

LOUTH LOCAL AUTHORITIES

WATER SERVICES INVESTMENT PROGRAMME

ASSESSMENT OF NEEDS

2007 - 2014

1. Introduction

This report has been prepared to comply with the requirements of Department of the Environment Heritage and Local Government Circular L2/06. The last Assessment of Needs Study was completed in January 2003 and has, with updating, formed a basis for scheme approval and Programming under successive Water Services Investment Programmes.

The report covers the functional areas of Drogheda Borough Council, Dundalk Town Council and Louth County Council and it is intended that the assessment will undergo public consultation during July /August 2006.

The purpose of the study is to identify schemes for inclusion in the Water Services Investment Programme in the period up to the end of 2009 and to develop a strategic perspective on likely requirement for the period 2010-2014 for infrastructural investment in water services in Louth, incorporating drinking water, wastewater disposal and stormwater management.

2. Development Framework

County Louth has experienced very significant development pressures over the last 5 years. In particular housing demand has placed serious strain on the capacity of existing infrastructure. This has manifested itself in the need to expand the Drogheda WWTP and a number of smaller wastewater treatment plants in the county. Similar pressures have arisen on water supply infrastructure.

2.1 Demographics

The appended graph is based on national population and household numbers currently being undertaken by DEHLG. It is projected that the population of the county will increase by some 7,200 between now and 2014 with the population of Dundalk increasing by circa 3,700.

The National Spatial Strategy and Regional Planning Guidelines project a population of some 60,000 in Dundalk by 2020. The Greater Drogheda Planning Strategy Study suggest that the population of Drogheda and Environs will rise from its current figure of circ 32,300 to circa 48,000 by 2014 with a concurrent rise of some 7,600 in the adjacent East Meath area over the same period. Regional planning guidelines suggest that the population of Drogheda will be of the order of 50,000 to 60,000 circa 2020.

The target population for the Eastern sub-region as set out in Regional Planning Guidelines is 280,000 by 2020. As Louth is designated as an area “under strong urban influence” it likely that a significant proportion of the projected population increase outside of hub towns within the sub-region will occur within the county.

2.2 Development Plans

The County Development Plan 2003-2009 prioritised a number of water and sewerage schemes for upgrading. Substantial progress has been made in meeting these targets. Details and outcomes are listed in Appendix 1.

The Dundalk and Hinterland Development Plan 2002-2008 sets out a framework for the development of the Dundalk Gateway. Significant tracts of lands are zoned. It is a key objective of the Authorities to prioritise the servicing of lands within this area to facilitate achieving targeted growth level consistent with Gateway status.

The Greater Drogheda Planning Strategy outlines a strategic plan for the development of both Drogheda and its hinterland in East Meath to 2024. Key constraints identified are lack of adequate water supply which is being addressed through East Meath, South Louth and Drogheda Water Supply Improvement Scheme for which Meath County Council is the lead Authority. Existing shortfall in wastewater treatment capacity is being addressed through extension of plant from 67,000PE capacity to 101,000 PE. However further capacity constraints are also likely to arise in the Wastewater Treatment Plant by 2014.

Significant issues also exist in relation to surface water drainage in all urbanised areas where deficiencies in the capacity of existing stream networks have been identified.

The preparation of Local Area Plans for Category I development centres within the county area has created a situation where there is a genuine expectation that services will be available to cater for zoned lands albeit existing constraints on service availability were noted in many of these plans. Significant pressure also exists on both Water and sewerage facilities in Ardee.

2.3 Projected Trends

The increase in population within and around Drogheda looks set to continue. Much of the growth is likely to arise from commuter-based development. The lower cost of housing in Drogheda coupled with the completion of the M1 Drogheda Motorway Bypass and the continued upgrading of commuter rail services will strengthen this trend.

Growth levels are also expected to accelerate in Dundalk as a consequence of its Gateway designation, in particular if national investment decisions reflect policy. This will be complemented by focused growth in designated rural villages.

Increase in non-domestic demand will be focused on larger development centres and in particular in the areas adjacent to Dundalk and Drogheda. It is assumed that the rise in demand related to commercial, institutional and industrial demand would be between 15% and 25% of domestic demand.

In addition, demands will arise to service specific large-scale water users with Dundalk having been designated by the IDA as a strategic sites for the development of major FDI BioPharma Project; whilst significant IT and Healthcare developments are also envisaged in our larger towns.

3. Progress Summary

A summary of projects completed over the last number of years and work in progress is set out below. This listing covers schemes in the Water Services Improvement Programme but does not include projects undertaken as part of Group Scheme and Small Schemes Programmes, nor does it include infrastructural improvement works funded in full by the Local Authorities.

