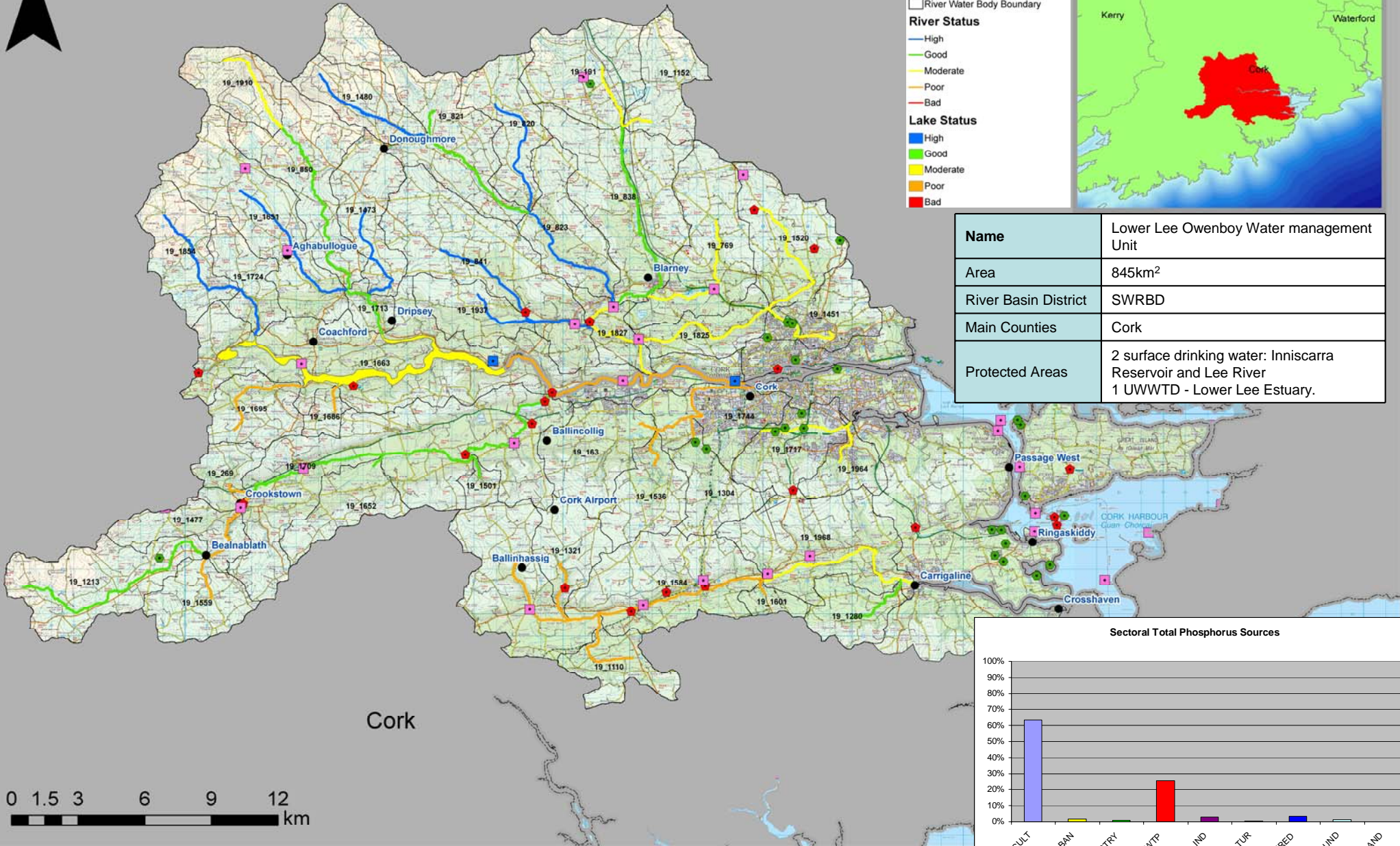


# Lower Lee - Owenboy WMU



**Legend**

- Towns and Villages
- EPA Licensed Facility (IPPC)
- Local Authority Licensed Discharge
- Wastewater Treatment Plants
- Water Treatment Plants
- County Boundary
- River Water Body Boundary

