SUPPORTING INFRASTRUCTURE
This section provides an overview of the current position in relation to some key elements of the physical infrastructure that is necessary to support development in Kildare that will be sustainable. According to the County Development Plan the provision and safeguarding of infrastructural investment is a critical component of the development strategy for the county. Without an environmentally sound means of supplying water, disposing of wastewater and solid waste, as well as offering choice in types of transportation, the principles of sustainable development cannot be met.

7.1 TRANSPORT

Improving the standard of transportation infrastructure is of primary importance to the Council. The core objectives to be pursued through the County Development Plan (2005-2011) strategy will be:

- To improve road safety for all road users and reduce fatalities/accidents on Kildare roads.
- To prepare an integrated transport strategy for Kildare based on sustainability and better use of resources.
- To enable people, goods and services to reach their destination safely, economically and quickly and to improve access to services in rural parts of Kildare.
- To improve the capacity of the roads infrastructure within County Kildare in accordance with national/regional policy.
- To ensure that all new housing/developments are provided with adequate transport services and to enable these to be served, where possible, by public transport services through appropriate location, layout and density.
- To have a well maintained road network base.
- To improve travelling times by managing traffic more efficiently.
- To encourage public transport use throughout the county.
- To improve access for mobility impaired people.
- To provide safer routes to educational establishments within the county to encourage walking & cycling.

The increasing levels of commuting have led to huge increases in traffic volumes throughout the county. Despite improvements in the frequency of bus services, public and private, the private car remains the dominant form of transport in County Kildare. In order to achieve the over riding development strategy for the county provided for in the NSS and RPGs, the new County Development Plan has emphasised a modal shift in favour of public transport. Decisions on land use and development must take account of the existing public transport networks and support new networks.

Since the last County Development Plan was adopted in 1999, there have been many improvements in the key strategic transport links from the county to the Dublin metropolitan Area and to the Regions. The ease of transportation of goods and materials into the Greater Dublin Area and beyond is a key feature of the attractiveness of the county for economic investment.
SUPPORTING INFRASTRUCTURE

7.1.1 Public transport and the rural transport initiative
Future development of the transportation networks will necessitate an approach based on the principles of sustainable development which will require efforts to encourage greater use of public transport, especially for journeys to work. The current level of provision of public transport services is limited, especially for movements between rural and urban areas and to a lesser extent between the main urban centres.

7.1.1.1 Suburban and rural bus services
There have been significant improvements to the quality and frequency of bus commuter services to and from the urban centres in the county to Dublin and other regional centres. Whilst Naas has a local bus service connecting some of the expanding environs of the town to the town centre there is much room for improvement as large areas of the environs are not serviced by a suburban bus service.

Two rural transport companies which were established under the Department of Transport/ADM Rural Transport Initiative (RTI) operate in the county. They are South Kildare Community Transport (SKCT) and Offaly and Kildare Community Transport (OK Transport). South Kildare Community Transport has two buses operating an all day service from Castledermot through Athy and into Newbridge (Map 125). OK Transport provide a more intricate network of services in the north of the county and into Offaly (Map 125). Their services provide maximum flexibility to meet passenger needs as closely as possible and are fully accessible to those with disabilities. Using a dial-a-ride booking system, this means that each route can change marginally from week to week, according to demand. Passengers avail of the services by ringing a LoCall number to book their seat or by contacting the private operator who provides the service. The most obvious conclusion that can be drawn from Map 125 is that the rural areas of the north of the county have much better public transport linkages to the urban areas than do rural areas in the south of the county.

7.1.1.2 Suburban rail
There have been some improvements to the suburban rail network in Kildare in recent years but major improvements in the form of the “Kildare Route Project” are proposed for the future. The Kildare Route Project is a major capital investment project designed to increase the frequency of commuter and other services along the key Kildare to Heuston corridor, to allow thousands more commuters every day use rail services. This will be achieved through increasing the number of tracks from two to four along the route from Cherry Orchard to the 10.5 milepost west of Hazelhatch, providing two dedicated lines for commuter services and two dedicated lines for intercity and regional services. The Kildare Route Project has its origins in the National Development Plan, which identified the need to invest in public transport and in particular to improve the quality, speed and reliability of rail services, in order to reduce private car usage. The NDP pin-pointed the thirty-two kilometre route between Dublin’s Heuston Station and Kildare as a major national growth corridor, requiring significant upgrading in order to meet the transportation needs of the communities living along the route. The Dublin Transportation Office also highlighted the need for investment in services along this route, based on predictions that commuter activity in this zone will substantially increase over the coming years. To this end, Iarnród Éireann has developed the Kildare Route Project which envisages meeting this demand by increasing the capacity and frequency of trains serving the route.
The Kildare Route Project will allow Iarnród Éireann to deliver commuter and regional services as follows at peak times:

- Double Service Frequency from Hazelhatch to Dublin, serving all stations.
- Double Service Frequency between Dublin and Sallins, Newbridge, and Kildare, and continuing to serve outer commuter towns including Portlaoise, Athlone and Carlow.
- Will also facilitate increased frequency and clockface timetabling on Intercity routes.