Significant progress has been made in respect of Serviced Land Initiatives and in particular development of a framework for Public Private Partnership approach towards the funding and construction of piped infrastructure. Due to the high up front investment required on the part of the Local Authorities (in excess of 60% of costs) these will tend to progress only when a critical mass of development interest is in place.

It is also noted that the impact of Polluter Pays Principle and its implementation has had a significant impact on progressing many schemes. Firstly the issue of affordability is leading to revision of Preliminary Reports and subsequent delay in progressing schemes. A further impact is the policy of calculating Local Authority percentage contribution on the overall scheme rather than each proposed phase. This significantly increases the cost burden to the Local Authority in the earlier stages of projects, which in many cases is addressing pre-existing deficiencies rather than making capacity provision for significant new developments, and as such has limited revenue generating potential. This will impact negatively on a strategic approach to projects, favouring an incremental approach to the provision of additional service capacity.

Capital Schemes 2003-2007

Table 1

<i>Scheme</i>	<i>Inception Stage</i>	<i>Brief</i>	<i>Preliminary Report</i>	<i>Contract Documents</i>	<i>Contract Awarded</i>	<i>Under Construction</i>	<i>Completed</i>	<i>Cost</i>
Drogheda WWTP Extension								€9 m
East Meath South Louth and Drogheda Water Augmentation*								€25.0m
Dundalk and Drogheda Sludge Drier								€5.0m
Baltray Termonfeckin Sewerage								€4.0m
Mid Louth RWSS Emergency Works Dunleer								€0.76m
Dunleer/Mid Louth RWSS Phase I								€10.95m
Cooley RWSS Stage II								€4.0m
Ardee Sewerage Scheme Stage II								€5.7m
Blackrock Sewerage								€5.4m
Drogheda Sewerage Network Improvements(Stage 1) Assessment								€1.5m
Dundalk Water Supply Strategic Review								€0.26m

* Being managed by Meath Co Council

Service Land Initiatives 2003-2007
Table 2

Scheme	Inception Stage	Brief	Preliminary Report	Submitted to DEHLG	Approved DEHLG	Construction	Completed	Cost
Greenhills Drogheda Sewage and Stormwater								€1.1m
Dromiskin Sewerage								€1.25m
Ardee Link Road Sewer								€0.80m
North Drogheda SLI – Link Road Water Main*								€0.59m
South and West Sector Drainage Dundalk								€13.0m
Dundalk Northern Environs Water Augmentation/Drainage								€2.9m
Mount Avenue Drainage								€1.07m
Tallanstown/Collon Sewerage Works Upgrade								
Tullyallan Sewerage Stage II								€0.75m
Knockbridge WWTP Upgrade								
South and East Sector Drainage Dundalk**								€0.0m

* Not subsequently approved by DEHLG

** Update being prepared based on Local area Plan

Strategic Studies 2003-date
Table 3

Strategic Studies	Descriptions
Sludge Management Plan	Integrated management plan for the handling of all sewerage sludge has been implemented in full
Complete Information System	Mapping of all water and sewerage networks has been completed.
Water Conservation	Stage 1 of project in progress. Advance works prior to commencement of Programme undertaken by Council to facilitate demand assessment.
Operational Plan	Procedures manuals and Health and Safety Assessments in place for all schemes.
Stream Studies	All significant urban streams have been surveyed and modelled to assess capacity; to provide design criteria in respect of implementation of SUDS and to quantify and cost improvement works required to alleviate flood risk.
Dundalk Water Supply Strategic Review	Consultants have been appointed to set out a framework for the provision of a sustainable water supply, distribution system, storage and treatment.
Drogheda Sewerage Network Improvements Assessment	Brief for appointment of consultants is with DEHLG in respect of carrying out a structural and hydraulic assessment of the network and a framework plan for its renewal/upgrading
Wastewater Assessment – Towns and Villages	Project to develop upon the flow and load study being carried out this year at all our smaller treatment works in order to prioritise centres where remedial works on network and additional treatment facilities are required.

4. Methodology for Assessment of Needs and Delivery of Services

4.1 Project Identification and Prioritisation

In identifying and prioritising projects the following criteria were used.

- Relevant National, EU environmental public health and water quality standards.
- Planning and Development Framework-National and Local.
- Deficits in existing service delivery.
- Economic Development.

Based on the above a preliminary project scoping was carried out to adequately address the requirements and an indicative costing prepared. It should be noted that costs are indicative only and accuracy will reflect stage in design cycle at which project rests.

