Water Services Strategic Plan

Public Consultation Report – Phase 2
October 2015

CONTENTS

1 Introduction

1.1 Overview

The Water Services Strategic Plan sets out the strategies we need to implement as a country in the short, medium and longer term to ensure the availability of safe drinking water, an environment that is protected from the impacts of wastewater discharges, and efficient modern systems that meet the needs of customers, contribute to economic growth and development, and provide value for money. The document addresses six key themes of customer service, clean safe drinking water, effective treatment of wastewater, a sustainable environment, supporting economic growth and investing for the future.

Irish Water (IW) is required to publish a Water Services Strategic Plan (WSSP) under Section 33 of the Water Service (No. 2) Act of 2013 (WSA). The WSSP is required to state the objectives of Irish Water in relation to the provision of water and wastewater services for a 25 year period and the means by which Irish Water proposes to achieve these objectives. Following consultation, the final plan is subject to approval by the Minister for the Environment, Community and Local Government. The implementation of the plan will be reviewed after a maximum of 5 years as stipulated in the WSA.

In line with the SEA Directive (2001/42/EC) and Habitats Directive (92/43/EEC), the WSSP is subject to a Strategic Environmental Assessment (SEA) and an Appropriate Assessment (AA) to provide for a high level of protection of the environment and to promote sustainable development by integrating environmental considerations into the preparation and adoption of the WSSP whilst meeting the provisions of the Directives and transposing regulations.

1.2 This Document

This document forms the evaluation report of submissions received during the second round of public consultation on the WSSP (PC2) which ran from the 19th February to the 17th April 2015. This consultation invited statutory bodies, interested parties and the general public to make submissions on the following documents:

- A draft Water Services Strategic Plan in compliance with Section 33 of the Water Services (No. 2) Act 2013;
- An Environmental Report for the Strategic Environmental Assessment (SEA) in accordance with the European Communities (Environmental Assessment of Certain Plans and Programmes) of 2004 (as amended); and the
- Natura Impact Statement in support of the Appropriate Assessment of the plan completed under Regulation 42 of the European Communities (Birds and Natural Habitats) Regulations 2011 and pursuant to Article 6 of the Habitats Directive 92/43/EEC.

2 Consultation Methodology

The methodology used for this public consultation is described in the paragraphs below.

2.1 Draft Water Services Strategic Plan

2.1.1 Agreement of Scope

Section 33(1) of the Water Services No. 2 Act (2013) (WSA) defines the statutory consultees for the preparation of the Water Services Strategic Plan (WSSP) as the Commission for Energy Regulation, the Environmental Protection Agency, each local authority and each regional planning authority.

To develop the scope and form of the WSSP, meetings were held with the statutory consultees identified in the WSA (the CER, the EPA, the regional planning authorities and the City and County Managers Association representing local authorities) and with the Department of Environment, Community and Local Government (DECLG). In addition, letters were issued to each local authority and the statutory consultees.

Following preparation of the draft scope, an Issues Paper for the WSSP was prepared and published in July 2014. Members of the public were invited to provide feedback to Irish Water during a five week public consultation which ran from July to September 2014. The responses from this consultation were collated and presented within the PC1 evaluation report. This was used to agree the final scope and inform the preparation of the draft WSSP.

2.1.2 Preparation and Consultation of the Plan

Following this initial phase of public consultation (PC1), the draft WSSP was prepared between October 2014 and February 2015 with text supported by relevant graphics, photographs and case histories. Six Strategic Objectives were defined addressing the required content of the WSSP as set out in the WSA and a series of strategies were devised to deliver each of these Strategic Objectives. The draft WSSP was then published on the 19th February 2015 for consultation. The methodology used to advertise the consultation is described in Section 2.3 below.

2.2 Strategic Environmental Assessment and Appropriate Assessment

2.2.1 Agreement of Scope

For the purpose of developing the scope of the Strategic Environmental Assessment (SEA) for the WSSP, consultation on the scope of the assessment was initially held through a workshop with representatives from the Environmental Authorities specified under the SEA transposing regulations. Issues in relation to the Appropriate Assessment (AA) process for the WSSP were also discussed at this workshop. After this workshop, written submissions were received from the Environmental Authorities. Other interested parties including Non-Governmental Organisations (NGOs) were also invited by letter to contribute to the initial scoping in writing. The output of the workshop and written submissions informed the preparation of the Draft Scoping Report which was issued for public consultation alongside the WSSP Issues Paper in July 2014.

Following this consultation, the scope of the SEA and the framework used in the SEA to assess potential environmental impacts of implementing the WSSP were updated.

2.2.2 Preparation and Consultation of the SEA Environmental Report and Natura Impact Statement

The SEA and AA processes were carried out in parallel with the preparation of the Draft WSSP and an SEA Environmental Report (SEA ER) and Natura Impact Statement (NIS) (in relation to the AA process) were prepared. As such, the development of the SEA ER and NIS informed the strategies identified within the draft WSSP through an iterative process. The SEA ER and NIS were then published alongside the draft WSSP on the 19th February 2015.

2.3 Public Consultation

2.3.1 Distribution of Documents

Statutory and non-statutory consultees and members of the public were invited to provide feedback to Irish Water during an eight week public consultation which ran from 19th February to 17th April 2015.

The draft WSSP, SEA ER and NIS documents were printed and sent to each county library for distribution to their local libraries. In addition, copies of the documents were sent to the planning counters in all local authority planning offices. The printed documents were also sent to all statutory consultees and all other interested parties who had taken part in the development of the scope.

The documents were also made available for download in English and Irish at the Irish Water website.

2.3.2 Advertisement of the Consultation

The following methods were used to advertise this Public Consultation (PC2):

- A press release circulated to the media. This resulted in newspaper articles in the national newspapers, Irish Times, Irish Independent, Irish Examiner and Daily Mail and several regional newspapers including Carlow Nationalist, Kildare nationalist, Roscommon Herald. The following non-print media websites also discussed the WSSP – Boards.ie, TheJournal.ie and UTV Ireland.
- An Irish Water spokesperson was interviewed on radio news shows RTE Morning Ireland and Newstalk Pat Kenny Show.
- Advertisements placed in national and regional newspapers. Copies of the advertisements are presented in Appendix A.
- Locally through posters provided to the libraries and planning counters. A copy of the poster is presented in Appendix A.
- Website release of the Draft WSSP SEA Environmental Report and NIS of the Draft WSSP and an invitation for comment through the website and dedicated email address (wssp@water.ie).
- Update email to all stakeholders who had signed up for updates through the project website.

2.3.3 Submission Responses

Responses to the consultation were invited online at https://www.water.ie/projects-plans/our-plans/ by email to WSSP@water.ie or posted to the address below:

Water Services Strategic Plan
P.O. Box 860,
South City Delivery Office Cork City,
Cork

3 Evaluation of Responses to the Draft WSSP

3.1 List of Respondents

A total of 58 responses were received. The parties who returned submissions directly relating to the draft WSSP, the SEA Environmental Report and the Natura Impact Statement for the draft WSSP are summarised in **Table 1** below.

Table 1 Parties Who Returned Submissions

Name	Role and Submissions
Commission for Energy Regulation (CER)	Economic Regulator
Environmental Protection Agency (EPA)	Environmental Regulator
Department of Environment, Communities and Local Government	Government Department
Department of Communications, Energy and Natural Resources (Geological Survey of Ireland and Inland Fisheries Ireland)	Government Department
Department of Agriculture Fisheries and the Marine	Government Department
Department of Environment (Northern Ireland)	Northern Ireland Government Department (Trans-boundary Issues)
Department of Arts Heritage and the Gaeltacht	Government Department
Department of Jobs, Enterprise and Innovation	Government Department
Regional Authorities	3
Local Authorities	11
Public Sector Organisations	2
Non Governmental Organisations	12
Community Groups	2
Businesses	2
Elected Representatives	2
Private Individuals	16
Total Responses	**58**

3.2 Summary of Submissions and Revisions

The text submitted by respondents and any revisions to the WSSP which were carried out on foot of that submission is presented in full in **Appendix B** of this document (submissions relating to the draft WSSP) and **Appendix C** (submissions relating to the SEA Environmental Report and Appropriate Assessment NIS). A summary of submissions and revisions to the key areas of the draft WSSP are presented in **Table 2** below.

A large number of responses to the draft WSSP referred to activities, projects, plans, strategies or policies which will be detailed within the Tier 2 implementation plans or Tier 3 projects which will also be subject to appropriate consultation. It is proposed to include additional detail on these plans and projects within the final WSSP.

Table 2 Summary of Responses to the draft WSSP

Submission Points	Revisions to WSSP (where appropriate)
Introduction/Overall	
1. Many respondents welcomed the plan in its clarity and opportunity for meaningful engagement.	1. Noted.
2. The request for further interim targets was made. These should be included in future revisions of the plan on a five yearly basis.	2. Targets for 2027 are now included in the WSSP.
3. Respondents requested that the plan has an interim revision to bring it in line with the River Basin Management Planning and the future National Spatial Strategy and Regional Planning Guidelines.	3. This has been agreed with the DECLG and reference to an interim revision is included.
4. The legal context within which Irish Water operates (particularly with a view to environmental obligations) was requested.	4. Legal context is now included.
5. Timelines for delivery of the Tier 2 plans were requested, EPA seeks further Tier 2 plans on Public communication, THM reduction, disinfection and pesticides.	5. Timelines for delivery of Tier 2 plans are now included. Specific reference is now made to THM and pesticides. Additional text added on Aarhus Convention obligations and FoI.
6. Uncertainty of the affordability of the future requirements and plans was stated.	6. Reference to affordability has been removed except with reference to the Water Framework Directive.
7. The approach used to prioritise projects and plans within the Capital Investment Plan (CIP) should be published.	7. A paragraph has been included in Chapter 2 re prioritisation of investment to be included in CIP.
8. The plan needs to state roles of Irish Water, the Government and the CER in relation to affordability assessment.	8. Reference to affordability has been removed in this context as IW does not have a role in determining affordability.
9. Concern was raised by the Local Authorities (LAs) and the City and County Managers Association (CCMA) that the recognition of the long-term involvement of the LAs and Elected Representatives in the delivery of water services was limited in the draft WSSP. The plan should reference Annual Service Plans, 5 year long term service plan and 3 year Transformation Plan.	9. A paragraph has been added to the Introduction with reference to 'Our Partners in Delivering Water Services.'
10. Improve clarity in use of some terms (e.g. UfW and Leakage).	10. Reference to UFW has been removed, consistency of terms and glossary has been improved.

Submission Points	Revisions to WSSP (where appropriate)
Challenges and Priorities	
11. Stakeholders section should include the need to align the WSSP with spatial plans as a priority.	11. Reference to spatial planning policy is now included and the legal context refers to the requirements to be consistent with national planning policy.
12. Obligations under Birds and Habitats Directives and the duties placed on public authorities should be explicitly referenced in this section.	12. Reference to Birds and Habitats Directives is now included.
1. Meet Customer Expectations	
13. Requirement for good customer engagement and communication in relation to the delivery of the services (particularly any interruptions) and accuracy of billing were noted.	13. Noted and included in text. No amendment required.
14. The need to publish performance against the targets on a continual basis was highlighted.	14. Commitment to report against targets in each plan revision included.
15. Commitment to public participation under the Aarhus convention.	15. Now included in strategy CEf1.
16. Suggestions to use LA knowledge in Customer Communication.	16. Not appropriate to address at this strategic level document – referred to Customer Communications Function.
2. Ensure a Safe and Reliable Water Supply	
17. The existing investment and programmes undertaken by farmers in the protection of water supplies was highlighted.	17. Noted. No amendment required.
18. Greater commitment to customer education in water conservation with sustained public awareness campaign proposed.	18. Included in strategy WS3c.
19. Concern on the reallocation of water from areas of lower demand to the larger urban areas, particularly the provision of additional water supplies to Dublin.	19. Emphasis on sustainability of abstractions included.
20. Local Authorities are seeking definitive strategy for SCADA.	20. Not appropriate to address at this strategic level document – referred to Operations and Maintenance Function.
3. Provide Effective Management of Wastewater	
21. A number of environmentally focussed respondents were concerned at the present level of non-compliance with the UWWTD and that remediation of this should have the highest priority and want the final plan to be more ambitious in achieving compliance.	21. Commitment to achieving UWWTD compliance is now highlighted in a number of places with specific targets to be 99% compliant by 2027 and to address the 44 agglomerations identified by the

Submission Points	Revisions to WSSP (where appropriate)
	EPA as discharging raw sewage – by the end of 2021 .
22. Respondents highlighted need for focus on surface water run-off separation and retention to free-up capacity in existing WWTPs. The greater use of Sustainable Urban Drainage (SUDs) and Integrated Constructed Wetlands (ICW) was proposed.	22. Reference to storm water separation is included in strategy WW1a.
23. The need for a comprehensive national sludge management strategy which included domestic sourced sludges was highlighted.	23. Reference to domestic sludges now included in sludge management plan strategy and referred to in strategy EN3b.
24. Need for public access to the register of CSO flooding.	24. Reference to publically available register of CSO flooded properties now included in strategy WW2c.
25. The plan should refer to objectives under the Freshwater Pearl Mussels Regulations.	25. FWPM objectives referred to in relation to the Habitats Directive (strategy EN2b).
26. LAs requested if Irish Water (IW) can participate in the Catchment Flood Risk Assessment (CFRAM) process and that data from the CSO floods register is made publicly available.	26. Irish Water is committed to establishing an MoU with the OPW and LAs which will cover flooding (WW2c).
27. Publicity campaign on Fats, Oils and Greases (FOGs) is required.	27. Public Education on FOGs is covered under strategy WW3d.
28. Taking in Charge of group and private sewerage schemes should be highlighted.	28. This is not considered a long-term strategic issue.
4. Protect and Enhance the Environment	
29. Need to show the wider management of the environment and IW in the context of this.	29. Additional figure now included showing IW role in the delivery of RMBPs. Our Legal Context section illustrates IW's responsibilities in relation to the environment.
30. Environmental respondents requested greater emphasis on meeting compliance with a wider range of European Directives including Marine Directive	30. Our Legal Context details requirements of EU Directives. WFD and UWWTD relevant to wastewater discharges. Relevant of Marine Directive unclear and not included.
31. Need for energy efficiency identified.	31. Reference to Energy Efficiency in IW operations included throughout.
32. Requirements for improvements to energy consumption and sustainable technology through use of renewable technologies for power at treatment sites; anaerobic digestion and biogas extraction of sludge waste.	32. Reference to improvement in energy consumption referred to throughout; renewable technologies referred to under strategy EN3b in relation to the management of wastewater

Submission Points	Revisions to WSSP (where appropriate)
	sludges.
33. The WSSP should state which public authority is to undertake the AA determination.	33. IW is the competent authority. It is stated in the WSSP that IW has undertaken the AA process.
34. Obligations under the Birds and Habitats Directives should be explicitly referenced.	34. Now included in Our Legal Context in The Introduction.
5. Support Social and Economic Growth	
35. Need for consistency with the National Spatial Strategy, National Planning Framework, present RPGs, future Regional Spatial and Economic Strategies (RSES), County Development Plans, Local Spatial Strategies.	35. Requirement for consistency identified throughout the document and included in legal context of Chapter 7.
36. Ensure IW forecasting methodologies are consistent with RSES.	36. Commitment to plan water services in line with nation planning policy and Core Strategies consistent with current RPGs –Phased approach to deliver Core Strategies and will adopt same approach for RSES.
37. Reference to Local Economic and Community Plans.	37. Relationship of IW Planning Framework and LECPs now noted in Figure 3.
38. Uncertainty in population projections and changing demographics was highlighted.	38. Referred to in Chapter 7.
39. Adequate provision of headroom. Regional Authorities highlighted need for higher headroom targets particularly in growth towns (e.g. Portlaoise) and more ambitious targets in achieving headroom.	39. Allocation of headroom is consistent with RPG settlement hierarchy. Targets are based on likely availability of funding.
40. Standard metrics used to calculate headroom to be published.	40. IW is preparing a policy to address provision for growth in strategic infrastructure. Metric will be determined and included. This policy will be subject to approval by the CER.
41. Need to maintain affordability of new connections. Potential to offset connection cost against future billing or payment over an extended period.	41. Policies on new connection charges are being developed and will be subject to approval by the CER.
42. The security of water services as critical to the future national and international economic investment by business was highlighted.	42. Importance identified in WSSP and included in first sentence of Executive Summary.
43. Need to emphasise that cost savings for funding are not realised at the expense of quality and reliability in services.	43. Quality and reliability of service is regulated by the CER and quality of service emphasised throughout the WSSP.
44. Is engagement solely with planning authorities or also with tourism, agriculture and fisheries?	44. SG1a states IW will engage with key stakeholders including the IDA and Enterprise Ireland. Trade

Submission Points	Revisions to WSSP (where appropriate)
	representative bodies and government organisations now included as stakeholders in this strategy.
45. Information on the capacity and network development plans needs to be available to the LAs.	45. Network plans will be prepared in conjunction with LAs based on planned needs.
46. Concern on the absence of reference to rural sustainability within the plan.	46. Reference to the provision of water services in small towns and rural villages now included in strategy SG3a.
6. Invest in Our Future	
47. The prioritisation of investment needs to be consistent with legal obligations and other documents such as the Capital Investment Plan.	47. Noted.
48. The availability and affordability of funds for investment was highlighted.	48. Noted.
49. Several local authorities highlighted the need to agree resourcing and staffing levels under the SLAs.	49. Noted.
50. Irish Water should determine their long-term approach to major infrastructure investments such as the Dublin Water Supply Scheme project.	50. Our investment planning process addresses short, medium and long-term investment and is part of our Revenue Control submission to the CER
51. The need for continued investment into existing legacy capital build projects was noted.	51. Noted.
52. Potential to broaden text of R&D to include wastewater solutions (DAHG).	52. Strategy IF4 R&D refers to research in Water Services which includes wastewater.
53. Add Science Foundation Ireland to research and innovation bodies.	53. Strategy IF4a now includes reference to government organisations in relation to collaboration with research and innovation bodies which would include the Science Foundation Ireland.

4 Submissions for the SEA Environmental Report and Appropriate Assessment

All submissions received for consideration on the SEA Environmental Report and the Natura Impact Statement of the Draft WSSP are presented in **Appendix C**. A summary of submissions to, and revisions of, the SEA Environmental Report and the NIS of Draft WSSP are included in the SEA Statement and the NIS for the WSSP.

5 Conclusions

The submissions received have been considered in the preparation of the (final) WSSP which has been adopted by the Boards of Irish Water and Ervia. The SEA Statement has been prepared and the Natura Impact Statement updated, where required.

The final WSSP has been submitted to the Minister of Environment, Communities and Local Government for approval. All final documents will be published on the Irish Water website www.water.ie.

Appendix A: Public Consultation Advertisements and Poster

UISCE ÉIREANN : IRISH WATER

Irish Water Public Consultation:

Water Services Strategic Plan

Irish Water invites you to have your say in shaping its Water Services Strategic Plan in Ireland for the next quarter of a century.

Irish Water took over responsibility for the operation of public water services on 1st January 2014. Under Section 33 of the Water Services (No. 2) Act 2013, Irish Water is required to prepare a Water Services Strategic Plan (WSSP). The WSSP outlines the strategic direction for Irish Water over the next 25 years.

Everyone in Ireland has a stake in the future of our water services and Irish Water is seeking your views on this plan which addresses six key themes:

- Customer service
- Clean and safe drinking water
- Effective management of wastewater
- A sustainable environment
- Supporting social and economic growth
- Investing in our future

Having this plan is an essential part of ensuring the availability of safe drinking water. It will also ensure that we have an environment that is protected from the impacts of wastewater discharges, and efficient modern systems that meet the needs of customers, contribute to economic growth and development, and provide value for money.

The draft WSSP has been developed following an initial consultation with statutory bodies and the public in 2014 and has been subjected to a full Strategic Environmental Assessment (SEA) and an Appropriate Assessment (AA) to assess any environmental effects that may occur as a result of the WSSP.

Irish Water is inviting submissions on the draft WSSP together with the SEA and AA. The consultation is running until **Friday 17th April, 2015.**

The documents are available on the Irish Water website www.water.ie and at planning counters in local authority offices and public libraries across the country.

[redacted]

Submissions can be made to Irish Water in the following ways:
Online at http://www.water.ie/about-us/project-and-plans/future-plans/
By email to wssp@water.ie
By post to: Water Services Strategic Plan, Irish Water, P.O. Box 860, South City Delivery Office, Cork

Public Notice

European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (as amended)

Notice of public consultation on the Environmental Report & Natura Impact Statement on Irish Water's Draft Water Services Strategic Plan

Notice is hereby given by Irish Water that an Environmental Report has been prepared for the Strategic Environmental Assessment of the Draft Water Services Strategic Plan (Draft WSSP) in accordance with the European Communities (Environmental Assessment of Certain Plans and Programmes) of 2004 (as amended). A Natura Impact Statement in support of the Appropriate Assessment for the draft WSSP has also been prepared pursuant to Article 6 of the Habitats Directive 92/43/EEC.

The Draft WSSP which is required under section 33 of the Water Services (No2) Act of 2013 sets out Irish Water's objectives for the provision of water services for the next 25 years and the strategies proposed to achieve these objectives.

A copy of the Environmental Report and the Natura Impact Statement are available along with the Draft WSSP at planning counters in main Local Authority Offices and in public libraries during normal opening hours. The documents are also available online at http://www.water.ie/about-us/project-and-plans/future-plans/. Written submissions are sought from interested parties wishing to comment on the documents. All submissions made will be given due consideration in advance of the preparation of the final WSSP and the SEA Statement.

Written submissions may be made online at http://www.water.ie/about-us/project-and-plans/future-plans/ by email to wssp@water.ie or by post to Irish Water, P.O. Box 860, South City Delivery Office, Cork until close of business on Friday 17th April 2015.

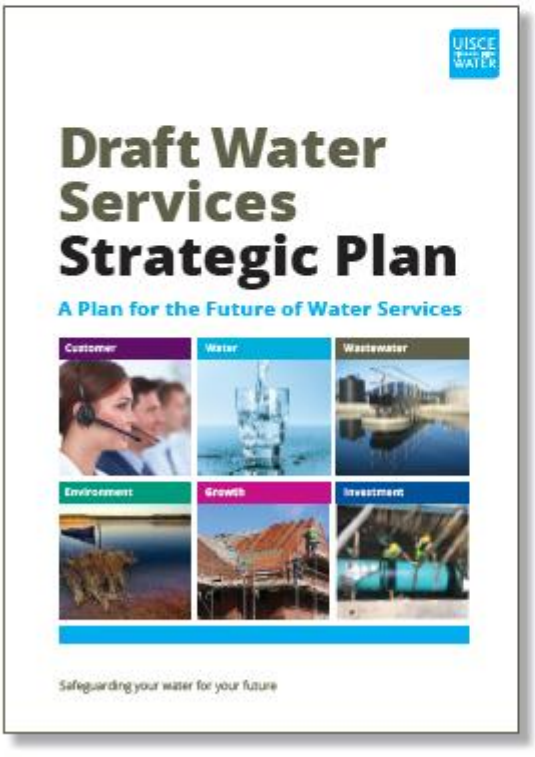
Public Consultation

Draft Water Services Strategic Plan

and Associated Environmental Assessment Reports

Irish Water has published its **Draft Water Services Strategic Plan (Draft WSSP)** and associated environmental assessment reports; an **Environmental Report** as part of a **Strategic Environmental Assessment** in accordance with the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (as amended); and a **Natura Impact Statement** as part of the **Appropriate Assessment** pursuant to Article 6 of the Habitats Directive 92/43/EEC. We now invite you to have your say in shaping the final Water Services Strategic Plan.

This consultation process will run until the **17th April, 2015**, and submissions and observations are invited from all interested individuals and bodies on the **Draft WSSP**, the **Environmental Report** and the **Natura Impact Statement**. Submissions and observations will be taken into consideration in deciding on the final Water Services Strategic Plan. Every member of the public and all interested bodies are encouraged to contribute. The final plan will set out our collective vision for the future of water services in Ireland for the next twenty-five (25) years.



The documents are available at planning counters in main local authority offices and in public libraries across the country during normal opening hours and are also published on our website (and available to download) at

http://www.water.ie/about-us/project-and-plans/future-plans/.

Questions on any of the above documents should be directed in the first instance to the email address given below.

There are three ways you can give us your comments and contributions:

Online at:

http://www.water.ie/about-us/project-and-plans/future-plans/

By email to:

wssp@water.ie

By post to:

Water Services Strategic Plan,
Irish Water,
P.O. Box 860,
South City Delivery Office,
Cork.

Safeguarding your water for your future

Appendix B: Submissions to the Draft WSSP

Regulators and Government Departments

Sub No.	Relevant Submission Text	Summary of Submission and Response or Revisions to WSSP (where appropriate)
S1	**Commission for Energy Regulation** **Introduction** The Commission for Energy Regulation ('the CER') welcomes the opportunity to comment on Irish Water's draft Water Services Strategic Plan ('the draft Plan'). The draft Plan presents a valuable opportunity for Irish Water to meaningfully engage with its stakeholders including, most importantly, the customers that it exists to serve. As the economic regulator of Irish Water, the CER is tasked with deciding upon the monies allowed to Irish Water to deliver safe, secure and sustainable water services to its customers to defined standards and with ensuring that Irish Water does so in an economical and efficient manner. The CER is required to carry out these functions in a manner that best serves the interests of customers of Irish Water. Our response is informed by the above and is in recognition of the fact that Irish Water faces many challenges, not just those expressly highlighted in the draft Plan, but also the need to build customer trust and confidence in the new utility and to appropriately balance and prioritise competing objectives where funding constraints exist. Irish Water must deliver on its objectives and targets in an efficient manner, providing value for the customers it serves. This should facilitate sustainable customer revenues and investor confidence which in turn will result in access to finance on the markets at competitive rates. This will support a sustainable approach to funding which will enable the delivery of required outcomes for customers. The remainder of this response is drafted with the above in mind. **Meeting Customers' Expectations** In his Direction to Irish Water regarding the draft Plan, the Minister stated that a strong customer focus should be integral to the Plan. The CER concurs with this and notes the inclusion in the draft Plan of an objective to meet customer expectations with the associated strategic aim to establish both customer trust and a reputation for excellent service through delivery of Irish Water's defined strategies. In order to do this, the CER considers that meaningful engagement and communication	The opportunity for meaningful engagement is noted. The CER acknowledge the challenges faced by Irish Water. Objectives and targets must be delivered in an efficient manner to deliver sustainable customer revenues and investor confidence. Strategic aim to establish Customer Trust and a reputation for Excellent Service was noted. Proactive participation by Irish Water in the Public Forum is required by the CER. Text refining the Irish Water

Sub No.	Relevant Submission Text	Summary of Submission and Response or Revisions to WSSP (where appropriate)
	with customers is crucial. Proactive participation by Irish Water in the Public Water Forum once established will be an important part of this engagement. The draft Plan states that Irish Water will develop a Customer and Stakeholder Communication Strategy which will set out a roadmap towards full and open two way engagement. The CER recommends the inclusion of a defined timeline for the publication of the Strategy and the commencement of its implementation in the final Plan. The CER welcomes Irish Water's commitment to complying in full with the obligations set out by the CER in the Customer Handbook. The Handbook sets out the minimum customer service standards that are currently required of Irish Water. The CER will monitor and periodically publish Irish Water's performance against these minimum requirements, commencing in the third quarter of this year. **Data: The Basis for Measurement of Performance & Delivery** The CER supports the inclusion of defined, time bound deliverables and targets in the draft Plan, noting that delivery of these is contingent on the CER's decisions regarding the associated costs and Irish Water's ability to access necessary funds. The CER is of the view that Irish Water should commit in the final Plan to periodically publishing information regarding its performance against the targets it sets for itself in that Plan. Key here is the ability to define the current position or baseline such that performance can be assessed against this. Customers paying for services need to see what has been delivered for monies paid. Unfortunately, robust information regarding the current baseline is not yet available in all cases. It is vital that accurate data regarding all aspects of Irish Water's business is available and collection and collation of this data must be prioritised. This is necessary for the CER to monitor Irish Water's performance. In addition to monitoring performance under the Customer Handbook (please see below), the CER is also putting in place a process to monitor delivery of Irish Water's Capital Investment Plan, with monitoring due to commence in the second quarter of this year. An overall performance assessment framework is currently being developed which will require Irish Water to report on a number of defined metrics across a number of areas including water supply, sewerage service, environmental performance and customer service. This will allow the CER to monitor Irish Water's performance over time in these areas and to compare its performance against other water utilities. The CER will publish information periodically regarding Irish Water's performance against this framework.	commitment to Customer Communication has been added to strategy CE1d and to public engagement in Strategy CE1f. The CER will monitor Irish Water performance against standards in Customer Handbook from Q32015. Irish Water should commit to periodically publishing performance data. Text committing to benchmarking performance against targets in each review of the WSSP has been included in the section on "Our Strategic Plan for 25 years". Robust information on current baseline still required in many areas. Text on collation of information on assets is included in strategy IF1a. Collection and collation of data should be prioritised. CER will monitor delivery of Irish Water CIP from Q22015 within overall performance assessment framework. IW performance will be benchmarked against other utilities. Implementation of the Capital Investment Programme is not part of this WSSP. Collation of asset condition information should include

Sub No.	Relevant Submission Text	Summary of Submission and Response or Revisions to WSSP (where appropriate)
	Whilst the need to prioritise the gathering of information regarding the condition of Irish Water's assets is recognised in the draft Plan, the CER considers that this should be expanded to include other key data requirements where robust data is currently not available. Additionally, the draft Plan should include defined, time bound targets for the collection and collation of relevant data. The draft Plan includes a number of implementation plans that sit under the strategic plan. It would be useful to include the timelines for the delivery of these plans in the final Plan.	other key data requirements where robust data is not currently available. The WSSP should state timelines for delivery of the Tier 2 implementation plans. This has been included as a new Table 1 within the final plan.
	Affordability versus Efficiency The CER notes the references to affordability throughout the draft Plan. The CER recognises that affordability is a key issue for customers and via the Customer Handbook requires that Irish Water offer payment plans for customers in arrears and to take into account a customer's ability to pay when doing so. These requirements are reflected in Irish Water's Code of Practice on Billing and commitments to customers therein. Whilst the CER recognises that affordability is an important matter, we note that this is primarily a matter for Government consideration when formulating water and other policies. The work of the Inter-Departmental Working Group on Affordability Measures under the Water Sector Reform Programme is noted here for example.	Recognition that affordability is primarily a government consideration under Inter-Departmental Working Group on Affordability Measures. References to customer affordability have been removed from the final plan.
	The CER notes that affordability can be considered at a higher level when it comes to meeting obligations on Ireland as an EU Member State under the Water Framework Directive. Here, the Government decides how to prioritise delivery of required measures and what sectors face what portion of the associated costs.	Affordability consideration is set at a higher level for Irish obligations under EU Directives. The government sets prioritisation of measures required under the Water Framework Directive and affordability references have been retained in this context.
	The CER operates within Government policy on this issue and our focus under legislation is to ensure, when carrying out our functions, that water services are provided by Irish Water in an economical and efficient matter. It is important that the final Plan accurately reflects the respective roles of Government, the CER and Irish Water in relation to affordability.	The CER considers that the final WSSP should accurately reflect roles of Govt, CER and Irish Water in relation to affordability. The roles have been clarified in a new section "Our Legal Context" within the final plan.
	Balance, Prioritise and Optimise It is recognised that significant capital investment is required in relation to both water and wastewater service provision in order to facilitate the continuity, safety, security and sustainability of water services. This presents a number of competing objectives, for example, the need to address capacity issues, including via conservation measures, and the requirement to comply with environmental regulations. Funding constraints dictate that prioritisation is required and the CER welcomes the fact that the draft Plan sets out Irish Water's current priorities for parties to comment	The requirement for significant capital investment balanced against funding constraints will result in a need for prioritisation. CER considers that Irish Water's approach used for

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	on. The CER considers that Irish Water's approach to prioritisation should be published. Consideration should be given to matters such as relative costs, benefits and risks of projects while seeking to appropriately balance investment across the country. Investment should be optimised across maintenance of existing assets, conservation and new infrastructure. The CER welcomes the inclusion of a number of 'tier 2' plans pertaining to Irish Water's assets in the draft Plan, including an Irish Water water resource plan, regional water conservation strategies, an Irish Water wastewater compliance strategy and the intention to complete Drinking Water Safety Plans for all water supply zones. As above, defined timelines for the delivery of these plans should ideally be included in the final Plan. **Prudent Facilitation of Growth** The CER acknowledges the requirement for Irish Water to ensure as far as practicable that the Plan is consistent with the National Spatial Strategy and regional planning guidelines. It is also recognised that, in drafting the Plan, Irish Water must have regard to a number of matters including proper planning and sustainable development, strategic development zones and housing strategies. In planning the provision of water and wastewater services to meet projected demand it is important to proceed in a prudent manner based on best evidence available to minimise the risk of stranded assets. Use of existing assets should be maximised in a cost effective manner coupled with sufficient emphasis on conservation measures. This is reflected in Irish Water's stated approach to planning the water and waste water systems in the draft Plan whereby an evidenced based approach based on realistic projections and appropriate planning timelines will be employed whilst maximising capacity and use of existing assets. The cost-effective use of modular design for new assets and a phased approach to construction set out in the draft Plan are also noted. These approaches will feed into Irish Water's capital investment plan and other information regarding Irish Waters costs which is periodically submitted to the CER for review and decision. The standards and metrics used by Irish Water to plan the system and to assess the capacity of existing assets in that context are an important consideration. The CER intends to request information from Irish Water regarding these standards and metrics, including, for example, the methodology for determination of headroom, as part of the next price control, given their impact on Irish Water's capital investment plans and costs.	prioritisation should be published. A paragraph has been included in Chapter 2 with regard to prioritisation of investment in CIP. Timelines for delivery of Tier 2 Implementation plans should be included in the WSSP. These are included in a new Table 1. The WSSP should be consistent (as far as possible) with the National Spatial Strategy and Regional Planning Guidelines with reference to sustainable development, strategic development zones and housing strategies. Irish Water should plan in a prudent manner to minimise the potential for stranded assets. Use of realistic projections and appropriate planning timelines. Maximise use of existing assets. Cost effective use of modular design. These approaches must feed into future Irish Water CIPs. Standards and metrics used by Irish Water to assess capacity of existing assets including methodology used for headroom assessment to be requested by CER in the future.

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	Connection Policy The draft Plan sets out Irish Water's views on some of the principles that underlie connection charges. For example, it is stated in the document that developers will be able to build their own connections subject to designing the connection to standards specified by Irish Water and signing a connection agreement. It also states that a national approach to charging will apply and addresses the issue of who bears the 'strategic' costs associated with connections versus the 'local' costs. The CER will consult on connection charging principles, on the charging methodology, including the matters set out in the draft Plan, and on the associated connection charges. The CER will consider Irish Water's views on the principles, methodology and charges, along with the views of all respondents to our consultations, before reaching our decisions on these matters. **Research and Innovation** The CER welcomes the inclusion in the draft Plan of reference to research and innovation and the intention to avail of opportunities to adopt new technologies developed by others. The intention to collaborate with academia to maintain up to date knowledge of innovations that could be applied by Irish Water to the benefit of customers is also supported. The CER has provided for an innovation fund to encourage Irish Water to invest in research and innovation projects with a view to addressing issues across the Irish water network. To avail of the fund, innovation projects which Irish Water proposes to complete are required to meet criteria defined by the CER.	Developer led connections allowable subject to meeting design criteria. The CER are to consult on connection charging principles and methodology. The CER supports the inclusion of reference to research and innovation. The CER has provided for an innovation fund for Irish Water projects which meet criteria defined by CER.
S2	**Environmental Protection Agency** **Overview** The EPA welcomes the publication of Irish Water's draft Water Services Strategic Plan (WSSP) as a high level strategy setting out how water services will be delivered in Ireland over the next 25 years. The plan shows that Irish Water is committed to achieving quality outcomes for waste water and a safe and secure drinking water supply. **Strategic Approach** The strategic approach to investment and long term planning for the water service sector is welcome. The EPA considers that the final plan must be more ambitious in striving to achieve compliance with both the objectives and requirements of the 1991 Urban Waste Water Treatment Directive and the	The EPA welcomes the draft Plan. The EPA considers the Final plan should be more ambitious in achievement of UWWTD and DWD targets

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	1998 Drinking Water Directive. Full national compliance must be achieved well in advance of 2040 and that such an extended timeline is not satisfactory. The EPA supports Irish Water's commitment to undertake an interim review of the WSSP. This is an important step to align it to pending water-sector plans (e.g. River Basin Management Plans). The subsidiary Tier 2 plans also offer the opportunity for a national, time-bound and prioritised approach to key issues in the water sector. For example, plans currently in progress on lead, drinking water safety plans and on waste water compliance. Further Tier 2 plans should include on Public Information/Communication, THM Reduction, Disinfection, and Pesticides. The EPA will comment individually on these plans as they are developed. **Priorities** The Strategy should focus on achieving compliance at the earliest opportunity and also set out the key interim milestones to achieving full compliance. While there is a requirement to prioritise resources within the short to medium term, it is necessary to set out the full roadmap to compliance within the context of this long-term plan. The challenge of meeting the current legal requirements set in EPA waste water discharge authorisations should be addressed in the WSSP. Climate change has the potential to impact significantly on our water resources and water services infrastructure and will affect the entire hydrological system regardless of size, and infrastructure is also likely to be vulnerable. A full climate resilience approach is necessary as part of the Tier 2 climate change plan. **Customer Expectations** Irish Water should continue to develop systems to present data to the general public. Irish Water should develop a pro-active communication programme for key risks. Additional options for effective communication should be considered, e.g. presenting information on water quality investment in tandem with account statements. **Protect and Enhance the Environment** The strategy should adopt a holistic water cycle approach to provide for all aspects of water management (including resource efficiency) throughout the water cycle. As part of the strategy the	to ensure full compliance well in advance of 2040. Additional targets to achieve compliance with the UWWTD and DWD have been included within the final plan. The EPA supports the proposal for an Interim review to align the WSSP with RBMPs. Tier 2 Implementation plans should give a national, time bound prioritised approach to key water issues. The EPA wants further Tier 2 plans on Public Information/Communication, THM Reduction, Disinfection and Pesticides. Tier 2 plans for THM reduction and pesticides have been included in strategy WS1f. Irish Waters commitment to Public information is presented in strategy CE1f. The challenge on meeting the legal requirements for wastewater discharge authorisations should be addressed. This has been added to "Our Legal Obligations" in the Wastewater Strategic Objective. A full climate resilience approach is required by the EPA as part of the Tier 2 Climate change plan. The EPA proposes systems to present current performance data to the public. Additional proposals have been added to strategy CE1f to achieve this. Environment strategic objective should have a holistic water cycle approach. Text on this approach is included

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	work on dangerous and emerging substances should be targeted at discharges to drinking water sources and shellfish areas. Irish Water should outline their strategy for working on source protection. The strategy should consider the requirements of Article 7(3) of the WFD regarding drinking water protected areas, i.e. aim to reduce the level of treatment required in the production of drinking water (which promotes taking action within the catchment to improve raw water quality). The EPA sees the management of sludges arising from domestic wastewater treatment systems as a national priority as this is an area in which action by the homeowner is being actively promoted and is a legal requirement.	in in the Introduction to the Chapter 6. A commitment to meeting the requirements of the Priority Substances Directive and targeting discharges to drinking water and shellfish protected areas has been added to strategy EN2b. The requirements of WFD Article 7(3) in regard to Drinking Water Protected Areas should be considered. This will be detailed in the National Water Resources Plan (WS1a) and the preparation of Drinking Water Safety Plans (WS1b). A commitment to the management of sludges from domestic wastewater treatment systems should be prioritised. This has been added to strategy EN3b.
S3	**Department of Communications, Energy and Natural Resources (Geological Survey of Ireland)** As it is noted in the Strategy EN1e of the draft WSSP, all future Irish Water infrastructures should comply national planning and environmental legislation (including geology, hydrogeology and geological heritage). The Geological Survey of Ireland should be routinely consulted (as a prescribed body under the aegis of Dept Communications, Energy & Natural Resources) at the planning stage and in the preparation of an SEA or EIA/EIS for any proposed development. Likewise, Irish Water should take cognisance of any Guidelines produced by the Geological Survey of Ireland or any other relevant body in the planning of any Irish Water infrastructural works.	Irish Water developments should comply with national planning and environmental legislation including consultation with GSI as a prescribed body. Irish Water to take cognisance of guidelines produced by the GSI. Submission text is noted.
S3a	**Department of Agriculture Fisheries and the Marine** The comments provided in this submission are specific to Chapter 4 of the Water Services Strategic Plan (WSSP), i.e. 'Ensure a Safe and Reliable Water Supply'. The DAFM shares the aim of Irish Water in its WSSP to ensure the availability of safe and reliable drinking water. Clean water is a key component of efficient and sustainable, high quality food production. Moreover, Irish farmers are playing a significant role in ensuring the delivery of clean water. The agriculture sector is open to working with all stakeholders to ensure a safe and reliable water	Comments specific to the **Ensure a Safe and Reliable Water Supply** chapter. No amendments to the WSSP strategies are proposed in the submission. DAFM submission states that farmers have a significant role in ensuring delivery of clean water.

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	supply. In the context of our shared aim, and also in terms of the full participation of Irish Water in developing River Basin Management Plans and Programmes of Measures to protect water sources from catchment impacts, there is a need; a) to consider the significant investment already made by the vast majority of Irish farmers in the delivery of a clean water supply; b) to ensure a complete cost-benefit analysis of any potential additional agricultural measures; c) to consider the substantial scientific findings of the DAFM funded Agricultural Catchments Programme in the context of ensuring water quality standards. The Water Framework Directive (WFD) is the central policy driver for the delivery of good water quality across the European Union, and WFD measures which farmers in Ireland are currently implementing, and which are designed to protect and improve water quality are outlined here. **Basic WFD measures** *Nitrates Regulations* The Nitrates Regulations give legal effect in Ireland to the EU Nitrates Directive, which is one of the Basic Measures of the WFD. The Nitrates Regulations comprise the main element of the Programme of Measures for the agriculture sector, contained in River Basin Management Plans during the 1st cycle of WFD implementation in Ireland. These Regulations provide for the mandatory implementation of agricultural measures for protecting surface and groundwater quality by all Irish farmers. Measures include limits on the storage and landspreading of nutrients, including no-spread zones adjacent to drinking water abstraction points, and uncultivated buffer/riparian strips, to prevent nutrients and sediment from entering water. Compliance with these Regulations is controlled by the DAFM on behalf of the competent Local Authorities. The DAFM is also responsible for monitoring the effectiveness of the measures contained in these Regulations and does this through its funding of the Teagasc operated Agricultural Catchments Programme (ACP). Research findings from the ACP demonstrate that full implementation of the Nitrates Regulations is having a positive effect on the delivery of good water quality. *Environmental Impact Assessment (Agriculture) Regulations* The Environmental Impact Assessment (Agriculture) Regulation (EIA) provides for a mandatory screening and consent process for all farmers regarding three different types of agricultural activities. These include the restructuring of rural land holdings, commencing to use uncultivated land or semi-	Comments made in the submission relate to the development of River Basin Management Plans. Irish Water commits in the WSSP (Strategy EN2a) to participating in the development of the RBMPs alongside Irish farmers. However, the EPA is the lead authority in the RBMP development. The response further outlines the WFD measures being implemented by farmers. *Nitrate Regulations.* Agricultural Catchments Programme research demonstrates implementation is having positive effect on water quality.

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	natural areas for intensive agriculture, and land drainage works on lands used for agriculture, all in accordance with certain thresholds. The screening and consent process is controlled by the DAFM. The EIA Regulations do not apply to reclamation, infill or drainage of wetlands, which activities are subject to planning permission under the Planning and Development (Amendment) (No. 2) Regulations and the European Communities (Amendment to Planning and Development) Regulations 2011. *Plant Protection Products* The Pesticides Registration and Control Division at the DAFM control the mandatory registration (classification, packaging and labelling and approval for marketing and use) of pesticides in Ireland. In addition, the Sustainable Use of Pesticides Regulations provides for the mandatory registration and training of professional users of pesticides and sprayer testing as well as restriction/safeguard zones, in particular surrounding drinking water abstraction points, where pesticides must not be applied. *Cross-Compliance* The vast majority (> 135,000) of Irish farmers are in receipt of Direct Payments under the Common Agricultural Policy (CAP), and a requirement of that participation and payment is compliance with Statutory Management Requirements (SMR), including the Basic WFD measures outlined above. In addition, farmers are required to ensure that land is maintained in Good Agricultural and Environmental Condition (GAEC). Measures under GAEC ensure maintenance of optimum soil organic matter levels, prevention of severe poaching of land and maintenance of hedgerows, all of which assist in protecting water quality. Compliance with these SMR and GAEC is controlled by the DAFM through the Cross-Compliance inspection process (risk-based). Annually, the DAFM carries out ~ 3,000 farm inspections which relate to Cross-Compliance and the Nitrates Regulations (on behalf of Local Authorities) combined. **Supplementary (beyond basic) WFD measures** *CAP Rural Development Programme 2014-2020* The CAP Rural Development Programme (RDP) 2014-2020 provides opportunities for Irish farmers to undertake additional voluntary and compensated measures which further protect water quality as outlined here. <u>Agri-Environment & Climate Measures</u>	*EIA (Agriculture) Regulations* Screening and consenting for new development or production. *Pesticides Control* Control of pesticides use around drinking water abstractions. *Cross Compliance* CAP payments requirement for compliance with above. Good Agriculture and Environmental Condition inspections. CAP RDP (2014-2020) for additional (voluntary) water quality measures. Green Low Carbon Agri-Environment Scheme (GLAS).

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	a) The Green Low Carbon Agri-Environment Scheme (GLAS) is the newest agri-environmental scheme for farmers, which continues to support agricultural measures to protect water. All participating farmers must implement a GLAS farm plan which includes Nutrient Management Planning and a commitment to Training in environmental practices and standards as mandatory. Participation in GLAS is targeted at priority areas, including High Status water areas and Vulnerable Water areas as identified by the Environmental Protection Agency. The participation of 30,000 farmers in Tier/Priority One and a further 20,000 in Tier/Priority Two is targeted for 2015/2016. b) Locally-led Agri-Environment Schemes, for example, the extension of the long-running Burren Farming for Conservation Project; and the Freshwater Pearl Mussel Scheme which will be targeted at nine priority Freshwater Pearl Mussel catchments as identified by the National Parks and Wildlife Service at the Department of Arts, Heritage and the Gaeltacht. There will also be an opportunity in the RDP 2014-2020 for locally led community groups to tender for projects potentially focused on improving water quality. c) The Organic Farming Scheme will build on previous Organic Farming Schemes to encourage farmers to respond to market demand for organically produced food, and provide environmental protection. <u>On-Farm Capital Investments</u> This measure encourages a broad range of investments in physical assets to help producers improve the efficiency and sustainability of their farm enterprises. Funding will be provided for example, for low emission spreading equipment, e.g. trailing shoe, as well as farm nutrient storage and animal housing to further reduce nutrient losses from agriculture to the environment. <u>Knowledge Transfer Schemes</u> A suite of knowledge transfer measures to target specific areas including environmental issues will be provided in the RDP 2014-2020. Knowledge Transfer groups/Discussion groups in all sectors will raise awareness of environmental issues, including the protection of water quality. The Continuous Professional Development of professional farm advisors will include education and awareness-raising in relation to the protection of water quality and WFD requirements.	Nutrient planning in High Status water areas and Vulnerable water areas. Local Schemes for Burren and FWPM areas. Organic Farming Scheme – market led. On farm capital investments in sustainable measures. CPD and Knowledge Transfer.
S4	**Department of Jobs, Enterprise and Innovation, IDA & Enterprise Ireland** The specific issues of relevance to enterprise arising under each of the six objectives set out in Irish Water's draft strategic plan are:	

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	Meeting customer expectations: Irish Water needs to set high standards and ambitious goals to deliver on Ireland's potential to develop a competitive advantage in water services provision in the longer term. It is important that the strategic plan clearly sets out what non-domestic customers can expect in terms of product and service standards (e.g. minimum pressure levels, supply interruption, resilience, security of supply, complaint handling), and that performance is monitored and publicly reported. ***Ensuring a safe and reliable water supply:*** We support the measures proposed by Irish Water to meet water quality standards, ensure adequate and reliable water supplies and provide acceptable service levels at least cost to business and domestic customers. A greater focus on the specific needs of business customers is required. ***Providing effective removal of waste water:*** Balancing economic and environmental objectives with limited funding to deliver effective waste water services will be challenging, particularly in the short to medium term. We support Irish Water's proposal to prioritise waste water investment where the environmental benefit is greatest and growth in demand for water services is occurring. ***Protecting the environment:*** Improving Ireland's environmental sustainability and meeting our environmental obligations are important, but it must be done at least cost to Irish water customers – domestic and non-domestic. We welcome the focus on improving energy efficiency and climate change adaptation. ***Supporting future social and economic growth:*** Ensuring sufficient water services capacity at least cost in Dublin and the main regional centres to meet existing and future demand is central to national and regional economic development. In meeting demand, it is critical that sufficient spare capacity is available to facilitate mobile business investment (foreign and Irish owned). We support Irish Water's proposed measures to drive for efficiencies in all capital and operating cost factors that are within its control. We need to ensure that any cost savings in expenditure are not realised at the expense of outputs (e.g. the quality and reliability of water services). The new connection charging policy for non-domestic users is very important to support enterprise growth and job creation but has yet to be agreed. It will require the approval of the CER, following a public consultation with stakeholders. ***Investing in our future:*** Adopting a national approach to water services investment offers significant opportunities for efficiency in operations, investment and for improved service delivery and quality which must be captured. We support Irish Water's focus on managing its assets and investments in	The WSSP should set out non-domestic service standards, public monitoring and reporting of performance. Further text on monitoring and reporting is included in the section on "Our strategic plan for 25 years" and targets are set at the end of each strategic objective. Non domestic service standards are the subject of a separate Code of Practice approved by the CER. The submission seeks a greater focus on needs of business customers. Submission supports prioritisation of delivery of wastewater investment where the environmental benefit is greatest. Environmental sustainability should be at least cost to customers. Submission supports the focus on energy efficiency and climate change adaptation. Respondent requires sufficient spare capacity to support business investment (particularly in Dublin and regional centres). Ensure cost savings are not realised at expense of quality and reliability. A new connection charging policy is important to support enterprise growth. This is a matter for the CER. National focus allows efficiency in operations and

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	accordance with best international practice, delivering cost competitive, high quality water services, establishing a sustainable funding model to achieve the required outcomes and implementing innovative technical solutions to drive efficiencies and reduce the cost of providing water services. The adoption of new processes, procedures and technologies within Irish Water may offer sub-supply opportunities for Irish firms and potential to attract FDI. Investment in the network should also provide more opportunities for mobile investors (Irish and foreign) to develop innovative products and services, test bedded in Ireland, which can then serve global markets (e.g., smart city initiatives). It is important that Irish Water engages with IDA Ireland and Enterprise Ireland on the potential to deepen our competences in this sector and with Science Foundation Ireland on the research agenda.	procurement. Submission supports focus on managing assets and investments in accordance with international best practice. Submission highlights supply opportunities by Irish Water to attract FDI, particularly in areas of innovation. Irish Water needs to engage with IDA Ireland and Enterprise Ireland on investment and with Science Foundation Ireland on research. Text on this has been added to strategy IF4b.
S5	**Inland Fisheries Ireland** **Response related to SEA and AA only.**	
S6	**Department of Arts, Heritage and the Gaeltacht** The Department welcomes Irish Water's development of its Water Services Strategic Plan 2015-2040 and the commitments made within to the protection of the environment. The Department has the following observations to provide in relation to nature conservation. These should be considered in conjunction with earlier observations provided, as well as the preliminary discussions between Irish Water and the National Parks and Wildlife Service of this Department on 20th March 2015. It is noted that Irish Water has posed a number of consultation questions, the majority of which are outside the scope of these observations. The Department notes the high-level nature of the Strategic Plan and the challenges that creates for the identification and analysis of site-specific impacts. However, it is suggested that the assessments of the Plan and the Plan itself would benefit from a more in-depth analysis of the likely types of impacts that will arise from the Plan at its different levels of implementation, the implications for the receiving environment and the mitigation that will need to be developed and implemented at the plan-level (not just project-level). The Department acknowledges that the Tier 2 Implementation Plans may serve to mitigate many of these impacts but it is at times unclear to the Department if their scope will address all the issues that can already be anticipated to arise, (including, but not only, as a result of existing assets).	DAHG welcomes the plan. DAHG considers the WSSP and its assessments would benefit from more in depth analysis of likely types of impacts at different levels of implementation and implications for the receiving environment. DAHG recognise that the Tier 2 plans will be the subject of separate assessments, where appropriate.

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	The Plan It is noted in the documentation provided that the Plan is to be prepared by Irish Water, and to be approved by the Minister for the Environment, Community and Local Government. For the purposes of clarity, it should be stated which public authority is to conduct the appropriate assessment, pursuant to Regulation 42 of the European Communities (Birds and Natural Habitats) Regulations 2011, and to prepare the determination as to whether the plan will adversely affect the integrity of European sites.	WSSP to state which public authority is to conduct the Appropriate Assessments and prepare the determination. Text confirming that Irish Water is the Competent Authority for the Appropriate Assessment has been added to the revised Natura Impact Statement.
	As noted earlier, the Department welcomes the commitments within the Plan to protect the environment, and to prepare a number of Implementation Plans, such as the Sustainability Policy and Framework, to achieve this aim. However, the Department is of the view that more explicit reflection within the Plan of the wider obligations of the European Union's Birds and Habitats Directives, and national obligations, would be of value, particularly as these may be or are more stringent than those required by currently-referenced Directives. There are several references to "ecology" and "environmental obligations" but they are usually (not always) general in nature. Some examples are provided below though these are not exhaustive.	More reflection of wider obligations under EU Birds and Habitats Directives in the plan would be of value. Text detailing Irish Waters obligations under the Birds and Habitats Directives has been added to a new "Our Legal Obligations" section in the Environment chapter.
	Chapter 2: Challenges and Strategic Priorities: Protecting the Environment A number of EU Directives are referenced in this regard, though the requirements of the Birds and Habitats Directive are not explicit. Given the range of challenges that Ireland faces across freshwater and water-dependent habitats and species, their current conservation status, the obligation to maintain and restore such habitats and species to favourable conservation condition, and the implications this has for water resources and usage, the Department would suggest that these obligations are explicitly referenced. The European Communities (Birds and Natural Habitats) Regulations 2011 (Statutory Instrument 477 of 2011) also places a duty on all public authorities to carry out their functions in a manner that does not cause deterioration to European sites. Further detail on these obligations is provided in Regulation 27 of the above SI; it is recommended that these obligations be examined as they may have further implications for the contents of the Strategic Plan and subsequent Plans and operations than has yet been incorporated. These may also need to be considered in Irish Water's analyses to inform priority-setting.	Obligations under Birds and habitats Directives and the duties placed on public authorities should be explicitly referenced in this section. Additional text stated above.
	Chapter 4: Ensure a Safe and Reliable Water Supply **WS1a. Prepare a National Water Resources Plan and implement on a phased basis** The Department	Irish Water facilities which are compromising the achievement of favourable conservation condition

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	welcomes the commitment to the environmental sustainability of any proposed water transfers and that they "*will not compromise the needs of the local catchment or region*", and to improving or decommissioning those which are causing avoidable environmental impacts. The Department requests that those facilities that may be compromising achievement of the favourable conservation condition, as required under the Birds and Habitats Directives, are included and prioritised in this regard.	under the Habitats Directive should be included and prioritised. Reference to specific sites is not appropriate within a high level Tier 1 plan but would be the subject of the lower Tier plans and projects.
	WS2b. Manage existing water resources and plan for new resources taking a regional view of needs and having regard to the objectives of the Water Framework Directive. The narrative in this section refers to a balancing of the volume of abstractions and their location with the "*needs of the ecology supported by the water environment*". The scope of this commitment is unclear as to whether it includes a commitment to the requirements of the Birds and Habitats Directives under Article 6 (3) and 6(4), or more broadly, e.g. to Annexed species occurring outside European sites, to those protected under national legislation, or locally important etc. It is suggested that Irish Water include an explicit commitment to the objectives of the Birds and Habitats Directives in this Strategy, and that appropriate indicators are also developed.	Irish Water to include an explicit commitment to the objectives of the Birds and Habitats Directives in this Strategy, and that appropriate indicators are also developed. Strategies committing to the requirements of the Birds and Habitats Directives are included under aim EN2 and cover all IW operations.
	Chapter 5: Provide effective management of wastewater This Objective is particularly relevant to the achievement of Ireland's obligations under the Birds and Habitats Directives, and these should inform any exercises for prioritising Capital Investment , as well as being reflected in the "Purpose" column and the supporting narrative for each of the associated aims.	Obligations under Birds and Habitats Directives should inform prioritisation of Capital Investment and be reflected in the Purpose column in the WSSP. Text highlighting the commitment to the Birds and Habitats Directives is included in the "Our Legal Obligations" section of the wastewater strategic objective.
	The Department notes the commitment to "*robust and well-engineered solutions which are sensitive to the environmental context [which] will enable Irish Water to develop wastewater systems that can be built and operated without excessive adverse impact on communities and the wider environment*". Given the challenges that may arise in demonstrating that such solutions will meet the standards required by the Habitats and Birds Directive, the Department suggests that research and development for such solutions, as well as research to understand their effects on the natural environment be included within Strategy IF4: Research and Innovation, and the wording of the Strategy be broadened to reflect same. It is currently stated as: "*Promote research and proven, innovative technical solutions to meet standards set by our regulators including our objectives for cost and energy efficiency.*" This also serves as an example where a more in-depth analysis of the impacts arising from current and	Inclusion of R&D for solutions to wastewater treatment and the research on the impact of the solutions on the environment in IF4: Research and Innovation and broaden the text of this strategy to reflect the same. Text for IF4a commits to innovation to *deliver benefits in water and environmental quality* and *to achieve best outcomes for our customers and the environment*.

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	likely activities and technological developments could usefully serve to inform the mitigation required for the Plan. With regard to the Indicators and Targets for effective management of wastewater, those for WW1 focus on compliance with emission limit values set by EPA discharge licences. In accordance with the 2009 Freshwater Pearl Mussel Regulations, these emission limit values are to aim to achieve the ecological quality objectives set out in the Fourth Schedule to the Regulations. These objectives could be usefully reviewed with a view to informing Plan level (Tier 1 and 2) mitigation and strategy development. **Chapter 6: Protect and enhance the environment** With respect to key challenges, meeting the requirements of the Habitats Directive, as well as Regulation 27, will also be relevant, particularly as these may be more stringent than those standards required by the WFD. Regulation 27 and the obligations within are also relevant to the Strategies of this section, and could usefully be referenced in the narrative; it should also be noted that this will also be relevant to maintenance and ongoing operations that would or might fall outside of the planning system (which is referenced in EN1e). The European Communities Environmental Objectives (Freshwater Pearl Mussel) Regulations 2009 are also relevant in that they set out environmental quality objectives for the habitats of the freshwater pearl mussel in named populations. The Indicators and Targets for this Section would benefit from further development that would improve consideration of the requirements of the Habitats and Birds Directives, including, but not only, the freshwater pearl mussel (relevant to Consultation Q 25). **Chapter 7: Support social and economic growth** The Department would welcome clarification as to whether the engagement with planning bodies referred to in this Chapter is focused on those that are part of the planning system, or if it is intended to be interpreted more broadly *e.g.* Government Departments and agencies involved in sectoral-development planning, (such as agriculture, forestry, tourism etc). Such sectors and their development will obviously have significant implications for water resource issues. **Chapter 8: Invest in our future** As noted above, the proposed Research and Development Programme could usefully include aspects that would seek to develop technologies that will minimise environmental effects, to improve	Objectives from Freshwater Pearl Mussel Regulations to be referred to in informing the setting of ELVs for discharge licences. These would be considered in Tier 2 plan and Tier 3 project development. The Habitats Directive may require more stringent standards than the WFD. Regulation 27 from the Habitats Regulations could be referenced, particularly in regard to O&M which are outside the planning regulations (reference in EN1a). IWs responsibility under the Birds and Habitats Regulations are acknowledged in the "Our Legal Obligations" section of Chapter 6. Request to add further indicators and targets specific to the Habitats and Birds Directives, including but not limited to the FWPM. Indicators and targets are stated under AIM EN2 which includes reference to the Habitats and Birds Directives. Is engagement solely with planning bodies or with other government departments involved in sectorial planning (e.g. agriculture, tourism and fisheries)? Strategy SG1a refers to engagement with key stakeholders which would include the above, where appropriate. R&D on activities to minimise environmental effects and improve understanding. Refer to above response.

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	understanding of the effects that do arise and to increase/demonstrate the effectiveness of mitigation measures that will or may be relied on at the project-level. Similarly, within the ER, assumptions are stated that include "*that the environmental effects of infrastructure proposals identified in future implementation plans will be fully considered through SEA and AA (as appropriate) as well as through EIA and AA at the project stage where appropriate"* and that *"It is assumed that the potential for construction activity associated with the implementation of projects to generate adverse environmental effects would be managed/mitigated where possible using best practice"*. It is the Department's view that the latter should not be assumed to be the case, as there is very real potential that current best practice methods may not be sufficient to meet the standards required for an Article 6 (3) assessment, in terms of demonstrating effectiveness of mitigation, particularly in sensitive and high-risk areas. The evolution of best practice and the demonstration of its effectiveness need to be considered at the strategic Tier 2 level, and not only at project-level. The Department welcomes the commitment within IF2 to engage collaboratively with the National Parks and Wildlife Service of this Department, and would also welcome opportunities to engage in the development of Irish Water's Research and Innovation agenda.	Assumption that all environmental effects would be managed mitigated through best practice should not be made in the SEA ER. Best Practice may not be sufficient to meet the standards required for an Article 6(3) assessment. Commitment to engage with NPWS is welcomed.

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S7	**Eastern and Midland Regional Assembly** *A detailed preamble of the role of the regional assemblies and the legislation and purpose of the Regional Planning Guidelines is presented. Information in the submission specific to the WSSP is copied below.* **Population projections** Regional population targets were issued by the Department of Environment Community and Local Government in 2009, these targets were transposed into the Regional Planning Guidelines and are set out in Chapter 4, of the relevant RPGs 2010-2022. It is considered that these policy targets should be the primary source to inform the population growth forecasts for the draft Water Services Strategic Plan (WSSP). This would ensure the required consistency between the WSSP and the National Spatial Strategy and regional planning. Whilst it is accepted that there is a commercial challenge in using these targets to inform cost effective long term investments in existing and new infrastructure there is a requirement to align investment with national and regional spatial policy. It is predicted that the NSS will be reviewed and this review will included new population targets and in turn the RPGs will be reviewed and replaced with Regional Economic Strategies with revised population and housing targets. In this regard it is noted that the WSSP proposes an interim review to ensure alignment with the new NSS and RSES and River Basin District Plans when they are published, this is welcomed by the Regional Assembly. The settlement hierarchy within the RPGs reflects the different approaches required for the development of metropolitan, hinterland and rural areas in the country and the typology level of towns to achieve balanced regional development. The typology consists of gateways, hubs and town of various levels on the hierarchy, which is informed by the higher order NSS. In this regard the alignment of the WSSP with NSS designated settlements, identified as Large Urban Settlements; Regional Gateways; and Other Towns in the draft WSSP is welcomed as a hierarchy to focus investment in infrastructure and to provide an acceptable level of headroom capacity. Furthermore the commitment to support anticipated growth in line with the "core strategies" in local authority city and county development plans, which are also aligned with RPGs since 2010, is also welcomed.	Policy targets should be used as primary source to inform the population growth forecasts of the WSSP and would ensure consistency with the NSS and RGPs. Requirement for consistency with national and regional planning policy is now included in a new section on "Our Legal Obligations within the Support Growth strategic objective. Interim review to align WSSP with revised NSS and new Regional Economic strategies is welcomed. Alignment of WSSP with NSS designated settlements of Large Urban Settlements; Regional Gateways; and Other Towns and their use to define headroom capacity is welcomed. Commitment to support growth in line with 'core strategies is welcomed.

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	Environmental Directives A significant aspect of the environmental responsibility of Irish Water is to comply with the European Union Water Framework Directive and the Urban Wastewater Treatment Directive, both of which are transposed into Irish law. We recommend that the WSSP recognise this responsibility more explicitly and enthusiastically. There are currently significant issues in achieving national compliance with these Directives, evidenced by the EPA's remedial action list and the European Commission Infringement Case against Ireland. This is of relevance in the preparation and adoption of the proposed National Water Resources Plan and Wastewater Compliance Strategy (which are assumed to be Tier 2 Implementation Plans), and should be one of the primary considerations of these plans. They should also be considered in tandem with the upcoming publication of the new round of River Basin District Management Plans, and the upcoming NSS review and RSES publication.	WSSP should recognise the commitment to the WFD and UWWTD more explicitly and enthusiastically and compliance with these Directives should be primary considerations for the Tier 2 National Water Resources Plan and Wastewater Compliance Strategy. These commitments are now detailed in sections on Our Legal Context in the Introduction and Our Legal Obligations in the Chapter 6.
	The proposed targets for compliance with the Urban Waste Water Treatment Directive of 90% compliance by 2021 and 100% compliance by 2040 (the end of the WSSP) are not in compliance with the Directive, whose final compliance deadline was 2005.	Targets for UWWTD compliance in the WSSP are not in compliance with the Directive (who's target was 2005). A revised target for 2027 is now included.
	The proposed strategy to "progressively meet the requirements of the UWWTD and the EPA Discharge Licences and Certificates" is not in compliance with Irish or EU law. Full compliance should be achieved as soon as practicable and the timescales for compliance should be specified in the WSSP. The EMRA is concerned by ongoing non-compliance by Irish Water with EPA Discharge Licences within the Region which both damages the environment and could impede development in line with the RPGs	Full compliance with Directives should be achieved as soon as practicable. EMRA considers that non-compliance impedes development.
	Climate Change It is noted that Climate Change Adaptation and Mitigation is identified as a Tier 2 Implementation Plan, this should be considered as part of the requirements of climate change modelling to ensure resilience of the existing and future network. The proposed Sustainable Energy Strategy should provide for commitments to energy efficiency and reduction in line with national requirements under the National Energy Efficiency Action Plan.	Climate change modelling should be considered when preparing the Climate Change Adaptation and Mitigation Strategy to ensure resilience of water services. Also Sustainable Energy Strategy should meet NEEAP. These proposals will be considered in the respective Tier 2 plans.
	The WSSP should also recognise the climate impact of infrastructure and consider this fully in all infrastructural decisions.	
	The draft Plan characterises water conservation as primarily a matter of leak control or meter-incentivised behavioural change. It is weak and general in relation to the full range or water conservation strategies including technical specifications and technology choice, greywater and	WSSP should consider more water conservation strategies including technical specifications and technology choice, greywater and rainwater use. Additional consideration with regard to customer

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	rainwater use. Water conservation has significant climate benefits both by reducing operational energy use and by reducing infrastructural requirements.	demand management has been included in Strategy WS3c.
	With regard to resilience, the Eastern Midland Regional Assembly is a partner in an Horizon 2020 funded EU project called RESILENS which aims to address critical infrastructure vulnerabilities and enhance the resilience of infrastructure in Europe, thereby increasing the ability of societies to prepare for, respond to, and recover from the range of crises and disasters including natural hazards and man-made threats. The aim of this project is to produce a set of European Resilience Management Guidelines that can be applied at a national, regional and local level. Part of this project is also a demonstration of these Guidelines through pilot implementation for critical infrastructure at a national, regional and local level.	Critical infrastructure resilience management guidelines and pilot implementation noted.
	Consultation	
	One of the functions of the Eastern and Midland Regional Assembly will be to prepare a Regional Spatial and Economic Strategy for the Region, to replace the existing Regional Planning Guidelines 2010-2022. In preparation of such a document there will be a requirement for extensive engagement, collaboration and input from key stakeholders including national infrastructure providers. These bodies have a key role to play in the implementation of spatial policy and the services they provide are considered a pre requisite to supporting population and economic growth in the Region.	Engagement encouraged between Irish Water and the EMRA in preparation of the Regional Spatial and Economic Strategy.
	Furthermore the ongoing implementation of regional planning, currently through the statutory RPGs requires ongoing input from various bodies including national infrastructure providers. This was previously performed through RPG Implementation Groups and RPG Technical Working Groups, these bodies will be reimagined by the new Regional Assembly to assist in implementation of the RPGs.	New RPG implementation and working groups under the Regional Assemblies
	The Regional Assembly welcomes any engagement from Irish Water and is willing to establish a structure for such engagement, or include Irish Water in existing structures. The Assembly considers that this structure for engagement should also consider including the Water Framework Directive Implementation element of the EPA.	
	Public Participation	Irish Water should commit to Best Practice in public consultation. The final plan includes Irish Water's commitment to best practice in public participation in line with Ireland's commitments under the Aarhus Convention in Strategy CE1f.
	The plan should commit Irish Water to best practice in public participation, in line with Ireland's commitments under the Aarhus Convention. The Convention's Recommendations on Promoting Effective Public Participation in Decision-making in Environmental Matters http://www.unece.org/fileadmin/DAM/env/pp/mop5/Documents/Post_session_docs/ece_mp.pp_2014_2_add.2_eng.pdf will be of assistance.	

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	Conclusion The Water Services Strategic Plan is required to align with the Regional Planning Guidelines 2012 - 2022, at policy level, it is considered that the draft plan demonstrates this alignment, whilst recognising that national and regional planning policy will be reviewed in the coming years and that the WSSP will be amended accordingly. The Regional Assembly welcomes any requests for further discussion or collaboration on matters relating to the preparation of the Draft WSSP.	Regional Assembly welcomes requests for further discussion or collaboration.
S8	**Northern and Western Regional Assembly** The wide range of issues covered in the Draft WSSP are welcomed, particularly those important in the context of regional development as described in the strategic objectives - ensuring a safe and reliable water supply, providing effective management of wastewater, protecting and enhancing the environment, supporting social and economic growth and investing in future growth and seeking to meet customer expectations. The proposed cyclical review of the WSSP every five years and the preparation of detailed implementation plans on issues such as waste resource management, wastewater compliance and sludge management will support on-going reviews of social and economic progress, together with protection of the environment.	NWRA welcomes the Draft WSSP and plans for 5 year cyclical review.
	As per the Water Services (No. 2) Act (2013) and associated Ministerial Direction, the Draft WSSP contains a series of strategic objectives. The inclusion of performance targets and indicators is valuable in this context and regular reporting should be made publically available. Monitoring can be refined as more data becomes available and should be aligned with the monitoring of the new Regional Spatial and Economic Strategies to be in place from 2016.	Performance against targets should be made publicly available. Irish Water has committed to public reporting of performance against targets in each plan revision in the section on "Our Strategic Plan for 25 years".
	Proposals within the Draft WSSP to work with national, regional and local planning bodies, ensuring that Irish Water understands and plans for future development is welcomed, together with a twenty-five year investment perspective, planning for effective management of existing assets, network connections and capacity.	Engagement with national, regional and local planning bodies for future development is welcomed.
	The vision of the WSSP is supported and the Regional Assembly and the Local Authorities in the Western and Northern region are keenly aware of the challenges for water service infrastructure which Irish Water is now facing. As noted previously in the submission by Regional Authorities (February, 2014), the effective implementation of all seven Regional Planning Guidelines (RPGs) 2010-2022 documents is reliant upon 21st Century Water Services infrastructure provision. This necessitates the alignment of investment priorities with land use planning policy. Implementation of	Investment priorities and land use policy must be aligned. Growth of designated settlements is to be promoted. A commitment to alignment of policy is made in the "Our Legal Obligations" section of the Support Growth strategic objective.