The existing service has a total capacity per day, per direction of 11,050 suburban passengers. This service will be steadily increased to a total potential capacity of 36,400 suburban passengers per day in each direction. Improvements to the Waterford line have also been advocated and if these materialise this will improve accessibility to the south of the county considerably.

7.1.2 Road network

County Kildare is well served by the national roads network with the M4/N4, M7/N7 and M9/N9 passing through the county to the main centres of population in the west, south-west and south of the country. The north of the county is also serviced by the Dublin-Sligo line with the rest of the county being serviced by the Waterford and Limerick lines. The growth of population and especially the increase in the number of vehicles on the roads has in many areas created severe pressures on the roads infrastructure.

Recent and planned improvements to the network include:

- The completion of the M4 Motorway linking Kilcock – Enfield – Kinnegad in December 2005 has extended the M4 motorway from Kilcock westwards through the county.
- The completion and opening of the M7 (Monasterevin by-pass) motorway in November 2004 has provided continuous motorway along the M7 from Naas through county Kildare and beyond as far as Portlaoise.
- The improvement of the N7 interchange at Newhall, Naas is currently at pre-planning stage.
- Works are ongoing to widen the existing N7 between Naas and Johnstown as far as the boundary with South County Dublin. This work is scheduled for completion in Summer 2006.
- The N9/N10 Kilcullen to Waterford scheme includes the northern section situated in County Kildare. This high quality dual carriageway scheme will extend the existing M9 (Kilcullen By-Pass) to the southern county boundary. It is in the pre-construction stages at present and is due for completion in 2008. It will also include provision of a link road from Athy to the new N9 and a by-pass at Castledermot.
- Junction improvements will be carried out on the existing junction between the National Secondary Road N78/R417 Regional Road east of Athy to facilitate connection with the new N9 link road referred to above.
- The Athy Inner Relief Street (N78) is currently at the planning appeal stage and the Athy Southern Outer Relief Road is at pre-planning stage.

The improvements to the M7 and M4 have greatly improved traffic flows, travel times and accessibility in the north of the county. The proposed improvements to the M9 will further improve accessibility, particularly in the south of the county and also increase safety for drivers and other road users.
MAP 126: PROPOSED IMPROVEMENTS TO THE ROAD NETWORK
The main items of environmental infrastructure relate to water and sewerage treatment, and waste management. The provision and safeguarding of infrastructural investment is a critical component of the sustainable development strategy of the county. In relation to water and sewerage treatment there is a need for considerable investment in order to cater for the increasing population and the demands generated by industrial development. As can be seen from the previous sections the county has undergone a period of intense growth and change in the last fifteen years. This has resulted in a significant increase in pressure on infrastructure, including energy resources, water and waste water collection and treatment, solid waste recovery and communications infrastructure.

7.2.1 Water services

Over the life of the previous County Development Plan and against the backdrop of considerable population increases and significant housing supply, the existing services infrastructure of the county has experienced a dramatic increase in pressure. While reacting to this growth with significant investment directed into the services infrastructure, the continued growth of some areas of the county is restricted by a lack of capacity in both water and wastewater infrastructure to serve existing zoned lands. The supply/demand balance continues to be precarious in some parts of the county, however, there has been significant investment in water services in recent times to meet the challenges of growth. The Water Services Investment Programme Assessment of Needs was adopted by Kildare County Council in October 2003 and €40 million was invested in Water Services in Kildare in 2005 with similar investment likely in 2006. This Investment Programme identifies the need for strategic water/wastewater infrastructure in order to accommodate the level of growth envisaged. The Investment Programme provides for a ranked list of 21 projects influenced by the planned strategic direction of development for the county and the existing settlement strategy contained in the County Development Plan. The programme includes the upgrading/replacement of existing deficient infrastructure. Schemes recently completed include:

- Castledermot Water
- South Kildare Rural Water Sewerage Scheme
- Castledermot Sewerage - Treatment Plant
- Monasterevin Sewerage
- Watermain from Oldtown to Newbridge.

