Administration, Environmental Licensing Programme, Office of Climate, Licensing & Resource Use, Environmental Protection Agency, headquaters, POBox3000, Johnstown, Castle Estate, County Wexford.

Your Ref.: A0358-01 Our reference: MS/Kilm/11

28 February 2011

Sub.: Kilmurry Agglomeration (Register No. AQ358-01) Regulation 25(c)(ii) Further Information Response

Dear Sir/Madam,

Dear Sir/Madam,
With reference to your letter of the 14 of December 2010, please find the following attached:

1 Original of the Kilmurry Agglomeration (Register No. A0358-01) Regulation 25(c)(ii) Further Information Response.

- 1 Copy of the Kilmurry Agglomeration (Register No. A0358-01) Regulation 25(c)(ii) Further Information Response.
- 1 Original of The Upper Lee Management Plan
- 1 Copy of The Upper Lee Management Plan.
- 1 CDROM with the Further Information Response & Attachments in PDF Format.

Yours faithfully,

Ms Patricia Power, Director of services, Water Services, Cork County Council, County Hall, Cork.

### **Kilmurry Regulation 25 Further Information Response**

Question 1

Assess the likelihood of significant effect of the waste water discharges from the above agglomerations on the relevant European sites by referring to Circular L8/08 "Water Services Investment and Rural Water Programmes – Protection of Natural Heritage and National Monuments" issued by the Department of Heritage and Local Government. In particular, the flow diagram in Appendix 1 should be completed and the results of each section recorded. Provide details of the results of this assessment within one month of the date of this notice and provide a reasoned response for the decision. If significant effects are likely then and appropriate assessment must be carried out and a report of this assessment forwarded to the Agency by within 1 month of the date of this notice. You are advised to provide the requested information in accordance with the "Note on Appropriate Assessments for the purposes of the Waste Water Discharge (Authorisation) Regulations, 2007 (S.I. 684 of 2007)"

Wastewater Discharge Licence Application: A0358-01

Circular L8/08 2 September 2008

Water Services Investment and Rural Water Programmes – Protection of Natural Heritage and National Monuments Introduction

1.1

The village of Kilmurry is situated approximately 11.5 km south of the town of Macroom off the N22 in County Cork. The village has a school a church and 80 houses built along main access road of the village.

The existing waste treatment plant handles waste from 14 houses only at St.Mary Terraces housing estate, with loading of 42 PE. Originally the system (built late 1970's) was a septic tank to service the newly developed housing estate. In 1991 the plant was upgraded, Cork County Council built a secondary treatment unit on site, this was Bord Na Mona Pura- flow sewage treatment unit . In 1996 a pre cast concrete tank (capacity 1500 gallon ) was installed between the septic tank and the pumping station, a ZABEL Filter was also fitted. In 2007 the peat was replaced in the pura-flow treatment tank. The distribution grids, the filtering system and pipe work was also replaced in 2007.

1.2

This document brings together all of the information necessary to make determination as to whether there are likely to be significant impacts arising from the Kilmurry discharges on the designated sites within the catchment area.

These are :-

SAC/SPA – The Gearagh – Located on River Lee approx 7km upstream of Kilmurry discharge location.

Based on the preliminary flow chart already carried out, the need for an assessment is solely to assess whether the Kilmurry discharge has an impact on the salmonoid waters of the Lee.

### 2 Appropriate Assessment Screening Matrix

2.1 Description of project							
Location	Kilmurry						
Description of the key components of the project	Kilmurry WWTP serves a population equivalent of approx 42. The effluent discharges directly into river Buingea which is a tributary of the river Lee.						
Distance from designated sites in potential impact zone	Discharges directly into River Buingea which is a tributary of the River Lee – Salmonoid waters						

2.2 Description of the Natura 2000 Sites within the potential impact zone 1							
Name	None within impact zone.  The Gearagh SAC/SPA is located on the River Lee approx 1km upstream of Coolcower discharge locations.)						
Site Code	N/A						

 $^{1}$  Natura 2000 sites within the potential impact zone of the proposed development have been identified in accordance with guidance provided in the NPWS circular L8/08.

