial needs. The provision of water and drainage services to meet the projected expansion is a very significant challenge for the Infrastructure and Planning Departments of Meath County Council. The majority of the county's water services infrastructure will have been upgraded or replaced to cater for projected demands up to and beyond 2013, corresponding with the life of the new County Development Plan. However, this will result in a lead in time for development corresponding with the construction phase.

The Infrastructure & Environment Departments of Meath County Council oversees the following programmes with regard to water services:

- Capital Schemes (for both water services and waste water);
- Rural Water;
- Water Conservation, and;
- Water Monitoring – Water Quality.

1. Capital Schemes

Substantial progress has been made in the provision of water services infrastructure in County Meath. Since 2000, 59 no. schemes are at various stages of advancement. The level of population growth that has been experienced over the past five to six years would not have been possible without the very substantial investment in water services projects. This investment has already provided approximately 50,000 PE of wastewater treatment capacity and 30,000 PE of water capacity. The total cost of these projects amounts to €523 million.



2. The Rural Water Programme

The Rural Water Programme is administered by the Local Authorities and is comprised of a number of measures to address deficiencies in:

- Group Water Schemes;
- Small Public Water and Sewerage Systems in rural villages, and;
- Private Individual Supplies where an alternative group or public supply is not available.

Rural water covers two distinct sectors namely groups schemes and small schemes. There is an active group scheme sector in Co. Meath. The small schemes comprise mainly of infrastructural improvements and have a threshold limit of €635,000. Over 40 no. schemes totalling €3.75m have been developed in the past five years. Almost all of these schemes were group water schemes involving the extension of public supplies to rural communities thus removing their reliance on often poor quality well water.

3. Water Conservation

Water Conservation involves leak detection and repair. Two water conservation projects have been completed in Meath, namely Navan and Mid-Meath in 2001 at a cost of €2.4 million and East Meath in 2002 at a cost of €1.2 million. Very substantial success resulted from these projects without which the level of development which has taken place would not have been facilitated in recent years. The Department has allocated funding of €16.5 million to extend water conservation to the entire county.

The typical level of unaccounted for water within Meath is 60%. This means that for every 10 litres of water produced, 6 litres are wasted through consumer negligence, leaking pipes or lost through illegal or unknown connections. Under the new project, the aim is to reduce this to accepted economic levels of leakage which typically range from 25-35%. Water is a precious resource which is costly to treat and deliver and it needs to be protected. Education, increased awareness and participation are required to address the issue of consumer negligence. The DoEHLG will insist upon economic levels of leakage being achieved before they commit funding to major new water schemes, which stresses the importance of water conservation in Co. Meath.

4. Water Monitoring

This is dealt with in Water Quality Section. (See Section 4.7)

4.6.2 Wastewater Treatment

In addition to drinking water treatment and distribution, Local Authorities are also responsible for waste water collection and disposal and stormwater management, including collection and disposal. The drainage system collects foul sewage, industrial effluent and rainwater, all of which must be discharged or treated while minimising flood risk or environmental impacts.

There are a large number of watercourses to which effluent is discharged by Meath County Council from its municipal waste water treatment plants and privately by license issued by the Environment Section of Meath County Council. The assimilative capacity of these water courses represent a significant asset to facilitate development within the county provided they demonstrate compliance with the need to meet 'good quality' standards as required under the Water Framework Directive.

The foul and storm water drainage infrastructure has struggled to keep pace with the increased demand for new serviced land for housing, commercial developments and industry in the county over the course of the 2001 - 2007 County Development Plan. New development produces increased levels of urbanisation, potentially leading to:

- Decline in the quality of our surface, ground, estuarine and coastal waters;
- Loss of biological diversity, amenity and habitat, and;
- Accelerated run-off response leading to higher flood levels and loss of ground water re-charge.

An assessment of the capacity of the existing infrastructure, the assimilative capacity of watercourses, the impact of discharge to the water courses, as well as plans for and details of upgrades, is currently being compiled within the Council. Overloading of the existing systems is evident from marked deterioration in water quality, increased risks of flooding and concerns that the drainage system and wastewater treatment plants have insufficient capacity to cater for future development. As outlined above, Meath County Council is committed to reaching the necessary water quality standards by 2015 as required under the Water Framework Directive. The River Basin Management Plans, prepared pursuant to the Water Framework Directive will be in place by 2009, with a 6 year timeframe to deliver corrective actions and necessary infrastructure.

Further, there are additional external threats to the functionality of the drainage infrastructure. The impacts of climate change will reduce the level of service of drainage systems due to increased rainfall intensity and sea level. The presence of substantial inflow, infiltration and ex-filtration flows will continue to compromise the capacity of sewerage and treatment systems to service future development.

The development and expansion of the County's wastewater and surface water drainage system is essential to the future sustainable development of the County and to the improvement of water quality in the area. The Council, together with the other Local Authorities in the Greater Dublin region, have completed a major study of the drainage requirements for the entire Dublin region for the period to 2031 and beyond. This study, the Greater Dublin Strategic Drainage Study (GDSDS) was commenced in 2001 to analyse the existing drainage system in the Greater Dublin Area, which includes South East Meath and to make recommendations on future drainage policies and needs. One of the key deliverables of the project are recommendations for regional drainage infrastructure to cater for development up to 2031. The GDSDS along with the WSIP for Meath (outlined in preceding section) are the two most important documents, which govern infrastructure policy contained in this Development Plan.

4.6.3 Greater Dublin Strategic Drainage Study

The GDSDS was published in 2005 and provides the blueprint to facilitate sustainable development and to facilitate future housing needs in the Region for a thirty year period and beyond. It will also improve the system to meet the requirements of EU Directives. In the interest of brevity and clarity, the recommendations as they directly influence the drafting of objectives and policies contained in this Development Plan are outlined hereunder.

Study Main Conclusions

- 1) A major new wastewater treatment plant is required on the North Dublin coastline in addition to the planned extension of the Ringsend Wastewater Treatment Plant;
- 2) A 22km long orbital sewer is required to link the new North Dublin plant with the South and West of Dublin and adjacent catchments in Meath and Kildare;
- 3) Upgrading works will be required at all Dublin's existing wastewater treatment plants;
- 4) Very significant local infrastructure improvements are needed throughout the Dublin Region, and;
- 5) New drainage practices are required from developers and from industry.

The policies are intrinsically linked and cover a number of key areas, including:

- Existing Drainage Infrastructure and how to best utilise the existing assets and minimise their impact on the regions watercourses;
- New Development and how to minimise the impact of future development on the environment, particularly its watercourses;
- Basements and how to protect basements from sewer flooding, and
- Climate Change and what, if anything, should be done to prepare for higher sea levels and greater rainfall intensities - the predicted outcome of climate change.

Implications of GSDSDS for Co. Meath

Ratoath and Ashbourne lie at the north western extremity of the catchment of the 9C (Blanchardstown) Sewer, which feeds into the Dublin piped network leading to the treatment plant at Ringsend. Similarly, the Wastewater Treatment Works (WwTW) at Dunboyne has also been abandoned and flows have been transferred by gravity to Clonee, and from there to the 9C Sewer at Blanchardstown. Due to substantial growth in the residential population and other sectors, Meath County Council is understood to have reached its population equivalent (PE) allocation. The overloading on the sewer system is exacerbated by the level of infiltration. Inflow and infiltration of surface water into the sewerage network is a major problem, up to 25% of the base flow in the orbital sewer in Co. Meath is from infiltration, with higher rates of infiltration recorded in Ashbourne. All new drainage systems need to be sealed and all drainage systems needs be inspected at the time of construction. This would reduce the level of infiltration considerably.

Future Needs

The 9C Sewer Branch Capacity is exceeded with current development demand due to storm inflows and increased catchment development, including the Meath connections from Dunboyne / Clonee / Pace Corridor, Ashbourne and Ratoath. The sewage collection and forwarding system for Ashbourne and Ratoath is totally inadequate for the predicted levels of development. Upgrading works are thus required by year 2011 in the Ratoath and Ashbourne catchments with the provision of a storage tank in each catchment to address emergency overflow discharge problems and localised flooding. Radical pump upgrading is required (or more likely replacement of the pumping stations) and replacement of the existing rising mains, which serve both the Ratoath and Ashbourne pumping stations. Further works are required at Kilbride pumping station to increase the pump capacity. On-line storage is also required at Dunboyne to address local flooding, which is predicted to occur prior to 2011. A total of some 2,500m³ of storage would be required.

Similar large increases in flows are predicted for the downstream Blanchardstown catchment with the result that the 9C Trunk Sewer is completely overwhelmed with significant flooding predicted by 2011. A duplicate trunk sewer, similar in size to the existing trunk sewer, is required from Mulhuddart Bridge to a point adjacent to the old Phoenix Park Race Course. This system will need to be in place by 2011.

GSDSDS Proposed Solution

Eight alternative strategies were considered as part of the study, in an effort to resolve and eliminate wastewater treatment constraints. These are outlined in detail in the 'white paper'. Having regard to the technical, environmental, social and political implications, Strategy Scenario Option 2C was ultimately selected. The preferred option ultimately considered a new WWTP (to serve 850,000 p.e.) at Portrane, North County Dublin and ancillary piped network and pumping stations to be the most sustainable way forward. This new regional treatment plant would take effluent from the South Dublin, West Fingal and south-east Meath (Ashbourne, Ratoath, Dunboyne / Clonee) areas. In practical terms, for Meath this would involve a pumped connection from Meath to a new orbital sewer and on to the plant.

The Strategy also required a reduction in infiltration and improvements in treatment of industrial effluent at source (reducing flows to the plant). In the short term (2011) the following actions would be required of Meath County Council:

Parallel Sewers and Major Storage Upgrading	
Ratoath	Upsize Pumps from 32 to 84 l/s; 835 m ³ Storage.
Ashbourne	Upsize Pumps from 76 to 143 l/s; 230 m ³ Storage; New Rising Main to Kilbride Pump Station.
Ashbourne (2031)	Upsize Pumps from 143 to 191 l/s; 1408 m ³ Storage.
Kilbride	New Rising Main from Ashbourne; Upsize Pumps from 111 to 236 l/s Rising Main Direct to Kilbride Pump Station; Divert Rising Main to new Development Sewer (Sewer 9C).
Kilbride (2031)	Upsize pumps from 236 to 279 l/s; Abandon Existing Rising Main to Sewer 9C; Divert Rising Main to Orbital Sewer.
Dunboyne / Clonee	Upsize existing sewage pipe to 1500 mm.

4.6.4 Water Services Assessment of Needs

When the Draft County Development Plan was being prepared, the then Water Services Investment Programme Assessment of Needs was adopted by Meath County Council on 3rd November 2003. The preparation of this Assessment had regard to the pace of residential development taking place across the County but also the need to balance this residential growth with employment creation. The Meath Water Services Assessment of Needs identified 26 individual water services projects

totalling an estimated €151.8 million (at 2003 prices) which was required to facilitate the upgraded / replacement of existing deficient infrastructure over the coming years. These projects were ranked in order of priority by areas of greatest need having regard to the Regional Planning Guidelines for the Greater Dublin Area, the National Spatial Strategy, 2001 - 2007 County Development Plan, existing water services capacity and condition, development demand, availability of zoned lands and environmental considerations. The Water Services Investment Programme 2005-2007 for Meath and the Water Services Assessment of Need is contained in Appendix I.

As outlined in the introduction to this section, Meath County Council have prepared a Water Services Investment Programme Assessment of Needs (2007 – 2013) in accordance with Circular L2/06 as issued by the DoEHLG. The new Assessment of Needs reflects and compliments the policies and objectives of this Development Plan and shares the same timeframe. The Draft contains a ranked list of 31 Water Services Capital Works Projects totalling an estimated cost of €281.2 million which have been identified as requiring substantial investment in the short to medium term, for the purpose of addressing existing serious infrastructural deficiencies while also providing for the continued sustainable advancement and development of County Meath. It is the Council's objective to prioritise and promote investment in Water Services Infrastructure in line with the Settlement Hierarchy contained in this Development Plan.

Navan, Kells & Trim Primary Development Cluster

The continued growth of the primary development cluster in Meath, namely Navan, Kells and Trim, is critical in achieving the strategic development objectives of this Development Plan. The availability of the existing water resources of the Blackwater River, and more importantly, of the River Boyne, to the continued sustainable development of these centres is critical. Subject to environmental, ecological and water quality considerations, it is possible to provide adequate water supply and a medium to assimilate treated wastewater to cater for the anticipated levels of growth over the plan period and beyond. This will involve the upgrading of the existing facilities serving these centres, subject to the availability of the necessary finances, as follows:

Navan

Water Supply - Abstraction from the River Blackwater at Liscarton augmented by abstraction from the River Boyne at Kilcarn. The ability to serve significant development in Navan from the existing supply is limited. The long-term solution is the development of a new abstraction (from the Boyne) and water treatment works at Bellinter (Navan and Mid East Water Supply). The detailed design of this project is underway with a projected completion date of 2011. An interim solution of constructing a reservoir to be serviced by Kilcarn Water Treatment Works is at detailed design stage and is expected to be constructed by the end of 2008.

Wastewater - Wastewater from Navan and its immediate environs is pumped to the Navan Wastewater Treatment Plant (WwTP) at Ferganstown, on the southern shore of the River Boyne. This significant infrastructural investment was developed under the Navan Sewerage Augmentation Scheme and is designed to treat effluent for a population equivalent of 40,000, 5,000 of which is earmarked for non domestic usage. The plant can be expanded in a modular manner to cater for a population equivalent of 60,000, as sufficient lands are available at the existing site at Ferganstown. The plant could ultimately be extended beyond a design of 60,000 population equivalent as the receiving waters of the River Boyne have sufficient assimilative capacity, although additional lands would be required to augment the Ferganstown Plant. The existing pipe network leading to the Ferganstown WwTP have been designed to cater for an ultimate design of 60,000 population equivalent and would represent the main design constraint.