**River Status**

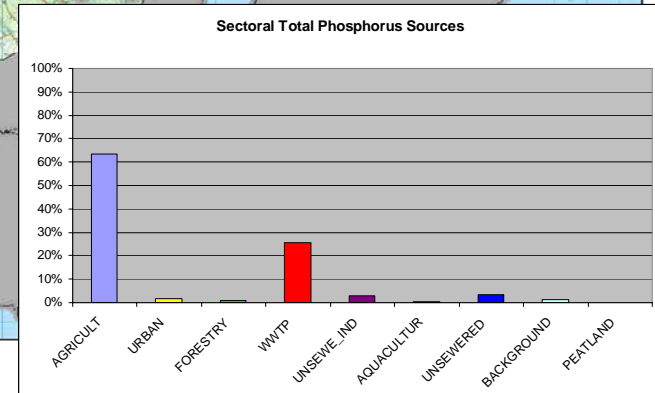
- High
- Good
- Moderate
- Poor
- Bad

**Lake Status**

- High
- Good
- Moderate
- Poor
- Bad



<b>Name</b>	Lower Lee Owenboy Water management Unit
<b>Area</b>	845km <sup>2</sup>
<b>River Basin District</b>	SWRBD
<b>Main Counties</b>	Cork
<b>Protected Areas</b>	2 surface drinking water: Inniscarra Reservoir and Lee River 1 UWWTD - Lower Lee Estuary.



Calculated in accordance with OSPAR HARP Guidelines.  
Not an indication of risk, rather an indication of potential to cause risk.

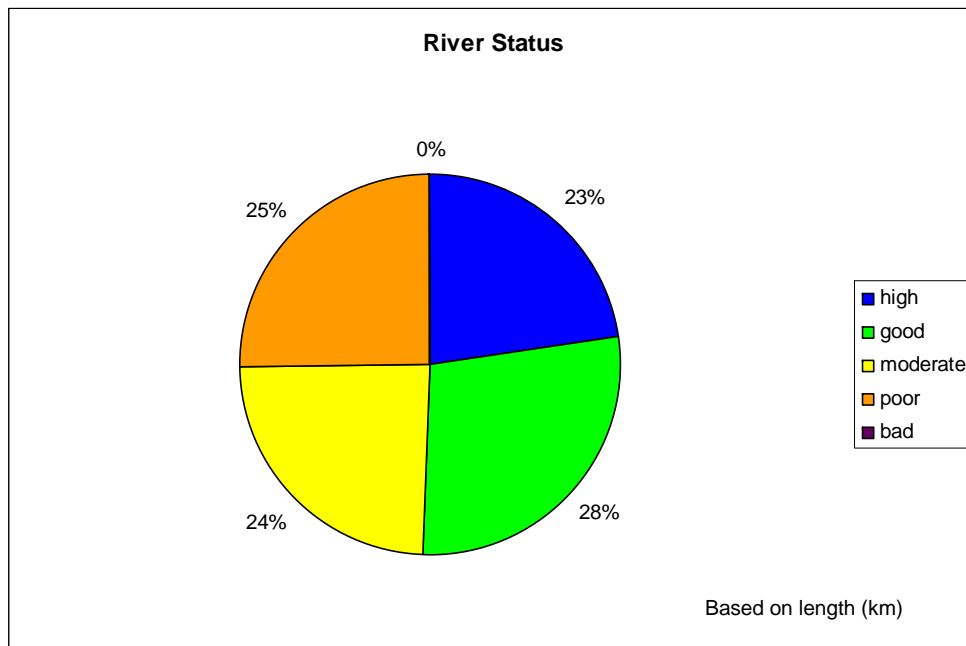
# Lower Lee Owenboy Water Management Unit Action Plan