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#### 2.3 Assessment Criteria

Describe the individual elements of the project (either alone or in combination with other plans or projects) likely to give rise to impacts on the Salmonoid River.

Discharge from Kilmurry WWTP

Effluent from the treatment plant is discharged into the river Buingea which is a tributary of the river Lee.

Other Discharges in the vicinity:

Macroom WWTP— Treated effluent is discharged into the Sullane river. Though the WWTP is overloaded the standard of effluent is generally good.

Clondrohid – Two septic tanks discharging to the Foherish tributary of the Sullane.

Untreated discharges could give rise to elevated nutrients

entering the River Lee. Increased nutrients could have a

Coolcower WWTP --- Effluent from the treatment plant is discharged into the river Lee.  $_{\text{L}}$ 

Describe any likely direct, indirect or secondary impacts of the project (either alone or in combination with other plans or projects) on the Salmonoid river taking into account the following:

negative impact on the fish life in the river.

- Size and scale
- o Land-take
- Distance from the Natura 2000 site or key features of the site:
- Resource requirements (water abstraction etc.)
- Emissions (disposal to land, water or air)
- Excavation Requirements
- Transportation
   Requirements
- Duration of construction, operation, decommissioning
- Other.

Describe any likely changes Reduction in habitat area: to the site arising as a result Reduction in habitat Disturbance to key species: area Disturbance to key Increased nutrients in the river Lee downstream of the 0 species discharge location could have a negative effect on fish Habitat or species numbers in the Lee. However there is no evidence to support fragmentation o Reduction in species density Habitat or species fragmentation: Changes in key No water dependent species in the surrounding SAC's indicators of SPA's. conservation value (water quality etc) Reduction in species density: Climate Change Changes in key indicators of conservation value eg water quality: The South Western River Basin District have carried out a Water Management Unit Report on the Upper lee Catchment. This includes all the tributaries to the Lee. The river buingea is contained within hydrometric area 19. The water quality in the river Buingea is monitored by EPA station 0800 at Athsollis Bridge which is located approx.2 km up-stream of the discharge point water quality in this station had Q3-4 value from 2002 and Q3-4 from 2005., this represents a moderately polluted water. Cork County Council have monitoring sites on the River Lee for Salmonoid monitoring. There is a monitoring site downstream of the Coolcower Discharge at Bealaglashin Bridge. Results for 2010 are included as part of the assessment. As part of the Application process Cork County Council carried out limited sampling of water immediately downstream of the discharge point (depending on safe There is no evidence of deterioration of water quality associated with these results.

Describe from the above those elements of the project of plan, or combination of elements, where the above impacts are likely to be significant or where the scale or magnitude of impacts is not known.	

### 3. Finding of No Significant Effects Report Matrix

3.1 Project Description							
Name of project or plan	Kilmurry						
Name of salmonoid River	The treatment plant discharges into the river Buingea which is a tributary of the river Lee.						
Description of the project or plan	Kilmurry waste treatment plant handles waste from 14 houses only at St.Mary Terraces housing estate, with loading of 42 PE.  Originally the system (built late 1970's) was a septic tank to services the newly developed housing estate. In 1991 the plant was upgraded, Cork County Council built a secondary treatment unit on site, this was Bord Na Mona Pura- flow sewage treatment unit . in 1996 a pre cast concrete tank (capacity 1500 gallon) was installed between the septic tank and the pumping station, a ZABEL Filter was also fitted. In 2007 the peat was replaced in the pura-flow treatment tank. The distribution grids, the filtering system and pipe work was also replaced in 2007.						
Is the project or plan directly connected with or necessary to the management of the site (provide details)?	No						

