

APPENDIX 6. GRANULOMETRY, LOI, HEAVY METALS

Table 6.1 Data from granulometric analysis of sediment samples showing the percentage of the total sample which passed through each sieve size.

Sieve size μm	C4	Le	G2	G3	Df
	Irishtown	Tolka estuary	Liffey/Tolka estuary	Liffey/Tolka estuary	Off Bull Island
5600	100				99.89
4000	100				99.79
2800	100				99.65
2000	99.94	NOT APPLICABLE	NOT APPLICABLE	NOT APPLICABLE	99.55
1180	99.85				99.32
850	99.75				99.13
600	99.63				98.96
425	99.42				98.78
300	98.52				97.29
212	95.85				95.40
150	56.57				65.66
63	3.48				0.74

Table 6.2. Granulometric scales used in classifying sediments after Wentworth (1922) and Folk (1954).

phi	mm	μm	Wentworth	Folk
-8	256	256000	Boulders	Gravel
-7	128	128000	Cobbles	Gravel
-6	64	64000	Cobbles	Gravel
-5	32	32000	Pebbles	Gravel
-4	16	16000	Pebbles	Gravel
-3	8	8000	Pebbles/granules	Gravel
-2	4	4000	Granules	Gravel
-1	2	2000	Granules	Gravel
0	1	1000	Very coarse sand	Sand
1	0.5	500	Coarse sand	Sand
2	0.25	250	Medium sand	Sand
3	0.125	125	Fine sand	Sand
4	0.0625	63	Very fine sand	Sand
5	0.0312	31	Silt	Mud
6	0.0156	16	Silt	Mud
7	0.0078	8	Silt	Mud
8	0.0039	4	Silt	Mud
>8	<0.0039	<4	Clay	Mud

Table 6.3 Data from Heavy Metal analysis of sediments expressed as mg/Kg of metal to sediment.

Metal	C4	Le	G2	G3	Df
	Irishtown	Tolka estuary	Liffey/Tolka estuary	Liffey/Tolka estuary	Off Bull Island
Mercury	<0.3	<0.3	<0.3	<0.3	<0.3
Lead	12.9	78.4	30.9	22.4	3.2
Cadmium	0.6	2.0	1.3	0.9	0.3
Chromium	10.5	23.7	25.7	23.4	7.7
Copper	6.8	64.9	28.8	18.0	1.2
Zinc	37.6	272.8	117.3	74.8	11.5
Nickel	12.47	19.42	22.59	16.41	5.55
Manganese	149.2	299.7	303.3	270.8	141.1

Table 6.4 Data from the Loss On Ignition analysis of sediments.

Loss on ignition (LOI) at 440 °C	C4	Le	G2	G3	Df
	Irishtown	Tolka estuary	Liffey/Tolka estuary	Liffey/Tolka estuary	Off Bull Island
As % weight	93.56	96.42	96.32	95.62	89.64