STATUS/IMPACTS	
Overall status	There are 43 river water bodies in this WMU - 9 High, 9 Good, 11 Moderate, 14 Poor Status.
Status elements	2 Poor water bodies are dictated by Q Score, and 2 are dictated by Fish Status. 3 moderate water bodies are dictated by Q score and 3 are dictated by Physchem. Both Q and Physchem and Good / High for the good/high status water bodies that have been monitored. Lake status is dictated by macrophytes, chlorophyll and fish.
Possible Impacts - EPA Water Quality	<p>AUGHNABOY (CORK) – SW_19_1584            2005 – With deterioration, to slightly polluted condition, recorded at the lowermost location (0300) in August 2005 the overall quality reverted to 1999 status.            2008 – Good ecological quality at the only scheduled sampling location. .            Status of WB 2009: Poor status dictated by Q score (physchem high).</p> <p>BLARNEY – SW_19_769            2008 – Good quality recorded in successive surveys - prior to 2005 had been less than satisfactory. .            Status of WB 2009: Moderate status dictated by PHYSCHEM.</p> <p>BRIDE (LEE) – SW_19_1213; SW_19_1477; SW_19_1709            2008 – Satisfactory throughout with high ecological quality at three of the sites. Significant improvement was recorded at Crookstown (0610) where high ecological quality was recorded but the hydromorphological condition of the site was only moderate. Some artificial siltation was recorded along right-hand margin of river at the final location (1600) but overall quality was satisfactory. .            SW_19_1213 Status of WB 2009: Good status dictated by Q score.            SW_19_1477 Status of WB 2009: Moderate status dictated by physchem status            SW_19_1709 Status of WB 2009: Good status dictated by Q score.</p> <p>SHOURNAGH – SW_19_821; SW_19_823; SW_19_1827            2005 - No change. Continuing mostly satisfactory but again slightly polluted at Tower Bridge            2008 - Satisfactory throughout with high status at two of the locations.            SW_19_821 Status of WB 2009: Good status dictated by Q score.            SW_19_823 Status of WB 2009: High status dictated by Q score.            SW_19_1827 Status of WB 2009: Moderate status dictated by Q score.</p> <p>DRIPSEY – SW_19_1910; SW_19_850; SW_19_1713            2001 - Satisfactory apart from uppermost location (0010) where large crops of filamentous algae were recorded downstream of forestry plantation.            2005- No change since previous survey. Satisfactory except at upper location (0010) where again slightly polluted.            2008 - No change with good quality at two of the three locations and the uppermost one continuing in high status.            SW_19_1910 Status of WB 2009: Moderate status dictated by Q score.            SW_19_850 Status of WB 2009: Good status dictated by Q score            SW_19_1713 Status of WB 2009: Good status dictated by Q score</p> <p>LEE (CORK) – SW_19_1663            2001- No significant change. Satisfactory apart from Inishcarra Bridge (0600) where again highly eutrophic. The protected pearl mussel has apparently become scarce in the river in the past two decades.            2005- 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. Further downstream the water quality status was the same as that of the previous survey with highly eutrophic conditions again recorded at Inishcarra Bridge (0600).            2008- Satisfactory apart from at Inishcarra Bridge where again poor ecological quality was recorded.            SW_19_1663 Status of WB 2009: Poor status dictated by Q score</p> <p>MARTIN – SW_19_838; SW_19_191            2001 - No change since last survey with the first and final location (0100, 0600) again unsatisfactory due respectively to moderate and slight pollution effects. The sources of the pollution are suspected to be agricultural at the former and domestic (Blarney) at the latter.            2005- Satisfactory throughout, for only the second time since surveys began in 1971, following improvements in condition at the uppermost (0100) and lowermost(0600) locations.            2008 - Satisfactory apart from uppermost location where only moderate status. .            SW_19_838 Status of WB 2009: Good status dictated by Q score and physchem            SW_19_191 Status of WB 2009: Moderate status dictated by Q score</p> <p>OWENBOY (CORK) – SW_19_1321; SW_19_1584; SW_19_1968            2005 - Deterioration, to moderately polluted conditions, at two locations (0200, 0600) since previous survey in 2003. Continuing slightly polluted at lowermost location (1400).            2008 - Continuing with only moderate ecological quality at final location but otherwise satisfactory with good status.            SW_19_1321 Status of WB 2009: Good status, dictated by Q score            SW_19_1584 Status of WB 2009: Poor status dictated by Q score            SW_19_1968 Status of WB 2009: Moderate status dictated by Q score</p>

# Lower Lee Owenboy Water Management Unit Action Plan

PRESSURES/RISKS	
Nutrient sources	Main source of TP is from unsewered industry (64%) and agriculture (26%).
Point pressures	24 WWTP - ghabullogue, Ballincollig New WWTP, Ballinhassig, Ballygarvan, Blarney/Tower WWTP, Cloghroe WWTP, Cloughduv, Coachford WWTP, Crookstown, Crossbarry, Dripsey WWTP, Five Mile Bridge, Grenagh, Half Way, Kerrypike, Killeens, Kilumney, Rylane, Whitechurch, Carrigrenan, Cobh, North Cobh, Passage/Monkstown, Ringaskiddy; 2 WTP (Inniscarra Pws, Lee Rd. Water Works); 21 Section 4s 26 IPPC's 1 contaminated site
WWTP risks	The following WWTPs are causign risk: Ballincollig New WWTP Ballygarvan Blarney/Tower WWTP Carrigrenan Cloghroe WWTP Coachford WWTP Cobh Crookstown Crossbarry Dripsey WWTP Killeens Passage/Monkstown Ringaskiddy Ringaskiddy Carrigaline Crosshaven Whitechurch