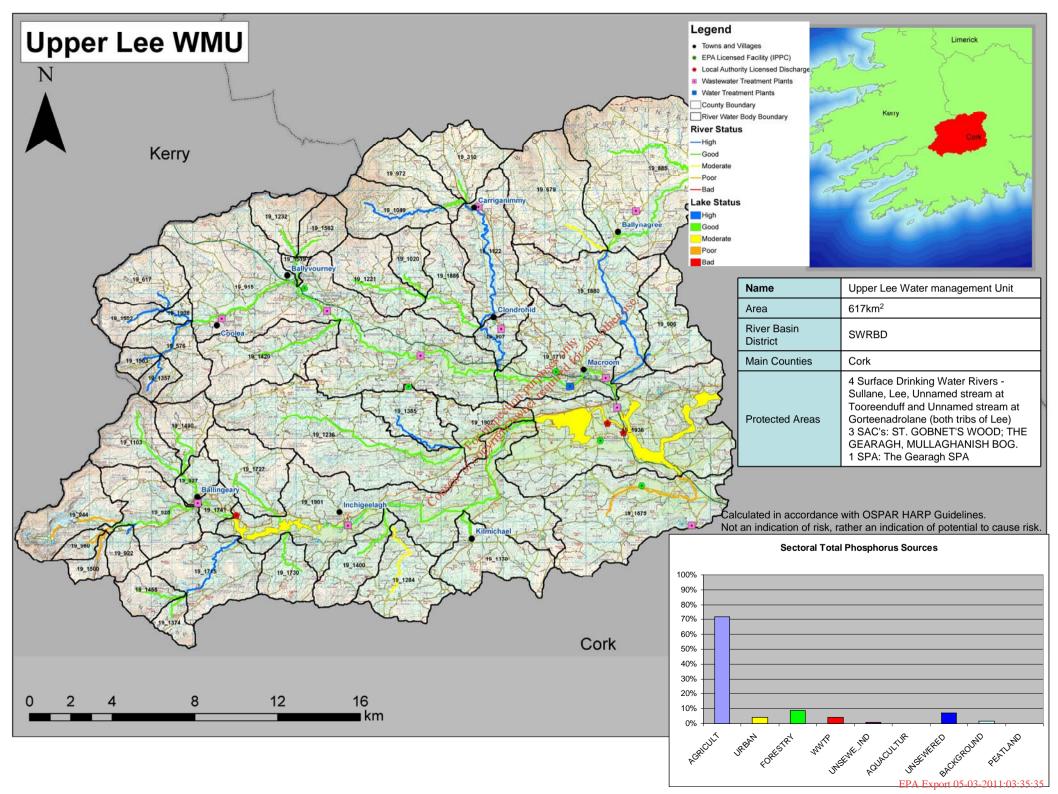
3.2 The assessment of significance of effects								
Describe how the project or plan (alone or in combination) is likely to affect the river	The effluent from Kilmurry discharges directly into the river Buingea downstream of the Gearagh SAC. If, in times of low flow in the Lee, the treatment process was to breakdown or deteriorate in Kilmurry and/or other treatment processes upstream, this could result in high levels of nutrients discharging into the Salmonoid river which could affect the fish life in the river.							
Explain why these effects are not considered significant.	Discharge from Kilmurry is negligible and receives adequate dilution in the Buingea river before it reaches the Lee.							

Data collected to carry out the assessment											
Who carried out the assessment	Sources of data	Level of assessment completed	Where can the full results of the assessment be accessed and viewed								
Mahmoud Shaladan& Madeleine Healy , Cork County Council	Cork Co Council Counci	Desktop review of cited data.	This report.								

Question 2 Confirm the design capacity of the waste water treatment plant and the current population equivalent (PE) being treated at the plant. Confirm current PE includes the maximum average weekly loading for the agglomeration having taken into account local festivals, peak holiday seasons, etc.

The existing waste treatment plant handles waste from 14 houses with loading of 42 pe only . Originally the system (built late 1970's) was a septic tank built to services the newly developed housing estate. In 1991 the plant was upgraded , Cork County Council built a secondary treatment unit on site, this was Bord Na Mona Pura- flow sewage treatment unit (see attachments in appendix A). in 1996 a pre cast concrete tank (capacity 1500 gallon ) was installed between the septic tank and the pumping station, a ZABEL Filter was also fitted. In 2007 the peat was replaced in the pura-flow treatment tank. The distribution grids, the filtering system and pipe work was also replaced in 2007.