At present, there is less than 8,000 P.E. available to cater for the long term needs of Navan. The continued development of the town requires the upgrading of the capacity of the existing treatment plant.

Navan is also the designated 'hub' for dealing with municipal sludge as designated in the Sludge Management Plan.

Trim

Water Supply: The existing water supply to the town is via abstraction from the River Boyne. The existing water treatment works is at capacity and new development is dependent on the upgrading of the treatment works, which is due for completion by the end of 2007. The Water Services Investment Programme Assessment of Needs 2007-2013 has included the Trim / Summerhill / Rathmolyon Water Supply Scheme, albeit ranked nineteenth. It is planned to link these towns to the proposed new major Water Treatment Plant at Dowdstown, near Navan and decommission existing interim supplies at that stage.

Wastewater: The Wastewater Treatment Works in Trim has been recently upgraded to cater for 12,000 P.E. It is considered that the projected level of residential and commercial / industrial development over the plan period can be catered for. The Water Services Investment Programme Assessment of Needs 2007-2013 includes the Sewer Network Improvement Scheme for Trim, ranked tenth. This will remove the threat of pollution to the River Boyne by replacing the Newtown Pumping Station and by upgrading / rehabilitating the associated sewers and rising main.

Kells

Water Supply: The existing water supply to Kells is supplied primarily from the Kells / Oldcastle Scheme which gets its water from Lough Bane augmented by a second source at Clavin's Bridge, fed by the River Blackwater. This scheme is under significant pressure to supply water to both of these areas (Kells & Oldcastle) given the projected level of development in each centre. The abstraction potential of Lough Bane has now been reached. There is a further capacity restriction in that the size of the pipe network feeding Kells is insufficient to meet current demand. The estimated cost of upgrading the existing scheme is €15 million. The Water Services Investment Programme Assessment of Needs 2007-2013 has identified two schemes, i.e. an advance water supply scheme and a main water supply scheme (ranked 4 & 6 respectively of 31 identified schemes) to meet the medium to long term needs of both centres. The first step of the main scheme will be to undertake a detailed Preliminary Engineering Study, one of the principal elements of which will be to examine and evaluate all available sustainable water sources.

Without pre-empting the outcome of this study, it is quite likely that the long term water supply for Kells / Oldcastle and their environs will be a combination of water from the Blackwater River and groundwater with a much reduced role (if any) for Lough Bane.

Wastewater: The existing Kells Wastewater Treatment Plant which has a design capacity of 8,000 P.E. with an outfall to the River Blackwater is nearing capacity. The estimated cost of upgrading the existing plant is €11 million. Meath County Council proposes to upgrade the existing facility as an interim measure which will be funded under the DoEHLG Small Scheme Fund. The Water Services Investment Programme Assessment of Needs 2007-2013 has included this capital scheme and is ranked seventh in order of priority.

East Meath and South East Meath Urban Centres

Water Supply: On the water supply side, all of the urban centres in the Slane Electoral Area (Drogheda, Laytown – Bettystown – Mornington East, Stamullen, Donacorney, Gormanston, Slane and Duleek) and the Dunshaughlin Electoral Area with the exception of Kilcock, Dunboyne and Clonee (i.e. Ashbourne, Ratoath, Kilbride and Dunshaughlin) along with the village of Kentstown (in Navan Electoral Area) are served from the East Meath, South Louth & Drogheda Water Scheme. The main water source for the East Meath Water Supply Scheme is the abstraction from the River Boyne at Roughgrange via the canal intake, which is treated at Stalleen Treatment Works. This plant serves an area of approximately 600 sq. km. with storage provided at Stalleen itself, at Windmill Hill, Kiltrough, Donore, Balloy, Carnes and Rath. The Slane supply area is independent from the East Meath Scheme with its borehole source located on the southern bank of the River Boyne immediately upstream of Slane Bridge. The borehole supply to Dunshaughlin is supplemented via a spur off the main between Windmill Hill Reservoir and Ratoath. Dunboyne and Clonee are supplied via imports to Co. Meath from Fingal County Council public water supply at Clonee and Coolquay respectively. The future development of Kilcock is dependent on importing an adequate public water supply from Kildare County Council.

While the water treatment plant in Stalleen is located within Co. Meath, it is operated by Drogheda Borough Corporation and Louth County Council. There is an agreement between those Local Authorities and Meath County Council to allocate 47% of the capacity of that plant to Meath which serves, inter alia, the above mentioned settlements in addition to a number of group water schemes in rural areas. The capacity allocation to Meath equates to approximately 15,000 cu. m. per day. However, it is estimated that Meath currently uses 14,250 cu. m. of that allocation. Furthermore, the Stalleen Water Treatment Works is now operating at capacity. Consequently, until the water supply scheme can be upgraded in 2008/9 (Phase 1), the availability of potable water is a major constraint to further large scale development in these areas.



Meath County Council has sought to address this infrastructural constraint to further development and, in early 2003, commissioned McCarthy Tobin JV, Consulting Engineers, to prepare a report to resolve this matter. The consultants were required to evaluate existing water supply and to make proposals for a future water supply scheme to supply the East Meath, South Louth and Drogheda region for the next 20 years. The final report was issued in September 2004. The report indicates that to meet future needs it will be essential to maximise the use of existing sources together with the development of new ones. Future demands will be met through the conjunctive use of both surface and groundwater sources. While the existing Boyne abstraction at Roughgrange will be maintained as a primary source, the potential for additional abstraction from the Boyne is limited. The report recommends therefore, that potential yield from groundwater sources to serve East Meath should be examined and identifies a Regionally Important Aquifer in north-east Meath as one such source. The results of trial well drilling will determine the most suitable method of incorporating this potential source into the overall scheme. The report recommends 3 phases for the overall scheme with the first phase to be delivered by 2008 and the final phase in place by 2018, the overall cost would be in the region of €141m.

Meath County Council acknowledges that the current water supply situation places significant constraints on additional large-scale development in the area and, as indicated above, has sought to address the matter in an expedient manner. However, it should be noted that even with the completion of Phase 1 in 2008/9, constraints will remain in place pending the commissioning of an overall solution. Consequently, the extent of land use zonings objectives in the Local Area Plans has to take cognisance of the infrastructural constraints that will likely remain in place over the lifetime of these plans.

Wastewater: Meath County Council acknowledge their involvement in the preparation of the Greater Dublin Strategic Drainage Study (GDSDS), the final report of which was presented by the Study Manager to the County Council at the September, 2005 meeting. The recommendations and conclusions emanating from the final report are far reaching for the continued development of the strategic urban centres of Ashbourne and Dunboyne / Clonee / Pace Corridor along with the small growth town of Ratoath. In effect, future development is restricted due to the lack of available wastewater treatment capacity pending the construction of a regional wastewater treatment plant in Fingal (likely to be in Portrane). The significant shortfall in the availability of wastewater treatment capacity in the Drogheda Treatment Plant to cater for the projected needs of Drogheda (Large Growth Town), Laytown – Bettystown – Mornington East (Small Growth Town) is outlined below in addition to the restricted assimilative capacity of the River Delvin to cater for the projected employment and residential growth of Stamullen (Small Growth Town) and proposed significant employment generating uses at Gormanston. Whilst the GDSDS clearly indicated that the wastewater from Stamullen and Gormanston was to be treated in the Balbriggan Wastewater Treatment Plant, no such arrangement is forthcoming from Fingal County Council. It is clear that a sub regional solution is required to cater for the medium to long term needs of this strategic area of Co. Meath.

Wastewater from the settlements of Mornington East, Bettystown, Laytown, Julianstown, Donacorney and Mornington is currently pumped to the Drogheda Wastewater Treatment Plant for treatment and final disposal. The treatment plant has been running at capacity since 2002 and no further large-scale developments could be serviced from it. Consequently, the Planning Authority had not been able to consider large-scale development proposals in the above mentioned settlements since September 2002. The DoEHLG has approved upgrade proposals which will increase the capacity of the plant to 101,000 PE at a cost of €12.7 million. Upgrade works are underway and the new plant will be commissioned in 2007. Of the 101,000 PE capacity, Meath County Council will be allocated 27,500 PE, the Planning Authority was already committed to 18,500 PE with reference to existing demand and permissions granted (at the end of 2005). However, having regard to the extent of zoned lands in the settlements in North-East Meath as per the East Meath Local Area Plans and the zoned lands in Drogheda Environs as per the Meath County Development Plan 2001 - 2007, it is estimated that Meath County Council requires a total of approximately 60,000 PE to service all existing zoned lands in these areas. So, even with the commissioning of the new plant in 2007, there will remain significant infrastructural constraints to further large-scale development. While the initial upgrade works will increase the capacity of the treatment plant to 101,000 PE the plant has an ultimate design capacity of 141,000 PE but for this capacity to be realised further upgrade works are required and such works may require the preparation of a new / revised Environmental Impact Statement. It is anticipated that if the Drogheda Wastewater Treatment Plant was to be extended to 141,000 PE, then Meath County Council's reserved allocation would be likely to extend to approximately 45,000 PE.

There is an existing wastewater treatment plant located in Stamullen with an outfall to the Delvin River. The treatment plant was upgraded in early 2002 which increased its design capacity from 600 PE to 2,300 PE. However, the plant is operating at capacity and no further large-scale developments can be serviced by it. Restrictions have been, and continue to be in place on any further large-scale development in the village pending a solution to the infrastructural constraints. A Part VIII for the interim upgrading of the existing wastewater treatment capacity in Stamullen was approved by Meath County Council at the June Council meeting of 2006.

Gormanston College is serviced by its own wastewater treatment plant. Existing residential development in the village is serviced by individual wastewater treatment units, primarily septic tanks which are periodically desludged. Gormanston Military Camp, which is located outside of the village boundary, is serviced by its own treatment plant, which has a sea outfall.

In 1999, Meath County Council commissioned J.B. Barry & Partners Ltd., Consulting Engineers, to prepare a report on options for the treatment of sewage from Stamullen, Gormanston and Mosney. That report recommended that sewage be pumped from these settlements to the proposed wastewater treatment plant in Balbriggan subject to the approval from Fingal County Council. Since the publication of that report it has transpired that the treatment plant at Balbriggan would be fully utilised by development within Fingal and that there was no spare capacity for sewage from Stamullen, Gormanston and Mosney. In March 2004, Meath County Council requested the consultants to update the original report, to investigate recent developments within the catchment, to consider development plans and planning strategies and to consider and price alternative solutions for wastewater treatment for the region. The report did have regard to, inter alia, the Regional Planning Guidelines which included a key objective to facilitate a Government objective to provide affordable housing on lands attached to the military airfield at Gormanston. In August 2004, Barry & Partners published the feasibility study. The study contained 3 options and recommended that the foul sewage from Stamullen, Gormanston and Mosney be collected and treated at Gormanston with a long sea outfall into the Irish Sea. This proposal is being considered by the DoEHLG.

4.6.5 Strategy for the East & South East Region

It is clear that in order for Meath County Council to implement the development strategy contained in the Development Plan, that the existing water service constraints which effect Ashbourne, Dunboyne / Clonee / Pace Corridor, Stamullen, Laytown – Bettystown – Mornington East must be addressed in the medium term.

Meath County Council is dependent on the various infrastructural components of the Greater Dublin Strategic Drainage Study being implemented to allow the potential of key centres within the County Settlement Hierarchy being realised in a sustainable manner. From the outset, it should be stated that Meath County Council is committed to the implementation of the GDSDS. It is accepted that the resolution of the wastewater deficiencies in relation to Dunboyne / Clonee / Pace Corridor, Ratoath & Ashbourne are dependent on the implementation of the recommendations of the GDSDS and in particular in the short term on the duplication of the 9C Sewer to Blanchardstown and the upgrading of capacity at the Ringsend Treatment Plant. The Planning Authority acknowledge the progress that has been made in this regard inclusive of the conditional approval to go to tender in relation to elements of the Ashbourne / Ratoath / Kilbride Sewerage Scheme Upgrade. However, it is adopted policy of Meath County Council as contained in the Corporate Plan to investigate the reduction of the dependence on adjoining Authorities for critical water services infrastructure,

particularly wastewater treatment and disposal. Furthermore, the GDSDS has to undergo a Strategic Environmental Assessment which will delay the implementation of the Final Strategy and could potentially alter the final recommended Strategy.

Meath County Council will continue to pursue investigations into the provision of a sub regional wastewater treatment facility and outfall to the Irish Sea in the vicinity of Gormonston. Meath County Council must also be cognisant that such sea outfalls may effect the achievement of Blue Flag status for bathing waters in the vicinity. Such an alternative solution would cater for waste water treatment of the urban centres along the east coast, exclusive of Drogheda. This would allow the capacity of the Drogheda Wastewater Treatment Plant being utilised in the medium to long term to cater for the needs of Drogheda and Environs, in accordance with the Greater Drogheda Planning Strategy.

The upgrade works to the Drogheda Wastewater Treatment Plant are underway and the allocation to Meath County Council to service the settlements in North-East Meath will be increased in the short term. However, the new works will only partially address capacity constraints and further substantial works are required to deliver a long-term solution to wastewater treatment in the region. The Planning Authority will therefore utilise the capacity allocated to it from the Drogheda Wastewater Treatment Plant in an efficient and fair manner and in the best interests of the proper planning and sustainable development of the area. This will involve a re-examination of the recently adopted East Meath Local Area Plans and Drogheda Environs Written Statement & detailed Objectives, to ensure that the Planning Authority prioritise employment generating uses in the first instance and secondly residential developments which will deliver key physical and social infrastructure over developments which provide exclusively for residential development. Meath County Council will continue to work with adjacent Planning Authorities to deliver on a long-term solution to wastewater treatment for the region. In respect of the urban centres along the East coast, these would be diverted to a sub regional facility at Gormonston, providing an alternative solution thus releasing adequate capacity for Drogheda. The provision of this sub regional plant would facilitate each of the centres to develop in line with the objectives of the RPGs, the Greater Drogheda Planning Strategy and the County Development Plan. In the event, of the former airfield being developed to facilitate the realisation of this objective, the requirement to prepare a subsequent LAP for these and surrounding lands may materialise.

