Appendix 6C

AQUATICS

Appendix 6.C Aquatic Assessment Results

Section 1: Table 6C.1 shows the full list of taxa recorded during the Q-values assessment and which group they belong to. It also shows the indicator group the species belongs to. The different groups (Group A- Group E) are an indicator of water quality with A being least polluted and E being most polluted. Group A signifies good water quality which is unpolluted as the group is the most sensitive to pollutants. Group E signifies poor-quality water which is polluted.

Section 2 includes photos (Figure 2 to Figure 24) of the ten sample sites.

Section 3 shows the map of survey locations

Section 1

Table 6C.1 List of macroinvertebrate taxa and proportional abundance (%) recorded at each site sampled.

Group	Taxon	Indicator Group*	WQ1	WQ3	WQ4	WQ5	WQ6	WQ7	WQ8	WQ9	WQ10
Coleoptera	Dytiscidae	C	44.8%	30.3%	0.0%	0.0%	6.6%	0.0%	19.2%	15.1%	20.8%
	Elmidae	C	0.0%	0.0%	14.3%	0.0%	6.6%	0.0%	0.0%	0.0%	0.0%
Crustacea	*Asellus aquaticus* (L.)	D	1.5%	5.1%	9.5%	0.0%	6.6%	4.8%	1.0%	6.8%	2.1%
	Gammarus sp.	C	0.0%	20.2%	4.8%	46.7%	26.3%	19.2%	48.1%	13.7%	20.8%
Diptera	Chironomidae (non-*Chironomus* spp.)	C	0.0%	0.0%	14.3%	0.0%	3.3%	4.8%	0.0%	0.0%	0.0%
	Chironomus sp.	E	0.0%	5.1%	33.3%	2.3%	0.0%	4.8%	0.0%	2.7%	0.0%
	Dicranota	C	0.0%	0.0%	0.0%	1.9%	1.3%	1.9%	0.0%	0.0%	0.0%
	Simuliidae	C	0.0%	0.0%	0.0%	4.7%	0.7%	0.0%	0.0%	0.0%	0.0%
	Tipulidae	C	0.0%	0.0%	0.0%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%
Ephemeroptera	Baetidae (non-*Baetis* spp.)	B	0.0%	0.0%	0.0%	9.3%	0.0%	0.0%	0.0%	0.0%	6.3%
	Baetis rhodani/alanticus	C	0.0%	10.1%	0.0%	18.7%	19.7%	19.2%	19.2%	20.5%	0.0%
	Caenis sp.	C	1.5%	0.0%	4.8%	0.0%	0.0%	1.0%	0.0%	0.0%	0.0%
	Ephemera danica (Müller)	A	0.0%	20.2%	4.8%	2.3%	0.0%	9.6%	4.8%	1.4%	0.0%
	Serratella ignita (Poda)	C	0.0%	0.0%	0.0%	4.7%	13.2%	4.8%	0.0%	0.0%	0.0%
Gastropoda	Lymnaeidae (*Radix balthica* (L.))	D	11.9%	0.0%	0.0%	0.0%	0.0%	1.0%	2.9%	1.4%	2.1%

	Planorbidae	C	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%
	Potamopyrgus antipodarum (Gray)	C	0.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.1%
Hemiptera	Corixidae	C	14.9%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	34.2%	41.7%
	Sialis sp.	D	3.0%	0.0%	0.0%	0.0%	0.0%	1.0%	0.0%	2.7%	2.1%
Hirudinea	Glossiphoniidae	D	0.0%	2.0%	4.8%	0.0%	0.7%	19.2%	0.0%	0.0%	0.0%
Plecoptera	*Leuctra* sp.	B	0.0%	2.0%	0.0%	0.9%	3.3%	1.9%	0.0%	0.0%	0.0%
Odonata	Zygoptera (Spp. Indet.)	B	17.9%	2.0%	4.8%	0.0%	0.0%	1.0%	0.0%	0.0%	2.1%
Oligochaeta	Lumbricidae (incl. *Eiseniella* sp.)	C	0.0%	0.0%	0.0%	4.7%	4.6%	0.0%	0.0%	0.0%	0.0%
	Enchytraeidae	D	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.9%	0.0%	0.0%
	Tubificidae	E	1.5%	0.0%	0.0%	1.4%	0.0%	1.0%	0.0%	1.4%	0.0%
Trichoptera	Hydropsychidae	C	0.0%	0.0%	0.0%	0.0%	0.0%	4.8%	1.0%	0.0%	0.0%
	Limnephilidae	B	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Polycentropodidae	C	0.0%	0.0%	4.8%	0.5%	0.7%	0.0%	1.9%	0.0%	0.0%
	Sericostoma personatum (Spence)	B	0.0%	0.0%	0.0%	0.0%	6.6%	0.0%	0.0%	0.0%	0.0%
Total Abundance			**67**	**99**	**21**	**214**	**152**	**104**	**104**	**73**	**48**