### **Upper Lee Water Management Unit Action Plan**

STATUS/IMPAG	CTS	
Overall status	There are 47 water bodies in this WMU. They are mostly High Status (14) with 27 Good Status, 2 Moderate status and 4 Poor status.	
Status elements	Fish and hydromorphology dictates status of the poor waterbodies. Physchem is good or high, where monitored. High and Good water bodies are generally dictated by Q scores.	
Possible Impacts - EPA Water Quality	LEE (CORK): SW_19_944; SW_19_928; SW_19_1901 2002 - EPA noted the protected pearl mussel has apparently become scarce in the river in the past two decades. 2005 - there was major disruption to fauna at first location, upstream of Gouganebarra Lake (0010), where salmonid parr and other age classes had been killed. The pH of the water was 10.66 on the day, outside the limit of tolerance for these fish, which resulted from concreting work on a small bridge upstream of the sampling site. 2008 - the site was assigned Q score 4-5 (high) - RECOVERY SW_19_944 Status of WB 2009: Moderate Status dictated by hydromorph SW_19_1901 Status of WB 2009: Good Status dictated by Q status SW_19_928 Status of WB 2009: Good Status dictated by Q status CUMMER SW_19_1875	
	2002 - The top and middle section of the river was polluted after having being high status in previous years. 2005 and 2008 - the water quality started to improve. The bottom section has remained at a good/high quality since records began. In 2002 and 2005 pollution was detected at the top section (site 0800). However the latest EPA data, collected in 2008, assigned site 0800 a Q score 4 (good). Status of WB 2009: Poor Status dictated by fishery status  TOON: SW_19_1236; SW_19_1907 2002 - EPA found Toon river to be satisfactory throughout, for the first time since sampling	on de
	TOON: SW_19_1236; SW_19_1907 2002 - EPA found Toon river to be satisfactory throughout, for the first time since sampling began in 1990, when examined after flooding in September 2002. The pearl mussel still lives in part of the upper reaches. The lower reach, including the final location (0800) is hydromorphologically different than upstream following channelisation in the past 2005 - continuing satisfactory. SW_19_1236 Status of WB 2009: Good Status dictated by Q status SW_19_1907 Status of WB 2009: Good Status dictated by Q status	
	LANEY: SW_19_885; SW_19_1800 2008 - Continuing satisfactory with high ecological quality at three of the site (0200, 0400, 0500) and good status a one site (0100). The top two sites surveyed (0100 and 0200) were assigned Q score 4 (good) whilst the bottom two sites were assigned Q score 4-5 (high). The protected pearl mussel lives in some stretches of the river. SW_19_885 Status of WB 2009: Good Status dictated by Q status SW_19_1800 Status of WB 2009: High Status dictated by Q status	

#### STATUS/IMPACTS

Possible Impacts - EPA Water Quality (CONTINUED) SULLANE - SW\_19\_915; SW\_19\_1710

2002 - EPA noted the protected pearl mussel inhabits parts of the river.

2005 - EPA found the Sullane to be continuing satisfactory. A polluted stream enters the river, from right-hand side, downstream of Ballyvourney (0170).

2008 - All sites were assigned good status, except site 0300 which was classified Q score 4-5 (high).

SW\_19\_915 Status of WB 2009: Good Status dictated by Q status, good fishery status and physchem status\*\*\*\*

SW\_19\_1710 Status of WB 2009: Good Status dictated by Q score

FOHERISH:SW\_19\_1049; SW\_19\_972;SW\_19\_1122; SW\_19\_907 All sites continue to be assigned Q score 4-5 (high).

SW\_19\_1049 Status of WB: High Status dictated by Q status

SW\_19\_972 Status of WB: High Status dictated by Q status SW 19 1122 Status of WB: High Status dictated by Q status

SW\_19\_907 Status of WB: High Status dictated by Q status

AWBOY - SW\_19\_679

Since records began the site has been assigned either good status or above. Status of WB 2009: Good Status dictated by Q score

**KEEL SW 19 310** 

Continuing satisfactory with good quality again recorded at the only location sampled on this tributary of the Foherish.