This would allow the development of the following development strategy in the Slane Electoral Area having regard to the Regional Planning Guidelines for the Greater Dublin Area:

- Concentration of the majority of significant residential development into Drogheda Environs, at locations and to a scale in accordance with the recommendations of the Greater Drogheda Planning Strategy.

More limited residential development to cater for a significant level of local growth to take place in the small growth towns of:

- Stamullen;
- Laytown – Bettystown – Mornington East, and;
- Duleek.

The development of the smaller centres would cater for local growth only as outlined in the Rural Housing Section of the Development Plan:

- Donacarney – Mornington
- Gormonston
- Julianstown

Concentration of employment generating uses to the following locations:

- 1) Drogheda Environs (at locations and to a scale in accordance with the recommendations of the Greater Drogheda Planning Strategy) - Offices, Logistics, Light Industrial, Retail Warehousing & Local / District Shopping;
- 2) Stamullen - Light Industrial, Logistics, Offices & Interchange Services adjacent to Motorway Interchange and Local Shopping Facilities in Stamullen;
- 3) Laytown - Light Industrial, Offices (close to Rail Station), Local Shopping Facilities;
- 4) Bettystown - District Shopping Facilities, Offices in Town Centre Development;
- 5) Duleek - Light Industrial and Warehousing, and;
- 6) Gormonston - Light Industrial, Logistics and Warehousing.

It is an objective of the Regional Planning Guidelines for the Greater Dublin Area to facilitate the Government objective to provide for an affordable housing scheme on lands attached to the former airfield at Gormonston. The Council will endeavour to facilitate this Government objective. Any development at this location is predicated upon resolving issues pertaining to provision of affordable housing and existing deficits in water services infrastructure.

The development of a strong green belt strategy outside of the development boundary of existing urban detail / local area plans is critical to ensure the consolidation and development of compact urban settlements and allowing each settlement to retain their identity.

4.6.5.1 Interim and Permanent Water Services Arrangements

The absence, or inadequacy, of water and wastewater services will curtail the development and expansion of some towns and villages in County Meath. As outlined, many of these towns and villages will not receive national funding to provide these services within the lifetime of this Development Plan. In order to overcome some of these difficulties, Meath County Council proposes the introduction of a number of initiatives that will allow flexibility in the provision of small scale sewage treatment and water works in towns and villages lacking in adequate treatment facilities.

The Planning Authority shall only consider such provision where capital funding to provide a permanent solution has been included in the Water Services Investment Programme or where in the opinion of the Planning Authority, such capital funding will be included in subsequent Water Services Investment Programme(s) within the life span of this County Development Plan, subject to environmental considerations being respected. Such temporary provision will only be considered

in locations which accord with the Regional Planning Guidelines as outlined in the Settlement Strategy of this Development Plan.

Where capital funding to provide a permanent solution has not been included in the Water Services Investment Programme or in the opinion of the Planning Authority is unlikely to be included in subsequent Water Services Investment Programme(s) within the lifetime of this County Development Plan, the Planning Authority will consider proposals to provide permanent solutions. The consideration of such solutions will be restricted to where they facilitate significant population and / or commercial / industrial growth in accordance with the objectives of this County Development Plan and where the scale and location of such growth is such that high quality, sustainable, permanent solutions can be feasibly and affordably delivered to the satisfaction of the Planning Authority.

In all instances:

- Developers to bear full cost of interim solutions;
- Area based rather than site based solutions preferred; and
- In relation to water supply solutions,
 - the adequacy and sustainability of proposed water source must be proven;
 - source protection required;
 - water produced must consistently meet the requirements of the Drinking Water Regulations;
 - provision for security of supply and fire fighting needs is essential, and;
 - Operational & Maintenance agreements, bonds etc. will be required.

Initiative 1 – Provides a contribution from Meath County Council towards the cost of a wastewater treatment plant which is provided by a private developer. The treatment plant must cater for the short term needs of the particular centre and not just to serve the individual development.

Initiative 2 – Meath County Council will consider the provision of a short term wastewater treatment plant in towns and villages where the DoEHLG has approved funding for a new wastewater treatment scheme, but where there is a lead in time to the provision of same. The cost of providing and maintaining the wastewater treatment plant must be borne by the developer in addition to the standard financial contributions towards the cost of providing the long term solution.

Initiative 3 – The Council will consider the provision of a foul sewage pumping station by developers to serve a particular development subject to certain criteria.

Initiative 4 – The Council will consider the provision of a borehole (groundwater supply) where it accords with their long term proposals for an area, is close to the existing pipe network and ideally storage facilities, and where the borehole will cater for the wider needs of the centre and not just the development itself. The cost of providing and maintaining the water supply plant must be borne by the developer in addition to the standard financial contributions towards the cost of providing the long term solution. The Council will not consider a number of individual bore holes serving a large residential development or individual bore holes serving small scale developments.

It should be noted that the assimilative capacity of the receiving waters from short term treatment plants as provided under Initiative 1 and 2 above must be sufficient to ensure that the resultant water quality adheres to that required under the Water Framework Directive.

STRATEGIC OBJECTIVES

In relation to Water Services, it is a strategic objective of the Council:

INFRA SO 2

To advance the water supply and wastewater collection and treatment infrastructural projects by reviewing the Assessment of Water Services Needs, as required, in order to accommodate the planned levels of growth expected for the county and to ensure that the necessary projects are included in future Water Services Investment Programmes.

INFRA SO 3

To improve and extend the water supply and wastewater collection and treatment infrastructure to serve the planned levels of growth, during the lifetime of this plan, in order to facilitate development.

INFRA SO 4

To secure the provision of water, wastewater treatment and waste management initiatives to accommodate the future sustainable economic and residential growth of the County, where necessary, in conjunction with the Department of the Environment, Heritage and Local Government and adjoining Local Authorities.

INFRA SO 5

To upgrade existing water and wastewater facilities, where deficient, in order to meet the Drinking Water Regulations and the Urban Wastewater Directives / Regulations.

POLICIES IN RELATION TO WATER SUPPLY

INF POL 36

To continue the development and upgrading of the water supply system so as to ensure that an adequate, sustainable and economic supply of piped water of suitable quality is available for domestic, commercial, industrial, fire safety and other use for the sustainable development of the county in accordance with the settlement structure identified in this Plan and as finances permit.

INF POL 37

To protect and develop, in a sustainable manner, the existing groundwater sources and aquifers in the county and to control development in a manner consistent with the proper management of these resources.

INF POL 38	To promote public awareness and involvement in water conservation measures by households, businesses and industries.
INF POL 39	To implement the Water Conservation Programme, in order to conserve valuable resources by reducing wastage.
INF POL 40	To co-operate with Louth County Council and Drogheda Borough Council in implementing the key findings and recommendations of the 'East Meath, South Louth & Drogheda Water Improvement Scheme Report (September 2004)' as prepared by McCarthy Tobin JV, Consulting Engineers, for a water supply scheme to meet the anticipated water requirements to serve the projected growth levels of this area.
INF POL 41	To utilise the existing water supply in an efficient and fair manner and in the best interests of the proper planning and sustainable development of the area.
INF POL 42	To ensure that in the case of all developments where public mains are available or likely to be available, the developer will be required to connect into them.
INF POL 43	To co-operate, encourage and advise in the provision of group-water schemes in the County.
INF POL 44	To implement the measures under the Rural Water Programme so as to improve the quality, reliability and efficiency of water supplies for rural dwellers.
INF POL 45	To promote and support proposals in line with the Interim and Permanent Water Services Arrangements outlined in this Development Plan for centres lacking in adequate treatment facilities and where the provision of such a facility does not effect the quality status of the receiving water as required under the Water Framework Directive. Such temporary provision will only be considered in locations which accord with the Regional Planning Guidelines as outlined in the Settlement Strategy of this Development Plan.

OBJECTIVES IN RELATION TO WATER SUPPLY

INF OBJ 18	To reduce Meath County Council's dependence on the water services infrastructure of adjoining Local Authorities to cater for the projected development needs of Drogheda, East Meath and the Dunshaughlin Area urban centres.
INF OBJ 19	To implement the Water Services Investment Programme 2005-2007.

INF OBJ 20	To continue the upgrading and rehabilitation of water main networks.
INF OBJ 21	To reduce leakage and wastage from the water supply system wherever possible in the interest of achieving efficiency and sustainability.
INF OBJ 22	To apply Water Pricing to existing and future non-domestic development in accordance with the Polluter Pays Principle.

POLICIES IN RELATION TO WASTEWATER TREATMENT

INF POL 46	To facilitate the provision of adequate wastewater collection and treatment systems to all towns and villages in the County to serve existing and future populations in accordance with the Settlement Strategy identified in this Plan, the Water Framework Directive 2000 , the Water Services Investment Programme and as finances permit, thus improving the quality of Meath's surface, ground and coastal waters.
INF POL 47	To develop additional treatment capacity at existing plants where required to facilitate new developments.
INF POL 48	To promote and support proposals in line with the Interim and Permanent Water Services Arrangements outlined in this Development Plan for centres lacking in adequate treatment facilities and where the provision of such a facility does not effect the quality status of the receiving water as required under the Water Framework Directive. Such temporary provision will only be considered in locations which accord with the Regional Planning Guidelines as outlined in the Settlement Strategy of this Development Plan.
INF POL 49	To co-operate with adjoining authorities to continue the sustainable development and improvement of the wastewater treatment systems throughout the County to meet the anticipated drainage requirements of the area.

INF POL 50	To implement the policies developed for the Dublin Region by the Greater Dublin Strategic Drainage Study and to ensure that all developments will have regard to the policies as expressed in the Greater Dublin Drainage Study with particular reference to: i) Developments; ii) Environmental Management; iii) Inflow, Infiltration and Exfiltration; iv) Natural Amenities and Recreation; v) Climate Change; vi) Basements; vii) Surface Water.
INF POL 51	To co-operate with the adjoining Planning Authorities of Drogheda Borough Council, Louth County Council and Kildare County Council to increase the capacity of the Drogheda and Kilcock Wastewater Treatment Plants to service the settlements in North-East Meath and in Kilcock in the immediate future, and, to jointly investigate proposals for the further upgrade / extension of the treatments plants to provide for a long-term solution for wastewater treatment in the north east region.
INF POL 52	To utilise the capacity allocated to East Meath from the Drogheda Wastewater Treatment Plant in an efficient and fair manner and in the best interests of the proper planning and sustainable development of the area.
INF POL 53	To review and seek to implement the findings of the Feasibility Study as published by J.B. Barry & Partners, Consulting Engineers (published August 2004), into wastewater treatment solutions for the East and South-East Meath region, thus allowing the Drogheda WasteWater Treatment Plant to serve the long term needs of Drogheda.
INF POL 54	To ensure that all new developments have and are provided with satisfactory drainage systems in the interest of public health and to avoid the pollution of ground and surface waters.

OBJECTIVES IN RELATION TO WASTEWATER TREATMENT

INF OBJ 23	To reduce Meath County Council's dependence on the wastewater treatment infrastructure of adjoining Local Authorities to cater for the projected development needs of Drogheda, East Meath and the Dunshaughlin Area urban centres.
INF OBJ 24	To seek to provide a major regional wastewater treatment plant in the Gormonston area to cater for the projected needs of the eastern coastal urban centres of the County .

INF OBJ 25 In accordance with the Greater Dublin Strategic Drainage Study and subject to the availability of finance, it is the Council's intention to provide separation of foul and surface water drainage networks and to upgrade the drainage network so as to reduce foul sewer discharges for treatment by identification and removal of surface water misconnection and infiltration.

INF OBJ 26 To implement pilot projects within the lifetime of the Development Plan, to develop an Inflow / Infiltration / Exfiltration Reduction Procedure to reduce inflow, infiltration and exfiltration flows to economic levels in the most cost-effective manner and to develop a systematic programme of rehabilitation works across the County.

4.7 WATER QUALITY

4.7.1 Introduction

County Meath has a rich and varied aquatic environment consisting of coastline, rivers, streams, lakes and estuarine waters (collectively called surface waters) and ground waters (underground water). The Royal and Boyne Navigation Canals, albeit artificial water sources, are also part of this environment. Collectively, they constitute an important economic, recreational, ecological and aesthetic resource.

This water environment is sensitive to most forms of development. It can be affected both directly, for example through river engineering works and water extraction for consumption, and indirectly, for example through pollution from surface water run-off, and agricultural and industrial processes. The Council is responsible for the protection of all waters in the County. The planning system has a major role to play in ensuring the protection, maintenance and improvement of water quality through the location and management of development.

The Planning and Development Act indicates that a Development Plan shall include objectives for the conservation and preservation of the environment. The First Schedule indicates objectives that may be included in a Development Plan, and includes:

- Protecting and preserving the quality of the environment, including the prevention, limitation, elimination, abatement or reduction of environmental pollution and the protection of waters, groundwater, the seashore and the atmosphere.

4.7.2 Water Framework Directive

There have been numerous pieces of legislation that seek to control discharges to waters or to set quality standards for waters for a variety of activities. Although reasonably successful, it has led to a fragmented approach to water resource management and a continuing decline in water quality. The publication of the recent EPA publication on Water Quality has indicated an improvement in the water quality in this county. The EU Water Framework Directive (WFD) establishes a framework for community action in the field of water policy and marks a new departure in the area of water resource management.

The WFD aims to introduce innovative measures to conserve and protect water resources. It is intended to provide a mechanism for dealing with both water quality and quantity. Its principal innovation is the requirement that water be managed in an integrated way.