In the context of delivery of the plan it should be noted that a number of factors beyond the control of the Authority may impact on delivery of services and in particular on the phasing of delivery.

- Affordability issues
- Changes in statutory requirements
- Locations where developments materialise

4.2 Proposed Investment Strategy

Investment strategy will:

- As a priority address deficiencies in respect of compliance with statutory requirements and standards.
- Provide additional capacity to cater for future developments where this can be achieved at economic cost, and in appropriate increments taking cognisance of strategic planning guide-lines.
- Where appropriate maximise the use of private funding in the provision of infrastructure.
- Encourage the consolidation of development in and around larger centres where spare capacity exists.
- Prioritise the provision of infrastructure for future housing and industrial development in the area designated in the Dundalk and Environs Plan to assist in attaining critical mass, in accord with objectives of the National Spatial Policy.

5. Needs 2007-2009

The following key issues were identified from which a number of projects evolved.

Waste Water
Adequacy of capacity and collection networks in Dundalk and Drogheda to facilitate development consistent with Development Plans zonings
Discharges to designated sensitive areas in from Drogheda and Dundalk WWTP's; and the potential impact of Nitrates Directive.
Discharges of untreated sewerage to coastal waters in Carlingford Lough -a designated as Shellfish production area with no treatment.
Loading and quality of discharges from a number of small wastewater treatment plants in the county that are discharging to rivers that are designated at risk or probably at risk in FWD Preliminary Classification exercise. Need to cater for servicing of zoned lands therein.
Collection Network deficiencies, in particular ingress of surface water and its impact on cost and efficiency of treatment processes and discharges to receiving waters.
Control of Odours at existing WWTP's.

Water
Sludge management at Staleen Water Treatment Plant, Drogheda have been subject of a Direction Notice from the EPA. Sludge facilities are being currently upgraded as an interim measure until such a time as the East Meath, South Louth and Drogheda Water Improvement Scheme progresses.
Cryptosporidium Risk Assessment which has highlighted that significant risk exists at a number of our water sources/treatment plants.
Capacity issues at a number of smaller schemes that service development centres.
Water Quality problems related to treatment plants operating at or near capacity impacting on our ability to properly maintain these plants.
Impact of continued /increased abstractions from Rivers on FWD objectives.
Identification, quantification and protection of Groundwater Resources. The preparation and implementation of a Groundwater Protection Plan to ensure the sustainability of groundwater reserves as well as meeting requirement of the Groundwater Directive/Water Framework Directive.
The position in relation to abstractions from three of our Water Treatment plants which do not have Abstraction Orders needs to be regularised.
Lack of storage/network capacity in Dunleer network which may impact on fire fighting capacity.

6. Recommendations of Assessment 2007-2009

The following projects are recommended for progressing through the period 2007-2009. The listing contains schemes which are currently in progress and new schemes which it is hoped to commence.

Schemes Currently in progress to Continue to 2007-2009

Priority	Scheme	Type	Description	Cost Indicator (Millions)	Current Status	Target Completion
	Ardee Sewerage Scheme-Phase II	S	Upgrading of existing network and provision of expanded treatment plant to cater for growth in Ardee Area.	€7.50	Preliminary Report	2008
	Blackrock Sewerage	S	Upgrading of existing network and provision of expanded treatment plant to cater for growth in Dundalk Gateway.	€10.00	Brief with DEHLG	2009
	Drogheda Sewerage Network Improvements Stage I - Network Assessment	S	Structural and hydraulic assessment of the network and development a framework plan for its renewal/upgrading. To maximise asset use, minimise discharges to River Boyne (FWD) and hydraulic loading on WWTP.	€1.50	Brief with DEHLG	2007
	Dundalk Water Supply Strategic Review	W	Development of a framework for the provision of water supply, distribution system, storage and treatment consistent with NSS and RPG growth projections for Dundalk and its hinterland. Project includes preparation of strategic asset assessment.	€0.50	Consultant Appointed	2007
	Mid-Louth/Dunleer Regional Water Supply - Stage I+II	W	Upgrading of existing trunk distribution network, the provision of storage facilities and the development of new water treatment plant.	€13.50	Preliminary Report with DEHLG	2009
	Cooley RWS - Stage II-Phase 1	W	Upgrading of existing trunk distribution network, provision additional storage capacity, development of groundwater source and extension of trunk supplies to Omeath and Ravensdale Area which have deficient isolated sources. Recent well surveys indicate greater than 98% microbiological contamination of private well sources	€5.50	Preliminary Report completed	2008
	Dundalk Northern Environs Water Augmentation/Drainage	W/S	Provision of piped water and sewerage services to Armagh Road and adjacent lands to facilitate balanced development in Dundalk Gateway.	€2.86	Construction in Progress	2006

Note: Schemes highlighted in yellow have an assigned construction start date. Others do not relate to construction.