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	the existing RPGs and NSS is integral to the Government's programme to enable the planning system to play an important role in promoting economic recovery by delivering a plan-led planning system where spatial plans are aligned to benefit the economy, the environment and provide for an improved quality of life. This process sought to prioritise future infrastructural investment (including water services infrastructure) at a regional and local level, whilst promoting the growth of designated settlements. Under the new arrangements for regional spatial planning and economic development strategies, as provided for in the Local Government Reform Act, 2014, Regional Spatial and Economic Strategies (RSESs) will be prepared (in tandem with the National Planning Framework) in 2016, replacing the existing RPGs. They will be guided by CSO population forecasts (2013) and new regional growth targets from the DECLG, to be established as part of the NPF/RSES processes. As set out in the Draft WSSP, *'future development of water services must be in line with agreed national and regional development plans'* (p.1) and Irish Water's intention to '*work with regional planning authorities and other agencies in the forward planning of water services infrastructure to meet social and economic growth'* are critical commitments. Engagement with the Regional Assemblies regarding the RSES, revised population targets and future growth priorities within the regions will be necessary to successfully align future growth as determined through the national, regional and local planning systems with the infrastructural priorities being developed by Irish Water. The DECLG in association with other government departments and agencies are developing an econometric model for the new population projections which will be encompassed within the NPF and RSESs. In identifying investment priorities, Irish Water should seek to utilise consistent forecasting methodologies; using multiple parameters (i.e. not solely population based or economics based) and ensure that spatial planning policy drives future social and economic conditions and the location of future sustainable growth while taking account of environmental capacity. The existing suite of RPGs support the sustainable growth of settlements in the hierarchy of Gateways, Hubs and other key settlements. In line with the provisions of the 2010 Planning and Development (Amendment) Act, Local Authorities amended their Development Plans and Local Area Plans to ensure consistency with the population targets and objectives of the RPGs. New Local Economic and Community Plans (LECPs) are now also a key component of Local Authority policy and the provision of water infrastructure shall be critical to accommodating identified economic development strategies at local level. The North Western Regional Assembly administrative area	Regional Spatial Economic Strategies will be prepared by the RAs using CSO 2013 population forecasts and new NECLG growth targets. Engagement with the RAs regarding the RSES will be necessary. Irish Water should use forecasting methodologies consistent with the RSESs. This commitment is made in the "Our Legal Obligations" section of the Support Growth strategic objective. Local Economic and Community Plans (LECPs) are a key component of Local Authority policy and new water infrastructure is critical to accommodating identified economic development strategies at local level. A commitment to engaging with local planning bodies in the development of their economic plans is made in

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	includes the Gateways of Galway, Letterkenny and Sligo; the Hubs of Castlebar-Ballina, Tuam, Monaghan, Cavan and many medium and small towns and rural areas Investment in waste water treatment facilities, plant and network capacity upgrades is of utmost importance to accommodate existing housing, commercial and industrial developments. As noted by Irish Water, 'new' development is emerging as the economy recovers. This must be planned in the right locations with the appropriate water services infrastructure. Irish Water and the Draft WSSP acknowledge the need for '*substantial improvements to water supply capacity, quality and reliability…in addition to upgrading of our wastewater infrastructure, both treatment plants and collection networks, in order to protect the environment'* (p. iv). Chapter 4 of the Draft WSSP references the importance of ensuring a safe and reliable water supply. It refers to some catchments in the west of Ireland as having a surplus of available water resources but a deficit in treatment provision (p.23) - as evidenced by the spatial representation in Map 2 'Irish Water Wastewater Treatment Plants' (p.xiv). Within the *Northern and Western Regional Assembly* area – 34% (43/126) of the water supplies listed on the *EPA's Remedial Action List* occur in the region. At the end of 2013, two out of seven of the larger urban areas listed were above the Urban Wastewater Treatment Directive (UWWTD) thresholds and lack treatment or have preliminary treatment only. These are located in County Donegal while 39% (11/28) of the smaller urban areas with a population equivalent (p.e.) of 500 are at threshold. These towns lack treatment or rely on preliminary treatment only. Of the nine settlements listed, four discharge sewage without treatment. The issuing of boil water notices due to microbiological contamination is frequent in County Roscommon, a county sourcing almost 80% of its drinking water from groundwater. Regular occurrences of drinking water contamination in Roscommon and Galway are noted in the Draft WSSP and are a matter of serious concern to the Regional Assembly. Targets for population and economic growth must be supported by the availability of water and wastewater infrastructure. The strategic aims as set out in Chapter 7 (p.60) of the WSSP supporting social and economic growth, together with SG2c which will develop growth scenarios based on development plan projections over short, medium and long term growth horizons are supported. As stated by Irish Water, the intention to engage with local authorities early in the planning process (p.65) will ensure that local authorities are aware of water services constraints which would impact on the size, scale, cost and location of proposed development centres including the environmental impacts. Similarly this approach will be necessary during the preparation of the Regional Spatial and	Strategy SG1a. The NWRA highlighted the deficiencies in water and wastewater services in the region. Targets for population and economic growth must be supported by the availability of water and wastewater infrastructure. Strategy SG2c is supported by the NWRA.

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	Economic Strategies (RSES). **Regional Indicators Report 2014** This report outlines the status (as of October 2013) of the water and wastewater treatment capacities in RPG settlements (Gateways, Hubs and Tier 1 Settlements) to accommodate the 2016 population targets. It also identifies the relative compliance with the Urban Wastewater Treatment Directive Discharge Licences. Adequate *infrastructural capacity is required in order to sustainably reach the population targets and ensure that that water quality achieves 'good status' in accordance with the Water Framework Directive.* The level of compliance with the UWWTD discharges licences relating to the collection, treatment and discharge of urban wastewater is reported by the EPA. These areas of poor performance need investment to accommodate the existing RPG/ Development Plan 2016 targets. Many of the treatment plants in the RPG settlements met the UWWTD standard in 2011, however twenty-two failed and eight received no treatment or a basic level of treatment prior to discharge and, consequently, the effluent could not achieve the quality standards specified in the Directive. The majority (61.25%) of settlements have sufficient **water infrastructure capacity** to accommodate planned growth, i.e. target population growth to 2016 which is envisaged in the RPGs or by the Local Authority. 27.5% of the settlements require infrastructure to accommodate the planned population target, but it is important to note that some development can proceed and be accommodated. However, for 11.25% of settlements it has been identified that planned development may not proceed due to infrastructural deficiencies in water capacity. **Wastewater Treatment Capacity** is sufficient to accommodate planned growth for 61.25% of settlements, while 22.5% of settlements can accommodate some growth but require investment in infrastructure in order to achieve the planned population target. Planned development cannot proceed in 16.25% of settlements due to identified infrastructural deficiencies in wastewater treatment capacity. Improved compliance with respect to urban wastewater treatment is integral to safeguarding and improving water quality across regions. Where improvement works are being carried out to ensure	The NWRA highlighted that a significant number of settlements in the region require investment in water and wastewater infrastructure capacity to accommodate planned growth. Where improvement works for compliance with UWWDLAs are required options to provide additional capacity should be assessed.

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	compliance with licences, options to upgrade treatment plants to provide additional capacity should be actively examined by Irish Water. This will have a direct effect on achieving the objectives of the River Basin District Management Plans and will also have a direct or indirect impact on the status of EU protected habitats and species, the overall natural environment and the quality of human health. These works are critical to the achievement of the RPG population targets and the settlement strategy is heavily dependent on the sustainable provision of critical infrastructure. The *strategic network development plans* will be very beneficial, supporting anticipated population growth in line with core strategies. A crucial issue for many regions as noted in Chapter 2 of the Draft WSSP is that '*planned population growth may not be where water and wastewater services are available'*. The emphasis must remain on targeting development at appropriate growth centres established within Development Plan Core Strategies. Overtime, greater rationalisation will occur as Local Authorities continue to phase development in a sequential manner; and align development with the delivery of water services and other infrastructure. Spare capacity targets namely the 20% capacity headroom for larger urban centres, 15% for regional gateways and 10% for other towns (p.66) which will limit the economic and social impact of exceedances are welcomed. Information on capacities (including additional headroom) and projections for water and wastewater in the network development plans must be available to local authorities for consideration in the Strategic Environmental Assessment (SEA), Appropriate Assessment (AA) and Strategic Flood Risk Assessment (SFRA) processes as they shape the considerations and alternatives considered in land use plans. It is recommended that Chapter 2 (p.11) of the final WSSP should include the need to align the WSSP with spatial plans and deliver realistic long term population and economic growth targets. This should also be included with other short to medium term priorities, including reducing drinking water quality problems, achieving compliance with the UWWTD, reducing leakage in water supply networks and addressing inadequate asset condition information. **Water Framework Directive & Floods Directive & Environmental Protection** Balancing the development of regional growth centres in conjunction with protection of the environment is a highly challenging but nonetheless a very important task. Significant targets for environmental protection are formalised through the European Union's (EU) Water Framework Directive (WFD), Floods Directive, Habitats and Birds Directive.	Developments must be targeted at appropriate growth centres established within Development Plan Core Strategies. Proposed headroom targets are welcomed. Information on capacity and network development plans need to be available to LAs in the development of their plans and consideration of SEA, AA and SFRA. Ch2 (p.11) should include the need to need to align the WSSP with spatial plans and deliver realistic long term population and economic growth targets as a short to medium term priority. An additional priority in relation to *Catering for Growth* has been added to "Our Current Priorities" on page 16 .

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	The aforementioned Regional Indicators Report 2014 highlights the status of water quality and trends in the River Basin Districts towards meeting the objectives of the Water Framework Directive (WFD). Given the obligations set out under the WFD, improving the quality of water bodies is imperative to securing the long term protection and enhancement of the natural environment within the regions. It is also necessary to protect human health and sustain regional economies. Many water bodies will require longer timeframes than 2021 or 2027 in order to improve their status, which is in line with a trend emerging across Europe. Ireland must improve the status of approximately 4,000km of rivers alone which are at less than good ecological status and special protection measures (including associated funding) are necessary to protect and restore all types of high-status water bodies which are under pressure from a variety of pollution sources.	Overview of WFD challenges are presented.
	While there are multiple stressors throughout catchments, Irish Water must play their part in managing the cumulative effects of its activities in association with other activities. Significant responsibility lies with Irish Water in order to implement the programme of measures identified in respective River Basin Management Plan(s) prepared under the EU Water Framework Directive. Irish Water must adopt a catchment approach in their planning and investment strategies. Working within the catchment is critical to improve water management within the context of polluting activities, conservation and slowing the flow downstream/ flood risk management. Funding of improvement measures and an integrated catchment management approach involving a variety of stakeholders will be necessary. The proposals at EN2a (p.55) in the WSSP to apply a holistic approach for the management of catchments is supported.	Responsibility of Irish Water in the implementation of WFD measures is highlighted. Proposals at EN2a are supported.
	Water abstraction and wastewater treatment have a major influence in the catchment where they occur. Other catchment activities will both affect the operation of water services infrastructure and can result in sustained high treatment costs. A catchment with good water quality and healthy ecosystems will reduce treatment costs. The EPA collected substantial scientific data to support the preparation of new a new RBMP. Irish Water should use this to support effective water quality management.	Irish Water should use catchment data collected by the EPA for preparation of the current RBMP to support effective water quality management.
	Water quality, excessive abstraction and flood risk are interrelated issues. Water abstraction must be carefully planned to prevent impacts on the catchment and biodiversity particularly in the context of climate change where there are likely to be longer periods of low flow and drought like conditions. Large scale projects such as the *Dublin Water Supply Project* must be planned in a manner which will not significantly impinge on other regions.	Careful planning of water abstraction in the context of climate change (more low flow and drought conditions). Proposed climate change and mitigation strategy is important in this regard.

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	The proposed 'Sustainability Policy and Framework' (p.54) and 'Climate Change Adaptation and Mitigation Strategy' as indicated at EN1c will be important components in planning for future water services. Flood protection measures are noted within this context. **Flood Risk** The EU Floods Directive is being implemented in Ireland through the Catchment Flood Risk Assessment and Management (CFRAM programme). Regional assemblies and local authorities have a key role through spatial planning to examine and assess flood risk and seek to manage it through RPGs, Development Plans and Local Area Plans. While it is noted that Irish Water intend to collaborate with the OPW and local authorities on flood risk, it should participate in the CFRAM development process, providing details of where treatment plants and sewerage networks may be flooded or where this has previously occurred. The WSSP indicates that Irish Water will prepare a register which will record and gather information on flooding events from combined sewers caused by inadequate capacity and other causes such as blockages, collapses and equipment failures, cataloguing the extent, frequency and cause of flooding (p.46). The proposed risk assessments (p.45) for agglomerations are welcomed in order to determine short, medium and long term risks to the effective provision of wastewater services, which include the flooding of properties, equipment failure, non-compliance of discharges, environmental pollution and capacity constraints which will be used to plan investment and mitigation measures. Local authorities should be given access to such information as it prepares plan level/ other flood risk assessments. **Catchment Based Approach** WW2b (p.45) refers to working with the EPA and other stakeholders in a catchment based approach to wastewater management. It suggests a balanced approach between sectors in a coordinated manner to meet WFD objectives. Promoting the maintenance and improvement of green infrastructure networks[1] and the use of sustainable drainage systems (SuDs) in urban areas will slow the movement of water in the catchment. Enhanced natural features will improve water quality, with greater chances for recharge and infiltration, better mitigate the effects of climate change, support flood risk management, reduce pollution incidences and enhance biodiversity by maintaining	Irish Water should participate in the CFRAM development process in particular with details on critical infrastructure which could be flooded. Irish Water has committed to the agreement of an MoU with local authorities and the OPW on surface drainage and flood prevention (detailed in the final WSSP on p2). Proposed flooding risk register is welcomed and LAs should be given access to this information. A commitment to making the risk register publicly available in now given in strategy WW2c. Catchment based approach for wastewater management should be balanced between sectors including LAs and communities e.g. promotion of SuDS to assist wastewater treatment capacity. Irish Water has committed to working with all key stakeholders under strategy WW2b.

[1] Green Infrastructure refers to an interconnected network of green spaces (including aquatic ecosystems) and other physical features on land and is considered to be a tool for providing ecological, economic and social benefits through natural solutions.

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	ecosystem services. Local authorities and Irish Water must be proactive in promoting these techniques in spatial planning and environmental protection. Engagement with local stakeholders and communities to take local action in improving catchment management is also an important measure for the next RBMP cycle and Irish Water should provide investment towards this goal. The Environmental Protection Agency (EPA) who regulates Irish Water also implements the EU's Environmental Liabilities Directive. Environmental damage is classified as that which would have a significant adverse effect on water status under the WFD, damage to protected natural habitats and species and land damage that creates a significant risk to human health[2]. This Directive should be referenced in Chapter 6 of the WSSP. **Septic tanks & Sludge** The connection of dwellings with private treatment plants (e.g. ribbon development extending from urban areas) to the public network, wherever feasible is supported in the RPGs for the West and Border Regions RPGs. SG2e refers to this type of connection to the sewerage network. It is acknowledged that Irish Water will consider these with the CER based on the costs of service and the willingness of the property owners to sign development agreements and meet the costs involved. It is noted that the WSSP also refers to the production of a stable pasteurised product consistent with the DECLG Code of Practice for re-use of sludges as fertiliser and soil conditioner (p.56). All sludge management plans for water and wastewater should be consistent with the new Regional Waste Management Plans. **Other infrastructure** SG3 refers to the provision of water services in a timely and cost effective manner. Consideration should be given to other proposed large infrastructural projects, and coordinate, wherever possible, the installation/ delivery of water services infrastructure in tandem with the laying of other utilities (e.g. electricity/ broadband) to minimise excavation works and support mutual benefits, cost reduction and phasing of development. **Monitoring** It is recommended that the indicators and targets in Chapter 6 include a target which ensures that all	Environmental Liabilities Directive should be referenced in Chapter 6 (Protect and Enhance the Environment). Reference to the ELD has been included in the section on "Our Legal Context" p5. Extension of the public network for wastewater treatment (SG2E) would be welcomed. Sludge management plans (EN3b) should be consistent with Regional Waste Management Plans (RWMPs). Consideration of the RWMPs will be included within the relevant Tier 2 sludge management plans. Coordination of new water services infrastructure with other utilities (e.g. broadband and electricity) to minimise excavation and disruption should be given consideration. Ch6 (Environment) indicators and targets should include a target to ensure all EC Infringement Cases are addressed and no future EC Infringement Cases are warranted. The targets within the Environmental

[2] http://www.epa.ie/enforcement/liab/#.VS0KX9LFW_0

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	aspects of Infringement Cases initiated by the European Commission are addressed and no future cases are warranted by the EC. The Assembly supports the prioritisation of investment where the environmental benefit is greatest and growth is occurring, as proposed by Irish Water. **Consumers** Irish Water is responsible for public service pipes up to 225mm from the property boundary with householders being responsible for the service pipe from the site boundary to the dwelling and those found internally in the property. The proposed standardisation of specifications for the design and construction of treatment plants and networks is welcomed to prevent the continued development of ad hoc collection systems. It is suggested that customers are made aware of the how the targeted deployment of repair teams will operate, particularly in the context of fixing existing leakages and what they should expect should there be any impacts to the network (e.g. as a result of storm damage, etc.). Local Authorities make effective use of Twitter and other social media outlets for communicating its activities and services to its customers. This approach should be developed by Irish Water. The levels of 'unaccounted for water' are extremely high and a sustained public campaign is necessary to instigate behavioural change and reduce wastage. Similarly it will be necessary to progress the proposed FOG strategy to change behaviour with regard to fats, oils and greases eradicating them at source. **Conclusion** The Northern and Western Regional Assembly broadly supports the Draft WSSP and has made a number of suggestions which should be considered prior to its finalisation. As previously submitted, it will be necessary to maintain continuity in capital investment in water services to meet statutory drinking water and urban wastewater standards, other EU Directive targets, support long term spatial development and regional economic development, and, as far as practicable, respond to urgent development needs. There will be a need for active engagement by Irish Water in the Regional Spatial and Economic Strategy processes being undertaken by the Regional Assemblies and in the monitoring processes to be put in place to assess the delivery of these statutory regional strategies.	Chapter refer to achieving the Wastewater (WW1) targets which will address the Infringement Cases brought under the UWWTD. Prioritisation of investment for environmental benefit is supported. Consumers should be aware of how the targeted deployment of repair teams operate for fixing leaks. This is not appropriate within this high level strategic plan. A commitment to effective communication with customers is detailed under strategy CE1d. Effective use of social media for customer education on leakage and FOGs. These have been covered under strategies WS3c and WW3d. WSSP is broadly supported by the RA.

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S9	**Southern Regional Assembly** It is noted that The Draft Water Services Strategic Plan (WSSP) prepared by Irish Water seeks to provide a comprehensive and strategic approach to the provision and management of water infrastructure for a 25 year period up to 2040. The Draft Water Services Strategic Plan sets out clear objectives and strategic priorities by which Irish Water(IW) will support social and economic development in Ireland by the management of water assets and the development of water infrastructure to facilitate proper planning and sustainable development. The Regional Assembly notes that objectives contained in the WSSP are formulated using an evidence based approach which is derived from national and regional spatial planning policy including regional population targets. The draft WSSP states that water services infrastructure has to be planned at strategic level in line with Development Plans which incorporate the regional population targets. This approach is endorsed by the Regional Assembly. The Regional Assembly welcomes that the strategic objectives set out in the draft WSSP are formulated to be consistent with the objective of national and regional spatial planning policy in supporting sustainable growth, economic development and protection of the environment. It is also noted that the draft WSSP will be a flexible plan designed to respond to changing circumstances and policy which will be reviewed on a five (5) yearly basis and contains targets and indicators for each strategic objective to allow for the effective monitoring of progress on implementation of WSSP objectives. The draft WSSP also contains provision for an interim review to ensure alignment with the new National Spatial Strategy (to be known as the National Planning Framework)and the new Regional Spatial and Economic Strategies for each region due to be published in 2016. The interim review will be essential to ensure that the WSSP objectives remain consistent with any new iteration of national and regional spatial planning and economic policy. The Regional Assembly notes and concurs with section SG2d on page 66 regarding maintaining appropriate headroom in strategic water services infrastructure with 20% headroom for the 'larger urban centres' of Cork, Limerick/Shannon and Waterford and 10% headroom for 'other towns'. The provision for headroom for Gateways and other towns is consistent with a sustainable settlement strategy and national and regional spatial planning policy. It is also noted that that the Draft WSSP would provide for sustainable development and management of water infrastructure that will protect and improve the environment and also protect and improve	The draft WSSP is welcomed. The planning of water services infrastructure at a strategic level in line with the agreed development plans and consistent with national and regional spatial planning policy is endorsed. Interim review for alignment with the new National Spatial Strategy is welcomed. RA agrees with the proposed headroom targets.

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	water bodies within the river catchment basins, such that implementation of the WWSP would assist in achieving compliance with the Urban Wastewater Treatment and Water Framework Directives. However, in relation to the extra provision for water capacity or services to be allocated to provide for 'one-off' demands (such as industrial development, for example) as cited at page x of the Executive Summary and at strategy SG2d on page 66, then it should be stated the location of significant one-off development should be consistent with the relevant Regional Planning Guidelines and Development Plan policy and should be in accordance with requirements for EIA and Appropriate Assessment. In conclusion, the Regional Assembly endorses and supports the draft WSSP as a strategic plan for water services and infrastructure which will facilitate growth in line with national and regional economic and spatial policy.	WSSP should state that any provision of water infrastructure for one-off development (page x and SG2d) should be consistent with the relevant RPGs and Dev Plan policy and in accordance with EIA and AA. The requirement for development to be consistent with RPGs has been included throughout the document and for development to comply with EIA and AA legislation in strategy EN1e. RA endorses and supports the WSSP.
S10	**City and County Managers Association** The following observations are made: 1. We observe that while Section 33 5(b) of the Water Services (No. 2) Act 2013 explicitly requires Irish Water, in preparing the Strategic Plan to have regard to "proper planning and sustainable development", the CCMA submit that the Strategic Plan should, as far as practicable, endeavour to be consistent with the County Development Plans. Further, Irish Water should have regard to any opinion of the Minister on the national and regional order of priority to the planning and development requirements of Local Authority development plans prepared in accordance with Section 10 of the Planning and Development Acts 2000 (as amended) when preparing a water services strategic plan. 2. We observe that a 25 year strategic plan is generational in its span. Irish Water should ensure that targets are challenging but realistic and appropriate in light of resource availability. 3. We observe that recognition of the Local Authority involvement is limited in the draft plan. We submit that the Plan should explicitly recognise the local authority sector as a Strategic Partner in delivery of water services and the plan be consistent with the sustainability, viability and financial security of the local authority sector in line with the principles of the Water Industry Operating Framework. 4. We submit that the Local Authority sector should have an explicit role in the oversight of the implementation of the strategic plan and specifically that the Local Authority sector is fully represented in the Tier 2 Planning process including the five yearly service plans. 5. We submit that there should be ongoing or periodic reviews to ensure that Value for Money is	WSSP should be consistent with County Development Plans. WSSP should also have regard to Ministerial opinion on national and regional order of priority to planning and the requirements of the Local Authority development plans. Commitment to following the Ministerial Guidelines is included in Strategy SG1a. Targets should be challenging but realistic in line with likely resource availability. Plan should recognise local authority sector as a strategic partner in line with the principles of the Water Industry Operating Framework. Recognition of the LA as a strategic partner has been added to the final WSSP in a new section "Our Partners" in the Introduction. Local Authority oversight of implementation of WSSP. The Local Authority sector is a statutory stakeholder under Section 33 of the Water Services (No 2) Act.

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	optimised in implementing all aspects of the Strategic Plan.	Reviews of plan and value for money in the implementation of the CIP will be undertaken by the CER as the economic regulator of Irish Water.
S11	**Kilkenny County Council** Elected Members of Kilkenny County Council and the members of SPC 5 (Environmental Protection, Water Services and Energy) considered the Draft Water Services Strategic Plan which is currently at consultation stage. Overall, the members were impressed with the Strategy and wish to acknowledge the efforts of Irish Water in the development of the various priorities and targets. They highlighted a number of key issues that they consider need to be addressed in the Strategy. The following is an overview of the issues, with a more detailed account later in this document. • **Funding Model**-Certainty is needed for the funding model, so as to ensure that all the required improvements in water services take place over the Plan period. • **IDA Strategy**- The Minister for Jobs, Enterprise and Innovation, together with the IDA, recently announced that there will be a more regional targeted approach to attracting IDA backed enterprises. This should be taken into account in the Strategy. • **Communication Strategy**-The view is that a more customer friendly type communication strategy should be developed by Irish Water which would make it easier for the public to understand the message being conveyed by IW, e.g. First Fix Policy. • **Elected members**-There is no mention of the elected Councillors in the document. No recognition is given to the special place of elected local representatives in Irish society. There is a need to strengthen the relationship between elected Councillors and Irish Water. Councillors are at the coalface of public opinion, especially as they canvass door to door and listen first hand to the concerns of the public. **Quality of Water-**The quality of water is also used as a measure of how we are perceived as a nation and it is important in the branding of Irish produce. Therefore, it is vital that the targets are achieved. **Targets-**Targets should be realistic and achievable. Unachievable targets will undermine the credibility of the entire document. **ISSUES**	WSSP document is welcomed. Requirement for certainty in funding (IF3). Approval for investment funding is the responsibility of the CER. Regionally targeted approach to IDA backed enterprises. A commitment to working with the IDA and other stakeholders is included in Strategy SG1a. More customer friendly communication should be developed. A commitment to effective customer communication is presented in CE1d. Need to mention elected councillors in document. A new section on Our Partners is included in the Introduction. Water quality targets and link to the branding of Irish produce. Realistic and achievable targets needed.

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	1. New Connections-IW propose to achieve full cost recovery for all new connections. However they should also be mindful not to make the cost of a new connection prohibitive for proposed new customers. Would it be possible for the customers to pay their connection fees over a period of time & for the existing Council fees be retained. **2.** Cost Saving Measures- Quality must not be comprised by cost saving measures. **3.** Headroom 10%-This could be prohibitive towards future economic development and growth large urban centres such as Kilkenny City. Kilkenny is a designated Hub in the National Spatial Strategy and should not be limited to 10%. Headroom for designated Hubs should be 15%-20%. **4.** Customers- IW need to simplify communications to the public. The public are not happy with the current arrangements. Call centre staff are not familiar with areas and there is no continuity of service. The Council gave a far better service before the arrival of the IW call centre. IW should consider having staff designated on a county basis. It is disappointing that there is no specific relationship with Councillors in the Strategy, but yet the Councillors are often the first point of contact for the public. **5.** Sustainable Energy-Irish Water need to be open minded about sustainable energy, e.g. anaerobic digestion and locally grown energy crops. **6.** First fix policy- To facilitate customers, IW should consider redirecting supply outside house/property rather than expecting customers to dig up internal floors, where it is known that a leak is internal and underground. **7.** Water quality-IW should identify in more detail how it proposes to deal with non-drinking water regulation issues which are of particular concern to the public, e.g. **hard water, colour** and **manganese**. IW should have a defined strategy in place for these parameters. It will be a challenge for IW to collect revenue from customers affected by either of these issues. IW should consider a grant scheme, or some other incentivised scheme, for domestic treatment/filtration systems to address these issues. **8.** There is concern that if targets are being driven nationally, that this wouldn't result in reduced resources to individual areas/counties. E.g.: At 39% unaccounted for water (UFW), Kilkenny is ahead of national average of 49% and close to the 2021 target of 38%. Will this result in reduced water conservation funding for Kilkenny? **9.** Abstraction Points- Significant areas around abstraction points are regulated to a level where	New connection policy of full cost recovery should not be prohibitive to new customers. A new connections policy will be the subject of a consultation by the CER. Quality not compromised in cost saving Headroom for designated hubs should be 15-20%, not 10%. Appropriate headroom targets for all urban areas will be aligned with the new NPF and RSESs. Simplify communication and call centre staff not familiar with local issues. Promoting use of LA. Mention of councillors. A commitment to effective customer communication is made in Strategy CE1d and reference to working with LAs is made in a new section on Our Partners. Open-minded on sustainable energy. This will be detailed in the Tier 2 Sustainable Energy Strategy (EN1b). Redirection of supply routes in properties under first-fix where these is a known internal leak. (WS2g). Private side pipelines are not the responsibility of Irish Water. Aesthetic water quality issues. Potential for grant scheme for domestic filtration. The Irish Water strategy for non-drinking water regulation issues is detailed in WS1f. Domestic filtration grant schemes would be the consideration of the CER and DECLG and not Irish Water. Need for regional and local leakage targets not just national. Leakage targets will be further developed in Regional Conservation Strategies (Strategy WS2g).

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	normal farming practice cannot continue. This applies across the country. It should be examined by IW to see if more flexibility can be allowed. **10.** The 2040 target for Urban Waste Water Treatment Directive compliance is 100%. The 2040 target for Category 2 incidents reported to the EPA is 20. Is this not a contradiction? **11.** It is proposed that in the case of emergencies, communications will be by national and social media. No mention is made of communication via the very important local media sector. Local media must be used to communicate with customers. 12. Progress Reports- Asset Strategy should include for progress reports to local authority members at a minimum of once a year.	Flexibility for farming practices close to abstraction points. (WS1b). Source protection around points of abstraction is required within Drinking Water Safety Plans and regulated by the EPA. Compatibility of targets in relation to UWWTD compliance and pollution incidents. These two targets are not incompatible. Add local media to communication of emergencies. Noted and referred to IW Customer Function Progress reports to councillors. Public reporting of the Capital Investment Programme and the performance against WSSP targets is included within the plan.
S12	**Tipperary County Council** **PLANNING CONTEXT** The Draft Plan is required to comply with National Spatial Strategy and Regional Planning Guidelines and this requirement is addressed in Chapter 7 of the Plan and sets out strategic aims as follows: • Support National, Regional and Local Economic and Spatial Planning Policy • Facilitate growth in line with national and regional economic and spatial policy The Council supports the strategic aims as outlined above. However, it is considered that the Draft Plan, with particular reference to the development of rural towns and villages, is not consistent the National Spatial Strategy and the Regional Planning Guidelines. The National Spatial Strategy supports the development of Gateways and Hubs, and medium size towns. However, the National Spatial Strategy also recognises the importance of rural villages and requires regional and local authorities to adopt policies designed to support and consolidate small town or villages and to support housing development, community services and economic	Need for recognition of rural villages in the plan which are recognised in NSS. This commitment has been added within strategy SG3a.

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	development. County Tipperary, similar to many local authorities across the country, has a strong network of rural towns and villages which have a vital role in providing social and community services and local jobs in rural areas. For example, in County Tipperary the majority of the population of the county live in settlements and rural areas which are below a 1,500 population threshold. The Core Strategies of the North and South Tipperary County Development Plans, as required under the Planning and Development Acts, have included county settlement strategies which seek to achieve balanced growth in the towns and villages of the county. In this regard, the Core Strategies have determined population growth targets for district and local centres. This population growth is dependent on the delivery of appropriate water and wastewater infrastructure and while the Draft Plan recognises *"the dispersed and rural nature of a significant part of the Irish population..."* and also combines social with economic growth in many references, there appears to be a marked absence of references to rural sustainability in the Draft Plan. The Draft Plan, notwithstanding national, regional and local planning policy, seeks to support the sustainable development of rural towns and villages but does not include a strategy for the provision of new and up-graded water and wastewater infrastructure in the rural sustainability context. The DoECLG Rural Water Programme in its current format does not address this issue. It is considered that the absence of a strategy to support rural towns and villages is contrary to the national spatial strategy and will not achieve the strategic aim of the Plan to facilitate social and economic growth and maintain sustainable rural communities. Furthermore, it is considered that the absence of investment in rural villages will undermine county settlement strategies and will lead to a more dispersed and uneconomic pattern of development in housing in the countryside and a greater environmental impact *inter alia* on the landscape and groundwater resources (see Section 3). It is strongly suggested that the Water Services Strategic Plan should incorporate a strategy for the investment of wastewater and water services in small towns and rural villages, with consideration being given to a separate funding stream, where a "social value" weighting is applied to the value for money and whole life costs evaluation. This separate funding stream would address, in some way, the challenge of *"balance investment for growth with affordability"* as referenced in the Draft Plan. **2. Strategic Water Services Infrastructure**	Core strategies to balance growth in towns and villages. Absence of reference to rural sustainability in WSSP. Commitment to ensuring that smaller towns and villages are appropriately supported with water services infrastructure is now included in SG3a. Provision of upgrades to water services infrastructure in rural context. This commitment has been added within strategy SG3a. Absence of rural strategy can lead to more dispersed settlement and greater impact on surface water and groundwater resources. Recommends addition of strategy for investment in small towns and villages with funding stream and 'social value' weighting for whole life cost evaluation. Addressed above (SG3b).

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	The Council notes and in principle supports the strategy [SG2d] to maintain appropriate headroom in strategic water services infrastructure. However, it is noted that it is stated that it is a long-term objective to provide for headroom, based on the size of settlement served, in line with the NSS *and its successors.* It is also noted that particular headroom parameters are stated for large towns. The Council considers that appropriate headroom should only be determined following a national analysis of population projections, targets and following the preparation of a new National Spatial Planning Framework. The Council supports the policy of the facilitation of new industries, which require up-grades of water and wastewater infrastructure, subject to recovering the cost to restore system capacity. However, while it is accepted that national and regional spatial planning policy will be followed, it is considered that there is a need for close engagement with the Planning Authority to deliver on this policy, where other local factors may contribute to the determining of the outcome of such developments. It is recommended that the targets for 'headroom' as stated on page 66 should be omitted. Headroom targets should be determined following the adoption of the new National Spatial Planning Framework and Regional Spatial and Economic Strategies and in consultation with the relevant authorities. 3. **Environment** In addition to examining the rural villages and rural communities, as referred to in Section 1 from a sustainability perspective, the ability of the Plan to *"contribute to the achievement of water body objectives under the Water Framework Directive"* must provide for the provision and upgrading of wastewater infrastructure in these villages and communities. Value for money and whole life costs cannot be based on the monetary return on investment but more on the environmental benefit that will result from the provision of the infrastructure. It is suggested that similarly a separate (environmental) funding stream be identified to address this issue, without the capital cost having to be borne by the customer. The role of the CER and Government in addressing both of these funding streams should be further examined. It is noted that while it is intended to engage at national and regional level there is minimal reference to engagement at local level, i.e. the Local Authorities. It is strongly suggested that there should be strong engagement with the Local Authorities at the Tier 2 stage of the Plan with this being	Headroom [SG2d] should only be determined following preparation of the new National Spatial Planning Framework. Existing commitment is to the successor of the NSS. Need for close engagement with LAs on delivery of new connections for new industries. This is committed to under strategy SG1a. Request removal of target headroom references (p66) and confirmation following NSPF and RSES. Headroom targets are stated but will be reconfirmed in the next plan revision following the adoption of the NSPF and RSESs. Environmental benefit from wastewater infrastructure must be a prioritising factor. Environmental funding for WFD measures has a separate affordability assessment by the CER. Reference to role of LAs. This has been strengthened through the inclusion of a new section on 'Our

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	recognised and referenced in the Plan.	Partners'. IW is committed to engaging with local bodies in planning water services (SG1a).
S13	**Meath County Council** **1.0 General:** a) This draft WSSP is welcome. It quite clearly sets out Irish Waters view of the objectives and challenges involved in delivering Water Services in Ireland over the next 25 years. It is a high level report which is light on specifics, however, this is not unreasonable for what is a Tier 1, long term strategic report. b) The draft WSSP makes no reference to how Water Services are currently delivered and how IW proposes that they will be delivered up to 2040. In this regard, there is no reference to the current 12 yr. SLA's in place between IW and the LA's, the ongoing and future role of LA's, the proposed Transformation Plan and its various initiatives, etc., etc. – all of which is central to, and will be essential in, the successful realisation of the various objectives and aims contained in the WSSP. This is a very serious and notable omission and needs to be comprehensively addressed in the final draft of the WSSP. c) The draft WSSP sets out a number of welcome objectives and aims relating to improved levels of customer service, standardised plant operation, asset management approach, etc. – the final draft of the WSSP needs to acknowledge that, the realisation of these aims will require the collaborative implementation through the SLA of substantial change and training. This required change and training should be included as an aim. In addition, but in relation to the above, part of the substantial change required will be the implementation of a formal rostered out of hours on call system to facilitate a proper and assured response to unplanned incidents which arise outside normal working hours. At present, in Meath as in most other LA's, there is no formal out of hours on call system and response of both indoor and outdoor staff to out of hours unplanned incidents is wholly dependent upon good will. This is not sustainable into the future and hence the final draft WSSP needs to include a clear and definite aim to deal with this issue. d) The final WSSP needs to consider and acknowledge the challenge that will have to be dealt with collaboratively between IW and the LA's in terms of achieving balance between IW's various worthy objectives and aims as contained in the WSSP and its objectives to reduce LA Water Services headcounts and Water Services operational costs.	WSSP welcomed. WSSP should reference how water services are currently delivered and LAs role. The role of LAs has been acknowledged through the inclusion of a new section on 'Our Partners'. WSSP should acknowledge that the realisation of strategies needs collaboration with SLA including substantial change and training. This is not the remit of this Tier 1 strategic plan. Irish Water prepares annual service plans with the LAs and is currently implementing a transformation plan with the LAs. LA and IW collaboration in relation to headcount and operational costs. Responded to above.

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	2.0 Objective - Meet Customer Expectations: a) **Complaint Handling:** The draft WSSP sets a 2021 target of; '100% resolution or understood steps to resolution within 5 working days'. - Depending on what exactly 'understood steps to resolution' actually means, 100% within 5 working days may not be achievable – quite often the resolution to certain complaints is not straightforward or apparent – a reduction to a lower % or else a rewording of this target is required. **3.0 Objective - Ensure a Safe and Reliable Water Supply:** a) **WS1a Prepare a National Water Resource Plan and implement on a phased basis:** This is a logical and welcome aim – recognition should however be made of the fact that bigger schemes mean bigger numbers of customers affected when problems arise and hence to counter this interconnectivity between schemes and headroom capacity of schemes will be essential – i.e. interconnectivity without the headroom capacity is of limited benefit. b) **WS1b Prepare and Implement Drinking Water Safety Plans for all Water Supply Zones:** This aim and indeed the overall WS1 aim is not something that can be delivered by IW alone, it will require a national partnership approach with active participation by all relevant stakeholders including, the DoECLG, the Dept. of Agriculture, LA's, EPA and IFA/ICMSA – the WSSP should acknowledge this. c) **WS1f Prepare and implement strategies to manage other water quality issues in water supplies:** The two main issues that customers complain about in relation to water quality are, lime-scale (hard water) and Fluoridation. While the draft WSSP refers to lime-scale there is no reference to Fluoridation. IW should make some significant reference to Fluoridation in the final WSSP. d) WS1c **Standard Operating Procedures:** Although not included as a listed aim, the draft WSSP refers to the development and implementation of SOP's for Water Treatment Plants and networks. This is a worthy proposal, however, the WSSP should acknowledge that this would require significant change that would have to be delivered through the SLA's and also a significant investment in operator training. e) **Water Conservation:**	Complaint handling target. This is a commitment under the Codes of Practice approved by the CER. Interconnectivity is essential to improve security of supply. Interconnectivity of schemes will deliver improved security of supply through additional sources and treatment plants serving areas. Headroom capacity will be aligned to the demand centre sizes. Need for partnership with other agencies to deliver the DWSPs. Commitment to engagement is included in Strategy WS1b. Need for reference to fluoridation. This is a legislative requirement and not the subject of this consultation. Need for investment in operator training for SOPs. Inclusion of staff training is referred to within the strategy.

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	The draft WSSP refers to leakage and Unaccounted for Water (UfW) as if they were the same thing. The final WSSP should distinguish between the two and should explain issues such as, unauthorised and unknown connections, estimated usage and water theft – which are real and significant issues particularly in rural counties. f) WS2g **Water Conservation:** The draft WSSP refers to an economic level of leakage of 18 – 22%. This is a very crude measure and in fact on certain schemes the economic level will be significantly above or below this range. g) WS2g **Water Conservation:** The draft WSSP says that IW will promote the reuse of grey water and water efficient domestic appliances – no mention of water efficient plumbing (cisterns/taps/showers) or rain water harvesting. **4.0 Objective - Provide Effective Management of Wastewater:** a) **Standard Operating Procedures:** As 3.0 d) above. b) WW2a **S16's / FOG / Third Party Wastes:** The management and control of Section 16 licences / licensing , FOG and third party wastes are all very significant issues for which IW should include specific Aims in the final WSSP. c) **Storm Water Management:** Storm water does not come under the remit of IW, nonetheless IW has a very definite involvement with storm water by way of its combined sewers, CSO's, storm holding tanks, WWTP and PS overflows, etc. In this regard, there is a need for agreement between IW and other relevant stakeholders (incl. LA's, OPW, EPA, NRA) in relation to respective responsibilities relating to storm water management. The final WSSP should acknowledge this and set an appropriate Aim. **5.0 Objective - Support Social and Economic Growth:** a) **Capital Investment:** IW has a central and hugely important role to play in terms of providing the essential water and wastewater capacity and infrastructure necessary to facilitate social and economic growth. In this regard, very substantial capital investment (in source development / water and wastewater treatment and network improvement and expansion) is required, over the life of the WSSP. Although a balance between what is required and what is affordable will have to be struck, IW must resist short sighted investment decisions. For many reasons consistently maintaining adequate headroom is essential and	WSSP should distinguish between UfW and Leakage. This has been clarified in the final WSSP and reference to UfW has been removed. Economic level of leakage may be outside 18-22% metric stated. Target is now set at "Achieving Sustainable Economic Level of Leakage". Reference to UK water utilities leakage included to give some context between targets for 2027 and 2040. Include promotion of water efficient plumbing. This is included in strategy WS3c. Need for investment in operator training for SOPs. Included in W1b. Include reference to management and control of S16 licences for FOGs. This is included in strategy WW3d. Agreement for management of stormwater between IW, LAs and other stakeholders should be included as a strategy. The WSSP commits IW to agreeing an MoU with the OPW and LAs on stormwater management (p2). Need to consistently maintain adequate headroom and resist short sighted investment decisions based on affordability. Affordability is the consideration of the

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	in this regard IW will need to be constantly looking ahead and undertaking the necessary planning and preparation work to allow them respond quickly to provide additional capacity at short notice to, for instance attract prospective new FDI. The draft WSSP makes reference to having adequate headroom at 60% of treatment facilities to meet 'core strategies' needs, by 2021. A more ambitious % should be set (80%) with particular emphasis put on ensuring adequate capacity is available in all higher status urban centres where plans exist to attract and sustain employment generating development. Furthermore, the draft WSSP only refers to headroom at treatment plants, however, in many urban areas in Meath the current constraint to developing certain lands is network capacity and connectivity rather than treatment plant capacity. The WSSP needs to address this issue. There are many small Public Water Supplies and Wastewater Schemes in Meath (and indeed throughout rural Ireland) – historically these small schemes have suffered as a result of a lack of available capital investment. The final draft WSSP should specifically acknowledge these small schemes and should set out aims to invest as necessary in their upgrade and upkeep. b) **New Connections:** The draft WSSP suggests that the full cost of providing new connections should be fully borne by the applicant. Whilst in many instances this would be fair, in others it would not and could also act as a serious disincentive to new businesses siting in a particular area. A more flexible approach is required, particularly for new businesses and also where other parties (existing or future) will benefit from the connection works. **6.0 Objective - Invest in Our Future:** a) As outlined in 1.0 b) above, the draft WSSP makes no reference to the current 12 yr SLA's in place between IW and the LA's, the ongoing and future important role of LA's, the proposed Transformation plan, etc., etc. – all of which is central to, and will be essential in, the realisation of the various objectives and aims contained in the WSSP. This is a very serious and notable omission and should be comprehensively addressed by IW in the final draft of the WSSP. b) **Preventative Maintenance:** The asset based management approach outlined in the draft WSSP is in line with best practice and is the way to go, however, amongst other things it will require a major shift towards far greater levels of preventative maintenance – the final draft should acknowledge this.	CER and not IW. Want a more ambition target of 80% of treatment facilities to meet headroom targets [SG2]. A new target for 75% of plants meeting headroom targets by 2027 and 100% by 2040 has been included within the final plan. Need for investment in small schemes. The WSSP highlights the vulnerability of many small schemes and the need for investment in strategic interconnection and rationalisation. Full cost recovery for new connections may be unaffordable in some circumstances [SG3c]. The cost for new connections is the subject of a separate consultation by the CER. More reference to SLAs needed. Responded to above. Need to acknowledge greater preventative maintenance in asset management approach. Maintenance is noted within Strategy IF1a. Comment noted and passed to

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	c) **New development standards:** Irish Water together with LA's have a strong mutual interest in ensuring that the highest possible standards are applied in relation to the Water, Wastewater and indeed Storm Water infrastructure provided by developers within new housing and other developments. This is a particularly timely and topical issue given the ongoing resurgence that is starting to arise in relation to new development. In what is a very notable omission, the draft WSSP does not include any objectives or aims to deal with this. Irish Water needs to quickly develop policies and standards in relation to the specification, provision, supervision and subsequent adoption of Water Services infrastructure within / serving new developments. In this first instance, in relation to this matter, IW needs to include a clear and definite aim in the final draft WSSP. d) **SCADA / Telemetry:** Presently in Meath there are 110 separate Water and Wastewater schemes and the level of SCADA / Telemetry installed varies widely. Generally, any scheme where there has been a major capital project over the past decade or so, SCADA / Telemetry is present but, many older, smaller schemes do not currently benefit from SCADA / Telemetry. We understand that Irish Water has plans to develop a uniform national SCADA / Telemetry system which is very much needed and would be highly welcome. It would have many obvious benefits which would substantially contribute towards the achievement of many other objectives and aims of the WSSP. However, the final WSSP needs to include a clear and definite aim relating to SCADA / Telemetry. e) **Stock of critical Spares:** In relation to IW's welcome aim to move towards an Asset management approach, a key element of this will be a centrally or regionally maintained stock of critical spares (pumps, certain pipes/fittings, etc.) which, LA's / their agents, acting on behalf of IW can access both inside or outside normal working hours in order to attend to necessary unplanned repairs as efficiently and as quickly as possible. At present, it is not feasible for each LA to hold a full stock of all spares and hence a national or regional stock held by IW (or by suppliers on their behalf) would be of immense benefit. IW should include an aim relating to this in the final draft of the WSSP.	O&M Function. High standards for new infrastructure design, specification, supervision and adoption. Standards for infrastructure design are discussed in strategy IF1c. WSSP needs to include reference to a definitive strategy for SCADA [IF1]. A SCADA strategy is not within the remit of this strategic level plan. Reference to nationally or regionally held stocks of spares rather than at LA level. Procurement of good and services based on international best practice is discussed in strategy IF1c. Comment noted and passed to O&M Function.

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	7.0 MCC Planning Department Comments on Chapter 7, Objective: **Support Social and Economic Growth.** It is difficult to disagree with the aims, strategies or purpose included in the Strategy as they are broad sweeping in nature and generally laudable. It is considered that it will be the identification and prioritisation of projects contained in the subsequent Capital Investment Plans and their alignment with locations identified for regional population and employment growth which will be critical to Meath County Council. It is considered critical for balanced regional development to occur that economic development and population growth can take place in the most optimal locations particularly the continued consolidation of the Dublin Gateway and Major Growth Towns within the wider Hinterland. Meath County Council have recently undertaken the preparation of an Economic Development Strategy for County Meath 2014- 2022. Leading the economic development of County Meath through the successful implementation of the 7 no. Actions identified in the Economic Development Strategy is a key priority of the Meath Corporate Plan 2014-2019. To this end, the building of strong influential partnerships with other agencies nationally such as Irish Water will be key in order to promote Meath as the investment location of choice. The availability of the necessary water services infrastructure at identified strategic employment sites in this strategy will be essential. Meath County Council is presently undertaking an audit of available infrastructure and services on the identified sites in conjunction with the relevant stakeholders and to outline how best to address any deficiencies identified. This will include sites in Dunboyne, Clonee and Ashbourne which are part of the area served by the Greater Dublin Strategic Drainage Network. The areas identified correlate with those centres identified for growth and further development in existing national and regional planning frameworks. In this regard, Meath County Council welcomes the commitment of Irish Water to the provision of additional capacity to meet future population growth and industrial development. The suggested flexibility referred to in terms of planning for new infrastructure on the basis of uncertainty or disconnect between national policy of balanced regional growth and actual growth is also accepted. Over the period of this Plan, Meath County Council will continue to strengthen our focus on economic and enterprise development and the promotion of Meath as a prime location for business investment, while at the same time responding to the many social challenges facing the county including the accommodation of a significant portion of regional residential population growth. Meath County Council must ensure that we have the infrastructural services in place to facilitate sustainable and balanced growth, and to support the needs of our existing communities, businesses	Links to Irish Water for delivery of Economic Development strategies. Welcomed commitment to additional capacity to meet future growth. *A detailed overview of the proposed development plans for Meath Co Co is presented.*

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	and other stakeholders. The interface of Irish Water's objectives for future service improvements will have largely positive implications for plan led growth models favoured by modern planning guidance. Consequently the planning process is a critical dimension in the integrated delivery of the new service and particularly so in the context of preparation of investment programmes for effective regional and local planning models. There are areas of Co. Meath located within the Metropolitan Area of Dublin identified in the Regional Planning Guidelines for the Greater Dublin Area (RPGs) which are earmarked for significant development from both an economic development / enterprise and residential perspective. This area broadly coincides with the area of Meath served by the Greater Dublin Strategic Drainage Network. Dunboyne is identified as a Large Growth Town II, as a Secondary Economic Development Centre and identified to grow from a Level III to a Level II Retail Centre. There has been significant public exchequer investment in Dunboyne in the provision of excellent transport infrastructure (M3 Motorway and Navan Rail Line Phase I). This needs to be balanced with future investment in the provision of the necessary water services to ensure that the significant development potential is realised in a timely manner and to ensure that the existing level of exchequer investment is maximised. The north east quadrant of Maynooth is located in the administrative area of Co. Meath and is identified as a Moderate Sustainable Growth Town and is part of the Maynooth / Leixlip Core Economic Area. The northern quadrant of Kilcock is located in the administrative area of Co. Meath and is similarly identified as a Moderate Sustainable Growth Town and also forms part of the Maynooth / Leixlip Core Economic Area. There are presently no piped water services available to cater the lands identified for significant high level employment (Maynooth) and residential (Kilcock) developments for these areas. The development of both areas is considered integral to the resolution of transport infrastructure within both towns, which infrastructure is most likely going to be developer driven. Commitments had been agreed previously with Kildare County Council to provide 10,000 population equivalent in both water and waste treatment to serve these settlements to realise the development frameworks for both environs areas as contained in the Meath County Development Plan 2013-2019. In addition to these stated centres, there are also centres such as Ashbourne and Ratoath which although located in the Hinterland Area of Dublin are partially served by the Greater Dublin Strategic Drainage Network (wastewater). Ashbourne is identified as a Moderate Sustainable Growth Town and	

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	is part of the Secondary Economic Development Centre with Dunboyne. The historical dependence on water services provided by other Local Authorities to serve these stated centres and uncertainty which prevailed with regard to the level of available capacities / headroom available was seen as restricting the ability of Meath County Council to actively pursue certain types of manufacturing and other uses which had significant water services capacity requirements. Competition between Local Authorities for much sought after enterprise and employment investment, particularly Foreign Direct Investment, resulted in a distinct disadvantage accruing to Meath in the areas which were included in and bordered the Metropolitan Area of Dublin where services were controlled by others. It would be hoped in future that the allocation of capacities will have less regard to the presence of administrative boundaries and have a greater focus on serving the needs of locations identified in national and regional spatial strategies. The thrust of the Draft Water Services Strategic Plan would lend support to this view becoming a reality. Irish Water should operate apolitically in this regard as the availability of services or timeframe for their delivery may become the difference in Foreign Direct Investment or indigenous industry locating in County Meath rather than in another location in the region or indeed Ireland. In the context of County Meath, capacity, where it exists, should be prioritised for economic development given the scale of outward commuting and the clearer need to generate sustainable employment in Meath. In this regard, given our historic dependence on our neighbouring counties for services, Meath County Council were successful in inserting that an *agreed protocol should be put in place between Local Authorities in the Greater Dublin Area to ensure the optimum allocation of sanitary and other services for priority investments*. The Water Services Strategic Plan should set out a framework or commit to establishing one which would guide the fair allocation of water resources between multiple administrative areas which share common infrastructure. In addition, the Water Services Strategic Plan should set out a framework or commit to establishing one for the allocation of capacity in water services between different land uses ensuring that sufficient reservation is made for strategic employment and enterprise uses. This would lend to greater certainty in the development of Core Strategies for statutory development plans and the identification of strategic employment sites. Equally, it is important that Irish Water is adequately resourced to input in a timely and meaningful manner in the framing of the statutory land use plans in County Meath. Meath County Council would therefore strongly support AIM SG1 in this regard. The inclusion of significant capacity and headroom	Need for water services to support manufacturing in support of enterprise and employment investment. Commitment in WSSP to engage with key stakeholders in relation to infrastructure to support industrial development and job creation (SG1a). Commitment to ensure that water services are provided in an efficient and cost effective manner and that the cost of developing water services and connection to IW networks is equitably apportioned between new and existing (SG3b &c). Less focus on administrative boundaries in water services planning required. Plan commits to a regional/national approach to water services (SG2b) Framework for fair allocation of water resources between administrative districts which share common infrastructure needed. Plan commits to the strategic consideration of water resources within the National Water Resources Plan (WS1a).

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	in terms of water supply and wastewater capacity for significant employment should be made available to locations which align with national and regional policy but also where significant networks converge e.g. power, transport, etc. Apple's decision to announce an €850 million investment in a data centre in Athenry, a project supported by the IDA and located in a town identified in the National 1 Page 129 of the Regional Planning Guidelines for the Greater Dublin Area 2010-2022 Spatial Strategy Flexibility as an 'Urban strengthening Opportunity' is testament to the need for flexibility in this regard.	MCC strongly support SG1 but also the need for flexibility to allow FDI.
	It would be useful in relation to Aim SG2d (maintain appropriate headroom in strategic water services infrastructure) that 'Dublin' was defined. It would be assumed that it includes all of the Metropolitan Area identified in the RPGs. Perhaps, it should be considered to cover the area served by the Greater Dublin Strategic Drainage Networks? It is worrying from the information contained in this aim that facilitating new industries which may require large one off demands would be catered for in the existing headroom / available reserves which would be restored at a later stage. In reality, there are limited locations in Meath and in particular, the areas served by the Greater Dublin Strategic Drainage Networks, where such headroom presently exists. This would seem to infer that such locations could not be considered for significant employment creation which would be unacceptable.	Aim SG2D needs a definition of 'Dublin' is it the metropolitan area or area service by the Greater Dublin Drainage Network. SG2d refers to the Greater Dublin Area. Limited capacity for large one-off industrial demands at present.
	8.0 Response to Specific Questions related to Chapter 7 – as Appendix 1 of draft WSSP **Q 26.** Having regard to the lengthy timeframe involved in bringing significant infrastructure through the justification (need), design, construction and operational stages, a longer term view of current and future customers must be taken. There is little point in a Planning Authority identifying with apparent certainty the locations which must accommodate regional residential, employment, commercial and retail growth through the Core Strategy of their Development Plans without having a corresponding level of certainty with regard to the availability of or the timely provision of the necessary water services.	Long term view of infrastructure needed with regard to lead-in time for new development. Irish Water commits to engagement with LAs at the preparation stage of development plans (Strategy SG1a).
	Q 27. Stakeholder engagement by Irish Water in the preparation and agreement of statutory land use plans is essential to underpin locations identified to accommodate residential and economic growth. There must be strict alignment between the forthcoming National Planning Framework and Regional Spatial and Economic Strategies which identify centres for growth and the corresponding Irish Water Capital Investment Plans for the corresponding periods. The short time frames of development plan cycles – 6 years with 50% headroom for residential development is too short (effectively 9 year supply) and does not align with the longer term horizons of water infrastructure capital projects. That	Strict alignment between NPF, RSES and Irish Water CIPs needed. The commitment to an interim review of the WSSP is intended to facilitate this. Out-of-date population projections hinder future

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	Planning Authorities in the Greater Dublin Area are expected to rely on population projections prepared in 2009 by the CSO / DoECLG in this regard is incredulous. **Q 28.** Meath County Council would broadly support the view expressed in the Strategy in this regard. There must however be timely reviews to ensure that the economic outlook remains robust and realistic whilst providing the necessary flexibility. **Q 29.** Yes but it should be important in the attraction of significant economic development to a County such as Meath, which has been heretofore beset by excessive levels of out commuting for employment purposes, that the cost is not prohibitive such as the consideration of such locations becomes unattractive or unviable. The ability of development to bear such costs upfront may prove difficult in the prevailing economic climate and the phasing of payments over an agreed period of time post development occurring similar to that operated by Local Authorities in the operation of the Development Contribution Scheme should be considered. **Q 30.** The only indicator included in this objective relates to headroom and may not give a true indication of supporting social and economic growth in identified regional locations. How does this reflect instances whereby development cannot proceed on the basis of lack of capital investment in Large Growth Town II such as Dunboyne whilst having the necessary headroom in lower tier centres such as Dunshaughlin where there will be less of a demand for residential and employment growth? Demand for water services does not, and is not likely in the future, to correspond spatially with the areas that benefit from capacity in water resources. It would be suggested that the plants meeting targets by 2021 should include all centres identified in the respective Regional Planning Guidelines or their replacement Regional Economic and Spatial Strategies to accommodate significant regional residential and economic growth. These are the locations in which priority should be focused rather than in lower tier centres in which Planning Authorities through their Core Strategies have attempted to arrest supply through demand management techniques (dezoning, rezoning, phasing / order of priority).	forecasting. Ability of development to bear upfront connection costs. Need options to spread payment terms, similar to the Development Contribution scheme operated by the LAs. IW 's New Connections Charging Policy will be subjected to public consultation and will be fully approved by the CER. Headroom may not give a true indication of supporting social and economic growth in identified regional locations. Demand for water services does not, and is not likely in the future, to correspond spatially with the areas that benefit from capacity in water resources. IW is committed to engaging with planning authorities to identify where demand for water service is most likely to occur (SG1a).
S14	**Dublin City Council (endorsed by DLRCC, SDCC, FCC and Kildare CC)** **Introduction:** The Draft Water Services Strategic Plan sets out Irish Water's vision and strategy for the delivery of water services in Ireland, with a 25 year outlook, up to the year 2040. The draft plan adopts a high level strategy by setting six key objectives to be achieved over the duration of the plan. The objectives, which are detailed across six chapters in the plan, are as follows (i) meet customer	

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	expectations (ii) ensure a safe and reliable water supply (iii) provide effective management of wastewater (iv) protect and enhance the environment (v) support social and economic growth and (vi) invest in our future. The Dublin Local Authorities fully agree with these key aspirations. The Irish Water vision states that: *'Through responsible stewardship, efficient management and strong partnerships, Ireland has a world class infrastructure that ensures secure and sustainable water services, essential for our health, our communities, the economy and the environment'.* Within the Executive Summary, Irish Water states that they are responsible for the delivery of water services to approximately 80% of the national population. The response prepared by Dublin City Council to the plan assesses the plan both from a Dublin City Council and an overarching Dublin region perspective. The Dublin Water Supply Area, located within the Dublin region, include the following local authorities: Dublin City Council, Fingal County Council, South Dublin County Council, Dun Laoghaire- Rathdown County Council, and parts of Wicklow County Council, Kildare County Council and Meath County Council. According to the 2011 census, collectively this geographical and demographic area represents 1.52 million people or *circa* 39% of the national population. A key requirement of any strategic plan is to set out how the objectives of the strategy are to be implemented or delivered. Currently, water services in Ireland are delivered through an agreed partnership, arranged in 2013 between each local authority and Irish Water. The 12 year *Service Level Agreement* (SLA) currently in place is the mechanism through which the local authority sector and Irish Water will interact into the future. The draft plan does not reference this key collaborative obligation. The draft Irish Water 25 year plan does not refer to the *Annual Service Plans* (ASP), the rolling 5 year *Long Term Service Plan* or the proposed 3 year Irish Water *Transformation Plan* initiative. These key plans and initiatives are intended to support the 25 year strategic plan in meeting its six stated overarching objectives, through a *'strong partnership'* approach. The Dublin region local authorities have historically worked in partnership across their respective jurisdictions, to deliver water services effectively through a 24-hour operating regime, within region. They continue to do so, within a stable Dublin region local authority governance framework. A tangible manifestation of this collaborative arrangement is illustrated in the management of water conservation regionally and in the reduction of *Unaccounted for Water (UFW)* in the Dublin region from 42% to 33%, between the period 2002 and 2013. A Regional Office was also established and remains in place to manage water conservation and UFW reduction in the region. The Dublin region local authorities are in a unique position in that the successful partnership to date has effectively	The Dublin Local Authorities (DLAs) agree with the aspirations of the WSSP. An overview of the area is presented. WSSP needs to better reference the 12 year SLA. Plan needs to refer to the Annual Service Plans (ASP), the 5 year Long term Service Plan and the 3 year Irish Water Transformation Plan. This has been included in the final plan within a new section on "Our Partners". DLA partnership has delivered tangible improvements in UfW from 42% to 33% from 2002 to 2013. New Irish Water ASP construct does not align with the

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	utilised its resources: financial, governance, knowledge and systems, to deliver on its key performance indicators. The new ASP construct, while suitable for individual local authorities operating outside the Dublin region jurisdiction, is not aligned with the existing governance and operational arrangements already working effectively in the Dublin region. In terms of future water services planning, for the first time in the history of water services delivery in Ireland, water services planning and the local planning and development function will be undertaken by two separate jurisdictions. The Dublin region local authorities asserts that it is imperative that future water infrastructural development in the Dublin region is plan led and should take cognisance of the current *National Spatial Strategy* and *Regional Planning Guidelines* in informing the *National Development Plan* and the proposed *National Planning Framework.* The current plans advocate further consolidation of the Dublin region. Therefore, a strong interface is required between Irish Water and the Dublin region's Planning Authorities in the preparation of future *City and County Development Plans*. The progression of key complex significant regional and national water and wastewater infrastructural projects, such as the *Water Supply Project, Eastern and Midlands Region*, the *Ringsend Wastewater Treatment Plant Extension* project and the *Greater Dublin Drainage Scheme* are essential requirements for future planning and economic growth in the Dublin city region. Of particular concern to the Dublin region local authorities is the current lack of '*headroom*' or insufficient capacity in the regional water supply network. This key supply side risk needs to be addressed comprehensively in order to provide adequate supplies of water to effectively manage the following: essential operational works, unforeseen weather events, future climate change predictions and increased demand, due to increasing economic activity. **Chapter 1: Introduction** In chapter 1, Irish Water outlines the hierarchical relationship between the following plans, programmes and projects: (a) Tier 1: Plan: The Draft 25 Year Water Services Strategic Plan, which will be subject to review after 5 years in 2021. (b) Tier 2: Implementation Plan: This suite of documents includes the *National Resources Plan, National Sludge Management Plans and Climate Change Adaptation and Mitigation Strategy* (c) Tier 3: Projects and Activities: The *Water Supply Project – Dublin Region* project is explicitly referred to under this sub level in the overall hierarchy of plans and is of important significance in	existing governance regimes in the Dublin region. DLAs consider that future water service infrastructure development must be led by the development plans with cognisance of the NSS and RPGs. Irish Water is committed to ensuring that our infrastructure development is consistent as far as is practicable with national regional and local development plans (SG1a) Concern with the lack of headroom in the GDA water supply is highlighted. Summary of the plan is presented.

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	terms of its need and timing for the Dublin region. **Chapter 2: Challenges and Strategic Priorities** Chapter 2 outlines the immediate priorities in the plan as (i) meeting customer needs, (ii) providing safe water supplies, (iii) managing wastewater, (iv) protecting the environment, (v) the efficient use of energy and (vi) providing water services for future population and economic growth. The plan acknowledges the current serious issue of high leakage rates nationally and the headroom deficit experienced in large towns and cities. These are key concerns presently for the Dublin region local authorities. Irish Water recognises that their future water planning policy should be aligned with current National Spatial Planning policy and future national planning policy. The plan outlines Irish Water's proposed arrangement for the introduction of standard operating procedures across all plants and networks nationally. The introduction of these changes should take cognisance of potential industrial relations risks. Irish Water confirms in the plan that they are using data gathered as part of the *National water metering programme,* to help refine estimates of water usage and levels of leakage on the customer side of properties. Dublin City Council on behalf of the region is currently analysing these assumptions, to determine the validity and reliability of the research. It is critical to the region, that any such data on which significant Irish Water decisions will be based, is well founded and supported by the local authorities in the Dublin region. **Chapter 3 Objective: Meet Customer Expectations** The overall strategic aim is to establish customer trust and a reputation for excellent service. Brand development and reputation are internationally recognised components of an organisations asset base. Irish Water's Code of Practice sets out their communications objectives as agreed with the *Commission for Energy Regulation* (CER). Within this chapter, Irish Water outlines a number of key aims and attendant targets to be achieved by the end of 2021, with a revised set of targets to be achieved by 2040. These objectives include '*contact'* and *'complaint handling'*, interruption to supply and billing and payments. Specifically, in relation to complaint handling, a target of 100% resolution of complaints within five working days is cited within the plan for the milestone periods 2021 and 2040. Protocols regarding complaint handling and communications in general, has not been fully agreed in relation to which organisation is responsible for its resolution. The temporal nature, extent and scale of a particular water services related emergency compounds the uncertainty surrounding its management. For example, which organisation, Irish Water or the relevant local authority is responsible for managing	Introduction of SOPs across plants and networks should take cognisance of potential industrial relations risks. Critical that data used for decision making is well founded and supported by the LAs. Protocols for complaint handling and communications need to be fully agree in relation to the organisation

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	an emergency event during out-of-office hours and what is the required *communications plan* protocol to be implemented in such a scenario. Meeting customer expectations is a common important objective to both Irish Water and the Dublin region local authorities and therefore, these key strategic aims need to be further agreed by both parties. **Chapter 4 Objective: Ensure a Safe and Reliable Water Supply** The strategies outlined in this section centre around three distinct strands, namely (a) quality, (b) reliability and (c) affordability. This chapter acknowledges potential water shortages in the Dublin region. A *Case Study* is included on the *Vartry Water Supply*, which outlines its longevity, its scale in serving approximately 200,000 people in the Dublin region and also its non-conformance with current drinking regulations. Six sub strategies in regard to quality are outlined [ref: WS1]. The preparation of a *National Water Resources Plan* is one of the key objectives, which is highly relevant to the Dublin region. The Dublin water supply network currently experiences operational supply constraints across the seven local authorities in the region. The need for increased interconnectivity across the water supply networks is crucial to ensure future resilience to guard against potential climate change and future economic and population growth impacts. Seven sub strategies in relation to reliability and water availability are listed [ref: WS 2]. The need for new sources, building resilience and the preparation of regional water conservation strategies inform these objectives. While overarching in their aims, the need for resilience and an effective regional water conservation strategy are key and present concerns for the Dublin region local authorities. There is a need for meaningful engagement by Irish Water with the Dublin region local authorities to optimise both the experience gained and corporate knowledge, which is inherent in this crucial activity. In summary, the success of any future regional water conservation strategy is highly dependent on meaningful input from the Dublin region local authorities. The delivery of a regional water rehabilitation strategy is fundamental to the success of any overarching Dublin regional water conservation strategy. Currently, in the Dublin region, UFW levels are increasing and corollary, water rehabilitation activity has decreased substantially since its peak activity levels in 2011. The draft plan specifically refers to reducing leakage in objective WS3, across all schemes, to (a) less than 38% by the end of 2021 and (b) 18-22% by 2040. Current trends in UFW levels in the Dublin region do not support these target ambitions. It is the position of the Dublin Local Authorities that such targets can only be achieved, if there is significant investment through the	responsible for its resolution. Is IW or the LA responsible for managing emergency events out of hours and what is the agreed communications plan? This is within the remit of the SLA and not appropriate for this strategic level plan. DLAs support the need for increased interconnectivity of networks. Resilience of supply and regional water conservation are key concerns for the DLAs. Need for engagement to optimise experience and knowledge. Highlighted the need for significant additional investment through the existing Regional Water

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	existing Regional Water Conservation and Watermain Rehabilitation Office. This integrated water conservation strategy needs to be across all areas of UFW reduction, including network management and watermain rehabilitation. In addition, there should be agreement nationally on the use of certain terms, which are being used interchangeably, including for example, leakage and unaccounted for water, non-domestic demand and commercial consumption. This step would bring a level of consistency to the language used relating to leakage. Irish Water has included a section on the need for preparing and implementing a lead strategy nationally. The presence of lead in certain networks is a key concern for Dublin region local authorities. Any potential solutions, which may include chemical processes, such as orthophosphate dosing, would need to be agreed by relevant stakeholders in advance of any implementation strategy. **Chapter 5 Objective: Managing Effective Management of Wastewater** The chapter outlines the challenges faced by the large proportion of urban sewers which operate as both wastewater and surface water runoff, known as combined systems. The management of storm water remains a function of local authorities. However, the interface of where these functions intersect is not referenced in the draft plan and needs to be agreed. It is worth noting that there are large areas of the Dublin urban areas currently served by combined sewers, the bulk of which were constructed in the late 19th or early 20th century. **Chapter 6 Objective: Protect and Enhance the Environment** Irish Water categorises its strategy in the context of (a) sustainability and (b) compliance with the Water Framework Directive (WFD). The Dublin region local authorities support these strategies and objectives as advocates for sustainability and meeting the requirements of the WFD. **Chapter 7 Objective: Support Social and Economic Growth** Irish Water outlines how 62% of Ireland's population currently live in urban areas. The Dublin region, as the largest city conurbation in Ireland, supports 39% of the national population. International evidence suggests that there is a growing trend toward increased global urbanisation. This section specifically references a Case Study entitled: *'Supporting Dublin's Growth'.* It correctly states that current headroom levels are circa 1-2%, which is recognised as being unsustainable. Dublin City Council, included as a large urban settlement, supports the need to achieve ultimate headroom levels of 20% [ref: SG2d]. The draft plan sets out to ensure that nationally, 60% of all plants will reach this preliminary headroom target by 2021 and eventually 100% target by 2040. However, the Dublin region local authorities are a unique case, by virtue of their capital city status, as the economic engine	Conservation and Watermain Rehabilitation Office. Need for national agreement on use of leakage and unaccounted for water, non-domestic demand and commercial consumption. The term UfW has been removed from the final plan for clarity. Solutions for high Lead concentrations (including orthophosphate dosing) need to be agreed with relevant stakeholders. This is the subject of a separate Lead Mitigation Strategy consultation. The interface of the LA function responsible for stormwater and the IW function for combined sewers needs to be agreed. Noted. DLAs support strategy for sustainability and meeting the requirements of the WFD. Submission highlights the need for increased headroom in the Dublin plant capacity. Noted.