The Directive aims to contribute to:

- The provision of the sufficient supply of good quality surface water and ground water as needed for sustainable, balanced and equitable water use;
- A significant reduction in pollution of ground water;
- The protection of territorial and marine waters, and;
- Achieving the objectives of relevant international agreements.

It supports three significant principles:

- 1) The principle of precautionary action, where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing cost effective measures to prevent degradation of the environment.
- 2) The polluter pays principle, where those who cause the pollution should pay for its effects, both by finding ways to avoid further pollution and by covering the costs of restoration.
- 3) The principle of the recovery of costs of water services, which requires member states to use water-pricing policies that “provide adequate incentives for users to use water resources efficiently”.

The implementation of the WFD is based on catchment management. A catchment is the area of land from which water flows into rivers and lakes (or directly into the sea). Within the catchment, all of the waters including ground water and artificial water bodies like reservoirs and canals) have to be managed in a balanced way. The key is getting all water users and interested parties (i.e. the stakeholders involved). The overriding objective of the WFD seeks to maintain “high status” of waters where it presently exists, preventing any deterioration in the existing status of waters and achieving at least “good status” in relation to all waters by 2015.

The other objectives of the WFD are:

- To protect and enhance the status of aquatic ecosystems (and terrestrial ecosystems and wetlands directly dependent on aquatic ecosystems);
- To promote sustainable water use based on long-term protection of available water resources;
- To provide for sufficient supply of good quality surface water and groundwater as needed for sustainable, balanced and equitable water use;
- To provide for enhanced protection and improvement of the aquatic environment by reducing / phasing out of discharges, emissions and losses of priority substances, and;
- To contribute to mitigating the effects of floods and droughts.

4.7.3 River Basin Districts

The WFD uses the river basin as the natural unit for water management and each river basin has been assigned to a River Basin District (RBD). The Three Rivers Project which covered the catchments

of the Boyne, Liffey and Suir Rivers introduced a monitoring system for river catchments on a pilot basis with the impending introduction of the Water Framework Directive.

The overall objective of river basin projects is to establish an integrated monitoring and management system for all waters within a RBD, to develop a dynamic programme of management measures and to produce a River Basin Management Plan, which will be continually updated.

A RBD must include coastal / marine waters up to one nautical mile beyond the baseline from which territorial waters are measured. A river basin is the area of land from which all surface run-off flows through a sequence of streams, rivers and possibly lakes into the sea at a single river mouth, estuary or delta. It is an area of land and sea made up of one or more neighbouring river basins together with their associated groundwater, and coastal waters and identified as the main area for co-ordinated water management.

Local Authorities will have the primary role in establishing, promoting and implementing these projects. In practice, RBD in Ireland will be determined by the natural grouping of hydrometric areas into water resource regions already familiar to Local Authorities and other public bodies. The majority of Co. Meath lies in the Eastern River Basin District (ERBD), along with 13 other authorities. It should be noted that the area of Meath, north of and including Grangegeeth, Rathkenny, Castletown, Nobber and Kilmainhamwood is included in the Neagh Bann River Basin District whilst the western tip of the County around Oldcastle is included in the Shannon River Basin District. During 2004, a working group lead by Dublin City Council prepared a characterisation report for the Eastern River Basin District. This report quantified the number of water-bodies in the ERBD that are at risk of not achieving good status by 2015. The next step is to determine a programme of measures that are required to achieve the good water quality status by 2015. Allowing further development in vulnerable areas designated in the Water Framework Directive Characterisation Report will increase the difficulty in achieving good water quality status by 2015.

Four land use types dominate the ERBD, which include agricultural, urban, natural areas, (forests and bogs), and coastal areas. The ERBD is the most highly urbanised and populated basin district in Ireland. Urban land use covers 8% of the district, which includes the Greater Dublin area. It is to be expected that the ERBD area will continue to experience population and development growth and this will have implications on the aquatic environment.

The driving forces (population growth, agricultural production, industrial production and employment, tourism, transportation, energy demand and consumption) cause a number of pressures to exert negative impacts on water bodies and the larger natural environment. Pressures can take the form of either anthropogenic actions or pollution sources.

Environmental pressures present in the ERBD include:

- Point sources – Point sources consist of clearly defined discharge points serving defined sources. Discharges from wastewater treatment plants (WwTPs) represent the most common and significant point source pressure.

- Diffuse sources - Diffuse source is a geographically distributed discharge, which cannot be defined by a single, documented "end of pipe" source such as a WwTP or industrial discharge. Diffuse sources include surface runoff generated from urban or agricultural areas primarily during storm events or irrigation. Other sources classified as diffuse include septic tanks, contaminated surface water drains, farmyards and sewer overflows.
- Physical alterations - Most rivers through urban areas are channelised to prevent flooding and to allow development near the river. Channelisation exerts a pressure by changing the flow regimes and altering both the instream and riparian habitat.
- Waste disposal - Solid waste disposal facilities such as landfills exert pressures on the aquatic environment through the production and release of leachate into the ground or surface waters.
- Water abstraction - Water abstraction for water supplies or consumptive use can exert a pressure by reducing the quantity of water available for the environment. As both the population and industrial production increases, the demand for water will also increase.
- Recreation and tourism - The biggest pressure from tourism is on wastewater treatment plants and water supplies.

4.7.4 Rural Water Programme

Local Authorities are responsible for maintaining the public mains systems and ensuring the quality of the water they distribute. Local Authorities are also responsible for the water quality of the group water scheme sector.

In response to poor water quality in many rural water supplies, the Government set up the Rural Water Programme with the aim of improving the quality and efficiency of Ireland's many group schemes. More and more group schemes are being taken over by Local Authorities in an attempt to improve the quality of the water supply. A subsidy is also available to members of both public and private group water schemes towards the costs of running the schemes.

Under the Rural Water Programme, each county must draw up a strategic rural water plan. This plan pinpoints the areas that need to be improved and decides how to maximise the different grants and subsidies available for improving and maintaining water supply systems. Local Authorities must compile an inventory of group schemes and take note of the quality of the water supply to these groups. The overall aim of the plan must be how to deliver water as efficiently and effectively as possible.

The Rural Water Programme in Co. Meath covers two sectors, namely group schemes and small schemes. There is an active group schemes sector in Meath with over 40 such schemes developed in the past five years typically involving the extension of public supplies to rural communities. The Small Schemes involve essential water services infrastructural improvements and 47 such schemes have been carried out in the past five years.

4.7.5 Ground Water

Groundwater is a major natural resource in Ireland typically providing between 20% and 25% of public drinking water supplies. In many rural areas, groundwater is the only source of supply. As well

as providing drinking water, groundwater resources are important in that they provide a significant proportion of the flow in many rivers (more than 90% of summer flow volumes in some cases). The inter-dependence of groundwater and surface water has been recognised by the EU Water Framework Directive, which requires that they be considered together in the development of integrated catchment management policies. This Directive is therefore likely to continue the trend established by previous legislation (such as the Nitrates Directive), in which groundwater issues have moved to the forefront of environmental planning considerations.

Groundwater is a resource which is under increasing risk from human activities. The main threat to groundwater is posed by:

- 1) Point contamination sources e.g. farmyard wastes (mainly silage effluent and soiled water), septic tank effluent, sinking streams, leakages, spillages, pesticides used for non-agricultural purposes and leachate from waste disposal sites, and;
- 2) Diffuse sources e.g. spreading of fertilizers (organic and inorganic) and pesticides. While point sources have caused most of the contamination problems identified to-date, there is evidence that diffuse sources are increasingly impacting on groundwater.

Since groundwater flow and contaminant transport are neither readily observed nor easily measured, and both processes are generally slow, there can be a lack of awareness or, in some instances, complacency among decision-makers about the risks of groundwater contamination.

Groundwater in Ireland is protected under EU and national legislation. The Local Authorities and the EPA are responsible for enforcing this legislation. A practical and effective means of protecting groundwater and preventing pollution is through the use of a Groundwater Protection Scheme. The Geological Survey of Ireland, DoEHLG and the EPA have jointly developed the methodology for producing Groundwater Protection Schemes.

Groundwater Protection Schemes provide guidelines for the planning and licensing authorities regarding the carrying out of their functions and a framework to assist decision-making on the location, nature and control of developments and activities in order to protect groundwater. Use of the scheme helps to ensure that within the planning and licensing processes due regard is taken of the need to maintain the beneficial use of groundwater.

The Groundwater Protection Scheme aims to maintain the quantity and quality of groundwater and in cases improve it, by applying a risk assessment based approach to groundwater protection. In this way it helps public authorities to meet their responsibility to protect groundwater, including Planning Authorities, which have a major function in the development and control of land use and the built environment.

Two main components are integrated to produce the Groundwater Protection Scheme:

- 1) Land surface zoning, and;
- 2) Groundwater protection responses for potentially polluting activities.

The protection of groundwater quality from the impact of human activities is a high priority because;

- Groundwater is an important source of water for industry, agriculture and drinking water;
- Groundwater moves slowly through the ground and so the impact of human activities lasts for a relatively long time;
- Groundwater may be difficult to clean up, even when the source of pollution is removed;
- Groundwater provides baseflow to surface water systems and accordingly it's quality influences the amenity and recreational value of surface water and its potential use for water supply purposes;
- Unlike surface water where flow is in defined channels, groundwater is present everywhere;
- Agricultural, industrial and other human activities are posing increasing risks to groundwater quality, and;
- EU legislation and national regulations require that pollution must be prevented (as part of sustainable groundwater quality management).

With difficulties arising in increasing abstraction levels from the main rivers to meet demand, it is evident that greater dependence will be placed on groundwater to satisfy the increasing demand particularly to the east and south east of the county. The County Meath Groundwater Protection Plan provides the information background to the policies of this Development Plan in setting out the Planning Authority's approach to various categories of development in areas of varying groundwater vulnerability. The County Meath Groundwater Protection Plan provides a detailed baseline with regard to aquifer potential and vulnerability. Adhering to the highest standards in terms of both the installation and maintenance of wastewater treatment facilities is essential to the protection of water quality.

The Sustainable Rural Housing Guidelines outline that Planning Authorities will need information on site suitability assessments and site specific design of any wastewater treatment facilities that may be necessary including assessment of groundwater vulnerability to enable a speedy and informed decision to be made. The key to protecting water quality in the context of providing new dwellings in unsewered rural areas is to ensure that new development is guided towards sites where acceptable wastewater treatment and disposal facilities can be provided, avoiding sites where it is inherently difficult to provide and maintain such facilities, for example sites prone to extremely high water tables and flooding or where groundwater is particularly vulnerable to contamination.

4.7.6 Water Quality in Co Meath

The EPA National Survey 2001-2003 found that the water quality in Meath has improved. The percentage of unpolluted river channels surveyed in Meath has improved from 20% in 1997 to 25% in 2003. This compares to a national rate of unpolluted river channels of 69% for the same period. The percentage of seriously polluted river channel surveyed has reduced to 1%, compared to 6% in 1997 and can be considered as a substantial improvement. 42% of the river channels surveyed in Meath are in a slightly polluted condition. However, this is based on current standards. If the more stringent Water Framework Directive standards are applied, the compliance rate falls significantly and this is the scale of the challenge which faces Meath County Council over the life of the next Development Plan and beyond.

The EPA report indicated one seriously polluted river station in County Meath, on the River Nanny at Follistown Bridge (5km east of Kentstown). The source was discovered to be a cattle feeding station located along the bank of the river channel, just upstream of Follistown Bridge. The Council is continuing to monitor this station on a monthly basis to ensure that this station remains unpolluted.

Phosphorus Regulations - Of the 109 sites in Meath, 39 (36%) comply with the specified phosphorus standards.

Generally, water quality in Meath is poorer in the south of the County, particularly on the outskirts of County Dublin.

The following rivers have elevated concentrations of phosphorus:

- Skane (Dunshaughlin)
- Delvin (Stamullen)
- Broadmeadow (Ratoath and Ashbourne)
- Knightsbrook (Summerhill)
- Nanny (Duleek)
- Hurley (Curragha)
- Ward (Kilbride)
- Tolka (Dunboyne)
- Delvins (Grangegeeth)
- Clady (Robinstown)

In August 2005, the Council's internal report shows that 62% of stations comply with the Phosphorus Regulations, up some 25% on 2003. This improvement is largely due to significant investment in the upgrading of municipal wastewater treatment plants (Navan & Trim).

Whilst improvements have been achieved, the Council must sustain this progress if targets (Phosphorous Regulations, Water Framework Directive) are to be achieved. Presently, 25% of rivers surveyed in Meath are unpolluted and 75% of the rivers in Meath require improvement. There is a work programme in place to achieve the required improvements.

POLICIES IN RELATION TO WATER QUALITY

INF POL 55

To maintain, improve and enhance the environmental and ecological quality of our waters by implementing the Water Quality Management Plans that will emerge from the Eastern, Neagh Bann and Shannon River Basin Districts Projects in co-operation with all organisations and major stakeholders for the protection of drinking, ground, surface, coastal and estuarine waters as part of the implementation of the EU Water Framework Directive.

INF POL 56

To protect groundwater resources having regard to the County Meath Groundwater Protection Plan.

INF POL 57

To protect, maintain, improve and enhance the natural and organic character of the watercourses and rivers in the County, and promote access, walkways and other recreational uses of their associated public open spaces, subject to a defined strategy of nature conservation and flood protection.

INF POL 58	To establish, where feasible, riparian corridors, free from development, along all significant watercourses in the county.
INF POL 59	To restrict, where feasible, the use of culverts on watercourses in the County.
INF POL 60	To seek the continued improvement of water quality, bathing facilities and other recreational opportunities in the coastal, estuarine and surface waters in the County.
INF POL 61	To ensure that septic tanks and proprietary treatment systems, or other waste water treatment and storage systems, and associated percolation areas where required as part of a development, comply with the recommendations of the Environmental Protection Agency and that they are employed only where site conditions are appropriate.