*Macroinvertebrate groupings according to their sensitivity to organic pollution: Group A=*Sensitive*; Group B=*Less Sensitive*; Group C=*Tolerant*; Group D=*Very Tolerant*; Group E=*Most Tolerant* (Toner et al., 2005)

Section 2

Figure 1: WQ1 in the River Suir

Figure 2: WQ1 on the River Suir

Figure 1 and Figure 2 show the condition of the River Suir for the first sampling point (WQ1). This sample point had group C indicator species present, which are tolerant of pollutants in the water. This sample point scored a Q

value of Q3, which means the water quality is poor. The Water Framework Directive (WFD) status of this sample point is poor.

Figure 3: WQ2 in the River Suir

Figure 4: WQ2 in the River Suir

Figure 5: Crayfish trap being set at WQ2 in the River Suir

Figure 3 and Figure 4 show the condition of the River Suir for the second sampling point (WQ2). This sample point had no indicator species group, Q value or WFD status assigned as the kick sampling survey could not be completed. The substrate was too soft, and there was no suitable kick sampling habitat. Figure 5 shows the surveyor setting the crayfish trap in the River Suir at WQ2 sample point.

Figure 6: WQ3 in the River Suir

Figure 7: WQ3 in the River Suir

Figure 8: Crayfish trap being set at WQ3 in the River Suir

Figure 6 and Figure 7 show the condition of the River Suir for WQ3 sampling point. This sample point had group B indicator species present, which are sensitive of pollutants in the water. This sample point scored a Q value of

Q3-4, which means the water quality is moderate. The Water Framework Directive (WFD) status of this sample point is moderate. Figure 8 shows the surveyor setting the crayfish trap in the River Suir at WQ3 sample point.

Figure 9: WQ4 in the River Suir

Figure 10: WQ4 in the River Suir

Figure 9 and Figure 10 show the condition of the River Suir for WQ4 sampling point. This sample point had group C indicator species present, which are tolerant of pollutants in the water. This sample point scored a Q value of Q3, which means the water quality is moderate. The Water Framework Directive (WFD) status of this sample point is poor.

Figure 11: WQ5 in the River Suir

Figure 12: WQ5 in the River Suir

Figure 11 and Figure 12 show the condition of the River Suir for WQ5 sampling point. This sample point had group B indicator species present, which are sensitive of pollutants in the water. This sample point scored a Q value of Q3-4, which means the water quality is moderate. The Water Framework Directive (WFD) status of this sample point is moderate.

Figure 13: WQ6 in the Rossesstown River

Figure 14: WQ6 in the Rossesstown River

Figure 13 and Figure 14 show the condition of the Rossestown River for WQ6 sampling point. This sample point had group C indicator species present, which are tolerant of pollutants in the water. This sample point scored a Q

value of Q3, which means the water quality is poor. The Water Framework Directive (WFD) status of this sample point is poor.

Figure 15: WQ7 in the Rossesstown River

Figure 16: WQ7 in the Rossesstown River

Figure 15 and Figure 16 show the condition of the Rossestown River for WQ6 sampling point. This sample point had group C indicator species present, which are tolerant of pollutants in the water. This sample point scored a Q value of Q3, which means the water quality is moderate. The Water Framework Directive (WFD) status of this sample point is poor.

Figure 17: WQ8 in the River Suir

Figure 18: WQ8 in the River Suir

Figure 19: WQ8 in the River Suir

Figure 17, Figure 18 and Figure 19 show the condition of the River Suir for WQ8 sampling point. This sample point had group B indicator species present, which are sensitive of pollutants in the water. This sample point scored a Q value of Q3-4, which means the water quality is moderate. The Water Framework Directive (WFD) status of this sample point is moderate.

Figure 20: WQ9 in the River Suir

Figure 21: WQ9 in the River Suir

Figure 20 and Figure 21 show the condition of the River Suir for WQ9 sampling point. This sample point had group C indicator species present, which are tolerant of pollutants in the water. This sample point scored a Q value of Q3, which means the water quality is poor. The Water Framework Directive (WFD) status of this sample point is poor.