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	for the country and its legacy of a serious headroom deficit, which has already impacted on water service delivery in the region. The case study also refers to ongoing risks to the raw water sources supplying Dublin, where for example, algae bloom was experienced in the Vartry reservoir in May 2013. It is important to note that algae bloom issues have become a regular feature in the April or May period annually prior to and since 2013. The plan affirms that the population will rise from 1.52 (2011 census) to 2.15 million by 2050. Irrespective of the success in reducing UFW levels, the plan recognises the need for a new major water source to be completed by the early 2020s to manage increasing capacity requirements in the Dublin region. The Dublin region local authorities broadly support the concerns raised by Irish Water in respect of these issues. In terms of building future water capacity, Irish Water and the Dublin region local authorities agree that a new water source for the Dublin region is critical to the social and economic development of the region. Water intensive industries in Ireland provide employment to approximately 200,000 people across a diverse range of employment sectors including ICT, Pharma-chem, agri-food and tourism. It is important that any new water source provides sufficient strategic water reserves to support planned residential, industrial and commercial activity in the region, up to the life time of this plan and also beyond the planning horizon of this strategic 25 year plan. **Chapter 8 Objective: Invest in our Future** Irish Water outlines four key strands required in the future investment in water services in Ireland: 1. Managing its asset base 2. (ii) Investing in its assets 3. (iii) Establishing a sustainable funding model 4. (iv) Promoting research and innovation and meeting the standards set by the CER The Dublin region local authorities would broadly support the aims of this sub strategy in terms of providing a world class water supply. Collaborative engagements with all stakeholders including the local authorities is seen as crucial in achieving that aim and in overcoming the current deficit in knowledge in relation to asset size, location, condition, performance and life expectancy. Irish Water recognises the historical underinvestment in water services in Ireland and the need to secure significant investment in order to overcome that deficit. The removal of lead, old cast iron mains, asbestos cement mains and ageing water and wastewater treatment plants are referenced as assets that pose a threat to the security and safety of the water and wastewater systems. The Dublin region	DLAs supports the WSSP recognition of a major new water source with sufficient strategic reserves for Dublin to be completed by the early 2020s. DLAs support the aims of the Invest in Our Future strategic objective. Collaborative engagement with stakeholders is crucial. DLAs seek to expedite the mains replacement programme in the Dublin region.

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	local authorities agrees with the concerns and issues outlined and seeks to expedite the anticipated programme of mains replacement in the Dublin region, where approximately 500km of the 8,500 km of watermains are over 100 years old. **Conclusion:** In summary, a key expectation in the formation of Irish Water is in its ability to deliver projects more efficiently and effectively than the previous governance arrangements through 34 local authorities working independently in most cases, with the exception of the Dublin region local authorities. Local Authorities generally have previously experienced delays in the long lead in times in advancing capital projects, from the inception to final commissioning stage, due to a protracted procurement and budgetary process. The Dublin region local authorities will continue to facilitate Irish Water in their vision for water services in Ireland and in their key strategic aim of delivering programmes and projects more effectively and efficiently into the future. In the context of the Dublin region, this significant undertaking can be achieved more effectively through a common cause and in a spirit of proactive collaboration with the Dublin region local authorities.	DLAs will continue to facilitate Irish Water in their vision for water services in Ireland through collaboration.
S15	**Cork County Council** Cork County Council wishes to acknowledge and support Irish water in their preparation of a 25 year Water Services Strategic Plan. The Draft document is very comprehensive in its content, objectives, aims and strategies. Cork County Council welcomes the opportunity to make a submission concerning the Draft WSSP. This submission comprises the views of the Councils Planning Policy Unit and the Water Services Directorate. Having studied and considered the Draft WSSP, Cork County Council from a Planning Policy perspective wishes to submit the following observations concerning the Draft WSSP including its relationship with the achievement of the objectives and strategies contained in the Cork County Development Plan (CDP) 2014: • The approach, aims and strategies are not clear in relation to whether Irish Water will provide the required headroom to meet the population targets contained in the core strategies of County Development Plans and in the case of Cork County Council headroom to meet the population targets for the various settlements in the Cork County Development Plan 2014. It should be clarified that headroom will be provided to meet the population targets set out in the core strategies of County Development Plans.	CCC welcomes the WSSP. Need to improve clarity on whether Irish Water will provide the required headroom to meet the core strategies in the County Development Plans. Strategy SG2d commits IW to maintaining headroom capacity based on size of settlement in NPF and RSESs.

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	• Metropolitan Cork (incl. Cork City which is a key element of Ireland's 2nd Gateway location) is targeted for significant housing and population growth and is a location that has consistently achieved significant growth in the past and is expected to achieve its population targets in the future. The Draft WSSP should be modified to include a section referencing Cork's requirements similar to the section supporting Dublin's growth. • Emphasis must also be placed on the provision of infrastructure for economic/employment needs of Cork in order to satisfy demand and also to attract Foreign Direct Investment into Cork as FDI will not come if adequate infrastructure is not in place. Capacity must be built into the WWTPs to accommodate industry and also planning permissions should be in place for future expansion. • Greater emphasis on housing provision is required throughout the document in order to satisfy the demand for housing and the realisation of the population targets in County Development Plans and in the case of Cork County Council the CDP 2014. The Planning and Development Act 2000 places requirement for housing in front of all others. The Draft WSSP needs to complement this approach. • Headroom must be provided in appropriate locations as outlined in the County Development Plans and in the case of Cork County Council headroom in order that development is directed to locations as outlined in the CDP 2014. • From the Planning Policy perspective it is essential for water services infrastructure to be provided in a timely manner to facilitate planned housing development so that the population targets outlined in County Development Plans and in the case of Cork County Council the Cork County Development Plan 2014 can be attained. • There must be a top level commitment to engage with Local Authorities to agree a programme to ensure that the supply of zoned lands for housing and economic development identified in County Development Plans and Local Area Plans is fully serviced in order that population targets can be attained. **Partnership with Local Authorities** The Strategic Plan contains very little reference to the fact that water services will continue to be delivered by local authorities under Service Level Agreement with Irish Water until 2025. The advantages of this arrangement in terms of continuity of service and harnessing of the local authority knowledge base are not brought forward in the draft document. This could impact negatively on staff	Section should be included referencing Corks population growth similar to the section on Dublin. The growth of metropolitan Cork is acknowledged. The section on Supporting Dublin's Growth is presented as a case study and does not form part of the strategic objectives. Infrastructure capacity should be in place to attract FDI Capacity to be built into WWTPs to allow expansion. WSSP needs to complement the approach of the Development Act 2000 in that greater emphasis needed on housing in the WSSP which is placed before investment in industry. Provisions for strategic growth in housing are presented in SG2b. Headroom provision must be provided in appropriate locations as outlined in CDPs. Timely provision of new water services. Need commitment to fully service lands zoned in the CDPs. More reference to partnership with the LAs under the SLAs is required. This has been included in a new section on 'Our Partners'.

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	morale and could undermine confidence in the status of the SLA. **Combined Sewers** In Chapter 5 (Effective Management of Wastewater) the impact of combined sewers is identified as a key challenge particularly in terms of Combined Sewer Overflows. Also one of the objectives in this section is to implement measures to reduce risk of flooding to properties from combined sewers. Cork County Council shares these concerns. We believe that, where it can be achieved, storm water separation is the most effective way of mitigating these effects. There would be mutual benefit for Irish Water and local authorities in separation of foul and storm sewers allowing clear separation of operational responsibilities and future planning. We acknowledge that this will not always be cost effective and better management systems for pumping stations and overflows may sometimes be more achievable. The strategy should contain an objective **to explore opportunities for storm water separation in cooperation with local authorities.** We would be obliged if you would take the above submission into account in the preparation of the Final WSSP.	Focus on separation of stormwater and wastewater where at all possible. Clear separation of operational responsibilities is required. Strategy WW2c commits to working with the OPW and LAs on this issue through the MoU being developed.
S16	**Mayo County Council** Mayo County Council welcomes the publication by Irish Water of the draft Water Services Strategic Plan and has the following observations: 1. While Irish Water identify that they are not responsible for Group Water Schemes, there has been a long tradition of Water Authorities "taking in charge" such schemes for a variety of reasons. We submit that a national Water Services Strategic Plan is incomplete without addressing the taking in charge of Group Water Schemes and that the criteria and methodology for this should be dealt with in Tier 2 planning. 2. Mayo County Council notes Irish Water's aim of reducing the large number of small water plants and replacing these with larger regional schemes. We look forward to working with Irish Water to continue the significant work carried out to date by Mayo County Council in this regard. Future projects include the further extension of the Lough Mask Regional Supply Scheme to the west of	WSSP needs to address policy for future taking in charge of Group Water Schemes. A commitment to consider (along with the CER) taking-in-charge is made in Strategy SG2e. Support for larger schemes and interconnection.

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	the county and the development of the East Mayo Regional Supply Scheme. 3. Mayo County Council with the assistance of the Department of the Environment, Community and Local Government has a history of developing small sewerage schemes and scheme extensions to improve the social and economic development of our communities and villages. We submit that the draft water services strategic plan should detail Irish Water's policy on these types of developments. An example of this is Crossboyne village which was included in Mayo County Council's strategic plan and was due for commencement in 2014. 4. We submit that Newport should be included in Appendix 3 - list of Areas from which raw sewage is discharged. 5. We note that the recognition of the Local Authority role in the delivery of water services is limited in the strategic plan. The draft plan gives little consideration to the operation of water services after the current 12 year service level agreements expire. We submit that the 25 year plan should give consideration to how water services will be delivered and the future role of Local Authorities.	Detail policy for development of small sewerage schemes to replace septic tanks is required. This is included in strategy SG2e. Newport to be included in areas from which raw sewage is discharged. This list is from the EPA. Recognition of local authorities role in the future delivery of the WSSP. This has been added in a new section on Our Partners.
S17	**Clare County Council** **Introduction** The preparation of a 25-year strategic plan is a very welcome development for the Irish water services sector. Similar exercises have been done before by bodies such as Engineers Ireland and Forfas, but this appears to be the first time that such a plan is on a statutory footing as provided for in the Water Services No. 2 Act of 2013. It should be stated that apart from the content about Irish Water itself as an organisation, the great majority of this document would have emerged the same if any other body had been tasked with the job of producing it in that it has an independent existence and merit outside of the context of Irish Water alone. As the draft plan acknowledges the importance of the Water Framework Directive (WFD) and River Basin District Management Planning (RBDMP), it should similarly aspire to a situation where water services are managed on a whole island basis. This would probably not be practical for some time yet, as IW already has an established equivalent north of the border and convergence could take some time, but for a small island with less than 6 million population it seems logical that both approaches to water – the "Resource" approach as in the WFD and the "Product" approach as in Water Services – should be managed on parallel lines. Generally, the draft plan is quite vague and somewhat dismissive	WSSP is welcomed. Document has merit outside the context of Irish Water alone. Plan should aspire to the delivery of water services on a whole island basis.

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	of Group Water Schemes, and it is our view that much deeper analysis of these schemes, and of the role which IW expects they will play for the long term, is required in the final plan. While mention is made of a 5 yearly review of the Plan, we would suggest that a brief Annual Review/Update be published outlining any major policy changes and target achievements. In the Glossary Section, we would also suggest that a clear and unambiguous definition be included of who exactly Irish Water view as their "Customer". Similarly, we suggest a definition be included of their interpretation of a private group water supply scheme and a public group water supply scheme and also the Regulators definition of a Complaint. **Challenges and Strategic Priorities** Firstly, for a Plan covering the next 25 years of which the next 10 at least, will involve local authorities working under an SLA arrangement, there is very little mention of the local authority as a partner, stakeholder, agent, etc. It would be imagined that some of the challenges IW will face in achieving their objectives will be the whole culture shift from this being a local authority service to the public utility model and part commercial outfit that is now being implemented. Surely, the management of that culture shift and the strategic relationship with local authorities in the future has to be a significant challenge? Clare County Council HR Section have a serious concern at the lack of mention or reference to the Local Authority as an obvious and important stakeholder and the role of the Local Authority under the SLA into the future. It is important that the LA and LA staff are recognised for the important role they are playing and will continue to play in this strategic change and that ongoing and necessary training in the new systems and processes is provided for in order to deliver the service to the highest standard. Similarly the arrangements for delivery of water services post the SLA period will have to be addressed to some extent in the document. That been said, we would be in general agreement that the Draft Plan has identified the most important challenges in providing water services to serve current and future populations over the next 25 years. In no particular order of importance, these include: • Meeting Customer Needs at an affordable cost • Providing Safe Water Supplies • Managing Wastewater • Protecting the Environment • Becoming more efficient in Energy Use	Plan should contain more detailed analysis of the position and future of Group Water Schemes. Text is included in strategy SG2e. Suggested that a brief annual review/update of the plan is published outlining any major policy changes and target achievements. Glossary. Definitions of "Customer", Complaint, Private and Public Group Water Schemes suggested. Additional text on role of the LA under the SLA is required. Additional text is included in a new section on "Our Partners". Arrangements for delivery of water services post SLA should be addressed.

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	• Providing Water Services for future population and economic growth. Mention is made of building the IW capacity to address these challenges by having Standard Operating Procedures, new systems and processes, using best international experience, Asset management approach, GIS, etc. However, it should be noted that the Local Authority Sector has made significant progress in these areas in recent years and the LA experience, expertise and local knowledge as a result should not be ignored.	LA sector experience and local knowledge should be not be ignored.
	Meet our Customer Expectations The key aim that Irish Water has identified is to establish customer trust and a reputation for excellent service through providing high quality and reliable water services delivered through resilient systems at an affordable price.	
	In the main, Local Authorities have already established customer trust and built up a reputation for excellent service but it is accepted more needs to be done. Particularly now when charges are to apply, the Customer will not accept anything less than a quality service, nor should they. To this end, some thought should be given to waiving charges completely where water quality is not to the standard expected and also how rebates are to apply when the service targets are not achieved.	Consideration to waiving water charges when water quality is not at the standard expected. Water charges are a matter for Irish Waters economic regulator (the CER) and do not form part of this consultation.
	The draft plan is also vague on the future duration of Service Level Agreements (SLA) once the initial agreements expire, and the continuing role (if any) of Local Authorities in the service provision. There is a lot of aspirational content about centralised delivery, but short on ultimate intentions.	
	In terms of communicating with the customer, IW has to be open, clear and concise. The current media PR campaign is welcome but is really 12 months too late. Definitions on who and what is a customer, what is a complaint (CERs definition versus the man in the street's), the reason for charging, how water is treated, the costs associated with same, etc. etc. all have to be communicated better. The possible categorisation of Group Schemes as non-domestic customers should be reviewed as up to now, this has not been the case in many local authorities where the end users are billed directly as non-domestic customers, where they have a mixed use. Where there is no active committee, establishing the Group Scheme Committee as a customer is fraught with difficulty. Where water supply networks are dependent on other networks such as Group Schemes, it is considered that some effort should be made to consolidated such "daisy chain" networks and thus avoids situations arising where one group of customers is disadvantaged by the inactivity of another.	Categorisation of Group Schemes as non-domestic customers should be reviewed. This is a matter for the CER.
	Existing communication channels that LAs have built up over many years should not be disregarded. Council Websites, text alerts, newsletters, vulnerable or strategic customers, etc. should all be	Existing communication channels used by the LA should

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	embraced and built upon. Recent IW instruction to remove old data and stop publishing new data *(Water Quality results)* on LA websites and instead publish it on the IW website is not a good idea. Once results are verified, better use of both communication channels should be encouraged with links going vice versa. Also, it is important that printer friendly versions of all communications are available and not just downloads. Utmost care has also to be taken in terms of misleading or contradictory information on IW literature and its website. Care has to be taken that there isn't an over reliance on online communications. Not everyone has access to email and the internet. Saying something is on the website isn't of much help to someone in a remote area without broadband facilities. It is positive to note that communication includes by post as we are absolutely of the view that a personal letter is still the best means of communicating significant information to people's homes.	not be ignored. Important that print material is available and there is no over-reliance on email and internet.
	In terms of how IW propose to measure its performance in meeting customer expectations, as indicated in Page 19, further consideration should be given to the areas of Contact Handling and Complaint Handling being handled by Local Authorities as opposed to the national call centre, *Abtran.* There would be added value and significant benefit in terms of an enhanced customer experience and fewer errors in terms of mistaken addresses, what the problem is, etc. when local knowledge and expertise is availed of.	Further consideration of contact and complaint handling by LAs rather than nationally.
	It is considered an absolute priority to firstly identify who is an Irish Water customer such as non-domestic individuals who are connected to Group Schemes served by a public supply and are being billed directly by local authorities as Agents of Irish Water. These individuals see themselves as customers of Irish Water but this has not be made clear as of yet.	Important to identify IW customers accurately. Commitment made in strategy CE1b.
	There is also an urgent need to transition the non-domestic Billing to the Irish Water central billing service area at the earliest stage possible and to communicate when this is happening. The recently issued FAQ regarding mixed use customers is useful but the general public have serious concerns in this regard. Eighteen months on and the Customer is still none the wiser on how the billing will operate under Irish Water and as a result, there is a breakdown of trust and a serious risk of significantly further reputational damage exists rather that the stated objective of establishing both customer trust and a reputation for excellent service. It is positive to note that there will be sympathetic handling of payment difficulty cases and also that there will be a range of customer focussed payment options available. Some customers have expressed an interest in monthly bills rather than Quarterly and these should be considered.	Need to move non-domestic billing to IW at the earliest possible stage. Monthly billing should be considered. This is a matter for the CER.
	Ensure a Safe and Reliable Water Supply No major disagreement about the contents of this chapter. The elimination of Boil Water Notices and	

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	effectively dealing with the risk from Lead pipes are two areas of paramount importance. Drinking Water Safety Plans are on the face of it positive, but must take account of adjoining landowners in terms of buffer zones and restricted areas around boreholes, rivers, lakes, etc. Also, the concept of interconnectivity on a county or regional basis is a positive one where an area is currently served by a single supply and in many cases a particularly vulnerable supply. Furthermore, successful interconnection of networks will also for smaller Treatment Plants to be decommissioned. However, in considering the need to manage supplies nationally and improve connectivity between supplies, the Plan isn't very specific about the role of Councils or the type of regional or national management model which IW aspires to. We understand that the Water Industry Operating Framework (WIOF) discussions that are running parallel will be considering the detail of this but it would be useful to have some additional information in the WSSP. While a National Water Resources Plan is welcome, IW must ensure that as a consequence, Local or Regional concerns in one region, in terms of Environmental, Tourism, employment, etc., are not unduly affected by decisions taken for the benefit of another region. It is considered that this objective should also include a planned approach to the taking in charge (by agreement) of Group Water supply schemes that are supplied from the public water supply. This would mean that over the life of the plan, the nature and range of different types of water supplies would be reduced and consolidated, thus eliminating fragmented and dis-jointed networks which are mostly managed on a voluntary basis by local committees and sometimes, not managed or maintained by anybody at all. This is definitely a challenge and an opportunity in that while it will take time to gather all the necessary data, consents etc, the end result of having all customers of public water supply on an Irish Water network which would be properly managed would be of benefit to all. As there is no effective or standardised Asset Management approach in the Group Water supply scheme sector, it is considered that the inclusion of those water mains which supply public water to rural communities under the Irish Water umbrella will ultimately improve the supplies to those customers and reduce unaccounted for water. It is considered that such a strategic view would be worth considering at this stage. In the performance indicators, the target to reduce the number of WTPs from current approx. 856 to 780 by end of 2021 looks ambitious, and there isn't much in the main text of the chapter as to how the plants to be decommissioned or combined will be identified and further information in this area is necessary and would be welcome. In terms of leakage, once the metering data information is available, IW should publish any changes	Clare CC support the contents of this chapter. DWSPs need to take account of adjoining landowners in areas around abstractions. WSSP should contain further detail on the regional or national management model for delivery of water services. National Water Resources Plan should not result in negative impacts to one region for the benefit of another. Objective should also include a planned approach to the taking in charge (by agreement) of Group Water supply schemes that are supplied from the public water supply. Strategic view for inclusion of public supplied GWSs into Irish Water should be made. Process to reduce the existing number of WTPs to 780 by end 2021 will form part of the National Water Resources Plan.

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	to the Unaccounted For Water (UFW) figures for those areas. It is our view that UFW figures could significantly change in certain areas once the customer usage is accurately identified as opposed to estimated as in the past. Significant differences may inform policy changes and/or priorities. Also, IW needs to be perfectly clear with the customer that IW is responsible for the public side and the customer is only responsible for the private side of the service. There is considerable confusion around the "split" as this is not helped by the mention of 225mm from the boundary or from the meter boundary box. Particularly in an urban context, the customer has no business in looking to open the public road or footpath in future in relation to water services. Fixed charges to the end of 2018 currently mean that there is no incentive for the customer to fix any private side leakage. In many case, the "leakage" is due to a dripping tap, a constantly running cistern, a damaged ball cock rather that a full on leak underground but the Customer may not realise the significant usage arising from these issues. . However, we feel that with a clear information campaign, many customers would take the necessary corrective action to reduce their usage. Some free allowance of water for community use by Tidy Towns Groups, etc should be considered. In terms of the Plans proposal to measure IW performance in ensuring a safe and reliable water supply, it would be useful to have a subcategory of Boil Notices in place for less than 200 days and have a target in this category as well. **Provide Effective Management of Wastewater** Again, in the main, we have no difficulties with the aspirations included in this chapter. However, we feel that it has missed opportunities to identify the need for better integration with CFRAMs, and for protocols or memoranda of understanding (MOUs) to be developed with the Roads authorities, the NRA and the Dept of Transport regarding road drainage and other wastewater related activities. It is considered that this objective should also include the taking ownership and control of private waste water treatment plants that may have been provided by developers or local authorities in the past. This would mean that over the life of the plan, the nature and range of different types of waste water treatment systems would be better managed and consolidated. The taking of these into Irish Water's remit would ensure consistency of approach to the provision of waste water infrastructure. It is considered that this objective should also include a planned approach to the taking in charge (by agreement) of Group sewerage schemes that are connected to the public sewerage network. This would mean that over the life of the plan, the nature and range of different types of wastewater services would be reduced and consolidated.	UfW data for each area should be published. This will form part of the Regional Water Conservation Strategies (WS2g). Confirmation of responsibility for pipework is required. This is presented in Figure 5 of the WSSP. Incentives to fix private side leakage is required before 2018. Submission suggests a subcategory for BWNs in place for <200 days. WSSP should identify need for better integration with CFRAMs and for protocols or memoranda of understanding (MOUs) to be developed with the Roads authorities, the NRA and the Dept of Transport regarding road drainage and other wastewater related activities. Objective for taking in charge of private and Group wastewater treatment plants should be included. Reference included in SG2e.

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	In the performance indicators, we feel that there is a need for an indicator for reduction of infiltration, to mirror the UFW reduction indicators in the previous chapter. It is also suggested that mention be made of how private domestic sludge contractors are to be accommodated in the future. **Protect and Enhance the Environment** We agree generally with this chapter, and welcome the recognition of the importance of the WFD and RBDMP, and the adoption of the energy reduction target of 33% from 2009 to 2020 which had previously been in the remit of local authorities. On the point of taking tourism & enjoyment of the environment into account when prioritising works, this will happen anyway, due to the WFD and its sub-directives such as those on bathing water, fisheries, habitats, & wildlife. In terms of a National Sludge Management Plan, the concepts of having alternative uses for sludge or sludge derivatives is welcome. We would also suggest that some incentivisation to Farmers and other producers to look at the available alternatives would be received very favourably. **Support Social and Economic Growth** Regarding working with national, regional and local planning authorities to deliver services to support growth, there is a lot about engagement and collaboration by IW with the authorities. However, we feel that there may be a need for further legislation to copper fasten the way in which the various sets of plans (National Spatial Strategy, Regional Planning Guidelines, County Development Plans, etc.) integrate with each other. This is necessary in view of the fact that up to the end of 2013 the planning authorities and water services authorities were almost one and the same, but have now diverged. As expected in a long term Strategic Plan, it is not going to contain any great detail pertaining to individual Counties but commitments to NSS Gateways and Hubs (Shannon & Ennis in our case) and their successors would be welcome. Ideally IW should take its lead from our Settlement Strategy/Hierarchy in our County Development Plan and over time try and deliver services to settlements having regard to spatial distribution and priority. To this end, the meeting arranged between IW and CCC regarding the 2017-2023 CDP is welcome and of particular importance. On who should pay the cost of new connections, Connection charges and development levies were paid before when there was no charge for usage. Now that the customer will be paying then consideration should be given to having a “free” connection charge. Of significant importance is that IW need to take environmental gain into account in deciding how to charge customers who wish to come off septic tanks and connect into the nearest wastewater network. It is noted also that in the	Indicator for reduction in infiltration should be included as well as detail on domestic sludge contractors. Management of domestic sludge is included in strategy EN3b. Incentives for farmers and other producers to use sludge waste. This would be considered as part of the National Sludge Management Plan. Need to copper fasten integration of national and regional plans with the development of water services infrastructure. Irish Water should take lead from Settlement Strategy in CDPs. See Aim SG2

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	entire draft plan, this is the only section in which Group Sewage Schemes come in for some positive mention as having a role in such connections. It would be good to include an objective to consider innovative ways of providing waste water treatment and collection infrastructure in small towns and villages through joint venture type arrangements by Irish Water with the local community, the Department of Environment, Community and Local Government and other stakeholders. Pilot projects could be brought forward to focus innovation and new ideas in this regard for areas that otherwise, treatment may not be economically viable.	Consideration should be given to 'free' connection charge, with cost recovery from billing. This is a matter for the CER and consultation on a New Connections Policy will be forthcoming.
	Investing in our Future We would generally agree with this chapter, with the caveat that more detail is needed on the future management models proposed i.e. National, Regional and County.	Objective for innovative ways for wastewater treatment and collection in small villages needed. Reference to small towns and villages now included in SG3a.
	Some General and overarching comments from our Environment Section Continuing our concern at the lack of reference to the Local Authority and its future role, of more concern is that there is no mention in the document at all that we can see of the role of the Local Authority Environment Section in protecting water as a resource. This lack of reference is important in a number of areas, e.g.	
	There is much reference to the requirements for the Water framework Directive and that Irish Water will collaborate and have a joined up approach etc. Many such requirements are statutory in nature and Clare County Council are the statutory authority that would enforce against Irish Water in those circumstances, e.g. groundwater regulations, surface water regulations.	More detail on future management models at national, regional and county level is requested.
	It is a principal of the polluter pays principle that the cost of implementing regulations should also be included in the price paid. There is no mention in the document of the cost of regulations management, enforcement, education and awareness being included in the price of water charged. If this is not Irish Waters responsibility this should be stated in the document. It is ultimately in Irish Waters interests that the appropriate resources are put into source protection in the environment sections of the LA system.	Role of LA as enforcement officer in WFD regulations (groundwater and surface water) is highlighted.
	There are a number of mentions of issues such as source protection risk assessment, assessment of the effects of climate change, and flooding, etc. all of these items are looked after by the environment section currently and there is no mention that the cost of these will be charged appropriately through water pricing or similar mechanism.	Cost of WFD measures and affordability. This is a matter for the CER.
	The compliance with waste water treatment requirements and the Urban Wastewater Treatment Directive(UWD) are mentioned. In terms of the interests of water resource management the following	

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	should be noted. The requirement for appropriate UWD have been in place since 1991 and are not yet complied with. The compliance targets of 90% by 2012 is too low. The compliance targets for UWD compliance should be 98% (or above) by 2021 and 100% by 2027 in line with the WFD. In regard to pollution risks to water supply, these risks should include Oil pollution and Hazardous and Noxious Substances pollution. While the proposed Water Safety Plans will address some of these issues, the Strategic Plan should address the risks associated with these and the contingencies in place for managing these risk. The document requests comment on the priority for investment. The Environment Section of Clare County Council considers that the priority on investment should be as follows: • Measures to protect human health, Drinking water, Bathing water and Shellfish water in equal priority • Measures to protect particular species at risk, e.g. Freshwater Pearl Mussel • Measures to protect Natura 200 sites and Habitats directive sensitive areas • Measures to maintain High and good status waters • Measures to improve low and medium standard waters. The document should also include measures for education and awareness initiatives for the protection of water as a resource. **Finally, Clare Fire Services have the following concerns:** There are a number of areas that could be referred to for Irish Water to consider as part of their 25 Year Water Services Strategic Plan including: • DWIRP – How engagement and interaction with the Local Authority and the Public can be achieved effectively in respect of drinking water incidents • Major Emergency Management – similar to the DWIRP, what engagement with Irish Water have if the particular issue becomes a major emergency • Provision and maintenance of Fire Hydrants & Fire fighting water – see Section 29 of Fire Services Act 1981 & 2003 http://www.irishstatutebook.ie/1981/en/act/pub/0030/sec0029.html#sec29 • Provision for water for sprinkler systems in commercial properties.	Cost of meeting regulations, enforcement and education included in the price of water charged. This is a matter for the CER. Considers the UWWTD compliance targets should be 98% (or above) by 2021 and 100% by 2027 in line with the WFD. A new target for 2027 has been included within the final plan. Pollution risks to water supply should be addressed. Consideration of priority ranking of investment in environmental measures is presented by CCC. Text on how IW will prioritise the allocation of funding included on page 16

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		Interaction between IW and CCC for major incidents, DWIRPs and maintenance of fire-fighting hydrants should be detailed.
S18	**Laois County Council** **Chapter 1 Introduction** Page 1, 3rd para: Despite the work of the local authorities over 130 years, (insert: and given the limited availability of funding), substantially more investment is needed … Page 1, last para: We will therefore work with regional planning authorities (include local authorities also) and other agencies in the forward planning of water services Page 3, 4th para: WSSP will be reviewed and performance benchmarked – will this be internal or externally reviewed? Comment: Page 3, Our Commitment: "... support Ireland's social and economic growth through appropriate investment in water services." This is welcome. Page 4, 1st para: The implementation plans will also take account of … (need to include the County Development Plans in this sentence) **Chapter 3: Meet our Customer Expectations** CE1: Establish both Customer Trust and a reputation for Excellent Service. Key Targets LA Comment Customer Contact Handling – Call may be answered within 20 seconds, however by the time a customer gets through to an operator after selecting the correct option and is then in a call queue, a considerable amount of time has elapsed. This results in the call being quite costly for the customer, despite using the Lo call number. We carried out a test call with a real complaint that had to be passed on to IW – we were passed through to specialist LA call desk. Very pleasant staff dealing with call, but call lasted. Customer Complaint Handling – Setting a target of 90% to 100% is very ambitious. To achieve this target: • The existing systems need significant improvements. • Improvement in the quality of the information included in the Work Orders.	The reference to investment is made and limitations on previous availability of funding to LAs. This been included elsewhere in the WSSP. A commitment to performance benchmarking in each revision of the plan has been made in the WSSP. The sentence on implementation refers to the IW Tier 2 Implementation plans. Reference to the CDPs is not appropriate here. Submission includes discussion on Customer Contact Handling times. This is set by the Codes of Practice which are approved by the CER.

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	• Reported outages are evident on Maximo. • On Call????? Question 8. How do you think a utility like Irish Water should best communicate with its customers? LA comment: Different communications methods needed to target different population groups – print, TV, social media. Question 9. What are your views on how we propose to measure our performance in meeting customer expectations? LA comment: Long waiting times for customers who ring the Lo call number. Waiting time reported by the customer differs from that recorded by Irish Water. The waiting time for the customer begins when he/she gets through on the lo call number. Does IW record the of the commencement of the waiting time at a different point in the customer call? Also the inability for the customer to return to the main menu to select a different option (should they choose the incorrect option initially), gives rise to additional costs for the customer and add to customer frustration. The customer is being regularly advised by IW operators at the call centre to contact the LA, despite the Customer Contact Protocol. Their subsequent contact with the LA results in them being redirected back to IW. This is costly on the customer and again results in customer frustration **Chapter 4 Objective: Ensure a Safe and Reliable Water Supply** 1. The last line of "The Current Situation" reads "Smaller water sources are also susceptible to sporadic and seasonal variations in water quality and availability." This statement is not necessarily accurate and may be included to justify IW reluctance to take responsibility for smaller supplies. Consistent water quality and availability is largely governed by good catchment management, correctly designed abstraction and robust treatment and monitoring. Without these, any source could be considered susceptible to water quality and availability risks. I would seek the removal of this sentence. 2. Under "Key Challenges", the first line on page 23 states "Protection of water sources from contamination ensures safe water supply and reduces treatment costs." Source protection appears to be covered by Strategies WS1b, WS2b and WS3b. These strategies suffer from not admitting that they are, to an extent, beyond the control of IW and their implementation is	Considers complaint handling targets are ambitious. Communication methods should be targeted to population groups. Issues rating to Customer Calls to the LoCall number. This is a matter for the appropriate Code of Practice and not the WSSP. LA disagrees with the sentence: "Smaller water sources are also susceptible to sporadic and seasonal variations in water quality and availability." Source protection needs to highlight the cooperation of stakeholders outside IW control. Engagement with all

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	reliant on the cooperation and resources of others. 3. WS1b refers to engagement with stakeholders to deliver the strategy, but does not recognise that IW itself has no or limited powers in respect of catchment management and source protection. It is unclear how this strategy can be resourced and delivered if it relies on functions beyond IW's remit, and therefore casts doubt over the efficacy of the strategy. The third last paragraph of the details section of this strategy could be interpreted that only "each catchment supporting good quality raw water sources" will be targeted for improvement. This should be clarified to ensure that this strategy applies to all drinking water supplies. 4. WS2b states "we will seek to balance the volume of our abstractions and the locations where we abstract water with the needs of the ecology supported by the water environment." There is no mention of balancing IW requirements with amenity, agricultural or other economic needs. Where IW requirements result in restrictions to farming practices and associated farmers' livelihoods, for example, how will those needs be balanced and compensated? This should be addressed. 5. WS3b makes no mention of IW reliance on external stakeholders, such as LAs who have powers in relation to catchment management. Again, the strategy is not credible without a recognition of how IW is limited in delivering its own strategy. 6. WS1a states "We will improve or decommission water sources which are at risk from contamination or low flows or are causing avoidable environmental impacts." It is important that where supplies are decommissioned, they are replaced with an alternative supply. Again, this may be to support a position where IW can walk away from small public supplies. 7. The National Water Resources Plan to be delivered under this strategy affects a number of other strategies (WS1b, WS2b, WS3b, SG2b, IF1b). The reliance of IW on external stakeholders for the successful implementation of the plan must be recognised. 8. WS2a covers risk assessments of supplies of all WSZs. It is imperative that the risk assessment criteria and procedures are agreed with EPA to minimise adverse effects on the environment. 9. Indicators and targets: It is unclear what the red crosses denote. 10. [WS1f] Prepare and implement strategies to manage other quality issues in water supplies, page 30. In relation to WS1f on page 30, the text somewhat contradicts the heading. The heading indicates that IW will "Prepare and implement strategies to manage other quality issues in water" and the early part of the text states that "We will identify water supplies that suffer from	stakeholders is included in strategy WS1b. WS1b. Strategy applies to all drinking water sources. Engagement with all stakeholders is included in strategy WS1b. WS2b should reference balance of abstractions against agriculture or other economic users. This section refers to the WFD and the needs of the ecology take priority. WS3b. This strategy promotes rationalisation of water supply areas. Consultation with external stakeholders will be undertaken, where appropriate. WS1a. Reference replacement with alternative supplies. Interconnection of water supply zones, where appropriate is a key component of the rationalisation proposals. The National Water Resources Plan. This will be subject to full stakeholder consultation. WS2a. Risk assessment criteria. These will be agreed with the EPA. Red crosses. These are part of a graphic to show that water is subject to a Boil Water Notice.

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	water quality issues that are not covered under drinking water standards such as water hardness and discolouration due to natural sources. These problems can cause concern to customers and excessive hardness in particular can cause damage to hot water appliances." This gives a firm impression that IW is going to tackle hardness and discolouration. However the later text states "neither hard water nor the substances associated with hard water, such as lime, calcium and magnesium, require the restriction of a supply nor do they make water unfit for human consumption..... While treatment to reduce hardness in water supply is not currently a priority, it may be considered in severe cases by the CER when priority compliance issues have been addressed". This categorically states that in general IW will not be addressing hard water. The wording "...it may be considered in severe cases by the CER when priority compliance issues have been addressed" is very ambiguous and either needs to be elaborated on or left out altogether. These are very sensitive issue in the customers mind and have been for years. The mixed messages within this section will only give rise to confusion and frustration. They certainly do not give clarity to a strategic plan. **Chapter 5 Objective: Provide Effective Management of Wastewater** 1. On page 40, the box and graphic indicates that combined sewers are acceptable in a foul sewer network. While WW1a seeks to address CSOs under a compliance strategy and WW2c aims to deal with flooding from CSOs, there needs to be a statement in this document that IW do not deem combined sewers acceptable, combined sewers present challenges to ownership/responsibility for such discharges to streams and rivers and that their use will be minimised and reduced over time. 2. WW1d There is no mention of ICW and related technologies that would reduce IW's environmental impact and operational savings. This strategy should deal with "design, construction and operation." 3. WW2b should include a review of available technology and techniques in any wastewater management system, to ensure that wastewater impacts are reduced to as low as reasonably practicable. 4. WW2c refers to collaboration with local authorities to investigate SUDS in combined sewer areas. Both the planning authorities and the roads authorities may inform IW's provision of a more sustainable wastewater collection system. Memorandums of Understanding may be	Addressing issues such as hardness which are not a requirement of the Drinking Water Directive. This can only be considered if approved in the future by the CER. This is stated in the strategy. Unacceptability of CSOs for the long term. CSOs are a fundamental component within the existing wastewater network. The strategy seeks to address problems from them in line with international best practice. Reference to integrated constructed wetlands. This is referred to in WW1d. LA wants a review of all wastewater management systems to reduce impacts.

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	required for each Authority. 5. WW3b states "Standardisation will support our strategy of modular development of treatment plants in sync with growth of demand." This may not give the greatest performance in every situation and appears to rule out all technology except the single preferred option. Having a suite of technologies available, including ICW, affords IW the flexibility to adapt to the specific requirements of a particular site in ways that can optimise energy, environmental and cost benefits which may not be available if a only single technology is to be used. 6. WW3c should mention ICW as an example of energy efficient "greener technologies." 7. WW3d should recognise the adverse economic impact that a lack of treatment capacity would have on an agglomeration. 8. WW3e should mention as part of the "balanced approach" the adverse economic impact that a lack of treatment capacity would have on an agglomeration. 9. The target for reducing properties at flood risk by 80% of the 2021 number, when the 2021 number is unknown is not wise. **Chapter 6 Objective: Protect and Enhance the Environment** • On page 50, the short section describing the Water Framework Directive should mention that water bodies with Good status must be protected and enhanced. • Aim EN2 deals with operations only. This must be expanded to cover upgrading and replacing the infrastructure with low energy/low impact technology so that a programme of continuous reduction is achieved. This should also be reflected in Strategy EN2b. • On page 54, EN1a must recognise the potential competing interests between water resources for drinking water and for agriculture, and the pressures that will come with the delivery of Food Harvest 2020. The stated framework components do not ensure that this important economic and environmental challenge will be adequately addressed in the Strategy. • The last line of EN1d allows for cherry picking selected schemes for optimising energy performance. The strategy should provide that all capital works are designed and optimised for minimising environmental impact as well as optimising energy performance. • EN1e should recognise the need to comply with County Council and Regional planning policy, County Development Plan and Local Area Plan policies and objectives, local bye-laws, CFRAM, etc.	WW3b. Modular technology may not be appropriate in all situations. Refer to a suite of available technologies including ICW. Refer to ICW as green technology. Reference stated above. Recognise adverse economic impacts from lack of WW treatment. This is recognised elsewhere in the document. LA considers flood reduction target unwise. Noted. WFD section references. The section on the WFD has been updated. Submission considers Aim EN2 to deal with operations only. Aim EN2b includes for the development of infrastructure to meet WFD objectives. EN1a should reference agricultural pressures for water. The Sustainability Policy references Economic Development and Social Impact under its headings. EN1d allows for cherrypicking schemes. Strategy commits to optimising significant projects, where possible. Need for compliance with county and regional planning

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	• EN2a IW's commitment to integrated catchment management and its ability to participate in RBMPs and collaborate with other stakeholders is undermined by the fact that the EPA did not appear to consider IW to be a stakeholder at the launch of the EPA Catchment Management Network. IW's reliance on third parties to give effect to useful catchment management options further weakens the prospect of implementing a strategy that delivers anything meaningful for the Water Framework Directive. • EN2b should recognise the impacts on agriculture that abstractions have and how water supply for drinking water and agriculture will be balanced to minimise adverse environmental impacts under this strategy. IW will seek to work with the EPA, the CER, LA's and all stakeholders to agree measures to achieve such a balance. • EN3a should have regard to Regional Waste Management Plans and County Council policies in relation to waste management. • EN3b should aim to follow the maxim reduce, reuse, recycle in terms of sludge generation. IW should use international best practice to minimise sludge generation before sludge management is considered. • There are no targets set for sludge management. Targets should be set for reduction of sludges from wastewater or water treatment processes. Targets for improving landspread practices to reduce environmental risks on an ongoing basis (meeting the WFD principle of protect and enhance water quality status), minimise odour nuisance etc should also be considered. **Chapter 7 Support Social and Economic Growth** Page 60, Our Strategic Aims: "Facilitate growth in line with national and regional economic and spatial planning policy (include local policy here?) Comment: Page 60, 2nd para: County Laois experienced highest growth in population in Ireland between Census 2006 -2011. Page 61, last para: Our primary objective is to support … in line with … (include local planning policies and objectives) Comment: Page 63, SG1a: This is welcome as it includes "local bodies". Comment: Headroom – proposed headroom this is based primarily on the basis of firstly large urban developments and secondly on the gateway towns and sets 20% and 15% headroom capacity as the target respectively and finally "other town" – this penalizes towns such as Portlaoise which has and	policy. This is detailed in Strategy SG1a. IW need to be a stakeholder on the EPA Catchment Management Network. EN2b. Abstraction impacts on agriculture. Local policy engagement is included in Strategy SG1a. Targets for reduction in sludges should be considered. Infrastructure planning will be in line with the future NPF and RSESs. Aim GS1 includes supporting local economic and spatial policy Comment on Laois population growth. Inclusion of larger towns such as Portlaoise in the 15-20% headroom target should be considered.

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	continues to buck the trend in population growth due to its strategic location in relation to the M7 and M8 motorways, the N80 National Secondary Route and the main Dublin Cork/Limerick Railway line and its designation within the NSS and a National transport Node and Inland Port. Growth in population was 26.7% in the last inter census period 2006 to 2011. Consequently, Portlaoise must be included in the 15% headroom bracket. Comment: Page 66, para 6: "… strategic network development plans to support anticipated growth in line with <local authority development plans>" – good. Page 66, last para: TIC of Estates is not explicitly mentioned – this could be expanded. Page 68, table: Current Baseline for 'Capacity in Strategic Networks to Support Growth' – main text should be expanded to explicitly state that land currently zoned for development will be reviewed as part of this baselining exercise. **Laois County Council Planning Section** made the following submission in Chapter 7 In October 2015 Laois County Council will be publishing notification of its intention to commence the review of the current Laois County Development Plan 2011-2017 in accordance with the requirements and provisions of the Planning and Development Acts 2000, as amended. A new County Development Plan to cover the period 2017-2023 will be prepared. In any Development Plan review process, the challenge of providing for population and economic growth in a sustainable manner, which aligns with Regional and National policy, is of paramount concern. Laois County Council Forward Planning unit therefore welcomes the opportunity to provide a submission on this Draft Water Services Strategic Plan. We also look forward to working closely with Uisce Éireann/Irish Water as a Prescribed Body in the Development Plan review process. The following are comments on aims as set out in the relevant Strategic Objectives chapters contained in the Draft Water Services Strategic Plan. **Chapter 7- Objective: Support Social and Economic Growth** AIM SG1- Support National, Regional and Local Economic and Spatial Planning Policy SG1a: Work with national, regional and local bodies to anticipate and plan water services for growth in line with the statutory planning process *Laois Co Co Forward Planning Comment* Ensure alignment of the WSSP review process with National and Regional Plan review periods. Work	Commitment on headroom is in line with current RPG settlement strategy and will be review on publication of new spatial planning strategies. TIC of estates could be explicitly included. Existing zoning of land as baseline. New Laois CDP being prepared. Comments made in the sections below are noted. No changes to the WSSP are required.

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	closely with Laois County Council in identifying water services needs during the Plan period 2017-2023. AIM SG2- Facilitate growth in line with National, Regional and Local Economic and Spatial Planning Policy SG2b: Plan Water service infrastructure at national, regional and river basin level *Laois Co Co Forward Planning Comment* Work closely with Laois County Council in ensuring the strategic provision of water services align with development plan and County aspirations SG2c: Invest in the development of strategic networks and treatment works *Laois Co Co Forward Planning Comment* Ensure that there is engagement with Laois County Council during Development Plan and planning application process in identifying necessary infrastructure works for delivery of sustainable economic development within the County SG2d: Maintain appropriate headroom in strategic water services infrastructure *Laois Co Co Forward Planning Comment* Work closely with Laois County Council in ensuring the strategic headroom is reviewed and amended accordingly upon publication of National Planning Framework and Regional Spatial and Economic Strategy's ie Headroom parameters as identified in this section increase or decrease in line alterations to "Gateway" status of towns as set out in current NSS. Ensure that cost of one off demands are not an impediment to development of industry and innovation centres within County Laois. Aim SG3- Ensure that Water Services are provided in a timely and cost effective manner SG3a: Plan for water services infrastructure development to meet projected demand facilitating deliver on a phased basis Laois Co Co Forward Planning Comment Work closely with Laois County Council in ensuring that any phasing proposed will not impede the ability of County Laois to achieve strategic objectives as set out in current or forthcoming County Development Plan. Ensure headroom is provided for across the County. **Chapter 8- Objective: Invest in Our future**	

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	Aim IF1 Assets Management- Manage our assets and investments in accordance with best practice asset management principles to deliver a high quality secure and sustainable service at a lowest cost IF1b: Develop long term asset strategies and implementation plans (Tier 2 Plans) *Laois Co Co Forward Planning Comment* Laois County Council will work closely with Uisce Éireann/Irish Water in ensuring that all Tier 2 Plans developed identify future needs and resources. Ensure that all future needs identified align with County Development Plan objectives Aim IF2: Balanced Sustainable Development- Invest in our assets while maintaining a sustainable balance between meeting customer standards, protecting the environment and supporting the economic development and growth of the country IF2b Engage collaboratively with key stakeholders including EPA,CER, DECLG, HSE, Regional and local authorities *Laois Co Co Forward Planning Comment* The Forward Planning unit will work closely with Uisce Éireann/Irish Water in advancing the need to balance customer standards, protecting the environment and supporting the economic development and growth of the county. IF2c Apply Clear and transparent investment prioritisation criteria *Laois Co Co Forward Planning Comment* The Forward Planning unit will seek to work closely with Uisce Éireann/Irish Water in the prioritisation of capital projects to ensure that any prioritisation will not impede the achievement of stated Development Plan objectives.	
S19	**Fingal County Council** Fingal County Council welcomes the opportunity to positively collaborate with Irish Water (IW) on the Draft Water Services Strategic Plan (WSSP), and we recognise the importance of the Plan as a key framework for delivering necessary water services infrastructure to support social and economic growth in Fingal and Dublin for the next 25 years. IW will be aware of Fingal's potential as a County, and as part of the Dublin Region, to play a key role in the economic recovery of the Country and the delivery of Construction 2020. The Draft Plan acknowledges the potential shortage of future water supply and waste water	WSSP is welcomed.

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	treatment capacity in the Dublin region and the urgent necessity to develop greater headroom for these services. In relation *to* water supply for example, it notes the vulnerability of the current supply for the Dublin area due to age of the system and the restrictions on headroom at only 2% (best practice is referred to as being in the region of 20% for large urban areas). Fingal supports the commitment by IW to prepare, develop and/ or implement a number of plans and strategies to deal with these deficits. The timely and efficient preparation of all such plans and strategies will be welcome and should provide clarity in relation to the provision and security of water supply and treatment for Fingal (both current and future). It would be helpful to have timelines for these plans as this will facilitate greater certainty in planning future development through the Development Plan, Local Area Plans and the development management process. Fingal would recommend that there are a number of strategic projects which should be referenced, with timelines, in the Draft Plan due to their national scale and importance. These are: Ringsend WWTP expansion 2019 Greater Dublin Drainage 2021 New Water Source for Dublin 2022 Fingal welcomes Irish Water's commitment to support Government policy in relation to meeting the objectives associated with a strategic approach to housing provision as identified in Construction 2020 and that IW will participate in the Housing Supply Co-ordination Task Force for Dublin (established by the DoECLG as an action under Construction 2020). The key priorities for Fingal over the short to medium term are:- • Meeting housing targets through Construction 2020 and the Social Housing Strategy 2020; • Ensuring the provision of serviced lands for employment opportunities for commerce and industry; • Ensuring the provision of serviced lands in key locations in accordance with Fingal's Settlement Hierarchy included in the Core Strategy of the current Fingal Development Plan. Presently, water and wastewater infrastructural capacity constraints are restricting future development in urban	Lack of headroom is highlighted. Timelines for the delivery of the Tier 2 plans should be highlighted. These are included in a new Table 1. Plan should also reference other significant Dublin projects.

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	centres that are all included within Fingal's Settlement Hierarchy including Rush, Lusk, Swords, Malahide, Kinsealy, Portmarnock, and Blanchardstown; and • Ensuring the provision of serviced lands identified in key locations, if altered from above, as part of the preparation of the next Development Plan. Fingal would recommend that: • The Plan is reviewed regularly to take account of future policy development and changing demographic data as it becomes available. • A close collaboration is maintained between IW and local authorities in respect of planning and delivering infrastructure, and the development of other plans etc. • planning for development beyond 2040 commences over the lifetime of this Plan To conclude, Fingal looks forward to working constructively with IW at both a County and Regional level and we would be happy to elaborate or contribute further on the draft Plan if required.	Recommends that WSSP is regularly reviewed with a view of policy development and demographic data. Close collaboration with LAs. This is included in a new section on Our Partners. Planning for development beyond 2040 takes place over the lifetime of the plan.
S20	**Donegal County Council** **INTEGRATION WITH REGIONAL AND COUNTY STATUTORY PLANS** The Plan sets out the Strategic objectives for the next 25 years up to 2040. It is noted that the plan will be reviewed on at least a five yearly basis. This will be critical to take account of the need for interaction with other national and regional statutory plans such as the National Spatial Strategy/County Development Plans and River Basin Management Plans including the implications of new plans as they are introduced. **WATER INDUSTRY OPERATING FRAMEWORK** The development of the Water Industry Operating Framework for the delivery of water services under the single utility model is noted as the most significant transformation initiative. Given the role of the Local Government Sector heretofore and the ongoing role under Service Level Agreements it is crucial that there is a comprehensive and appropriate engagement with the sector around all aspects of the development of the new operating framework. **STRATEGIC OBJECTIVES** The plan as required by law sets out proposals under six strategic objectives.	Five yearly review welcomed. Comprehensive engagement with LAs required under the Water Industry Operating Framework. This is stated in a new section on Our Partners.

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	A number of short to medium term priorities are identified including remediation work to bring drinking water quality to requisite standards and to ensure compliance with the Urban Waste Water Directive and others. As a basic requirement in order to meet customer expectations and for the protection and enhancement of the environment these are critical short term priorities where capital investment should be targeted. The scale of the challenge nationally on these objectives alone is acknowledged and is evident from the respective appendices to the draft plan. **PLAN REVIEW AND ECONOMIC DEVELOPMENT** It is crucial that there is a regular review and update of the Water Services Strategic Plan to take account of future policy development and demographic data as it becomes available. It is noted that it is intended to provide adequate spare capacity (headroom) in strategic level infrastructure to allow for projected future development demand. In this context the proposal for 15% headroom for the Letterkenny/Derry Gateway is acknowledged. However, the Council has identified a number of development centres/hubs in the County Development Plan as follows: • Bundoran - Marine Tourism • Ballyshannon - Cultural Heritage and Enterprise • Donegal Town - Tourism Focus • Ballybofey/Stranorlar - Sports Theme • Buncrana/Carndonagh - Tourism • Gweedore - Business Development • Killybegs - Renewable Energy, Marine, Technology & Food Considerations in relation to the adequacy of existing water services infrastructure and the provision of additional future capacity to support the objectives in the County Development Plan are required as part of regional/local capital investment programmes. It is acknowledged that proposals for investment at some of the locations are included in the Capital Investment Programme 2014-2016 with projects scheduled to commence shortly. However it is important that the service requirements at these locations are kept under review periodically during the lifetime of the Strategic Plan and particularly during the next capital investment cycle. **WASTEWATER TREATMENT** There are also other settlements in the County where provision for the treatment of wastewater is wholly inadequate. These locations and the requirement for investment at each would be familiar to Irish Water through the work under the Service Level Agreement. Proposals are being developed and	Targeting of investment to short and medium term priorities critical. Regular review to take account of future policy development. Additional development centres/hubs may require additional infrastructure capacity for growth.

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	programmed in some cases but a strategy to deal with this is required urgently and it is not clear what proposals Irish Water have to address the deficits at the remaining locations in the short to medium term. Many of these settlements are around our coastline and the Council has made a considerable investment to support the work of other agencies to attract visitors to the County building on the success of the Wild Atlantic Way. In some cases the quality of our bathing water is impacted by the discharge of untreated wastewater. It is clearly a priority for the Council that such issues are addressed as a matter of urgency.	Strategy to address deficits in wastewater treatment. Impacts to Bathing Water quality from inadequate discharges. This has been added to a section on Our Legal Obligations in the Environment strategic objective.
	SERVICE APPLICATIONS FROM NEW CUSTOMERS While it is accepted that Irish Water must operate in a commercially viable manner the new connection charging policy must be reasonable for citizens and business alike including local authorities particularly where access to services are required for the provision of social housing for example. It is noted that while the specific arrangements including scope and scale of charges must be agreed with the Commissioner for Energy Regulation every effort should be made to set the charges at reasonable/affordable levels. The Draft Plan refers to cost recovery which may lead to very significant charges in some cases, considerably in excess of those applied by local authorities through a combination of development levies and connection charges. In developing the charging regime regard should be had to some provision for exceptional/unique cases.	New connections charging must be affordable (including provision for social housing). The new connections policy and charging is a matter for the CER.
	FUNDING AND DECISIONS ON SPEND The establishment of a sustainable funding model is clearly critical for the delivery of sustainable investment balanced between meeting customer requirements, protecting the environment and supporting economic development. The pace at which improvements can be delivered is contingent on investment capacity and while the 2014-2016 Capital Investment Plan has set ambitious targets it is not evident at this stage that the programme will be delivered within the proposed timelines. Consequently the next investment cycle 2017-2021 will require a significant level of funding and the Draft Plan is deficient in that it does not provide some indicative financial projections for operating and investment capacity on a multi-annual basis over the lifetime of the plan or at least for the next 7/10 years.	Indicative financial projections on a multi-annual basis for next 7-10 years to cover future CIPs. (IF3).
	Because there has not been a comprehensive assessment of the assets it is accepted that it will take time to conduct the necessary analysis to proof strategic investment decisions. Consequently there is a concern that the focus will initially be in large urban centres where the business case can be readily established or already exists for investment at the expense of small towns and villages and rural areas. From a customer needs perspective it is important that this is given appropriate consideration	Concern for focus on investment in urban areas where business case can easily be established at deficit of rural

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	and that investment is proportionate and equitable and needs driven as far as possible from the outset.	areas. Proportionate and equitable investment.
S20a	**Waterford City and County Council** Waterford City and County Council welcome and support the objectives outlined in the Strategic Plan in particular that in relation to supporting social and economic growth. As the Plan outlines; *"The delivery of appropriate infrastructure to meet the required demand where and when it is needed is fundamental to supporting social and economic growth. Water and wastewater capacity is an important factor in maintaining Ireland's competitiveness for industry and commercial activity and as a destination for foreign direct investment".* The South East Regional Planning Guidelines (2010-2022) includes an Employment & Economic Development Strategy for the region. This strategy recognises that the growth of the Regional Gateway at Waterford City and its hinterland within the County area will facilitate the expansion of economic opportunities in the interests of achieving balanced regional development in accordance with the National Spatial Strategy. It outlines that continued focus is required to accelerate the development of Waterford in order that it achieve its status and performs as the regional Gateway. It is imperative that a cohesive approach to the planning and development of the Gateway is maintained, with the continued development of Waterford City and County kept high on the Irish Water agenda. Whilst, Waterford City Gateway has previously underperformed, it is now increasingly attracting investment from new industry and technologies such as knowledge based areas e.g. medical devices, biotechnology, pharmaceuticals, ICT and research and development fields. The continued development of Waterford City and County is heavily dependent on water services investment. The future wellbeing of the Gateway City as a realistic destination for industrial development, research and development hub, Technological University of the South East, commercial and retail destinations and social land community development, etc. can only be realised through investment and securing the necessary infrastructure. Thus the demands for water services within Waterford City and County are increasing and will continue to do so in order to meet the demands of the Gateway. In order to facilitate and foster such	Plan is welcomed. Reference to the South East Regional Planning Guidelines.

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	growth and the development of the Gateway City and County area the timely provision of necessary infrastructure is imperative.	

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S21	**Health Services Executive (Environmental Services)** Please file these comments to the 'Meet our Customer Expectations' section. Essentially the HSE (as Irish Water's 2nd Largest Customer) would like to develop a similar relationship with Irish Water as we have with the SEAI for energy efficiency, and the EPA for waste/water efficiency. Which will require collaboration at national level, and delivery of support services at local level with mutual benefits. IRISH Water Support and Education for (Large Non Domestic Customers) 1. Please refer to SEAI Public Sector programme which works well on similar scale and capacity i.e. promotion of energy efficiency via Public Sector programme. The Sustainable Energy Authority of Ireland supports Public Sector organisations (Large Non Domestic Customers) to meet their efficiency target and offer a comprehensive support and engagement programme through Partnership Agreements; Reporting Guidance; Best Practise, Finance and Procurement: Dedicated Programme Mgr (Alan Ryan), Free Energy Map training provided, Energy Link Forum, and ongoing mentoring (4 regional SEAI consultants) as required for HSE Technical (Sanitary) Engineers/Maintenance staff. 2. Please refer to EPA Green Healthcare Programme (Clean Technology Centre) supports resource efficiency and save on costs in healthcare facilities. GHCP provides direct advice and assistance to the many hospitals via the detailed surveys and follow-up reports, recommendations and customised advice. In 2015 HSE are developing healthcare water efficiency best practice benchmarks, guidance, and case studies which we will share publically. 3. The LA Water Services Training Network could be expanded to provide free IRISH Water leak detection/ pressure management/water usage/demand control training to Large Non Domestic Customers. WSTG offer a varied range of training courses in 5 Regional Training Centres. I attended one of these courses myself, although the courses would have to be condensed for a 1 day course aimed at Large Non Domestic Customers. The courses currently are focused on LA Sanitary Services Network Engineers/Operatives run over a week. The HSE will fix leaks on our pipe work based on a business case, but lack the technical expertise, or resources to identify such underground leaks and	HSE seek collaboration with Irish Water similar to that with the SEAI. Reference to SEAI Public Sector Programme. Irish Water has committed to working with the SEAI on Energy Efficiency in strategy EN1b. Reference to EPA Green Healthcare programme. Training Network for Leak Detection. The provision of leak detection training by the LAWSTN is for consideration by the organisation and is not a matter for Irish Water.

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	develop the business case. 4. The IRISH Water Customer Charter is good idea, but the current version for Domestic Customers is not applicable to large multi-site Non Domestic Customers. HSE have a range of locations from large Acute Hospitals (50) similar to a University Campus, and 3000 non acute locations from large hospitals to 'domestic type' health centres. HSE also have domestic properties in the community which the HSE (Landlord) rent to disability clients (Disability Benefit Recipients similar to the unemployed). The IRISH Water Customer Charter should include minimum standards i.e. water pressure, water quality, and Irish Water VAT status for payments from HSE as public sector body. 5. The HSE currently comply with Waste Water Discharge (Section 4/Section 16) Licensing as it is enforced by Local Authorities, but enforcement is adhoc depending on which Local Authority and their available resources. Obviously there are other concerns in a healthcare setting i.e. hygiene standards, legionella, pseudomonas outbreak prevention etc., which supersede water conservation but there is always scope for more efficient design, installation, and maintenance of existing water systems.	Non-domestic customer policy. A non-domestic customer policy is available at http://www.water.ie/docs/Business-Code-of-Practice-02.10.17.pdf Licensing of trade effluents. This will be developed under strategy WW3d. Advice on appropriate customer side water conservation. This will be made available under strategy WS3c.
S22	**Waterways Ireland** In general any strategy, plan, proposal for works or designation in a catchment which may impact on the designated inland navigations listed above, under Waterways Ireland's remit must be agreed with Waterways Ireland the Statutory Navigation Authority. There are aspects of this Draft Water Services Strategic Plan which may have significant impact on the Designated Inland Navigations under our remit for which no consultation has taken place. The designated navigations under our remit received no consideration in either the Strategic Environmental Assessment or the Natura Impact Statement in support of the proposed plan. Waterways Ireland strongly objects to the adoption of this Draft Water Services Strategic Plan as the implications for the designated inland navigations under our remit have not been considered. Waterways Ireland agrees that a long range planning is required but objects to the exclusion of	Waterways Ireland raised concerns about the lack of direct agreement of the strategy with the organisation. IW has reviewed the consultation process and considers that the process was carried out in accordance with current legislative requirements. Our process included a non-statutory consultation and a statutory consultation period, both of which were advertised in the national press. Letters were sent to the statutory authorities identified in both the Water Services (No2) Act 2013 and the SEA legislation including the DAU of the Department of Arts Culture and the Gaeltacht.

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	navigation interests from the current draft plan and associated documents. Waterways Ireland has no comment on communications with its customers but communications with stakeholders and the Statutory Navigation Authority needs to be initiated and improved. Provision of potable water should not impact on the designated inland navigations. Waterways Ireland agrees that the impact of climate change on water supply sources needs to be considered but the impacts on the designated inland navigations is a critical component of this consideration. Irish Water needs to consider the impacts on the designated inland navigations of this management approach and agree any proposals with the Statutory Navigation Authority. Waterways Ireland will be responsible for the water supply pipes serving our own facilities. There are water supply pipes providing a supply to others on our property for which we bear no responsibility. Waterways Ireland agrees with the objective of reducing water waste and will endeavour to comply with best practice to reduce consumption. Waterways Ireland has no comment on Irish Water's prioritisation process but would encourage greater consideration of the impacts on the designated inland navigations particularly the canals which are highly sensitive to pollution. We would highlight existing CSO discharges to the Grand Canal Dock and Kilcock which while not designated bathing areas are popular areas for bathing related activities and are subject to pollution events. Waterways Ireland would request that Irish Water puts in place monitors on the current sewer overflows discharging to the designated inland navigations. Irish Water needs to proactively engage with Waterways Ireland to consider impacts on the designated inland navigations. Irish Water needs to put in place monitors on existing discharges to the inland navigations so that this aspect of it's performance can be measured. Irish Water needs to recognise the impact of its works on the designated inland navigations and	Consideration of impacts on designated navigations under the remit of Waterways Ireland Specific reference is made to maintaining "navigation flows" in our Strategy EN2b; "We intend that our water abstractions will be managed sustainably to minimise impact on water body status or use by other stakeholders (for example, maintaining minimum environmental and navigation flows)". In addition, Strategy EN1e, addresses adherence to environmental and planning legislation when developing water services assets and refers specifically to consultation with key stakeholders in relation to appropriate strategies, options, design and method of implementation prior to the construction and operation of any new asset. Waterways Ireland would be considered a key stakeholder in relation to any of our services that would have the potential to impact on a designated inland navigation. The Water Supplies Act 1942 is a key element of legislation in the planning of water abstraction and includes the evaluation of the impact of abstraction of water for public water supply on navigation flows. Strategic Environmental Objective 7 of the SEA Environmental Report specifically addresses the protection of water as an economic resource and Strategies EN1 and EN2 have been assessed as having minor positive effects in relation to this Objective. The NIS has addressed the potential impact of implementing the WSSP on all protected sites, irrespective of their navigation status. WSSP Appendix 1 Feedback (in addition to the above)

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	fully engage with Waterways Ireland the Statutory Navigation Authority. Irish Water needs to recognise the potential impacts of any of its proposals on the designated inland navigations and fully engage with Waterways Ireland the Statutory Navigation Authority No consultation has taken place with Waterways Ireland with regard to any part of this plan or the proposals detailed within it. The designated inland navigations were not considered in either the Strategic Environmental Assessment or the Natura Impact Statement in support of the proposed plan. Waterways Ireland must strongly object to the adoption of this Draft Water Services Strategic Plan as the implications for the designated inland navigations have not been considered.	IW note WI's feedback in relation to • the monitoring of CSO discharging to designated navigation waters and in particular at Grand Canal Dock and Kilcock which are popular bathing waters and will take this into account when developing our wastewater compliance strategy. • to ownership of pipes on Waterways Ireland land. IW considered the implementation of our strategies on inland navigation during the preparation of our Water Services Strategic Plan.
S23	**Zero Waste Alliance Ireland** **38 page response submitted. A summary is presented below.** Zero Waste Alliance Ireland welcomes some of the WSSP policies and objectives, however, they are not clearly stated and they lack definite targets and timescales. Upon reviewing the WSSP, Zero Waste Alliance Ireland believes that Ireland has the possibility of re-using treated grey water and sewage sludge collection. Zero Waste Alliance Ireland believes that a major deficiency in the WSSP is that local authority will have very little or no influence in water-related planning matters, policies or objects which might be more appropriate at county or local level. Metering and pricing alone, while certainly helping to reduce demand, will not provide the necessary reduction in per capita water use in households, or major reductions in commercial and industrial buildings. It is our submission that effective demand management and reduction in domestic and commercial water use is a win-win strategy, and much more cost effective than attempting to meet the demand for water, as proposed by the Water Services Strategic Plan. The Zero Water Alliance Ireland believes that the WSSP considers conservation of water only in the narrow context of leakage control and saving of costs; and, while these are very desirable objectives, the Plan ignores the wider issue that water is a scarce and valuable resource, and should	Promotion of the reuse of grey water. This is included in strategy WS3C. LA engagement on water planning. Irish Water commits to engaging collaboratively with key stakeholders in strategy SG1a. Influence of metering and pricing. Demand management. Demand management included in WS3c Conservation of water in terms of leakage control and cost saving measures. Strategy WS2g indicates that Irish

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	be treated as such. It is our submission that Irish Water must develop and implement better governance structures, forecasting techniques and project management capability than that shown by Dublin City Council in its approach to the development of the Ringsend wastewater treatment plant. It is our view that SUDS should be more widely used in Ireland, that they should be included in the planning and design of all new housing estates, town and village centres, retail centres, roads, and other developments which include large hard-surfaced impermeable areas. Rainwater harvesting is not included in any of the objectives of the Water Services Strategic Plan; and we consider that this omission is regrettable. Irish water should consider water conservation measures in the cities of Melbourne, Sydney and Goleta as appropriate examples of good practice. Irish water should use rainwater to replace or augment mains water. Irish water should examine the success of the water conservation project operated by the City of Dublin Energy Management Agency (CODEMA) in Dublin's Civic Offices -- a 12-month project which in that short period of time reduced water demand by approximately 15% in the Civic Offices during 2003. We recommend that Irish Water encourage the using of grey water for non-potable purposes. We recommend the following measures: • The EPA or Irish Water should provide training and appropriate technical recommendations for the installation of grey water treatment and recycling systems for communities and single homes, as permitted presently in Part H of the Building Regulations; • The new planning regulations and a revised Part H of the Building regulations should make it mandatory and should impose a planning requirement for developments with a large number of houses to provide and operate grey water treatment and recycling, with water storage for toilets, gardens, car washing and clothes washing in those houses; • Management companies which operate these community or privately operated grey water re-use systems should be registered with the Local Authority; the re-use systems should also be registered, and should be inspected Local Authority inspectors (similar to the present inspection. regime for	Water will prepare regional water conservation strategies and implement on a phased basis. Aims EN1 and EN2 address the management of water services in a sustainable manner Control of surface drainage. This is under the responsibility of the OPW and Local Authorities and not Irish Water. Strategy WW2c promotes research and development by Irish Water with the local authorities on SUDs. Rainwater harvesting. This is one of the measures promoted through the implementation of strategy WS3c.

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	septic tanks and single-house wastewater treatment systems); and, • Planning authorities should inform architects and home builders at an early stage in the planning process that re-use of grey water must be considered, and that the planning application should include measures for grey water re-use as far as possible. We consider that a more ambitious target of leakage control and reduction is achievable. The Ecological context and nature conservation: The WSSP mentions "enhancement" – we cannot enhance nature, which has the benefit of millions of years of evolution; the best we can do is to cease damaging the environment and, where it has been damaged, restore it to full functioning and good status, as required by the Water Framework Directive. Irish water should recover nutrients from waste water: We submit that modern waterless and composting toilets with urine separation should be permitted under the Irish Building Regulations. We also suggest that urinals in public buildings should be plumbed to keep urine separate from other domestic waste streams, that urine is then stored in large plastic tanks, and when the tanks are full of urine, a mini struvite processing unit could arrive to process the urine and convert the phosphorous to struvite. The WSSP does not mention one of the largest projects for which Irish water has taken responsibility, namely, the Water Supply Project for the Eastern and Midlands Region.	Leakage Control. Irish Water is aware of the difficulty which is faced in terms of achieving leakage control and reduction. However, Irish Water will prepare regional water conservation strategies and implement on a phased basis in order to help reduce water leakage to a sustainable economic level in stages through a systematic work programme over a reasonable period as promoted in strategy WS2g. The Water Supply project for the Eastern and Midlands region. This is a Tier 3 project and is subject to a separate consultation.
S24	**VOICE of Irish Concern for the Environment** **Challenges and Strategic Priorities** *What are the further aspects of current water services we should consider in identifying challenges and priorities in providing water services?* We concur with the 6 Strategic Objectives, however, we are concerned that the Current Priorities do not mention the protection of the environment or water resources at all. While we understand that the IW is a utility and as such must focus on the provision of drinking water and sewerage treatment services, prioritising the protection of source water for drinking water purposes is essential not only to meet the objectives of the Water Framework Directive, but also to reduce the cost of expensive drinking water treatment. Protecting and improving the quality of ambient water goes hand in hand with the "delivery of an improved quality water and wastewater service at an affordable cost for our customers." IW must work together and communicate closely with the	The protection of the environment. This has a high priority within Irish Water and is implicit within a number of strategies within the water and wastewater Current Priorities (e.g. leakage reduction, compliance with the UWWTD). Irish Water commits to working with the EPA and to its role in the implementation of the RBMP strategies in the Environment Strategic Objective.