PRESSURES/RISKS	
Quarries, Mines & Landfills	14 quarries and 5 landfills. 3 WB at risk from quarries - SW_19_1663, SW_19_1584, SW_19_1968.
Agriculture	39 WBs at risk - SW_19_1520, SW_19_769, SW_19_1827, SW_19_1709, SW_19_1304, SW_19_1321, SW_19_1110, SW_19_1744, SW_19_1968, SW_19_1601, SW_19_163, SW_19_1451, SW_19_1964, SW_19_1825, SW_19_1717, SW_19_820, SW_19_191, SW_19_1652, SW_19_841, SW_19_1473, SW_19_838, SW_19_1480, SW_19_850, SW_19_823, SW_19_1713, SW_19_1663, SW_19_1213, SW_19_1477, SW_19_821, SW_19_1651, SW_19_1501, SW_19_1536, SW_19_1559, SW_19_269, SW_19_1686, SW_19_1280, SW_19_1584, SW_19_1695, SW_19_1937.
On-site systems	There are 15275 septic tanks in this WMU. 963 of these are located in areas of very high or extreme risk.
Forestry	Significant area of SW_19_1910 is under forestry
Dangerous substances	None at risk
Morphology	3 WBs at risk - SW_19_1663, SW_19_1744, SW_19_1825 - Water Regulation and Impoundments - Inniscarra Reservoir is a HMWB. (the local authority also note some drainage & channelisation of WB 19-1584 in the past particularly between Ballinhassig & Halfway when road was realigned, also some drainage upstream of Halfway in 2006)
Abstractions	1 WB at risk - SW_19_1663
Other	Local authority note possible impact of Bride confluence with Lee upstream of Inniscarra Bridge due to different chemistry of river waters (19-1663)



***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.*

# Lower Lee Owenboy Water Management Unit Action Plan

<b>SELECTED ACTION PROGRAMME</b> <i>NB All relevant basic measures and general supplementary measures/surveys apply</i>	
Point Sources	Section 4 & IPPC licensed facilities – review licenses  See below for WWTP action programme.
Diffuse Sources	AGRICULTURE - Good Agricultural Practice Regulations and Enforcement FORESTRY – investigate impact of forestry on SW_19_1910 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. Ensure licensing of quarries under Section 4 of Water Pollution Act 1977. MORPHOLOGY - Investigation into the impact of historical channelisation on morphological and fish status between Ballinhassig & Halfway. Carry out impassable barriers investigation at SW_19_1663, SW_19_1744, SW_19_1825.

Discharge		Measures							Waterbody	
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 Shellfish Waters	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
Ballincollig New WW	Cork South	Yes						No	SW_19_1663	Yes
Ballygarvan	Cork South						Yes	No	SW_19_1968	No
Blarney/Tower WWT	Cork South					Yes	Yes	Yes	SW_19_1827	Yes
Carrigrenan	Cork City	Yes		Yes				Yes	SW_060_0750	Yes
Cloghroe WWTP	Cork South				Yes		Yes	No	SW_19_841	No
Coachford WWTP	Cork South		Yes				Yes	Yes	SW_19_1663	Yes
Cobh	Cork South	Yes	Yes	Yes				Yes	SW_060_0750	Yes
Crookstown	Cork South		Yes					No	SW_19_1477	No
Crossbarry	Cork South					Yes		No	SW_19_1584	No
Dripsey WWTP	Cork South				Yes			No	SW_19_1713	No
Killeens	Cork South	Yes						No	SW_19_769	No
Passage/Monkstown	Cork South	Yes	Yes	Yes				Yes	SW_060_0750	Yes
Ringaskiddy	Cork South		Yes					Yes	SW_060_0000	Yes
Ringaskiddy Carrigal	Cork South	Yes	Yes	Yes				Yes	SW_060_0000	Yes
Whitechurch	Cork South						Yes	No	SW_19_1520	No

<b>OBJECTIVES</b>	
Good status 2015	Protect 18 waterbodies.
Alternative Objectives	Restore 25 waterbodies by 2021(SW_19_1110, SW_19_1152, SW_19_1304, SW_19_1321, SW_19_1451, SW_19_1477, SW_19_1520, SW_19_1536, SW_19_1559, SW_19_1584, SW_19_1601, SW_19_163, SW_19_1663, SW_19_1686, SW_19_1695, SW_19_1717, SW_19_1744, SW_19_1825, SW_19_1827, SW_19_191, SW_19_1910, SW_19_1964, SW_19_1968, SW_19_269, SW_19_769) – extended deadline for nitrogen losses to surface water via groundwater. (Two of which are also extended to allow wastewater infrastructure to be put in place (SW_19_1827 and SW_19_1663))