Status of WB 2009: Good Status dictated by Q status

DOUGLAS (SULLANE) - SW\_19\_1420

The Douglas (Sullane) has consistently attained good/high status. The lower site (0200) continuously has been assigned Q score 4, whilst the upper site (0700) has continuously been assigned Q score 4-5.

Status of WB 2009: Good Status dictated by Q status

GARRANE (LEE) SW 19 972

Since records began this site has been assigned Q score of 4 or 4-5 (good or high).

Status of WB: High Status dictated by Q status

CUSLOURA - SW\_19\_679

Consistently assigned Q score 4 (good) except in 2005 when it was assigned moderate status. This was due to the river becoming overgrown with emergent vegetation in July 2005. In 2008 EPA recorded a reverse in the quality and it was assigned Q score 4 again.

Status of WB 2009: Good Status dictated by Q status

## **Upper Lee Water Management Unit Action Plan**

PRESSURES/RISKS								
Nutrient sources	Most TP is diffuse (92%) of which 72% comes from agriculture, 9% from forestry and 7% from unsewered properties. 8% of TP comes from Urban and WWTP.							
Point pressures	11 WWTP: - Ballinagree, Ballingeary, Ballymakera, Carranimmy, Clondrohid, Coolcower, Coolea, Inchigeela, Kilmurry, Kilnamartyra, Macroom U.D.C); 1 WTP (Macroom Pws); 4 Section 4 2 contaminated sites (Palfab Limited, Adhmaid Cill Na Martra Teoranta). 4 IPPC							
Wastewater Treatment Plants (WWTP) and Industrial Discharges	Ballingeary - Insufficient existing capacity, evidence of impact, not a protected area Ballingeary - Insufficient existing assimilative capacity (BOD), evidence of impact, not a protected area Ballymakera WWTP - Insufficient existing capacity, evidence of impact, not a protected area Ballymakera WWTP - Insufficient existing assimilative capacity (BOD), evidence of impact, not a protected area Kilmurry - Insufficient future (2015) assimilative capacity (BOD), discharge not to a protected area Macroom U.D.C. WWTP - Insufficient existing capacity, non-compliant effluent standard Macroom U.D.C. WWTP - Insufficient existing capacity of treatment plant, no evidence of impact, not a protected area Macroom U.D.C. WWTP - Insufficient future (2015) assimilative capacity (BOD), discharge not to a protected area Inchigeela - Insufficient existing assimilative capacity (BOD), evidence of impact, not a protected area							
Quarries, Mines & Landfills	3 quarries and 1 landfill. None at risk.							
Agriculture	1 WB at risk - SW_19_1875 -Cummer and Buingea Rivers							
On-site systems	There are 4499 septic tanks in this WMU. 1518 of these are located in areas of very high or extreme risk.							
Forestry	10 WB at risk from acidification - SW_19_1400, SW_19_617, SW_19_1357, SW_19_1503, SW_19_576, SW_19_1374, SW_19_1049, SW_19_1500, SW_19_1730, SW_19_1727.							
Dangerous substances	None at Risk							
Morphology	1 WB at risk - SW_19_1936 - Water Regulation and Impoundments - Carrigdrohid Reservoir, which is designated as HMWB							
Abstractions	None at risk							
Other								

#### Future Pressures and Developments

Throughout the river basin management cycle future pressures and developments will need to be managed to ensure compliance with the objectives of the Water Framework Directive and the Programme of Measures will need to be developed to ensure issues associated with these new pressures are addressed.