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	Environmental Protection Agency (EPA), Local Authorities and the future River Basin Management Councils to ensure that the number of abstraction and effluent discharge licenses within River Basin Districts is sustainable both in protecting the quality of both surface and ground waters and in providing good quality drinking water. **Proposal: Insert 'protection of the environment and water resources' into the list of Current Priorities.** *Has the plan identified most important challenges? Have we missed some challenges?* While the plan includes the challenge of not meeting the wastewater treatment standards in 38 out of 162 larger urban areas, there are also other areas that are pumping raw sewage into waterways. For example, there is raw sewage being discharged into Doldrum Bay in Howth in North Dublin. The EPA Urban Waste Water Treatment in 2013 Report[3] listed this discharge in the county report for Fingal County Council. It says *"Waste water from a population equivalent of approximately 100 at Howth is discharged to coastal water without treatment through a secondary discharge point at Doldrum Bay. This discharge is required to cease".* When the Ringsend sewage treatment plant received its discharge licence in July 2010 one of the conditions was that the Doldrum Bay untreated outfall be ended by 31st December 2011. This condition has not been complied with although County Fingal tried and failed to get the funding from the Department of the Environment, Communities and Local Government (DECLG). Now IW is responsible for this situation and has indicated that it intends to seek a reviewed licence to allow raw sewage outfall to remain as is. This is of great concern as we conclude that this type of unlicensed discharges is happening throughout Ireland. **Ensure a Safe and Reliable Water Supply** *While IW's top priority in terms of water supply is ensuring water supplies meet Drinking Water Regulations, what are the other priorities?* The plan states that a National Water Resources Plan is to be prepared to assess, on a country wide basis, the availability of water resource against water supply demand on a catchment and river basin scale. This plan must also consider all pressures and stresses on the river basin catchment,	In relation to the wastewater treatment standards. Irish water has committed to preparing and implementing a wastewater compliance strategy which will contribute to the management of environmental water quality and to meeting the requirements of the Urban Wastewater Treatment Directive. Submission details considerations for the Tier 2 NWRP.

[3] http://www.epa.ie/pubs/reports/water/wastewater/30086%20Urban%20Waste%20Water%20Web.pdf

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	including other abstractions, either for drinking or industrial purposes, discharges (Section 4 and Integrated Pollution Prevention and Control (IPPC) licenses), agricultural runoff, Combined Sewer Overflow (CSO) discharges and other pressures. *Should we consider the impact of climate change on our water supply sources?* Yes, this is an essential task. Increasingly, an abundance of rain falls where it is not needed and fails to fall in areas in desperate need of water. The system must become more resilient and plans must be put in place to address future climate change considerations. Additionally, IW should submit its mitigation plans to the National Climate Mitigation Plan currently being drafted by DECLG. Many government departments impacted by climate change are feeding into this National Mitigation Plan. **Proposal: In addition to addressing climate change in its own strategic plan, IW must feed into the National Climate Mitigation Plan being compiled by the DECLG.** *Where does the responsibility of the individual come in for the repair of pipes on their property?* It has come to our attention that IW intends to apply the 'first fix' policy only to householders whose pipes are leaking 53,000 litres or more of water per year.[4] This initiative should not be limited. IW keeps moving the goalposts. When it first mentioned this initiative, it promised to fix leaky pipes up to the front door. Then a spokesperson mentioned over the radio that it would only fix the pipes between the meter and the property line (which in many households would only be 1-2 feet). IW has lost a lot of credibility over the year and if it limits 'first fix free', it will lose whatever support it has from its customers. IW avers that it is a utility. It should act like one and own up to the decaying infrastructure and not put the burden of fixing leaky pipes on the customer. Customers pay for a service and they should be able to rely on this initiative. Gas Networks Ireland (formerly Bord Gais) fixes and finances all leaky or broken gas pipes leading up to the front door at all times. IW should take a leaf from their book. However, if the customer breaks the pipe due to digging or other activity on their own property, they should be responsible for this repair. **Proposal: 'First fix free' should not be limited.**	Climate Change Adaptation and Mitigation strategy. This will be prepared under strategy EN1c. First fix policy. The 'first fix' policy is not under the remit of the WSSP. The policy was a decision for the CER and the results of the CER consultation is available here. http://www.cer.ie/document-detail/CER-Decision-on-Irish-Waters-First-Fix-Leak-Repair-Scheme-for-Domestic-Water-Customers/1023

[4] CER Consultation on the Irish Water First Fix Policy,

https://www.cru.ie/home/customer-care/water/conserve-sustain/

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	What initiatives would we support to reduce water use and waste. VOICE believes that households and commercial ventures should be incentivised to install low flow tap fittings and shower heads, water butts, and rainwater harvesting systems. These incentives could be achieved either through a grant/loan programme or through tax deductions or credits. **Proposal: Adopt a grant programme to encourage the installation of water-saving devices similar to the SEAI greener home programme or implement a tax credit or deduction for such works.**	Measures to educate and incentivise customers. These were included in Strategy WS3c.
	Provide Effective Management of Wastewater In the Introduction of this section, p. 38,, it states that 'the treatment of wastewater to appropriate standards prior to its discharge to watercourses safeguards water used for drinking water abstraction, bathing, fishing and other recreational activities.' However, this sentence should also include 'protection of the ecosystems, habitats and biodiversity. '	The Irish Water commitment to protection of the ecosystems, habitats and biodiversity. This is presented with a new section detailing Our Legal Obligations.
	Should Irish Water prioritise bathing or shellfish waters or areas of nature conservation? Yes, these areas should be prioritised. However, there are coastal areas where people regularly swim but are not designated 'bathing waters'. IW should also investigate the uses of such areas when setting priorities.	Comments on bathing waters.
	Other issues: The plan dictates that IW will participate in "a high level of public engagement at **key stages** in the process" of constructing and operating waste water treatment plants (emphasis added). We do not know what the 'key stages' are. This needs to be defined. The government has proven again and again that it does not engage effectively with the public on actions it plans to take…whether it pushes forward the upgrading of the electricity infrastructure and the construction of enormous pylons in the Irish countryside or it imposes water charges or it grants planning permission for a controversial project. Many of these controversies would have been avoided or tempered had the public been actively involved and engaged from the beginning…not just at 'key stages'. **Proposal: Engage actively with the public at the early stages of any new project.**	Key stages in the development of new wastewater treatment plans. These will be aligned with statutory planning and construction stages.

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	Protect and Enhance the Environment VOICE supports the adoption of a green public procurement (GPP) approach and believes that engaging in a life-cycle analysis when purchasing goods and services will not only reduce IW's impact on the environment, but with its immense purchasing power, it will support and foster a greener supplier network for other government department purchases. However, green public procurement should not be limited to energy efficient initiatives or the purchasing of lower-impact chemicals. It should also address the products used in the construction of treatment plants and where practicable, used to promote new innovative treatment technologies. **Proposal: GPP should be at the forefront for all purchasing decisions.**	Support for the Green Procurement Approach. .
	We agree with IW to engage with all stakeholders to support a catchment based approach. Sludge from treatment plants will be an ongoing problem. IW must liaise and consult with the Regional Waste Authorities in the management of sludges and investigate beneficial uses for them. Further research into the use of sludge in anaerobic digesters for heat and power generation should be advanced and pilot programmes supported. Digested sludges may be used as soil conditioners. **Proposal: Support the development of the anaerobic digestion industry to treat sludges and to generate heat and electricity that can be used to power water and sewerage treatment.**	A strategy for wastewater sludge management. This is currently being prepared under WSSP strategy EN3b http://www.water.ie/about-us/project-and-plans/wastewater-sludge-management/
	Other Issues: IW plans to compile a database and map of all of its assets. (p. 32) **Proposal: This information along with other data gathered should be publically available in an easy to access format, such as on a dedicated website.**	Public information on mapping. This can be considered once the asset collation is completed in 2018.
	IW will develop and maintain a wastewater incident response plan for all wastewater systems managed local through service level agreements. (p. 44) **Proposal**: **We urge IW to compile and collate complaints and incident reports for all sewerage treatment plants into a central data base that is easily accessible by the public on a dedicated website.**	Incident response planning. Irish Water will produce appropriate guidance documentation and standard operating procedures as proposed in strategy WW1b. In the case of unexpected wastewater incidents, Irish water will develop, update and maintain wastewater Incident Response Plans for all our wastewater systems

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	IW will put in place a register to record and gather information on flooding from combined sewer overflows (CSOs) (p. 46) **Proposal: We urge IW to make this register freely available to the public and easily accessible through a central location on a dedicated website.**	which will be managed locally through the service level agreements with local authority staff. Public availability of CSO flooding data. Irish Water has updated the CSO flooding strategy to make this information publicly available.
S25	**ICMSA** The value of Irish food and drink exports approached €10 billion for the first time ever in 2013. This represents an increase of 9% on the previous year and 40% in the last four years with revenues almost €3 billion higher than in 2009. However, this growth and continued contribution of the agri-sector to export driven growth and economic recovery is only sustainable if the sector remains competitive. The delivery of clean useable water is paramount to the continued success of the industry and also ensuring continued foreign inward investment in Ireland. Ireland is capable of meeting increasing world demand for quality and sustainably produced food, particularly given the problems associated with water scarcity facing many of the food producing countries across the world. It is important to note that water quality in Ireland continues to improve and farmers have played a key role in contributing to these improved standards through considerable investment of over €2.5 billion in upgrading farmyards and increasing slurry storage since 2005. This expenditure ensures farmers comply with the Nitrates Directive and the Water Framework Directive. Farmers are classified as non-domestic users of water (or mixed-use customers) and have been paying for water on a volumetric basis coupled with a standing charge for meters for many years. The Draft Strategic Water Services Plan, (WSSP) sets out the general mission statement and objectives with regard to the delivery of water services in Ireland. The WSSP when adopted will be followed through by detailed implementation plans and ICMSA believe there are important issues that need to be addressed. Irish Water was set-up on the basis of reform and consolidation of supply and conservation of water services in Ireland which would be regulated by the Commission for Energy Regulation (CER). However, it appears that multiple Local Authorities continue to be effectively providing the water service at local level superimposed at National level by Irish Water. ICMSA has serious concerns that this is resulting in additional costs including administration costs which will impact on the ability of	Submission highlights the importance of Irish food and drink exports. Role of farming in improving water quality in Ireland. Concerns relating to the additional cost of the SLAs and

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	Irish Water to deliver a first-class cost efficient water service at a reduced cost to the consumer. The establishment of Irish Water must provide for operational efficiencies to guarantee the most cost-efficient means of useable potable water delivery for Irish consumers. ICMSA believe it is useful to examine how the evolving rollout of a national WSSP may impact directly and indirectly on farmers. Even if the majority of farmers are not customers, or at least not direct customers of Irish Water, ICMSA believe the plans of Irish Water may have a considerable impact on them. A key concern is the impact of the cost to the food processing sector and the possible impact of capital investment strategies across the country and the resultant ability of certain regions to attract and sustain foreign direct investment. An additional concern is the need to match water abstraction to availability and quality using surface water and groundwater sources, known as "conjunctive use", and the impact on farmers and the food sector companies which have their own water supply. In assessing the WSSP, Irish Water is hampered by the uncertainty regarding funding in the short-term and in the long-term. In addition, the WSSP is somewhat vague regarding efficiency and cost effectiveness. Greater emphasis should be placed on this. For example it is one thing to say that Ireland will at some distant future date have a world-class water supply treatment system. However, it may come at a higher cost of comparable size utilities in Europe and elsewhere. In the medium and long-term, if not indeed the present time, access to reliable safe water at a reasonable cost is an important issue for farming, industrial and food sector development generally. Fortunately, Ireland has a relatively un-polluted environment and an abundant supply of water. We agree that this is a comparative advantage. However, it is vital that this comparative advantage is not eroded by self-imposed costs in terms of capital investment costs and operational costs. ICMSA believe the strategic timescale envisaged for certain achievements are excessive with some instances up to 2040. While it may be argued that the underinvestment in the past requires this long timescale, conversely it is more arguable that this under development and chronic, if not acute poor state of our water infrastructure requires an accelerated programme of investment. However, of course this is tied in with the lack of certainty regarding funding, whether it is from central government or from users or both. Another key issue is whether or not the WSSP being formulated now with its excessive long timescale for delivery is influenced by the Service Level Agreements which Irish Water has entered into with Local Authorities. **Chapter 1; Introduction**	the ability of Irish Water to deliver efficient water services with the SLAs in place. Cost to food processing sector from water charges based on required capital investment. Impact on farming abstractions from Conjunctive Use. Comparative advantage to Ireland from a world class water supply system.

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	Page 1: ICMSA agree with the general thrust of the vision statement, however, we believe it is important that reference be made to cost efficiency or the lowest possible unit cost. Page 1; Paragraph 2; *"The water services which each customer receives require significant funding for both the operation of the existing treatment plants and networks and for investment in maintaining and providing new infrastructure. Irish Water, as a new national utility, must promote an understanding and acceptance of the need for a new fully funded entity to deliver the water services of this country in the 21st century."* Clearly, it would seem that Irish Water also sees the need for a fully funded entity to deliver water services. However, there is considerable uncertainty at the present time regarding the funding model and this uncertainty may block real progress at least in the short-term. Page 1; Paragraph 3; ICMSA believe the strategic timeframe of 25 years is far too long. It would seem a more appropriate timescale would be one of 15 years with two interim review dates at 5 years and 10 years respectively. Page 1; Paragraph 5 ICMSA agree with the comments regarding the key global competitive advantage which Ireland potentially has, but as stated above, quality water must be delivered at a competitive cost. Page 3; "Our Commitment" The statement and commitment at the bottom of page 3 has no timescale. It is imperative an indication of the timescale should be given otherwise it is meaningless and particularly so if it is to be 25 years hence. **Chapter 2 ; Challenges and Strategic Priorities** Page 7; Paragraph 5; Reference is made to the substantially lower number of plants in Scotland vis-a-vis Ireland. We would be concerned, as stated above, that the Service Level Agreements between Local Authorities and Irish Water may significantly restrict the rationalisation and reduction in the number of both treatment plants and sewage plants that should in the normal course take place.	Reference to cost efficiency. Strategic timeframe of 25 years. The WSSP sets out strategic objectives for the delivery of water services over the next 25 years up to 2040. However, the WSSP the strategic plan will be reviewed on at least a five yearly basis. Comments on importance of water for global competitive advantage. Concern that the SLAs will restrict rationalisation.

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	Page 7; Paragraph 6; Reference is made to the fact that Local Authorities were dependent on Exchequer funding whereas Irish Water will not be so dependent. This may not necessarily be the case. Unless sufficient and reliable revenue streams are generated by Irish Water such that it will reach the off-balance-sheet criteria set down by the EU and that Irish Water will be able to borrow at a competitive rates it too will be dependent on Exchequer for funding. If this is the case then the required improvement in the cost of the water supply and treatment will have to come from efficiencies and rationalisation which have to occur in any event.	Concern on the ability of Irish Water to borrow from markets at competitive rates.
	Page 8; Paragraph 1 and 2 of Managing Wastewater; These paragraphs and their description highlight again the appalling failure of local government and the Department of the Environment to provide for safe water supply and disposal of wastewater over the decades.	Previous failures of the Department to deliver critical infrastructure.
	Page 9; Protecting the Environment; ICMSA believe that the current Nitrates Regulations introduced in 2006 more than adequately represent farmers' contribution to the achievement of good water status, and, we strongly believe that there should be only one set of regulations and inspections and that under no circumstances should any further supplementary measures be placed on the sector.	Impact of Nitrates Regulations on farming.
	Page 9; Providing for Future Population and Economic Growth; It is important that investment strategies are delivered on a nationwide basis and that factors other than planned population growth are taken into account such as the need for the delivery of clean useable water in rural areas where the continued growth and success of the dairy industry is paramount and also ensuring continued foreign inward investment into these areas.	Irish Water commitment to providing for future population and economic growth. This is referenced in strategy SG1 'support national, regional and local economic and spatial planning policy' in order to coordinate development which is environmentally and economically sustainable.
	Page 11; Our Current Priorities; ICMSA agree with the objectives and strategies set out under "Our Current Priorities".	
	Page 12; Monitoring Our Performance; With regard to progress and the limitations of the WSSP the following is stated:- *"Our performance against these targets will be monitored and reported by us within each revision of the plan. This performance will therefore be available for scrutiny by our regulators (CER and EPA), other stakeholders and the general public. However, our progress against these targets is subject to adequate funding being available."* This emphasises the point made above regarding current lack of	Irish Water awareness of the importance of necessary funding in order to implement strategic plans.

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	clarity on current and future funding of Irish Water. The sentence above clearly demonstrates that Irish Water is not confident of any real progress on strategic planning and implementation of plans in the absence of secure and adequate funding. Page 22; ICMSA agree that the supply of water should be based on requirements of quality reliability and affordability, however, we believe it is essential to include efficiency or cost efficiency as another requirement. Page 27; Manage the Quality of Drinking Water from Source to Tap to Protect Human Health; ICMSA welcome the fact that a National Water Resources Plan will be formulated, however, many farmers use private wells for either their farm or domestic water supplies and ICMSA believe that the preparation of a National Water Resources Plan must not under any circumstances impact negatively or restrict these individuals. With regard to the preparation and implementation of Water Safety Plans for all Water Supply Zones it is important to note that improvement has taken place in recent times particularly with regard to nitrate levels in groundwater and that cognisance is taken of the considerable level of investment and change in management practices at farm level in order to comply with the requirements of the Nitrates Regulations. Page 32; WS2f; Reference is made to the need to match water abstraction to availability and quality using surface water and groundwater sources, known as “conjunctive use”. It is important the introduction of any such control system does not place a further compliance burden, new or increased costs on the farming sector and most importantly that existing water rights and use sources are maintained and protected. Page 32; WS2g; Irish Water plan on reducing leakage across all schemes to less than 38% by the end of 2021 and will work to achieve a sustainable economic level of leakage, estimated to be in the range of 18-22%, by 2040. Given the rates achieved in other European countries, ICMSA believe these targets are by far too low and long term. Page 33; WS3d; With regard to the plan to optimise capital and operational investments in water supply, it would be	NWRP must not impact negatively on farming. This will be addressed in a separate consultation on the NWRP. The rates of leakage reduction and estimate of the sustainable economic level of leakage. These are in line with water utilities in other countries.

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	important that greater emphasis be placed on the unit cost of delivering and that it should be in line with what is achieved by comparable water utilities in other countries. However, ICMSA welcome the stated commitment regarding efficiency of expenditure on investment at the bottom of this page. Page 39; Key Challenges; The fact that there are 71 EU infringement cases against Ireland for untreated sewage discharge is a damning indictment of government and local government inaction over a number of decades. Priority must be given to these areas and ICMSA believe the timeframe of 25 years envisaged by the draft WSSP is excessive for completion of such necessary works. Page 47; WW3b; With regard to wastewater, ICMSA particularly welcome the commitment that Irish Water will develop a number of cost reduction strategies as part of their focus on minimising the unit cost of delivering wastewater services whilst meeting environmental standards. As stated above, this should be extended to the whole range of services and actions undertaken by Irish Water. Page 51; The Current Situation; Paragraph two notes the improvements with regard to nitrates and ICMSA believe the contribution of agriculture to the achievement of good water status through compliance with the Nitrates Regulations introduced in 2006 must be recognised. In addition, we strongly believe that the lag-time associated with these Regulations must be taken into account and that there should be only one set of regulations and inspections and that under no circumstances should any further supplementary measures be placed on the agricultural sector. It goes without saying that the current approach involving research, monitoring and collaboration with the various other stakeholders is the best way to ensure that profitable expansion of agriculture coupled with the delivery of clean potable can take place into the future. Page 60; Our Strategic Aims; ICMSA would like to reiterate the need for a commitment from Irish Water that investment strategies will be delivered on a nationwide basis and that factors other than planned population growth are taken into account such as the need for the delivery of clean useable water in rural areas where the continued growth and success of the dairy industry is paramount and also ensuring continued foreign inward investment into these areas. A key example is the need for ongoing expansion and development of milk processing facilities in areas of milk output expansion in what	Addressing the EU Infringement Cases. These have been prioritised by Irish Water which will be compliant well within the 25 year period. Reiteration of the contribution from agriculture under the Nitrates Regulations. Need for investment strategies on a national basis covered in the Support Growth strategic objective.

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	are predominantly rural areas across the country.	
S26	**Irish Farmers Association** Water quality in Ireland is of a high standard, with 92% of lakes and 71% of rivers classified by the EPA as unpolluted. Farmers have made a significant contribution to this high status, spending over €2 billion upgrading farm-yards, increasing slurry storage facilities and developing farm buildings to ensure they meet the highest standards. In addition, chemical fertilizer use continues to decline, with nitrogen use falling by 60,000 tonnes over the past decade. **Compensation for yield and income losses to farmers around water abstraction points** Irish Water controls water services' assets with a value of more than €11 billion. In protection of these assets, Irish Water imposes specific land spreading restrictions of organic fertilisers. However, to date the core issues of yield and income loss arising out of the imposition of buffer zones remains unresolved. These buffer zones or set back distances prohibit the spreading of fertilisers, leading to yield losses and income losses and are essentially land designations. Precedent exists for the payment of compensation, where land designation and sterilisation arises because of EU legislation such as the Habitats and Birds Directives. More recently, where activities such as turf cutting have ceased, compensation has also been paid. In the group water scheme sector, the National Federation of Group Water Schemes engage directly with landowners impacted and agree terms to ensure landowners adjoining the water abstraction points are at no economic losses. ***IFA proposes that similar to the compensation packages in place for turf cutting restrictions and other such land use restrictions, a package of measures must be put in place, which compensates farmers for losses incurred around water abstraction points.***	Submission notes the concerns of the Irish Famers Association in relation compensation measures. This issue does not form part of the WSSP.
S27	**Dublin Chamber of Commerce** **Summary** This submission broadly echoes Dublin Chamber's position as set out in the first consultation regarding the Water Services Strategic Plan (WSSP), conducted in August 2014. The Chamber fully supports Irish Water's high-level objective of delivering a "world-class water infrastructure that ensures secure and sustainable water services, essential for our health, our communities, the economy and the environment."	DCoC supportive of the WSSP high level objective.

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	In the pursuit and delivery of this vision, Dublin Chamber would like to emphasise the recommendations made in past submissions concerning the Water Services Strategic Plan: 1. Businesses have been paying for water for decades, and it is important that they are clear on the services they receive in return. 2. A regional approach to the water services to better assess and address the particular challenges facing each region. 3. Investment is necessary to ensure Ireland's competitiveness, with security and supply of water a critical element in attracting and retaining business. 4. The required capital investment is high due to a legacy of under-investment. In order to achieve operational efficiencies and cost savings while increasing service quality, prioritisation must be driven by the business case for projects. The remainder of this submission follows the questions as set out in Irish Water's WSSP consultation paper. Irish Water's questions are in italics. **1. Introduction** *This Draft Water Services Strategic Plan is a roadmap for managing our water services for the next 25 years. Do you have any general views on the need for long range planning and our commitment to ensure that everyone has their say about water services?* The Chamber fully supports and shares Irish Water's high-level objective of delivering a "world-class water infrastructure that ensures secure and sustainable water services. Ireland's ability to remain competitive depends on the essential requirement of this world-class water system. This infrastructure is critical for Ireland's citizens, businesses, visitors and future foreign direct investment. A long-term approach to planning is critical in the delivery of this infrastructure. This WSSP sets out a vision for water services to 2040. However, the strategy must recognise that infrastructure delivered in the next ten to twenty years will be used for the next hundred. The passage of time sees the emergence of different trends and demands, and while we cannot predict the future, we can plan for the most likely scenarios based on historic and global demographic & economic trends. Seventy years ago, foresight was needed to plan and build the Poulaphouca Reservoir which continues to supply the Dublin Region to this day. Now, the same forward thinking is needed to	Non-domestic services and charges. These are matters for the CER. A commitment to a regional approach. This is made under SG2b. The importance of investment in order to attract and retain business. Prioritisation to be given by the business case for projects. Long-term approach to planning of water infrastructure is critical. Planning for the most likely scenarios based on historic and global demographic and economic trends.

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	ensure Dublin's supply for the next seventy years. **2. Challenges and Strategic Priorities** *Do you agree with our evaluation of the current state of water services in Ireland? Is there any further aspect of current water services that you think we should consider in identifying challenges and priorities in providing water services? Do you think the Draft Plan has identified the most important challenges in providing water services to serve current and future populations over the next 25 years (listed here)? Has the Draft Plan missed any other challenges to the provision of water services that you would consider important?* Dublin Chamber broadly agrees with Irish Water's evaluation of the current state of water services in Ireland, particularly with regard to weaknesses in security of supply in certain areas. Certainty and resilience of supply is essential for Irish businesses to plan their future. Companies that are considering development or expansion depend on the knowledge that their water supply is assured for the years to come. This is particularly true for companies whose business activity implies high levels of water use, such as those in the pharmaceutical and ICT sectors. In this way, a reliable water supply directly sustains jobs and investment. The water network must be prepared for the population growth forecasted by the CSO and supported by numerous other studies, but also for new arrivals, namely tourists and foreign direct investment (FDI). Although large infrastructural projects, such as the proposed Water Supply Project for the Eastern and Midlands region, are not expected to be operational for several years, the Chamber believes this demonstrates that Irish Water is preparing to secure future supply necessitated by demand of businesses and residents. *We have identified five proposed current priority areas (listed here) in order of importance. Do you agree with the order, and if not how would you rank them?* Dublin Chamber agrees that the first priority, 'Our Customers', is an appropriate strategic aim. The other priorities will flow from this. The Chamber would also emphasise that business and domestic customers should be viewed as equal in the strategy. Customers require quality services, affordable and stable pricing, certainty of supply and treatment, and accessibility for service queries. The remaining four priorities should perhaps better explain how they will help deliver these key aims.	DCoC broadly agrees with Irish Water's evaluation of the current state of water services in Ireland. Companies and businesses need assurance that their water supply is assured for the years to come. Must be prepared for population growth, new arrivals, tourists and foreign direct investment. WSSP to refer to demand of future water supply by demand of businesses and residents. Dublin Chamber agrees with the first priority. However, business and domestic customers should be viewed as equal in the strategy.

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	For example, while priority 4, leakage, is a problem, the strategic issue is certainty of supply. If all resources went to fixing leaks at the cost of water supply generally that would be a strategic failure. Leakage reduction is a tactic to achieve secure water supply rather than a strategy in itself. The same can be said for priorities 3 and 5. They relate to the customer needs of water quality and ensuring affordable and stable pricing, respectively. *Are there any other priorities you feel should be considered and where would they rank in the list?* While agreeing that the five issues set out in the Draft Plan represent the greatest challenges to the delivery of water services, Dublin Chamber considers that the lack of security of water supply should be explicitly stated as one of the top priorities. The challenge of 'Reducing Leakage in Water Supply Networks' is extremely important, and Irish Water has set a target of reducing leakage from 47% to 25% by 2021. However, leakage reduction is a long, inexact and costly process. The savings that can be achieved from conservation, demand management, and leakage reduction programmes are uncertain. Meanwhile, the availability and certainty of water supply remains a grave concern. In Dublin, water shortages in late 2013 disrupted homes and businesses throughout the city, and coincided with the popular Web Summit held in the RDS. Research by Indecon suggests that the daily of cost of such water shortages in Dublin is likely to be upwards of €78 million. With no new supply, these shortages will only become more frequent as the Region's population grows. Some commentators argue that 'Unaccounted for Water' and high national leakage levels must be addressed before planning any new infrastructure. But leakage reduction alone will not be enough to solve headroom issues and address increased demand. In the Dublin Region, current sources are not capable of providing enough water to meet needs even if Irish Water meets its 'extremely ambitious' leakage reduction targets. For these reasons, Dublin Chamber recommends that Irish Water include security of supply as a priority to complement the leakage reduction programme. Water supply infrastructure must be developed alongside important efforts to reduce leakage rates. The concurrent progression of these two projects will result in a best case outcome of an efficient, resilient water supply. **3. Meeting Customer Expectations** *The key aim that Irish Water has identified is to establish customer trust and a reputation for excellent service through providing high quality and reliable water services delivered through resilient systems at an affordable price. Do you have any comments about this aim? Should other*	Dublin Chambers believes that the lack of security of water supply should be stated as one of the top priorities. The importance of a safe and reliable water supply is acknowledged throughout the document. The savings that can be achieved from conservation, demand management and leakage reduction programmes are uncertain. Concern's over water shortages in Dublin which will become more frequent as population rises. Concern over Irish Water's 'extremely ambitious' leakage reduction targets. Dublin chambers recommends include security of supply as a priority to complement the leakage reduction programme. Water supply infrastructure must be developed alongside important efforts to reduce leakage rates.

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	aims be considered? Building trust with business customers will be achieved through early and frequent engagement, clarity on and stability of pricing. When initially consulting on non-domestic charging arrangements, Irish Water proposed to retain existing pricing structures "until at least the end of 2015". This terminology was later changed to the less definite commitment to maintain a price freeze for the "foreseeable future". The difference in wording may seem minor, but this is important for businesses as they prepare and arrange their finances in advance of the introduction of a new charging scheme (medium-term of 5 to 10 years, and long-term of 20 or more). Certainty on future costs is the cornerstone of good financial planning, and companies must have sufficient notice regarding changes to their cost base. It is important that Irish Water clearly understands the current arrangements for business customers ahead of any 'glide path' discussion. Additionally, Dublin Chamber recommends that Irish Water should run business model simulation using target pricing. If price is determined through external factors it is worth examining how it will impact on current operations and efficiency. In the medium to long term, the price of water may become a greater factor when businesses decide where to locate. *Do you agree that balancing the level of services to customers against the cost of those services is a key challenge for Irish Water? Do you think that service, quality and environmental standards should be met irrespective of cost?* The aim of achieving full cost recovery for water services (without profit) is part of Ireland's national water policy and the EU Water Framework Directive. It is expected that process of data migration process from the local authorities to Irish Water will reveal the cost of providing water to domestic and non-domestic customers, allowing Irish Water to build a pricing model which enables full cost recovery. However, it is worth reminding that many businesses across the country are already covering the cost of their water services, and have been doing so for some years now. For example, following several annual increases in water charges, Dublin City Council announced that the goal of full cost recovery was achieved in 2013. In the development of affordable pricing system for water that will aim to achieve cost recovery, the contribution of business to date should be acknowledged. Dublin Chamber is concerned that in developing the pricing framework for the non-domestic sector, charges to non-domestic customers	Business customer's trust must be built through engagement, clarity and stability of pricing. Recommends that Irish Water run business model simulation using target pricing. This is a matter for the CER. It is expected that the process of data migration from the local authorities to Irish Water will inform the true cost of providing water to domestic and non-domestic customers. Many businesses across the country are already

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	could be raised beyond the point of cost recovery. In light of this, a regional approach to charging may be appropriate to ensure that non-domestic customers across Ireland are paying cost-reflective charges. It is inequitable that charges should increase for those who are already at that level. Businesses have paid increased water charges under the assurance that the cost recovery was the ultimate goal. In areas where this goal has been achieved, no increase to water charges can be justified. *How do you think a utility like Irish Water should best communicate with its customers?* Since its inception, Irish Water has repeatedly expressed an aim of engaging with customers and providing excellent service. Dublin Chamber appreciates that the focus to date has been on domestic customers given the challenges involved in migrating these onto a new billing system. However, as a pricing model for non-domestic customers is prepared, Irish Water must offer as much advance notice as possible to this sector. Businesses have been paying for water for decades, and it is important that they are notified of any changes to their charging system, and clear on the services they receive in return. With regard to Irish Water's objective that every customer can have their say about water services, Dublin Chamber welcomes the efforts to develop an online consultation tool, and the preparation of consultative questions to guide the public through consultation documents. Another essential facet of meaningful engagement with the public is early and frequent consultation with customers. Groups such as the Irish Water National Stakeholder Forum help to ensure that customers are informed of the latest developments in water service delivery. This engagement is particularly important for businesses as they prepare and arrange their finances in advance of the introduction of a new charging scheme (medium-term of 5 to 10 years, and long-term of 20 or more). Certainty on future costs is the cornerstone of good financial planning, and companies must have sufficient notice regarding any changes to their cost base. **4. Ensure a Safe and Reliable Water Supply** *Irish Water has identified the top priority in terms of water supply as ensuring that water supplies meet Drinking Water Regulations (and removal of boil water notices from public supplies). Do you agree? Are there any other priorities in terms of water supply that you would see as more important?*	covering the cost of their water services. A regional approach to charging may be appropriate to ensure that non-domestic customers across Ireland are paying cost-reflective charges. Businesses have paid increased water charges under the assurance that the cost recovery was the ultimate goal. In areas where this goal has been achieved, no increase to water charges can be justified. As a pricing model for non-domestic customers is prepared, Irish Water must offer as much advance notice as possible to this sector. As proposed in strategy CE1d, Irish Water will establish effective communication channels with customers. Develop an online consultation tool, and the preparation of consultative questions to guide the public through consultation documents. This was completed for this consultation. Irish Water should provide early and frequent consultation with customers. Companies must have sufficient notice regarding any changes to their cost base.

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	As discussed above, certainty and availability of supply is crucial for securing foreign direct investment in this country. One of the strategic issues that any potential FDI client can easily identify is the security and resilience of water supply, particularly in the Dublin Region. At present, some 85% of Dublin's water comes from a single river – the Liffey. Not only is more water needed to meet demand, the supplying sources must be diversified so that the region is equipped to deal with external shocks.	More water is needed to meet demand and the supplying of sources must be diversified so that Dublin is equipped to deal with external shocks.
	The Chamber is ambitious for the future of Ireland, and confident that strong national growth can be achieved, driven in particular by growth in the Dublin region. However, it is worth noting that all planning scenarios put forward by the CSO, even ones which imply low growth, point to the need for a new water supply for the Eastern and Midlands region.	Need for a new water supply for the Eastern and Midlands region.
	The delivery of this additional supply should be accorded the same strategic importance as the removal of boil water notices, especially in acknowledgement of the number of people that stand to be affected by potential water shortages in the Eastern and Midlands Region (the Greater Dublin Area (GDA) currently accounts for 39% of the State's population. 1.8 million people currently live in the GDA with this figure set to grow to 2.2 million by 2031).	The delivery of this supply should be accorded the same strategic importance as the removal of boil water notices.
	Do you agree that we should plan to deal with the impact of climate change on our water supply sources and our networks for delivering water across the country? Is there anything missing from any aspect of these plans to deal with climate change?	
	It is good business practice to explore and plan for all possible future risks that can impact upon the delivery of services. Building resilience and identifying risks are now key elements of strategic business planning. This approach must also be applied to the delivery of water services. The nature of water supply in Ireland means that we are vulnerable to the impact of climate change, and Irish Water should set out clear plans for mitigation and adaption.	It's good practice to explore and plan for all possible risks that can impact upon the delivery of services. The WSSP should set out clear plans for mitigation and adaption.
	To help ensure that customers can get a consistent and secure water supply, Irish Water would like to manage water services on a national basis, increasing the amount of connectivity in the network and strengthening the source of water to supply areas (in a similar way to how the electricity network is managed). Do you believe this is a good approach? Are there any issues in relation to this approach?	
	In some cases such as infrastructure, the management of water services on a national basis may allow for more comprehensive and strategic plans than may previously have been possible when 44 local authorities were responsible for water services in Ireland.	

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	For example, Irish Water's national remit has allowed for the revision and expansion of proposals for a new water source for East and Midlands. The Water Supply Area has now been extended beyond the boundaries of the Greater Dublin Area, with potential benefits for more counties, including Tipperary, Offaly, Laois and Westmeath. The expansion of the project's scope is a welcome development, as it will facilitate the delivery of infrastructure of a scale that will benefit the Region for generations to come.	Revision and expansion of proposals for a new water source for East and Midlands is a welcome development.
	However, regional disparities must also be acknowledged. The problems facing some parts of the country are dramatically different to those facing other parts. Current leakage levels in Dublin are the lowest in Ireland, at 33%. This compares with Roscommon, which loses 62% of its water through leaks.	
	Although it is envisaged that subsequent Implementation Plans will detail how strategies will be carried out at a regional and county level, the WSSP itself must take account of the significant disparity in the water resources and services available across the country. Generalisation across Ireland's greatly varying water systems is unlikely to produce the best possible plan over next 25 years.	Take account of the significant disparity in the water resources and services available across the country.
	Furthermore, Irish Water must recognise the special role of the Mid East as critical for the economic wellbeing of the State as a whole. The strategic importance of this Region for the national economy means that an adequate, reliable water supply is crucial for the continued wellbeing of existing, indigenous businesses. A new supply is also a prerequisite for future growth, especially for meeting ambitious targets for tourism and foreign direct investment.	Recognise the special role of the Mid East and critical for economic wellbeing of the state. The strategic importance of this region for the national economy means that an adequate, reliable water supply is crucial for the continued wellbeing of existing, indigenous business.
	We need to reduce leakage from our network through pipeline replacement and pressure management. Our approach is to reduce leakage wherever possible as long as it is cost effective to do so. There will always be some leakage that it will not be economic to fix. Do you have any comments on this approach? Dublin Chamber fully supports the important efforts to reduce leakage but, as previously mentioned, leakage reduction is not a silver bullet that will solve all problems caused by historic underinvestment in water services. It is a programme that must be advanced in conjunction with other efforts to improve the efficiency and security of water supply across the country.	Dublin Chamber fully supports the importance efforts to reduce leakage – it must be advanced in conjunction with other efforts to improve the efficiency and security of water supply across the country.
	Would you participate in or support initiatives that would reduce your water consumption in an effort to reduce waste and use of water? e.g. changing tap fittings, installing water butts etc.? Dublin Chamber supports such initiatives and has been active in raising awareness amongst the	Supports water conservation initiatives.

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	Dublin business community of the simple ways in which to reduce water usage, as doing so is good business. *What are your views on how we propose to measure our performance in ensuring a safe and reliable water supply?* Dublin Chamber broadly agrees with the indicators set out to measure performance in ensuring a safe and reliable water supply. When measuring performance in relation to water supply interruptions, Irish Water should adopt a similar approach to the electricity sector, i.e., performance should be measured in terms of days since the last shortage/outage occurred, or since the last water restriction was put in place. Information on the current baseline for water shortages must be provided, such that customers have a standard against which they can measure the service they receive. Information on the current baseline is particularly important for businesses in the Eastern and Midlands Region, given the extremely high costs associated with water shortages and outages in this Region. Irish Water should provide this information on a regional basis (i.e. Average hours of supply interruption per property served (per year) - hours lost due to water supply interruption for 3 hours or longer (planned or unplanned) for each of Irish Water's three water regions). Another indicator would be headroom. Dublin's water supply currently operates just 1% ahead of demand (most capital cities in Europe have headroom of 15-20%), and it is estimated that up to 800 kilometres of Dublin's water mains network are over 80 years old. Ensuring this is addressed has been rightly recognised by Irish Water. **5. Provide Effective Management of Wastewater** *Significant investment is needed in wastewater infrastructure to ensure that human health is protected and that discharges from our treatment plants and collection networks comply with environmental legislation. This investment will take time to deliver. Do you agree with our short term priority as set out here? How should we prioritise our investment in this area? For example; should we prioritise our investment to enhance bathing waters or shellfish waters or areas of nature conservation?* Further details are required on the upgrade to the Ringsend Wastewater Treatment Plant (WWTP), and the delivery of a new WWTP for North Dublin. **7. Supporting social and economic growth**	Broadly agrees with indicators set out to measure performance in ensuring a safe and reliable water supply. Adopt a similar approach to the electricity sector where performance should be measured in terms of days. Water shortages information should be provided – provide this information on a regional basis. Pleased that Dublin's water main network has been recognised by Irish Water. Provide further details on the upgrade to the Ringsend Wastewater Treatment Plant (WWTP) and the delivery of a new WWTP for North Dublin. This is a Tier3 project and will be consulted on separately.

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	Do you think it is important that Irish Water balances the requirement of future customers and current customers when planning our investment or should we concentrate on meeting our current challenges? Do you agree with our strategies for supporting growth in a timely and cost effective manner? For example; building additional capacity in our systems to allow for growth based on the economic outlook in the medium term. It is absolutely critical that Irish Water focus on meeting long term demand due to the long development period for such projects. Equally, many of the problems faced today are the legacy of past underinvestment and poor forward planning to meet the needs of customers. An efficient water system has always been a competitive advantage for national economies, but this advantage is only set to grow in importance as the world faces into a global water crisis in the coming years. *Do you agree that we should work with national, regional and local planning authorities/policy makers to ensure that cost effective water services can be delivered to support social and economic growth?* Dublin Chamber supports the provision that the Water Services Strategic Plan should complement national spatial planning. This demonstrates the kind of long-term, coordinated thinking on Ireland's future that has been absent in many strategic plans to date. However, the Chamber is somewhat concerned by the fact that this provision requires the WSSP to comply with the National Spatial Strategy (NSS), Regional Planning Guidelines and other dated planning documents. The NSS was originally drafted in 2002 and last updated in 2010. It is clear that the Irish context has changed dramatically since that time. A new National Planning Framework is currently being prepared with public consultation expected in July 2015, and new Regional Spatial and Economic Strategies will be prepared to succeed the Regional Planning Guidelines. Clarity and transparency is needed on how Irish Water intends to update the WSSP to account for the new national spatial plans. *What are your views on how we propose to measure our performance in supporting social and economic growth?* Dublin Chamber fully agrees with the selection of 'availability of headroom in water and wastewater treatment plants' as a key performance indicator. The target of 20% headroom in large urban areas seems appropriate, and this figure should remain in line with European and global competitors. Its achievement is particularly critical in Dublin, where headroom is currently on a knife-edge.	Acknowledgment of past problems faced today are the legacy of past underinvestment and poor forward planning to meet the needs of customers. Thus, it is critical that Irish Water focus on meeting long term demand. The competitive advantage of an efficient water system for businesses. Supports that the WSSP should complement national spatial planning. Expresses concern that this provision requires the WSSP to comply with the National Spatial Strategy, Regional Planning Guidelines and other out dated documents. How will Irish Water update the WSSP to account for the new national spatial plans? This will be completed within the revisions to the plan. The first being in 2017 to align the plan with the NSS. Fully agrees with the selection of 'availability of headroom in water and wastewater treatment plants' as a key performance indicator.

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	8. Invest in our future *Do you have any comments on the model for funding outlined in our strategy here?* Irish Water, in its goal of 'establishing a sustainable funding model to ensure…the required capital investment' must provide for uncertainties outside their control. *Do you agree with our proposal to raise public awareness of the value of water and the complexity of the system in bringing water and removing wastewater to our homes and businesses? What is the best way to do this in your view?* Businesses have been paying for water for decades, and it is important that they are clear on the services they receive in return. In addition to direct payment for water, business paid indirectly for water services overheads in their local authorities through rates. There is a lack of appreciation of the additional costs borne by businesses to cover the investment costs that have left some regions with better infrastructure than others. *What are your views on how we propose to measure our performance in this strategic objective?* Dublin Chamber appreciates that Irish Water has been in a situation that has required them to respond to different internal and external situations with often a lack of clarity. However, it is worth noting that in its submission in August 2014 Dublin Chamber voiced concern at an approach which seemed to prioritise quick-win, low-cost projects to achieve compliance. While the cost-saving approach is understandable in the context of very limited resources, it will not ultimately address the acute need for large-scale capital projects to bring Ireland's water services up to standard. Dublin Chamber believes the current approach as outlined in the Draft Water Services Strategic Plan reflects a more robust approach with a proper long-term perspective to capital investment in water services and is in favour of the establishment of an Output Monitoring Group to establish performance measure and review them.	Irish water must provide funding for uncertainties outside their control. Important that businesses are clear on services they receive in return for payment. Appreciates that Irish water is in a difficult situation with often a lack of clarity. Expressed concern in 2014 at approach which seemed to prioritise quick-win, low-cost projects to achieve compliance. Current approach in the WSSP offers a more robust approach with proper long-term perspective to capital investment in water services and is in favour of the establishment of an Output Monitoring group.
S28	**National Disability Authority** **Meet our Customer Expectations** *Q6. The key aim that Irish Water has identified is to establish customer trust and a reputation for excellent service through providing high quality and reliable water services delivered through resilient systems at an affordable price. Do you have any comments about this aim? Should other*	

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	aims be considered? We believe that the principle of accessibility should be added to the key aims listed above. As a public body Irish Water has obligations under the Disability Act 2005 to make its services, as far as practicable, accessible to people with disabilities. The NDA has a statutory function to prepare Codes of Practice under the Disability Act 2005, and the Code of Practice on Accessibility of Public Services and Information Provided by Public Bodies (SI No. 163 of 2006) has been in force for a number of years. The NDA also has a statutory function in monitoring compliance with such Codes of Practice. The accessibility of information on water usage to people with disabilities does not appear to have been built into the design of the water metering project from the outset. However, it would be important at this stage of the process to work to find a solution that can fulfil the spirit and letter of the Disability Act and the statutory Code of Practice in this regard. Given the scale of the project in terms of its reach and total national expenditure on water meter installation, the NDA has advised that Irish Water fund R&D into finding a technical solution that could harness the signal from the meter, address data privacy and security and transmit this information to the householder via channels like a text/e-mail message, or to an in-home display. Irish Water and the NDA are currently working together towards future solutions – along with other interested parties - on a Water Meter Data Accessibility Group. This Group's work is informed by the following criteria set out by Irish Water in correspondence with the NDA: • The data remains private and secure • The technology integrates with both types of meters being installed across the country and also integrates with the in-home displays to be introduced for gas and energy customers • It is reasonably priced and customers are prepared to pay for both the purchase and installation costs • The equipment is easy to install, practical to use and complies with the Technical Guidelines for Universal In-Home Displays prepared by the NDA's Centre For Excellence in Universal	Believes that the principle of accessibility should be added to the key aims. Irish Water is obligated under the Disability Act 2005 to make its services accessible to people with disabilities. The water metering project should allow the accessibility of information on water usage to people with disabilities. Noted and the issue is being considered. Advises Irish Water to find a technical solution that could harness the signal from the meter, address data privacy and security and transmit this information to the householder via channels like a text/e-mail message or to an in-home display. Acknowledges that Irish Water and the NDA are currently working together towards future solutions on a Water Meter Data Accessibility Group.

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	Design **Meet our Customer Expectations** *Q8. How do you think a utility like Irish Water should best communicate with its customers?* The NDA believes that in relation any aspect of the customer engagement Universal Design principles reduces discrimination exposure and will enable a wider number of customers to avail of the services offered. Universal Design prioritises the customer's ability to understand and use the information and services provided which in turn will reduce downstream costs required to support disabled end-users who require assistance to understand or use the service provided. It should be the primary goal of Irish Water to meet the needs of as many existing and potential customers as possible. Universal Design provides a way to achieve this goal. It promotes designs that are accessible to, usable by and understandable by as many end-users as possible. The more flexible a service is, and the more options it provides to customers, the higher the probability of that service meeting the diverse needs of as wide a customer base as possible. Universal Design should be considered throughout the entire customer experience from when the customer first reads or hears about Irish Water right through to when they are a full paying customer and whether they need to use Irish Water's complaints procedure. By incorporating a Universal Design approach Irish Water should reduce the requirement for costly and wasteful retrofitting and to create a sustainable service that meets the needs of all people regardless of their size, age, disability or ability who wish to use it. The Commission for Energy Regulation's support was one of the main reasons why the National Standard Authority of Ireland's SWiFT 9: 2012 Universal Design for Energy Suppliers was produced. This standard provides guidance and requirements to energy suppliers on how to apply Universal Design in the development of accessible and usable products and services for household customers. Along with the consumer protection obligations set out for gas and electricity suppliers in Regulation 3(3) of S.I. No. 463 of 2011 , SWiFT 9: 2012 Universal Design for Energy Suppliers should form the template for all of Irish Water's customer engagement. This is the standard by which all of Irish Water's customer service should be measured.	Irish Water should refer to Universal Design which prioritises customer's ability to understand and use the information and services provided which in turn will reduce downstream costs required to support disabled end-users who require assistance to understand or use the service provided. Recommends that it should be the primary goal of Irish Water to meet the needs of as many customers as possible – Universal Design. Universal design should be considered to improve customer experience. A Universal Design approach would reduce the requirement for costly and wasteful retrofitting and to create a sustainable service that meets the needs of all people.

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	The above-mentioned standard has statutory underpinning via the European Communities (Internal Market in Electricity and Gas) (Consumer Protection) Regulations (S.I. No. 463 of 2011), under which electricity and gas suppliers are required to apply the principles of Universal Design to all their products, services and communications provided to their customers. In the interests of consistency across the major utilities it might be worth consulting with the Minister for Communications, Energy and Natural Resources and the Minister for the Environment, Community and Local Government on what legal scope there is for extending this to water services. Access to real-time information On the wider issue of real-time information, the international evidence shows that access to frequent real-time information is what most changes customer behaviour. This is supported by recent research by ESRI economists which showed that consumer behaviour is most responsive where householders have an in-home display of their usage. The research shows that clear feedback is a necessary element in learning how to control utility use more effectively over a long period of time and instant, direct feedback combined with frequent, accurate billing is required as a basis for sustained demand reduction.	Recommended to consult with the Minister for Communications, Energy and Natural Resources and the Minister for the Environment, Community and Local Government. Access to frequent real-time information is what most changes customer behaviour – consumer behaviour is most responsive where householders have an in-home display of their usage.
S29 & 30	**Anti-Austerity Alliance** **Introduction** Over €7bn of capital has been spent by the taxpayer since 2000 on the 1,856 treated water (drinking) and waste water (effluent) treatment systems and related infrastructure in this Country. In 2007 98% of water supplies sampled by the EPA complied with drinking water standards. Of course for the households supplied from the 2% of the water treatment systems that are not compliant, with some on boiled water notices, this is a totally un-satisfactory situation. 94% of waste water now receives secondary treatment up from 21% in 2000. This is a requirement of the 1991 Urban Waste Water Treatment directive for all urban centres above 2,000 people which discharge to rivers or estuaries. Ireland is however being taken to court in Europe for missing the deadlines set out in the directive by more than 10 years. None the less it is clear from reading the many reports available from the Department of the Environment (DoE), the Environmental Protection Agency (EPA), Dublin City Council (DCC) etc that	AAA considers that “the heavy lifting” in the delivery of improved infrastructure for compliance with European Directives is complete.

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	the heavy lifting is done with 100% compliance in relation to secondary treatment of waste water (effluent) due by the end of 2016 when the final 1% of the systems are finished their upgrades including four in Cork, three in Donegal and one each in Wicklow and Galway. The main delay in relation to most of these projects since they were started has being planning issues around where to site effluent treatment plants. It is an historic achievement to have the hundreds of towns which had being dumping raw sewage now connected to waste water treatment plants and all this was achieved by the public service with tax payers money. Compared with the task of achieving compliance with the 1991 directive, compliance with the Water Framework Directive should be more straightforward given the infrastructure that is now in place, the fact that we are a relatively sparsely populated Country with many sources of water and access to an abundance of renewable energy. Irish Water say a similar level of investment (€5-6bn) will be needed to achieve this. **The IW strategic plan proposes to dumb down the focus on leak repairs** While it is widely accepted that leaks from the treated, drinking water system is a huge issue the main focus in the Irish Water 25 year Strategic Plan is pointing towards investment into new capacity to supply an expected population growth in particular in the Dublin Region with less of an emphasis than there has been in recent times on tackling the huge losses from the system. The agreed leak rate for the Country as a whole in all recent reports is 41%. However that number has surprisingly jumped in Irish Water reports to 49%. Irish Water has produced no new information to show why the higher figure has come about all of a sudden. The most likely reason for the leak rate jumping up by 20% soon becomes apparent in that the target IW propose until 2021 is to reduce the leak rate to 38%. That would be a reduction of 11% if the leak rate was 49% but is only a reduction of 3% assuming the leak rate is in fact 41%. It also seems that economically viability now takes priority over water conservation. The Dublin Region (including Kildare and Meath) reduced leaks since 1996 from 42.5% to 28% under the Dublin Region Water Conservation Project. That is what has catered for all the development in the past 20 years without any capacity being added. Irish Water is opting for the “Economically Viable” targets of 20% leaks in Urban Areas and 25% in Rural areas despite South Dublin County Council using district metering and a leak detection crew already having achieved the “World Class” target of 16% and Fingal County Council not far behind. County Limerick and Wexford are the standard bearers	Leakage rate is disputed. Irish Water is determined to achieve the lowest level of leakage which is technically sustainable and affordable, taking account of the state of the networks. Refer to Strategy [WS3C].

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	outside of the Dublin Region. In truth the setting up of Irish Water has set back progress on all fronts with the year 2013 missing completely from the capital program reports. **Estimated water leakage from Housing Units is now proven to be way overestimated.** Another reason for IW dumbing down the leak repair program is they now have conclusive information from the domestic meters that are already fitted shows leaks from housing units at 2.8% being a relatively minor component of the overall losses of 41%. Irish Water announced recently that based on the meters already installed they can extrapolate that for their estimated 1.5million customers the leak rate is 45million litres per day or 30 l/prop/d. That is under 3% of the total water produced and they say that only 7% of houses have leaks with half of those losses being accounted for by overflowing cisterns. Related to all of this is the comment in the Report by Dublin City Council regarding its Water Supply Project – 2010 where it says "Current customer side leakage levels of 65 l/prop/d (2010) are forecast to reduce to 35 l/prop/d (2022) and 25 l/prop/d (2031)". At 30 l/prop/d the leak rate on the house side of the system is less than half the 65 l/prop/d predicted in the Dublin City Council report with the 2031 target almost achieved already. By simply going after the half of the 7% of housing units in the state who have overflowing cistern's IW will be able to reduce the national leak rate to below 40% with little or no cost. This all adds up to a classic case of a self-fulfilling prophecy and very typical behaviour of a company motivated by profit rather that a public service which takes conservation seriously as many of the Councils had being doing. By setting these targets IW have left it open that they do not have to invest much capital into the rehabilitation of water mains and expensive projects such as the replacement of the Vartry Tunnel in order to reach their targets. Instead they can concentrate on expanding the network to more and more "customers" from which huge profits can be earned when the metered charging structure kicks in after 2018. **Cost of running Irish Water vs the charges that they are planning after 2018 and the pressure to privatise.** The €3.70 per 1,000 litres that IW charge for water in (€1.85) and Waste Water out (€1.85) is twice the typical charge to industry that the local authorities were charging. After the €160 & €260 cap is	Submission considers leakage from housing is over-estimated by Irish Water. In relation to estimated water leakage from housing units robust information on current baseline still required in many areas.

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	lifted in 2019 the typical charge per person will be €200 per annum based on the typical usage figure for these islands of 150 litres per person per day. That will be €500 for an average household (2.5 people) rising to €1,000 for a five person household. This would generate revenues of €750m per annum for Irish Water if they had 1.5million households paying. There are figures which show that the actual customer base of Irish Water is more like 1.7million households so the potential annual revenue is heading towards €1bn and that is before IW start increasing the unit charges or reducing the "free" allocation for children which means the cost for children is approximately 40% less. During their last year of supplying water Dublin City Council had a budget of €53m to supply the 216,827 housing units plus industry in the City. They also supplied some water to Fingal from this. Allowing for the fact that Industry including businesses use on average 20% then the cost per household to City Council was at most €195 per household and that is assuming for simplicity that the householders also pay for all the water that is leaked or used in Fingal. The actual cost of supplying water is also borne out by the typical charge on a group water scheme which are non-profit organisations being between €150 and €250 per household per annum. This also suggests where the current flat charge from IW of €160 and €260 come from. Any way you look at it the plans that are in place clearly allow for Irish Water to become an extremely profitable company. The pressure then from International capital to privatise Irish Water would be immense. Given that Irish Water already owns €11bn in assets and given its potential profitability it would be worth 10s of billions of euro. The sort of amount of money that would fund a future bank bailout and well the IMF know this. **Irish Water vs the River Basin Structure.** The structure pre Irish Water is based on river basins with the 9 districts for the whole island called East, West, Shannon, South West, South East, West, North West, Neagh Bann and North Eastern. That structure cost very little to manage and was simply an exercise in co-ordination between the various local authorities and the Department of the Environment (DoE). Even in state ownership the hugely expensive national monolith that is Irish Water is very unlikely to ever perform as well as the regional river basin structure which cost a tiny amount to run and had made such great progress particularly in the past 20 years. In private hands driven by profits Irish Water could not possible perform as well as the publically owned system has. The example already given for leak repair and management of the treated drinking water system for	Submission discusses cost of running Irish Water. Irish Water operating costs are not part of this consultation. In order for Irish Water to be able to raise significant finance for capital investment at favourable interest rates, it will be necessary for it to demonstrate that it is an efficient water utility company, operating within a stable regulatory framework, with secure revenue streams.

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	the Dublin Region (Dublin, Kildare and Meath) which has nearly half the population far surpasses any plans that Irish Water have. **Conclusion.** Clearly the local authorities co-ordinated using a river basin district structure and with low cost capital supplied by the state transformed the Waste Water systems in the Country over the course of the past 20 years and kept the existing drinking water supply systems operating to a capacity sufficient for the needs of today. Nothing that is being proposed by the setting up of Irish Water improves that situation and if anything takes the focus off such key tasks as water conservation. Therefore Irish Water was not set up relating to the needs of this Country but rather the needs of big finance internationally to find a home to invest their billions. Clearly domestic metering has little or no bearing on the system and so this too was embarked on in order to facilitate the charging for water. Therefore our key proposal is to hand the system back to the local authorities with the co-ordination by the river basin structure and funded by low cost capital raised by the state. This would be a step forward from where we are now both in terms of water supply and also water conservation plus waste water treatment.	Under the previous funding model, investment in wastewater collection and treatment was the responsibility of the local authorities. This approach did not encourage strategic investment planning at a regional or national level. One consequence was that investment was concentrated in larger urban centres to address legislative requirements, at the expense of smaller development centres where a rapid expansion of housing had led to increased pressures and demands on outdated treatment systems. This has resulted in a large number of small schemes with either no treatment or unacceptable treatment which does not meet the requirements of the legislation.
S31	**Chambers Ireland** **Introduction** Chambers Ireland is the largest business network in the State. With members in every geographic region and economic sector in Ireland, we are well positioned to understand the concerns of businesses and represent their views. This submission to the consultation on Irish Water's Draft Water Services Strategic Plan has been shaped on the basis of inputs from our Chamber Network and policy councils, which comprises representation from a variety of industry sectors. We have structured our responses in line with the questions posed in the consultation document. **1. This Draft Water Services Strategic Plan is a roadmap for managing our water services for the next 25 years. Do you have any general views on the need for long range planning and our commitment to ensure that everyone has their say about water services?**	Introduction to Chambers Ireland.

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	The fundamental restructuring of national water services is a unique opportunity to effectively plan the long term development of Ireland's water infrastructure. In this regard, 25 years could be considered a relatively short time horizon for infrastructure developments of this scale and importance. While we acknowledge the commitment to ongoing reviews on a five yearly basis and the statutory requirement for a 25 year strategic investment plan under paragraph 33 (4) of the Water Services (No. 2) Act 2013, we believe that as long term a view as possible is taken when planning investments of this nature and scale. There must also be a robust economic evaluation and prioritisation process for the identification of capital projects that are to be funded in the short to medium term. **Challenges and Strategic Priorities** **2. Do you agree with our evaluation of the current state of water services in Ireland? Is there any further aspect of current water services that you think we should consider in identifying challenges and priorities in providing water services?** One aspect of strategic planning that must be considered in identifying challenges and priorities in the provision of water services is the spatial planning context that Irish Water will be operating within from 2016. The abolition of the National Spatial Strategy and the new Regional Assembly structure could challenge the underpinnings of previous iterations of Irish Water strategy. It is important that Water Services Strategic Priorities are cognisant with the new National Planning Framework currently being developed by the Department of the Environment, Community and Local Government. **3. Do you think the Draft Plan has identified the most important challenges in providing water services to serve current and future populations over the next 25 years (listed on page 8)? Has the Draft Plan missed any other challenges to the provision of water services that you would consider important?** Chambers Ireland supports the most important challenges identified in providing water services, and note that these are consistent with the requirements set out under the Water Services (No.2) Act 2013. In order to increase transparency regarding future investment requirements, Chambers Ireland considers that Irish Water's approach to prioritisation of investments should be published. In making decisions on investment, we deem it necessary to balance investment across the country as well as the need for conservation, maintenance of existing assets and developing new	Long-term (> 25 years) required. Need for a robust economic evaluation and prioritisation process for the identification of capital projects. Need for cognisance of NPF. CI supports the challenges identified.

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	infrastructure. One of the major challenges facing Irish Water will be to ensure that efficiencies in the delivery of services based on Service Level Agreements (SLAs) with Local Authorities are delivered. The sooner efficiencies and cost savings can be demonstrably delivered, the sooner the merits of a single utility for water services will be appreciated. It will be a challenge to ensure that there is no ongoing duplication of costs and work into the medium term regardless of SLAs. **4. We have identified five proposed current priority areas (listed on pages 11 and 12) in order of importance. Do you agree with the order, and if not how would you rank them?** While Chambers Ireland supports all five areas listed as priorities, we consider the effective and reliable supply of water the most important task currently facing Irish Water. The wording of Priority 1 suggests that Irish Water is primarily focused on the communications aspect surrounding the delivery of water services. While we recognise the importance of effective communications and customer relations, we would advise that this priority is rephrased so as to ensure that the primary focus remains on the actual delivery of quality services rather than demonstrating a commitment to delivery. **5. Are there any other priorities you feel should be considered and where would they rank in the list?** Chambers Ireland suggests that increasing headroom capacity is recognised as a current priority. In line with international best practice we recommend that spare headroom capacity is increased to 20% in large urban areas, and support the 15% and 10% targets proposed for regional gateways and towns, respectively. The current low headroom capacity in the Greater Dublin Region bears a high risk of water shortages, which can result in high disruption costs for businesses and domestic water users. Recent water outages in Dublin in the period 2010- 2014 are estimated to have cost the Irish economy in excess of €78m per day. In order to protect the economic well-being of our businesses and the social needs of domestic users we therefore suggest that sustainable headroom levels and provision for peak demand is recognised as a key priority across the water supply network. **Meet our Customer Expectations** **7. Do you agree that balancing the level of services to customers against the cost of those services is a key challenge for Irish Water? Do you think that service, quality and environmental standards**	Transparency of future investment. Irish Water has committed to applying clear and transparent investment criteria in strategy IF3a. Remove duplication of work and costs between IW and the LAs. Focus on the quality of water services rather than communication aspects. Headroom as key priority. IW has included catering for growth as an additional priority in the final WSSP.

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	should be met irrespective of cost? As with all public service provision, the challenge is to deliver a service to the highest possible standards within a sustainable budget. It is not a realistic proposition to suggest that there is a choice between meeting standards and a scale of costs. Service, quality and environmental standards, by law, must be met by Irish Water. Irish Water must commit to meet these standards in the most cost effective manner. The challenge for Irish Water is to become as cost effective and efficient a utility in as short a timeframe as possible. In this context it is important that Irish Water bills 100% of its customer base and ensures an effective collection mechanism to reduce instances of non-collection or bad debts. This in turn will enable Irish Water to fund excellent service levels and increase investment in the network. **8. How do you think a utility like Irish Water should best communicate with its customers?** For non-domestic customers, we believe the most important aspect of Irish Water's communications strategy must be transparency. In the next number of years, many businesses will likely be moving to new tariffs for their water supply. It is important that both the reason that new tariffs are being charged to businesses and the methodology for calculating new tariffs by is clear and transparent. It is of paramount importance that value for money can be clearly demonstrated. **9. What are your views on how we propose to measure our performance in meeting customer expectations?** Chambers Ireland considers the inclusion of Key Performance Indicators as part of price control regulation the most efficient way of measuring Irish Water's performance. Consequently, we believe there is a need for developing year-on-year targets as part of the price control period rather than five and 25 year targets as proposed. **Ensure a Safe and Reliable Water Supply** **10. Irish Water has identified the top priority in terms of water supply as ensuring that water supplies meet Drinking Water Regulations (and removal of boil water notices from public supplies). Do you agree? Are there any other priorities in terms of water supply that you would see as more important?** As suggested under question 5 Chambers Ireland considers the achievement of sustainable levels of headroom capacity a key short-term priority for Irish Water. **11. Do you agree that we should plan to deal with the impact of climate change on our water**	Irish Water must commit to delivering the required legal standards within a sustainable budget. New tariffs for business to be clear and transparent. Tariffs for non-domestic charging are a matter for the CER. Chambers Ireland would like to see annual targets with price control periods rather than 5-year and 25-year targets. An additional target for 2027 has been included in the final WSSP.

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	supply sources and our networks for delivering water across the country? Is there anything missing from any aspect of these plans to deal with climate change? Chambers Ireland supports the view that risks associated with climate change should be considered in the context of Irish Water delivering water services. However, we do not consider it sufficient to only ensure that new sources are able to cope with the potential impact and risks from climate change. Irish Water should rather strive to achieve that climate adaptation plans are implemented across the network – particularly in areas with high risks of floods – so as to guarantee the reliable operation of supply and abstraction services for all Irish Water customers. In this context, we consider it appropriate for Irish Water to closely cooperate with Local Authorities to assess how climate adaptation and in particular flood defences can be integrated into Irish Water's planning and investment strategies. **12. To help ensure that customers can get a consistent and secure water supply, Irish Water would like to manage water services on a national basis, increasing the amount of connectivity in the network and strengthening the source of water to supply areas (in a similar way to how the electricity network is managed). Do you believe this is a good approach? Are there any issues in relation to this approach?** Yes, it is imperative that water services are managed on a national basis with national strategies for connectivity, source protection, investment and development. The primary reason for the establishment of an entity such as Irish Water is to allow Ireland's citizens to benefit from the dividends derived from economies of scale, coherent planning and a national vision for the delivery of water services. The focus on a national strategy for water service provision must remain at the core of Irish Water's development and planning. **13. We need to reduce leakage from our network through pipeline replacement and pressure management. Our approach is to reduce leakage wherever possible as long as it is cost effective to do so. There will always be some leakage that it will not be economic to fix. Do you have any comments on this approach?** Chambers Ireland supports the proposed approach of Irish Water seeking to reduce leakage to an economically sustainable level. However, we note that there may be a requirement for a communications exercise explaining the need for reducing leaks but highlighting that some leaks repairs are not economically viable and the diminishing returns to investment in leakage reduction.	Irish Water should rather strive to achieve that climate adaptation plans are implemented across the network The Climate Change Mitigation and Adaptation Strategy will apply across the network. Integration of LA flood defence measures in the Climate Change Strategy. National basis for management of water services is imperative.

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	As suggested by international evidence, we consider the economic sustainable level of leakage to be around 20%. In the context of reducing leakage, we welcome the consultation on the First Fix Leak Repair Scheme and suggest that the final scheme is implemented as soon as possible. As suggested by the pilot scheme informing Irish Water's first fix policy proposal, 63% of all leaks detected occurred within the house of a property owner. In other words, 530m3 water a day could be saved if property owners address internal leaks. We thus also consider it appropriate for Irish Water to effectively communicate to the public that internal leaks are the responsibility of property owners whereas the network is the responsibility of Irish Water. We acknowledge that efforts are currently underway to communicate this message. **14. While Irish Water fixes leaks in external pipes it remains the property owner's responsibility to fix leaks on their property. Would you be willing to fix internal leaks on your property?** We believe that Irish Water is adopting a prudent and logical approach in delineating between leaks in external pipes and leaks on private property. The risks and potential costs associated with a utility undertaking works on the private property of consumer would outweigh the benefits in terms of water conservation at this stage in the project. We believe that homeowners and businesses would be willing to fix internal leaks on their property provided that there was an incentive to do so. This could be a demonstrable reduction in their future bills, or even a once off payment to offset the costs of the fix. In order to ensure that internal leaks are actually being addressed, incentives such as the water conservation grant should be based on evidence of some remedial works actually being undertaken. **15. Would you participate in or support initiatives that would reduce your water consumption in an effort to reduce waste and use of water? E.g. changing tap fittings, installing water butts etc?** As with Question 14, businesses and homeowners are far more likely to participate in initiatives to reduce consumption if there is a positive cost-benefit analysis. Information as to the benefits to the individual or firm should be clearly communicated. For the business community, if the financial savings attributable to water conservation measures can be quantified, they are very likely to invest in water conservation. For both citizens and businesses, if information on the positive externalities and the overall public good derived from private water conservation measures are also likely to encourage engagement with water conservation initiatives. **16. What are your views on how we propose to measure our performance in ensuring a safe and**	Supports leakage reduction to the SELL. Welcomes First fix policy. Internal leaks are the responsibility of the property owner. Payment of the Water Conservation Grant should be based on evidence of remedial works being undertaken. Consumers will invest in conservation measures where there is a positive cost benefit from doing so.

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	reliable water supply? While we support the list of key indicators proposed to measure performance, Chambers Ireland considers the inclusion of Key Performance Indicators as part of price control period the most efficient way of measuring Irish Water's performance. Consequently, we believe there is a need for developing year-on-year targets as part of this process rather than five and 25 year targets as proposed. **Provide Effective Management of Wastewater** **17. Significant investment is needed in wastewater infrastructure to ensure that human health is protected and that discharges from our treatment plants and collection networks comply with environmental legislation. This investment will take time to deliver. Do you agree with our short term priority as set out on page 12? How should we prioritise our investment in this area? For example; should we prioritise our investment to enhance bathing waters or shellfish waters or areas of nature conservation?** Chambers Ireland does not consider the Customer Handbook a sufficient method of monitoring Irish Water's performance in effectively managing wastewater. As mentioned on page 12, the Customer Handbook merely refers to customer obligations relating to billing, communication and protection rather investment in wastewater services. We also note that provisions contained under the Customer Handbook recognise Irish Water as a newly established utility and is likely to evolve over time. Rather than merely adhering to the obligations set out in the Handbook, Chambers Ireland suggests that Irish Water sets ambitious targets for developing our wastewater infrastructure and collection network. We suggest that investment in prioritised to ensure compliance with the Urban Wastewater Treatment Directive in order to avoid financial penalties imposed by the European Commission. **18. Do you agree with our strategies to reduce the risk of flooding from sewer overflows in light of the increasing impact of climate change?** We support the commitment to implement measures to reduce the probability of flooding, reduce the severity of flooding and improve the sewer network with the aim of ensuring that adopted measures are economically viable. We also support the recognition that a collaborative response is needed to effectively address flooding events. Chambers Ireland proposes that ambitious community engagement programmes	Seek year on year KPIs as part of the price control to monitor performance. Monitoring of wastewater performance. Targets resulting from the development of infrastructure for wastewater are presented at the end of that strategic objective.