Proposed New Schemes 2007-2009

Priority	Scheme	Type	Description	Cost Indicator (Millions)	Current Status	Target Completion
1	South and West Drainage-Dundalk Phase 1 (Gateway Project)	S	Provision of pump station foul and surface water drainage to facilitate development of lands designated in Local Area Plan and to alleviate flooding/ flood risk to adjacent developed areas.	€2.5	Preliminary Report	2009
2	North Drogheda Interceptor Sewer and Trunk Water Main	S/W	Provide water and sewer trunk lines to service lands designated in Local Area Plan through PPP with developers. Incorporates element of East Meath South Louth and Drogheda WSIS.	€4.5	Preliminary Design	2009
3	South and East Drainage/Water-Dundalk Phase 1(Gateway Project)	S/W	Provide pump station, foul and surface water drainage and trunk water main to service lands through PPP with developers and provide for diversion of flow from existing Blackrock WWTP. Incorporates element of Mid-Louth Dunleer RWSS.	€7.3	Preliminary Design	2008
4	Upgrade of Odour control Facilities at Dundalk and Drogheda WWTP	S	Provide chemical scrubbing equipment at Dundalk WWTP to remove H ₂ S which is currently being produced in network and to enclosure of primary settlement tanks in Drogheda WWTP.	€0.70	Inception	2008
5	Dundalk Northern Environs Water Augmentation/ Drainage Stage 2(Gateway)	S/W	To provide pump station, foul and surface water drainage and trunk water mains to facilitate development	€13.50	Preliminary Report	2008
6	Rural Towns and Villages Sewerage Schemes	S	Upgrade existing WWTP plants, pump stations and networks in Clogherhead, Dromiskin, Castlebellingham, Louth Village and Annagassan.	€10.0	Inception	2009
7	Groundwater Resource Study	W	Carry out a countywide assessment of potential groundwater resources and develop a framework for their protection and use in a sustainable manner for drinking water supplies.	€1.50	Inception	2008
8	Carlingford Lough Sewerage Scheme	S	Provide collection and treatment facilities in Omeath and Greenore and upgrade facilities in Carlingford consistent with requirements in respect of designation as a Shellfish Production Area	€8.50	Brief	2008
9	Rural Towns and Villages Network Rehabilitation Project-Stage 1	S	Progressing a detailed asset survey of networks in rural towns and villages and implementation of trunk network rehabilitation Programme.	€7.50	Inception	2009
10	Cryptosporidium Risk Amelioration Measures-Stage1	W	Upgrading of existing water treatment facilities to mitigate risk of Cryptosporidium contamination.	€0.75	Inception	2007
11	Drogheda WWTP Expansion –Phase 3	S	Preliminary Assessment of expansion options, preparation of EIS and other required studies and Reports	€1.00	Inception	2009

6. Recommendations for consideration 2010-2014

The following projects are recommended for consideration in period 2010-2014. It is envisaged that progress in both implementation of Framework directive and Nitrates and Phosphates Regulations will lead to a number of other schemes being identified whilst the focus on Asset assessment will serve to quantify extent of investment and economic basis for investment in asset renewal/replacement.

Indicative Schemes 2010-2014

Priority	Scheme	Type	Description	Cost Indicator (Millions)	Current Status	Target Completion
1	Dundalk Strategic Water Study Investigations and Implementation	W	The carrying out of investigations and implementation recommendations arising out of Strategic Water Study.	€12.5	Inception	
2	Ardee /Tallanstown Regional Water Supply Scheme	S/W	Upgrading of existing trunk network and storage facilities as well as examining potential of relocating existing two treatment plants to expanded facility developed for Mid Louth/Dunleer RWS.	€13.5	Inception	
3	Drogheda WWTP Phase III	S	Upgrading/expansion of WWTP at Drogheda. Contingent on ongoing studies in respect of provision of treatment in East Meath area and impact of FWD.	€20.0	Inception	
4	Rockview Area Drainage	S	Development of a new pump station and rising main which will cater for development of zoned lands in Dundalk and may also facilitate the closure of Blackrock WWTP with transfer of sewage to Dundalk WWTP.	€0.90	Inception	
5	Mid Louth Dunleer RWS Stage II +III	W	Further upgrading and expansion of Mid Louth Dunleer network			