A number of schemes are also currently under construction and these include:

- Ballymore Eustace to Naas Watermain
- Curragh/Cutbush Sewerage
- Rathangan/Hybla Wellfields
- North East Kildare Rural Water Sewerage Scheme
- Castledermot Sewerage – Archaeology & Pipelaying
- Allenwood Sewerage
- Lower Liffey Valley River Sewerage Scheme – Straffan Sewerage
- Sludge Handling Facility at Osberstown
- Ballymore Eustace to Old Kilcullen Watermain.
The servicing of certain urban centres in the north east of the County 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 both economically and technically necessitating regional solutions involving the co-operation of adjoining Local Authorities. Due to these difficulties and in order to achieve the roles allocated to these urban centres in the Settlement Hierarchy, it is imperative that these centres proceed on the basis of balanced development both in terms of employment generation allied to residential growth but also on the basis of the sustainable provision of piped services. In order to move away from dependence on other Local Authorities and to facilitate Kildare’s independence in the future in terms of water supply, a number of wellfields are being developed in the county with the first one set to open in May 2006. In addition, there are plans for water abstraction from the River Barrow which is planned to be operational in Athy by 2008.

The Greater Dublin Drainage Study is presently being completed and the study outcomes will determine wastewater treatment and collection in the Greater Dublin Area up to 2031. The surface water drainage system is being analysed as part of this study and a regional policy on stormwater control is being formulated. A number of key flooding studies have resulted in major works taking place to resolve flooding in the county caused by climatic change and increased development.

The primary objective to be taken up with regard to piped water services is to secure the implementation of the Water Services Investment Programme in conjunction with the department of Environment, Heritage & Local Government and the adjoining Local Authorities. The majority of the county’s water services infrastructure will have been upgraded or replaced to cater for projected demands up to and beyond 2012, broadly corresponding with the life of the new County Development Plan.

7.2.2 Waste management

Increasing population numbers and lifestyles associated with greater affluence are leading to ever increasing amounts of waste that needs to be disposed of. In addition, there are large amounts of waste produced by agriculture and some industrial sectors as well as by the construction industry. In accordance with the Waste Management Act 1996 and the Waste Management (Planning) Regulations 1997 Kildare County Council adopted a Waste Management Plan for the county in 2000 and in light of directions from the Department of Environment, Heritage and Local Government the process of reviewing this plan is ongoing at present. The review of the Waste Management Plan will inform the recommended options for waste disposal and management. It is crucial that we preserve and protect our environment whilst simultaneously sustaining our growing population. County Kildare has a modern and sustainable system for the management of waste, protection of waters and the conservation of energy.

Kildare County Council has made significant progress over the period 2000-2005 in implementing the Waste Management Plan. Among the major developments were the closure of Silliot Hill Landfill Site and the development of a restoration and aftercare plan for the facility. Silliot Hill Landfill reached its design capacity in March 2002, and consequently has ceased to accept waste for disposal by landfill. Since then,
the Council has constructed a waste transfer station at Silliot Hill which transports all the Council’s domestic waste to Thornton’s Recycling Ltd. In Dublin for baling, followed by subsequent disposal at Arthursstown landfill site. A final decision from Kildare County Council on the provision of a new facility is currently being considered in the context of proposed private development. A comprehensive strategy has been prepared that will involve measures to minimise the amount of waste for disposal by encouraging recycling and separation of disposable wastes.

Kildare County Council has placed considerable emphasis on changing peoples’ behavioural patterns in order to reduce the volume of waste produced. Kildare County Council appointed an Environmental Awareness Officer in 2002 and recycling centres have been provided at Kilcullen and Athy and an additional one is planned for Kilcock. A two-bin collection service and pay-by-use charges have been rolled out in most of the county (to all Kildare County Council customers) offering kerbside collection for separated waste materials and a number of Bring Bank centres have been created in rural locations (see Map 116). In addition, more than 6,000 home composting bins have been distributed in the county. It is intended that a three bin system be rolled out to all Kildare County Council customers by 2009 with a brown bin to take cooked food and other organic waste.

7.3 ENERGY

The development of renewable energy sources is a priority at local, regional, national and European level. It is an objective of the current County 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 development of the area. Kildare’s energy supply is provided from a number of sources including the Liffey and Poulaphouca hydroelectric station and a natural gas pipeline from Cork to Dublin which passes through the east of the county. According to the County Development Plan (2006) when taking landscape character into consideration as well as the potential for visual impacts it is recommended that the lowland and bogland areas to the north-west of the county have the greatest landscape potential to absorb the development of wind farms. In terms of hydro-electricity the Council will not allow the canal system to be used as it is designated for tourist and amenity use, but where suitable the use of rivers for this purpose will be encouraged in the future according to the County Development Plan. Similarly the Council supports the development of solar energy as it has the capacity to make a significant contribution to energy production.