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	(in line with international best practice) are adopted at the pre-implementation stage to ensure local support. In order for a community to best decide the optimal solution for a particular area to reduce the incidence of flooding, all viable options detailing cost, design and impact on the neighbourhood should be presented. **19. Do you agree with our proposals to actively manage discharges from industry and businesses to our wastewater collection networks through customer engagement and licensing of trade effluent discharged to our sewers?** We support the view that discharge into the public wastewater network should be managed better. Customer engagement should be central to this process. In order to maximise industry support for this proposal, Chambers Ireland advocates that businesses which pre-treat effluent and thereby reduce the burden on the public treatment network are awarded through a reduction in their wastewater bills. In this way, we believe there is scope for integrating the management of effluent discharge into the forthcoming non-domestic tariff framework. **20. What are your views on how we propose to measure our performance in managing wastewater?** Chambers Ireland considers the inclusion of Key Performance Indicators as part of price control regulation the most efficient way of measuring Irish Water's performance. Consequently, we believe there is a need for developing year-on-year targets as part of the price control rather than five and 25 year targets as proposed. In relation to wastewater specifically, we note that there is an absence of information regarding Irish Water's current assets, the level of compliance with the Urban Wastewater Treatment Directive requirements and WFD objectives, the degree of sewer flooding and discharge into sewers. We therefore consider it imperative to gain a full understanding of the level of non-compliance with EPA and EU regulations before defining long-term performance targets. **Protect and Enhance the Environment** **21. Do you agree with our strategies to deliver water services while protecting and minimising harm to the environment? Are there other strategies that you think we should consider to reduce impact on the environment?**	Need to present viable options for solutions to CSO flooding to a neighbourhood. Discharge from industry to the wastewater network. Considerations for the treatment of effluent by business will be developed under strategy WW3d. Need for a comprehensive understanding of Irish Water's wastewater assets and compliance with the UWWTD.

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	We fully support and endorse Irish Water's goals to use information from their various needs analyses, EIAs, metering programmes and other research projects to inform and support the environmental programmes of other bodies and NGOs. Chambers Ireland believes that data of this nature will provide a wealth of information for the design and implementation of future environmental protection programmes and should be provided to as many research bodies and institutions as possible. **23. Our continuing demands as a nation for high quality water services that comply with environmental and quality standards will require significant investment, operational/running costs and energy use. What are your views on balancing the cost of water services that meet environmental objectives with affordability of supply?** Compliance with environmental and quality standards is a necessity; however achieving environmental objectives over and above the very high standards already enshrined in regulation and legislation must be balanced with affordability for the consumer. The fundamental aims of Irish Water must be to provide safe, clean water at a cost that is affordable to the consumer and exchequer. **24. Do you think that indirect benefits of water services investment should be considered in prioritising investment, such as tourism and people's enjoyment of the environment?** At this time, Chambers Ireland does not consider it viable for Irish Water to consider indirect benefits of water services in its investment decisions. Since Irish Water is an infant utility facing many legacy issues due to years of under-investment in the water network, we believe that only the direct benefits of investment should be considered when prioritising projects in the short to medium term. Only when key priorities, key performance indicators, and an efficient economic cost of service delivery have been achieved by Irish Water should indirect benefits such as tourism and enjoyment of environment be considered during decision making on investments. **25. What are your views on how we propose to measure our performance in protecting and enhancing the environment?** Chambers Ireland considers the inclusion of Key Performance Indicators as part of price control regulation the most efficient way of measuring Irish Water's performance. Consequently, we believe there is a need for developing year-on-year targets as part of the price control rather than five and 25 year targets as proposed.	Use of other programmes and projects to set environmental objectives supported. Standards balanced against affordability. As an infant utility Irish Water should only consider Direct Benefits in its investment decisions.

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	In relation to protecting the environment, we note that an absence of information exists regarding the level of compliance of treatment and disposal of sludge. We do not consider it appropriate to define short and long-term performance targets before this information is available. **Support Social and Economic Growth** **26. Do you think it is important that Irish Water balances the requirement of future customers and current customers when planning our investment or should we concentrate on meeting our current challenges?** Capital and infrastructure projects must by their nature adopt a long term strategic view in terms of future needs assessment, service delivery, and funding. Irish Water as an entity must maintain long term planning horizons to ensure that investment and project planning is coherent. Nonetheless, as we are emerging from a long period of underinvestment in water infrastructure, investment in critical projects should be 'frontloaded' and undertaken as soon as possible with the capital cost spread over the longer term if necessary. A heavy upfront capital cost will be offset by the ongoing savings derived from the improved infrastructure and the potential for increasing economic growth supported by an enhanced water infrastructure. **27. Do you agree that we should work with national, regional and local planning authorities/policy makers to ensure that cost effective water services can be delivered to support social and economic growth?** Irish Water should engage with relevant planning authorities and policy makers to ensure that water services delivery is coherent with national development and planning strategies. Irish Water must be cognisant of regional and local planning and policy, but must ultimately adopt a national approach to supporting social and economic growth. **28. Do you agree with our strategies for supporting growth in a timely and cost effective manner? For example; building additional capacity in our systems to allow for growth based on the economic outlook in the medium term.** We recognise the need to balance the levels of investment with cost considerations. With this in mind we support initiatives to maximise the capacity of existing assets and optimising and streamlining existing operations. Improving the performance of existing assets is a necessary precursor to fully assessing new capital project requirements and associated costs. This maximising of existing capacity should take place in tandem with investment in new infrastructure where a	Absence of information on compliance of treated sludges. Information on compliance of treated sludges will form part of the wastewater and water treatment sludge strategies. Need for front-loading capital investment in critical projects. Irish Water must engage with planning authorities but maintain a national approach.

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	critical need has already been identified. Given the potential for lags between investment cycles, we support the proposal to build additional capacity into systems to facilitate future growth in the medium term and between investment periods. A robust needs assessment should determine the scale of additional capacity built into assets. **29. Do you agree that the cost of new customers and developments connecting to Irish Water networks should be borne by the new customer or developer and should not be a burden to existing customers?** Chambers Ireland agrees that new connections to the network should reflect the added economic cost imposed on the network due to a connection in a given area. The cost of new connections should thus not be spread across the entire customer base or burdened on existing customers. However, we note that any proposals for connection charges must be subject to public consultation and will refrain from further comments until presented with Irish Water's detailed proposals. **Invest in Our Future** **31. Do you agree that a national approach to managing water service infrastructure such as standardisation and centralised procurement has both cost and operational benefits and is a correct strategy for Irish Water to pursue?** We agree that the cost savings and operational efficiencies that can be derived from a national system of standardisation and centralised procurement within utility make this the correct strategy for Irish Water. However, it is very important that a centralised procurement system has the capacity to recognise value for money in a broad fashion. A programme of investment and development of the scale that Irish Water will oversee over the next several years has the potential to generate significant economic activity throughout the economy. Irish Water's procurement processes must facilitate equitable access for SMEs and be responsive enough to make decisions based on criteria above and beyond basic upfront cost. There is also an opportunity for Irish Water to use their procurement processes to support the development of innovative new products and services by Irish entrepreneurs. The restructuring of Ireland's water services system provides an opportunity for Irish companies to become leaders and innovators in water services technology and support the expansion of an indigenous water services technology sector.	CI supports proposal for modular development of capacity within a robust assessment of need. New connection costs should reflect the economic cost of the network. Centralised procurement must recognise value for money in a broad fashion and must be accessible to

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	32. Do you have any comments on the model for funding outlined in our strategy on Page 68? Chambers Ireland supports the view that a new national connection policy should be developed. However, we note that any proposals for charges under such a framework must be subject to public consultation and will refrain from further comments until presented with Irish Water's detailed proposals. **33. Do you agree with our proposal to raise public awareness of the value of water and the complexity of the system in bringing water and removing wastewater to our homes and businesses? What is the best way to do this in your view?** Chambers Ireland strongly supports the need for raising public awareness about the value of water. Overall, public messages should be kept simple and avoid technical complications. As suggested under question 13 we believe that there, among others, is a need for clearer communication around leakage and the responsibility of property owners. In order to increase public awareness, Chambers Ireland also advocates that all domestic customers are transferred to volumetric tariffs as soon as possible and that water meters are continually installed where economically viable. In the interim, we support the decision to display metered consumption and metered cost on capped bills. This, we believe, will assist bill payers better understanding the cost of supplying water. In order to assist customers reducing their bills we also recommend Irish Water to clearly communicate methods to save water in all engagement with its customers. In addition, we suggest Irish Water to develop workshops and education programmes targeted at primary and secondary schools to install an awareness of the value at an early age. By doing so, Irish Water will support the gradual development of a cultural appreciation of the cost associated with effectively supplying water services. In the context of raising public awareness, Chambers Ireland considers it beneficial for Irish Water to develop a Corporate Social Responsibility (CSR) programme. CSR is now a key business activity and larger companies cannot afford to ignore it. For Irish Water in particular, which relies on a collaborative and harmonised relationship with the local community, a CSR strategy would be hugely beneficial. The company must be seen to be going above and beyond their remit by take an interest in and supporting the local community. However, given the importance of Irish Water becoming a self-sustainable utility which does not	SMEs. Procurement must also support innovation. Supports need for public awareness on costs and transfer of domestic customers to volumetric tariffs.

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	rely on public funding, we also believe the Government should focus on raising public awareness about the value of water. This, we believe, will speed the transition of all customers to volumetric charges and will increase acceptability around paying for water. **34. What are your views on how we propose to measure our performance in this strategic objective?** Chambers Ireland considers Key Performance Indicators for each price control period the most effective way of measuring Irish Water's performance against its strategic objectives. **Overall** **35. Do you think that the Draft Water Services Strategic Plan has identified the correct strategic objectives? If not, what other strategic objectives would you add, and why?** As a general point, we note that the achievement of a self-sufficient funding model is not recognised as a strategic objective. Chambers Ireland considers the achievement hereof central to the long-term operability of Irish Water as a utility and would therefore advocate that this is listed among the strategic objectives. **36. Do you have any other comments on the Draft Plan?** Chambers Ireland believes that the role that water services plays in supporting economic development should be made more explicit and separated out as a distinct strand within the final strategy document. The business community and industry has been a significant funder of water services in the past, and will continue to be major funder of water infrastructure and services into the future. Industry and business will also generate the economic growth needed to provide employment and tax revenues to support the development of water services. In this context consideration should be given to involving the Department of Jobs, Enterprise and Innovation and the IDA at every investment step of major investment prioritisation decisions. Finally, it is of vital importance that Irish Water becomes self-sustaining as soon as possible and can operate without Government subvention to allow for the private capital necessary for short and medium term investment.	It is noted that a self-sufficient funding model is not identified as a strategic objectives and considers that this is fundamental to long-term sustainability of Irish Water. Role of water services in supporting economic development should be more explicit within the plan.
S32	**Environmental Law Implementation Group (Environmental Pillar and An Taisce)** **38 page response submitted which is available in Appendix D.**	WSSP welcomed. ELIG seek a detailed legal context for the strategy. This

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	Irish Water summary adjacent.	has been included in Chapter 1. Concerned that criteria for setting target dates are not transparent. ELIG would like greater focus on the Birds and Habitats Directives to be included. This has been included in a new section in Chapter 6. Wider organisational system and interaction of Irish Water with legislative bodies should be set out. This has been included in Chapter 1. ELIG concerned that the targets for UWWTD do not meet legal obligations (original date Dec 2005). ELIG highlight need for non-compliance with UWWTD to drive investment.
S33	**Sustainable Water Network (SWAN)** SWAN's welcomes the publication of the Water Services Strategic Plan and the opportunity to comment on it. This document provides a good overview of the state of Ireland's water and wastewater services and is extremely interesting and well presented. The use indicators and targets contributes to a focused document and the use of graphics also makes the key messages clear and accessible. SWAN would like to commend the Irish Water team involved in its production. SWAN broadly agrees with the key issues identified in the WSSP, especially in relation to impacts of water and wastewater services on the aquatic environment, and with much of what is proposed in terms of addressing these. However, of course by necessity this submission will focus on areas where SWAN believes the Plan falls short in our view and on issues which we believe need to be better addressed or addressed more comprehensively than they currently are in the draft Plan. Clearly a number of the objectives within the Plan are more relevant to SWAN than others and this submission focuses primarily on those relating most directly to the water environment, namely: Objective 2: Ensure a safe and reliable water supply; Objective 3: Provide effective management of wastewater & Objective 4: Protect and enhance the Environment. Since a number of overarching issues immerge for SWAN and since these are relevant across other	WSSP is welcomed by SWAN. SWAN submission focuses primarily on the strategic objectives relating directly to the water environment, namely: Objective 2: Ensure a safe and reliable water supply; Objective 3: Provide effective management of wastewater & Objective 4: Protect and enhance the Environment.

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	objectives also, this submission is presented under these 'key issue' headings rather than following the format of the WSSP, in the interests of clarity and to avoid repetition. Comments on the Environmental Report for the Strategic Environmental Assessment (SEA) and Natura Impact Statement (NIS) are made separately at the end in Section 12. Well managed water is essential for sustaining healthy and vibrant rural and urban communities and, as recognised in the WSSP, business, industry, nature and human health all depend on the integrity of our rivers, lakes and groundwater to provide clean and plentiful water supplies. There is an urgent need to address impacts of wastewater discharge in particular on our natural water environment in addition to managing our water supply sources sustainably. This urgent need is reinforced by the EU Water Framework Directive (WFD), which imposed a statutory obligation on all EU member states to achieve good water status by this year 2015, with only very limited exemptions and extensions. And at an even more fundamental level, the 1991 Urban Waste Water Treatment Directive – nearly 25 years ago – set down basic legal requirements regarding treatment and discharge of wastewater, of which Ireland is still significantly in breach. SWAN does not believe that the urgency of the dismal situation regarding wastewater and attendant non-compliance is reflected in the draft WSSP and that this needs to be addressed in the final Plan. **3. LEGAL CONTEXT: IRISH WATER RESPONSIBILITIES & PRIORITIES** It is SWAN's view that a fundamental weakness in the WSSP is the lack of legal context and underpinning. The whole WSSP must be informed by Ireland's legal obligations regarding environmental and other legislation. Whilst there are numerous references to the WFD, UWWTD and other legislation throughout the report, these are piecemeal and fall far short of the provision of a robust & comprehensive contextual framework which clearly sets out the key relevant legal obligations and how the WSSP is proposing to address these. In relation to the WFD and UWWTD, whilst references are made to legal requirements under these, these are never fully set out, so it is not possible for the reader to compare the targets and indicators against the legal obligations which the WSSP is obliged to meet. Closely aligned to this is the organisational framework within which Irish Water is working to achieve national and European legal requirements. The impression given by the WSSP is that Irish Water is a stand-alone water services organisation, working where necessary with regulators and Local Authorities to deliver organisational goals. There is no systematic setting out of the exact	SWAN seeks more emphasis of the urgency of wastewater non-compliance in the final plan. A target to achieve compliance of 99% of the Population Equivalent served by a WWTP compliant with the Urban Wastewater Treatment Directive by 2027 has been added to the final WSSP. SWAN would like additional legal context included in the plan. A section on Our Legal Context has been added to Chapter 1 and sections summarising Our Legal Obligations have been added to Chapters 4, 5 6,7. Comparison of targets against legal requirements is requested. The legal requirements of the WFD and the UWWTD have been added to the Our Legal Obligations sections.

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	place of Irish Water in the water governance landscape, and how that relates to the achievement of legal requirements. We submit that this needs to be addressed in the final WSSP and we propose the addition of a dedicated chapter setting out the legal and organisational context within which Irish Water is proposing the WSSP, in addition to a transparent outline of any constraints preventing, for example, the delivery of earlier compliance. **4. INTEGRATED WATER MANAGEMENT** SWAN wholeheartedly welcomes the nationally integrated approach to water and wastewater services proposed in the WSSP. It is clear that the historically fragmented approach has left Irish Water with a challenging legacy and that an integrated approach is vital in addressing this. However, it is most regrettable that this crucial integrated approach has not been extended in any meaningful way beyond water services. Water and wastewater services are by their nature only one element of integrated management of our natural water resources and whilst numerous welcome references are made to WFD objectives and river basin management plans, there is insufficient emphasis on the fact that Irish Water strategic operations, must take place fully within the context of integrated catchment management, if they are to be sustainable. Source protection is the obvious example of this. (See Section 4.2) The WFD provides a policy and legislative framework for integrated catchment-based water management, including cost-recovery, and it is within, and not alongside, this framework that water and wastewater management and planning, as set out in the WSSP, must sit. This is not reflected in the draft WSSP and we recommend that the Plan is amended to address this. **Water Framework Directive** The requirements of the WFD are touched on in a fragmented way in various sections of the WSSP and it isn't necessary to rehearse them here. SWAN welcomes the commitment by Irish Water to manage water …. *'having regard to the objectives of the Water Framework Directive (WFD)* and to employ measures which are *'aligned with the requirements of the WFD'* However, we reiterate our position that water services management can only take place within, and not alongside, river basin district planning and this needs to be more strongly articulated in the final WSSP. Secondly, it is of grave concern to SWAN that the overall tone and language employed in relation to WFD compliance in several parts the WSSP is excessively vague and circumspect e.g. Irish Water will *'Work towards meeting WFD requirements'.* Allied to this is a regrettable emphasis placed on the	SWAN seeks a dedicated chapter setting out the legal and organisational context for the WSSP, in addition to a transparent outline of any constraints. This has been responded to above. SWAN seek more emphasis on integrated catchment management of water services within the WFD legislative framework.

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	impact of other sectors on the water environment: • *'other water users must also play their part in achieving water quality objectives'* • *'we consider that each programme of measures should be proportionate to each sector'* and that solutions should *'consider impacts from all catchment land uses'* SWAN is concerned that Irish Water is seeking to minimise the impact of its operations and its responsibility to meeting WFD objectives. UWWTs have been identified as one of the most significant threats to meeting the environmental objectives set by the WFD in the first River Basin Management Plans1 (See Section 5) and implementation of the UWWT Directive is a basic measure under the WFD, which must be implemented without the application of exemptions. Only once this basic measure has been implemented fully, can Irish Water consider applying exemptions to the meeting of WFD objectives and only under the strictest of conditions. It is not permissible to simply shift the deadlines in the WFD to *'a timescale that is affordable'.* This is clearly a non-compliant approach. Irish Water's WSSP should include whatever measures are necessary to achieve full compliance with the WFD basic measure of UWWTD compliance as a matter of urgency. If Irish Water does not have the funds to do this, then this is a serious compliance matter which should be transparently communicated to the public in the WSSP and the EU Commission should be informed. More emphasis also needs to be placed in the Plan on measures to address particularly sensitive sites especially catchments of High Status Water Bodies and Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) for birds. Discharges to (and potentially abstractions from) these sites should be prioritised for measures in the WSSP and such prioritisation should be stated the final WSSP. We propose a map of discharge points to these sites in the WSSP. The WFD also requires '*measures to ensure that the hydromorphological conditions of the bodies of water are consistent with the achievement of the required ecological status'* for water bodies and requires a system a system of regulation of morphological alterations to waterbodies. This legislation once it is introduced will also affect Irish Water operations and should be identified and highlighted in the WSSP. (It is currently more than 3 years overdue.) Article 9 of the WFD, the main policy focus of which is the role of pricing as a tool to enhance the protection of the environment, states that member states must *"take account of the principle of recovery of the costs of water services, including environmental and resource costs … in accordance*	Concern with language employed in relation to WFD compliance. Irish Water will play its part in achievement of the WFD objectives but it is not the only sector which impacts on the water environment. Funding constraints. Irish Water must also operate within funding constraints set by government and agreed with the CER. Discharges to and abstractions from SACs and High Status water bodies should be mapped in the WSSP. Measures to ensure hydromorphological conditions are consistent with the achievement of good status should be cited in the WSSP.

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	… with the polluter pays principle". Furthermore it requires cost-recovery for water services which are not limited to the costs of provision of drinking water and wastewater services. While the application of pricing policies to recovery of environmental and resource costs is a challenging exercise, and potentially unpopular if it entails increased water prices, the requirements of Article 9 of the WFD in relation to water pricing and cost recovery cannot be shirked WFD and should be set out clearly as part of the additional legislative context section proposed in Section 3 above. **4.2 Source Protection** A vital element of an integrated approach, with substantial benefits to drinking water management, is catchment based source protection. The fact that a *'significant number of water supply zones are vulnerable to microbial contamination'* makes an extremely good argument for the importance of source protection. Whilst we acknowledge that this approach is part of the development of Drinking Water Safety Plans (see Section 6.2), this link is not explicit enough. Source protection is the primary link between water services and integrated catchment-based water management & WFD implementation and this should form one of the primary themes of the WSSP, with a clear explanation of its importance as part of holistic water management. A case study of the cost effectiveness of this approach from, for example the National Federation of Group Water Scheme's work, would be extremely useful and is recommended. **5. URBAN WASTE WATER TREATMENT & DISCHARGES** SWAN welcomes the proposed prioritisation of non-compliant urban waste water treatment (UWWT) facilities in the WSSP. However we believe it does not go far enough. According to the EPA's report *'Focus on Urban Waste Water Treatment in 2013'*, urban waste water is still one of the principal causes of pollution of water resources in Ireland. The Urban Waste Water Treatment Directive (UWWTD) sets specific requirements for waste water treatment plants and specifies limits for certain parameters in associated discharges. The EPA report emphasises the fact that Irish Water is now responsible for ensuring compliance with this legislation. The report found *inter alia* that seven large urban areas did not meet the requirements of the directive to provide the requisite secondary treatment or equivalent treatment: • Three of these 7 sites should have been compliant by **31 Dec 2000** (Killybegs; Ringaskiddy/Crosshaven / Carrigaline; Arklow;	SWAN would like to see reference to cost recovery for polluter pays highlighted in the legal context section of the WSSP. SWAN propose the inclusion of a case study of the cost effectiveness of a source protection approach to be included. Source protection will be further addressed in Tier 2 Water Safety Plans.

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	• Four should have been compliant by **31 Dec 2005** (Cobh; Clifden; Youghal; Passage West/Monkstown); In the context of this current unsatisfactory situation and the existence of the open European Court of Justice case against Ireland regarding the UWWTD2, and the later infringement case 2013/2056, provision of secondary or equivalent treatment for these areas and wider compliance with the UWWTD should therefore be addressed by Irish Water as a matter of the utmost strategic priority and this should be reflected in the WSSP. SWAN does not believe that the WSSP reflects this urgency and this is a matter of the utmost seriousness. The main reference document in the context of Irish Water's UWWT work is the EPA Focus on Urban Waste Water Treatment 2013 referenced above. All recommendations in that report must be fully reflected in the WSSP and SWAN recommends adding Chapter 7 of that EPA report, which sets out the EPA's recommendations, fully as an appendix to the WSSP, in the interests of transparency. For the same reason, we recommend a dialogue box setting out the key requirements of the UWWTD. **Targets** In specific response then to the proposed targets then, SWAN believes that it is very unsatisfactory that Irish citizens must wait another 25 years before the discharge of raw sewage into our waters is ended. It is totally unacceptable that only 90% of the population (pe) will be served by compliant UWWT plants by 2021. Furthermore in light of compliance deadlines set in the UWWTD it is clearly a major transgression. It is even more unacceptable that only 60% of WWTPs for >500pe are proposed to be compliant with Emission Limit Values (ELVs) to achieve WFD requirements by 2021. As outlined in Section 4, such non-compliance is not permitted under the WFD except under the strictest of exemption conditions which must be applied to every water body affected. Thirdly, the target of only halving the number of Category 2 pollution incidents (from 149 to 75) caused by Irish Water effluent by 2021 is not ambitious enough by far. In relation to licensed discharges to sewers, SWAN seeks clarification in relation to the 2021 target: *'50% of trade effluent load licensed covering priority classes of discharges'.* In the first instance, this target is not clear; secondly what are *'priority classes of discharges'*? **5.2 Waste Water Compliance Strategy & Risk Assessment** SWAN would like further information on the Waste Water Compliance Strategy, both on the timescale and process of prioritisation. How do the risk assessments proposed under WW2a to '*plan*	SWAN considers addressing the non-compliant UWWT is matter of the utmost strategic priority and does not believe that the WSSP reflects this urgency and this is a matter of the utmost seriousness. Achieving compliance with the UWWTD is now identified as a priority and 3 targets are included in relation to achieving compliance SWAN would like to see Chapter 7 of that EPA report, which sets out the EPA's recommendations, fully as an appendix to the WSSP, in the interests of transparency. SWAN considers the targets for wastewater compliance are inadequate and not ambitious enough. Targets have been revised to reflect IWs commitment to achieving compliance.

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	investment and mitigation measures' relate to the Waste Water Compliance Strategy and will there be consultation on these? If these are the primary method by which prioritisation of measures is to be made, then it is very important that stakeholders and the wider public understand the criteria being used and have input to the process. There is currently a lack of transparency regarding the process that is proposed to be used for prioritisation of measures in the WSSP. As stated earlier, SWAN recommends the prioritisation of high status water bodies and N2000 sites. SWAN believes that it of concern that Irish Water *'cannot address all compliance issues in the short term'* and seeks clarification regarding what exactly '*short term'* means in the context of the 25 year Plan. We re-iterate our position regarding the grave legal situation regarding UWWT Directive non-compliance and the necessity for comprehensive justifications for each waterbody that does not meet WFD standards due to wastewater activities. SWAN welcomes all research work which contributes to *'greater understanding'* of the *'receiving environments'*, especially in relation to cumulative impacts. However, if UWWTPs are clearly non-compliant, SWAN is doubtful that *'major surveys'* and the *'development of models'* are necessary in all cases. There is a danger that these represent further unnecessary delays to addressing obvious non-compliance problems. **5.3 Wastewater Source Control and Licensing Strategy** We agree that it is very important to '*regulate and license the volume and quality of wastewater that commercial customer discharge'* into the network. Will this regime replace the old Local Authority Section 16 licenses? We would emphasise that the terms of the licenses must be strictly aligned with the objectives of the WFD and the ELVs set in the Surface Water Regulations for all parameters. **5.4 Combined Sewer Overflows** SWAN welcomes the commitment that Irish Water will *'plan and deliver measures to decrease the pollution impact from CSOs'* in line with international best practise. However, more detail is needed on these. How many are there and where? Are they impacting on sensitive receiving waters? Does Irish Water have sufficient information on them? Which Tier 2 Plan will the detail be in as SWAN would be very interested in inputting further on this? **5.5 Sludge management** It is vital that the wider strategic issue of sludge management is addressed in the WSSP, in particular in relation to the issue of national capacity to treat sludge. It would be extremely useful for	Timescale and prioritisation of the Wastewater Compliance Strategy is requested. This has been included as a new table in Chapter 1. SWAN seeks definition of short-term in the context of the 25 year plan. Short term priorities are presented in Chapter 2 for the period of 5 years. WSSP needs confirmation of whether trade effluent licensing will replace the LA Section 16 licences. This will be addressed within the wastewater compliance strategy. Detail on commitment to CSOs. CSOs will be addressed

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	decision-makers and the public if the 50% volume deficit in current UWWT infrastructure to treat sludge from DWWTSs and the serious attendant sludge management issue was highlighted in the WSSP along with proposals made for dealing with this. This is described in the EPA report '*Management Options for the Collection, Treatment and Disposal of Sludge Derived from Domestic Wastewater Treatment Systems'3* The issue of addressing impacts from DWWTSs via *'connection to municipal systems'* for certain clusters, as recommended in the WFD 2008 Programmes of Measures Study on Unsewered Wastewater Treatment Systems should also be addressed in the WSSP. Furthermore there must be a commitment and recommendation that Irish Water liaise closely with the EPA and DECLG liaise with on this matter, as such an integrated and strategic approach is crucial to finding a solution to the significant strategic challenge. **6. DRINKING WATER QUALITY** Whilst acknowledging the serious human health implications of drinking water quality, in this submission SWAN concentrates on the environmental elements of drinking water services and management. Firstly, we would also propose the addition of sustainability as a 4th key requirement for water services. It is not enough for a water supply to be of good quality, reliable and affordable today, if the water source may not be capable of servicing the same supply in 10-20 years. This is especially the case in light of projected impacts of climate change. SWAN welcomes the inclusion of source management in the first aim under the drinking water objective i.e. management from *'source to tap'*. (Chapter 4). However we are concerned that the WSSP whilst referencing this approach a number of times, does not specifically articulate any concrete proposals for actions in relation to source protection. We acknowledge that the 'whole catchment' approach is a part of the WHO Drinking Water Safety Plan approach but it is important for Irish Water to specifically set out what measures you intend to take OR, if these have yet to be formulated then a firm commitment to do so, including a timeline and opportunity for public engagement should be set out in the WSSP. Under key challenges for protection of water sources, it is stated that '*risk-based assessments to determine and prioritise protective measures have not been completed for all water supply sources'*. However such assessments do not then appear specifically as proposed actions or aims in Chapter 4. Can you confirm that these are going to take place as part of the Drinking Water Safety Plans?	in the Wastewater Compliance Strategy and greater detail on their number, location and possible solutions will be made. Sludge management. This will be addressed in the Tier 2 National Sludge Management Plan identified in strategy EN3b. Require integrated approach in addressing sludge management from domestic systems. This has been included into Strategy En3b. SWAN propose the addition of sustainability as a 4th key requirement for water services. Sustainability now included in Strategic Aims WS1 &WS2 in relation to Water Supply

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	National Water Resources Plan SWAN is disappointed to learn how narrow the focus of the proposed National Water Resources Plan is and believes that this is a missed opportunity. We recommend that the focus should be broadened beyond looking exclusively at water quantity issues to look at source protection and water quality issues in an integrated fashion also. It is also vital that in addition to focusing on the provision of an *'effective consistent service quality and value for money'* one of the main priorities must be ensuring that the drinking water strategy in compliant with WFD requirements, including quantitative objectives. In relation to *'inter-region or inter-catchment water transfers'*, SWAN is strongly of the view that any assessment of *'cost-effective measures'*, must incorporate environmental and resources costs. **6.2 Drinking Water Safety Plans** SWAN welcomes the preparation of Drinking Water Safety Plans for all water supply zones especially the *'whole catchment approach'* that these entail. However more information on this would lead to greater understanding. How many DWSPs will there be and what is the timeframe within the 6 years for completing them? Given that a *'significant number of water supply zones are vulnerable to microbial contamination',* six years would appear an excessively long time for their completion, presuming that multiple Plans will be developed simultaneously. We further welcome the commitment to *'engage with stakeholders in development and implementation of measures aimed at delivering effective Improvements in the quality of raw water within each catchment*'. However, it is important for SWAN to know what kind of strategy is planned for this engagement e.g. whether stakeholders will be involved in the development of these Plans and whether there will be consultation on them. We realise that much of this detail may be in the WHO and EPA DWSP guidance but it would be helpful for an overview of this approach to be presented in the WSSP, for accessibility. Ideally such detail would be included in a dedicated public participation / stakeholder engagement section, as recommended in Section 8. We would also suggest a one page dialogue box with graphics illustrating the key elements of DWSPs. It is also important to describe how these DWSPs will be integrated with the catchment-based approach to WFD implementation and if so, how? **7. ABSTRACTION** Whilst abstraction is clearly an intrinsic part of drinking water provision, SWAN believes that its importance as a water management issue and pressure on the water environment merits a	SWAN seek commitment to measures and timeline to be taken for DWSP approach. This is now included. SWAN wants NWRP to look at source protection and water quality issues in addition to water quantity. Assessment of cost effectiveness for inter-region water transfers must include environmental and resource costs. SWAN seek confirmation on timeframe for completion of DWSPs. Timelines for Tier 2 plans have been included. Add detail on stakeholder engagement to the DWSPs section.

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	dedicated section in this response document. Water abstraction represents a significant pressure on Ireland's inland surface waters, groundwaters and groundwater dependent terrestrial ecosystems (GWDTEs) and has been identified as such. The 2009 Programme of Measures report on abstraction carried out by the Eastern RBD5 *'National POM/Standards Study Revised Risk Assessment Methodology for Surface Water Abstractions from Lakes'* identified 79 lakes nationally at high risk from abstraction pressures and stated that *'basic measures will not be sufficient to address abstraction pressures in some lakes and site-specific (supplementary) measures will be needed.'* The accompanying 2008 report *'Revised River Risk Assessment for Abstraction Pressures* found 237 river water bodies to be 'at risk' or 'probably at risk' from abstraction and states that *'Ireland's current institutional arrangements to support the evaluation of the effects of surface water abstractions need to be modernised. The primary governing legislation for water supplies (Water Supplies Act, 1942) does not consider environmental issues.'* The Water Framework Directive identifies abstraction as a *'significant anthropogenic pressure'* and requires the establishment of *'controls over the abstraction of fresh surface water and groundwater, and impoundment of fresh surface water, including a register or registers of water abstractions and a requirement of prior authorisation for abstraction…'* (Art 11.3(e)). The South Eastern River Basin Management Plan (2009-2015) stated that, *'The legislative framework will be further enhanced to protect and improve water quality through the introduction of strengthened controls on abstractions of water ...',* and as indicated in the WSSP, this vitally important legislation is imminent. As stated in the WSSP, it is the responsibility of Irish Water to ensure that the quantity of water abstracted by the company is sustainable. The WSSP identifies *'our water resources (in particular our rights of abstraction) rights'* as one of Irish Water's main assets. SWAN of course acknowledges that raw water from the environment is fundamental for providing drinking water services; however it is important to recognise that these abstraction rights must first and foremost be based on environmental sustainability and are not inalienable. Ireland's natural water resources are part of the environment and constitute part of 'the commons'. Accordingly it cannot be viewed by Irish Water as its sole '*asset'* and Irish Water must factor into its *'asset management based approach'* (WS3a) the fact that abstraction activities must be reviewed regularly to ensure continued sustainability and WFD compliance and may change with the changing environment and climate. Obviously Irish Water, as by far the largest abstractor of water in the country will be a key stakeholder in discussions regarding imminent regulatory requirements for abstraction. However,	Water abstraction rights (licences) must be based on environmental sustainability and be regularly reviewed to ensure continued sustainability in climate change. This is a matter for the EPA.

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	SWAN would strongly propose that you refine your statement that Irish Water's *'paramount consideration'* in this regard will be to maintain supplies. In fact we would submit environmental compliance and overarching sustainability should be the *'paramount consideration'* for Irish Water. It is vital that Irish Water works with the DECLG to ensure that the new regulations are fully compliant with the WFD and ensure fully environmentally sustainable water levels to support a vibrant and resilient aquatic environment, especially in the context of climate change. Such prioritisation of environmental sustainability and WFD compliance will in turn guarantee that you *'can maintain your supplies'*. SWAN believes that in advance of discussions regarding the imminent regulations Irish Water should make a very clear commitment to this effect in the final WSSP.	SWAN submit that environmental compliance and overarching sustainability should be the *'paramount consideration'* for Irish Water which will in turn guarantee that water supplies can be maintained.
	8. PUBLIC PARTICIPATION & ENGAGEMENT SWAN welcomes the references to awareness-raising, education and public engagement sprinkled throughout the WSSP and fully supports all the public awareness and other initiates put forward. For example the commitment to *'engage with stakeholders in developing and implementing programmes of measures'* and the *'public awareness and information campaign'* to inform the public about the impacts of *'inappropriate material such as pharmaceuticals, baby wipes, nappies and sanitary towels',* which SWAN recommended in the pre-consultation phase. However, one of the main weaknesses in the WSSP in SWAN's view is the fact that there is no strategic, co-ordinated approach to public participation outlined. Neither is a dedicated public awareness campaign specifically committed to. SWAN believes that a well-resourced citizen engagement initiative led by suitably qualified professionals is central to the delivery of sustainable water management, including water services over the coming 25 years and it is regrettable that such a strategy is not included in the WSSP. Discussion on the key elements of successful public participation / engagement is beyond the scope of this submission, but these are well rehearsed in the literature and have been set out by SWAN in various submissions to the Department of Environment7. In summary they should include: • early engagement, that is well-planned & designed and has been well publicised in advance; • appropriate mechanisms, structures & processes, that *genuinely* facilitates the participation of those affected (stakeholders), and enables them to influence the outcome(s); • adequate resources to conduct effective public participation, and to enable stakeholders to fully realise the potential of each engagement opportunity;	SWAN considers that a strategic co-ordinated approach to public engagement with a commitment to a public awareness campaign is required.

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	• evaluation of operation and outcomes, to inform improvements in how engagement continues; • specially qualified & trained professionals. It is SWAN's view that the WSSP should have a dedicated section devoted to public participation, setting out a strategy for engaging with the public over the life of the WSSP, including detail on the Irish Water Stakeholder Forum and on the Public Water Forum. If it is too soon to have developed such a strategy then this should be stated and identified as a priority in the draft WSSP and included as a Tier 2 Plan, with consultation. This is not just best practise which will achieve the most effective support for Irish Water operations, but it is also a requirement of the Aarhus Convention. On a separate, more specific note, SWAN has found that an effective way to get the message to local communities (in addition to the use of local print and radio media) is to work with local community groups – Community Councils, and community fora. Cooperation with Strategic Policy Committees (SPCs) in each Local Authority is also important. The Environment Pillar has representatives on SPCs on all Local Authorities and may be able to facilitate a cooperative approach with these bodies. The new Public Participation Networks (PPNs) will also now be important fora for engaging with stakeholders. In relation to the public awareness activities mooted regarding domestic disposal into the wastewater system, we would strongly propose the inclusion items containing microbeads in this campaign. SWAN member An Taisce are heavily involved in a campaign on micro-plastic and would be well-placed to assist. **9. PROTECTING & ENHANCING THE ENVIRONMENT: GENERAL** By its nature, there are many proposals under this Irish Water objective which SWAN welcomes. Those in relation to UWWT and WFD have been addressed earlier in this submission. However SWAN identifies here where we believe there are deficits in other areas to be addressed in the final Plan. The WSSP identifies the following as the challenges in terms of environmental impact: • meeting the requirements of the WFD Programme of Measures; • sustainability of abstractions; • discharge licensing and • input to catchment management planning. SWAN proposes that meeting the requirements of the Marine Strategy Framework Directive, the Birds and Habitats Directives and the Aarhus convention should be included here also, with	SWAN would like to see more detail on the Stakeholder Forum and Public Water forum included or a commitment to a Tier 2 plan with consultation. Use local community fora (PPNs) for engaging with the public.

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	associated proposed actions. **9.1 Chemicals** More information is needed on the chemicals being used by Irish Water which have *'potential to impact the environment'.* SWAN seeks clarification as to whether this will be covered in the Sustainability Policy, with consultation opportunities? It is not sufficient to say that Irish Water will '*work towards'* meeting the requirements of the Priority Substances Directive or that the discharge of these will be regulated '*where appropriate'* under your trade effluent licenses. Clearly, this is a legal requirement for Irish Water and it is appropriate that such requirements are met in full. Finally, there are no targets and indicators set out for Priority Substances, abstractions or catchment management in Chapter 6. This is a clear omission which we propose should be addressed in the final Plan. **10. WATER CONSERVATION** SWAN is extremely disappointed with the lack of discussion or commitments regarding water conservation in the WSSP. Much more ambitious strategies are needed to encourage water conservation – both commercial and domestic and we strongly recommend that these be included in the final WSSP. References to initiatives are sprinkled throughout the WSSP, for example under WS3c and these are of course to be welcomed. e.g. the commitment to *'support education in water usage'* and the promotion *of 'the reuse of grey water and water efficient domestic appliances'*. However this falls far short of the co-ordinated ambitious strategy required to manage demand, especially in area of the country facing water shortages. An ambitious strategy to promote water conservation, including the promotion of rain-water harvesting, should be prominent in the WSSP and we propose that this deficit be addressed in the final document. **11. NEXT STEPS** SWAN seeks clarification on the final output at the end of this consultation period. What is the process and timeline by which feedback from the consultation will be incorporated into the final WSSP? SWAN would like to take this opportunity to formally request a meeting with Irish Water to discuss the issues raised in this submission.	SWAN proposes that meeting the requirements of the Marine Strategy Framework Directive, the Birds and Habitats Directives and the Aarhus convention should be included here also, with associated proposed actions. Commitment to meeting the requirements of the Birds and Habitats Directives and the Aarhus Convention are now included. Irish Water should commit to the requirements of the Priority Substances Directive rather than a statement of 'work towards'. SWAN seek targets and indicators set out for Priority Substances, abstractions or catchment management. SWAN would like to see an ambitious strategy to promote water conservation, including the promotion of rain-water harvesting, prominent in the WSSP. IW has included additional target for Water Conservation/leakage reduction and public education in relation to Demand Management is included WS3c

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S34	**Engineers Ireland** Engineers Ireland welcomes the Irish Water Draft Water Services Strategic Plan. Provision of water supply and associated waste management services is a major user of energy and other resources, and consequential cost to all end users whether in the business, public services or residential sectors. The quality and efficiency of these services, in their design, operation and maintenance, plays an important part in meeting the direct needs of customers and in ensuring a safe and healthy environment. Any initiatives which reduce wastage (of water or other resources) and improve the efficiency of public water supply and waste treatment systems will have the multiple benefits of reduced energy usage, cost economies and minimised emissions of effluents, CO2 and other gases. Such initiatives are welcomed ensuring that Ireland's water services are fit for purpose in serving both current and future needs. We welcome the proposals within the draft Plan to develop and implement a number of strategies to achieve Irish Water's environmental and sustainability aims including: • Implement a Sustainability Policy and Framework • Prepare and implement a Sustainable Energy Strategy • Prepare and implement a Climate Change Adaptation and Mitigation Strategy • Adopt a green procurement approach and review our current use of resources • Contribute to the delivery of the Water Framework Directive programmes of measures • Develop and implement waste and sludge management plans In particular, we welcome the commitment to prepare and implement a Sustainable Energy Strategy. We interpret this as requiring a holistic and balanced approach to the ambitious, forward looking, deployment of best available technologies and systems for both energy efficiency and renewable energy. We trust that this commitment reflects the use of best available energy efficiency technologies and practices and appropriate renewable energy technologies. As a result, positive contributions will be made towards achieving each of the six strategic objectives in the draft Plan. We note and welcome the recognition within the draft Plan that 'becoming more efficient in energy use' is one of six strategic challenges facing Irish Water. Within the response to this challenge is the commitment that Irish Water must meet national targets for energy efficiency set by the	Response focuses on energy waste reduction. Under strategy [EN1b] the sustainable energy strategy will document how Irish Water will achieve energy efficiency through the use of technologies and initiatives designed to improve energy efficiency and use of renewable energy sources where appropriate and economically viable. Irish Water intends to target asset investment and operational changes to meet targets for energy use, consumption and efficiency. Irish Water's target is an improvement in energy efficiency by 33% by 2020 from the 2009 baseline. Irish Water has entered into an energy partnership with SEAI to avail of their support, resources and expertise in meeting this target.

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	Government. In addition, a 33% improvement of energy efficiency at Irish Water facilities by 2020 relative to the 2009 baseline is a key target in protecting and enhancing the environment. Towards delivery of this target, we also welcome the explicit commitment to supporting the objectives of the National Energy Efficiency Action Plan through targeted investments and adapting asset operations. Similarly, we welcome the advance commitment to meeting the targets that will be established by national energy policy to 2040. On this basis, it is our expectation that energy efficiency is seen as a vital sub-goal in delivering on the primary goal of service quality and efficiency in Irish Water. We see the implementation of energy efficient design as a key principle which should underpin the design of all significant investments to be made by Irish Water in major modifications to its facilities or in the design of new facilities in the years ahead. The formal incorporation of the approach promoted by the new Irish Standard IS 399 Energy Efficient Design Management would enhance the Draft Water Services Strategic plan. We also note that water supply and associated waste management services afford particular opportunities for the appropriate deployment of particular renewable energy technologies, with both environmental and cost efficiency benefits. We acknowledge, for example, the use of wastewater sludge to generate renewable energy in some existing facilities and the likely potential for wider deployment of such systems within Irish Water. In addition to the examples cited in the draft Plan, there are several sustainable energy technologies and practices which should be included in any register or audit of opportunities for energy and cost efficiencies. For example, among the measures which should be considered for widespread application is the introduction of energy saving technologies such as variable frequency motor drives for water pumping. Finally, within the framework of a forward looking strategic and ethic of continuous improvement, we welcome the commitment in the draft Plan to promote research and develop proven, innovative technical solutions to meet standards set by the regulators including Irish Water's objectives for cost and energy efficiency. We trust that the above comments from both an energy and wider environmental perspective are helpful and we look forward to the successful finalisation and implementation of the Plan.	
S35	**Aghalonteen Group Water Scheme**	

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	Background Our village, Aughalonteen, which is outside Lahardane in Co Mayo on the slopes of Nephin has no potable water. Households have a pipe in the River White which has its source on Nephin. The nearest group water scheme is at the bottom of our road, Nephin Valley Group Water Scheme; it has a new water treatment plant, 100% funded by the Department of the Environment. Our ten houses have been trying to join that scheme since 2007, when on the advice of Mayo County Council we opened a bank account, called ourselves "Aghalonteen Group Water Scheme", and each household paid €1,045 into the bank account as their local contribution. There has been no progress, apart from the land for the pump house being purchased. We are still without potable water, most householders have pipes in the River White. Householders travel 3km to Suile Well for water for drinking and cooking. **Response** If there are 3.3 million connections to Irish Water, and that constitutes 80%, some 825,000 households and businesses are presently outside Irish Water's remit; getting water from private water schemes, wells and rivers. They are largely situated in rural areas. In the past they will have contributed financially, like ourselves, through taxation to the assets that Irish Water has now taken over. The idea of a national grid for water, similar to electricity is very appealing, but it must include the rural areas like electricity, with Irish Water eventually taking over all the private water schemes across the country to ensure consistency of product and price. This idea is very challenging, but if adopted, it will be the pathway to a more successful national coordinated water scheme that meets European standards, and can demonstrate in a coordinated manner that this is so.	In relation to the Supporting National and Regional Planning Policy, Irish Water is aware of the challenge of providing water services to rural communities in a cost effective manner. Irish Water will prepare a National Water Resources Plan to ensure a sustainable water supply for all customers as proposed in strategy WS1a.
S36	**Butterfield and District Residents Association** The Butterfield District Residents' Association (BDRA) has for over 50 years promoted the interests of more than 2,200 families living in the Butterfield/Ballyroan area of South Dublin, and wishes the following submission to be considered and its conclusions incorporated in Uisce Éireann/Irish Water's (UE/IW) Strategic Plan. Our main point is that the Strategic Plan, as published, contains no specific reference to domestic Water Metering, a critical component of the Billing System, which could provide residents with the	Water metering. The Strategic plan references water metering in [WS2g]. The water metering programme

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	means of conserving domestic water usage. Reduced water usage will optimize the delivery capacity of existing water supply systems and postpone future investments needed to meet increased water demand and sewage treatment, thus minimising the cost of water to all UE/IW customers. Gas and electricity customers have easy access to their meters, so they can confirm their bills and moreover check their usage and assess the effectiveness of any measures taken to reduce their consumption. Domestic water customers want to check and assess their usage. However, because water meters are located in the footpath outside their homes (no doubt to reduce the cost of metering), only the most determined can gain access to their meters, and will find that it is not possible to read them accurately, as some of the usage figures are obscured by apparatus covering part of the meter dial. Press reports state that when it was announced that water would be charged pro rata with volume delivered, consumption dropped in the Dublin area, but when it was confirmed that, for the present at least, bills will not be based on meter readings, consumption rose again. Clearly, the lack of meter readings will discourage water conservation. The Spring 2015 edition of the Ervia (formerly Bord Gais) house newsletter states at page 9 : "….our meter reading technology holds the end-of-month meter reads for the past three months" And at page 10 : "Our meters hold the reading at the end of each calendar month…." (which enables precise, 91-day billing, covering the first to the last day of each calendar quarter). BDRA concludes that it will be possible to supply domestic customers with month-end meter reads, thus allowing them to assess the value of conservation measures undertaken in the home. So when bills are based on the volume of water supplied, there will be an immediate incentive to take all feasible steps to reduce usage. BDRA therefore requests that on the quarterly bill, all domestic customers shall be provided with the meter read at each month-end in the quarter concerned. BDRA further requests that UE/IW gives careful consideration to providing week-end readings to	and our related 'first fix' policy seek to reduce customer side leakage. We will analyse domestic metering data returns to build up a better picture of water usage and review estimates for Unaccounted for Water (UFW), including leakage in all water supply zones during 2015 and 2016. Our Current Priorities. We are currently utilising the early returns from the water metering programme to help us refine estimates of legitimate usage and levels of leakage within customers' properties. This will better define the size of the leakage problem, the optimum solutions and help us to determine where the largest leaks are. In relation to customers assessing their own water usage this is not covered in the WSSP. Chapter 2 Challenges and Strategic Priorities; Monitoring our performance: Our economic regulator, CER, has published and will maintain, ***'The Customer Handbook'***, which is primarily concerned with customer billing and communication. [CE1e] Establish national customer service standards and robust customer protection measures. Irish Water is committed to providing a satisfactory standard of water services to our customers with robust customer protection measures in place. We operate under a range of Codes of Practice which comply with the requirements of the Water Handbook and includes **Domestic Billing Code of Practice** Irish Water commit under strategy CE1 to accurate

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	domestic customers, to help and encourage water conservation.	quarterly bills based on actual reads (for metered customers) - no "planned estimated" bills (99% of customers). Sympathetic handling of payment difficulty cases.
S37	**FH Wetland Systems** With respect to the invitation for consultation submissions for the Draft Water Services Strategic Plan, I wish to submit the items below for consideration. Having briefly examined the Draft Plan, following are some items that I consider to be important for inclusion in your final Water Services Strategy: **Combined Sewage Overflows** The identification of combined sewer overflows is a welcome development. The constructed wetland at Kiltimagh in Co. Mayo is one such example of excellent CSO management, achieved at relatively little cost and serving both urban storm runoff, tertiary effluent and CSOs into the future with no additional energy inputs. **Sludge Management** With regards to the National Wastewater Sludge Management Plan details on page 56, the identification of anaerobic digestion as a way to recoup energy from sludge is an excellent example of the type of innovation that is possible. Already the Cork sewage treatment plant at Carrigrenan meets *c*.50% of sludge drying bed requirements with gas generated within the plant. I think that Irish Water is in a unique position to do much more however. Landfill is identified in the document as continuing to play a major role (p57) in sludge management. Some of the primary inputs into sludge toxicity are the chemicals of domestic grey water, industrial effluents and the wastewater treatment chemicals themselves. There is a unique opportunity now to carry out an extensive investigation into the possibilities for substitution of these chemicals and to move homeowners, industry and waste treatment plants to biodegradable alternatives that will make sludges compostable for return to agriculture. An environmentally sustainable society cannot separate food production from sewage management. Without a clean closed loop system, the energy required to maintain food production is simply too high. For those sludges that are still contaminated with industrial effluents, recouping energy through willow coppice plantations can offer a more environmentally sustainable way to manage this	In relation to Sludge Management, Irish Water is aware of the challenge of water and wastewater services generateing a significant volume of both water and wastewater sludge which is dispersed around the many water and wastewater treatment plants and other sites we operate. Effective and safe management of this sludge, utilising its potential for energy generation or reuse where feasible, is a key challenge. Strategy EN3b proposes to develop and implement a National Wastewater Sludge Management Plan to reduce the environmental impacts from wastewater treatment by re-use and renewable energy generation, where feasible. Research and Development. A part of Strategy IF4 the WSSP will promote research and develop proven, innovative technical solutions to meet standards set by our regulators including our objectives for cost and energy efficiency.

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	nutrient resource than simply landfilling the dried sludges. There is a new sludge treatment wetland at the Hacketstown treatment system at Co. Carlow. This will provide phytoremediation to the sludge dewatering process using *Phragmites* reed as well as providing sludge drying and maturation prior to removal. **Source Separation Technologies** Given the possible short-fall in the future availability of energy, rock phosphate and natural-gas dependant nitrogenous fertilisers, there is a huge potential opportunity for Irish Water to embrace source separation technologies that reroute faecal solids and urine from being potential pollutants to serving as agricultural fertilisers. If grey water is removed from the sewage at source, the faecal and urine components are much less toxic. As a country, if we were to move our infrastructure gradually toward separated grey water and black water, and also to embrace urine separation as a more conventional tool, then we could deal with multiple challenges at once. I realise that this requires the adoption of new infrastructure and technology, but much of this has already been developed in Scandinavia. Municipal examples of dry toilet systems and in-sewer faecal separation systems exist around the world. In-sewer separators are a relatively new area of research and product development (c.2030 years in Scandinavia with the Aquatron unit), but it is an area that can help to deal with multiple issues that revolve around the crucial issues of water pollution, energy conservation and supply and nutrient availability. **Climate Change** Energy consumption optimisation is highlighted in the document, and is a welcome and important element of wastewater treatment. Yet I am concerned that the mentions of climate change assume that this is something about which Irish Water has no actual role other than merely adaptation to future climate conditions. This outlook is relatively unambitious from an environmental perspective. I acknowledge fully that such adaptation is necessary, but something further that could be done is to embrace the possible role that Irish Water could bring to the atmospheric carbon balance in Ireland as a whole. We currently have an abundance of wasted nutrients from our sewage outfall pipes in Ireland, and a shortage of native fuel sources. By taking on a wider vision of possibilities we, as a nation, could route all sewage outfalls through community willow plantations managed as short rotation coppice crops and used for electricity generation. Co. Monaghan already has such a system in place and	

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	Edenderry power plant in Co. Offaly already co-fires with 30% willows instead of fossil fuels in the form of harvested peat. Irish Water is in a unique position to make such genuine environmentally sustainable infrastructure a reality and place Ireland high on the list of carbon efficient countries in the EU. **Energy Supply Assumptions** Keeping with the theme of adapting and responding to climate change; currently most of the country's secondary treatment systems are electrically powered mechanical units. These can be very effective and have a small footprint area - however, in light of the current environmental recommendations to leave *c*.80% of current know oil reserves in the ground to mitigate against the worst effects of climate change, we really need to be focusing on treatment systems that have no electricity inputs, or as in the case of willow planted systems of any sort, repay handsomely in fuel reserves and carbon uptake for limited electrical pump inputs. If we install new electrical systems now in an expensive process of upgrades and improvements, who knows what the reliability of electricity supply will be over the coming 30 years. It might be uninterrupted – but the odds are equally high that it may not. Also, quite apart from the reliability of power supply, it is our collective responsibility to minimise electricity inputs of any form to minimise our reliance on fossil energy as an urgent climate issue. Where new sewage treatment systems are needed and planned, such as the Cork Harbour region as highlighted on page 55, these are very welcome investments. However I would urge you to consider as part of your site acquisition the question of gravity flows in the event of power supply interruptions as well as additional space for possible short term or longer term installation of zero energy input systems such as rotating arm trickling filters, constructed wetlands or willow plantations. **Fluoridation** There is much research to suggest that compulsory medication of Irish water supplies is not necessarily beneficial to our health. This is a practice that has drawn considerable criticism from many quarters and based on my brief reading of the literature I would strongly encourage a discontinuation of this practice. **Chlorination** For many years I've been working with a Danish willow facility designer as part of my work here in	Energy Efficiency. Irish Water proposes strategies for Energy Efficiency in EN1b. Sewage sludges are presently used for energy generation in a number of treatment plants and further AD plants will be considered where appropriate. Fluoridation. This is a matter of Irish legislation and does not form part of this consultation.

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	Ireland with willow facilities. To the best of my understanding, in Denmark, chlorination of high quality water sources is prohibited for generation of potable supplies. Thus the emphasis is upon keeping water sources clean rather than assessing the amount of chemicals needed to render them safe. Ireland is blessed with plentiful water resources and a beautiful countryside. With careful land and catchment management it would be possible to bring proper protection to our water resources so that sterilisation of potable supplies is not necessary to make them safe for consumption. **Dublin's Water** There has been much public debate about the plans to route water from the River Shannon to Dublin. The environmental impact of a large infrastructural pumping and reservoir project would be significant, with potentially detrimental impacts on the Shannon catchment below the point of extraction. I would suggest that by careful leak management, extensive rain harvesting infrastructure and other conservation measures, that the current water catchment would be more than sufficient to meet Dublin's current and projected needs. **Water Conservation** Most of the conservation strategy mentions in the report relate to leakage at supply level. Focusing on this alone would miss the current opportunity to engage the public in an extensive water conservation initiative at household and business level. The current EPA sewage generation figure is 150 litres/p/d, or for our family of 4 people, over 200m3/year. In the three months of water metering to date, the current projections are that with our current domestic water conservation strategies, we will require approximately one quarter of that amount. Any conservation strategy that Irish Water develops should include an extensive description of imaginative initiatives that the public can take in reducing their water consumption. If the environmental imperative hasn't worked in the past, the chances are good that the per-litre billing structure will be more effective. **Investing in Sewage Infrastructure** In brief, the heavy investment in water and wastewater infrastructure in Ireland is very badly needed. The introduction of water charges is an important element within this funding, so that we gain a greater appreciation of the resource that we often take so much for granted. There are many	Chlorination. Adequate disinfection is a safeguard for water supply and a matter of Irish legislation. Additional water supplies for Dublin. This is part of a Tier 3 project which is presently out for consultation.

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	small towns and villages that have long been without proper sewage treatment, and I welcome this wholeheartedly. In conclusion, there are many opportunities that could come out of the central management of our water services in Ireland, and in order to harness the full potential benefits, a truly holistic and ambitious approach is urgently needed across all Irish Water departments and levels to demonstrate that Ireland can live up to its reputation as a clean, green island nation, and be a beacon of environmentally sustainable practice for the rest of the EU to follow. Having worked within this area for many years I would be very happy to liaise with Irish Water on any of the brief items raised in this letter. How we manage our water as a nation is a very important issue, and at present there is a clear opening for a change in our approach that would help to make water protection easier all concerned, including homeowners, farmers, industry and government.	Need for a holistic approach.
S38	**Rain Safe** *We are an Irish, water treatment technology company. We lead the world in the field of water treatment without the need for added chemicals. We welcome the WSSP and we would be delighted for an opportunity to engage with you more thoroughly in respect of water strategy for the future. Meantime, in brief, below we summarise our reflections on this document.* **1. Love the Rain** Rainfall is explicitly referred to 12 times in the WSSP. In 11 instances rainfall is presented negatively as it is described as being "problematic, troublesome, risk causing, demanding, threatening, stressful, polluting and a cause of distress." It was only in section 2 "Introduction and Challenges" that a rainfall reference could be interpreted as being neutral, where it was written… "Rainfall events are predicted to result from climate change." Globally and in our interactions with other Utility companies in Europe and the USA, we witness an appetite to embrace rainwater harvesting opportunities. This willingness extends to include trials that are now beginning where our modular Irish technology for treating, storing, pressurising, safeguarding and remotely monitoring water quality is being installed. We hope and ask that Irish Water strategy be similarly re-aligned. While we welcome your commitment to supporting the reuse of grey water and water efficient	Rainwater harvesting. This is implicit in Strategy WS3c.

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	domestic appliances, and we are pleased that you will advise commercial and industrial customers on how to reduce their water usage, we would like to see Rainwater Harvesting referenced and incorporated into your plans. We note that rainwater harvesting is excluded not referenced in your Glossary of Terms. **2. Max Headroom** With 62% of Ireland's population currently living in urban areas and water supply availability regularly exceeding demand requirements in the Greater Dublin Area by just 1%-2%, we understand the need to either lessen demand or increase supply. This could, as you intimate, involve "the relocation of abstractions to larger more sustainable water sources" for example, the river Shannon. However, such large scale projects challenge your commitment to "protect and enhance the environment" and would also be hugely carbon emission intensive. Furthermore, this would add significantly to your energy bill which is such that "Irish Water is the largest single public user of electricity in Ireland" with its associated carbon footprint. We suggest there is "another way" and it is now being implemented by Wicklow County Council. A new build social housing project, funded by Wicklow county council, will incorporate new water technology to facilitate a reduction in water consumption demand by 50% and 30% respectively – depending on occupancy levels of 2 or 5 people. This project will deliver an incremental benefit of protecting its (Bray) urban dwellers from the impacts of rainfall runoff into combined sewerage systems. Additionally, this new technology solution does NOT require public groundwork spend (and associated disruption costs) that accompany large scale capital projects. **3. Microbiological Challenges** You highlight that microbiological contamination is a challenge for Irish Water due to climate change, old piping infrastructure, changing weather patterns affecting source water, pollution from agricultural activities, surface water run-off and flooding caused by heavy rainfall causing stress to combined sewers. Treating microbiological contamination, under constant Wi-fi monitored supervision to "cleaner than bottled water" quality is now possible with our new water treatment system which is being used at Water Utility projects in the UK and mainland Europe. We suggest you consider combining municipal /mains supply with alternative remote water sources	Dublin Water Supply. This is a Tier 3 project and subject to a separate consultation. Innovation is promoted in Strategy IF4a.

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	to reduce dependence on overstretched municipal supplies. Added benefits of storm attenuation and flooding event eradication would follow where the alternative water sources were the sole supply source during times of plentiful rainfall. **4. Social Support & Economic Growth** We welcome your commitment to engage with the IDA and Enterprise Ireland. We recently attended a "Meet the Irish Water Buyer" event hosted by Enterprise Ireland. We've also made representations in person and followed up in writing to senior members of the Irish Water Executive. Considering our collaboration with Trinity College Dublin, where one of our systems is installed, and our on-going communications with other Irish Educational Institutions, we note your determination "to ensure that opportunities for innovation through existing and on-going research and development are fully exploited". We also have a system installed at the University of Exeter as part of the European Commissions "Competitiveness and Innovation Framework Program". We hope and look forward to an opportunity to engage Irish Water. Being an Irish, water company, considering that we have also started innovation projects with overseas Water Utility companies, it is great to see Irish Water profess a commitment to support "Innovation developed by industry for water services here in Ireland" and we hope this will extend to and embrace our new, Irish and globally patented water technology. Advocating and supporting the propagation of a new Irish technology would be good news for Ireland, Irish jobs, our climate, carbon emissions and a good news story for Irish Water too.	

Elected Representatives and Private Individuals

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S39	**AM** I am suggesting that local authority rep should have a PIN number so that when they ring IW with a break or blockage they would be able to progress and deploy workers faster to the scene and that local authority member could give timely updates on progress. This member could be rotated weekly and public reps would know weekly who is on duty. Local knowledge is where IW are falling down and will their downfall in years ahead Regards	Local knowledge of LAs. Irish water are committed to continuing work with the local authorities under the Service Legal Agreements (SLA's) to continue the industry transformation including implementation of initiatives required for service improvement and cost reduction which is promoted in strategy IF2B.
S40	**JF** I agree fully with Clare Co Co draft submission & content in terms of points made ,including the following ; - Resource V product approach - important role of Group schemes & their governance & Asset management - Annual review - importance of recognition of role of & harnessing existing expertise of local authorities. - duration of SLA - future role of Local Authorities. - method & channels, incl traditional ones ,of communication with public , eg re water quality - water quality partic re lead - protection of sources - increased bureaucratic delays in planning , taking in charge ,leakage due to road opening,etc - augmentation of schemes by interconnection - consolidation & strategic reduction of sewerage treatment sites - targets & review re leakages in water & infiltration in waste systems - 33% reduction of energy use by 2020 from 2009 figures - National Sludge management plan - water & sewerage infrastructure as a driver of economic & social development. - free connection in return for payment of usage and/or reduction of environmental impacts	The WSSP notes lack of detailed knowledge of the condition and performance of the assets, especially underground water distribution and sewage collection networks. Irish Water will prioritise investment to firstly ensure universal, basic service availability and beyond that to deliver consistent service quality equivalent to that provided by high performing utilities in other sectors.

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	- imaginative approach needed for small towns & villages for collection & treatment of sewerage In addition I wish to submit - Urgent need for use of Plumbosolvency to deal with existing lead problem - The lack of headroom at Water and Wastewater treatment plants in Ennis, Shannon for future development is a serious concern. - The lack of Augmentation of water schemes to Ennis and Shannon is a serious concern . - raw sewerage from Clarecastle into the SAC of the Fergus River is a serious concern - protection plan of Drumcliffe water source for Ennis should be to World Health Standard. National & regional Development. Balanced regional development requires that population projections and economic growth projections need to be reconfigured that 1/3 happens in greater Dublin Area with 2/3 in regions such as Mid-West particularly Ennis as a Hub town. The water resources in the West should be used in the west to lead the development of the country particularly in water intensive industries.	Plumbosolvency. Irish Water is preparing a Lead Strategy to deal with plumbosolvency under strategy WS1e UWWTD. Irish Water is committed to meeting the requirements of the UWWTD and the WFD including commitments for protected areas as per strategy. Investment in new infrastructure will be aligned to the new national Planning Framework, Regional Economic Strategies and County Development Plans.
S41	**IP** Are there any plans to promote rainwater harvesting, government policy or otherwise. My data so far suggests that it would relieve some pressure off the current water treatment system.	Water Conservation including rainwater harvesting is promoted in Strategy WS2g and WS3c.
S42	**JJ** I believe that we need to accumulate adequate water supplies in the first instance by building reservoirs or a large reservoir in a water catchment area. This state has done very little to harvest water from rivers and streams in spate. There must be several sites suitable in valley areas to construct reservoirs. Such reservoirs should also facilitate clean water sports. The treatment of waste water from Industry, Farming, Hospitals, Institutions, Food production, and domestic sources all needs individual planning and treatment before release to land or sea. The nature and quality of pipework needs to be to best standards to withstand the heavier transport loads on our roads. Possibly we should plan pipe runs and valve points out of traffic rather	Water Conservation is promoted in Strategy WS2g and WS3c. Additional water service infrastructure. The WSSP proposes the development of additional water service infrastructure in SG2b and new reservoirs will be considered where required. Leakage. Irish water has a targeted programme of leakage detection, leakage control, pressure

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	than on the road. New drainage within towns and approaches should be to storm drain standards, New factories or any new unit using volumes of water should have a safe means of disposing or recycling grey or waste water. Builders should be encouraged to provide water catchment butts in new housing for watering gardens etc.	management and leakage repair. This work will be implemented in a continuous programme over a number of investment cycles to reduce leakage and maintain it at sustainable economic levels. The surface water drainage network and flood prevention works remain the responsibility of the relevant local authority or the Office of Public Works. However, Irish water will improve sewer network models and investigate the use of sustainable urban drainage systems in combined sewer area to reduce the risk of flooding and improve drainage systems as proposed in strategy WW2c. Standardisation. Irish Water will produce appropriate guidance documentation and standard operating procedures to enable optimal operation and maintenance of wastewater treatment facilities and collection networks to achieve the best possible outcomes as proposed by strategy WW1b. Trade effluent. Similarly, Irish Water aim to ensure that discharges from the trade sector are controlled and managed to minimise loads at source, thereby reducing loads to treatment as proposed in strategy WW3D. Onsite water storage, Irish Water will prepare and implement water conservation strategies in order to reduce the volume of water abstraction and treatment and therefore cost to the customer as proposed in strategy WS3c.
S43	**PM** I am in favour of water meters. I have registered. They enable good environmental management of	

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	supplies. How it is being done, however, is quite another matter. I have four points to make: 1. It is good that the meters have Automated Meter Reading. It is not acceptable that the customer does not have a way to read the meter without having to open the meter installation. I can read my electricity meter and my gas meter. It is a basic right to be able to monitor what water I am using. You need to supply a way for the customer to read the meter remotely , without needing to open the meter container. Since you have a way to do this on a drive-by, it is surely possible for you to provide a way for the customer to read the meter – perhaps with a smart-phone app? If there is concern about data security, it can be protected by password. This is basic digital technology. (Although with my electricity and gas meters on the wall of my house, any person with the common key can read them.) Why would water readings be sensitive information? It's not that Irish Water staff are mistrusted, but that I have a right to know, just as I would not want to pay my supermarket charge without having my own way of checking. In addition to the basic right to know what I am using and paying for, if customers can read their own meter, it will help in promoting awareness of usage and economy. Customers could be encouraged to read their own meter perhaps once a week and keep a record. It would also help in detecting a leak quickly if there were an unexplained increase in consumption. 2. Toilets use 20 to 30 percent of the total consumption of water. Treated water is not needed for this. Surely your engineers can devise an economical way for householders to take rainwater from the downpipe just below the gutter level, and pipe it to a tank on the wall above the toilet? If this were done nationally, the cost would come down. This could be set up on a non-profit basis, and would provide jobs. It would reduce the need for tankers etc. in case of interruption of water supplies, floods, etc. There are expensive commercial systems involving underground storage tanks and pumps. It is possible to have a relatively simple system which does not need a pump. A storage tank in the bathroom could be filled in the same way as a garden water-butt. Simple plumbing can provide that if the rainwater runs out on occasion, the treated water supply can be used. This would be a far simpler way to increase water supplies, rather than a major project to bring water to Dublin from the Shannon. The need for that could be postponed, or even lifted. For Dublin, it would mean some alleviation in case of floods, because people would be using water already there, rather than bringing in extra water from outside the flooded area. I do not know the extent to which commercial and industrial bodies use rainwater where treated water is not required.	Water Metering. Automated reading of water meters by customers is not planned at present and cost of implementation would need to satisfy the CER (our economic regulator). The water metering programme will help Irish Water determine water usage and help identify water leakage as proposed in strategy WS2G. Water Conservation including rainwater harvesting. This is promoted in Strategy WS2g and WS3c. However, the WSSP has not identified the possibility of storing rainfall and piping it to the toilet.

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	3. It is entirely unacceptable that it will take until 2021 to lift all Boil Water notices: you are supplying a defective and dangerous product. Lifting all those notices must be highest priority. The 2021 date is scandalous. People and businesses in those areas have been put to extra expense of boiling and/or buying water, some for years now. Yes, you have inherited the problem, but it is your responsibility. The target should be the end of this year, 2015, for safe supplies for all customers, even if some of the areas need temporary provision until the eventual work is done. I realise it is not a simple matter, but it must have priority. It can be done if there is the political will. It is planned, I hear, that a number of areas will be have notices lifted this year. Every effort should be made to do the same in every affected area. Water charges will be capped – is it until the end of 2016? I cannot find the information on your website. Because this reduces somewhat the pressure on installing meters (I still don't have one in Dublin 16), perhaps some of the meter installation workers could be reassigned to speed up work in Boil Water areas. Fixing leaks is obviously important, but supplying safe product is far more important. 4. The whole business has been handled disastrously. Large numbers of people feel they have been treated with little respect by government and Irish Water. The Boil Water notices are an extra insult, even if people in those areas will not be charged. They have already paid over years in general taxation and have been given defective and dangerous product. There should be no metered charges anywhere until all Boil Water notice areas have been rectified. That would help concentrate the mind of Irish Water. It would also show the public that Irish Water is up to the job.	Microbiological contamination. Irish Water aims to ensure a sustainable water supply for all customers in compliance with water quality standards as proposed in strategy WS1a as soon as possible. However, due to the extent of investment required it is believed that all boil water notices will not be removed until 2021. Water charges. These are set by the CER as our economic regulator and are not the subject of this consultation.
S44	**BD** -Irish Water makes a commitment to replacing all water pipes in the worst areas, such as the earliest pipes are replaced first. Irish Water must replace a certain percentage of pipes within 25 years etc. -Irish Water could develop a Facebook page. -Irish Water could hold ' a county by county consult' , Where an Irish Water representative could meet with locals to advise on projects and for members of the public to address their issues. -Irish Water could post a booklet to each house in relation to ways to conserve water etc and a	Leakage. Irish Water plans to fix pipelines in a sustainable manner. Irish Water will prepare regional water conservation strategies that will deliver a targeted programme of leakage detection, leakage control, pressure management and leakage repair [proposed in strategy WS2g]. Effective communication. Irish Water plans to establish effective communication channels with customers as

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	booklet on contact info and terms and conditions -Irish Water could save money by reducing the adding of fluoride to water supplies. -Irish Water must appreciate that elderly people can not submit their views on the wssp online therefore IW should consider a way of elderly people submitting their views.	proposed in strategy CE1d. Irish water will actively communicate with our customers, particularly when we must temporarily interrupt services, giving advance notice in accordance with our Codes of Practice. Our communications are intended to reach all of our customers which will include the use of our website, social media, SMS messages, telephone, letter and face to face conservations. However, irrespective of the form of communication used Irish Water will always listen to feedback from our customers. Fluoridation is a statutory requirement and not part of this consultation. WSSP Consultation. The WSSP was distributed to all libraries and planning counter in LAs to ensure that the document was readily available. Irish Water also accepted submissions by post in addition to online.
S45	**JD** In the aftermath of the recent troubling report from Met Eireann and a group of academic experts on the future of our weather, predicting as it does not only more rainfall overall but a succession of extreme 'weather events', it seems to me more urgent than ever that we look seriously at the whole issue of water management and conservation. It may after all be possible, admittedly with some considerable initial investment on the part of the government, and vigilance and responsible behaviour on the part of individual citizens, to turn this at first sight grim scenario to our advantage. Indeed, the water conservation initiatives proposed by the newly-established Irish Water, involving piping water from the Shannon basin for the use of the Greater Dublin area, the creation of various further reservoirs, extensive repairs to pipes, and, of course, the imposition of water charges, seem to me to deserve the country's full support – though, sadly, with the help of organised uproar from such far-sighted patriots as Sinn Féin and the United Left Alliance, it is hardly likely to get it. And yet, I would suggest, we should all start thinking seriously about water.	Climate change and sustainable water. Irish Water aims to develop long-term sustainable water sources with resilience to climate change as proposed in strategy WS2c. Irish Water will develop and implement strategies to meet water quality standards, ensure water availability and provide an acceptable level of service to our customers (WS1). In terms of water conservation, Irish Water will prepare Regional water Conservation strategies and implement on a phased basis as proposed in strategy WS2g.