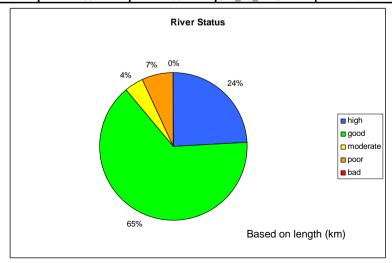
## **Upper Lee Water Management Unit Action Plan**

SELECTED ACTION PROGRAMME  NB All relevant basic measures and general supplementary measures/surveys apply							
Point Sources	Refer to point source table below for WWTP action programme						
	Section 4s & IPPCs- Review Discharge Licenses						
Diffuse Sources	AGRICULTURE - Good Agricultural Practice Regulations and Enforcement						
	FORESTRY - Measures to address acidification apply to the 10 water bodies at risk in the WMU. These are generally located to the west and south west of the WMU.						
	Septic Tanks: At Risk septic tanks are to be prioritised for inspections. Subsequent upgrade or connection to municipal systems depends on inspection and economic tests.						
Other	Protection of drinking water, abstraction control and future licensing.  MORPHOLOGY – Impassable barriers investigation.						

Discharge	)			Waterb	ody					
Point Source Discharge	County	Plants Requiring Capital Works	Agglomerations Requiring Further Investigation Prior to Capital Works	Plants Required to Commence Implementation of Pollution Reduction Programmes for Maters	Plants Requiring the Implementation of an Appropriate Performance Management System	Plants Requiring the Investigation of CSO's	Plants Required to Ensure Capacity of Treatment Plant is not Exceeded	Extended Timescale for Measure Implementation	Waterbody Code	Extended Deadline to Achieve Waterbody Objective
Ballingeary	Cork South	Yes		inshit				Yes	SW_19_927	No
Ballymakera WWTP	Cork South	Yes		FOLVILE				Yes	SW_19_915	No
Inchigeela	Cork West	Yes		8 COA				Yes	SW_19_1901	No
Kilmurry	Cork South			at o			Yes	No	SW_19_1875	No
Macroom U.D.C. WWTP	Cork South	Yes		anse.		·	Yes	Yes	SW_19_1710	No

OBJECTIVES	
Good status 2015	Protect 41 waterbodies. Restore 3 waterbodies – by 2015
Alternative Objectives	Restore 1 waterbody by 2021 (SW_19_1875) – extended deadline for nitrogen losses to surface waters via groundwaters.  Restore 1 waterbody by 2021 (SW_19_980) to allow recovery from poor/bad status Restore 1 waterbody (SW_19_1500) by 2027 for forestry.

**Transitional Status** – Refer to separate transitional waters action programme **Groundwater Status** – Refer to separate groundwater action programme



# **Upper Lee Water Management Unit Action Plan - Rivers**

							IE_S	W_Uppe	rLee								
			Bio		l Eleme	nts	Suppor	ting Ele	ments			P	rotected	Areas			
Member State Code	Monitored Y (Extrapolated N)	Donor Waterbody	Macroinvertebrate s (Q)	FreshWater Pearl Mussel	Fish	Phytobenthos (Diatoms)	Morphology	Specific Polutants	Physio-chemical	Ecological Status	Chemical Status	Special Area of Conservation	Special Protection Area	Nutrient Sensitive Waters	Drinking Water	Objective	Date objective to be achieved
SW_19_1020	N	SW_19_1221								G			Υ			GES	2009
SW_19_1049	Υ		Н							Н			Υ			HES	2009
SW_19_1103	N	SW_19_1420								G						GES	2009
SW_19_1122	Υ		Н							eH_			Υ			HES	2009
SW_19_1221	Υ		G						الم.	G G			Υ			GES	2009
SW_19_1232	N	SW_19_915							oth	G		Υ	Υ			GES	2009
SW_19_1236	Υ		G				G	ó	illy all.	G						GES	2009
SW_19_1284	N	SW_20_250						600	, to	M						GES	2015
SW_19_1357	N	SW_21_4731						OHIP CHIL		Н						HES	2009
SW_19_1370	N	SW_19_1710					×	ion of tex		G						GES	2009
SW_19_1374	N	SW_19_928					300	ONIT		G						GES	2009
SW_19_1385	N	SW_19_907					cot its tell	,		Н						HES	2009
SW_19_1400	N	SW_19_1236					Top9			G						GES	2009
SW_19_1420	Υ		G				of			G						GES	2009
SW_19_1455	N	SW_19_928				, Se	it.			G						GES	2009
SW_19_1490	N	SW_19_1420				CQ.				G						GES	2009
SW_19_1500	N	SW_19_944								Р						GES	2027
SW_19_1502	N	SW_21_4731								Н						HES	2009
SW_19_1503	N	SW_21_4731								Н						HES	2009
SW_19_1519	N	SW_19_915								G			Υ			GES	2009
SW_19_1562	N	SW_19_915								G		Υ	Υ			GES	2009
SW_19_1710	Υ		G				Н		Н	G					Υ	GES	2009
SW_19_1715	N	SW_21_7068								Н						HES	2009
SW_19_1727	N	SW_19_1420								G						GES	2009
SW_19_1730	N	SW_20_1491								G						GES	2009
SW_19_1741	N	SW_19_1420								G						GES	2009
SW_19_1875	Υ	_	G		Р				Н	Р						GES	2021