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

# Lower Lee Owenboy Water Management Unit Action Plan - Rivers

IE_SW_LowerLee/Owenboy																	
Member State Code	Monitored Y (Extrapolated N)	Donor Waterbody	Biological Elements				Supporting Elements				Protected Areas					Objective	Date objective to be achieved
			Macrobenthos (O)	Freshwater Mussel	Fish	Phytoplankton (Diatoms)	Morphology	Specific Pollutants	Physio-chemical	Ecological Status	Chemical Status	Special Area of Conservation	Special Protection Area	Nutrient Sensitive Waters	Drinking Water		
SW_19_1110	N	SW_19_1584									P					GES	2021
SW_19_1152	N	SW_18_2169									M					GES	2021
SW_19_1213	Y		G								G					GES	2009
SW_19_1280	N	SW_20_1209									G					GES	2009
SW_19_1304	N	SW_19_1536									P					GES	2021
SW_19_1321	Y		P							G	P					GES	2021
SW_19_1451	N	SW_19_755									M					GES	2021
SW_19_1473	N	SW_19_1480									H					HES	2009
SW_19_1477	Y		P							M	P					GES	2021
SW_19_1480	Y				H						H					HES	2009
SW_19_1501	N	SW_19_1709									G					GES	2009
SW_19_1520	N	SW_19_755									M					GES	2021
SW_19_1536	Y				P						P					GES	2021
SW_19_1559	N	SW_19_1875									P					GES	2021
SW_19_1584	Y		P							H	P					GES	2021
SW_19_1601	N	SW_19_1793									P					GES	2021
SW_19_163	N	SW_19_1744									P					GES	2021
SW_19_1651	N	SW_19_1480									H					HES	2009
SW_19_1652	N	SW_20_1209									G					GES	2009
SW_19_1663	Y		P							H	P			Y		GES	2021
SW_19_1686	N	SW_19_1875									P					GES	2021
SW_19_1695	N	SW_19_1875									P					GES	2021
SW_19_1709	Y		G							H	G					GES	2009
SW_19_1713	Y		G							G	G					GES	2009

# Lower Lee Owenboy Water Management Unit Action Plan - Rivers

IE_SW_LowerLee/Owenboy																		
Member State Code	Monitored Y (Extrapolated N)	Donor Waterbody	Biological Elements					Supporting Elements				Protected Areas					Objective	Date objective to be achieved
			Macroinvertebrates (O)	Freshwater Pearl Mussel	Fish	Phytoplankton (Diatoms)	Morphology	Specific Pollutants	Physio-chemical	Ecological Status	Chemical Status	Special Area of Conservation	Special Protection Area	Nutrient Sensitive Waters	Drinking Water			
SW_19_1717	N	SW_19_1968									M						GES	2021
SW_19_1724	N	SW_19_1880									H						HES	2009
SW_19_1744	Y				P						P						GES	2021
SW_19_1825	N	SW_19_755									M						GES	2021
SW_19_1827	Y		G							M	M						GES	2021
SW_19_1854	N	SW_19_1880									H						HES	2009
SW_19_191	Y		M							G	M						GES	2021
SW_19_1910	Y		M							G	M						GES	2021
SW_19_1937	N	SW_19_1480									H						HES	2009
SW_19_1964	N	SW_19_1968									M						GES	2021
SW_19_1968	Y		M							H	M						GES	2021
SW_19_269	N	SW_19_1477									P						GES	2021
SW_19_769	Y		G							M	M						GES	2021
SW_19_820	N	SW_19_1480									H						HES	2009
SW_19_821	Y		G								G						GES	2009
SW_19_823	Y		H								H						HES	2009
SW_19_838	Y		G							G	G						GES	2009
SW_19_841	N	SW_19_1480									H						HES	2009
SW_19_850	Y		G							H	G						GES	2009

# Lower Lee Owenboy Water Management Unit Action Plan - Lakes

IE_SW_LowerLee/Owenboy																	
Member State Code	Name	Monitored Y (Extrapolated N)	Biological Elements			Supporting Elements			Ecological Status	Chemical Status	Special Area of Conservation	Protected Areas				Objective	Date objective to be achieved
			Macrophytes	Chlorophyll	Fish	Morphology	Nutrient Enrichment	Physico Chemical				Special Protection Area	Nutrient Sensitive Waters	Bathing Water	Drinking Water		
SW_19_138	Inniscarra Reservoir	Y	M	M			G	G	M					Y	GEP	2015	