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	A few years ago now, I had the opportunity of visiting the impressive ruins of the ancient Nabataean fortress town of 'Avdat, in the Negev Desert, about 50 km. south of Beersheva in Israel, where I happened to be taking part in a conference. 'Avdat has much visually to commend it, but what impressed me particularly then, and what I want to dwell on in the present connection, is the marvellous efficiency and complexity of the Nabataeans' arrangements for water conservation and distribution. This area, after all, was just as much of a desert in the first century B.C., when the town was founded, as it is now, and every drop of water was essential to their survival, which continued into the Byzantine era (7th cent. A.D.), when Arab invasions put an end to them. What we were shown was an elaborate system of channels, pipes and cisterns, both for collecting and storing water on the citadel, and for distributing it to the countryside round about, where the inhabitants were able both to grow vegetables and fruit, and to graze their livestock. The terraces which they had established on the surrounding hillsides are still visible, though nothing but desert scrub grows there now. The point of adducing the case of 'Avdat is simply this. When water is very scarce, and comes, when it comes, very suddenly (in the Negev one is dependent on between ten and twenty rainstorms during a good winter), one treats it with proper reverence as a basic commodity. In a country like Ireland, where the stuff – traditionally, at least -- courses down incessantly out of the heavens, one simply watches it gloomily as it gurgles down the drains, and courses down the rivers into the sea, without thinking more than 'good riddance'. However, what we are learning now the hard way, as a result of the freezes and thaws of the last few years, is that treating water with carelessness and contempt is profoundly counter-productive. As city and county managers all over the country are weary reminding us, water as such is of little or no use. To be any good, it needs to be gathered up, treated, and then conveyed to us through hundreds, indeed thousands, of miles of piping – much of which is now very old, and subject to crumbling or bursting at any moderate provocation. Plainly, in the excitement of the Tiger years, and for many decades before that, very little attention was paid to this whole process, and at the same time hundreds of miles of new piping were added, to service the vast acres of new building – much of it now superfluous – with which our fair land has been defaced in recent times.	However, in relation to your proposed thoughts on the development of an extensive pipeline development reaching foreign lands this is not part of this consultation or any long-term plans. Irish Water is bound by the various Water Services Acts which restrict the delivery of water services to Ireland.

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	What I would like to suggest, in face of this, is that we take a hint from the Nabataeans of 'Avdat, and learn to treat water as a commodity, and a commodity of which, like wind, we have an abundance. The current emphasis on developing wind and wave power is indeed most commendable, but it should be complemented, I would suggest, by developing a comprehensive network of mini-reservoirs, feeding into major reservoirs, the contents of which can then ultimately be exported to parts of the world that really need it, primarily by pipeline, but also by super-tanker. Now I fully recognise how preposterous this must sound, but I think that in the world that we are facing into we must come to look on water very much as we look on oil or gas now (especially as our dependence on the latter two commodities becomes progressively less), and be prepared to think about shifting it to where it is needed by much the same means as those other commodities are currently shifted. If it is worth running a gas pipeline from central Siberia through Europe as far as Spain, say, then it must ultimately become worthwhile to run a pipeline from Ireland to the same destination, or even further afield, to North Africa. And this water should ultimately, if we are facing into the sort of climatic situation that seems inevitable over the coming decades, become a commodity commanding suitably high prices. It is of course not just Ireland that should wake up to this. Most of Northern Europe should do the same, and ultimately there should be pipelines running up and down the length of Europe, Africa – and also of Australia (think of the recent floods in Queensland, as against decade-long drought in the south!). With proper irrigation and the introduction of modern farming methods, after all, Africa could become the breadbasket of the world, instead of being a basket case (the Chinese, indeed, are among the first to appreciate this); and Australia could be pretty much of a paradise. No one needs to remind me of the enormous cost of all this, but let us set this against the vast sums being spent currently in deep-sea drilling for oil and gas, and we gain, I think, a certain perspective. In any case, I doubt that we have much choice. It is a case of this, or serious hardship, and consequent conflict. To return, finally, to the Middle East: it is there that predictions of water wars have been most insistent, as between Turkey and its southern neighbours, over the control of water from the Tigris and the Euphrates, and between Israel and its neighbours, concerning water from the Jordan. Water is a fighting matter, if you don't have it, even as it can become a most profitable resource, if	

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	you have rather too much of it. If we are looking for indigenous commodities to market, then, I would suggest that we give serious consideration to water. We might even be able to use it to pay off the national debt.	
S46	**SH** There is no mention of interaction between IW, ESB, CER, EPA on cross functionality in the area of upgrades A major problem with wind energy and in the future, the possibility of ocean energy power generation, is the electrical network. A major obstacle being that the potential power generation that could be generated has no way of being transported from the West of Ireland due to the poor infrastructure of the electrical network. Another issue is that of the public opinion which tends to be against overhead lines. Bearing in mind that Irish Water will be upgrading the network (underground) in the next 25 years, is there any plans or any consideration being given that the electrical network could be upgraded in tandem with the water network. This would cut down on cost and would make sense?	Stakeholder Engagement. Irish Water will engage with key stakeholders such as CER and the EPA as proposed in strategy IF2B. Irish Water is accountable to the economic regulator, CER and the environmental regulator, the EPA. Our economic regulator, CER, has set out the levels of service which we are required to meet in the Customer Handbook and this is supplemented by a number of Codes of Practice which we have prepared. These relate to how we will correspond with our customers, deal with requirements for billing, complaints and other matters. Irish Water and its service partners will liaise with other utilities and local authorities in the development of water services infrastructure, as appropriate.
S47	**JM** You state at page 94 of WSSP " It is an objective of Irish Water to achieve public awareness of the value of water and the complexity of water service delivery" Page 94 IF3c. This is a fundamental target. Other major semi state organisations use advertising. The ESB ran advertisements for its importance and value individual homes. Bus Eireann plays on the ability to get family members home. Irish water will need to adopt a similar role. To supply water to individual homes does not come cheaply; the treatment of waste water is costly. At the same time what has been achieved by the local authorities over the years has been significant. The challenges for the future are no less daunting. In particular the demands for an adequate supply to the Greater	Communication. Strategy CE1d commits Irish Water to communicate effectively and appropriately with our customers through our website, social media, SMS messages, telephone, letter and face to face conversations.

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	Dublin Area have to be emphasised over and over again. In a recent (2014) book The Consolations of Economics Gerard Lyons writes at page 83 " The price mechanism is a central feature of economics, vital for sending signals. Yet there are some essentials that are free in many places or not priced properly in others, and water is one of them. When commodities are not priced properly it leads to misallocation. Take basic services. Provision of basic services has to be paid for, and in some countries the costs are met by general taxation or government borrowing. This includes a multitude of areas: for instance, the provision of sewers to carry away waste, pipes to bring drinking water, or health provision. But once you create disconnect between the person who pays for a service and the person who receives it you have a potential problem, and if something is free or too cheap it is often not valued or not used properly. The provision of water should be seen in this light. We must price water by charging people and companies for using it. It needs to be priced properly to discourage the wrong type of behaviour, to encourage the right type, and to avoid penalising the poor in the process. With water, the problems are multiple: shortage, location, pollution. These problems are not being addressed properly, so many behaviours continue." Irish Water needs to embark of a strong publicity campaign to highlight the cost of sanitary services. TV programmes, films, brochures, mail drops, open days could be utilised to being home to the public the fact that water abstraction, treatment and distribution do not come cheaply. Standards are high and the EU are ready to penalise. It is noteworthy that while a campaign of water being a human right and the source –abundant rain-was free it was conveniently forgotten or ignored that waste water treatment was the other side of the coin. The polluter pays principle applies. Much issue was made of the possible call out charge for repairs. But it was always the responsibility of the householder to effect repairs to the service pipe from the stopcock in. Every argument needs to be met fairly and squarely. At the same time the public should be able to contact Irish water directly by hot line to report faults in the system. In the past a burst could be notified directly to the local authority office, the caretaker, an elected representative or anyone connected with the service. Now the line of access is not clear or well known. The photograph of the Waste Water treatment plant in Drogheda in WSSP brings home that for many years the River Boyne received the discharge from all the town's sewers. The brief article on the Ringsend plant shows the costs involved are considerable. EPA and EU standards do not come cheaply; the public need to be made aware of prosecution costs.	The promotion of water efficiency. This is documented throughout the WSSP and specifically in strategy WS3c. The marketing of Irish Water. This is not part of this consultation.

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	In the past the role of the local authorities has been significant. An 80% satisfactory rate is no mean achievement. We have come a long way from untreated water coming to towns from a nearby lake that was high enough to enable gravity feeding. The British army provided water to some towns if they had a garrison. The Congested Districts Board made available a water supply to Malinbeg in Co. Donegal at a cost of £ 110. The Regional water Supply scheme in Achill Island from a corrie on the mountains west of Keel and pioneered by P.J.Tobin was the start of regional water schemes in the 1950 s. Many graduates of Sligo Institute of Technology and other colleges bring a high degree of professionalism to that already supplied by generations of committed civil engineers and chemists, technicians and caretakers over the years. We can be proud of these achievements. It is sad that a recent radio programme (not RTE) described Irish water as a shambles. Such glib remarks are untrue, unfair and demoralising to the staff. An aggressive counter publicity approach is well called for. The objective set out at page 94 is both a challenge and an objective.	
S48	**BG** I thank you for the e-mail. Do Irish Water Limited plan to hold Public Meeting re WSSP.? If not why not We as user's of water, think that Irish Water Limited are arrogant, do not listen, will not answer any question, Irish Water Limited was set up to Privatise Our Water,through PPP, DBO,(Design Build Operate), We need the Infrastructure to be fixed first -Not to put 600 million in to the ground on Water (smart) Meters. Which will be re-new in short period of time. Battery has 10 year life span Smart Meters have Health and Enviromental issue. We have seen over the last year that Irish Water Limited can not respond to major leaks. Putting in Boundary Boxes,Forcing Boundary Boxes on Communities. The Communities all over Ireland have NO trust in Irish Water Limited.	Consultation. We anticipate a high level of communication with our customers by letter, email, phone, digital channels and through the media. We are committed to handling all customer communication in the manner expected of a modern professional utility. We aspire to deliver a consistent, functional and ultimately satisfying customer communication experience in relation to operational and billing queries, complaints, service requests, new connections services and all other interactions with Irish Water staff and contractors (Strategy CE1d). Water Metering. Irish Water believes that the introduction of meters to measure domestic water usage at individual properties will facilitate this which is

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		promoted in strategy WS3c. The water metering programme will help Irish water determine water usage and help identify water leakage (WS2G).
S49	**DH** How do Irish Water propose to meter residential apartments ? This issue is not raised in the document. I ask because we have been collaborating with Ireland's largest property management agency and we have proposed a comprehensive research trial re cost feasibility to The Irish Water Programme. In simple terms, together with Wyse we have surveyed several apartment blocks for suitability re installation of a highly cost effective remote wireless (fixed-radio) water telemetry managed service and selected one for the proposed trial. Our partners include an established Irish telemetry engineering company and the approach we advise is based on the European telemetry standard (Wireless M-Bus) as well established brands of meters, data-collectors, gateways and time-stamped database specialists. The key problem for Irish Water is not a technical one but rather it is simply a matter of gaining access to the plumbing of apartment blocks, initially in order to establish feasibility re any block and subsequently, to install meters at an acceptable lifetime price per installation. Thus, our first step was to form an agreement with a property management company. The property management company are keen to ensure best practice so that water charges are apportioned fairly to each tenant in the apartment blocks under their management. We first met with Irish Water 5th Feb 2014 and in July and August 2014 proposed a trial at a particular apartment complex in Dublin.	Water Metering. Our Customer Charter published on the 30 September 2014 (https://www.water.ie/docs/Customer-Charter.pdf) offers a process for queries in relation to Water Meter Installation (CE1e).
S50	**BG** Q 1. Every one should have their say. NOT every one is on the Internet - Hold Public Meeting Q 2. No I do do not agree with Evaluation. What about water used by Business, Bottle Water Companies etc Q.3.and Q. 13 Your vision ?? What Vision. Putting in Water Meters and Smart Meters show ''YOUR VISION''. It will cost €600,000 million to put in Water Meters, Smart Meters, that will need to be re-	Communication. We are committed to handling all customer communication in the manner expected of a modern professional utility. We aspire to deliver a consistent, functional and ultimately satisfying customer

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	placed, re- newed, every 5/10 years. Yet 2 years will have elased and NO WORK done on the Infrastructure. Fix leaks like the ''Cost Effective'' term IT IS ALL WAYS COST EFFECTIVE TO FIX LEAKS. Q. 4. Re-new, replace, repair the ''LEAKING'' Pipes. Up-grade the Reservoir, Upgrade the Water Treatment Plants, Upgrade Waste Treatment Plants, It would be ''Cost Effective'' in a very short time. Q. 5. AS per Q.4 Q.6. Irish Water Limited is seen as ''Arrogant ,Liars'' -- First interaction People have with Irish Water Limited is at 7am in the morning making noise outside their door. Not Told what is happening bullied told liars. Not asked would we like to be ''Customer's'' we are told Q.7. We already pay. Q.8. BE TELLING THE TRUTH Q.9 Get real !!!! Could you please send me in booklet form the WSSP Please keep me informed of any Public Meeting you may have on WSSP I like to be on your ''Advisory Board'' for the Public. I try to get around to answering the other Question Yours	communication experience in relation to operational and billing queries, complaints, service requests, new connections services and all other interactions with Irish Water staff and contractors (Strategy CE1d). Water Metering. Our Customer Charter published on the 30 September 2014 (https://www.water.ie/docs/Customer-Charter.pdf) offers a process for queries in relation to Water Meter Installation (CE1e). Leakage. Irish water will prepare regional water conservation strategies that will deliver a targeted programme of leakage detection, leakage control, pressure management and leakage repair. This work will be implemented in a continuous programme over a number of investment cycles to reduce leakage and maintain it at sustainable economic levels. Thus, Irish water will introduce pressure management measures and replace or rehabilitate water pipelines as required (WS2g). Strategic Development. Irish Water will also invest in the development of strategic networks and treatment works in order to meet the projected demand for our water services as proposed in strategy SG2c.
S51	**EC** 1. The formation of Irish Water has been a mess from start to finish. It is ridiculous that €500m. worth of water meters are being installed now but won't be used before 2018 at the earliest. I understood that the whole Irish Water project was around water conservation – a precious natural resource that will become under threat with climate change. I am fully in favour of using water meters to bill water to motivate people to reduce their consumption of water and help minimise leakages in the system. We are one of the few countries in Ireland that do not charge	Water Conservation including rainwater harvesting. This is promoted in Strategy WS2g and WS3c. Water Metering. The Irish Water Customer Charter

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	for water. Note that water consumption went down temporarily in October last year when water metering was near commencement and went back up when metering was taken off the table. ACTION: Please install the water meters as soon as possible and start charging consumers from that point. 2. Dublin is near the limit of water resources at present, and no metering will exacerbate this. We should not be looking for new sources for Dublin water (especially the Shannon which has been mooted regularly). Therefore your strategic plan should have no reference to sourcing fresh water supplies from the Shannon (or any other river). As above, we can live within our current resources if we reduce our wasteful consumption and minimise leaks. Modern day water usage in showers, toilets, washing machines, gardens etc. is excessive and can come down significantly with water metering. ACTION: Please do not source Dublin water from the Shannon in the future.	which was published on the 30 September 2014 (http://www. water.ie/docs/Irish-Water-Customer-Charter.pdf) offers a process for queries in relation to Water Meter Installation (CE1e). Dublin Water Supply. The WSSP indicates that there is just 2% spare capacity to supply water in the GDA. The options for additional sources for the Greater Dublin Area forms part of consultation for the Eastern and Midlands Water Supply Project. Further information is available at: http://www.watersupplyproject.ie/
S52	**BG** The Aarhus Convention encourages Public Participation on the Environment Your WSSP is not Consumer friendly Public Meeting should be held for full Public Participation in WSSP and decision-making. Questions 1. What is the plan for the Lee Road, Cork, Water Treatment Plant ? Has it gone out to Tender ? The time line for it to be built ? 2. Will the Water Treatment Plant and Boiler House be built by Irish Water or by DBO Design Build Operate or by PPP Public Private Partnership.? 3. Reason why NO Public Meetings are being held ? 4. When will Irish Water be fitting Waters Meters in Cork City.?	Aarhus Convention. Irish Water is fully committed to public consultation under Ireland's obligations to the Aarhus convention. The WSSP was widely made available for consultation. Public meetings were not considered an effective means for discussion of the document. Tier 3 projects such as the Lee Road Water Treatment plant. These are not part of this Tier 1 strategic plan. All projects will be in compliance with planning and environmental legislation, as appropriate. Irish water cannot comment on the design and build process for this project. Water Metering. The timetable for the installation of water meters does not form part of this consultation.

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		Irish Water's contractors will inform all households in advance of the installation of meters in line with their Customer Policy which is summarised here: https://www.water.ie/for-home/metering-explained/
S53	**PF** I wish to make the following submissions/observations on the document entitled Draft WATER SERVICES STRATEGIC PLAN published by Irish Water. 1.The document states that it is a 25 year review and a 5 year SEA Strategic Environmental Assessment. Is the document a 25 year review or a 5 year SEA ? 2. An SEA is required to engage in meaningful consultation as well as calling for observations and submissions. Will Irish Water be engaging in meaningful consultation to the standard required by the EU SEA Directive? 3. The subject of waste water sludge generation and management has not been addressed in this document. Failure to address this subject leaves this document incomplete and it lacks the comprehensive analysis required for the subject matter. Will the issue of Waste Water Sludge be addresses in full? 4.The issues relating to the Ringsend WWTP and the associated chemical analysis of sludge and soil samples from the receiving agricultural land, the recording of those results, the transportation, storage and distribution of the waste water sludge to agricultural land in the South East, the compliance with all planning permissions and permits have all been documented. The absence of a Sludge Management Plan have been raised in the Draft SEA of the Eastern and	The Water Services Strategic Plan sets out strategic objectives for the delivery of water services over the next 25 years up to 2040. It details current and future challenges which affect the provision of water services and identifies the priorities to be tackled in the short and medium term. The plan will be reviewed on at least a five yearly basis to ensure that it continues to be up to date with current and future needs. In developing the plan, we have considered its interaction with other national and regional strategic plans such as the National Spatial Strategy and River Basin Management Plans. For more information see the Executive summary on page iv. An initial public consultation on the issues to be included in the plan was completed in the summer of 2014 and has informed this document. The draft plan has been subjected to Strategic Environmental Assessment and Appropriate Assessment and these documents are also published and are available at https://www.water.ie/projects-plans/our-plans/ along with the draft plan. see the Executive summary on page v.

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	Midlands Waste Management Plan as well as in number of Dublin City Council Draft Development Plans These issues were also brought to the senior management of Dublin City Council in correspondence sent by Registered Post on several occasions over a number of years. These correspondence and documents are available for inspection by Irish Water staff so as to assess these issues. The decisions of Justice Liam McKechnie and Justice Elizabeth Dunne may also be of relevance. Will Irish Water examine all of these issues? 5.The issues raised in 4 relate to contractor compliance regarding the contract entered into with Dublin City Council Will Irish Water examine the Ringsend WWTP and the associated sludge transport, storage and distribution contracts to assess, do the contractors comply with the conditions of the contract and also comply with all local, national ,EU and international laws, directives, obligations, permissions and permits and performance requirements? 6. Is Irish Water aware that the failure of the Ringsend WWTP to comply with all the requirements raised in question 4 and 5 along with the failure by Dublin City Council and the Eastern and Midland Waste Management Authority to set out a Sludge Management Plan raise significant issues and show deficiencies the result being that the Eastern and Midlands Waste Management Plan , The Dublin City Development Plan and The Build 2020 Housing Plan are defective? 7. Is Irish Water aware of the problems of E.C.`s, (emerging contaminants) and unaccountable heavy metals entering the waste water system? 8. Will Irish Water consider and examine options other than agricultural land spreading of waste water sewage sludge such as A. Gasification. B Plasma Gasification C. Plasma gasification vitrification. on the BATNEEC BEST AVAILABLE TECHNOLOGY NOT ENTAILING EXCESSIVE COST basis?	In Chapter 6 (Protect and enhance the Environment), Section EN3b "Address Waste water Sludge. Develop and implement a National Wastewater Sludge Management Plan" references how the WSSP will handle waste water sludge. Chapter 8 Objective: Invest in Our Future contains a case study on Ringsend Wastewater Treatment Plant. Expansion and upgrading of the Ringsend Wastewater Treatment Plant is an urgent priority for Irish Water and a revision to the approved scheme to achieve required outcomes at least cost is currently being evaluated in partnership with Dublin City Council. Irish Water is proposing innovative wastewater treatment technology for the upgrade and this innovative solution can result in a higher treatment standard to the benefit of Dublin Bay and a cost saving of €170 million compared to previous project proposals. Any proposed revisions to the approved scheme will be subject to environmental/planning approvals as appropriate. Contaminants. Irish Water will work towards compliance with the Priority Substances Directive. Wastewater sludge. This can be treated for re-use as a fertilizer and soil conditioner and also to generate renewable energy. We aim to retain and develop these outlets with full regard to all food safety and environmental considerations through quality management of all stages of the process. As part of Tier 2 (Implementation Plans) This plan will document the approach to be used for key water service areas such as water resource management, wastewater compliance and sludge management.

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		[IF4a] Actively pursue research and development in water services and track opportunities to develop and adopt new technologies: We will investigate alternative and innovative solutions in relation to both new projects and for the upgrading of existing plants and networks. Investment decisions will be based on solutions that provide the lowest whole life cost whilst also meeting our energy and carbon commitments.
S54	**PD** **1. Protecting designated bathing areas** WW1a concludes that Irish Water will develop solutions to address serious pollution noted at designated bathing areas affected by wastewater discharges (*from plants you manage*). EN1e Irish Water express a desire to work with non-governmental organisations, special interest groups and the general public. At our most recent Stakeholders Forum meeting 11th March 2015, Paul O'Donoghue Head of Customer Operations informed the meeting that Irish Water now has the best information (from meter readings) where treated water is going, 99% accuracy! At a previous meeting he confirmed that smaller waste water treatment plants located at mobile home parks in coastal areas are answerable to County Councils. In order that potential pollution can be identified it would be most helpful if Irish Water would share the information they gather on the draw down of treated water destined for use in (coastal) areas not serviced by Irish Water waste water treatment facilities. **2. Storm water abatement measures** WW2c addresses the risks from combined drainage and while reference is made to work with key stakeholders (planners, land managers and developers) no reference is made to working with customers who could be encouraged to introduce abatement measures, reduce impervious surfaces, maintain and increase flood plains, construct ponds, rainwater harvesting – a whole gamut of measures that with understanding and cooperation have us better prepared	Small wastewater discharges. Irish Water is committed to working with the key stakeholders (planners, land managers and developers) in developing long term sustainable solutions. In the longer term, Irish Water will focus on research and development, improve sewer network models and investigate (in collaboration with local authorities) the use of sustainable urban drainage systems in combined sewer areas. These measures will enable Irish Water to promote an integrated urban drainage approach and to provide a more cost effective and more sustainable wastewater collection system. This work will be carried out in close collaboration with local authorities and the OPW with whom Memoranda of Understanding are being developed. Customer education in SUDs. This is a planning issue through local authorities and not under the remit of Irish Water.

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	for intense rainfall events as well as periods of drought.	
S55	**RA** Submission to the Draft Waste Water Services Strategic Plan This 116-page document uses countless times the term “sustainable”. Its a fashionable expression used mainly by people which don't know exactly what it means, but it sounds good and indicates knowledge where there is none. This “plan” is full of laudable objectives which, in turn, contain a lot of intentions. Many of them will, for various reasons, never reach the stage of practical realisation. So why is the plan not limited to those things which have a reasonable chance of being done? I strongly object to a “lifespan” of 25 years for this plan. I think it is far too long into a largely unpredictable future, and therefore very likely not effective enough to deal with present problems and challenges. And there are many! As a member of the County Tipperary SPC for Environment & Water I believe that the strategic aims of the plan are not in compliance with Section 33 of the Water Services (No.2) Act which requires that the plan shall be, as far as practical (who decides what is practical ?) consistent with: National Spatial Strategy, regional planning guidelines, river basin management plans Furthermore, the plan shall have regard to: • proper planning and sustainable development • county housing strategies I'm far from being convinced that the plan complies with those requirements adequately. While the draft plan apparently supports the “sustainable” development of rural towns and villages there is no explicit mentioning of upgrading existing water and waste water facilities, not to mention new ones. The plan is not acceptable unless the above issues are clearly and unambiguously included. Reading “between” the lines I cannot help but notice that the general emphasis of the plan seems to be on “ investing where the biggest return could be expected”, i.e. in densely	25 year lifespan of plan. This Water Services Strategic Plan sets out strategic objectives for the delivery of water services over the next 25 years up to 2040. It details current and future challenges which affect the provision of water services and identifies the priorities to be tackled in the short and medium term. The plan will be reviewed on at least a five yearly basis to ensure that it continues to be up to date with current and future needs. Spatial planning and rural areas. In developing the plan, we have considered its interaction with other national and regional strategic plans such as the National Spatial Strategy and River Basin Management Plans. For more information see the Executive summary on page iv. In the challenges section of the Executive Summary it references Substantial improvements to water supply capacity, quality and reliability are required in addition to upgrading of our wastewater infrastructure, both treatment plants and collection networks, in order to protect the environment. This will require significant capital investment over many years. Even with additional funding, the timescale to address all of the issues is likely to extend through a number of investment cycles so that we must prioritise projects which should proceed in order of criticality. Projects and plans will adhere to environmental and planning legislation when planning and developing

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	populated areas and rural Ireland will lose out. This seems to be very unfair to me, and I would welcome an initiative to find ways to charge all service users, independent from their location, the same price. I'm open to correcting but my reading of the plan indicates that future planning decisions made by County Councils can easily be objected to, even overturned by Irish Water There seems to be no guarantee that County Councils remain the ultimate body for planning decisions. I'm rejecting any moves into such a direction, the authority regards all aspects of planning has unconditionally to remain with the County Councils. To conclude: Depending on sources of information, Irish Water is either a State Body or a private company. Assuming it is the former I'm inclined to believe that it is set up and structured to pave the way to be sold to the highest bidder to become a private company. Any effort has to be made to stop such plans, Irish Water, despite its shortcomings and teething problems, belongs to Ireland and its citizens and must continue indefinitely to remain that way.	water services assets [Strategy EN1e]. The WSSP references the country as a whole, in chapter 4 (Objective: Ensure a Safe and Reliable Water Supply) and [WS2g] Prepare Regional Water Conservation Strategies and implemented on a phased basis. All investment will take full cognisance of national regional and local development plans.
S56	**GM** From an overall aspirational perspective the document is very good however the document shows no real appreciation of the chronic condition of the assets that Irish Water have taken over from the Local Authorities or the special relationship of the Long Term Service Level Agreements that exist, between Irish Water & the Local Authorities for their mutual benefit in providing the best service possible to their customers. Some of the targets set out in the document are completely unrealistic and only serve to highlight the continuing lack of knowledge within Irish Water. The greatest asset that Irish Water have in operating the service is the experienced and dedicated Local Authority staff, that they appear not to listen to, or take advice from. Irish Water do not, and in my opinion will not have, a true appreciation of the chronic deficiencies that exist in the Water Services Infrastructure in Ireland for a number of years to come until a comprehensive GIS associated detailed asset database is completed and analysed.	Respondent considers may of the targets set in the WSSP are unrealistic. Irish Water has set targets using currently available information. A detailed information gathering exercise to determine current baselines for a number of targets is underway as stated in strategy IF1. Importance of LAs. Irish Water acknowledge the importance of the relationship with the LA under the SLAs in the Executive Summary and in Strategy IF4c

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	Local Authorities have for many decades been almost totally dependent on Central Government (The Department of Local Government & Environment) for funding, and approval, for all infrastructure in Water Services. No proper consideration has been given by European & National Governments of the huge infrastructural, economic, and manpower commitments of the ever increasing amount of legislation and directives being implemented. Successive Governments in both good times and bad have continued to under invest in providing the infrastructure necessary to fulfil the requirements of attaining the clear and planned needs of Directives. While there are a few Local Authorities that failed over the years to identify and request infrastructure to address the deficiencies, in most cases these deficiencies were identified, but adequate resources were not provided to address the deficiencies, and this over many decades has led to the current chronic situation. In most cases, the Local Authority staff involved in Water Service are very competent, professional, and dedicated to providing the best service possible to the public in the context of the resources available to them. To date Irish Water have been very slow to use and appreciate the wealth of experience and knowledge in the Local Authorities and to make use of it. Irish Water is trying to aim to be the best water utility in the world and this is laudable, but they, the Government, and Public must acknowledge the extremely low starting base of where we are (not that they know this yet and won't for another two to three years) and put realistic timeframes and targets in place. Water Services Nationally are being delivered by the Countries Local Authorities under long term Service Level Agreements. There is a very special relationship and interdependency between Irish Water and the Local Authorities which is hardly mentioned in the draft strategic plan. A problem that has arisen since the introduction of Irish Water & water charges is that in many cases the level of service being provided by Irish Water is not as responsive and good as was being provided previously by the Local Authorities due to the new procedures and the costs of water & waste water services under Irish Water are far higher in many Local Authorities at present. While the new Irish Water method of providing services gathers an improved record of problems and works it is less locally interactive with customers. In light of the higher public acceptance of Local Authority provided services it may be in Irish Water's interest to place greater emphasis on the role of Local Authorities in delivering the services locally, and play to the strengths of Irish Water in managing the improvements to the existing infrastructure and operational procedures in a planned national needs priority basis as against the previous method of planning and delivering infrastructure which has failed Ireland so dismally. The Local	The lack of knowledge on the condition of the assets. This is detailed in the 'Invest in Our Future' and strategies to address this are stated in IF1 [Asset Management]. Additional detail on the relationship of the LAs under the SLAs in the WSSP. This has been included in a new section on Our Partners.

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	Authorities did the best they could with what they had, but Irish Water will deliver dramatic improvements in operational, upgrading and new infrastructure provision, by proper planned and financed investment in the service. While I have only had an opportunity to rapidly peruse the Irish Water, Draft Water Services Strategic Plan it appears that some of the targets set out in the plan are completely unrealistic in the context of the infrastructure and resources available. In terms of meeting customer expectations catastrophic sudden supply interruptions will continue to occur until very substantial investment has taken place in infrastructure upgrading and pressure management in the Country's water network and in the wastewater systems dramatic improvements will be required to minimise the impacts of heavy rainfall, blockages, and pump failures. In terms of providing a safe and reliable water supply it is unrealistic to think that a small number of short term boil water notices will not be required from time to time due to infrastructural failures while they are being resolved. The targets set for lead in the public network is probably being met currently, but it is at the consumers tap that the standard applies. Even if the communication pipes are replaced, replacement of the private service pipes as far as the consumers consumption point will be required to meet the standard. In terms of THM compliance until full compliance with the EPA disinfection compliance is continuously monitored and recorded at the critical points in the networks and substantial infrastructure upgrading has taken place the targets are unrealistic. The first step in this is continuous critical/end point chlorine residual monitoring and THM monitoring at these points to get a realistic measure of the current problems and issues. In my modest opinion and depending on how successful the handheld devices are in remote rural areas with poor mobile phone networks, the end of 2016 is a very tight deadline for determining the frequency and length of supply interruptions to consumers. The proposal will require substantial infrastructure investment. While the average loss of service is an important indicator of more importance to those impacted is the maximum deviation from the average as occasional interruptions are to be expected too many consumers are being subject to very frequent interruptions due to the extremely poor condition of some of the infrastructure. What matters to consumers is the pressure and flow at the point of consumption not at the	Respondent considers that boil water notices will continue to be required from time to time. Irish Water will advise customers of the need to replace private side lead pipes in the proposed Lead Strategy [WS1e] Additional monitoring of disinfection and THMs within the supply network is required. 2016 is a tight deadline to determine frequency and length of supply interruptions to customers.

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	main. There are very few network models available. The targets for both determining and providing adequate pressure appear overly realistic. In many parts of Dublin the pressure has been reduced to such a degree that consumers have had to fit booster pumps to get adequate pressure and flow at the point of consumption. In terms of leakage places like Holland are completely different in topography, geology, and infrastructure condition and age, than Ireland and consequently have far lower leakage levels. The infrastructure condition, rate of upgrading, topography, carbon footprint, pressure control, numbers of staff involved in locating and fixing leaks, and many other related factors will dictate the ELL for the various schemes and DMA's throughout the country. While some progress was made in the mid 2000's following the National Water Audit & Leakage Study 2000, since the recession in 2008 and consequent loss of staff and investment in this area the levels of leakage have increased quite dramatically and these increases were further exacerbated by the re-structuring and staff reductions in Local Authority to facilitate the introduction of Irish Water. The lack of mains replacement since the recession, and the continuing aging and degradation of the mains is also leading to increased leakage and burst incidence. The proposed targets are unrealistic unless there are dramatic changes to distribution management, mains replacement, and the numbers employed on both leak detection and repair while respecting the financial and HR implications and restrictions on Irish Water & the Local Authorities. In terms of waste water again the targets appear to be very tight and will require huge investment to meet the targets set out. The availability of finance from the markets at reasonable rates will be dependent on the prompt payment by the majority of customers and balancing costs and the costs of covering non-payment. While the investment in the water infrastructure will be self-financing to a large degree and essential for public health. The investment in wastewater while of great benefit environmentally and to comply with the Waste Water and Water Framework Directives will be very costly. It is not alone the operational costs but the investment costs of an infrastructure required by European legislation for which cohesion funds were never made available that will make this element of cost very difficult. To obtain sufficient balance between investment and cost to achieve the targets will be an extremely difficult challenge. Protecting and enhancing the environment will be a huge challenge and the targets appear overly optimistic. While leakage reduction has very large energy saving potential savings from this are likely to be more than eaten up by the energy requirements of the new wastewater	Irish Water need to focus on pressure and flow at the point of consumption. Leakage rates achieved in some countries (e.g. Holland) may not be achievable in Ireland due to geography. Respondent considers proposed leakage targets are unrealistic. Respondent considers sustainable funding, particularly for wastewater assets will be a significant challenge.

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	infrastructure. Use of low energy technologies and processes, will be essential to optimise the carbon footprint and minimise energy requirements. Supporting social and economic growth, the 2016 targets here are completely unrealistic in the context of available information. Until the current state of the infrastructure and infrastructural deficit is identified and appreciated by Irish Water and the CER it is unrealistic to be setting impossible and unaffordable targets. This will need to be properly explained to the public together with explaining why the previous level of central funding is inadequate and needs to be supplemented by the current charging and utility model. The successive Governments over a long number of years must accept their responsibility for the current situation that the Country finds itself in regarding water services infrastructure and give their full support to Irish Water and the Local Authorities to solve the problems together. Water Services is a very pure form of engineering. In all its design and strategies Irish Water should harness the powers of nature to their limits to minimise costs, energy impacts, and environmental impacts of their proposals while allowing for the impacts of climate change and global warming.	Energy savings from leakage reduction will be offset by additional energy consumption in wastewater treatment. Need to focus on working with nature to limit treatment requirements and costs whilst allowing for climate change.

Appendix C: Submissions on the SEA Environmental Report and the Appropriate Assessment (NIS)

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S2	**Environmental Protection Agency** ***1. Integration of SEA and AA in the WSSP*** It is not clear how the SEA and AA processes have influenced and informed the preparation of the WSSP. A description and schematic should be included in the Executive Summary and the WSSP describing and showing the link between the SEA and AA processes and the WSSP preparation. These should indicate how and where the SEA has informed the WSSP. In the SEA Environmental Report, Figure 1.4 *Linking the SEA and the WSSP* shows the integration of the processes and could be extended to include the Appropriate Assessment process and included in the WSSP. The integration of the WSSP and SEA process should reflect the overall objective of the SEA Directive "*to contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes".*	The SEA Environmental Report and Natura Impact Statement have identified a number of measures to avoid or minimise potential negative effects and to enhance positive effects arising from the implementation of the WSSP (summarised in Section 4.5 of the Environmental Report and Section 3.3 of the Natura Impact Statement). Those measures that relate to the WSSP itself (as opposed to Tier 2 plans and Tier 3 projects) have been considered by Irish Water in preparing the final WSSP. The Post Adoption SEA Statement sets out explicitly how these measures have been incorporated into the final Plan and so the extent to which they have influenced the final Plan. Page 3 of the draft WSSP sets out that the Plan has been subject to SEA and AA and the relationship between the development of WSSP, SEA and AA. It is acknowledged that the inclusion of a revised figure in the final Plan would aid understanding of how the SEA and AA processes have influenced the development of the document. In consequence, and as requested, a figure similar to Figure 1.4 in the SEA Environmental Report (but including reference to AA) has been included in the final WSSP.

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	2. Baseline Environment Relevant aspects of the Baseline Environment description in *Appendix C Baseline Information* and key maps should be included in the main body of the text of the Environmental Report. This should include a description of the implications of the WSSP on specific key relevant aspects of the environment and be accompanied by relevant map based information. The interrelationships between the relevant environmental aspects should also be highlighted and reflected where relevant in the assessment of effects.	Baseline information has been presented in Appendix C to the Environmental Report. The decision to include this information as an appendix (as opposed to text within the main body of the document) reflects a desire to enhance the document's accessibility and to focus the reader's attention on the assessment of the environmental effects of the draft WSSP. Notwithstanding, a summary of the key environmental issues identified through the baseline analysis is presented in Section 2.4. No amendment is proposed. The baseline information presented in Appendix C and the key environmental issues summarised in Section 2.4 of the SEA Environmental Report informed the Strategic Environmental Objectives (SEOs) that comprise the Assessment Framework and which have been used to assess the effects of the draft WSSP. Further, the baseline information has also been used to inform the assessment of draft WSSP strategies contained at Appendix D and summarised in Section 4.3 of the Environmental Report. In consequence, it is considered that the effects of the draft WSSP on the key relevant aspects of the environment have been adequately assessed. It is unclear how the findings of the assessment could be presented in map-based form given that the WSSP is not spatially-specific (i.e. it does not identify specific projects). This may be more relevant as part of any future SEA of Tier 2

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		plans. The interrelationships between the relevant environmental aspects have been considered in the assessment of effects. In particular, the assessment contained in the SEA Environmental Report has identified that positive effects associated with the Plan's implementation in terms of the expected improvements to water quality will also have beneficial effects with regard to human health and biodiversity.
	3. Alternatives An overview of the alternatives considered in the development of the WSSP along with the reasons for selecting the preferred approach or combination of approaches adopted should be included in the Plan. The alternative approaches to achievement of compliance with the requirements of the Urban Waste Water Treatment Directive and Wastewater Discharge Licence Emission Limit Values should be further explored with EPA. This is with a view to ensuring the objectives and commitments in the WSSP reflect environmental obligations and licence conditions.	Alternatives. Statements relating to the alternatives considered in developing the WSSP and the reasons for selecting the preferred option has been included in the final WSSP. However, it is important that the plan remains a customer facing document and that this information does not confuse readers with the agreed set of objectives, aims and strategies. This information will also be included in the SEA Statement Irish Water welcomes the opportunity to work with the EPA to discuss approaches to the achievement of compliance with the requirements of the Urban Waste Water Treatment Directive and Wastewater Discharge Licence Emission Limit Values. This will help inform the specific proposals contained in Tier 2 plans and Tier 3 projects.
	4. Mitigation and Enhancement Measures It is not clear to what extent the Mitigation Measures proposed in *Section 4.5*	As set out above, those measures identified in the SEA Environmental Report that relate to the WSSP itself have

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	Mitigation and Enhancement and *Table 4.9 Cross-Cutting Mitigation Measures* and in *Appendix D Assessment Matrices* are or will be reflected in the Plan. A commitment should be considered for inclusion in Objective 4 and 5 to review the assessment of the flood risk of all water and waste water related infrastructure with a view to developing a prioritised programme to alleviate the risk of flooding. This should be informed by the Flood Directive CFRAMS and associated Flood Risk Management Plans. Where Mitigation Measures proposed relate to projects, these should be reflected in the WSSP as well as in the proposed *Sustainability Policy and Framework*.	been considered by Irish Water in preparing the final WSSP. The SEA Statement sets out explicitly how these measures have been incorporated into the final Plan. The proposed additional mitigation measure relating to flood risk is noted and will be considered in preparing the Sustainability Policy and Sustainability Framework and Climate Change Adaptation and Mitigation Strategy, as proposed under strategies EN1a and EN1b of the WSSP. It is not considered appropriate at this stage to include project-level mitigation in the WSSP. This will be considered further in developing Tier 2 plans (when specific schemes are identified) and at the project stage, informed by appropriate evidence and consultation.
	5. Monitoring and Reporting The Monitoring Framework set out in *Table 5.1 Potential Indicators for Monitoring Effects* should be further developed in consultation with the relevant statutory environmental authorities. The monitoring programme should be flexible to take into account ongoing national monitoring programme developments. The environmental monitoring should be linked with WSSP Implementation monitoring and reporting. The outcome of monitoring should be reviewed at mid-term of the 5 yearly review period. The proposed WSSP Implementation Group referred to above 4 could have a role in review of the Environmental Monitoring Programme and associated environmental monitoring reports. The scope of the monitoring should include both positive and potentially negative aspects with a view to capturing the overall performance of the WSSP. Consideration should be given, where appropriate, to the inclusion of relevant thresholds to identify	Detailed monitoring programmes (including environmental monitoring) will be developed for the national Tier 2 plans, as appropriate. It is considered that the WSSP, as a Tier 1 high level plan, should have monitoring which is appropriate to the plan and should not overlap or duplicate monitoring better placed within other programmes or plans (e.g. the National Water Resources Plan or the Wastewater Compliance Strategy.

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	when unforeseen adverse environmental effects and trigger appropriate remedial action where required. The scope of transboundary related monitoring and datasets should be developed in consultation with the relevant Northern Ireland authorities.	
	6. Future Amendments to the WSSP Where amendments to the Plan are proposed prior to adoption, these should be screened for likely significant effects in accordance with the criteria as set out in Schedule 1 of the SEA Regulations and should be subject to the same method of assessment applied in the "environmental assessment" of the Plan.	No significant future amendments to the plan were proposed.
	7. SEA Statement – "Information on the Decision" Following adoption of the WSSP, an SEA Statement should be prepared summarising information on the decision and should be sent to any environmental authority consulted during the SEA process.	An SEA Statement has been prepared to accompany the final WSSP.
S3	**Department of Communications Energy and Natural Resources (Geological Survey of Ireland)** The Geological Survey of Ireland (GSI) would like to make some specific input from the Geological Heritage & Planning Programme and also comment under the following headings. With the difficulty in promoting the significance of geology in the past, geology should be highlighted as the underpinning layer and an integral part of both heritage and the environment, as this is not always appreciated. Hence, reference to geology as very much a part of heritage and the environment is strongly recommended in order to raise awareness. The Geological Survey of Ireland, as the national earth science agency, has maps/datasets to assist with the Strategic Environmental Assessment, and especially the "Soils & Geology" and "Surface Water & Groundwater" parts. The information	Importance of Geology, Soils and Geological Heritage. It is not proposed to update the baseline information contained in Appendix C to the SEA Environmental Report or the Strategic Environmental Objectives that comprise the Assessment Framework. The Strategic Environmental Objectives were set out in the Draft SEA Scoping Report that was subject to consultation between July and September 2014, prior to their adoption for use in the assessment of the draft WSSP. Irish Water fully recognise the importance of considering the effects of its activities on Ireland's geology and welcomes the suggested data sources which will be particularly useful

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	that should be included in these sections is available on the GSI website under "Online Mapping"- direct link: http://www.gsi.ie/Mapping.htm. **BASELINE INFORMATION (APPENDIX C.3 – SOILS)** The Geological Survey of Ireland agrees with the Key Environmental Issues identified and their relevance to WSSP. However, it is strongly recommended that the heading of the Appendix C. 3 (Soils) includes Geology as it is also described in this section. Therefore, **SOILS AND GEOLOGY** should be considered as the Strategic Environmental Objective 8 in the report. *"Avoid conflict with, and contribute toward, where possible, the appropriate management of soils **and geology**"* Besides, it is advised that further description of some of the geological aspects is provided, including maps if appropriate, and the addition of Landslides Hazard is proposed. **Irish Geological Heritage** The Geological Survey of Ireland (GSI) is in partnership with NPWS (the National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht), to identify and select important geological and geomorphological sites throughout the country for designation as geological NHAs (Natural Heritage Areas). This is addressed by the IGH Programme (Irish Geological Heritage & Planning) of GSI, under 16 different geological themes, in which the minimum number of scientifically significant sites that best represent the theme are rigorously selected (by a panel of theme experts). County Geological Sites (CGS), as adopted under the National Heritage Plan, include additional sites that may also be of national importance but which were not selected as the very best examples for NHA designation. All geological heritage sites identified by GSI are categorised as CGS pending any further NHA designation by NPWS. CGS are now routinely being included in County Development Plans and in the GIS of planning	in developing future Tier 2 plans and scheme-specific (Tier 3) projects. In this context, the data sources cited will be considered in the preparation of any future SEA Environmental Report prepared in support of Tier 2 plans and at the Tier 3 project stage, as appropriate and further consideration will then be given to the development and application of assessment objectives that place due weight on soils and geology.

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	departments, to ensure the recognition and appropriate protection of geological heritage within the planning system. **Please note that Irish Geological Heritage data can now be viewed online on the GSI Public Data Viewer at:** http://spatial.dcenr.gov.ie/imf/imf.jsp?site=GSI_Simple There are two map layers under **'Geological Heritage':** **1. 'Geological Heritage Sites Boundaries'**: a national dataset (one shapefile with boundary polygons) showing the County Geological Sites that have been audited to date. County Geological Sites audit data are also available for download (as individual county shapefiles and site report pdfs; with direct links to individual reports) at: http://www.gsi.ie/Programmes/Heritage+and+Planning/County+Geological+Sites+Audits/ **2. 'Geological Heritage Sites No Boundaries'**: a national dataset (one shapefile with buffer polygons) covering all the other counties not yet audited or a few new sites discovered in the audited counties, indicating the provisional location/extent of sites. These sites have buffers appropriate to their type (or theme), ranging between 200m, 500m and 1000m (for the largest landscape/glacial features). These are not 'mitigation' buffers, but an attempt to encompass the extent of the particular type of site. Please note that all the above sites are of, at least, County Geological Site (CGS) status and **their protection and enhancement should be identified as a SEO target**. CGS are included in the relevant County Development Plan with associated protection policies. County Geological Sites have been surveyed by an ongoing national programme of County Geological Heritage Audits. These have been carried out since 2004, and to date over half of the country has been completed. The programme of CGS documentation is a dynamic process as additional sites may be added through new exposures such as quarries and road cuttings, and notifications from local community knowledge.	

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	Landslides: The Geological Survey of Ireland would advise that Landslide Hazard should be listed in the SEA report in order to identify landslide occurrences that may affect the strategic objectives and aims of the Plan. A map showing the distribution of recorded landslides could be included – see the GSI public viewer http://www.gsi.ie or landslide viewer (2012) http://spatial.dcenr.gov.ie/GeologicalSurvey/GeoTechnicalViewer/index.html The Geological Survey of Ireland is in the process of producing a national landslide susceptibility map. This data is currently available for east Leinster and the greater Cork region. Further information and updates on this mapping can be found at http://www.gsi.ie/Programmes/Quaternary+Geotechnical/Landslides/National+Landslide+Susceptibility+Mapping.htm **GROUNDWATER** Groundwater is a major natural resource in the Republic of Ireland providing between 20% and 25% of drinking water supplies. With such a large proportion of the country relying on groundwater it is imperative that this resource be protected. Relevant information about groundwater such as aquifer vulnerability, aquifer recharge areas, groundwater well and springs, and details of the groundwater protection schemes should be described and accompanied by maps. Groundwater maps and datasets are available on the GSI website at: http://spatial.dcenr.gov.ie/imf/imf.jsp?site=GSI_Simple or http://spatial.dcenr.gov.ie/GeologicalSurvey/Groundwater/index.html	
	OTHER COMMENTS As it is noted in the Strategy EN1e of the draft WSSP, all future Irish Water infrastructures should comply national planning and environmental legislation (including geology, hydrogeology and geological heritage). The Geological Survey of	Irish Water will continue to consult the Department for Communications, Energy & Natural Resources on planning and EIA matters and in respect of future SEAs relating to Tier 2 plans, as per its statutory responsibilities.

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	Ireland should be routinely consulted (as a prescribed body under the aegis of Dept Communications, Energy & Natural Resources) at the planning stage and in the preparation of an SEA or EIA/EIS for any proposed development. Likewise, Irish Water should take cognisance of any Guidelines produced by the Geological Survey of Ireland or any other relevant body in the planning of any Irish Water infrastructural works.	
S5	**Department of Communications, Energy and Natural Resources (Inland Fisheries Ireland)** Under section 7(3) of the IFI Act it is stated that *without prejudice to subsection (1), IFI shall in the performance of its functions have regard to:* *(g) the requirements of the European Communities (Natural Habitats) Regulations 1997 (S.I. No. 94 of 1997) and the need for the sustainable development of the inland fisheries resource (including the conservation of fish and other species of fauna and flora habitats and the biodiversity of inland water ecosystems),* *(h) as far as possible, ensure that its activities are carried out so as to protect the national heritage (within the meaning of the Heritage Act 1995).* Article 5 of the 2009 Surface Water Regulations requires that a public authority, in performance of its functions, shall not undertake those functions in a manner that knowingly causes or allows deterioration in the chemical or ecological status of a body of surface water. Also article 28(2) of the said Regulations states that a surface water body whose status is determined to be less than good shall be restored to at least good status not later than the end of 2015. Inland Fisheries Ireland is also the competent authority for fish and has significant responsibilities and powers under S.I. 477 of 2011 whereby Ireland transposed into Irish law its responsibilities under the European Communities (Birds and Natural Habitats) regulations – the habitats directive. Furthermore the Eel is now endangered and additional protection measures have also been introduced in that regard and it is	The importance of inland and marine fisheries. Irish Water recognises the importance of inland and marine fisheries and the need to consider the effects of its activities on these resources.

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	incumbent on Ireland to ensure that the eel and its range and habitat is properly protected. Please note that IFI are in broad agreement with the content and aims of your Water Service Strategic Plan It is also important to note that while many rivers are not designated under the Habitats Directive, they hold species that are designated under that directive. Atlantic salmon, for example, are listed as an Annex II Species under the European Habitats Directive. It is respectfully highlighted that various fish species receive protection under Irish National Fisheries Legislation (which can be found referenced in our guidelines document). Regard should be had to the need for the sustainable development of the inland and marine fisheries resource when undertaking any works on any surface water (whether subject to formal designation or not).	
S6	**Department of Arts, Heritage and the Gaeltacht** **General Observations on the Environmental Report and Natura Impact Statement:** **Baseline data and information on the receiving environment:** The most recent Article 17 Report on the status of habitats and species listed on the Habitats Directive has not been considered in the Environmental Report or in the Natura Impact Statement, although this has been available since September 2013 and has been referred to in previous submissions from this Department. Appropriate assessments, and screenings, are to be undertaken in view of best scientific knowledge (Part 5, SI 477 of 2011). There does not appear to be any consideration of the effects on the status of bird species or the current state of the receiving environment in relation to bird species. The Department's previous observations of June 2014 provided information on the availability of the Article 17 Report and the	Article 12 / 17 reports. Whilst the Article 12 / 17 reports are not explicitly referred to in the Natura Impact Statement they were used as part of a broad review of European sites and interest features undertaken during the assessment. This has been updated in the revised Statement. Notwithstanding, it must be recognised that the extent to which the potential effects of the WSSP on specific sites or specific interest features can be explored, is limited. The Article 17 assessments provide useful information on the status of habitats and species nationally; the WSSP contains policies and measures that will operate nationally to ensure that European sites and interest features are protected. However, the range of potential impacts arising from Irish

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	recent Birds' Directive Article 12 Report, but these do not seem to have been taken into account.	Water's activities is so broad (relating to capital and operational works) that any assessment can only be undertaken at a very high level. Explicit and exhaustive assessments of potential effects on specific sites or features (e.g. water-resource sensitive features, or bird species) would not be appropriate for the Appropriate Assessment of the WSSP. Hence, the WSSP and the Natura Impact Statement focus on the development of good policy that will ensure that adverse effects do not occur as a result of any activities that may ultimately result from the plan.
	Integration of ecological issues between the Environmental Report and the NIS The Environmental Report and the screening for Appropriate Assessment set out a range of impacts that may arise as a result of the Plan but these are not carried through and resolved in the Natura Impact Statement. The Department acknowledges the commitments made to protecting the environment within the Strategy and the challenges in undertaking an appropriate assessment of a plan of this nature. While it may not yet be known where future projects to be developed under the Plan will arise, there is existing knowledge about the current infrastructure, discharges, their location and the effects they may or currently have on European sites and this should be used to inform this assessment and to ensure all necessary mitigation at Tier 1 and Tier 2 etc is developed and integrated into the Plan. Consideration of how the Plan will affect the obligation to maintain *and restore* habitats and species to favourable conservation condition needs to be included within the NIS. The development of strategic Plan-level mitigation (*e.g*. by helping to inform and broaden the scope of the R&D Strategy), rather than project-level mitigation, should help projects to move through the required consent processes in a more timely manner. A number of the proposed Tier 2 plans and strategies should serve as	Integration of ecological issues between the Environmental Report and the NIS. The SEA Environmental Report and the Appropriate Assessment Screening set out a range of 'conceivable' impacts that could occur as a result of the normal operations and capital works undertaken by a water company. However, for the reasons set out in the Natura Impact Statement it is considered that the exhaustive documentation and assessment of all of these conceivable impacts is neither possible or appropriate for the plan being assessed. Involving the current infrastructure, discharges, their location and the effects they may or currently have on European sites would be a substantial undertaking (conceivably equivalent in many respects to the Review of Consents process undertaken over 10 years in the UK), and would not in our view be appropriate. The WSSP does not advocate a 'business as usual' approach

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	useful mitigation in this regard but a more systematic linkage of impacts and effects that may arise to the Tier 1 and Tier 2 mitigation would support the conclusion of the assessment more robustly. This should also then serve to inform the necessary targets and indicators of the Tier 1 Strategy.	and recognises the detailed assessments that will be required of Irish Water's assets and their performance. Currently, the WSSP is considered to contain sufficient protective measures and policies to ensure that there will not be adverse effects as a result of its implementation – this includes policies directly related to legal compliance and the safeguarding of European sites during all Irish Water activities – and the specific asset and impact assessments proposed by the Department are more appropriate to the Tier 2 plans that the Strategy promotes, rather that the high-level Strategy itself.
	Relevant Ecological Context: The following ecological context, amongst other considerations raised in previous observations provided by this Department, should be used to inform the Water Services Strategic Plan, its targets, indicators, the associated assessments and subsequent Tier 2 Plans; these observations are provided particularly in the context of issues to be considered in relation to abstraction. Under the EU Habitats Directive, 45 Annex I habitats have been identified as water-dependent for the purposes of identifying Special Areas of Conservation (SACs) on the Water Framework Directive Register of Protected Areas. 1. 6 of these are in freshwater rivers and/or lakes: a. All river and lake habitats have the potential to be impacted by surface water abstractions and have some groundwater dependence. b. Hard-water lakes (3140) and calcareous sub-types of river habitat (3260) are likely to be most sensitive to groundwater abstractions. c. Sensitivity to groundwater abstraction will be particularly case- and location-specific, owing to the potential for an abstraction to 'tap-into' a particular flow path	Additional ecological context. This information has been used to inform the final WSSP and will be referenced as appropriate in undertaking any future assessments of Tier 2 plans.

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	that drives the ecology of the lake/river habitat. 2. 19 of the water-dependent habitats are Groundwater Dependent Terrestrial Ecosystems (GWDTE): a. The most sensitive to groundwater abstraction will be *petrifying springs (7220), transition mires (7140), alkaline fens (7230) and *Cladium fens (7210). b. The coastal habitats *machair (21A0), dune slacks (2190) and dunes with Salix repens (2170) are also very sensitive to groundwater abstractions, such as for golf-course irrigation or caravan parks. Saline intrusion is also a consideration here. c. The sensitivity of all GWDTE to groundwater abstraction is very case- and location-specific. 3. Under the EU Habitats Directive, 22 Annex II species have been identified as water-dependent for the purposes of identifying SACs on the Water Framework Directive Register of Protected Areas. a. 10 of these are found in freshwater rivers and/or lakes. b. Of these 10, the freshwater pearl mussel is the most sensitive to surface water abstractions (from upstream lakes and/or occupied rivers). Abstractions at low flows are the greatest concern, owing to risks of exposure of mussels, slower flow, increased sedimentation and macrophyte/macroalgal growth. Relatively small abstractions at a sensitive location or acting cumulatively/in-combination (e.g. with land drainage, or bank erosion) could have significant negative impacts. c. *Najas flexilis* is sensitive to lake abstractions, given that it occupies the base of the euphotic zone. d. There is potential for the freshwater pearl mussel to be impacted by groundwater abstractions, as up-welling by groundwater in the river substratum contributes to water circulation and oxygenation, however the risks are presumed to be lower owing to the predominance of surface water abstractions in pearl mussel catchments. The	

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	aquifers in such areas are usually poorly productive, so abstractions are typically from rivers and lakes. The Nore may be an exception to this generalisation, however. e. Seven of the water-dependent species are largely ground-water dependent, found in GWDTE and sensitive to groundwater abstractions. f. Of these 7, *Vertigo geyeri*, *Saxifraga hirculus*, *Petalophyllum ralfsii* and *Drepanocladus vernicosus* are likely to be the most sensitive. 4. While the selection of water-dependent Special Protection Areas (SPAs) for the Water Framework Directive Register of Protected Areas was never finalised, the primary consideration in relation to bird species protected under the EU Birds Directive is to avoid deterioration of wetlands and the birds that use them. 5. It is also important to ensure that potentially significant disturbance of bird species by activities related to abstractions and impoundments should be avoided. Other relevant work includes that undertaken for the Western River Basin District on water dependent habitats and species (http://www.wfdireland.net/docs/27_HighStatusSites/) as well as work recently funded by the EPA Strive programme on GWDTE (ground-water dependent terrestrial ecosystems) and high status sites.	
	Strategic Environmental Objectives: SEO 1: "*To prevent damage to terrestrial, aquatic and soil biodiversity, particularly EU designated sites and protected species resulting from Irish Water's activities*". Nationally protected species (protected under the Wildlife Acts) should also be included within this SEO SEO3. Water – it is recommended that these are broadened to include the requirements of the Habitats and Birds Directives.	Strategic Environmental Objectives. It is not proposed to amend the Strategic Environmental Objectives that comprise the Assessment Framework at this stage. The Strategic Environmental Objectives were set out in the Draft SEA Scoping Report that was subject to consultation between July and September 2014, prior to their adoption for use in the assessment of the draft WSSP. Notwithstanding, the suggested amendments to the Strategic Environmental Objectives will be considered in the SEA of any future Tier 2 plan.

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	Timeframe for development and Implementation of Mitigation and Tier 2 Plans The Strategic Plan would benefit from the inclusion of proposed timeframes for the development of the necessary mitigation for the environmental effects that may or will arise, including the Tier 2 Plans.	The timeframes for the Tier 2 plan are included in the final WSSP.
	Cumulative effects assessments: The assessment of cumulative effects would benefit from consideration of the recently adopted National Forestry Programme 2015-2020, as well as the Rural Development Programme 2015-2020 and Fáilte Ireland's Wild Atlantic Way. The National Biodiversity Plan is also omitted from the list of relevant national plans.	At the time of writing the National Forestry Programme 2014-2020 was not adopted whilst the Rural Development Programme was in draft only. In consequence, the Programmes were not considered in the assessment contained in the SEA Environmental Report. Notwithstanding, the Environmental Report notes (in Section 4.4.2) that emerging plans will be considered in the future assessment of Tier 2 plans, as appropriate. In consequence, it is fully expected that the Programmes will be considered in any future SEA of Tier 2 plans. It is not clear how the WSSP would have significant in-combination effects with Fáilte Ireland's Wild Atlantic Way, which seeks to develop a long-distance touring route. However, it is recognised that effects on the route may need to be considered at the Tier 2 and Tier 3 stages once the location of proposals are known. Whilst the National Biodiversity Plan is not included explicitly in the list of relevant plans and programmes contained in Table 2.1 of the Environmental Report, it is identified as relevant legislation in the context of the European Union Biodiversity Strategy to 2020.
	Terminology, tests and conclusion of screening/AA.	It is agreed that an effect can only be adverse if it is

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	It is noted that the wording of the conclusion to the Natura Impact Statement is that it is considered that the WSSP will have "*no significant adverse effects on any European site, alone or "in combination" with any other plans and programmes*". The language to determine and conclude an appropriate assessment is whether the effects of a plan will have "*an adverse effect on integrity of the site*", whereas, at screening, consideration is given to whether *significant* effects will or may arise. The language used in the NIS combines the terminology of the different stages of the assessment, which causes confusion as to the question being answered and should be clarified. Please also note that the terminology "Habitats Directive Assessment" (HDA) is not typically used in the Republic of Ireland and is not the terminology used in the relevant Regulations. Also, the conclusion of the screening report does not appear to have been resolved in the Natura Impact Statement, which is pertinent to the comments above on the consideration of impacts within the NIS. The Screening Report Section 2.9 states "*it is recommended that the screening should be refined further to determine the relevant European sites that can be screened out based on the absence of particular habitats or species".* This approach does not appear to have been applied within the Natura Impact Statement. For instance, using a mapping comparison of existing assets (including those on the Remedial List) to European sites would have helped to elucidate which habitats and species, and sites, may be particularly at risk, and then could have been used to inform the development of plan-level mitigation that may be required and to inform any prioritisation exercise that will be undertaken.	significant, so the phrase has been amended to 'no significant and adverse effects' (since an effect can be significant but not adverse). With regard to the Screening Report recommendation "*…the screening should be refined further to determine the relevant European sites that can be screened out based on the absence of particular habitats or species"*, we do not think this would be appropriate for the reasons set out in Section 2.4.3 of the Natura Impact Statement. Irish Water's future works and operations could theoretically affect any European site and so trying 'screen out' European sites would add little value. Irish Water also has an imperfect knowledge of the assets being adopted, making cross-cutting policies more appropriate than trying to identify specific measures for specific sites. The specific asset and impact assessment proposed by the Department is more appropriate to one of the Tier 2 plans that the WSSP promotes, rather than the high level Plan.
	Use of guidance from other jurisdictions: The Department notes that guidance from other jurisdictions has been used in the preparation of the NIS. Such guidance may not always be consistent with the requirements of the national legislation under which this appropriate assessment is to be concluded.	The assessment has been undertaken in accordance with European Communities (Birds and Natural Habitats) Regulations 2011 (as amended).

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	Monitoring in the Environmental Report There are a number of issues with the proposed monitoring indicators, including the following. - The proposed indicators should be integrated into and consistent with those in the Strategic Plan itself to ensure that they are carried through into further stages of implementation. - One proposed indicator is "*the number of* Margaritifera *plans put in place"* but it is unclear which type of plan is being referred to here. A more meaningful indicator may be indicators that relate to the ecological requirements of the species (see 2009 Freshwater Pearl Mussel Regulations). It is also kindly requested that Irish Water clarify with the Department which type of plans are referred to here, prior to any inclusion as an indicator or publication of same, as NPWS is named as the source of data. - It is proposed to use data from NIEA and JNCC though these have not been specifically linked to the transboundary effects that may arise. - There is a reference to Ireland's Article 17 report "*not currently compiled*", yet the 2013 Report has been available at www.npws.ie since September 2013. - NPWS is incorrectly referred to as a data source for the condition of selection features in sites designated for nature conservation in Northern Ireland. - NPWS does not undertake a systematic programme of monitoring of the condition of selection features in Ramsar sites and Natural Heritage Areas, as is indicated in Table 5.1. - On page 33 of Environmental Report, it is also proposed that a target for Soil is included as "*Avoid conflicts with, and contribute towards, where possible, the appropriate management of peatlands as per the National Peatlands Strategy*". The proposed indicator is "*information from the NPWS on the management of peatlands*".	The comments on the proposed monitoring indicators are noted and will be taken into account in the preparation of the SEA Statement.