# **Upper Lee Water Management Unit Action Plan - Rivers**

IE_SW_UpperLee																	
	Biological Elements						Suppor	rting Ele	ments			Р					
Member State Code	Monitored Y (Extrapolated N)	Donor Waterbody	Macroinvertebrate s (Q)	FreshWater Pearl Mussel	Fish	Phytobenthos (Diatoms)	Morphology	Specific Polutants	Physio-chemical	Ecological Status	Chemical Status	Special Area of Conservation	Special Protection Area	Nutrient Sensitive Waters	Drinking Water	Objective	Date objective to be achieved
SW_19_1880	Υ		Н							Н			Υ			HES	2009
SW_19_1886	Υ		G							G			Υ			GES	2009
SW_19_1901	Υ		G						Н	G		Υ	Υ			GES	2009
SW_19_1907	Υ		G							Ģ		Υ	Υ			GES	2009
SW_19_1908	N	SW_21_4731								₹ <sub>N</sub> E H						HES	2009
SW_19_1936	Υ								G <sub>o</sub> din	G		Υ	Υ			GES	2009
SW_19_310	Υ		G					3	17, 3113	G			Υ			GES	2009
SW_19_576	N	SW_21_4731						ases a	10.	Н						HES	2009
SW_19_617	N	SW_21_4731						alif quite		Н						HES	2009
SW_19_679	Υ		M				3	on Prices		M			Υ			GES	2015
SW_19_885	Υ		G				OSC)	OWITE		G			Υ			GES	2009
SW_19_906	N	SW_19_1880					digit re	,		Н						HES	2009
SW_19_907	Υ		Н				FORTH.			Н						HES	2009
SW_19_915	Υ		G		G		of		G	G		Υ	Υ			GES	2009
SW_19_922	N	SW_21_7068				ر چوخ	N.			Н						HES	2009
SW_19_927	N	SW_19_1420				Con				G						GES	2009
SW_19_928	Υ		G						Н	G						GES	2009
SW_19_944	Υ		Р				G			Р						GES	2015
SW_19_972	Υ		G							G			Υ			GES	2009
SW_19_980	N	SW_19_944						_		Р						GES	2021

# **Upper Lee Water Management Unit Action Plan - Lakes**

IE_SW_UpperLee																	
			Biolog	ical Ele	ments	Suppo	rting Ele	ments									
Member State Code	Name	Monitored Y (Extrapolated N)	Macrophytes	Chlorophyll	Fish	Morphology	Nutrient Enrichment	Physico Chemical	Ecological Status	Chemical Status	Special Area of Conservation	Special Protection Area	Nutrient Sensitive Waters	Bathing Water	Drinking Water	Objective	Date objective to be achieved
SW_19_139	Carrigdrohid Reservoir	Υ	M	G			G	G	М		Υ	Υ				GEP	2015
SW_19_4	Allua ( Lough )	Υ	M	M	M		G	G	М							GES	2015

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