OBJECTIVES IN RELATION TO WATER QUALITY

INF OBJ 27	To pilot the development and implementation of Integrated Water Management Plans in priority catchments in co-operation with the adjoining Local Authorities, in order to facilitate the development of policy relating to integrated water management across the Region.
INF OBJ 28	To evaluate all watercourses in the County for rehabilitation potential, particularly in conjunction with sustainable drainage measures.
INF OBJ 29	To develop groundwater protection schemes in line with the recommendations contained within the DoEHLG / GSI / EPA publication 'Groundwater Protection Schemes, 1999' or any revised or replacement publication.

4.8 FLOOD PROTECTION

4.8.1 Introduction

Flooding is a natural phenomenon of the hydrological cycle. While there are different types and causes of flooding, the most common in Co. Meath are the flooding of rivers (and the Boyne Estuary and its tributaries in the case of East Meath) and the inadequacy of stormwater pipe networks in response to extreme rainfall events. There are many factors that influence flood behaviour and the degrees of risk that it possesses. Like other natural processes, flooding cannot be completely eliminated, but its impacts can be minimised with proactive and environmentally sustainable management. The accepted policy response to flood protection is now to manage the risk to life and property as sustainably as possible and to consider flood risk and its related impacts on development on a catchment basis, rather than on an individual location basis. This will facilitate sustainable development through the reduction of future flood damage, and hence reduce the associated potential economic and social costs.

Recognising the need for an integrated, planned and sustainable approach to flooding, having regard to its impacts on and link to development, the Planning & Development Act addresses this issue. The First Schedule of the Planning and Development Act, 2000 indicates that development plans can include objectives regulating, restricting or controlling development in areas at risk of flooding (whether inland or coastal), erosion and other natural hazards.

The Office of Public Works (OPW) is charged at a national level to monitor and address situations pertaining to flooding. A number of flooding related projects are currently underway by the OPW including the facilitation of a high level governmental review into flooding issues and management. The OPW are also involved in the preparation of historic / indicative maps. At a local level, there are a number of important drainage channels and rivers in County Meath for which the Office of Public Works is responsible. In dealing with applications for development in the vicinity of such channels, Meath County Council will consult with the OPW.

At a regional level the issue of flooding was also considered by the GDSDS (referred to previously). In preparing development assessment criteria and/or development management standards, outlined in the technical standards section, the Planning Authority have had regard to and endeavoured to incorporate the GDSDS recommendations.

POLICIES

INF POL 62	To actively participate in the National Flood Policy Review, being carried out by the Office of Public Works (OPW).
INF POL 63	To control development in the natural flood plain of rivers and develop guidelines, in co-operation with the adjoining Local Authorities, for permitted development in different flood risk category areas.
INF POL 64	Development should not itself be subject to an inappropriate risk of flooding nor should it cause or exacerbate such a risk at other locations. Development that is sensitive to the effects of flooding will generally not be permitted in flood prone or marginal areas.
INF POL 65	To require all significant developments impacting on flood risk areas to provide a Flood Impact Assessment, to identify potential loss of flood plain storage and how it would be offset in order to minimise impact on the river flood regime.
INF POL 66	To require all developments to submit, prior to commencement, details of a Sediment and Water Pollution Control Plan, for the agreement of the Drainage and Environmental Departments.

INF POL 67

Development should not take place which has an unacceptable risk of flooding, leading to danger to life, damage to property and wasteful expenditure on remedial works.

INF POL 68

Development should not create or exacerbate flooding elsewhere.

INF POL 69

Development should not take place that prejudices possible works to reduce flood risk.

OBJECTIVE

INF OBJ 30

Local Authority Drainage and Planning Departments shall understand the extent of flood plains, and the likelihood of such areas being flooded, by the production of flood risk maps. These flood risk maps should be integrated into the County Development Plan, with the Planning and Drainage Departments categorising land for development.

4.8.2 Flooding in Co. Meath

Flooding issues have been identified at the following locations:

- In East Meath, related the Boyne Estuary and its tributaries. This flooding is likely to increase in line with the anticipated sea level rise. A flood relief scheme has been drawn up by consultants, the implementation of which will involve significant environmental impacts upon sensitive and designated habitats;
- In Kells, area known as "the Backlands". This has been examined and a flood protection scheme is being considered by the Infrastructure Section for previously zoned lands;
- In Navan at the confluence of the Boyne and Blackwater Rivers;
- In Clonee up to Batterstown;
- In the Broadmeadow, Ashbourne;
- In the Nanny, Duleek where extensive remedial works have been carried out by the OPW, and;
- Within the environs of Maynooth.

Areas where project based flood studies have been carried out by Meath County Council include:

- Mornington District Surface Water and Flood Protection Scheme carried out by Kirk McClure Morton Consultant Engineers, Preliminary Report January 2004;
- Kells Stormwater Drainage Study, by Carl Bro Consultant Engineers, March 2006, and;
- Greater Dublin Area Strategic Drainage Study - River Tolka Flooding Study.

4.8.3 Sustainable Urban Drainage Systems

Urban development according to traditional stormwater drainage practice significantly increases the run off response to rainfall by virtue of conversion of soft surfaces to hard pavement, roof surfaces, etc. As a result, for moderate rainfall events, the peak flow response from the developed catchment could be 2-3 times that expected from an undeveloped catchment.

For future development, the Planning Authority will require that all large-scale developments in the designated settlements incorporate 'Sustainable Urban Drainage Systems' (SuDS) as part of the development proposals. SuDS are effective technologies which aim to reduce flood risk, improve water quality and enhance biodiversity and amenity.

POLICIES IN RELATION TO FLOOD PROTECTION

INF POL 70	To control development in the natural floodplains of all rivers and streams where such development may have a negative impact on flood control, access for channel maintenance or future flood control works or might contribute to environmental degradation were flooding to occur.
INF POL 71	To restrict development, which is sensitive to the effects of flooding in flood prone or marginal areas unless adequate mitigation measures, which may involve the preparation of a Flood Impact Analysis, are proposed to the satisfaction of the Planning Authority.
INF POL 72	To require all new large scale developments in all designated settlements to provide 'Sustainable Urban Drainage Systems' (SuDS) as part of their development proposals. Compliance with the recommendations contained in Technical Guidance Document, Volume 2, Chapter 4 of the Greater Dublin Strategic Drainage Study shall be required in all instances.
INF POL 73	To consult with the Office of Public Works in relation to proposed developments in the vicinity of drainage channels and rivers for which the OPW are responsible, and the Planning Authority will, in general, retain a strip of 10 metres on either side of such channel.

OBJECTIVES IN RELATION TO FLOOD PROTECTION

INF OBJ 31	To provide support for the funding of the surface water infrastructural requirements as identified by the Planning Authority in order to accommodate the planned levels of growth expected for the county.
INF OBJ 32	To improve and extend the surface water disposal infrastructure to serve the planned levels of growth, during the lifetime of this plan, in order to facilitate development.
INF OBJ 33	To develop guidelines, where appropriate in co-operation with adjoining Local Authorities, for permitted development in the different flood risk category areas.
INF OBJ 34	To construct the interim works recommended by the Tolka Flood Study and, subject to resource availability, implement the full flood protection scheme.

INF OBJ 35	To co-operate with the Office of Public Works in implementing the recommendations contained within the Mornington District Surface Water & Flood Protection Scheme – Final Preliminary Report’ as published by Kirk McClure Morton, Consulting Engineers, in January 2004.
INF OBJ 36	To implement the recommendations of the Kells Stormwater Drainage Study, as published by Carl Bro Consultant Engineers in March 2006 in conjunction with the development of the Backlands Local Area Plan lands.
INF OBJ 37	To liaise with other Local Authorities in the Greater Dublin Area and the OPW to prepare flood risk maps for the County.

Development Assessment Criteria

It shall be required therefore that development proposals are framed such as to address in an authoritative manner the following issues with regard to flood protection:

- To require all significant developments (i.e. development of areas exceeding 1 hectare) impacting on flood risk areas to provide a Flood Impact Assessment to accompany the planning application to identify potential loss of floodplain storage and proposals for the storage or attenuation of run/off discharges (including foul drains) to ensure the development does not increase the flood risk in the relevant catchment and how it would be offset in order to minimise the impact on the river flood regime.
- Where considered necessary, the Planning Authority will require a certificate from a suitably qualified competent person that the development will not contribute to flooding within the relevant catchment. A certificate must accompany applications for planning permission for development of areas of 1 Hectare or less.
- Appropriately designed development, which is not sensitive to the effects of flooding may be permissible in flood plains, provided it does not significantly reduce the flood plain area or otherwise restrict flow across floodplains. Examples of such developments would include park areas, sports pitches, certain types of industry, warehousing, etc. which are designed to be flood resistant and / or insensitive to flooding. Such developments should include adequate measures to cope with the ever existent flood risk, e.g. adequate drainage systems, safety measures, emergency response facilities and / or warning and response systems and where it is considered that flooding would not result in significant hardship / financial loss or cost.
- All new developments must be designed and constructed to meet the following minimum flood design standards:
 - For urban areas or where development (existing, proposed or anticipated) are involved – the 100 year flood;
 - For rural areas of where further development (existing, proposed or anticipated) are involved – the 25 year flood, and;
 - Along the coast and estuaries – the 200 year tide level.

- Developments adjacent to water courses in the county will be required to ensure that there is adequate provision for access to allow maintenance and clearance, future improvement works or emergency works. A set back of 5 – 20 metres is required depending on the width of the watercourse.

Meath County Council is committed to avert insofar as possible, the threat of flooding in new developments, to minimise the impact of structures and earthworks on flood plains and river flow, and to reduce, insofar as possible, the rate and quantity of surface water run-off from all new developments. For those, contemplating developments within areas of the county that may be prone to flooding, the incorporation of measures to take flooding patterns into account is recommended.

Minimising Run-off

Development in floodplains, areas liable to flooding and areas where the conveyancing capacity of watercourses is marginal must so far as is reasonably practicable incorporate the maximum provision to reduce the rate and quantity of runoff. Such measures include:

- Hard surface areas (car parks, etc) should be constructed in permeable or semi-permeable materials;
- On site storm water ponds to store and / or attenuate additional runoff from the development should be provided, and;
- Soakways or French drains should be provided to increase infiltration and minimise additional runoff.

Such sustainable design / construction measures are desirable in most areas and essential in floodplains, areas liable to flooding, and areas where the conveyancing capacity of watercourses is marginal. In all of these cases, development that reduces the rate of absorption or increases the rate of runoff increases the risk of flooding of lands and properties downstream.

Ransom Strips

The use of Ransom Strips is to be curtailed, by review of drainage layouts at planning application stage to identify any obvious opportunity being created by the applicant. Site inspectors should be aware of the practice, and be vigilant for such opportunities being created on site.

4.9 SOLID WASTE / WASTE MANAGEMENT

4.9.1 Introduction

Waste management involves the provision of recycling facilities, enforcement of litter legislation, implementation of packaging and other regulations, and the provision of education on all aspects of our environment. How to manage waste sustainably is now identified as one of three strategic challenges facing Ireland's environment, the other two being meeting international commitments on air emissions and eutrophication prevention and control.

In accordance with the requirements of the Planning & Development Act 2000, Development Plans shall include objectives for :

the provision or facilitation of the provision of infrastructure including transport, energy and communication facilities, water supplies, waste recovery and disposal facilities (regard having been had to the waste management plan for the area made in accordance with the Waste Management Act, 1996), waste water services, and ancillary facilities.

Regional and local waste management plans are now in place nationwide in accordance with the requirements of the Waste Management Acts, 1996 to 2005, and the Waste Framework Directive (Council of the European Communities), 1975. This planning procedure represented the first time a comprehensive and holistic approach was applied to waste management and has the potential to provide an integrated national network of waste management services and facilities.

4.9.2 Policy Context

The DoEHLG published the policy statement on waste management “Changing Our Ways” in September 1998. This statement was intended to provide a national policy framework for the adoption and implementation by Local Authorities of strategic waste management plans under which national objectives and targets would be attained.

The policy statement strongly endorsed:

- Meaningful strategic planning on a regionalised basis;
- A dramatic reduction in reliance on landfill, in favour of an integrated waste management approach which utilises a range of waste treatment options to deliver effective and efficient waste services and ambitious recycling and recovery targets;
- Greater participation by the private sector in the provision of waste management services;
- A more effective and equitable system of waste charging with incentives for waste minimisation and recovery;
- Greater utilisation of legislative instruments extending the scope of producer responsibility initiatives, and;
- The mobilisation of public support and participation.

The primary purpose of the Protection of the Environment Act, 2003, (which superceded the Waste Management (Amendment) Act, 2001) is to provide a legal mechanism by which the current waste management planning process can be brought to an early conclusion. This legislation provides that the making, review, variation and replacement of a waste management plan is an executive (management) function. This was to overcome some of the difficulties been experienced such as the failure of Local Authorities to adopt the relevant proposed regional plan or dissatisfaction with the qualifications or conditions being placed on adopting other regional plans.

The most recent waste policy statement entitled “Taking Stock and Moving Forward” published in April 2004 reiterates a commitment to the implementation of the internationally recognised waste management hierarchy. The integrated waste management approach is to implement maximum recycling, recovery of energy from residual waste and moving away from landfill disposal.

Section 60 of the Waste Management Act 1996 empowers the Minister for the Environment, Heritage and Local Government, whenever it is considered proper, to give general directions in writing to the Environmental Protection Agency or each Local Authority regarding policy in relation to issues such as waste planning, the management of waste recovery or disposal activities carried on without

a waste licence and the performance of the Local Authorities in relation to waste movements. A policy direction WIR 04/05 was issued on 3rd May, 2005 in relation to the movement of waste. This was unforeseen in "Taking Stock and Moving Forward" and was intended to address concerns that relevant regulatory authorities were taking an unnecessarily restrictive approach in regard to the inter-regional movement of waste. Such an approach may conflict in certain circumstances with the rational use of waste management infrastructure and the objectives of national policy.