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	It is unclear what type of information is proposed to be provided by or sought from this Department and clarification is requested prior to its inclusion as an indicator.	
	Specific points concerning statements/figures in the documentation: - Natura Impact Statement: Footnote 8 states "*In some (rare) instances Government policy may extend the provisions that are strictly applicable to European sites (as defined by the European Communities (Birds and Natural Habitats Regulations) 2011 (as amended)) to undesignated sites (typically those in the early stages of the designation process)".* The provisions extend to all sites from their time of notification. Footnote 10 states that "*it should be noted that Irish case suggests that avoidance or mitigation measures can (and should) be considered at the screening stage*". This statement appears to go further than the case law referenced, as mitigation is not always an intrinsic part of the work to be carried out (which is the wording of the case-law quoted). Irish Water's attention is also brought to the Waddenzee judgment of the European Court of Justice (C-127/02) which states that the triggering of an appropriate assessment "follows from the mere probability that such an [significant] effect attaches to that plan or project" and that in view of the precautionary principle "in case of doubt as to the absence of significant effects such an [Article 6(3)] assessment must be carried out." - **Non-Technical Summary of ER**: Irish Water is advised that the statutory consultees for SEA are incorrectly identified on page x of the Environmental Report, and should include the Minister for Arts, Heritage and the Gaeltacht and the Minister for the Environment, Community and Local Government. - **Environmental Report Appendix C: Baseline Information:** omits Refuges for Fauna. - **Figure C1**: "Distribution of designated Nature Conservation sites" omits some sites	Regarding footnote 8 of the Natura Impact Statement, we accept any clarifications provided on this point, although the footnote is correct: the Government may extend the provisions to undesignated sites as a matter of policy, ahead of the notification process. In terms of footnote 10, it is considered that the statement is a reasonable reflection of the case law, and how this would be applied to a high-level plan or strategy. Mitigation is obviously a broad umbrella term, but measures incorporated into a strategy during its development are clearly intrinsic to it. The phrase "work to be carried out" reflects the fact that the case law relates to a specific project involving construction. If this is applied literally, no strategy could ever benefit from any measures incorporated during its development. Reference to the statutory consultation bodies reflects S.I. No. 435/2004 - European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004. This has been revised in the Post Adoption SEA Statement. It is not proposed to update the baseline information

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	such as the Rockabill to Dalkey Island SAC. As previously advised, details on distribution of sites are available at http://webgis.npws.ie/npwsviewer/. - **Figure C2**- this is not based on the most update Article 17 report, which is available on www.npws.ie The above observations and recommendations are based on the papers submitted to this Department on a pre-planning basis and are made without prejudice to any observations that the Minister may make in the context of any consultation arising on foot of any development application referred to the Minister, by the planning authority/ies, in her/his role as statutory consultee under the Planning and Development Act, 2000, as amended.	contained in Appendix C to the SEA Environmental Report. However, the observations will be taken into account in any future SEA of Tier 2 plans.
	Archaeology The Department welcomes this opportunity to comment on the SEA for the Draft Water Services Strategic Plan under the Archaeology heading. The Department has already commented on the SEA Scoping for the Water Services Strategic Plan on the 12th June 2014 under the above reference number and the Department's National Monuments Service has forwarded additional comments (attached here for information purposes as WSSP Additional Comments 01-12-14). The National Monuments Service has also met with representatives of Irish Water in relation to the provisions of the National Monuments Acts and compliance with same (first meeting on the 14/10/2014). On foot of these discussions, it has been decided by both parties to develop a Code of Practice in relation to the provision of water infrastructure and protection of the archaeological heritage. The comments below are provided in the order of items referred to in the SEA WSSP draft with page numbers (P) and table numbers provided for ease of referral.	
	Archaeological Heritage Comments **P ix, P9 Table 1.2 and P51** In order to achieve Draft WSSP Strategic Objectives and	It is not proposed to include an addition strategy directly related to Archaeology in the final plan. Strategy EN1e

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	Aims listed in Table NTSI, in particular with reference the objective to protect and enhance the environment and the aim EN1 Ensure that Irish Water Services are delivered in a sustainable manner that contributes to the protection of the environment, it is suggested that the commitment to develop a Code of Practice in relation to Archaeology be included as an additional strategy EN1f **Develop a Code of Practice in relation to Archaeology and the provision of water infrastructure.** In this, Irish Water would be committing to balanced sustainable development in complying with its aim IF2b in engaging collaboratively with key stakeholders.	commits Irish Water to adhere to all environmental and planning legislation when developing water infrastructure. This will include all legal requirements for protection of cultural heritage. It is proposed to expand the text of strategy EN1e to include reference to archaeology.
	P x On page x the there is an error in the titles of the statutory SEA bodies in relation to the usage of the Department of the Environment, Heritage and Local Government. Since 2011 the responsibilities of that Department have transferred to the Department of Environment, Community and Local Government, and the Department of Arts, Heritage and the Gaeltacht, both Departments being statutory consultees under SEA legislation.	Reference to the statutory consultation bodies reflects S.I. No. 435/2004 - European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004. This has been revised in the SEA Statement.
	P x and P 10 Table 1.2 and P 58 Table 4.6 In compliance with Aim 1F4 Research and Innovation, the Department recommends that there should be engagement with the Universities/Institutes of Technology with archaeology and related studies in relation to the sponsoring of PhD research and publication relating to the results of the information accruing from the provision of water infrastructure with the specific aim of realising the public benefit of archaeological data and accruing knowledge.	Irish Water commits to its legal requirements in the protection and reporting of archaeology and cultural heritage in the development of its water infrastructure which will include engagement with academia where appropriate.
	P xii and **P xxv and P33 Table 3.1** In relation to the Strategic Environmental Objectives set out in Table NTS3 the proposed objective 9. ***Avoid damage to cultural heritage resources resulting from Irish Water's activities*** is completely unrealistic. It will not be feasible to entirely avoid impacts on the archaeological resource. The Department suggests that in replacement a realistic aim would be to **Minimize and mitigate damage to cultural resources resulting from Irish Water's activities.** The SEO target in Table NTS7 articulated is acceptable.	As set out in Section 3.3 of the SEA Environmental Report, Strategic Environmental Objectives (SEOs) are measures against which the environmental effects of the draft WSSP have been tested in order to help identify areas in which potential adverse impacts may occur. In this context, they represent the preferred environmental outcome and it would not be expected that the proposed amendments to

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		SEO9 would materially affect the outcome of the assessment. It is also important to note that the SEOs were set out in the Draft SEA Scoping Report that was subject to consultation between July and September 2014, prior to their adoption for use in the assessment of the draft WSSP. Overall, it is not considered that the proposed amendment to SEO9 is necessary. Notwithstanding, the suggested amendments to the SEO will be considered in the SEA of any future Tier 2 plan in order to ensure that potential effects on cultural heritage are adequately considered.
	P xviii and P47 and P48 Table 4.7 In relation to table NTS5, specifically the text relating to Summary Cumulative Effects of the Draft WSSP on the cultural heritage, it is the Department's opinion that the text is too ambiguous. With the numbers and locations of known archaeological monuments, **and** those monuments not yet identified but which will be uncovered by ground works into the future "***it is possible that construction activities may be located in the vicinity of cultural heritage assets"*** is inaccurate**.** Already, by April 2015, on foot of archaeological monitoring of site investigations in historic towns and required assessments and monitoring of construction works, monuments both known and previously unknown monuments have been identified (human remains, town walls etc) and impacted upon. This identification of material of archaeological significance, which was previously unknown, can be considered to be a positive effect. Where excavation is required (and where permitted under the National Monuments Acts) to mitigate impacts, it is a destructive process by its nature. It is important to note at this point that while there will be effects, these effects can be managed and mitigated through the provision of an adequate levels of excavation where required	The potential for positive effects on SEO9 associated with the identification of as yet undiscovered cultural heritage assets is acknowledged, although the probability of any such effect occurring is clearly uncertain. The assessment of the draft WSSP contained in Appendix D to the SEA Environmental Report and summarised in Section 4 clearly highlights that there is the potential for the enhancement of existing, and development of new, infrastructure arising from the implementation of the draft WSSP to have adverse effects on cultural heritage assets and that these effects may be direct or indirect. This response states that the overall total cumulative impact of the WSSP (865 water treatment plants, 60,000 kms of pipe upgrade or provision, 1000 waste water treatment plants, and 25,000 of waste pipes) on cultural heritage will

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	and supervision of same as will be provided for under the Code of Practice. The Department concurs that the precise scale of these cumulative impacts are as yet difficult to quantify but would submit that in line with other comparable infrastructure provision the overall total cumulative impact of the WSSP (865 water treatment plants, 60,000 kms of pipe upgrade or provision, 1000 waste water treatment plants, and 25,000 of waste pipes) on the cultural heritage will be significant rather than uncertain primarily due to the scale of the proposed works, notwithstanding the chosen locations. In particular, the impacts in historic towns will be considerable.	be significant. However, the infrastructure cited represents Irish Water's existing assets and not new provision through the WSSP. Whilst the location of many of Ireland's cultural heritage assets is known, reflecting the strategic and high level nature of the WSSP, the scale, type and location of future development and investment is uncertain and in consequence, it is not possible to establish the type and magnitude of effects at this stage. It will be possible to consider in more detail and with greater certainty effects on cultural heritage assets once proposals have been identified in any future Tier 2 plan and at the Tier 3 project stage.
	P 87 Table 5.1 Potential Indicators for Monitoring Effects The information provided in this table in relation to monitoring the effects of the WSSP and cultural heritage is unclear. Some very straightforward monitoring in terms of quantification of the numbers of licences/consents issued in relation to Irish Water's activities per annum, the numbers and character of the newly discovered monuments identified per annum etc could be carried out on foot of the rollout of the WSSP. Enhanced research investigating the locational characteristics of newly identified material may enable future proofing of the selection or avoidance of particular sites of high potential. This part of the Draft WSSP requires further thought and consultation both with the National Monuments Service and the Universities/Institutes of Technology.	Comments noted. Archaeological monitoring and reporting for new infrastructure will be in accordance with legal requirements. It is not proposed to collate a record of newly discovered monuments per annum. Irish Water infrastructure has a diverse range of locational characteristics (e.g. roadside, river, high ground).
	Additional Comments On the Water Services Strategic Plan from the National Monuments Service *P 28 4.8. Cultural Heritage*	Comments noted. However, these comments relate to the SEA Draft Scoping Report which is now superseded by the SEA Environmental Report.

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	Archaeological heritage is protected under the National Monuments Acts (1930-2004), Natural Cultural Institutions Act 1997, and the Planning and Development Acts 2000-2010. I suggest amending the above to: Archaeological heritage is protected under the National Monuments Acts (1930-2004), Natural Cultural Institutions Act 1997, and the Planning and Development Acts 2000-2010 and The European Union (Environmental Impact Assessment of Proposed Demolition of National Monuments) Regulations 2012 (S.I. No. 249 of 2012).	
	p. 31 The sensitivity groupings need a rethink I would suggest. While the WSSP isn't linked to geographical contexts at this stage the overall impacts in terms of ground disturbance, through all of its activities are going to have a very extensive impact upon archaeological material over the next 25 years. As has been described most of the waste water piping in urban areas (many of whom are historic towns) is over 100 years old and needs serious upgrading. The provision of water treatment plans, waste water treatment plants, water storage provision and piping associated with the WSSP will be an extensive programme which will impact (and is currently impacting) directly upon material of archaeological significance. There is provision through proper planning to avoid some impacts on known archaeological monuments (i.e. the sites and monuments record and RMP/National Monuments) however there will be extensive impacts on many individual monuments of archaeological importance, the location of which was not previously identified until ground works exposed the features beneath the topsoil in greenfield and beneath overburden in urban locations. If the mitigation of these impacts is not accounted and provided for there will be an effect on the WSSP – leading to the halting of construction works where monuments are identified. Therefore in terms of the sensitivity groupings as described I suggest that previously unknown archaeology should be moved into the Most Relevant Sensitivities Group of Environmental	

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	Components.	
	p. 33 The European Union (Environmental Impact Assessment of Proposed Demolition of National Monuments) Regulations 2012 (S.I. No. 249 of 2012) should be added to the list of transposed legislation.	
	p. 34 Plans /Programmes/Studies currently in preparation The National Landscape Strategy was published by the Department of Arts, Heritage and the Gaeltacht in July 2014.	
	P 37 Table 5.2 In relation to Cultural Heritage The Draft Data Source relating to Monuments in the Republic is the NMS (National Monuments Service) with the relevant section charged with maintaining the Sites and Monuments Record and RMP (Record of Monument and Places) being the ASI (Archaeological Service of Ireland). There is no Archaeological Survey monitoring programme.	
	p. 39 In relation to Table 5.3 and Cultural Heritage please put previously unrecorded archaeology into the Potentially Significant Effect, if unmitigated (Most Relevant) category.	
S7	**Eastern and Midlands Regional Assembly** **SEA/AA** The use of the Regional Indicators Report 2014 prepared by the Regional Authorities of Ireland, in the Baseline Analysis of the Environmental Report is welcomed. Further information on the Regional Indicators, if required can be obtained from the Regional Assembly. It is considered that the indicators in this report, including those from the Regional Indicators report could be used for ongoing monitoring of the WSSP and the SEA.	
S8	**Northern and Western Regional Assembly**	The mitigation measures that relate to the WSSP itself (as opposed to Tier 2 plans and Tier 3 projects) have been

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	Strategic Environmental Assessment & Appropriate Assessment The conclusions of the Natura Impact Statement for the WSSP recommend amendments to the draft strategy, suggesting that their inclusion will result in the WSSP having no significant adverse effects on any European sites, etc. However they haven't been included in the document within the identified sections. It is important to ensure that all mitigation proposed through Appropriate Assessment (AA) and Strategic Environmental Assessment (SEA) processes are incorporated into the final plan. The Regional Assembly welcomes the use of the indicators in the *Regional Indicators Report 2014* in the SEA and supports Irish Water's involvement in the future refinement of regional indicators for monitoring the implementation of the RSES.	considered by Irish Water in preparing the final WSSP. The SEA Statement sets out explicitly how these measures have been incorporated into the final Plan.
S9	**Southern Regional Assembly** **Strategic Environmental Assessment (SEA)** The Regional Assembly notes that the SEA prepared for the draft WSSP concluded that its implementation is likely to have either positive or very positive effects for the majority of strategic environmental objectives contained within the plan. No significant negative effects were identified during the SEA assessment and where minor negative effects on some SEOs seem likely to arise, the SEA contains mitigation and enhancement measures to avoid or minimise potential negative effects and to enhance positive effects arising from the WSSP. Overall, it is considered that the SEA provides an accurate assessment of the likely environmental effects of implementing the WSSP, in accordance with the requirements of the SEA Directive. However, the following observations are set out below in relation to specific sections of the report:- • Baseline documents referenced at Appendix B should also include the Northern Ireland Regional Development Strategy 2035.	It is not proposed to update the review of plans and programmes at Appendix B to the SEA Environmental Report or the baseline information contained in Appendix C. However, Irish Water notes the request for further baseline information in respect of Northern Ireland and will consider this as part of any future SEA in respect of Tier 2 plans.

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	• The Northern Ireland Water Resources Management Plan features twice in Appendix B at pages B15 and B23. • In Appendix C, Figure C1 should include designated conservation (& European sites) in Northern Ireland (A map containing this information is provided on page 13 of the Outline Appropriate Assessment Screening of the Draft WSSP). • Other maps contained within Appendix C which provide baseline data for the SEA should be reviewed to include data from Northern Ireland so as to fully inform the assessment of Transboundary Effects.	
	Appropriate Assessment (AA) The Regional Assembly notes that the conclusions from the Appropriate Assessment are that:- • 49 of the 68 strategies contained within the draft WSSP would have 'no effect' on any European sites, • 12 strategies cannot be assessed at the level of the WSSP but that screening for AA should be undertaken for such lower level plans, strategies and projects derived from the WSSP • 7 strategies within the WSSP will have no significant effects and area likely to have positive effects on European sites. Overall, the Appropriate Assessment prepared is considered to address the requirements of the Habitats Directive to assess potential impacts of the WSSP on the Natura 2000 network of European sites. However, the following observations are set out below in relation to specific sections of the report:- • The Executive Summary states at page iv that 'the WSP is not spatially	We have considered re-wording the 'spatially specific' term as it is not as clear as it could be. The only spatial dimension to the WSSP is that it is for the Irish State. However, given that this is the highest possible dimension for a plan such as the WSSP, to some extent, the statement is of limited relevance to the specifics of the assessment. The other aspects of this response are noted and have been updated.

Sub No.	Relevant Submission Text	Summary of Submission and Response or Revisions to SEA or NIS (where appropriate)
	specific' whereas it is considered that the WSSP *is* a spatially specific Plan for the Irish State. In this regard, it is noted at Section 2.4.2 on page 8 that the document correctly identifies the need to asses Transboundary Effects for the adjoining territory of Northern Ireland, where the AA Screening identifies 57 SACs (Special Areas of Conservation) and 16 SPAs (Special Protection Areas) in Northern Ireland that have been assessed. • Table 2.5 Plans and Projects likely to cause In-Combination Effects (Page 18 of the Outline AA Screening report) should also include the Northern Ireland Regional Development Strategy 2035 and the Northern Ireland Water Resources Management Plan. Finally, in both the Glossary and Appendices there are out of date references to the former Regional Authorities which were abolished in June 2014, and to various Local Authorities which have merged as of this same date. It would be desirable if the final version of the Plan made the appropriate updates to reflect the current make-up of the local government sector following the enactment of the Local Government reform Act, 2014.	
S33	**SWAN** **Strategic Environmental Assessment** The three objectives that are most likely to have an effect on the aquatic environment are: 1. Ensure a Safe and Reliable Water Supply; 2. Provide Effective Management of Wastewater; 3. Protect and Enhance the Environment;	Irish Water welcomes SWAN's general support of the findings of the SEA and will continue to engage SWAN on any future SEA in respect of Tier 2 plans and in consultation regarding Tier 3 projects.

Sub No.	Relevant Submission Text	Summary of Submission and Response or Revisions to SEA or NIS (where appropriate)
	and it is these which we deal with below. 12.1.1. Objective: Ensure a Safe and Reliable Water Supply The establishment of a National Water Resources Plan and efforts to increase the quality of water at source and the efficient delivery of treated water can only be beneficial for the aquatic environment by improving water quality and reducing water stress resulting from water abstraction. Significantly the increased likelihood of climate change driven droughts has been recognised as a supply issue by Irish Water. Preparing for the predicted increased likelihood of drought events and ensuring that water supplies have sufficient overhead will reduce the pressure that aquatic bodies will come under during droughts. This is naturally a positive thing from an environmental point of view. 12.1.2 Objective: Provide Effective Management of Wastewater Wastewater is acknowledged as one of the main causes of water pollution in Ireland. Any improvement in the standard of wastewater treatment would naturally have a beneficial effect on Ireland's aquatic environment. Increasing our compliance with the minimum standards laid out by the UWWTD and significantly reducing the number of Class 2 pollution incidence would obviously be beneficial for the aquatic environment. It would improve water quality with obvious knock on health benefits and aquatic ecosystem benefits by reducing general pollution, eutrophication and significant pollution incidences and fish kills. Setting out Standard Operating procedures should increase consistency and improve the management and ensure that waste water treatment plants are operated correctly, safely and efficiently. The benefits of this from an environmental point of view are self-evident. However see the Section 5 for SWAN's critique of the targets and timelines for reaching compliance. 12.1.3. Objective: Protect and Enhance the Environment	

Sub No.	Relevant Submission Text	Summary of Submission and Response or Revisions to SEA or NIS (where appropriate)
	Reducing the environmental footprint of water management through the development and adoption of the proposed management plans, namely a Sustainability Policy and Framework, a Sustainable Energy Strategy, a Climate Change Adaptation and Mitigation Strategy and a Waste and Sludge Management Plan will obviously be positive from an environmental point of view. 12.1.4 Overall response to SEA As outlined above, the three objectives to (1) Ensure a Safe and Reliable Water Supply; (2) Provide Effective Management of Wastewater and (3) Protect and Enhance the Environment will have many positive outcomes for the aquatic environment. Irish Water have in their SEA identified significant positive effects are expected in respect to: Biodiversity; Population and Human Health; Water Quality and Quantity; Food Risk; Air and Climatic Factor; Water Management Infrastructure; and Water as an Economic Resource. SWAN would be broadly in agreement with these general conclusions at this stage. Improving the sustainability and efficiency of water management will reduce the environmental impact of the sector. Improving compliance with the WFD water body objectives and the Urban Waste Water Treatment Directive are obviously positive. Irish Water claim that there will be no significant negative effects for any of the draft WSSP strategies assessed. Minor negative effects are deemed likely. Potential negative effects have been identified as potentially effecting: Biodiversity; Population and Human Health; Water Quality and Quantity; Air and Climatic Factors; Soil and Landscape (potential effects on Cultural Heritage are considered to be uncertain at this stage). Much of these negative effects may result from new infrastructure and may cause local adverse environmental effects due to, for example, land take, emissions to air, and disturbance. Irish Water have indicated that potential for adverse environmental effects will be	

Sub No.	Relevant Submission Text	Summary of Submission and Response or Revisions to SEA or NIS (where appropriate)
	identified and, where possible, addressed during the preparation of Tier 2 plans and through the SEA and Appropriate Assessment process of the respective plans. Similarly, at the project stage (Tier 3 projects), environmental impacts would be considered as part of the environmental permitting and planning application process (which may require Environmental Impact Assessment (EIA) and Appropriate Assessment depending on the scale, location and nature of development proposed). The pros and cons of these developments will have to be assessed on a case by case basis and not being in possession of all the details at this stage, given the high level nature of the WSSP, it is difficult for SWAN to comment further at this point. We look forward to inputting to the SEAs and AAs of Tier 2 and Tier 3 Plans when assessment of actual potential impacts is easier.	
	12.2 Natura Impact Statement in support of the Appropriate Assessment for the Draft Water Services Strategic Plan As with the SEA for the Draft WSSP, and as acknowledged in the NIS, the high level of the plan makes it hard to pinpoint specific impacts on individual Natura 2000 sites and their Annex I habitats and Annex I and Annex II species. However, in our opinion even at this early stage there are certain types of plans and projects that could potentially have a significant negative effect on a Natura 2000 site. For example: • Potential negative impacts to a Natura 2000 site could occur due to the direct loss of habitat and degradation of habitats due to the construction, upgrading or repair of water services related infrastructure. At a species level species listed under the Habitats and Birds Directives may be disturbed and or displaced during the construction, operational and decommissioning stage of a project; • The abstraction and storage of raw surface water or groundwater: Abstraction could stress water bodies and changing water levels may	Irish Water welcomes SWAN's general support of the findings of the Natura Impact Statement.

Sub No.	Relevant Submission Text	Summary of Submission and Response or Revisions to SEA or NIS (where appropriate)
	have a negative impact on biodiversity. • The storage and distribution of treated water; • Management, reuse and disposal of residual wastes and sludges. We would therefore fully agree with the conclusion that it will remain necessary to undertake Appropriate Assessment on the lower-tier Implementation Plans and projects (Tier 2 and Tier 3, respectively) as these are developed. SWAN would also be broadly in support of the conclusion that the development of the WSSP, and the strategic management of water resources and wastewater provision by a national body, will help improve the condition of many European sites and support the achievement and maintenance of favourable conservation status across the Natura 2000 network. Of course the effectiveness of this will depend on the prioritisation of measures for these sites (See Section 5).	
	Northern Ireland Environment Agency We are broadly content with the SEA Environmental Report as it relates to Northern Ireland. We note that the SEA did not identify any potential significant effects on Northern Ireland arising from the implementation of the plan. We are broadly content with the Natural Impact Statement as it relates to Northern Ireland. We note that the statement did not identify any adverse effects on any European Site in Northern Ireland. We welcome the inclusion of overarching environmental protection strategies and supporting text in the WSSP. We welcome the additional measures to avoid or minimise potential negative effects and to enhance positive effects arising from the implementation of the WSSP that were identified in the SEA Environmental Report. We consider that these mitigation and enhancement measures are also relevant to subsequent proposals and projects that may have transboundary interaction with	Comments noted and welcomed. The plan will include a statement within the Protect and Enhance the Environment strategic objective in relation to the environment in Northern Ireland in order to avoid or minimise transboundary negative effects and to enhance positive effects Any future SEA and Appropriate Assessment in respect of Tier 2 plans and Appropriate Assessment in relation to Tier 3 plans will, where appropriate, consider potential transboundary effects on European designated sites in Northern Ireland.

Sub No.	Relevant Submission Text	Summary of Submission and Response or Revisions to SEA or NIS (where appropriate)
	Northern Ireland. We would welcome the inclusion of a statement in the WSSP indicating that relevant proposals and projects should also have regard to the mitigation and enhancement measures in the WSSP in relation to the environment in Northern Ireland in order to avoid or minimise transboundary negative effects and to enhance positive effects. We note that appropriate assessments remain necessary on the lower-tier plans, strategies and projects derived from the WSSP. We consider that these assessments should also consider potential effects on European Sites in Northern Ireland.	

Appendix D: Additional Submissions in Full

(from Zero Waste Alliance Ireland and the Environmental Law Implementation Group)

ZERO WASTE ALLIANCE IRELAND

Towards Sustainable Resource Management

OBSERVATIONS ON THE DRAFT WATER SERVICES STRATEGIC PLAN

Submission by Zero Waste Alliance Ireland in Response to Public Consultation by Irish Water

Túr na Gaoithe
Philipstown HBX
Castleblaney Road
Dundalk
County Louth

17 April 2015

ZERO WASTE ALLIANCE IRELAND

Towards Sustainable Resource Management

Túr na Gaoithe
Philipstown HBX
Castleblaney Road
Dundalk
County Louth

17 April 2015

Water Services Strategic Plan (Public Consultation),
Irish Water,
P.O. Box 860,
South City Delivery Office,
Cork City.

BY EMAIL TO:
wssp@water.ie

Dear Sir,

Observations on the Draft Water Services Strategic Plan

Submission by Zero Waste Alliance Ireland in Response to the Public Consultation by Irish Water

On behalf of Zero Waste Alliance Ireland (ZWAI), I am attaching an electronic copy of our observations on the Draft Water Services Strategic Plan.

The submission provides a brief overview of our policy and objectives on water, supporting the well-established strategy and policy of aiming for "Zero Waste", and supporting repairing, preparation for re-use, reusing and recycling materials and objects, in accordance with the revised European Waste Hierarchy and the "Circular Economy".

Our observations express concern that the Draft Water Services Strategic Plan places great emphasis on water as an economic asset rather than a basic human need, and a requirement for life on this planet, and therefore the Plan does not sufficiently deal with the requirement to save water and treat with respect in the same manner as we treat food and human health.

Little attention is paid to the possibility of re-using treated grey water and sewage sludge, and almost nothing is said about the old Irish tradition of saving rainwater which can be used in households, agriculture and in some industries which do not depend on clean water. Instead, heavy rain is 'accused' as a significant cause of water pollution because in our combined sewerage systems it may overload the

capacity of the sewers and wastewater treatment plants, and cause local flooding. In our submission, rain should be considered as a valuable resource, available to augment our existing water supplies which we take from surface waters and groundwater.

As currently drafted, the Strategic Plan gives very considerable power to Irish Water. While the Plan is quite critical of the former local, small and fractured water supply and wastewater treatment systems, it promotes the concept of large-scale and long-distance water transfers between different parts of the country, rather than encouraging water conservation and demand reduction. Such large-volume transfers would not only require colossal investment, but on-going significant energy costs for pumping the water, and potential long-term adverse effects on the ecosystems from which the water would be abstracted, and a reduction in the amenity and economic value of the rivers or lakes from which the abstraction would be made.

According to the draft Plan, Local Authorities will have very little or no influence in water-related planning matters, policies or objectives which might be more appropriate at county or local level; and we consider this to be a major deficiency.

In general, it is our observation that, while the draft Water Services Strategic Plan contains some welcome policies and objectives, these are not clearly stated, and they lack definite targets and timescales.

We hope that the above observations, together with those in the attached submission, will help to influence the Plan towards a more ecological approach to water management – in which human societies behave more like natural systems which produce nothing which cannot be fed back into the Earth's transformational and long term sustainable processes.

Yours sincerely,

Ollan Herr Jack O'Sullivan & Dalia Smelstoriūtė

On behalf of Zero Waste Alliance Ireland.

WSSP-06 Covering letter with submission to Irish Water, final, 17-Apr-15.doc

ZERO WASTE ALLIANCE IRELAND

Towards Sustainable Resource Management

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17 April 2015

1. INTRODUCTION AND PRELIMINARY COMMENT

On 19 February 2015, a draft integrated plan for the delivery of water services Irish Water, a national utility established in 2013 as a subsidiary of Bord Gáis Éireann[1]. On 01 January 2014, Irish Water was given responsibility under the Water Services Acts 2013 for providing public water supplies and wastewater services; and the draft *Water Services Strategic Plan* (WSSP) was prepared after an initial round of public consultation with statutory bodies and the public in mid-2014.

The Draft WSSP was also subjected to Strategic Environmental Assessment (SEA) and Appropriate Assessment (AA) during 2014.

A second round of public consultation began with the publication of the draft WSSP, when Irish Water invited submissions on the WSSP and on the SEA Report and the Natura Impact Statement (prepared as a component of the AA process). The following observations by Zero Waste Alliance Ireland (ZWAI) are submitted in response to that invitation.

As stated by Irish Water at the time of publication, the Water Services Strategic Plan (WSSP) sets out the strategies needed:

- to ensure the availability of safe drinking water;

[1] This company was renamed Ervia in 2014, after Bord Gáis Energy was sold to an English company named Centrica Plc in December 2013 (Ervia website) or Summer 2014 (Gas Networks Ireland website). Irish Water is therefore a subsidiary of Ervia. The origin and meaning of the name "Ervia" are unknown.

- to protect the environment from the impacts of wastewater discharges;
- to provide efficient modern systems that meet the needs of customers;
- to contribute to economic growth and development; and,
- to provide value for money.

The draft Strategic Plan is intended to address six key themes of customer service, clean safe drinking water, effective treatment of wastewater, a

future.

In responding to the public consultation, ZWAI will not comment on all of the above strategies and themes; but will focus our attention on Irish Water's draft strategies for efficient resource utilization, avoidance of waste, and re-use of water where appropriate.

Our comments are based on the belief that water is a finite and valuable resource, that it is an essential component of life on Earth, that access to clean water is a basic human right, that other living organisms also depend on water for their survival, and that the naturally occurring water cycle should be respected and harmed as little as possible. Further details of these basic principles, and the background to our submission, are provided in section 2 below.

We also believe that this is a very appropriate time to consider all aspects of water abstraction, water supply, water use, and wastewater disposal in Ireland, as at this time the 7th World Water Forum is being held in Korea (from 12 to 17 April). One of the key issues to be examined in the Forum is that water is one of the most important public policy challenges to be faced, especially as approximately one billion people in today's world do not have access to clean drinking water, and more than three-quarters of a million people die every year from diarrhoea caused by inadequate drinking water and sanitation. Our relatively fortunate situation in Ireland must not therefore blind us to the water situation world-wide.

2. ZERO WASTE ALLIANCE IRELAND (ZWAI)

At this point we consider that it is appropriate to mention the background to our submission, especially the policy and strategy of ZWAI, given that our previous submission to Government Departments, to Local Authorities and to the EPA have generally addressed issues connected with solid wastes, their origin, prevention, minimisation, re-use, recycling, treatment and disposal.

2.1 Origin and Early Activities of ZWAI

Zero Waste Alliance Ireland (ZWAI) was established in May 1999 as an alliance of anti-landfill and anti-incineration groups from many locations in Ireland, and has subsequently developed into a national confederation of local residents' groups, supported by all of Ireland's principal environmental organisations, with the objectives of:

i) sharing information, ideas and contacts,

ii) finding and recommending environmentally sustainable and practical solutions to the growing domestic, municipal, industrial and agricultural waste management crisis in Ireland;

iii) lobbying Government and local authorities to implement environmentally sustainable waste management practices, including clean production, elimination of toxic substances from products, re-use, recycling, segregation of discarded materials at source, and other beneficial practices;

iv) lobbying Government to follow the best international practice (for example, the policies and practices of countries such as New Zealand, Australia and many other countries, regions and cities which have adopted the policy of Zero Waste) and EU recommendations by introducing fiscal and economic measures designed to penalise the manufacturers of products which cannot be re-used, recycled or composted at the end of their useful lives, and to financially support companies making products which can be re-used, recycled or are made from recycled materials;

v) raising public awareness about the long-term damaging human and animal health and economic consequences of landfilling and of the destruction of materials by incineration; and,

vi) maintaining contact and exchanging information with similar national networks in other countries, and with international zero waste organisations.

ZWAI initially had nearly 50 affiliated organisations and groups throughout Ireland, including all the principal environmental NGOs (An Taisce, Voice, Friends of the Earth Ireland, Earthwatch Leitrim, Earthwatch Sligo, Friends of the Irish Environment, Cork Harbour for a Safe Environment (CHASE), Kinsale Environment Watch, the Irish Doctors Environmental Association (IDEA)), and more than 40 active local groups developing and implementing new ways to address Ireland's waste problems.

In Galway, the efforts of the **ZWAI** group "Galway for a Safe Environment" had a major impact on the waste management policy of the City Council, resulting in a pilot-scale recycling initiative which spread city-wide with significant benefits.

2.2 Our Basic Principles

It is a basic principle that human communities must behave like natural ones, living comfortably within the natural flow of energy from the sun and plants, producing no wastes which cannot be recycled back into the earth's systems, and guided by new economic values which are in harmony with personal and ecological values.

In nature, the waste products of every living organism serve as raw materials to be transformed by other living creatures, or benefit the planet in other ways.

Instead of organising systems that efficiently dispose of or recycle our waste, we need to design systems of production that have little or no waste to begin with.

There are no technical barriers to achieving a "*zero waste society*", only our habits, our greed as a society, and the current economic structures and policies which have led us to the present environmental, social and economic difficulties.

"Zero Waste" is a realistic whole-system approach to addressing the problem of society's unsustainable resource flows – it encompasses waste elimination at source through product design and producer responsibility, together with waste reduction strategies further down the supply chain, such as cleaner production, product repairing, dismantling, recycling, re-use and composting.

2.3 What We are Doing

Zero Waste Alliance Ireland has prepared a detailed policy document on waste management, we hold regular meetings, and we continue to lobby Government on the issue of sustainable resource management, and to express our concern at the failure to address Ireland's waste problems at a fundamental level.

In recent years, as many older landfills were closed or became better managed (primarily as a consequence of the implementation of European Directives, Irish legislation transposing these Directives, the development of a waste licensing regime by the Environmental Protection Agency, and the establishment of the Office of Environmental Enforcement in 2003), the number of affiliated groups concerned about the adverse environmental and public health effects of landfills decreased considerably in number, and ZWAI has concentrated more on the objective of ensuring Ireland's compliance with the Stockholm Convention.

ZWAI strongly believes that Ireland should have a policy of not sending to other countries our wastes for further treatment or recycling, particularly to developing

countries where local populations are being exposed to dioxins and other very toxic POPs. Relying on other countries' infrastructure to achieve our "recycling" targets is not acceptable from a global ecological and societal perspective.

In 2014, Zero Waste Alliance Ireland made submissions to the Department of the Environment, Community and Local Government on household wastes, and on used or end-of-life tyres; and, earlier this year, ZWAI made submissions to Dublin City Council's Regional Waste Coordinator on the Eastern and Midlands Draft Regional Waste Management Plan 2015 – 2021, and to the Environmental Protection Agency (EPA) in response to the Agency's public consultation on the national inspection plan 2015-2017 for domestic wastewater treatment systems.

ZWAI continues to maintain active working relationships with Zero Waste New Zealand Trust, with the Grass Roots Recycling Network in the United States, the Community Resources Network Scotland (CRNS), with the Global Anti-Incinerator Alliance (Global Alliance for Incinerator Alternatives -- GAIA), and with other international environmental organisations.

It will be clear therefore, that ZWAI is primarily concerned with the very serious issue of discarded materials and goods, how these become "waste", and how such "waste" may be prevented by re-design along ecological principles. But these same ecological principles can be applied to the many ways in which we abstract and use water as a resource, and to the equivalent volumes of wastewater produced as a consequence of these uses.

As pointed out in our submission to the EPA on domestic wastewater treatment systems, we suggested that the valuable nutrients contained in domestic wastewater should be recovered and re-used; and we indicated a number of ways in which this could be achieved, while pointing out that the technology was well-tried and tested. In that submission, we did not address the issue of water saving, the conservation of water and demand management, as these were not directly relevant to the subject of the public consultation, but in this current submission to **Irish Water** we will be addressing these issues, as we consider that they are of prime importance to Ireland.

Zero Waste Alliance Ireland is a registered charity, and a member of the Irish Environmental Network (IEN), and our directors are:

- Ollan Herr
- Sean Cronin
- Richard Auler
- Jack O'Sullivan

3. OBSERVATIONS ON THE DRAFT WATER SERVICES STRATEGIC PLAN

3.1 Introductory Remarks -- The Importance of Water for Life

Water, says Ivan Illich, is not just the H_2O produced by burning gases, nor is it the liquid that is metered and distributed by public authorities – it is "*the fluid that drenches the inner and outer spaces of the imagination*"[2]. What we do with water reflects the fashion of each age. In our present time we have transformed water from a spiritual substance that could baptize the newborn and purify the dead and the living, into a scarce resource in need of technological management, a kind of cleaning fluid that has lost the ability to excite our imagination, especially in the urban spaces where most of us live.

We need to ask what we are doing with water – from where do we obtain it, how are the natural reservoirs of water maintained and safeguarded, what happens when we use water, and how we, as a society and as individuals, choose to deal with liquid wastes, i.e., human excreta, wash waters and the products of our domestic and social cleansing activities.

The signs that all is not well are becoming more and more evident. We read that, worldwide, increasing numbers of people are denied access to water of a safe or acceptable quality for drinking, cooking and washing. Water, we are informed, will be the cause of future international wars, as countries squabble over access to water supplies.

In Europe, the European Commission has long recognised the threats to water quality, and (more recently) the growing problem of water scarcity and drought on the one hand, and flood risk management on the other.

In Ireland, we have seen an increasing incidence of drinking water supplies becoming contaminated, frequently by coliform bacteria derived from human or animal wastes, and more recently by another micro-organism – cryptosporidia. A forecast of growing water shortages in the eastern half of the country, which is also the most urbanised, has led Dublin City Council to plan for abstracting some 350 million litres of water per day from the River Shannon, and conveying it by pipeline to Dublin.

It is our submission that the root causes of these problems in Ireland are derived from the way in which we use water without demand management or

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[2] Illich, Ivan, 1985. *H_2O and the Waters of Forgetfulness: Reflections on the Historicity of Stuff*. Published 01 January 1985 by the Dallas Institute of Humanities and Culture, Dallas, Texas; and published subsequently by Heyday Books, Berkeley, California, USA. Quoted in "*The Re-Imagination Of Water -- Dealing with the Threats to Groundwater, Drinking Water, Rivers and Lakes*"; a paper presented by Jack O'Sullivan at a Seminar on Public Participation and Water Quality, held at the Environmental Change Institute, NUI Galway, on 23 June 2007. Also quoted in "*Restorative Commons: Creating Health and Well-being through Urban Landscapes*", Edited by Lindsay Campbell and Anne Wiesen, United States Department of Agriculture, General Technical Report NRS-P-39; U.S. Government Printing Office, 2011; 278 pp.

conservation, and the way in which we dispose of our water-borne wastes. Let us therefore examine firstly how the key issues of demand management and conservation are addressed in Irish Water's draft Strategic Policy document.

3.2 Demand Management

For most of the twentieth century, policy-makers have focused their attention on the supply side; and it was not until water scarcity became a public issue that demand management entered the arena. In Ireland, there is a widely held but mistaken view that we do not need to control our increasing demand for water, despite the fact the supplying potable water is incurring very high costs, and will continue to do so.

For example, when Dublin City Council and other Eastern Region local authorities first proposed to abstract water from the River Shannon at Lough Ree, the feasibility study produced in May 2006 [3] relied significantly on estimates for domestic, commercial and industrial demand for water in the Greater Dublin Area (GDA) provided in a much earlier report commissioned by the Department of the Environment Heritage and Local Government (DEHLG) in conjunction with the seven Local Authorities in the Greater Dublin Area.[4] This report, though partly revised in 2000 (to ensure compliance with the Strategic Planning Guidelines and to take account of population growth in the intervening period) was considered by Dublin City Council engineers to be "*the blueprint for the development of water services in the region to the year 2016*".[5]

While the May 2006 feasibility study took account of increasing per capita consumption of water caused by greater affluence and lifestyle changes, and also considered very briefly the impacts of climate change, and the need to facilitate possible future industry wishing to locate in the GDA, any potential savings from the introduction of conservation measures and from increasing public awareness of the value of clean water were dismissed as being "*difficult to quantify*" and were not taken into account.

This was an extraordinary statement, given the potential for demand management, conservation and leakage reduction; and the feasibility study was robustly criticised for this and other reasons by the Shannon Environmental Protection Alliance, a group representing the interests of boat owners, anglers, tourism and boat hire operators, wildlife conservations and others.[6]

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[3] Greater Dublin Water Supply - Major Source Development -- (Draft) Feasibility Study, Veolia and RPS, 31st May 2006.

[4] The Greater Dublin Water Supply Strategic Study (GDWSSS) 1996 – 2016, undertaken in 1996.

[5] Greater Dublin Water Supply - Major Source Development -- (Draft) Feasibility Study; Executive Summary, Section 1, Background, page 3.

[6] *Environmental and Sustainability Assessment of the Proposal by Dublin City Council to Abstract Water from Lough Ree for the Purpose of Meeting a Projected Growth in the Demand for Water in the Greater Dublin Area*. A Report for the Shannon Environmental Protection Alliance (SPA). Prepared by Environmental Management Services, Castlepollard, County Westmeath; 14 August 2007; revised and extended, June 2008.

Even before the study was published, the Office of Licensing and Guidance, EPA, wrote to Dublin City Council's consultants in April 2006:

> *"It is critical that the issue of radical water conservation measures (including metering / charging for private supply, use of rainwater for sanitary flushing and garden irrigation, grey water re-use on-site, etc.) should be emphasised in this SEA exercise, such that the scale / impact of any proposed infrastructure may be minimised or avoided;*
>
> *In addition, you are referred to the Waste Prevention Section of the EPA website* ***www.epa.ie*** *which provides a link to water conservation measures as implemented in the south-east of England which you should find of interest."* [7]

The EPA repeated its advice about the need for water conservation in a further letter dated 21 May 2008, addressed to the RPS group. The letter recommended that:

> *"If not already underway, consideration should be given to including a specific objective for the preparation of a water conservation strategy for the Greater Dublin Area, and in particular for the Greater Dublin Water Supply Area".* [8]

In November 2008, Dublin City Council (DCC), acting on behalf of the local authorities in the Dublin Region Water Supply Area (DRWSA), published a further group of reports under the title of "Water Supply Project - Dublin Region (Draft Plan)"

Unlike the previous Draft Feasibility Study which dismissed potential savings from conservation measures and increasing public awareness of the value of clean water, as being "*difficult to quantify*", this study considered that the "*constant addition of new housing stock within the water supply area, including greater usage of water efficient appliances, should exert some downward influence on average Per Capita Consumption (PCC) levels over time. Similarly increased consumer awareness, for water conservation, through media campaigns will also exert some downward pressure on PCC levels*".[9]

However, no attempt was made to quantify any possible or potential reduction in per capita consumption, while measures which have been regarded as normal in many other countries for at least 20 years, e.g., metering for private supply, use of rainwater for sanitary purposes / toilet flushing / garden irrigation, and on site re-use of grey water, were not even mentioned, let alone considered.

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[7] Greater Dublin Water Supply – Major Source Development: Strategic Environmental Assessment Report, page 126 of PDF version (immediately following a letter dated 24 March 2006 from Mr Tadhg O'Mahony, EPA, to Mr Gerry Geoghegan, RPS Consulting Engineers).

[8] Letter and attachment dated 21 May 2008 from Mr Tadgh O'Mahony, Senior Scientific Officer, SEA Section, EPA, to Ms Emma Oliveira, RPS Group.

[9] Water Supply Project – Dublin Region (Draft Plan). Veolia Water and RPS, for Dublin City Council, November 2008; section 2.4.2, page 11.

Furthermore, the predictions for population growth and per capita consumption used in the 2008 Plan were unchanged from those given in the Draft Feasibility Study published in May 2006. Per capita consumption was forecast to remain at 145 litres per head per day, giving rise to a total domestic demand of 317 million litres per day; while average and peak demand projections were also unchanged.

It was clear that no account had been taken of the massive changes in Ireland's economy from a period of strong growth to a severe economic recession. These changes occurred between 2006 and early 2008, when the first signs of the economic downturn became apparent; and, at that time, the effects of the recession were expected to become more severe in 2009, and in the following years. As we now know, there was no significant addition of new housing stock in the Dublin water supply area, as anticipated in the 2008 Plan. On the contrary, the number of housing completions fell as a result of the economic recession.

Given the history of failure (described briefly above) to consider any measures to reduce per capita demand for water, or to take account of any potential reduction in per capita consumption, we would expect that these issues might be important objectives of Irish Water's draft Water Services Strategic Plan.

Throughout the draft plan there are many references to demand for water supplies, but it appears that nearly all of these address the need to meet rising or potential demand, rather than managing demand to conserve the resource.

For example, the Executive Summary states that:

> *"There are areas zoned for development which are currently constrained by limitations in system capacity for water and wastewater. This additional demand must be met without risk to existing customer service standards".*

Other references to demand include the following strategies (we have emphasised the word '**demand'** in each quotation):

- *"The delivery of appropriate infrastructure to meet the required **demand**, where and when it is needed, supports the social and economic growth of the country. Reliable, high quality water supplies are increasingly important to attract foreign direct investment into Ireland. To achieve these objectives we must assess the **demands** for water services, based on national and regional spatial planning policies and plans, together with population and economic growth predictions".* (Executive Summary, page x).

- *"The **demand** from businesses and industry is uncertain and industrial development can have significant "one-off" **demands** for large water and/or wastewater capacity. This requires that our plans and implementation programmes are versatile and capable of*

being phased as far as possible to meet emerging needs". (Executive Summary, page x).

- *"A National Water Resources Plan is a country-wide assessment of water resource availability and water supply* ***demand****"* (Chapter 4; Objectives: Ensure a Safe and Reliable Water Supply, Strategy WS1a, page 27).

- Strategy WS2g states that Irish Water *"will prepare Regional Water Conservation Strategies that will deliver a targeted programme of leakage detection, leakage control, pressure management and leakage repair" (*Strategy WS2g, page 32).

- "*As the Regional Water Conservation Strategies referred to in WS2g are implemented, the focus on customer* ***demand management*** *in combination with less leakage will ensure costs for water abstraction, treatment and distribution are reduced.* ***Demand management*** *will be facilitated through the domestic metering programme, with water use figures provided on quarterly bills and the potential for customer savings for low water use*" (Chapter 4. Objectives: Ensure a Safe and Reliable Water Supply, Strategy WS3c, page 33).

- Irish Water will "*prepare and implement water conservation strategies including* ***demand management***", and the plan states that "*water conservation encompasses activities to manage the use of water as a sustainable resource whilst protecting the environment*" (Strategy WS3c, page 33).

- *"We will support education on water usage to encourage reduced water* ***demand*** *across both domestic and commercial water users. This will focus on the 'value of water' and how our actions and activities impact on our water* ***demand*** *and the implications for the environment, levels of service and costs to customers. The introduction of meters to measure domestic water usage at individual properties will facilitate this"* (Chapter 4. Objectives: Ensure a Safe and Reliable Water Supply, Strategy WS3c, page 33).

- *"The delivery of appropriate infrastructure* ***to meet the required demand*** *where and when it is needed is fundamental to supporting social and economic growth*" (Chapter 7. Objectives: Support Social and Economic Growth, page 60).

- *"We are committed to providing strategic capacity to* ***cater for domestic demand*** *arising from population growth and* ***non-domestic demand*** *associated with this growth (e.g. demand from education, hospital and commercial facilities serving these populations)"* and *"In order to deliver on this commitment we will take a national, regional and river basin perspective on the*

> *development and management of water services* ***to meet existing and planned for demand****"* (Strategy SG2b, page 65).

Despite a thorough search of the Strategic Plan, we have found only a few references to demand management (in Strategy WS3c, page 33, quoted above), and it is clear from these that the only demand reduction measures considered are through metering, pricing and education. It appears that no other demand management policies, strategies or measures have been considered; and in that respect the Strategic Plan differs very little from the approach taken by Dublin City Council in the Greater Dublin Water Supply proposals from which we have quoted above. Instead, the principal objectives of the Strategic Plan appear to be based on supporting continued "economic growth", catering for uncertain industrial demand, and attracting foreign direct investment into Ireland.

In other parts of the world, policy-makers are increasingly emphasizing non-structural approaches to water management, especially including demand management, scientific research, education and persuasion to coordinate how human societies use water. These demand-side policies are aimed at addressing the human causes of water problems such as water quality degradation, overexploitation of aquifers and the decreasing availability of water flows to meet non-consumptive water uses (such as hydroelectric power, pollution assimilation, and the maintenance of fish and wildlife habitats).

Metering and pricing alone, while certainly helping to reduce demand, will not provide the necessary reduction in per capita water use in households, or major reductions in commercial and industrial buildings. Other incentives and measures are needed, and the Water Services Strategic Plan does not appear to have considered these.

This is an unfortunate omission from the Plan, as comparative water-use data show that domestic water use in Ireland is higher than in other European countries, with daily domestic consumption of water averaging 160 litres per capita in Ireland. This is higher than in Britain (150 litres per capita per day), Germany (121 litres) and Denmark (114 litres), all users being metered in these last two countries). At 141m³ per inhabitant, Ireland has the third highest freshwater abstraction rate per inhabitant of the 26 EU member states, exceeded only by Italy and Croatia.[10]

Reducing this high rate of water use should be a primary objective of the Water Services Strategic Plan, especially when we consider that the eastern portion of the country is beginning to suffer significant water shortages more frequently than in previous decades, supplying potable water is becoming increasingly costly, and every litre of water delivered to a household or to most commercial premises results in an equivalent volume of wastewater to be treated, again at a high cost.

[10] Eurostat Water Statistics, data from March and July 2014: http://ec.europa.eu/eurostat/statistics-explained/index.php/Water_statistics

It is therefore our submission that effective demand management and reduction in domestic and commercial water use is a win-win strategy, and much more cost effective than attempting to meet the demand for water, as proposed by the Water Services Strategic Plan.

We like the definition that demand management is "*the implementation of policies or measures that serve to control or influence the amount of water used*", though a more comprehensive and better definition is given by the Department of Water Affairs and Forestry, South Africa:

> "*water demand management is the adaptation and implementation of a strategy (policies and initiatives) by a water institution to influence the water demand and usage of water in order to meet any of the following objectives: economic efficiency, social development, social equity, environmental protection, sustainability of water supply and services and political acceptability*".

A definition from a social perspective is that water demand management is a practical strategy that improves the equitable, efficient and sustainable use of water, and this is achieved by:

(i) stressing equitable access to water, reflected in a strategy that is specifically designed to improve service delivery to the poor;

(ii) treating water as both an economic as well as a social good, and managing and pricing it accordingly;

(iii) balancing the management of losses and consumption with new or augmented supplies; and,

(iv) and managing the change from a supply driven to a demand responsive culture.

Irish Water's Strategic Plan appears to have no social policy component, but it is demand responsive, to an extent which over-rides conservation, as we have noted above. The reference in the South African definition to "political acceptability" is a clear lesson for the Irish government, as demonstrated by the intense public anger at the manner in which Irish Water has been established; but this is an issue which ZWAI will not address in this submission.

3.3 Water Conservation

Conservation and demand reduction are two sides of the same coin – appropriate conservation measures will lead to a reduction in demand for water, while demand management can be greatly assisted by suitable conservation measures.

When the Government had indicated its intention to take a national approach to water, and to establish Irish Water as a new public utility, a public consultation process was undertaken in early 2012 along with the publication of a report on the establishment of Irish Water and a position paper setting out the reform of the "Water Sector". The public consultation resulted in some 300 submissions, including submissions were made in relation to water efficiency actions, with

support for increased efficiency measures such as water saving devices, rainwater harvesting and increased use of grey water.[11]

It appears that these submissions have been largely ignored, as we could find only a small number of references to water conservation in the Water Services Strategic Plan, and in nearly all instances "conservation" means "leakage reduction", and the term is not used in its wider sense of conserving water by more efficient use of water supplies or by augmenting public water supplies by greater use of rainwater harvesting.

References in the Plan to "conservation" include:

- *"Implement Regional Water Conservation Strategies to reduce leakage from our water mains by over 50% in the period of the WSSP"* (Executive Summary, page vii).

- *"Planning for resilient water supplies must also take place, independently of any progress in water conservation or success in reducing leakage" (Chapter 2, Challenges and Strategic Priorities, page 8).*

- Strategy WS3c states that Irish Water will "*prepare and implement water conservation strategies including demand management*", and the purpose of this strategy is given as "*to reduce the volume of water abstraction and treatment and therefore cost to the customer*" (Chapter 4, Strategy WS3c, page 27).

- Strategy WS2g, which addresses the task of preparing regional water conservation strategies, states that "*leakage is an immediate priority for Irish Water*" and "*Irish Water currently estimates that, nationally, 49% of water produced is lost to leakage, with the leakage lowest in the Greater Dublin Area and greatest in rural schemes with relatively long pipeline lengths per customer served. We will prepare Regional Water Conservation Strategies that will deliver a targeted programme of leakage detection, leakage control, pressure management and leakage repair*" (Strategy WS2g, page 32).

It is clear that the Water Services Strategic Plan considers conservation of water only in the narrow context of leakage control and saving of costs; and, while these are very desirable objectives, the Plan ignores the wider issue that water is a scarce and valuable resource, and should be treated as such.

If we look at the wider view, we see that climate change, population growth and migration, increasing urbanization and ageing infrastructure are imposing significant strains on urban water supplies and water cycle systems in Europe (including Ireland) over the coming decades. Cities such as Dublin are already beginning to experience increasingly frequent shortfalls in the supply and

[11] Department of the Environment, Community and Local Government, 2012. Water Sector Reform – Implementation Strategy; 12 October 2012.

demand balance, particularly during the summer months. More intense rainfall events are leading to local flooding of properties and to pollution of receiving waters.

Sustainable solutions to these challenges need to be sensitive to long-term investment needs, but also to increasing energy prices, demands for low carbon intensity solutions, and the need to reduce gas emissions from urban activities – but none of these issues are addressed in any detail (or at all) in the Water Services Strategic Plan.

3.3.1 The Example of Water Conservation Measures in the Cities of Melbourne, Sydney and Goleta

If we now consider the practical details of water conservation, we find that there is a wide range of measures and appliances which can be used or installed to conserve water, and we have listed these in Table 3.3 below. This example is taken from the City of Melbourne which has practiced total water-cycle management since 2002, supported by its adoption of the Total Watermark policy in 2004 and the Water Sensitive Urban Design (WSUD) Guidelines in 2005.

	ACTIONS	REDUCTION
Parks	Improve irrigation efficiencies (subsurface, soil moisture sensitive, technological improvements, limited time).	40 %
	Understanding soil types and subsequent soil moisture needs.	
	Mulching to prevent or reduce evaporation of moisture from the soil.	
	Planting climate responsive, drought tolerant species.	
	Staff training programs and contract provisions.	
Council buildings	Efficient fittings – flow restrictors on taps, showerheads.	40 %
	Efficient toilets – dual flush, reduced header tank flow.	
	Fire-sprinkler testing (reduced from weekly to monthly, or recirculating).	
	Cooling system efficiencies, resulting in water saving.	
	Staff training, contract provisions, education and behavior change programs.	

	ACTIONS	REDUCTION
Business and commercial buildings	Cooling system efficiencies.	50%
	Appliances – efficient washing machines and dishwashers.	
	Reduction in water use up to 50% per employee achieved through alternate water sourcing.	
	Efficient fittings – flow restrictors on taps, showerheads.	
	Gardens – efficient species, layout and irrigation (to be maintained when water restrictions are not in place).	
	Property management and tenant behavior change programs.	
	Proceed with the rollout of water conservation projects, including fire sprinkler testing program, green hotels and sustainable office building program.	
Households / residences	Efficient fittings – flow restrictors on taps, showerheads.	40%
	Water-efficient fittings and appliances, including more efficient washing machines and dishwashers	
	Gardens – efficient species, layout and irrigation (to be maintained when water restrictions are not in place).	
	Swimming pools – pool covers, re-use of backwash.	
	Householder behavior change through education.	
	Balance ring mains, fire sprinkler and cooling system efficiencies.	

Table 3.3 **Adapted from: Interventions in terms of actions and reduction percentages in the 'city as a catchment' approach within the Total Watermark policy of the City of Melbourne (*Total Watermark: City as Catchment*, City of Melbourne, 2009). Cited in: *Best Practices for Sustainable Urban Water Cycle Systems – An overview of and enabling and constraining factors for a transition to sustainable UWCSs*,** by Christos Makropoulos (National Technical University of Athens), Evangelos Rozos (National Technical University of Athens), Stian Bruaset (SINTEF Building and Infrastructure), Jos Frijns (KWR Watercycle Research Institute), and, Mariëlle van der Zouwen (KWR Watercycle Research Institute), December 2012. Research funded by the European Union Seventh Framework Programme (FP7/2007-2013) under grant agreement number 265122.

While some of the above-listed measures may not be fully applicable to Dublin or other Irish cities, they illustrate the range of possibilities yet to be considered by Irish Water.

Another example is provided by the City of Sydney, also in Australia, which implemented in 2010-11 a water efficiency programme (entitled WaterFix) for residential, business and school buildings, supported by community education and research and development activities.

Under the WaterFix programme, the City administration provided households with a qualified plumber to install a new water efficient showerhead; to install tap flow regulators, to install toilet cistern flush arrestor for single-flush toilets, and to repair minor leaks. Each WaterFix service was estimated to save 20.9 thousand litres per household per year. Since the program started in 1999, a total of 485,211 properties, including Department of Housing properties, have taken up a WaterFix service.

For other water users, the City developed DIY Water Saving Kits as an alternative to the full WaterFix service. These kits, which were distributed to home owners, provided simple devices people could install to make existing showerheads and taps more water efficient. Each DIY kit was estimated to save about 6.7 thousand litres per household per year. Since the program began in 2004, 211,623 DIY kits have been distributed.

Replacing a single-flush toilet with a 4 star dual-flush toilet can save about 23 thousand litres per household per year. Since it started in July 2008, 28,224 toilets have been replaced as part of this program.

Sydney offered residents a $150 rebate for purchasing a water efficient washing machine; and, as a result, some 186,634 rebate applications have been paid, saving each household on average 18 thousand litres of water annually.

As part of the New South Wales (NSW) Government's Climate Change Fund, a $150 rebate was offered for installing a hot water circulator with instantaneous gas hot water systems. A hot water circulator sends the cold water back into the hot water system to be reheated or used later. The NSW Government estimated that each hot water circulator saved up to 17 thousand litres a year.

Sydney Water offered customers a substantial rebate to cover the cost of installing and connecting a rainwater tank to existing homes. It is estimated that each rainwater tank installed saves between 35 to 60 thousand litres a year on average depending on how it is installed.

The WaterFix service also included a programme that helped customers identify and repair concealed leaks in their homes. Meter reading data was used to identify long and short term leaks; and, when notified of this consumption anomaly, if a customer could not find their leak an expert contractor was provided free of charge to detect the leak using specialist leak detection equipment. Since 2008, over 230 leaks have been detected and repaired; and it is estimated that this service saved each participating household 50,000 litres of water annually.

It is very good to see that Irish Water has implemented a similar scheme, under the title of "**First Fix**". Since detecting over 30,000 suspected leaks in customer properties during its first meter reading cycle in early 2015, Irish Water has contacted 2,500 customers offering them a free leak investigation under the interim First Fix Scheme.

Irish Water's Interim First Fix Scheme offers a free leak investigation to these customers to assist in identifying potential leaks and the scheme could provide a free repair of leaks located on the customer's external supply pipe, i.e., the pipe located between the water meter box and the point of entry to the house.

According to Irish Water however, if a leak is confirmed which is internal to the house, customers will be advised to arrange a repair. While the benefit of a leak investigation at no charge to the customer is very welcome, we would suggest that financial assistance should be given to households where the cost of fixing the internal leak (or leaks) is beyond the financial capacity of the householder. If this financial help were to be provided, it would repay the State in the form of less wastage of water, reduced need to augment water supplies, and reduced demand on wastewater treatment facilities.

In total, the programmes implemented in the City of Sydney, as described above, saved 17,556 million litres of water in 2010-11; i.e., approximately 17.5 billion litres! While the cost of this programme was obviously substantial, the value of the employment generated, and the cost savings that resulted in having to supply less water in 2010-11 and into the future would almost certainly have yielded a positive return, and would continue to do so into the future. When we add the fact that less water supplied in homes, business premises and other locations results in less wastewater having to be treated, it is easy to see that conservation provides the best return on expenditure. The following example gives an indication of such savings:

> "*When [the city of] Goleta, California, faced high costs for new water supplies during a drought, the water authority helped its 74,000 people to install over 17,000 water-frugal toilets (14,700 of them aided by rebates), gave away about 35,000 high-performance showerheads, identified more efficient irrigation methods for hundreds of households, and aligned water tariffs with marginal costs so that people would understand what their next unit of water usage really cost the community. From May 1989 to April 1990, per capita residential water use fell by over 50 per cent compared with the previous 5-year average. Total usage fell by over 30 per cent, from 135 to 90 gpcd [gallons per capita per day] – twice the 15 per cent target. The average single-family, multifamily and motel savings were respectively 50, 40, and 40-50 per cent. Later savings raised the total savings from over 30 per cent to 40 per cent. The whole programme, costing $1.5 million, reduced sewage flow from 6.7 to 3.9 million gallons per day by June 1990, indefinitely deferring a multi-million-dollar expansion of the previously overloaded*

treatment plant that had been thought necessary to comply with EPA standards."[12]

3.3.2 A Good Example from Dublin

Closer to hand, we can point to the success of the water conservation project operated by the City of Dublin Energy Management Agency (CODEMA) in Dublin's Civic Offices -- a 12-month project which in that short period of time reduced water demand by approximately 15% in the Civic Offices during 2003; but its methodology and the lessons learned from it have not been applied elsewhere or more widely.[13]

3.3.3 The Cost of Wastewater Treatment when Conservation is Ignored

Another lesson from the example of Goleta is that by reducing the volume of water supplied to homes and businesses, the cost of expanding the city's wastewater treatment plant was saved. When Dublin City Council and the adjacent local authorities which comprise the Greater Dublin Area were planning to transport by a long-distance pipeline some 455 to 460 million litres of water daily from the River Shannon to Dublin City and other east coast local authorities, the cost of treating the equivalent volume of wastewater was completely omitted from the Feasibility Study and the Scoping Report for Phase II of the Strategic Environmental Assessment !

This was an extraordinary omission, which, if it had been included, would have shown the proposed water supply scheme to have been much more costly than estimated in the reports produced for Dublin City Council. As we have noted earlier, for every litre of water conveyed to a building, approximately a litre of wastewater is produced. This is recognised in Denmark, where the metered amounts of water supplied to a household are used not only to determine the household's water consumption, but also to calculate the volume of sewage requiring disposal, so that the appropriate wastewater treatment charges can be levied.

Irish Water also recognises this fact in its proposal to levy charges for wastewater treatment, but the Water Services Strategic Plan fails to appreciate that the economics of supply and disposal are not evenly balanced. It has long been recognised that "*the cost of getting rid of abundant water proved many times more costly than getting it there is the first place*" and "*this disproportion*

[12] Rocky Mountain Institute, 1994. *Water Efficiency: A Resource for Utility Managers, Community Planners and Other Decision makers*, (in co-operation with the US EPA), 4th ed., November 1994, Snowmass, CO, USA. Cited in Weizsäcker, E.von, Lovins, A.B. and Lovins, L.H., 1998. *Factor Four: Doubling Wealth - Halving Resource Use. The New Report to the Club of Rome*. London, Earthscan Publications Ltd., page 87.

[13] Civic Offices Water Conservation Project. DublinWaterSave Website https://www.dublincity.ie/main-menu-services-water-waste-and-environment-water-projects/dublin-region-water-conservation

was increased further when many large cities decided to combine the sewers for waste with storm waters for rain".[14]

We can clearly see how ignoring water conservation, while providing large-scale sewage treatment, has been very costly for Dublin City. The Ringsend wastewater treatment works, which had cost €297 million (2011 prices, VAT exclusive), began operating in June 2003; but within two years it had to be extended and upgraded, as it was overloaded from day one (a plant that was supposed to have sufficient capacity until 2020 was over-capacity in 2002, partly due to miscalculation of the commercial load), it did not meet the EU Wastewater Treatment Directive standards, and a noxious smell persistently affected the surrounding communities in the Ringsend area.

The overloading of the wastewater treatment plant has also had financial consequences for Dublin City Council, which has had to pay additional fees to the operators of the plant, Celtic Anglian Water, as compensation for dealing with the extra load.

After the project was finalised, the designation of the Liffey estuary as a sensitive water body requiring full tertiary treatment of discharges to it resulted in the need for an additional expenditure of a further €147.3 million (2011 prices, VAT exclusive), together with some €40 million on odour alleviation measures, which had to be paid by Dublin City Council.

In 2011 the City Council announced its intention to extend the capacity of the plant to 2.1 million population equivalent. The project has now been taken over by Irish Water, and the information provided on the project's website states that "*The ultimate cost of this project will be determined by a competitive tendering process and it would not be appropriate to speculate publicly on this without potentially compromising the bidding process. Suffice to say that the Dublin Bay Project will cost several hundred million euros to complete*".

In other words, the overall expenditure on wastewater treatment for Dublin City and the adjoining portions of the drainage area could amount to around €700 to €800 million Euro; and we would have to ask how much of this expenditure was required to deal with greater volumes of wastewater derived from increasing per capita consumption of water, and how much of this expenditure could have been avoided if conservation measures had been implemented.

It is therefore our submission that Irish Water must develop and implement better governance structures, forecasting techniques and project management capability than that shown by Dublin City Council in its approach to the development of the Ringsend wastewater treatment plant. The poor quality of design, construction and overloading of the Ringsend WWTP also had a lasting and serious negative effect on the quality of life of Ringsend residents, a point noted by the European Commission in its 2012 Ex Post Evaluation of the Plant.

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[14] Illich, Ivan, 1985. *H_2O and the Waters of Forgetfulness: Reflections on the Historicity of Stuff*. Published 01 January 1985 by the Dallas Institute of Humanities and Culture, Dallas, Texas; and published subsequently by Heyday Books, Berkeley, California, USA.

3.3.4 What Practical Steps can be taken to Conserve Water – some Further Suggestions for Irish Water

In sections 3.3.1 and 3.3.2 we have given some examples of conservation measures. In this short section we make some proposals to reduce water consumption and thereby reduce Ireland's increasing demand for mains water. Regulating for water use should be no different than providing suitable toilets for disabled people in public buildings; the principle is the same – to improve the quality of life for people, in this case by reducing water demand without causing hardship or discomfort. We therefore propose the following mandatory requirements:

- Dual-flush water-saving toilets should be installed in all new houses and refurbished houses in the future;
- Dual-flush water-saving toilets should be specified, and their installation required, under Part H of the Irish Building regulations;
- The sale of single flush toilet cisterns should be banned in Ireland; and,
- One or more male urinals should be specified and installed in new and refurbished houses, together with push-to-flush taps or some other form of low-water-flush devices in these urinals so to significantly reduce water demand when half the population uses the toilet.

3.4 Using Rainwater to Replace or Augment Mains Water

Rainwater utilization is comparatively rare in Ireland, but has been widespread in Germany since the 1980s, and around 50,000 professional rainwater harvesting systems are being installed every year, mostly in new one-family houses.[15]

Typically, the water is collected from the roof and is filtered, stored and primarily used for toilet flushing, garden watering and household laundry. Research by Erwin Nolde at the Technical University of Berlin has suggested a novel approach: instead of using only the water from the roofs, the results shows that rainwater draining from streets and courtyard surfaces could also be reused. This could be a viable option for densely populated urban areas and reduces drinking water consumption and wastewater production. It also minimizes the entry of pollutants into the surface waters, without the need for a sewer connection. He found that 70% of the toilet-flush demand can be replaced by treated stormwater without any comfort loss.[16]

There are numerous positive benefits for harvesting rainwater. The technology is low cost and highly decentralized, empowering individuals and communities to manage their water, and to improve access to water and sanitation at the local level. In agriculture, rainwater harvesting has demonstrated the potential of doubling food production by 100% compared to the 10% increase from

[15] Nolde, E., 2007. Possibilities of rainwater utilisation in densely populated areas including precipitation runoffs from traffic surfaces, Desalination, 215, pp. 1–11.

[16] Nolde, E., 2007. *Op. cit.*

irrigation. Rainfed agriculture is practiced on 80% of the world's agricultural land area, and generates 65-70% of the world's staple foods. The biggest challenge with using rainwater harvesting is that it is not included in water policies in many countries, where water management is based on surface and groundwater with little consideration of rainwater.[17]

According to the Irish Water Treatment Association, studies show that 55 % of domestic treated water could be substituted for rainwater while 85 % of water used for commerce and industry does not need to be of drinking standard. Rainwater harvesting systems have only started to grow in popularity in Ireland during the past couple of years or so, but they have long been popular abroad. For example, they have been used for about 20 years in Germany, which does not have as much rainfall as Ireland. To date, the demand for rainwater harvesting technology in construction projects has been driven by planning decisions, commercial developments and environmentally conscious builders and developers.[18]

Unfortunately there is no mention of rainwater harvesting in the Water Services Strategic Plan; and the only reference to rain occurs in connection with flooding of properties ! In the Executive Summary, rain is mentioned in the context of "*heavy rain resulting in the flooding of some properties and giving rise to overflows which can cause pollution within our rivers and streams*" (Executive summary, page iv), and "*during intense rainfall, combined sewer overflows discharge effluent into our watercourses with limited or no treatment and this can result in unacceptable levels of pollution"* (Executive summary, page viii).

Under the heading of Managing Wastewater (page 8), the Plan notes that "*during periods of heavy rainfall, surface drainage from roads and other impermeable areas combines with household and business wastewater in a 'combined' sewer",* and "*this places a large stress and capacity requirement on our wastewater networks and treatment plants".*

In other sections of the draft Strategy, rainwater is again mentioned, but only in the context of the combined sewerage system; and heavy rainfall is considered to be problematic because it results in increased hydraulic flows in the sewers, may overload the sewers and wastewater treatment plants, resulting in partly untreated discharges to rivers and streams, and serious intermittent pollution of these watercourses. In addition, heavy rainfall on impermeable surfaces such as roads and roofs can cause flooding of properties.

The draft Strategy also notes that "*increasing urbanisation combined with more frequent and intense rain storms (due to climate change) can result in the capacity of some combined sewers being exceeded. This can cause flooding of properties causing distress to some customers*" (Chapter 5, Strategy WW2c, page 46).

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[17] *Rainwater Harvesting: A Lifeline For Human Well-Being*. A report prepared for UNEP by Stockholm Environment Institute. Published by United Nations Environment Programme and Stockholm Environment Institute in 2009.

[18] http://www.iwta.ie/rainwater-harvesting/3/rainwater-harvesting.aspx

Irish Water's response to these undesirable consequences is to:

- implement mitigation measures;
- record and gather information on flooding events from combined sewers caused by inadequate capacity and other causes;
- focus on research and development;
- improve sewer network models; and,
- investigate (in collaboration with local authorities) the use of sustainable urban drainage systems in combined sewer areas.

The reference to sustainable urban drainage systems, even though it states very little about their implementation, is very welcome, as these systems (which are in use in many countries) reduce flooding and overloading of sewers by providing cost-effective solutions that are designed to replicate natural systems. Sustainable urban drainage systems (SUDS) allow surface water run-off after rainfall events to be collected, stored and cleaned before releasing it slowly back into the environment.

Examples of this type of SUDS include basins (shallow landscape depressions that are dry most of the time when it's not raining), rain-gardens (shallow landscape depressions with shrub or herbaceous planting), swales (shallow normally-dry, wide-based ditches), filter drains (gravel filled trench drain), bio-retention basins (shallow depressions with gravel and/or sand filtration layers beneath the growing medium), reed beds, constructed wetlands and other wetland habitats that collect, store, and filter dirty water along with providing a habitat for wildlife.

Their principal features (along with flood prevention) are that they should be easy to manage, requiring little or no energy input (except from environmental sources such as sunlight, etc.), resilient to use, and environmentally as well as aesthetically attractive.

It is our view that SUDS should be more widely used in Ireland, that they should be included in the planning and design of all new housing estates, town and village centres, retail centres, roads, and other developments which include large hard-surfaced impermeable areas. There are many examples world-wide where such systems are in use, and are serving their flood alleviation purpose while at the same time providing public open spaces or areas for wildlife.

As mentioned earlier in this section, rainwater harvesting is not included in any of the objectives of the Water Services Strategic Plan; and we consider that this omission is regrettable.

We now have obligations to include renewable energy systems in new housing developments, and therefore we propose that a similar set of measures should be promoted, to increase rainwater use, and to correspondingly reduce mains water use:

- It should be mandatory to install and use rainwater harvesting for toilet flushing and gardening in all new houses and refurbished houses in the future;
- Part H of the Irish Building regulations should be amended to require that rainwater must be used for toilet flushing in all new houses;
- The EPA should be requested to produce a Code of Practice for rain-water harvesting (similar to the existing and widely used Code of Practice for Site Characterisation and Assessment for proposed domestic wastewater treatment systems). These recommendations should include technical guidance and options to make treated rainwater safe to use for all other uses in the home with the exception of drinking water or water for cooking;
- Government funded "free" training and education (without obligations) should be provided to members of the public on water quality and health safety issues, on national standards and obligations for drinking water, on grey water treatment and re-use, and on the operation of septic tanks and domestic wastewater treatment systems;
- Planning authorities should inform architects and home builders at an early stage in the planning process that rainwater harvesting must be considered in all proposed developments, and that a planning application should include measures for rainwater harvesting;
- Planners and Planning Authorities should require that rainwater harvesting is included where possible as a useful element in any Sustainable Urban Drainage (SUDS) measures;
- A legal basis and financial incentives (tax incentives) should be drawn up for the supply of rainwater between adjoining or nearby houses, or the sale of rain water between nearby houses and properties – solely for non-potable water use and specifically for toilets, car washing and gardening only; as this would encourage the neighbourly sharing of water;
- Plumbers should be trained to install and maintain multiple water sources within buildings, so as to prevent contamination of the mains water supply from rain water or treated grey water, and thereby to maintain the quality of water essential for human health.

3.5 Using Grey Water for non-potable Purposes

Our obligations to recycle water are clearly set out in European Council Directive 91/271/EEC of 21 May 1991 (the Urban Waste Water Treatment Directive) which states in Article 12-1 that "*Treated wastewater shall be reused whenever appropriate*".

Grey water is defined as wastewater generated from dish-washing and wash-hand basins, showers and baths, and can be recycled on-site for uses such as toilet flushing, landscape irrigation and constructed wetlands. Grey water may also include wastewater from clothes washing machines and discharges from

dishwashers and kitchen sinks. However, it is best to exclude wastewater from kitchen sinks and dishwashers, as this frequently contains solids which make treatment and re-use difficult.

Grey water differs from the discharge of toilets, which is designated as sewage or black water to indicate that it contains human waste. In contrast, the amount of human waste present in grey water is normally so small that its return to the environment requires no systematic wastewater treatment.

The potential benefits of grey water recycling include:

- Lower freshwater extraction from rivers and aquifers;
- Less impact from septic tank and treatment plant infrastructure;
- Topsoil nutrification;
- Reduced energy use and chemical pollution from wastewater treatment;
- Groundwater recharge;
- Increased plant growth; and,
- Recovery and re-use of nutrients especially nitrogen and phosphorus.