APPENDIX 1

County Development Plan Proposals 2003-2009 Water

Scheme	Status 2003	Proposals 2003	Outcome 2006
Ardee	Limited	Increase in capacity of treatment works and or development of additional Groundwater resources required.	Additional groundwater source identified and plant operation improved through installation of lamella settlement tubes.
Greenmount	Limited	Proposal to upgrade Mid-Louth and Dunleer Water supplies at Preliminary Report Stage. Part of current NDP proposals.	Replacement forms part of Mid Louth Dunleer RWS at Preliminary Report Stage.
Dundalk Sth.	Adequate	Adequate capacity available from Cavan Hill Source	
Cooley	Adequate	Proposals for upgrading of network/storage and extension to Faughart, Ravensdale, Killcurry being prepared.	Proposals form part of Cooley RWS currently at Preliminary Report Stage.
Tallanstown	Adequate	Plant upgrade required	
Dunleer	N/a	Existing source to be abandoned. Proposal to upgrade Mid-Louth and Dunleer Water supplies at Preliminary Report Stage will address long term supply. Interim solution with limited capacity to cater for new development will be in place shortly	Interim solution in place.
Collon	Very Limited	Limited supply will be a constraint on development. New supply being sourced to serve Tullyallan.	New groundwater source developed at Tullyallan, reservoir to be constructed this year.
Clogherhead/ Termonfeckin	Limited	Limited additional supplies available from Drogheda. Network upgrade and increased reservoir capacity required. Groundwater potential being investigated.	New groundwater source operational.
Jenkinstown	Adequate	Supplied from Cooley	Integrated into Cooley Scheme
Dunbin	Adequate	Supplied from Cavan Hill	
Carlingford	Limited	Augmentation of spring supplies from Cooley scheme will be required on an ongoing basis in the not to distant future. Source protection issues.	Disinfection equipment upgraded
Greenore	Adequate	Existing source unreliable and is currently being integrated into Cooley network.	Integrated into Cooley Network
Omeath	Very Limited	Development will be constrained by supply. Connection to Cooley scheme envisaged in medium term	Forms part of proposals in Cooley RWS Preliminary Report
Sheelagh	Adequate	Supplied from well/Northern Ireland.	Integrated into Dundalk Environs supply
Rathmore	Adequate	Proposals to integrate into Dunbin scheme.	Integrated into Dundalk Environs supply
Dundalk Nth	Adequate	Supplied from Dundalk UDC.	

County Development Plan Proposals 2003-2009 Wastewater

Scheme	Capacity (PE)	Load(PE) (2003)	Proposals	Current Load	Outcome
Anagassan	500	270	None	C450	Upgrade subject to PPP with proposed developers. At initial discussion stage.
Ardee	5000	4800	Expansion of capacity (7,500) and network upgrade proposed as part on NDP. Capacity is a short term constraint on future development	At Capacity	Preliminary Report is being prepared with view to implementation of expansion scheme 2008-2009.
Blackrock	6000	5000	Medium Term proposal to pump to Dundalk STW. Capacity is currently a development constraint.	At Capacity	Provision of pump station at Contract stage. Brief for appointment of consultant to upgrade network and possibly treatment plant with DEHLG
Carlingford	1500	750	None	1200	
Castlebellingham	1700	1100	Installation of surface water drainage system	1500	
Collon	500	520	Plant upgrade proposed to 750PE	650	Proceeding to Contract for expansion to 1200 PE under SLI Programme
Clogherhead	2000	1400	Upgrade of network proposed	1900	Included in 2007-2009 Programme
Dunleer	4300	1400	None	2000	
Dromiskin	1000	1200	Plant upgrade required, long-term proposal to pump to Dundalk. Capacity is constraint on development.	1200	Upgrade subject to PPP with proposed developers. At Preliminary Report/Output specification stage. Will be subject of SLI application.
Greenore		200	No treatment. Treatment plant will be required.	n/a	Included in 2007-2009 Programme
Knockbridge	500	380	None.	500	Preliminary Report completed. SLI application submitted. Proceed on basis of PPP with developers.
Gyles Quay	50	50	Upgrade to secondary treatment dependent on development.	150	Small Schemes Programme
Louth	500	570	Additional capacity to be provided (250PE). Dependent on development demands.	600	Included in 2007-2009 Programme
Omeath		700	No treatment. Treatment plant will be required.		Included in 2007-2009 Programme
Tallanstown	400	550	Additional capacity to be provided (200PE). Dependent on development demands.		Proceeding to Contract for expansion to 1200 PE under SLI Programme
Tinure	380	390	No further capacity to be provided		
Tullyallan	500	480	Additional capacity to be provided. (500PE).Upgrade of pump station.		Upgraded to 1500 PE. SLI Scheme.