Regional Planning Guidelines

The RPGs indicate that since the adoption of the respective Waste Management Plans in 2001 by the constituent Local Authorities, population growth, economic growth and a corresponding increase in household waste generation means that the targets identified in the plans will not be achieved within the agreed timeframes. The RPGs also state that while progress has been made, particularly for recycling, it is clear that the targets indicated in the plans were overly ambitious and that there is a serious lack of waste management infrastructure in the GDA, both for household and commercial waste which will become critical beyond 2008. It should be noted that County Meath is the only county in the Greater Dublin Area that is located in the North Eastern Waste Management Region and that the experience in the GDA as a whole with regard to difficulty in providing adequate waste management infrastructure has not been replicated in this county.

The Guidelines note that the transferring of waste between regions within the GDA could be reconsidered so as to give flexibility in dealing with waste management at a regional level. New facilities should be allowed to perform their required function in one region and also form part of the wider strategy that includes waste management in another region.

The RPGs call for the revision of the Regional Waste Management Plans as a matter of urgency in order to take account of demographic changes, increases in waste volumes and improvements in waste management technology.

Regional Waste Management Plan

County Meath is the lead authority for the North East Region which also includes Counties Louth, Cavan and Monaghan. The original Waste Management Plan (WMP) for the North East Region was adopted in 2001. The replacement WMP for the North East Region has now been developed and covers the period 2005 – 2010. The replacement WMP reflects changes in both legislation and policy direction, regional changes and cross border opportunities and challenges since the original WMP was adopted. It also identifies current progress on waste management, the policy vision for future development and the means to implement and monitor future progress. Progress to date shows that implementation of the original Plan has been very successful with a significant increase in household recycling rates and the further expansion of the household collection of dry recyclables. Education and awareness of waste management issues has intensified throughout the Region following the appointment of Environmental Awareness Officers in each Local Authority. The waste infrastructure in the Region has also grown significantly.

The Replacement WMP outlines policy for 2005-2010 and gives Regional Policy Objectives of the Plan. They are as follows:

- i) Waste prevention and minimisation will be a priority and there will be increased focus on the schools, community and business sectors to reduce waste arisings.

- ii) The region will deliver an effective system meeting the polluter pays principle that meets high standards of environmental performance and all legislative obligations.
- iii) The Region will strive to give access to waste management services across the Region, particularly in rural areas.
- iv) The Region will strive to improve collection coverage and participation for households and businesses, reducing uncollected waste.
- v) The Region will continue to improve infrastructure for recycling and recovery of waste.
- vi) The Region will maximise positive input of the private sector to help meet Plan objectives.
- vii) The North East Local Authorities will if necessary and / or appropriate for environmental or other reasons, direct that certain waste streams must be delivered to a certain tier in the waste hierarchy (e.g. reuse, recycling, biological treatment, energy recovery). This will be achieved by means of the Waste Collection Permit system or other appropriate regulatory or enforcement measures.

4.9.3 Waste Infrastructure

In terms of waste infrastructure, the facilities in the region have grown significantly. Recycling is a key component of the strategy for a sustainable approach to waste management. Meath County Council has already established a recycling facility in both Navan and Trim with the latest centre recently completed and opened in the Kells Business Park in Lloyd. A recycling centre in Dunboyne has been developed by the private sector. The Council also proposes to increase the number of sites and the diversity of materials accepted at Bring Centres, and to encourage the provision of Bring Centres in all new housing estates and rural areas. The replacement WMP notes that finding suitable locations for Bring Banks is a challenging task for all Local Authorities. A kerb-side collection for separated waste materials has been introduced in urban areas.

A site at Carranstown, Duleek has been approved by An Bord Pleanála and Environmental Protection Agency to cater for 150,000 tonnes per annum of the region's municipal waste. This is the subject of a judicial review to the Supreme Court. The Knockharley Landfill, near Kentstown, off the N2 National Primary Road is a privately operated landfill under licence from the EPA. This regional facility has capacity for 25 years, accepting 130,000 tonnes per annum to 2008 and reducing to 88,000 tonnes per annum. The landfill site takes both municipal and industrial waste that cannot be otherwise disposed of in a safe manner. Planning permission was granted in 2003 for a former quarry site at Gormonston and this site will deal with construction and demolition waste. No landfill operations have commenced at this site to date. There are two Waste Transfer Stations in the County, located at Rathdrinnagh on the N2 and at Clonmagadden, Navan.

Litter Management Plan

Each Local Authority is also obliged to prepare a litter management plan for its area. This plan sets out their objectives to prevent and control litter as well as measures to encourage public awareness of the problem. Local Authorities are responsible for implementing the litter laws in their own areas. This means they are responsible for the prevention and control of litter and they have the power to take enforcement action against individuals who break or ignore these laws. Gardai also have the power to issue on-the-spot fines for litter offences.

POLICIES IN TERMS OF SOLID WASTE / WASTE MANAGEMENT

INF POL 74	To implement the provisions of the Waste Management Hierarchy and the Replacement North East Regional Waste Management Plan. All prospective developments in the county will be expected to take account of the provisions of the Replacement Regional Waste Management Plan and adhere to those elements of it that relate to waste prevention and minimisation, waste recycling facilities, and the capacity for source segregation. Account will also be taken of the proximity principle and the inter regional movement of waste as provided for under the Section 60 Policy Direction by the Minister for the Environment, Heritage & Local Government (Circular WIR:04/05).
INF POL 75	To promote education and awareness on all issues associated with waste management, both at industry and community level. This will include the promotion of waste reduction by encouraging the minimisation, re-use, recycling and recovery of waste within the county.
INF POL 76	To ensure the provision of quality cost effective waste infrastructure and services, which reflect and meet the needs of the community and to ensure that the 'polluter pays' principle is adhered to in all waste management activities.
INF POL 77	To ensure that all waste disposed of by private companies shall be undertaken in compliance with the requirements of the EPA and the Waste Management Legislation.
INF POL 78	To require the provision of bring banks, bottle banks or other appropriate recycling facilities as part of the overall development in the case of new or extended shopping centre developments and commercial neighbourhood centres, educational, sports, and recreational facilities. The sites shall be made available to the Local Authority at the developer's own expense and will be maintained by Meath County Council or its agents.
INF POL 79	To support the development of recycling sites / waste disposal sites or transfer stations and associated developments in appropriate locations, subject to normal planning and environmental sustainability considerations. In assessing applications for these types of development, the Planning Authority will have regard to the Groundwater Protection Plan and appropriate response matrix.
INF POL 80	To encourage the recycling of construction and demolition waste and the reuse of aggregate and other materials in future construction projects.

INF POL 81 To support the re-development of former quarries for construction and demolition waste recycling facilities subject to normal planning and environmental sustainability considerations.

INF POL 82 To promote and facilitate communities to become involved in environmental awareness activities and community-based recycling initiatives or environmental management initiatives that will lead to local sustainable waste management practices.

OBJECTIVES IN TERMS OF SOLID WASTE / WASTE MANAGEMENT

INF OBJ 38 To continue to expand environmental awareness initiatives designed to create increased public awareness of waste prevention minimisation and reuse. Particular emphasis should be placed on local schools involvement.

INF OBJ 39 To identify suitable sites for additional Civic Amenity Sites and neighbourhood recycling facilities to cater for the projected increase in waste for recycling over the timescale of this Development Plan and to provide appropriate infrastructure at these locations.

INF OBJ 40 To implement the recommendations of the adopted Sludge Management Plan for the County, including any amendments following the carrying out of the Sludge Management Plan review, and in particular the construction of a Sludge Treatment Facility in Navan.

INF OBJ 41 To continue to tackle littering through the continued implementation and updating of Meath County Council's anti-litter plan.

INF OBJ 42 To seek the effective engagement of local communities in Meath to promote their role in recycling waste and tackling the problems of illegal dumping within the County through liaison with the Environmental Awareness Officer.

INF OBJ 43 To consider, when undertaking development or when authorising or permitting development, the provision of waste minimisation, prevention and reuse programmes and facilities including the provision of recycling facilities within developments, the imposition of conditions requiring implementation of waste management measures and programmes, including schemes for the management and construction of waste, on development sites.

Development Assessment Criteria

In assessing planning applications, regard will be had to the waste produced by proposed developments including the nature and amount produced and proposed method of disposal. Developments should ensure that production / disposal methods do not give rise to environmental pollution, result in undue loss of amenity or be detrimental to public health.

In assessing all significant construction / demolition projects, the developer shall include construction and demolition waste management plans. These plans should seek to focus on waste minimisation in general and optimise waste prevention, re-use and recycling opportunities and are required for developments of five or more housing units or commercial or industrial developments on sites in excess of 0.5 hectares.

In the assessment of planning applications for waste management facilities, in addition to the Replacement North East Region Waste Management Plan, the Planning Authority will also have regard to the provisions of the relevant Waste Management legislation, EPA Landfill Manuals, EU Packaging and Packaging Waste Directive and DoEHLG policy statements including 'Changing Our Ways' and 'Preventing and Recycling Waste-Delivering Change'.

4.10 ENERGY

4.10.1 Introduction

The availability of energy is of critical importance to the continued development and expansion of employment in Co. Meath. The growth in the national economy has placed strain on the national electricity generating capacity. The ESB National Grid, in its Generation Adequacy Report (2003 – 2009), has identified significant generation shortfalls as electricity demand continues to grow at approximately 3.5% per annum. The supply of electricity has been opened up to increased competition and new generation plants may connect to the electricity network to transport power from wherever it is produced to where there is a demand for it.

The Planning Authority recognises the essential requirements for electricity production and distribution. The two main energy networks serving Co. Meath are electricity and gas. With increased residential development in the county and a drive for more industrial, commercial and employment generating uses, it will be important to ensure that the capacity of the energy networks is sufficient to meet these demands.

In relation to power generation, Meath is well placed to encourage and facilitate the development of power generation facilities in the county, for a variety of reasons, namely:

- The county's proximity to Dublin;
- The passage of a number of gas mains and trunk elements of the national grid through Meath, and;
- The availability of sites.

4.10.2 Policy Context

The Planning and Development Act indicates that a Development Plan shall include objectives for the provision or facilitation of energy infrastructure. The First Schedule indicates objectives that may be included in a Development Plan, and includes:

- Promoting design in structures for the purposes of flexible and sustainable use, including conservation of energy and resources (Part II - Control of Areas and Structures);
- Reserving land for transport networks, including roads, rail, light rail and air and sea transport, for communication networks, for energy generation and for energy networks, including

renewable energy, and for other networks, and for ancillary facilities to service those networks (Part V- Infrastructure and Transport).

The National Spatial Strategy states that in relation to the relationship between local planning and electricity network planning, important points to consider include:

- The need to address electricity infrastructure in county development and local area plans to facilitate national, regional and local economic progress, and;
- The need to liaise with the operators of the transmission and distribution grids, particularly in the environs of towns, to ensure the continued availability of corridors for overhead cables and continuity of supply for existing and new users of electricity.

It is the objective of this Development Plan to encourage and facilitate the development of power generation facilities in the County, including the support of non renewable energy developments where it is consistent with the proper planning and sustainable development of the County.

4.10.3 Profile of Electricity and Gas Networks in Co Meath

The major existing electricity corridors and potential major new corridors are indicated on the Map 4.2. In terms of electricity, there are capacity constraints, particularly affecting the Navan Area. The ESB has a list of major electrical infrastructure projects planned for the coming years to cater for normal domestic and commercial supply, the majority of which are due to commence. This includes a new 38KV Line and upgrade of Academy St., Abbeylands and Navan Sub-Stations giving increased capacity to Navan Business Park and Mullaghboy Industrial Estate. The need for 110 KV Stations is now considered necessary at locations in the county, including Navan and Drogheda.

The Gormanston 220 - 110 KV Station is currently being progressed which will provide increased supply to the East Meath area. The planned Gorman to Meath Hill 110kv line will give increased capacity to Kells, Navan and East Meath, and is expected to be in place by 2008. There are new 110kv sub-stations under consideration for Ashbourne and Gormanston whilst the existing Ashbourne station is being upgraded (by 50%) as an interim solution. The IDA Business Park at Drogheda can cater for a large consumer if the need arises as an existing 110 KV line traverses the site. The capacity of Trim and Duleek is sufficient at present.

Natural gas is the cleanest of all fossil fuels and its chemical composition makes it an environmentally friendly fuel. There has been a very large increase in the consumption of gas for electricity generation and also for residential and industrial heating and other uses. As demand increased, the Kinsale gas supply was augmented by imports via a pipeline system from Scotland. A second interconnector pipeline was put in place in 2000 to bring additional supplies ashore at Ballough in north Dublin from which a new pipeline was laid to Galway and from there to the Shannon Estuary. It will also be able to take gas from the Corrib Gas Field. Planning permission has been granted for an (AGI) at Gormanston which will enable the transmission of gas from Scotland to Belfast.

A number of important gas mains traverse the county. The gas mains, and towns connected to the mains supply are shown on Map 4.3. In terms of gas supply, the County is well served in terms of transmission lines and the towns of Navan, Trim, Ashbourne, Dunboyne / Pace / Clonee Corridor, Dunshaughlin, Ratoath, Laytown, Longwood, Bettystown, Mornington, Donacorney, Duleek, Drogheda South Environs, Gormanston, Stamullen and Enfield are currently served (Robinstown,

a gaig in the settlement strategy is also served by the gas network). The existing network has capacity for connections and local distribution network extensions.