7.3.1 Electricity

In terms of electricity there are capacity constraints, particularly affecting the Newbridge/Naas and Kildare town area. The ESB has a list of major electrical infrastructure projects planned for coming years to cater for existing load and normal growth rates over the next five years, the majority of which are under way.

Monread 110/MV station is complete and is being connected to the medium voltage network around Naas/Johnstown/Newbridge. Athgarvan 38/MV station is being upgraded, doubling its capacity to 20MVA which will feed into the Newbridge area. The project of building a new 110/MV 2x20MVA station in Kildare...
to replace the existing 38/MV station has commenced with site acquisition underway. Approx 4 km of new 110kV line/cable will be built to connect this station to the existing Newbridge-Portlaoise 110kV line.

It is planned to double the capacity of Kilteel 110kV/38kV station which serves the Naas/Johnstown area, and a new 110kV line will be built to loop this station. This project is planned to start in 2007. To benefit from this extra station capacity, and enable standby to the Johnstown area, a new 38kV line from Kilteel to Johnstown, approx 6km is planned for 2007.

Options are being reviewed at present for a new 110/MV station in the Newbridge area. This new station which will serve the new industrial parks planned in Newbridge in addition to the commercial & residential load. The rebuilding of Naas and Celbridge 38kV stations and doubling of their capacity is planned to commence in 2007 while options for a new 38/MV station at Clane is also being considered.

In South Kildare, Stratford 110/38kV station has recently been completed and is now supplying the Kilcullen area. The construction of a new 110/MV 2x20MVA station in Athy is well under way and should be completed in 2006. This will enable the retirement of the two existing 38kV stations Stradbally Road and Ballylinan Road. The capacity at Kilcullen station is planned to be doubled to 20MVA in 2009.

In North Kildare, 20MVA of additional medium voltage capacity is being added by doubling the station capacity of Kilcock 38kV station, and adding an additional 10MVA capacity to Moneycoole 38kV/MV station. A new 38kV cable is being installed between Griffiths 110/38kV station and Moneycoeley 38kV station which will increase capacity and improve quality of supply at Maynooth. These three projects have commenced.

The project of building a new 110/MV station is planned for Maynooth in 2007, 110kV lines will be required to connect this into the 110kV network.

The above infrastructure reinforcements will cater for existing and normal growth in county Kildare for the next 5 years. Large customer loads will be catered for as they arise. In addition, the above does not include reinforcements of the high voltage network which are planned for by the Transmission System Operator, Eirgrid.

7.3.2 Gas

Natural gas is the cleanest of all fossil fuels and its chemical composition makes it an environmentally friendly fuel. Following the discovery of a major natural gas reserve off Kinsale in the early 1970s and the eventual construction of a pipeline to Dublin and further north 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 Kinsale gas supply was improved 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.
In terms of gas supply, the county is well served in terms of transmission lines and the towns of Athgarvan, Athy, Ballymore Eustace, Caragh, Castledermot, Celbridge, Clane, Johnstown, Johnstownbridge, Kilcock, Kilcullen, Kildare town, Kilkee, Kill, Leixlip, Maynooth, Naas, Newbridge, Prosperous, Sallins and Straffan are currently served.

7.4 INFORMATION TECHNOLOGY

Whereas 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 the need to deliver high levels of broadband connectivity to industry and communities. In order to achieve this objective it seeks to make broadband infrastructure and services accessible and affordable nationally within 3 years. It is the policy of Kildare County Council to take full advantage of the Government’s supportive position and to continue to play an important leadership role in providing critical infrastructure. To achieve this objective requires a high degree of cross-functional collaboration between the Kildare County Development Board and the Planning, IT, Infrastructure, Community & Enterprise and Economic Development Departments of Kildare County Council. In Kildare, Phase II towns for the provision of MAN were Clane, Kilcock, Kildare, Maynooth, Monasterevin, Newbridge, Prosperous, Rathangan, Sallins. Many of these MAN have been completed with the remainder expected to be completed in 2006 or early 2007.

In terms of Mobile Telecommunications Masts, the county is well served by the existing licensed operators. The policy in the Kildare County Development Plan which encourages co-sharing and clustering of masts is based on the recommended Guidelines for Planning Authorities with regard to Telecommunications Antennae and Support Structures. The primary objective to be pursued with regard to Telecommunications is to position Kildare as a “Technology County” offering up to date telecommunication systems as part of the county’s technology infrastructure and delivering adequate broadband capacity to key business locations, communities and schools in the county.