There is only one reference to grey water in the draft Strategy, and it states that Irish Water "*will promote the reuse of grey water and water efficient domestic appliances. We will also provide specific advice to our commercial and industrial customers on how to reduce water usage, thereby assisting our drive towards minimising abstraction*" (Strategy WS3c, page 33). This objective is welcome, but should be expanded and more detail provided, to show that Irish Water is serious about the reuse of grey water where appropriate. Clearly, if grey water were to be more widely used, one effect would be to reduce the pressure on water supplies.

Given the public concern about water charges, it is inevitable that people's attitudes and thinking will change, and we believe that a growing number will want to take more personal responsibility for water issues in their own homes. We therefore propose the following requirements:

- The EPA or Irish Water should provide training and appropriate technical recommendations for the installation of grey water treatment and recycling systems for communities and single homes, as permitted presently in Part H of the Building Regulations;
- The new planning regulations and a revised Part H of the Building regulations should make it mandatory and should impose a planning requirement for developments with a large number of houses (more than 30 housing units?) to provide and operate grey water treatment and recycling, with water storage for toilets, gardens, car washing and clothes washing in those houses;
- Management companies which operate these community or privately operated grey water re-use systems should be registered with the Local Authority; the re-use systems should also be registered, and should be inspected Local Authority inspectors (similar to the present inspection

regime for septic tanks and single-house wastewater treatment systems); and,

- Planning authorities should inform architects and home builders at an early stage in the planning process that re-use of grey water must be considered, and that the planning application should include measures for grey water re-use as far as possible.

3.6 Leakage Control and Leakage Reduction in Water Distribution Systems

The amount of water leaked in water distribution systems varies widely between different countries, regions and systems, from as low as 3–7% of distribution input in the well-maintained systems, to 50 percent and even more in some undeveloped countries and less well maintained systems.[19]

According to the Water Services Strategic Plan, "*we are also losing almost half of the water we produce due to leakage within our water mains and within customer properties"* (Executive Summary, page iv), and Irish Water has estimated that "*nationally, we are losing approximately 49% of the water we treat due to leakage from our water mains and within customers' properties"* (Executive Summary, page vii). These estimates place Ireland among less developed countries, and among those countries where water supply systems have been poorly maintained.

The Water Services Strategic Plan states the problem clearly:

> *"Leakage from our water supply networks is at unacceptable levels and well above international norms*" (Chapter 1. Introduction, page 3-19).

and

> *Leakage of water from supply networks is a serious problem on a national scale. 'Unaccounted for Water' (UFW), both in Irish Water's networks and within customer properties, is estimated nationally at approximately 49% of the water produced for supply. This is twice the level of that in the UK and several times the typical figures in Germany, Denmark and the Netherlands, indicating that significant investment will be needed over a number of investment cycles to catch up with international norms in the water utility sector. High levels of leakage result in more raw water being abstracted and treated. This uses more energy and chemicals, requires larger treatment plants and pipelines, and leaves less water in our natural environment* (Chapter 2, Challenges and Strategic Priorities, page 8).

[19] Covas D., Ramos H., 1999. Practical methods for leakage control, detection and location in pressurised systems. 16 pp. Available at URL: http://www.civil.ist.utl.pt/~hr/bhrgroupEdin.pdf

The response by Irish Water is that "*We will prepare Regional Water Conservation Strategies that will deliver a targeted programme of leakage detection, leakage control, pressure management and leakage repair. We plan on reducing leakage across all schemes to less than 38% by the end of 2021 and will work to achieve a sustainable economic level of leakage, estimated to be in the range of 18-22%, by 2040*" (Chapter 3. Objective: Meet Customer Expectation, Objective WS2g, page 32).

While accepting that reducing leakages and improving the distribution network is costly, we consider that the above targets are still too high, and that if leakage could be reduced to 10%, the resultant savings (by not having to develop new water sources to the currently predicted extent, and by reducing the need for large additional wastewater treatment capacity) would be very significant.

Irish Water will be aware that a growing number of water utilities worldwide are adopting the use of the Infrastructure Leakage Index (ILI) as a means of measuring and benchmarking water leakage. The ILI is a high level performance indicator advocated by the International Water Association (IWA) and already used by various countries across the globe. The ILI is computed as the ratio of the total national leakage (Current Annual Real Losses) to the minimum technically achievable leakage value (Unavoidable Annual Real Losses). Hence an ILI of 1 implies that the national value of leakage will have been reduced to its minimum technically achievable value (for a given pressure regime), a feat that can only be achieved by an organization that is highly competent and that boasts a water network that is in good infrastructural condition.

While we could not expect Irish Water to achieve this ratio, we consider that a more ambitious target of leakage control and reduction is achievable.

3.7 The Ecological Context and Nature Conservation

It is a basic principle of ecology that water is essential for all ecosystems, and especially for aquatic and wetland habitats. We need to protect these areas; and, where they are not fully functional in an ecological sense, to restore them to good status as required by the Water Framework Directive.

The Plan mentions "enhancement" – we cannot enhance nature, which has the benefit of millions of years of evolution; the best we can do is to cease damaging the environment and, where it has been damaged, restore it to full functioning and good status, as required by the Water Framework Directive.

3.8 Recovering Nutrients from Waste Water

Reducing phosphorous from waste water has become one of the emerging challenges in recent years.

Setting targets of 2 mg/ litre for most treated water discharges has been the established standard for most large and small municipal waste water treatment systems. Reducing this treatment standard still further to a figure of 0.5 mg / litre has become an additional obligation when discharging to ecologically sensitive or protected environments. All of this has required an additional treatment stage and an additional cost on Waste Water Treatment Plant operators.

In spite of these new standards we are still wasting phosphorous. This wasting of phosphorous into the aquatic environment continues on a large scale.

Much of the thinking about phosphorous in waste water is about eliminating it. There is no great awareness of the need to recover it and to also reuse it.

We in ZWAI believe however that we should be removing it from water for the purposes of recycling it as a fertilizer. Without phosphorous fertilizer we cannot grow crops. Most significantly, while phosphorous is a very abundant element in living organisms, there is a finite amount of this material left on the earth as a minable or easily extractable resource.

We mention this phosphorous issue because we believe that this will cause two very significant world wide changes over the coming decades.

The first change will be the very significant rise of conventional phosphorous fertilizer prices as the availability of this very finite resource begins to run out. The projections are that the extractable resource left in the ground will be only half of what it is today by the year 2100. In addition to the reduced resource, the increased world population will place a much greater market demand on a shrinking resource. World commodity food prices will increase significantly. As food prices rise people's diet in poorer countries will suffer. There are no alternatives to phosphorus and no other way to create it. Once the phosphorous is diluted in the sea or in lakes it becomes too expensive to recover it.

The second change will be that the economics of phosphorous extraction and its recovery will very significantly improve. Instead of mining for phosphorous the emphasis will change to the separation, recovery and the recycling of phosphorous in urine. Living creatures will become the sustainable source of phosphorous. Animal manures and human urine will become the new raw material of the fertilizer industry in the future.

Sweden is a leader in Europe in the use of urine separation and urine as a fertilizer. Already they are advanced in the safest methods to separate, store and apply urine on land successfully. The separation and recycling of phosphorous in urine that originated on our food will come to be recognised the world over as an important way of fertilising crops in the future. It will also become a mandatory method to avoid wastewater pollution.

As a policy we need to begin building our houses so that urine and toilet solids will be collected separately. It is by avoiding the mixing of human excreta with

all of the rest of the domestic waste water that we can most effectively collect and recover phosphate.

Most often it is the case that society prefers to react slowly or to only reluctantly respond to a crisis rather than predicting it and acting to avoid the crisis as early as possible. This has been the case with peak oil and climate change. We acknowledge that most people's tendency is to remain with the old thinking. Certainly however if the move to efficient ways to recycling phosphorous is too slow then we will pay more for our food or we will go hungry.

As a relatively simple way to address this issue, we submit that modern waterless and composting toilets with urine separation should be permitted under the Irish Building Regulations

WE also suggest that urinals in public buildings should be plumbed to keep urine separate from other domestic waste streams, that urine is then stored in large plastic tanks, and when the tanks are full of urine, a mini struvite processing unit could arrive to process the urine and convert the phosphorous to struvite.

The combined need to separate and recover phosphorous as well as the problem of pharmaceutically active substances in our water will force the European Union to enforce the measures that we are proposing above. The mixing of urine and toilet solids and grey water together will eventually be phased out. In three more generations our existing wastewater plants may be under-loaded, and because the BOD levels will be so low it might become difficult in many instances to operate activated sludge treatment plants.

3.9 Large-Scale Transfers of Water from one Area of Ireland to Another

It has not escaped our notice that the Plan does not mention one of the largest projects for which Irish water has taken responsibility, namely, the Water Supply Project for the Eastern and Midlands Region (WSP), which had originally been known as the "*Water Supply Project – Dublin Region*", when it was managed by Dublin City Council.

However, the Plan refers to "*cost-effective measures to transfer water from areas that have plentiful water resources to those which have insufficient supplies to meet current demand and to support growth, ensuring that this approach meets sustainability criteria and supports balanced regional development in line with national and regional planning policy*" (Chapter 4, Strategy WS1a, page 27).

This would appear to be a clear indication that a large-scale transfer of water from the western part of the country to eastern region and to Dublin is envisaged, and this is borne out by the information available on the website http://www.watersupplyproject.ie/

This website provides brief details of the Water Supply Project for the Eastern and Midlands Region, the principal feature of which will be abstraction from "*a new water source*", i.e., a water supply from the River Shannon, and a connection to a Terminal Reservoir near Dublin. The need for a new long term additional secure and sustainable water source for the Dublin Region was identified as far back as 1996 by Dublin City Council and the Department of the Environment, Community and Local Government, and it appears that the responsibility for implementing this scheme has finally been given to Irish Water.

We have referred to this proposed scheme earlier in our submission, and to the feasibility studies which accompanied it. Unless there are major changes in the scheme to abstract large amounts of water from the River Shannon at Lough Derg, we have the following reservations about its suitability:

- ✓ This would be a a major project – to bring 455 to 460 million litres of water daily from the River Shannon to Dublin City and other east coast local authorities, equivalent to 3,125,000 baths every day, or 28 million toilets being flushed daily.

- ✓ Very high "front end" capital costs:
  - abstraction from Lough Derg estimated at around € 515 million;
  - abstraction from Lough Derg and storage in a worked out area of peatland: € 551 million;
  - abstraction from Parteen Basin above Limerick: around € 621 million.

- ✓ Very high operating costs over a 25 year period:
  - abstracting from Lough Derg: € 126 million;
  - abstracting from Lough Derg and storage in an area of peatland: € 141 million;
  - abstracting from Parteen Basin: € 150 million.

- ✓ Therefore it is a high risk project, and one which would create a serious dependency on its functioning; and it is an "all or nothing project".

- ✓ The reliance of Dublin water supplies on a single large-scale source would create a dependence on that source, so that in the event of adverse effects becoming apparent in the Shannon catchment, there is no provision for a shut-down of the scheme.

- ✓ The proposed scheme includes no provision for controlling and monitoring the abstraction.

- ✓ We need to question whether the proposed scheme is the only way to ensure that the people and the industries around Dublin are not short of water, and are there alternatives ?

- ✓ Have the adverse effects of the scheme, and the environmental and social costs been taken into account ?

- ✓ The proposal did not re-examine the earlier assumptions of population growth and business expansion on which the projected daily demand of 350 million litres of water was based.

- ✓ The proposal did not take into account the effect of the economic recession, including the effects of emigration, of significant reduction in household disposable income, changes in life-style and other factors which tend to reduce per capita water consumption.

- ✓ The feasibility study did not examine the reduction in water consumption which could be achieved by conservation and demand reduction measures.

- ✓ The proposal was based on Dublin continuing to lose around 53 million litres per day of customer-side leakage, and 20 % loss in the distribution network (amounting to 161 million litres per day).

- ✓ A reduction in the leakage rate from 30 % to 15 % in the Greater Dublin Area would save around 100 million litres of water daily.

- ✓ Other countries make much greater use of demand management and water conservation.

- ✓ The project report made no attempt to quantify any possible or potential reduction in per capita consumption.

- ✓ Measures which have been regarded as normal in many other countries for at least 20 years are ignored.

- ✓ Potentially large groundwater resources in Counties Fingal, Meath and Kildare are closer to Dublin, but did not appear to have been adequately assessed as either principal or supplementary sources of potable water.

- ✓ Abstraction from groundwater sources would be a much less expensive option than transporting water from the Shannon catchment.

- ✓ A combination of demand management and conservation measures, and the use of other sources of water could make this project unnecessary.

- ✓ The Technical Report provided no detail of the additional quantities of water treatment plant sludge which would require disposal.

- ✓ For every additional litre of water supplied to a household, an additional litre of wastewater has to be treated. The cost of wastewater treatment and disposal has not been taken into account, and international experience suggests that this cost is likely to be much greater on a volumetric basis than the cost of providing the water in the first place.

- ✓ No mention is made of the potable water requirements of Limerick City and adjacent parts of County Limerick which could be detrimentally affected by the proposed large-scale abstraction from Parteen Basin.

- ✓ Detrimental effects which would be experienced by people living and operating in the tourism industry within the lower part of the Shannon catchment have not been factored into the consultants' analysis.

- ✓ The importance of maintaining water levels for navigation, cruising and sailing tourism, water sports and recreation, and for local and tourist angling in the lower part of the Shannon catchment has been only partially addressed.

- ✓ The Shannon catchment contains a significant number of vulnerable and important Natural Heritage Areas (NHAs), Special Areas of Conservation (SACs), and Special Protection Areas (SPAs) for wildlife; and these designated areas and their unique flora and fauna would be at risk from excessive abstraction of water.

- ✓ There is no reference in the scheme to any over-riding national strategy or policy to conserve and manage this key resource for the benefit of all users; and in such a policy vacuum, the most powerful will dictate the terms.

3.10 The International Dimension, and Water as a Human Right

Water, like air and food, is our life support. It covers about 70% of the surface of our planet. However, only 2.5% of that is fresh water. It is the only fresh water in our solar system and possibly in our galaxy. There is probably plenty of it for present and future needs – the total amount of water vaporised in a year to feed the world's population would fill a canal 10 metres deep, 100 metres wide and long enough to encircle the globe 193 times. But, as the Romans eventually found out, it will be spoiled without the right management, conservation and investment.

As a fragile resource, water must be nurtured with care, and we must safeguard our water as a source of well-being, prosperity and progress.

This means confronting several challenges globally, and Ireland needs to play its part in this wider sphere. To begin with, there are over 7 billion people on Earth, of which a billion routinely drink unsafe water and do not have basic sanitary facilities, leading to illness, disability and death. Access to clean water and sanitation is a human right, which we must do more to honour – and this applies not only to developing countries, but to Ireland also.

Irish Water should recognise that the European Citizens' Initiative (ECI) "*Water is a human right!*" collected 1.8 million signatures in 28 EU countries, and in 13 countries the quorum was surpassed.

Those who signed up to that ECI believe that the European Union must implement the human right to water and must promote national implementation of this right by setting binding targets for all Member States to achieve universal coverage. The European Commission should therefore take action to:

- Prioritize water for domestic purposes; targeting access for the most disadvantaged.
- Encourage and support Member States to fulfil their obligations to ensure the right to water and sanitation.
- Make the Human Right to Water and Sanitation central to all communications on water and sanitation.
- Set a target for 100% coverage of good quality water and sanitation in all EU Member States by 2016.
- Define sanctions against Member States in case of non-compliance.
- Define options for situations where people cannot be connected to the grid (inhabitants of isolated areas) and how to fulfil the human rights obligations in these cases.
- Make regional structural funding dependent on democratic and human rights principles and refrain from making such funding dependent on market principles.
- Establish a coherent process for all legislative actions in relation to water and water resources.
- Declare water and water resources as a public good.
- Implement the demand that 'the management of water and water resources should not be subject to internal market rules' (EP Resolution P5_TA(2004)0183).
- Ensure that water services will not be included in any trade or investment agreement.
- Promote benchmarking for water services operators similar to long-standing practices in the Netherlands and Germany.
- Establish guidelines for transparency, accountability and participation to ensure that information on profits and payments to shareholders by water companies are made public.

Returning to the more global issues, it is likely that the world's population will reach 9 billion by 2050, which means more demand and more competition for scarce resources. Farming already uses 70% of the world's fresh water and cannot expand more. Water is also needed for industry and energy output, not to mention drinking water and sanitation.

The third key challenge is pollution of fresh water and oceans. This threatens our health and our environment, generates costs for treatment, and hampers development.

Clearly the first goal must be to secure everyone's access to clean water, not by some market mechanism, but as a human right. International development goals have hitherto focused on "improved" water; but we can do better and "go clean" by ensuring safe and affordable water for everyone. Universal access to clean water and basic sanitation by 2050 would mean over 80,000 fewer deaths per year from basic illnesses such as diarrhoea. It would also generate major

benefits for fisheries, tourism and livelihoods, particularly in the poorest countries.

Secondly, we must also improve efficiency and management, reduce waste, and maximise opportunities in all related sectors. Whether for advanced cities or remote countryside, addressing water scarcity or flooding, we must mobilise the rich range of economic and governance tools at our disposal to make this happen.

Thirdly, we must do more to tackle pollution, particularly effluent from cleaning products and medicines, and nitrogen and phosphorous discharges, so that we can safeguard soils, rivers and coasts, and our whole ecosystem. This goal should be primary, as human societies cannot function well in degraded or damaged ecosystems, and we have done much damage in recent decades – damage which must now be repaired.

While Ireland may appear to have escaped the worst problems of deforestation, soil loss, desertification and pollution, we need to be aware that many of our surface waters are affected by nutrient run-off and by organic pollutants; and it will be the task of Irish Water, acting with the EPA and local authorities, to ensure that these waters are restored to good ecological status. To date, we have failed to adequately protect our water resources, with the result that there are so few of our lakes and aquifers that are any longer in pristine condition. If Irish Water neglects this aspect of water management, then it becomes no more than a “water supply” organisation.

How can the goals desribed above be achieved? Firstly, as pointed out in Irish water’s Strategic Plan, there is a need for investment in infrastructure, technology and skills. There is a need to invest in smart irrigation systems, water conservation, leakage control, storm-water and rainwater capture, and effluent treatment.

The achievement of these goals will also need financing. Many investments are low cost, such as preserving wetlands to store or filter water; while others require substantial capital, and some large-scale projects may not be the best way forward, but could be replaced by smaller and more local-scale schemes. All require know-how and long-term management. Irish Water may need to tap new sources of financing beyond taxes, transfers and tariffs; but must avoid becoming caught up in a dysfunctional market-led system which has caused destruction, inequality and poverty.

Ireland needs tough regulatory rules to deal with water pollution, to instil more responsible consumption and to generate reasonable (but not excessive) revenue.

Governance is critical, as pointed out by the EU report on the Ringsend waste-water treatment plant. Everyone uses water, and no one community should be left alone with the problem, or left to deal with the consequences of poorly throught-out planning. Irish Water must therefore ensure that water-aware policies are adopted by interests beyond the water sector itself, by energy providers, agriculture, industry, transport, housing, land use planning, etc.

In any system where a resource is being extracted or polluted faster than the rate of replenishment, repair or recovery; then inevitably the system that depends on that resource will collapse. This applies to the national water resource also.

Our concern in ZWAI is that Ireland is “too focused” on investing in large centralized facilities that cater for unrestrained increasing water demand and the unrestrained generation of wastewater. Our water system is already under strain and will further weaken. Instead of the narrow single water policy we have at present we need a much wider and more diverse set of policies.

Ollan Herr, Jack O’Sullivan and Dalia Smelstoriūtė

For

Zero Waste Alliance Ireland

17 April 2015

Environmental Pillar's & An Taisce's ELIG Environmental Law Implementation Group

Submission to public consultation on:

Irish Water's Draft Water Services Strategic Plan

April 17th 2015

Submission to public consultation on:

Irish Water's Draft Water Services Strategic Plan

1 Introduction

We welcome the public consultation on Irish Water's Draft Water Services Strategic Plan. This submission has been prepared with certain of the individuals assigned by the Environmental Pillar and An Taisce as contact points on the issues of Ireland's compliance with:

- Urban Waste Water Treatment obligations; and
- Waste Management obligations in respect of Domestic Waste Water Treatment Systems, DWWTS; and
- Access to Information on the Environment obligations

under the auspices of the Environmental Law Implementation Group (ELIG)[1] initiative. It may not reflect the views of all the members of the Environmental Pillar.

Ireland's non-compliances in respect of Urban Waste Water and DWWTS are in part indicated by judgements against Ireland from the Court of Justice of the European Union, CJEU, and ongoing infringement actions alleged by the EU Commission, specifically:

- Case c-316/06: where Ireland was found in breach of its obligations on the Council Directive concerning urban waste water treatment2,and
- 2013/2056: the EU Commission's associated ongoing infringement action in respect of non-compliance with the Urban Waste Water Directive; and

[1] The Environmental Law Implementation Group (ELIG) was formally established in 2012 to assist in the protection and enhancement of Ireland's environment. ELIG seeks to improve the transposition, implementation and enforcement of environmental law through better communication between policy makers, implementing authorities, the Environmental Pillar and An Taisce, and to develop the capacity in environmental law of the Environmental Pillar's member groups.

The partners in the ELIG initiative are: The Environmental Pillar, An Taisce The National Trust for Ireland and The Irish Government, with the Department of Environment, Community and Local Government being the lead agency for the Government.

2 Council Directive of 21 May 1991 concerning urban waste water treatment, (91/271/EEC).

- Case c-188/08 where Ireland was found in breach of Waste Directive 75/442/EEC in relation to Domestic waste waters discharged through septic tanks in the countryside.

Our submission on Irish Water's Draft Water Services Strategy, DWSS, focuses on these matters, given limitations of resources. However we would welcome an opportunity to further engage with Irish Water to clarify as required our concerns, and to consider further areas of concern on compliance with Environmental Law relevant to Irish Water given its remit and approach.

The comments below are relevant in part to the strategy as a whole, but in particular to chapter 5 "Provide Effective Management of Wastewater"

2 Over-arching comment:

There is a failure to inform strategy and targets with the full-set of relevant legislative requirements, and to evaluate and evidences its compliance with same.

In summary there is a:

a) Failure to set-out and provide the legal context for the strategy and compliance of the strategy with it. There is an absence of any specific references on compliance with and the implications of a number of relevant Directives and legislation.
b) Need for transparency on criteria informing targets and alignment of criteria with legal obligations.
c) Need for an Organisational and System Context for the strategy

We expand on these briefly below

a) Failure to set-out and provide the legal context for the strategy and compliance of the strategy with it.

There is a need for the entire strategy and the elements thereof to demonstrate compliance with a range of relevant Environmental Directives and legislation, not limited to but in particular the Birds and Habitats Directives[3] and the Marine Strategy Framework Directive[4], Environmental Liability Directive and Environmental Crime

[3] Birds Directive:
DIRECTIVE 2009/147/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL
of 30 November 2009 on the conservation of wild birds (codified version)
Habitats Directive:
Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora

[4] Marine Strategy Framework Directive:
DIRECTIVE 2008/56/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

Directives. That legal context has not been set out anywhere in the document or compliance evaluated and evidenced.

There is a critical need to ensure at this the highest level of Irish Water's Water Services Strategy that it is informed and its priorities structured consequent on a robust and thorough consideration with its legally binding environmental obligations as specified in a range of EU Directives.

There is an absolute failure to set-out and provide the necessary legal context for the strategy. This document as a whole fails to reflect that, and in particular the section on Urban Waste Water. It is simply insufficient to purportedly subject the strategy to a Strategic Environmental Assessment and purport to conduct an Assessment based on one Article of the Habitats Directive, namely Article 6.

Additionally, the compliance with any one Directive, such as the UWWTD which is dealt with in Chapter 5 in particular, cannot be taken in isolation of obligations arising elsewhere, and the only other Directive mentioned (table on page 48) in that context is the Water Framework Directive.

b) Need for transparency on criteria informing targets and alignment of criteria with legal obligations;

It is of serious concern **that criteria which informing the decisions selecting dates and other targets such as those for compliance with the UWWTD are not transparent in this document.**

It is also **imperative that the criteria used to guide and select targets be informed by legal obligations and priorities informed by the need to comply with a range of Directives.**

Certain Directives, such as the Birds and Habitats Directives set out obligations in respect of endangered and protected habitats and species where Ireland has particularly special obligations to fulfil and we submit this strategy should reflect a commitment to prioritise its decisions, activities and operational actions to ensure and support Ireland's compliance. One only has to do a word search on the word "habitats" to see how inadequately this has been addressed in the strategy as a whole.

Such an approach would for example result in a clear commitment to inform and prioritise investment and action on Urban Waste Water in areas and sites where Natura 2000 sites and species are impacted in addition to those where there are major public health risks presented.

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of 17 June 2008 establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive)

c) Organisational and System Context for the strategy

Additionally the strategy needs to clearly set out the wider organisational and system context in which IW sits and will deliver its strategy – in terms of how it will engage with or interact with Government, LA's and agencies such as the EPA etc given their various remits and legislative obligations and interactions.

3 Urban Waste Water Treatment and Chapter 5:

3.1 Core compliance issues with the UWWTD

We are deeply conscious of the extent of the legacy of issues which Irish Water needs to address in respect of Urban Waste Water Treatment.

However Irish Water, as the agency responsible for delivering on these services for Ireland, must in considering its priorities and investment strategy in the area of Urban Waste Water Treatment be mindful of:

a) the legally binding timeframes set out for compliance with the directive's obligations, not limited to but particularly in respect of treatment and collection facilities;

b) the cost implications and exposure for Ireland from the point of view of the Public Health Risks, Environmental Hazards and Damage; and of course financially as a result of continued non-compliance with EU law;

In brief – a major issue of concern to us is that the timeframes summarised and proposed for compliance with the Directive on page 48 of the Strategy indicate a "target" of:

- 90% **by 2021** of "treatment compliance" and 100% **by 2040**

This wholly **fails** to **mention, consider and be informed** by the legally binding obligations set out in Articles 3 and 4 and 7 of the Directive in respect of requirements for collection and treatments facilities and discharge requirements for differing Population Equivalent levels, PE.

In contrast to the dates proposed by IW of 2021 and 2040, **the dates specified in the Directive for compliance range from 31 Dec 2000 and 31 Dec 2005, depending on PE levels**. We address these in more detail in the appendix to this submission.

Additionally while certain extension to those dates may have been permissible for a limited set of technical reasons as provided for in Article 8 – the upper-limit on the date of any extensions – was December 2005 which has long since expired.

Chapter 5 fails to address this or highlight it – other than mention the ongoing infringement action which only addresses an element of Ireland's non-compliance, and moreover it fails to mention the outstanding issues in responding to the judgement in case c-316/06.

The chapter has also failed to reflect adequately the extent of non-compliance which it should be highlighting in order to drive an awareness of the extent of prioritisation and investment needed in this area, and the consequential financial and operational decisions which a strategic plan such as this document purports to be should be driving and informing. In this regard in respect of useful baseline information it could have relied in part upon the excellent report provided by the EPA published in March 2014 "Focus on Urban Waste Water treatment in 2012" and subsequent updates, which admittedly does require some re-formulation and analysis in order to take the data presented therein and use it to evaluate specific obligations within the Directive, a task which we have endeavoured to do and will address in more detail below.

The absolute disregard and failure to reflect and consider in this chapter the extent of the gap and breach of our compliance with relevant dates and metrics is of real concern as it fails to serve to inform decision making and to inform the public effectively as part of the consultation on these critical matters.

Finally in respect of the issue of properly informing the approach based on legal obligations – we wish to make three further points:

- 3.2 Failure to set-out and provide the legal context for the strategy on wastewater
- 3.3 Need for transparency on criteria informing targets and alignment of criteria with legal obligations;
- 3.4 The strategy is to: develop a strategy
- 3.5 The implication of the views of the Court of Justice of the EU, CJEU as articulated in another case against Ireland (c-494/04) where a Member States administrative, financial and other difficulties are not seen as an admissible excuse for non-compliance with EU law – a factor for consideration by the EU Commission and Irish Water.
- 3.6 Detailed evaluation of alleged non-compliance by Ireland with the UWWT Directive

We expand briefly on these below.

3.2 Failure to set-out and provide the legal context for the strategy on wastewater

As indicated in our over-arching comments there is a need to establish the overall legal context and framework in which the strategy exists and must comply – and this is particularly evident in the section on Urban Waste Water.

There is an unacceptable absence of any reference or consideration of how the strategy complies with and the implications of other critically relevant Directives, not limited to but in particular the Birds and Habitats Directives and the Marine Strategy Framework Directive referenced earlier and the, Environmental Liability Directive[5] and Environmental Crime Directives[6].

3.3 Need for transparency on criteria informing targets and alignment of criteria with legal obligations;

Again as indicated in our over-arching comments - it is **imperative that the criteria used to guide and select targets such as those proposed in this section dealing with wastewater be informed by legal obligations and priorities consequent on the need to comply with a range of Directives.**

Certain Directives, such as the Birds and Habitats Directives set out obligations in respect of endangered and protected habitats and species where Ireland has particularly special obligations to fulfil and we submit the strategy on wastewater should reflect a clear commitment to prioritise its decisions, activities and operational actions to ensure and support Ireland's compliance.

Such an approach would for example result in a clear commitment to inform and prioritise investment and action on Urban Waste Water in areas and sites where Natura 2000 sites and species are impacted in addition to those where there are major public health risks presented.

This is particularly relevant given issues such as that in sites such as Glenamaddy – where the SAC contains a turlough – which is a Habitat indicated as having the highest category of importance in the categories indicated in the Habitats Directive – namely a priority habitat.

[5] Directive 2004/35/EC of the European Parliament and of the Council of 21 April 2004 on environmental liability with regard to the prevention and remedying of environmental damage

6 DIRECTIVE 2008/99/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 19 November 2008 on the protection of the environment through criminal law

Consequent on of an investigation and report by An Taisce, and active pursuit of the issue, we understand that Irish Water has agreed to prioritise tackling the unpermitted sewage discharge from the town of Glenamaddy, Co. Galway, to the priority habitat turlough SAC to the east of the town.

The timeframes for addressing such matters need to be clearly stipulated at commitments at a sufficiently granular level in order to be able to track progress, with associated visibility of investment commitment.

The strategy also needs to provide interim assessment of impacts, and for active interim mitigation measures to limit public health risks and environmental damage. The cost of remediation - based on delayed action should be factored into the decision process also and form a clear part of the strategy which informs investment decisions.

We understand the discharge of raw sewage at this site continues unpermitted and un-assessed, and that the status of a similar discharge from the town of Newmarket-on-Fergus in Co. Clare into Lough Gash turlough SAC is unclear. This and other such sites need to be similarly prioritised as a matter of urgency with interim assessment and mitigations also immediately prioritised.

3.4 The strategy is to develop a strategy!

It is of further concern that this strategy document on the matter of Urban Waste Water seems to simply articulate the intention to develop a strategy – rather than to specify the game plan for delivering on it, and what has informed it and shaped it. The detailed delivery then should be informed by the strategy and set out in subsequent implementation plans.

The fact the strategy is so vague as being only about preparing a strategy is clear from the table on page 42 under the title of "Objectives and Strategies" where "WW1a" is "Prepare and implement a Wastewater Compliance Strategy" and the subsequent expansion on this and associated elements thereof.

3.5 The views of the Court of Justice of the EU, CJEU as articulated in another case against Ireland (c-494/04) where a Member States administrative, financial and other difficulties are not seen as an admissible excuse for non-compliance with EU law – a factor for consideration by Ireland, the EU Commission and Irish Water.

We note the understandable and frequent recourse to statements indicating the scale of the problems, the legacy of underinvestment, financial constraints etc.

However we would draw Irish Water's attention and the Irish Government's attention to the CJEU's views as expressed in c-494/04 where the judgement against Ireland in respect of waste management obligations was damning and comprehensive to say the least.

There are clear and obvious parallels in-terms of a legacy of failures there with the current water services situation. **The court however, was emphatic that administrative or other difficulties in a Member State do not suffice to obviate or excuse non-compliance.**

We feel it appropriate to quote from the judgement at length given its relevance for the DWSSP as a whole and the wastewater issue in particular. We feel the significance of what was said by the Court albeit on a different area – have clear and obvious implications for the apparent commitment of Irish Water to continue a process of failure to fulfil Ireland's obligations on the UWWTD in particular, which is evidenced in the wholly inadequate targets indicated in this chapter, compounded by a failure to even highlight the extent to which they are planning to fail by or to consider the implications of it and how it will be mitigated against on a number of levels.

Contrast that with the Courts view in paragraph 126 below, supporting the Advocate General's opinion when the Court stated:

> **"…where a Member State has been failing for some 20 years to fulfil its obligation to achieve the result prescribed in Article 9 of the Directive, it is incumbent upon it to do everything to remedy that failure as rapidly as possible"**

We submit in the context of a targets which aim in part to fail by some 35-40 years that this strategy wholly fails to demonstrate that approach, and turn to the findings of the court for further expansion of its views on such an approach:

In paragraphs 116 – 226 in case c-494/04 the Court stated: (emphasis added)

"116 In this regard, ***it should be observed at the outset that, in accordance with the third paragraph of Article 249 EC, a directive is binding, as to the result to be achieved,upon each Member State to which it is addressed****. In the present instance,* ***Articles 9 and 10 of the Directive impose on the Member States obligations formulated in clear and unequivocal terms to achieve a certain result,*** *under which undertakings or establishments which carry out waste disposal operations or waste recovery operations in those States must hold a permit.* ***It follows that a Member State has complied with its obligations under those provisions only if, in addition to the correct transposition of the provisions into domestic law, the operators concerned have the permit required*** *(see, by analogy, in relation to the prior authorisation*
required to operate incineration plants referred to in Article 2 of Council Directive 89/369/EEC of 8 June 1989 on the prevention of air pollution from new municipal waste incineration plants (OJ 1989 L 163, p. 32), Case C-139/00 Commission v Spain

[2002] ECR 1-6407, paragraph 27).

117 As the Advocate General has observed in points 27 to 29 of his Opinion, ***the Member States therefore have the task of making sure that the permit system set up is actually applied and complied with, in particular by conducting appropriate checks for that purpose and ensuring that operations carried out without a permit are actually brought to an end and punished.***

118 Furthermore, the permit systems referred to in Articles 9 and 10 of the Directive are intended, as is apparent from the very wording of those provisions, to enable Article 4 of the Directive to be implemented correctly, in particular by ensuring that disposal and recovery operations carried out under such permits comply with the various requirements set by Article 4. For this purpose, the permits must contain a number of details and conditions, as is moreover expressly laid down in Article 9 of the Directive in relation to disposal operations. It follows that the authorisation processes referred to in Articles 9 and 10 must necessarily be such that they precede all disposal or recovery operations (see, to this effect, Case C-230/00 Commission v Belgium [2001] ECR I-4591, paragraph 16). Contrary to the Irish Government's assertions, mere submission of a permit application cannot therefore have the effect of making such operations consistent with the requirements of those provisions.

119 In this regard, the Irish Government's argument that the implementation in practice of a permit system introduced by national legislation requires a transitional period during which existing facilities must be able to remain operational cannot succeed in the present proceedings.

120 As provided in Article 13 of Directive 75/442, the Member States were required to bring into force the measures needed in order to comply with that directive within 24 months of its notification. Articles 9 and 10 of the Directive replaced Article 8 of Directive 75/442 and, with a view to continuity of the pre-existing obligations, strengthened the latter, which already provided for a permit system for facilities at which waste was treated, stored or tipped (see to this effect, in particular, San Rocco, paragraph 37).

121 ***The Irish Government therefore had the task of initiating in good time the procedures necessary for transposing into national law, initially, Article 8 of Directive 75/442 and, subsequently, Articles 9 and 10 of the Directive, so that those procedures were completed within the time-limits prescribed by the directives and the obligations formulated in clear and unequivocal terms in those provisions to achieve a certain result****, namely that the operations concerned be carried out only under the requisite permits, were met. In so far as the measures adopted by Ireland to transpose the directives were belated, they cannot be relied on to justify the failure to fulfil obligations (see, by analogy, Case C-60/01 Commission v France [2002] ECR I-5679, paragraphs 33, 37 and 39).*

122 With the benefit of those introductory points of clarification, it must be stated that, as regards municipal landfills, it is apparent from paragraph 108 of the present judgment that, on the Irish Government's own admission, on the date upon which the period set in the 2001 reasoned opinion expired, 14 operational landfills did not have a licence.

123 The Irish Government likewise ***admits that, when that period expired, it was the systematic practice of the Irish authorities to allow existing facilities to continue to operate during the period from the date on which the licence application was submitted until the date of the decision taken after examination of the application.*** *As is apparent from paragraph 84 of this judgment, that was in particular true of the Tramore and Kilbarry landfills.*

124 t is also apparent from various documents submitted to the Court that, at the time, ***the periods elapsing in practice before such existing facilities were granted or refused a licence were, taken as a whole, quite considerable****; the Irish Government itself acknowledged that those periods were a matter for concern in its letter sent to the Commission on 30 November 2000.*

125 An article entitled 'Waste Licensing 1997-2002: Lessons from the Application process' published in 2002 in the Irish Planning and Environmental Law Journal, which the Irish Government adduces, thus refers to an average duration of 808 days for the procedure for considering licence applications. It is apparent from paragraph 84 of this judgment that licences relating to the Tramore and Kilbarry municipal landfills, whose establishment nevertheless dates back to the 1930s and 1970s, were issued only on conclusion of procedures lasting 36 and 48 months respectively, although those landfills were the source of significant environmental pollution and of harm to sites of particular ecological interest.

126 According to that article, the main causes of such slowness are the extremely high number of applications dating from the same time relating to existing sites that were often poorly located and subject to little monitoring, and clearly insufficient staff numbers at the EPA. As the Advocate General has observed in point 75 of his Opinion, ***where a Member State has been failing for some 20 years to fulfil its obligation to achieve the result prescribed in Article 9 of the Directive, it is incumbent upon it to do everything to remedy that failure as rapidly as possible***

3.6 Detailed evaluation of alleged non-compliance by Ireland with the UWWT Directive

Following on from the consideration of the court above in c-494/04 we would like to set out in some detail the extent of non-compliance with the UWWTD Directive by Ireland. This evaluation is based on data provided in the EPA's report published in March 2014 "Focus on Urban Waste Water treatment in 2012", but also highlights certain deficiencies in that analysis.

This analysis in included in Annex I to this submission, and alleges non-compliance with over 7 obligations of the UWWT Directive, across a multiplicity of sites evidencing systemic failure.

While we note that subsequent to this analysis the EPA has produced a more recent report "Focus on Urban Waste Water Treatment in 2013 A report for the Year 2013"

(http://www.epa.ie/pubs/reports/water/wastewater/30086%20Urban%20Waste%20Water%20Web.pdf)

– which we have not had the opportunity to analyse and present in the same level of detail, a number of the key issues still remain, particularly in respect of infrastructural deficit and effluent quality with the report for 2013 indicating:

- 9 large urban areas did not meet the European Union Directive requirement to provide secondary treatment.
- 8 large urban areas did not comply with European Union Directive requirements to provide infrastructure to reduce nutrients and did not meet nutrient quality standards.
- Raw sewage discharged from 44 areas during 2013.
- 50% of 350 infrastructural improvements required in EPA licences before the end of 2013 were not completed. Works that were completed include the cessation of 70 discharges and upgrades to 30 waste water treatment plants.
- 23% or practically a quarter of larger urban areas did NOT compliy with the mandatory European Union effluent quality and sampling standard – as 124 of 162 (77%) did.
- •129 (29%) practically a third of all secondary treatment plants did NOT achieved the European Union effluent quality and sampling standards for the water quality indicator parameters of BOD, COD and suspended solids, as the report indicates 312 of all 441 (71%) did.
- •16 secondary treatment plants did not return a sufficient number of effluent samples in 2013.

4 Implications for Waste Water in light of DWWTS and Sludge Management Capacity.

While we appreciate that IW is not responsible for the Domestic Waste Water Treatment Systems, DWWTS, septic tanks etc of private residents – there is a consequential implication for we wish to address.

In summary a further judgement of the CJEU which we have been engaged in is the judgement in respect of DWWTS, in case c-188/08. In that context and in examining various plans, reports and proposals of the EPA on the matter of the National Inspection Plan for DWWTS the critical issue of the deficit in sludge capacity has come to our attention.

The recent analysis published by the EPA as part of their public consultation on a new National Inspection Plan for DWWTS (http://www.epa.ie/pubs/reports/water/wastewater/Report%20National%20Inspection%20Plan%20Web.pdf) highlighted the extent to which failure on inspection of DWWTS reflected a need to de-sludge the system. Additionally proper management and maintenance of DWWTS requires them to be de-sludged and consequent on the judgement the EPA is driving an initiative to address compliance which if successful will drive greater demand for de-sludging services and the facilities to cope with them.

The EPA also supported an excellent piece of research the Strive Report No 123: Management Options for the Collection, Treatment and Disposal of Sludge Derived from Domestic Wastewater Treatment Systems.

This report highlights the significant deficit in capacity and we include an extract from the Executive Summary which succinctly summarises the problem:

> "The adoption of new regulations relating to DWWTS maintenance and de-sludging (S.I. 220/2012 and S.I. 223/2012) will result in large annual volumes of sludge being evacuated, the majority of which will be transported to existing wastewater treatment plants (WWTPs) for screening, blending, dewatering treatment and reuse or disposal. Assuming the reuse of untreated sludge on individual farms, in accordance with current legislation, the total annual volume of sludge to be evacuated from DWWTS nationwide is estimated in Section 3 of the report at 473,381 m3 , at a de-sludging frequency of three years and based on an average DWWTS tank volume of 3.5m3 . The current spare available capacity of existing sludge reception facilities to receive DWWTS sludge is approximately 234,676m3 , indicating a volume deficit for receipt of 238,705m3 i.e. 50% of evacuated DWWTS sludge generated annually. Analysis of existing wastewater infrastructural capacity and operational practices indicates that the current lack of sludge screening facilities at WWTPs commonly results in the discharge of sludge tankers to the inlet of wastewater treatment process, resulting in the shock loading of the WWTP, disruption of the biological process, higher energy costs and a reduction in the quality of final effluent discharged to receiving waters"

In the context of a situation with an estimated 497,000 DWWTS in the country, according to EPA figures and the Strive Report, (so the best part of half a million) – we submit that the effective and proper management of the de-sludging requirement; in accordance with obligations under the Waste Directive, Public Health obligations, other Environmental Nature Directives; will necessitate a very concerted and holistic strategy, implementation plan and investment to address. In this context

we welcome the recognition in Irish Water's future plans indicated for the need for a National Water Sludge Management Plan. We submit :

It is imperative that it is informed based on the additional loading required to service the DWWTS issue, and the urgency with which that needs to be addressed given the extent of deficit currently.

In the latest draft inspection plan from the EPA – they propose to continue to limit the number of inspections to 1000 a year for the next three years until a further plan is drawn-up to co-ordinate with the River Basis Management Plans. We are concerned that the number of inspections proposed for DWWTS is being constrained by the concern on the effect of greater compliance given the sludge capacity shortfall. We are also concerned in this context the intention to continue to rely on an entirely un-evaluated engagement strategy to drive compliance – which is infact only an awareness strategy, is and will be similarly constrained. In this context we wish to highlight that the judgement against Ireland on c-188/08 stated: (emphasis added)

> "by failing to adopt, save in County Cavan, all the laws, regulations **and administrative provisions** necessary to comply with Articles 4 and 8 of Council Directive 75/442/EEC of 15 July 1975 on waste, as amended by Council Directive 91/156/EEC of 18 March 1991, as regards domestic waste waters disposed of in the countryside through septic tanks and other individual waste water treatment systems, Ireland has failed to fulfil its obligations under that directive;

We submit that the inspection regime needs to be seen and evidenced to be effective in order to address this judgement – and note that this is a case where Ireland was fined for failure to address the judgement, while the case has been closed – the Commission and ourselves continue to monitor this issue very closely. In the context of the ongoing constraint presented by sludge capacity – Ireland's credibility to implementing an effective approach in response to this judgement is at issue in our view. Therefore the obligations of IW in respect of sludge and the EPA's role in inspection are integrally linked.

We submit that we would be concerned about any intention to rely on incineration to solve this problem, and note the numerous references to energy-based solutions in the context of statements regarding sludge in the DWSSP. We would urge IW to ensure options to be considered and their strategy at this highlevel will require truly sustainable solutions and consider a wide-range of options to address this issue, with associated consultation.

Finally, we submit it is critical that the infrastructural burden and environmental impact associated with the proliferation of DWWTS – particularly in areas unsuited to

them which is a significant part of the country – is managed. Therefore we submit it is incumbent on IW to actively highlight and advocate for sustainable planning and development, and the implication of the Polluter Pays Principle, in this regard.

4 Access to Information on the Environment obligations, AIE

We submit that as part of this strategy and the delivery of same – IW will need to be able to adequately respond to requests for access to environmental information. In addressing one such request to IW previously, we noted a failure on IW's website to provide information on its obligations on this matter. We note that while there is a link to Freedom of Information, FOI on the HOME page – there is none on AIE.

We welcome the fact since the time when we made our request - that now a Search will yield a PDF document providing some information on IW's AIE process. However there is in fact no navigable link to information on the AIE process, so you have to know what you are looking for. We would highlight the legal obligations on a Public Authority such as IW to assist the public with making such a request, and feel more should be done in this regard.

While we do acknowledge the efforts to assist us with our request, we note also the format of the decision letter we received in response to our request – failed to provide information as required on the internal review procedure to challenge the decision.

We also feel the extent of proactive dissemination of information required by the Authority may be worth discussing further.

We would welcome an opportunity to discuss this constructively with IW.

4 Conclusion

We appreciate the consideration of our remarks. We wish to re-iterate the view that, while there is much to be welcomed in the strategy, there is a need to substantially re-work it. That re-work would be in the context of the legislative obligations and framework with which it must comply together with the other constraints pertaining, and to provide clarity and transparency on the criteria driving the targets and priorities in accordance with those obligations. At present the strategy would appear to be overly informed and guided by constraints, and non-transparent selection criteria for the targets identified – rather than being driven by a proper constraints exercise where the strategic planning exercise is stretched to consider what has to be done legally and for public health reasons and to address critical environmental impacts, at the non-discretionary end of the spectrum of actions - and to examine alternative options to overcome constraints, and where there is provide clarity on the criteria driving the choices and priorities and the constraints pertaining. Then,

and only then in that context can more-discretionary considerations be properly considered.

Additionally the strategy needs to clearly set out the wider organisational and system context in which IW sits and will deliver its strategy – in terms of how it will engage with or interact with Government, LA's and agencies such as the EPA etc given their various remits and legislative obligations and interactions.

Finally in the context of IW and Irelands obligation to address certain outstanding areas of compliance with EU Environmental Law and the national implementation thereof through this strategy we conclude by refer again back to the comments of the CJEU in case c-494/04 :

> **"where a Member State has been failing for some 20 years to fulfil its obligation to achieve the result prescribed in Article 9 of the Directive, it is incumbent upon it to do everything to remedy that failure as rapidly as possible"**

In that context we look forward to a revised draft and would welcome participative dialogue and engagement to assist in the development of an improved strategy.

Annex I:

Alleged non-compliance by Ireland with Council Directive of 21 May 1991 concerning urban waste water treatment, (91/271/EEC).

Purpose of Note:

The purpose of this annex is to highlight a number of areas of significant non-compliance by Ireland in respect of "Council Directive concerning urban waste water treatment[7]", (UWWTD or the directive), consequent on poor implementation.

The note draws on findings from the EPA's report published in March 2014 "Focus on Urban Waste Water treatment in 2012", (http://www.epa.ie/pubs/reports/water/wastewater/Focus%20on%20Urban%20Waste%20Water%20Treatment%20in%202012%20-%20web%20copy.pdf)

- but also highlights certain deficiencies in that analysis. It supports and adds to the recommendations made in that report.

While we note that subsequent to this analysis the EPA has produced a more recent report "Focus on Urban Waste Water Treatment in 2013 A report for the Year 2013" (http://www.epa.ie/pubs/reports/water/wastewater/30086%20Urban%20Waste%20Water%20Web.pdf)

– which we have not had the opportunity to analyse and present in the same level of detail, a number of the key issues still remain, particularly in respect of infrastructural deficit and effluent quality with the report for 2013 indicating:

- 9 large urban areas did not meet the European Union Directive requirement to provide secondary treatment.
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7 Council Directive of 21 May 1991 concerning urban waste water treatment, (91/271/EEC).

- •129 (29%) practically a third of all secondary treatment plants did NOT achieved the European Union effluent quality and sampling standards for the water quality indicator parameters of BOD, COD and suspended solids, as the report indicates 312 of all 441 (71%) did.
- •16 secondary treatment plants did not return a sufficient number of effluent samples in 2013.

There are certain gaps in the information in the report on 2012 necessary to report on Ireland's compliance with the UWWD; and the presentation of percentages is in general provided to emphasise positively the extent of compliance rather than the extent of non-compliance, for example the report states on page 9 that 17% of discharges to sensitive areas are compliant, as opposed to presenting the same data with the corollary and more compelling figure that "83% of discharges to sensitive areas are not compliant.

The approach below is to take and review the analysis and data provided in this latest EPA report in and to highlight alleged areas of Ireland's non-compliance with specific articles and obligations under the UWWD given the data available.

Legislative and Organisational Context:

The 1991 Urban Waste Water treatment Directive (UWWTD, or the Directive) without intending to be a comprehensive summary, but putting it simply:

- Defines what is classified as Urban Waste Water, (UWW);
- States the fundamental obligation of the directive is to protect the environment from the Adverse effects of discharges of UWW;
- Sets requirement for the provision of collection and treatment of UWW
- Sets requirements in respect of disposal and re-use
- Provides for monitoring of discharges
- Sets limits for certain parameters of the discharges
- Sets out transposition and implementation obligations
- Sets out oversight obligations for the Commission

The Irish Urban Waste Water Treatment Regulations 2001-2010 give effect in part to these requirements nationally, complemented by new provisions for the recently established Irish Water Authority who according to the EPA report is "responsible for ensuring compliance with this legislation" ; with the EPA as the regulator for this new semi-state company.

Assessment of Alleged Non-compliance based on report for 2012

1. Alleged breach of Article 4(1) and 4(3): Treatment obligations in respect of large urban areas.

According to page 2 of the EPA's 2012 report referred to above, **seven large urban areas are "without secondary treatment at the end of 2012 and no treatment or just basic preliminary treatment was provided at 6 of these (listed in Appendix B)"**.

So these 7 did not meet the requirements of the directive to provide the requisite secondary treatment or equivalent treatment. (This is of course a separate issue to those where there are facilities but they are inadequate to meet the necessary quality parameters etc.)

- 3 of the 7 sites have an Urban Area Population Equivalent (UA PE) level > 15,000
    - Therefore per Article 4 ***they should have been compliant by: 31 Dec 2000***
        - [Killybegs: 81382 UA PE Estuarine;
        - Ringaskiddy/Crosshaven/Carrigaline 39,200 UPE,Coastal;
        - Arklow:16,997 UA PE, Coastal]

- 1 of the site has an Urban Area Population Equivalent (UA PE) level between 10,000 and 15,000
    - Therefore per Article 4 ***they should have been compliant by: 31 Dec 2005***
        - [Cork Cobh: 12,000 Estuarine]

- 3 of the sites have an Urban Area Population Equivalent (UA PE) level between 2,000 and 10,000 and discharge to estuaries:
    - Therefore per Article 4 ***they should have been compliant by: 31***

Dec 2005

- [Clifden: 4,779 UA PE Estuarine;
- Youghal 9,600 UPE,Estuarine;
- Passage West/Monkstown:7,600 UA PE, Estuarine]

The areas are detailed on page 3 of the report in table 2.3.

It is noted that footnote 9 indicates the dates for estimated completion of facilities are a latest update received from water services authorities. Consequent on IW's Draft DWSS it is not clear, what the impacts of that strategy will be on the actual planned dates for completion or on the dates indicated in responses to Access to Information requests submitted to Irish Water on the actual real status of investment proposals for these measures necessary to protect the environment, and there are issues with the credibility with some of the indicated delivery dates for secondary treatment detailed in the report's table 2.3.

It is possible that certain of these specific sites are infact also captured under the more stringent requirements of Art 5(2) for PE > 10,000 and indeed Art 5(5) in respect of "discharges from urban waste water treatment plants which are situated in the relevant catchment areas or sensitive areas and which contribute to the pollution of these areas" - as certain of the sites are included in Ireland's list of sensitive areas. This matter is addressed later below in relation to alleged breaches in respect of Article 5.

2. Alleged breach of Article 7: treatment obligations at smaller urban areas

28 smaller urban areas listed in Appendix B of the report:

"have no treatment or basic preliminary treatment in place and these must be upgraded to provide appropriate treatment"

It is noted that the EPA's report does not appear to capture sites such as Glenamaddy which is < 2000 PE and also arguably discharges into fresh-water, specifically a turlough which is categorised as a priority habitat under the Habitats Directive.

Section 4 much later in the report details requirements for certificates of authorisation for sites with a PE < 500. However while it reports on the certificates issued, it does not detail the number where certificates of authorisation are outstanding, so the total picture, particularly in respect of unauthorised discharges for PE < 500 is unclear.

The report does note that at 86 sites with certificate of authorisation a treatment plant is reportedly overloaded or operating at above capacity, i.e.waste water load exceeds designed capacity, but there is no further detail in the main body of the report and would require extensive analysis of the county reports in Appendix A. It would be a useful enhancement of this report if the underlying analysis necessary to quantify such a conclusion in respect of the 86 sites was available in a supporting appendix listing the relevant sites to facilitate follow-up and the public rights to such information etc.

Critically it is noted that:

- 50 certificates of authorisation require ecological assessments to protect freshwater pearl mussels,
- 24 require risk assessments to protect downstream drinking water abstraction points
- 16 require microbiological assessments to protect designated shellfish waters.

However there is no analysis in the EPA's report of compliance with those critical obligations. It is noted that the three categorisations above cover obligations arising from other directive's including the Habitats Directive and as such fall to be considered in accordance with all obligations tied to Annex I B(4) of the UWWTD directive; in addition to the separate requirements arising from other directives. In this regard we also particularly highlight that the definition of "appropriate treatment" in Art 2(9) which is what is required for the smaller sites whose requirements are governed by Article 7 makes express the following:

> *"appropriate treatment" means treatment of urban waste water by any process and/or disposal system which after discharge allows the receiving waters to meet the relevant quality objectives and the relevant provisions of this and other Community Directives"*

and the threshold triggering Article 7 for fresh-water and estuaries is for agglomerations <= 2000 PE.

Therefore in summary, it would seem that: **the full extent of breaches and considerations under Article 7 is unclear from the report given the lack of**

granularity, i**t also also potentially compromised particularly where collecting systems are seriously inadequate, where there is no certificate of authorisation in place and where there are vulnerable receptors such as fresh-water pearl mussel.**

3. Alleged breach of Article 15(1) : Monitoring requirements, and in respect to failures to actively disseminate information relevant to their function: Art 7(1) of 2003/4/EC Access to Information on the Environment Directive, Aarhus Convention Article 5.

According to the EPA's report page 3:

> *"Water services authorities (i.e. County and City Councils) are responsible for effluent sampling and analyses and for reporting the results to the EPA. The EPA assesses the results reported to it on an annual basis against the quality standards and sampling frequencies specified in the Directive, and reports on the findings. Compliance with the quality and sampling standards in the Directive is mandatory for discharges from larger urban areas (all areas with a population equivalent greater than 10,000, and areas with a population equivalent between 2,000 and 10,000 that discharge to freshwater or estuaries). "*

Yet according to the EPA's report page 4:

> *"An insufficient number of sampling results was provided by the water services authorities for waste water treatment plants serving the following 6 larger urban areas: Rathcormac (Cork), Portrane (Fingal), Clones (Monaghan), Athy (Kildare), Rathdowney (Laois) and Courtown (Wexford). The first three of these previously failed to provide sufficient number of samples in 2011."*

As there is no proactive dissemination of information on the Local Authorities functional obligations in 2012 in respect of water sampling – which is in breach also of Art 5 of the Aarhus Convention, and Article 7 (1) of the Access to Information on the Environment Directive 2003/4/EC[8] which provides:

8 DIRECTIVE 2003/4/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

of 28 January 2003 on public access to environmental information and repealing Council Directive 90/313/EEC

"Dissemination of environmental information

1. Member States shall take the necessary measures to ensure that public authorities organise the environmental information which is relevant to their functions and which is held by or for them, with a view to its active and systematic dissemination to the public, in particular by means of computer telecommunication and/or electronic technology, where available"

- it is not possible to say at this point whether the Article 15(1) failure extends to:

- a failure to sample and monitor by the appropriate body in this instance the Local Authority, or
- a failure to provide the data to the competent authority in this instance the EPA as the regulator; or
- both a failure by the appropriate body which consequently compromised the monitoring and verification obligations of the EPA as the competent authority, and which it appears to have failed to circumvent.

Given the recurrent issue noted by the EPA and quoted above in relation to persistent failures to provide data at 3 of these sites – and given the obligation of the competent authority to monitor – it is arguable that the EPA should have been more proactive in order to ensure Ireland's compliance with the monitoring obligation. In this regard it is notable that a number of these sites are popular seaside destinations and the obligation to monitor effectively for potential public health issues is of particular concern.

Separately in the report on page 5 when dealing with a wider pool of urban areas it later also indicates that:

"Sampling carried out at 5% of secondary treatment plants was inadequate.

10 secondary treatment plants did not achieve the standards in 2012 due solely to providing an insufficient number of effluent sample results.

A further 12 that did not achieve the effluent quality standards in 2012 also failed to provide a sufficient number of sampling results"

It is potentially arguable this constitutes a further failure under Article 10 which requires Member States to ensure that UWWTP which are "built to comply with Art 4,5,6 and 7 are designed, constructed and operated and maintained to ensure sufficient performance ..."

This is given:

- a) that such operational obligations necessarily include the monitoring obligations of Article 15.
- b) the absence of data necessary to provided assurance on the effective operation of the facilities,
- c) the failure of the Member State to ensure data provision is adequate and that issues with such provision are rectified.

In this regard it should be noted there is a considerable time lag between the publication of this informational deficit in the EPA's report in March 2014 and the failures which occurred in 2012.

4. Alleged breach of Article 4(3) in respect of Effluent quality and treatment obligations compounded by alleged breach of Art 15(1) sampling and monitoring obligations

Without wishing to be overly critical of what is a most useful and informative report from the EPA, there is a failure to consistently categorise compliance issues in respect of specific articles and obligations, and there is in its summary approach a difficulty in untangling data particularly where failures are as a result of failure to provide information versus failures consequent on quality of the discharges, and determining potential overlaps.

Admittedly this information is discernible from the detailed count by county reports in the report's Appendix A - but it has clearly been analysed in coming up with aggregated summary conclusions provided in the report, and it is an ineffective and inefficient use of environmentally focused resources to have to rework analysis already done. Therefore in order to be clear about the significance of the data, it would be useful if the underlying information at least for each major compliance/non-compliance conclusion was included in an appendix to the report.

This issue is particularly pertinent in the following section: Section 2.2 of the report which deals with effluent quality at large urban areas.

Here the report detail statistics in respect of 170 large urban areas, it is not clear what PE level is used to determine what constitutes a large urban area, but it would seem from footnote 13 on page 4 that is does include consideration of smaller areas with a population equivalent between 2,000 and 10,000 that discharge to freshwater or estuaries, namely the 3rd indent of Article 4(1). However this does need to be clarified.

According to Figure 2.1, page 4 of theses "170 larger urban areas" for BOD, COD and TSS:

- 19% "failed to meet the effluent quality and sampling standards"
- 5% "failed to meet the effluent quality standards due to lack of secondary treatment"

However as the requirement to comply with the TSS concentration limit in the directive is optional – in relation to strict conformance obligations Figure 2.2 which looks only at BOD and COD is useful. Then in relation to the same 170 areas:

- 4% "failed to meet the effluent quality and sampling standards"
- 4% "failed to meet the effluent quality standards due to lack of secondary treatment"

Clearly the TSS data alters the picture, but nonetheless some with **8% of 170 areas not meeting the secondary treatment requirements for whatever reason this translates to 13.6 large urban areas which are not compliant with Article 4(3), albeit this includes the 7 larger urban sites already commented upon in relation to alleged breach no 1 above.**

Page 4 also states:

> *"An insufficient number of sampling results was provided by the water services authorities for waste water treatment plants serving the following 6 larger urban areas: Rathcormac (Cork), Portrane (Fingal), Clones (Monaghan), Athy (Kildare), Rathdowney (Laois) and Courtown (Wexford). The first three of these previously failed to provide sufficient number of samples in 2011."*

Therefore the failures here are consequent on both effluent quality and data provision.

5. Breach of Art 10 Operational obligations and Article 4(3) and Article 7 ? discharge standards

Section 2.3 of the report continues to examine 443 urban areas where secondary biological treatment was provided, a useful summary of results is provided in figure 2.3.

Again the failures are compounded by failure to provide sampling data with 5% of facilities carrying out inadequate sampling and 10 plants failing solely due to failure to provide a sufficient number of samples. Quite worryingly some 12 plants which did not achieve effluent quality standards also failed to provide sufficient number of sampling results, indicating the full extent of the environmental risk they present is unknown, and additionally indicating a significant operational disfunction.

Figure 2.3 provides an assessment in respect of these 443 areas, against BOD, COD and TSS quality requirements and indicates in summary that nearly a third are non-compliant for whatever reason with:

29% "secondary treatment plants that did not achieve the effluent quality standards"

2% "secondary treatment plants that did not achieve the effluent quality standards due solely to insufficient effluent sampling"

It would be helpful if the EPA could provide this assessment purely in respect of BOD and COD quality requirements, given the TSS requirements are not mandatory, without necessitating the detailed analysis of the information in Appendix A.

Section 2.4 continues to explain that those 443 areas are subject to the waste water discharge licensing programme, and have secondary treatment in place – even if inadequate/unproven in certain cases. However there are **a further 98 urban areas** that do not have secondary treatment and the report concedes with some understatement that: *"Effluent from urban areas with less than secondary treatment is unlikely to achieve the quality standards specified in the Directive".*

In this context then the combined view of Ireland's non-compliance from "all urban areas" against BOD, COD and TSS sampling standards shows in figure that 43% of discharges are not compliant, (23%+2%+18). It must be noted that nutrient data is not addressed in this table, but TSS is.

Again it would be useful in determining specific compliance issues with the directive if the EPA could re-format the data available to them to show these views for BOD and COD only and then additionally layer that with nutrient data. Finally it would be helpful then to provide the underlying detail on the non-compliant areas in a further supporting summary appendix, to facilitate direct follow-up on those areas, without necessitation analysis of appendix A.

A further breakdown is provided in table 2.4 , and provides some useful further insights, indicating that :

- Some 137 areas with secondary treatment facilites failed to meet BOD, COD and TSS standards, 63 of these persistently did not meet the standards in 2012, and

clearly

- The 98 urban areas without treatment are likely to have persistently failed in 2012 also, so therefore
- The likely total of areas which did not meet secondary treatment obligations is : 137 + 98 is: 235.

6. Alleged breach of Article 5(2) and 5(5) – discharges to areas defined as "sensitive areas"

The areas considered in the EPA report in respect of discharges to areas classified as sensitive only seems to focus on the article 5(2) obligation, namely sites with discharges from agglomerations of more than 10,000 PE. See paragraph 1 on page 9 which states:

> *"Secondary treatment alone may not offer sufficient protection to vulnerable receiving waters at risk of [24] eutrophication . In order to protect such waters and to prevent the accumulation of excessive nutrient loads Article 5(2) of the Directive requires a more stringent level of waste water treatment (nutrient reduction) to be provided at larger towns and cities (those with a population equivalent greater than 10,000) discharging directly to sensitive areas [25 26] . There were 32 such larger towns and cities in Ireland where the more stringent treatment criteria applied in 2012 [27]."*

However is we believe arguable that this is too narrow a view, as Article 5(5) provides compliance with obligations in paragraphs 2, 3 and 4 of Article 5 for:

> *"discharges from urban waste water treatment plants which are situated in the relevant catchment areas or sensitive areas and which contribute to the pollution of these areas".*

There certainly does not appear to be any rolled-up analysis in respect of these broader Art 5(5) areas in the report – and consequently Ireland's compliance in respect of Art 5(5) certainly may warrant further scrutiny.

In fact of the 7 large urban areas which fail secondary treatment obligations in accordance with Article 4, which are dealt with in item 1 above – it may be that certain of these sites are infact captured under the more stringent requirements of Art 5(2) for PE > 10,000 and indeed Art 5(5) in respect of "discharges from urban waste water treatment plants which are situated in the relevant catchment areas or sensitive areas and which contribute to the pollution of these areas" - as certain of the sites are included in Ireland's list of sensitive areas.

The Irish Statutory Instrument 48/2010 updates the list of sensitive sites, confirming existing and adding certain additional of the sites which are newly designated as sensitive areas from the date of enactment of the SI. These new areas are included

in part 3 of the schedule 1 listing of sensitive areas; but the have been previously designated as sensitive as they form part 2 of the schedule and hence are required to conform additionally to the more rigourous requirements of Art 5 paragraphs (2),(3),(4) and (5) by 31 May 2008.

However these sites with the exception of Killybegs are not dealt with in table 2.5 assessing compliance with nutrient standards for waste water discharges to sensitive areas from larger towns and cities. We assume this is possibly because of the failure

to capture sites encompassed by Art 5(5). The relevant schedule entries for sensitive areas are as follows with the area of interest highlighted in Bold below:

> *South Western River Basin District:*
>
> Blackwater Estuary Lower — downstream of Dromana Ferry, to near East Point, **Youghal Harbour.** (Map 4 , insert A, of Part 4 to this schedule)
>
> Lee Estuary / Lough Mahon — from the salmon weir (downstream of waterworks intake) to **Monkstown** (excluding North Channel and Great Island) (Map 4 , insert B, of Part 4 to this schedule)
>
> *North Western International River Basin District*
>
> **Killybegs Harbour** — **Killybegs Harbour i**nside Kanes Rock / Carntullagh Head. (Map 5 , insert A, of Part 4 to this schedule)

Admittedly, footnote 32 of the report acknowledges that 42,366 PE discharged to the sensitive area at Killybegs in 2012 and 39.016 discharged outside the sensitive area. It is not clear at time of writing this note if that second discharge component is captured by Art 5(5) and thus requires compliance with discharge obligations for sensitive areas per Art 5(2), (3) and (4).

Putting that possible Art 5(5) gap in the EPA's assessment data to one side for a moment, the report states:

> *"21 (66%) of the 32 larger towns and cities achieved all the applicable nutrient quality and sampling standards.*
>
> *Some heavily populated areas did not meet the standards and consequently just 17% of the total waste water load (in p.e.) discharged to sensitive areas from the 32 larger towns and cities met all the applicable nutrient quality standards.*
>
> *Phosphorous requirements applied at 30 of the 32 large urban areas and 77% of these met the phosphorus standards in 2012.*
>
> *Nitrogen requirements applied at 20 of the 32 large urban areas and*
>
> *50% of these met the nitrogen standards in 2012. ”*

The focus in the above is compliance orientated, looking at the corollary of the above statement in order to be clear about non-compliance with the directive we get:

"11 (34%) of the 32 larger towns and cities did NOT achieve all the applicable nutrient quality and sampling standards.

Some heavily populated areas did not meet the standards and consequently **83% of the total waste water load (in p.e.) discharged to sensitive areas from the 32 larger towns and cities did NOT meet all the applicable nutrient quality standards.**

Phosphorous requirements applied at 30 of the 32 large urban areas and 23% of these did NOT meet the phosphorus standards in 2012. (nearly one quarter)

Nitrogen requirements applied at 20 of the 32 large urban areas and

50% of these did NOT meet the nitrogen standards in 2012. "

It is or course unclear how if this assessment was corrected/adjusted to accommodate the further sites which fall to be considered under Art 5(5) as argued above – whether the situation would worsen significantly.

The report further notes that:

- There was no nutrient reduction in place for 6 of the areas that failed the quality standards, and only one has been provided since in Kilkenny city in 2013 for phosphorous.

- 3 sites Cavan, Navan and Roscrea failed the quality standards for Nitrogen and did not provide nutrient reduction for nitrogen. Dates in 2014 are indicated for the first 2 but there is n**o date available for Roscrea.**

- Portarlington now exceeds the 10,000 PE and hasn't been providing the data, and doesn't have facilities for nutrient reduction. No detail indicated on proposals.

- Tralee failed because it did not provide sufficient nitrogen results.

In summary it is clear there is a need for investment, increased rigour on data collation, and a data and investment review based on an adjusted scope of facilities which need to comply with the full quality and monitoring obligations of Article 5 including those arising from article 5(5).

7. Comments regarding investment proposals:

Following on the comments above regarding investment requirements, the deficit in relation to secondary treatment facilities as outlined earlier is once again highlighted.

However Part 3 of the EPA report which is issued in March 2014 fails to provide any useful current information on investments and compliance with its licensing conditions, providing only a significant time-lagged view as follows:

- Two thirds of EPA licences issued by 01/12/2013 have requirements for infrastructural improvements, with approximately 700 individual improvement works specified.
- Dates prescribed for completion of the works range between 2009 and 2021, with half of the improvements due prior to 2014.
- 59% of the 266 individual improvements due before the end of 2012 were reported as complete, while the remainder were still outstanding at the beginning of 2013.

The EPA indicates that it has commenced legal action in relation to the delays in the provision of infrastructure in only 3 urban areas this is despite the fact it also makes reference to some 105 actions completed by the end of 2012 which it notes earlier that 700 individual improvement works have been specified.

Figure 3.3 details that there are still fairly significant percentages of non-compliance with key areas assessed during their audits. In relation to the Annual Environmental Reports from water services authorities to the EPA section 3.5 of the report notes 20% did not provide the report even by an extended deadline of 5 further months to end of July 2013 from Feb 28th 2013, and notes variability in quality of reports and indications that omissions in data were **due to lack of resources**. At time of writing it is unclear if these reports also provide the basis for the sampling data overseen by the EPA.

There is no evident integration with the obligations under the Water Framework Directive and how the EPA's prosecution strategy, adhoc inspections and Ireland's/Irish Water's investment strategy are driven by the significant ecological quality obligations of that directive or indeed those of the Marine Strategy Framework Directive, and this in the context of an executive summary for the EPA's report which states:

> "*Urban waste water is one of the principal causes of pollution of our water resources.....However, further investment is infrastructure is necessary to meet European Union requirements such as the Urban Waste*

Water Treatement Directive and the Water Framework Directive and to ensure compliance with EPA waste water discharge authorisations. ……..

In some cases, where the required infrastructure is in place, operational and maintenance issues have prevented waste water from being consistently treated to the required standards."

While we note that subsequent to this analysis the EPA has produced a more recent report – which we have not had the opportunity to analyse and present in the same level of detail, a number of the key issues pertain.

This is all in the context of Directive obligations whose transposition obligations date back to 1993 and certain compliance obligations dating back to 2000 are still at issue in 2014 and some of which it is now clear IW does not intend to address until 2021 and 2040. This is compounded by the outstanding resolution to the 2008 judgement in case c-316/06, and an extensive infringement and where the priority to address these is unclear from the newly published IW DWSS plan.