Kells is not presently served and Bord Gais has no immediate plans to provide a supply due to the introduction of de-regulation. Bord Gais is not prepared to commit capital funding to a major distribution network extension.

4.10.4 Renewable Energy

The development of renewable energy sources is a priority at national and European level for both environmental and energy policy reasons. The National Development Plan sets out policies for the provision of electricity from renewable and indigenous sources. The development of renewable sources of energy offer sustainable alternatives to our dependency on fossil fuels, a means of reducing harmful greenhouse emissions and opportunities to reduce our reliance on imported fuels. Renewable energy comes from natural sources that are continuously replenished by nature. The main sources of renewable energy are the wind, the sun (solar energy), water (hydropower, wave and tidal energy), heat below the surface of the earth (geothermal energy) and biomass (wood, biodegradable waste and energy crops).

Most of our existing energy is derived from burning fossil fuels which releases greenhouse gases into the atmosphere resulting in significant long term consequences for the climate. The objective of the National Climate Change Strategy (October 2000) is to meet the national Kyoto Protocol target on Green House Gas emissions over the commitment period 2008 - 2012. The strategy encourages the expansion of the renewable energies and calls for a review of Building Regulations to reduce energy use in new housing by up to 20%. The National Climate Change Strategy is being reviewed at present to ensure that adequate and appropriate measures are in place to reduce greenhouse gas emissions in accordance with the commitment under the Kyoto Protocol, and in turn reduce adverse impact on air quality.

4.10.5 Meath Energy Management Agency

Meath Energy Management Agency (MEMA) is a local energy agency formed in 2002 by Meath County Council and the European Commission Directorate General for Energy. The Agency is involved in co-operative actions and demonstration projects and works in partnership with a number of other public and private organisations to obtain its objectives. MEMA also provides expert advice to Meath County Council and the private sector in assessing the energy rating of new housing schemes in line with the Performance of Buildings Directive which takes effect this year.

Objectives of MEMA

- To promote the rational uses of energy;
- To promote renewable energy;
- To provide and disseminate energy information;
- To protect the environment;
- To reduce waste of energy in all sectors of society, and;
- To encourage replacement of imported fossil fuels with regionally generated renewable energy in an effort to ensure security of energy supply where it is feasible.

The Agency's consultant report on a preliminary renewable energy plan for County Meath, 'Renewable Energy Plan for County Meath – Phase 1 Preliminary Assessment (2002)', outlined a number of small energy producers in the County including:

- Small Hydroelectric schemes at Slane and Navan producing between 0.1/MW and 0.2/MW of electrical power, and;
- A small number of private and domestic heat producing installations include geothermal heating systems and solar heating systems.

The Assessment indicates that there is strong potential for Co. Meath to increase its participation in renewable energy development and use it at an individual level, at group scheme level, and at an industry / business level. Based on preliminary assessments made in 2002, the potential feasible renewable energy options for the county includes but is not limited to a balanced mix of:

- Bioenergy - crops, forestry;
- Biomass - anaerobic digestion, combined heat and power (CHP);
- Geothermal - hot dry rock reservoirs, groundwater aquifers;
- Hydroenergy - small and microhydro systems;
- Solar - passive solar heating, active solar heating;
- Waste - landfill methane gas collection;
- Wave - wave action, and;
- Wind - onshore wind, offshore wind (single turbines and groups).

The Agency is currently working with Meath County Council to conduct an energy audit for the Council. The Council's responsibilities for energy use covers infrastructure (waterworks, water treatment plants, housing schemes, administration, machinery yards, building heating and lighting, transport fleet and public lighting).

4.10.6 Wind Energy Development

Over the past number of years, the development of wind energy farms throughout the country has been notable. The 2001 - 2007 County Development Plan indicated that the degraded landscapes of the cutaway bogs in the south west of the county offer much potential in locating wind energy installations. Since the 2001 - 2007 County Development Plan was adopted, planning permission was granted to develop a small scale (under 5 megawatts) wind farm in Teevurcher, on the Meath / Cavan border and a wind monitoring mast to ascertain wind energy resources was permitted in Chamberstown, Slane. This represents a poor level of activity in the sector compared to other counties.

The Wind Energy Development Guidelines (June 2006) issued by the DoEHLG indicate that it is important that all development plans incorporate a statement of the Planning Authority's policies and objectives in relation to wind energy development including those matters it will take into account in assessing planning applications for specific wind energy development proposals. The development plan must achieve a reasonable balance between responding to overall Government Policy on renewable energy and enabling the wind energy resources of the Planning Authority's area to be harnessed in a manner that is consistent with proper planning and sustainable development.

The assessment of individual wind energy development proposals needs to be conducted within the context of a “plan led” approach which involves identifying areas considered suitable or unsuitable for wind energy development. The Landscape Characterisation Assessment identifies areas of the County that are sensitive to this form of development from a landscape perspective.

4.10.7 Hydro Energy

The Council note that there are two existing small hydroelectric schemes at Slane and Navan producing between 0.1/MW and 0.2/MW of electrical power. The Council encourages the use of rivers, where suitable, within the county for the development of Hydro Energy and in particular, will be supportive of individual developments along the shore of rivers which propose hydro energy to provide an element of their energy requirements. The Council will not encourage the use of the canal system, which is designated for tourist and amenity use, for this purpose. In all proposals, the Planning Authority will consult with the National Parks & Wildlife Service (NPWS) of the DoEHLG and the Regional Fisheries Board with regard to the impact of such proposals for the free passage of fish, salmonid qualities of the river and ecological impact of any E.U. or national designation.

4.10.8 Energy Efficiency & Energy Performance for Buildings Directive

In addition to promoting renewable energy developments themselves, there is also the issue of energy efficiency, both on the macro and micro scale, to be considered. For example, at the macro level, sustainable land use planning will reduce the number of car trips being generated whilst at the micro level, pedestrian and cycle lanes will encourage people to use alternative forms of development to that of the private car. The need to reduce the amount of energy being generated has been to the fore in the proposed transportation and settlement strategies pursued in this Development Plan.

The use of alternative forms of heating e.g. geo-thermal and solar panels could be encouraged in the design of buildings. This could be referred to specifically in the proposed rural housing and residential estate guidelines.

Arising from the Kyoto protocol, the EU has set the reduction of greenhouse gas emissions as an important objective. The most significant greenhouse gas is CO₂, almost half of which derives from energy use in buildings. EU research has indicated that CO₂ emissions from buildings could be reduced by 22% through improved energy efficiency. The EU Energy Performance for Buildings Directive (EPBD) was adopted on 16th December 2002. The EPBD must be legally transposed in Ireland by national legislation and must generally be given practical effect by 4th January 2006. However, the EPBD explicitly provides for a longer period, up to 4th January 2009, for implementing the more complex provisions of the Directive requiring:

- The energy rating of newly constructed buildings, existing buildings (when existing buildings are let or sold) and of public service buildings;
- Improvement of the energy efficiency of certain classes of boilers and heating installations, and;
- Inspection of air-conditioning systems.

The EPBD contains a range of provisions aimed at improving energy performance in residential and non-residential buildings, both new build and existing. The EPBD obliges specific forms of information and advice on energy to be provided to building purchasers, tenants and users. The

intention is that this information and advice will help consumers to make informed decisions leading to practical actions to improve energy performance. As outlined in Section 4.10.5, the Meath Energy Management Agency provides expert advice in this regard.

The Planning Authority is committed to developing sustainable building requirements with regard to a shift to energy efficient, low environmental impact buildings in Co. Meath. Meath County Council is examining the work being carried out by Fingal County Council in their recent Local Area Plans for Cappagh, North Ballymun and Balbriggan in this regard. The Fingal Local Area Plans sought that the annual space and water heating energy requirement for all buildings must now not exceed 50kWh/m² and that renewable energy must be used to meet at least 30% of these energy needs. The incorporation of good design into developments should be welcomed by all who want to see sustainable building practices being mainstreamed. Good design is the key to achieving the optimum energy performance of buildings at no extra cost. The benefits are clear; lower energy bills for the consumer and a healthier environment for the community.

POLICIES IN TERMS OF ENERGY

INF POL 83	To facilitate energy infrastructure provision, including the development of renewable energy sources at suitable locations, so as to provide for the further physical and economic development of Meath.
INF POL 84	To support national and international initiatives for limiting emissions of greenhouse gases through energy efficiency and the development of renewable energy sources which makes use of the natural resources of the county in an environmentally acceptable manner, where it is consistent with proper planning and sustainable development of the area.
INF POL 85	To encourage the production of energy from renewable sources, including in particular that from biomass, waste material, solar, wave, hydro and wind energy, subject to normal proper planning considerations, including in particular, the potential impact on areas of environmental or landscape sensitivity.
INF POL 86	To support the National Climate Change Strategy and, in general to facilitate measures which seek to reduce emissions of greenhouse gases.

POLICIES IN RELATION TO ENERGY EFFICIENCY AND CONSERVATION

INF POL 87	To seek to improve the energy efficiency of its existing building stock, and to promote energy efficiency and conservation in the design and development of all new buildings in the County, and in residential schemes in particular.
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INF POL 88	To encourage planning applications for developments which maximise energy efficiency through their location, layout or design or which make appropriate use of energy conservation techniques, provided the development would not have a detrimental impact on the amenities of occupiers of nearby properties, or the amenities of the area. Development which is wasteful of energy in its location, layout or design will generally be resisted.
INF POL 89	To attain high standards of energy efficiency and environmental sustainability in residential development, including the following; 1) Bio-climatic site design; 2) Water Conservation; 3) Ventilation; 4) Energy efficient strategies for housing design; 5) Daylight analysis, and; 6) High insulation standards.
INF POL 90	That certain Local Area Plans shall indicate the scale of individual residential developments that shall be the subject of minimum energy performance standards as a prerequisite to receiving planning permission. A calculation report shall be submitted with the planning application. Each building's energy performance calculation must be demonstrated on the basis of an approved method (e.g. EN 832) carried out by suitably qualified and accredited experts. Low energy buildings are defined as buildings with an annual heating requirement (space and water heating) not exceeding 50kWh/m ² of useful floor area. The development will utilise renewable energy supply systems to meet at least 30% of the buildings space and water heating requirements as calculated on the basis of an approved method carried out by suitably qualified and accredited experts.

POLICY IN RELATION TO WIND ENERGY

INF POL 91	To encourage the development of wind energy, in accordance with Government policy and having regard to the Landscape Characterisation Assessment of the County, the Wind Energy Development Guidelines (2006) and the proposed Wind Energy Strategy for the County.
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OBJECTIVE IN RELATION TO WIND ENERGY

INF OBJ 44	To investigate the preparation of a study to identify areas suitable for wind energy development in conjunction with appropriate agencies.
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POLICIES IN TERMS OF ENERGY NETWORKS

INF POL 92	To support and facilitate the development of enhanced electricity and gas supplies, and associated networks, to serve the existing and projected residential, commercial, industrial and social needs of the County.
INF POL 93	To co-operate and liaise with statutory and other energy providers in relation to power generation in order to ensure adequate power capacity for the future needs of the County.
INF POL 94	To support the statutory providers of national grid infrastructure by safeguarding such strategic corridors from encroachment by other developments that might compromise the provision of energy networks where strategic route corridors have been identified.
INF POL 95	To protect areas of recognised landscape importance and significant landscape views from construction of large scale visually intrusive energy transmission infrastructure. In such circumstances, it is an objective to seek alternative routing or transmission methods.
INF POL 96	To require the provision of electricity cables underground, especially in the urban environment, and generally within areas of public open space, in the interest of visual amenity.
INF POL 97	To require that, in all new developments, multiple services be accommodated in shared strips and that access covers be shared whenever possible.

POLICIES IN RELATION TO TRANSMISSION LINES

INF POL 98	To ensure that the development of high tension power lines will be restricted, and that new high tension lines will not be permitted adjoining existing dwellings, except where no other alternative can be shown to exist.
INF POL 99	To locate services, including electricity, telephone and TV underground, where possible, and that existing overhead cables and associated equipment should progressively be located underground with future capacity considered and appropriate ducting put in place.

Development Assessment Criteria**All Renewable Energy Developments**

It is the policy of the Council to adopt a positive approach to renewable energy developments as outlined. In the assessment of individual proposals, the Planning Authority will take the following into account:

- The proper planning and sustainable development of the area;
- The environmental and social impacts of the proposed development, including residential amenity and human health;
- Impact of the development on the landscape;
- Impact on public rights of way and walking routes;
- Connection to the National Grid (where applicable);
- Mitigation features, where impacts are inevitable, and;
- Protected or designated areas - NHAs, SPAs and SACs, areas of archaeological potential and scenic importance, proximity to structures that are listed for protection, national monuments, etc.

The Council encourages and will facilitate early pre-planning discussion with providers of energy infrastructure and supports local community participation within this process.

Wind Energy Developments

In considering the siting of wind energy projects, the Planning Authority will permit their siting in appropriate locations as identified in the Landscape Characterisation of the County and where judged to be in compliance with the DoEHLG Wind Energy Development Guidelines.

An application for wind farms shall require an Environmental Impact Assessment having regard to the thresholds specified in Schedule 5, Part 2, (3)(i) of the Planning and Development Regulations, 2001 - 2006.

The Council will seek to ensure that development of wind farms are sited, so as not to cause a negative impact on the special character and appearance of designated conservation areas, protected structures or sites of archaeological importance.

The visual impact of wind turbines is among the most important considerations to be taken into account. Wind farms are tall and their prominence is emphasised by the movement of the rotors. Given the nature of wind farms, there are areas that can be identified as unsuitable for wind development, on the basis that they conflict with existing land uses and planning policies, and are therefore excluded from consideration. The location of wind farm development must also have regard to the Landscape Character Areas of the County (Chapter 8 & Appendix VI).