Figure 22: WQ10 in the River Suir

Figure 23: WQ10 in the River Suir

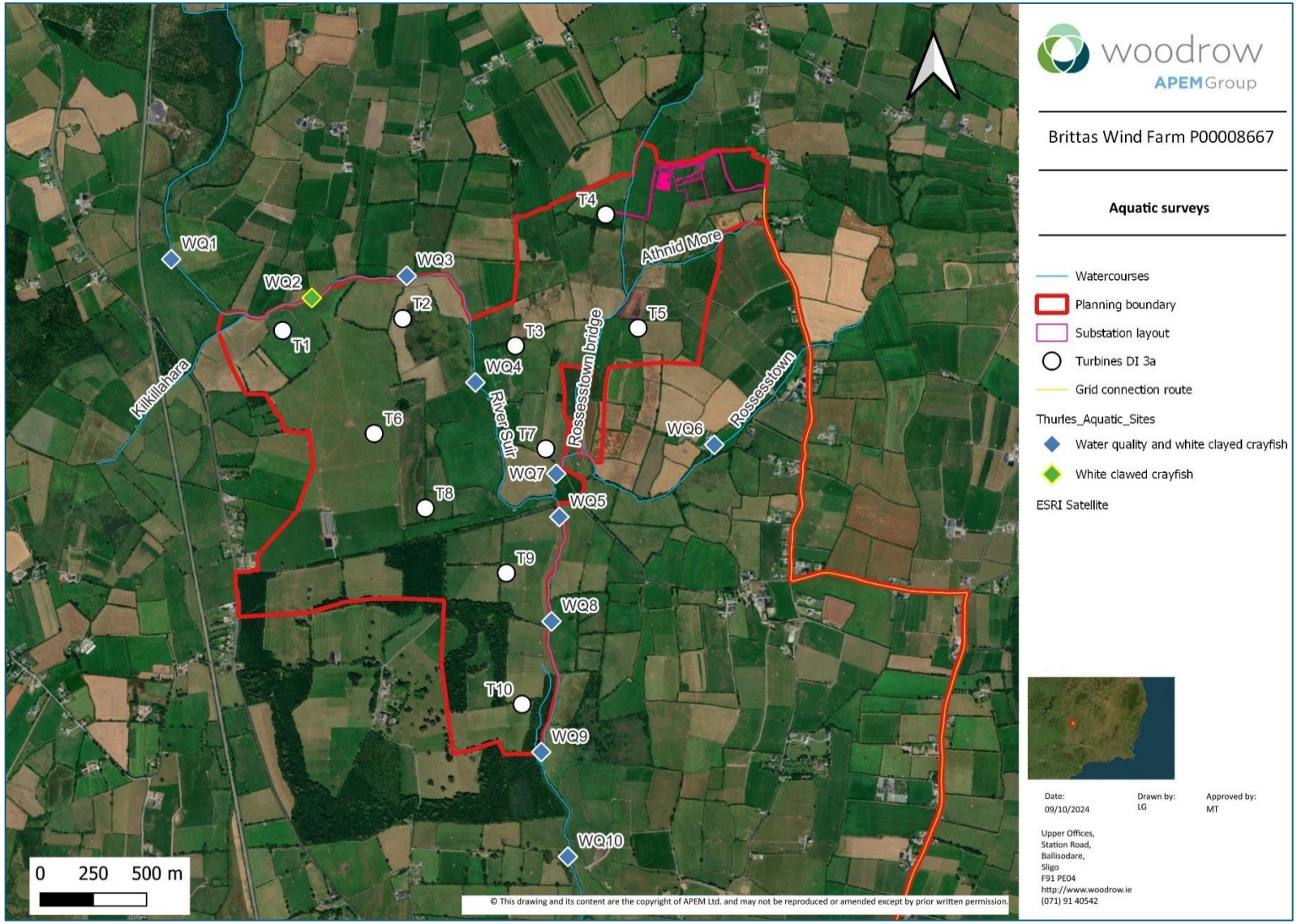
Figure 24: WQ10 in the River Suir

Figure 22, Figure 23 and Figure 24 show the condition of the River Suir for WQ10 sampling point. This sample point had group C indicator species present, which are tolerant of pollutants in the water. This sample point scored a Q value of Q3, which means the water quality is poor. The Water Framework Directive (WFD) status of this sample point is poor.

Figure 25: An inaccessible sample point

Figure 25 shows the sample point for Kilkillahara. This sample point was inaccessible, and no surveys were completed here.

Section 3


WQ1
WQ2
WQ3
WQ4
WQ5
WQ6
WQ7
WQ8
WQ9
WQ10
T1
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T3
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T9
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Kilkillahara
River Suir
Rossesstown bridge
Athnid More
Rossesstown
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