Whilst each application will be assessed on its own merits, it is important that certain design guidelines are adhered to:

- Topographical enclosures and extensive areas of degraded or previously developed lands should be identified for wind farm development to help minimise visual impacts and to harmonise wind turbines with the landscape. Where elevated sites are required, the location to site the turbines should be selected to minimise the zone of visual influence by avoiding summits and ridgelines and by using side slope locations only.
- The layout and design of the wind farm should directly relate to the key landscape characteristics, for example using a regular grid on regular surfaces such as cutaway bogs and more irregular lines on flowing topography such as foothills.

- The turbines and the landscape need to form a coherent unit and avoid visual confusion, all turbines should be of the same size and proportions, same colour and number of blades and same rotational speed. The spacing of the turbines should be regular so as to give a consistent and repetitive image.
- The use of a small amount of larger diameter turbines is recommended rather than a larger number of smaller turbines.
- In general, matt finishes and neutral colours for turbines and structures are encouraged to minimise their conspicuous nature.

Noise is the other principal environmental impact associated with wind farms. There are two sources of noise from wind turbines: the mechanical noise from the turbine and the aerodynamic noise from the blades. The former can be considerably reduced by appropriate engineering practice. The aerodynamic noise depends on the rotor speed, which in return depends on the wind speed.

Measures should be taken to ensure a good acoustical design of turbines, in order to guarantee that there are no significant increases in ambient noise levels in the nearby surroundings, which could affect private properties and wildlife, as well as the tranquillity of the landscape.

Once installed, wind turbines occupy approximately only 1% of the surface area, the access roads to the Wind Farm sites are the principal land disturbance. Where new access roads are required measures should be taken to ensure minimum disturbance of the proposed site. Cables connecting the wind farm to the national grid should be located underground, where feasible. Proposals for the restoration of the site after removal of the turbines should be included with a planning application. Adequate financial security will be required by planning condition to ensure site restoration.

Energy Efficiency and Conservation

Layout and dwelling design must conform to the highest possible standards of energy efficiency and as many dwellings as possible must have access to sunlight and make use of passive solar design. Where possible and practicable, energy-saving and energy generating technologies such as roof top solar panels should be incorporated at the design stage.

Hydro Energy

An application for the installation of a hydro electric plant shall require an Environmental Impact Assessment (EIA) where it exceeds the thresholds specified in Schedule 5, Part 2(h) of the Planning and Development Regulations 2001 - 2006.

The Council shall require that proposals for hydro energy installations have regard to the free passage of fish and other water based amenity activities. The Council shall have regard to the recommendations of the Eastern Region Fisheries Board and Department of Communications, Energy & Natural Resources in assessing development proposals.

Energy Networks

As outlined, it is the policy of the Council to facilitate the provision of energy networks in principle. In the assessment of proposed energy network extensions, the following issues will be taken into account by the Planning Authority:

- The development is required in order to facilitate the provision or retention of significant economic or social infrastructure;
- The route proposed has been identified with due consideration for social, environmental and cultural impacts;
- The design is such that will achieve least environmental impact consistent with not incurring excessive cost;
- Where impacts are inevitable, mitigation features have been included, and;
- Protected and Designated Areas – proposed NHAs, SPAs and Candidate SACs, areas of archaeological potential, landscapes of exceptional or high value, international or national importance and high sensitivity, proximity to structures that are listed for preservation, national monuments, etc. have been taken into account.

4.11 TELECOMMUNICATIONS & INFORMATION TECHNOLOGY

4.11.1 Introduction

The Government's telecommunication policy aims to place Ireland in the top quartile of OECD economies as regards the availability, price and quality of telecommunication services. Such a high quality and competitive telecommunications service is considered essential in order to promote industrial and commercial development, to improve personal and household security and to enhance social inclusion and mobility.

Telecommunications investment is essential to furthering the social and economic development of Co. Meath. Broadband with its resultant speed, provides a considerable advantage to home-users, students, businesses and is an important asset for attracting new businesses to an area. Government policy acknowledges that there is increasing awareness of the need to deliver high levels of broadband connectivity which is fundamental to strengthen economic and social prosperity. Whilst private sector investment in telecommunications infrastructure has slowed down with the downturn in the international economy and the telecoms sector, Government funding has continued, most notably the development of Metropolitan Area Networks (MAN), which has been undertaken to stimulate further development of the Communications infrastructure. The Government has stressed their awareness of need to deliver high levels of broadband connectivity to industry and communities and to achieve this objective, it seeks to make broadband infrastructure and services accessible and affordable nationally within 3 years.

The Council fully accepts the importance of a high quality telecommunications service at national, regional and local level and will seek to promote and facilitate the provision and continued development of such a service within County Meath, insofar as it falls within its capacity to do so. In this regard, the Council will seek to cooperate with the providers and operators of such services within County Meath in the national and county interests.

A progress report, published in 2004, on the Government Action Plan on the Information Society 'New Connections' reiterated that widespread availability of open-access, affordable always on broadband infrastructure for businesses and citizens remains the most important aspect of government policy on broadband. The implementation of broadband is under the auspices of the Department of Communications, Energy and Natural Resources. There are three programmes in place to ensure the delivery of broadband:

- Metropolitan Area Networks (MAN)
- Group Broadband Scheme
- Broadband for Schools

4.11.2 Broadband Strategy for Meath County Council

A Broadband Strategy for Meath County Council has been published and it states that the Local Authority is determined to take advantage of the supportive position that the Government has adopted to ensure that broadband infrastructure is made widely available throughout the county. The achievement of this objective requires a high degree of cross-functional collaboration between Meath County Development Board (Economic Development) and the Planning, IT, Infrastructure and Community & Enterprise Departments of Meath County Council.

4.11.3 Broadband Infrastructure in Co Meath

The provision of MAN to Navan and Trim at a cost of €10m is being provided primarily by the Department of Communications, Energy and Natural Resources whilst a proposal for the towns of Ashbourne, Dunboyne, Clonee, Dunshaughlin, Ratoath and Athboy is being considered. The availability of broadband is critical to the marketing and promotion of these centres in Meath to potential employment generating investors.

The lack of broadband service in rural Ireland is one of the reasons for the existence of the Department of Communications, Energy and Natural Resources Group Broadband Scheme (GBS). The Mid-East Regional Authority has appointed a GBS co-ordinator for counties Meath, Kildare and Wicklow. The GBS is a relatively simple scheme for the community to get involved and the workload for the community is minimal. It simply obtains a list of a minimum of 25 names and with the assistance of the co-ordinator selects a suitable company to bring broadband to their area. It is then the company's responsibility to complete all paperwork and to liaise with the co-ordinator.

- Broadband is now live in the following Group Scheme Areas; Ballivor, Kilcloon, Oldcastle, Slane, Summerhill, Moynalvey, Kiltale, Boardsmill & Longwood Group Scheme Areas;
- Broadband to be switched on in the coming months in Rathkenny, Kilberry, Gibbstown, Moynalty, Carlanstown, Oristown, Gibbstown Group Scheme Areas.

The inclusion of the next phase of Group Broadband Schemes is dependent on the availability of State funding.

The third programme is a partnership between the Government and telecommunications network. This joint approach was announced in February 2004. Under the 'Broadband for Schools Initiative', the industry committed €15 million and the Government a further €3 million over a three year period, to fund the rollout of broadband to all 4,029 primary and secondary schools by the start of the 2005 academic year. The roll out of broadband to primary and second level schools in Co. Meath is currently underway.

4.11.4 Telecommunications Antennae

The Planning Authority recognises the essential need for high quality communications and information technology networks in assuring the competitiveness of the county's economy and its role in supporting regional and national development generally. The document "Telecommunications Antennae and Support Structures – Guidelines for Planning Authorities"

published by the Department of the Environment in July 1996 gives considerable guidance on this matter. It will be the policy of the Planning Authority to consider proposals for such infrastructure in the light of the recommendations of this document.

It shall be the preferred approach that all new support structures meet fully the co-location or clustering policy of the guidelines and that shared use of existing structures will be insisted where the numbers of masts located in any single area is considered to have an excessive concentration.

Due to the physical size of mast structures and the materials used to construct them, they can severely impact on both rural and urban landscapes. When dealing with applications, great care will have to be taken to minimise damage through discreet siting and good design. In the assessment of individual proposals, the Planning Authority will also take the impact of rights of way and walking routes into account.

The design of the mast structures should be simple and well finished. They should employ the latest technology in order to minimise their size and visual impact. Mast structures are most visible and exposed within upland / hilly, or mountainous areas. In these locations, softening of the visual impact can be achieved through planting of shrubs, trees etc. as a screen or backdrop. Disguised masts e.g. as trees, will be encouraged in appropriate locations.

All masts approved will be for a temporary 5 year period only. This will allow review and reassessment in relation to numbers and concentrations, technology and the general dynamic nature of both the industry and the receiving environment within which these masts are sited.

Where the antennae and their support structures are no longer being used by the original operator and no new user has been identified they should be demolished, removed and the site reinstated at the operators expense (This will be a condition of the any permission and a bonding arrangement to this effect will be put in place).

Where the owner of a site disposes of the site to another suitably licensed operator, the original operator / owner will be required to inform the Planning Authority of such transfer so that the Authority may be in a position to readily enforce any continuing conditions on the new operator.

POLICIES WITH REGARD TO TELECOMMUNICATIONS AND INFORMATION TECHNOLOGY

INF POL 100

To encourage the further co-ordinated and focused development and extension of telecommunications infrastructure including broadband connectivity in the County as a means of improving economic competitiveness and enabling more flexible work practices e.g. teleworking.

INF POL 101

To encourage coverage and capacity of mobile phone network infrastructure, while striving to reduce the number of telecommunications structures, by ensuring that ComReg's Code of Practice on Site Sharing is implemented and reciprocal national roaming is entered into.

INF POL 102	To encourage the development of telecommunications based services at appropriate locations within the County, subject to environmental considerations.
INF POL 103	To actively promote e-inclusion in Co. Meath through the planning process and by supporting strategies to encourage and enable lower income households to avail of modern broadband infrastructure.
INF POL 104	To seek to have appropriate modern information technology, including a carrier neutral, multi-duct infrastructure servicing every unit, incorporated into the overall design and layout of all new developments in Co. Meath, where feasible.
INF POL 105	To require the provision of telephone and TV cables underground, especially in the urban environment, and generally within areas of public open space, in the interest of visual amenity.
INF POL 106	To require that, in all new developments, multiple services be accommodated in shared strips and that access covers be shared whenever possible.

OBJECTIVES WITH REGARD TO TELECOMMUNICATIONS AND INFORMATION TECHNOLOGY

INF OBJ 45	To establish a Broadband Telecommunications Task Force comprising service providers, user representatives and local development agencies to assist in the planning, implementation and monitoring of the roll out of broadband infrastructure in the county.
INF OBJ 46	To implement the "Broadband Strategy for Meath County Council" in conjunction with the Department of Communications, Energy & Natural Resources to ensure that broadband infrastructure is made widely available throughout the county and to all sectors of the economy.

Telecommunications Antennae & Support Structures

POLICIES WITH REGARD TO TELECOMMUNICATIONS AND INFORMATION TECHNOLOGY

INF POL 107	To provide orderly development of telecommunications infrastructure throughout the county in accordance with the requirements of the "Telecommunications Antennae and Support Structures – Guidelines for Planning Authorities" July 1996.
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INF POL 108	To adopt a presumption against the erection of antennae in proximity to residential areas, schools or community facilities, structures of historical or architectural interest and areas and sites of archaeological importance.
INF POL 109	To reserve an area of land of 500 metres in radius around all existing school premises / identified school sites to kept free from the erection of mobile phone masts.
INF POL 110	To secure a high quality of design of masts, towers and antennae and other such infrastructure in the interests of visual amenity and the protection of sensitive landscapes, subject to radio and engineering parameters.
INF POL 111	To encourage and facilitate pre-planning discussions with service providers and operators prior to the submission of planning applications. Through pre-planning discussions with operators it will be possible to ascertain an overall plan of the proposals for coverage in the county and determine where co-sharing is operationally viable.
INF POL 112	To encourage co-location of antennae on existing support structures and to require documentary evidence as to the non availability of this option in proposals for new structures. The shared use of existing structures will be insisted where the numbers of masts located in any single area is considered to have an excessive concentration.
INF POL 113	To avoid the location of structures in fragile landscapes such as areas of Special Visual Quality or archaeological heritage, where views and / or prospects are to be preserved as indicated on the above maps, and in areas adjacent to national monuments, archaeological sites or Protected Buildings and other structures.

Development Assessment Criteria

To facilitate the evaluation of development proposals for the erection of antennae and support structures, applicants / developers / operators will be required:

- a) To submit a reasoned justification as to the need for the particular development at the proposed location in the context of the operators overall plans to develop a network in County Meath;
- b) To indicate what other sites or locations in the County were considered;
- c) To submit evidence of consultations, if any, with other operators with regard to the sharing of sites and/or support structures;
- d) To submit proposals to mitigate the visual impact of the proposed development including the construction of access roads, additional poles and structures, and;
- e) To furnish a statement of compliance with the International Radiation Protection Association (IRPA) Guidelines (Health Physics, Vol. 54, No. 1(Jan) 1988) or the equivalent European

Prestandard 50166-2 which has been conditioned by the licensing arrangements with the Department of Transport, Energy and Communications and to furnish evidence that an installation of the type applied for complies with the above Guidelines.

In rural areas, masts should be placed in forestry plantations provided that the antennae are clear of obstruction. 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. In un-forested areas, softening of the visual impact should be achieved through judicious design, and through the planting of shrubs, trees, etc., as a screen and backdrop.

Where masts are located in areas of high amenity or landscapes of exceptional or high value, international or national importance and high sensitivity as indicated in the Landscape Characterisation Assessment, in Chapter 8 & Appendix VI, there shall be a presumption for a need to provide a 'Landscape Impact Report' to allow proper assessment of the visual impact of the structure on the area.

