

APPENDIX 2. LITTORAL AND SUBLITTORAL FLORA AND FAUNA

Table 2.1. Site locations and details of littoral sites, August 2003.

Site no.	Latitude	Longitude	Location and substrata
C1	53.3365 N	6.2085 W	Muddy sand, northwest extreme of Irishtown.
C2	53.3363 N	6.2080 W	Fine compact sand, northwest extreme of Irishtown.
C3	53.3390 N	6.1783 W	Fine compact sand with <i>Arenicola marina</i> casts, north Irishtown.
C4	53.3348 N	6.1940 W	Fine muddy sand, north of Irishtown.
La	53.3417 N	6.1852 W	Structure in Liffey estuary, downstream of Ringsend power station.
Lb	53.3423 N	6.1968 W	Structure in Liffey estuary, downstream of south container yard.
Lc	53.3542 N	6.2094 W	Tolka estuary, south side, black anoxic mud.
Ld	53.3567 N	6.2108 W	Tolka estuary, south side, black anoxic mud.
Le	53.3625 N	6.2193 W	Tolka estuary, north side, black anoxic mud.
Lf	53.3607 N	6.2147 W	Tolka estuary, north side, black anoxic mud.
Lg	53.3687 N	6.1428 W	Dollymount strand, upper shore, fine sand.
Lh	53.3678 N	6.1417 W	Dollymount strand, mid shore, fine sand.
Li	53.3672 N	6.1402 W	Dollymount strand, lower shore, fine sand.
Lj	53.3727 N	6.0985 W	Sutton / south Howth Head, coarse sediment and bedrock.

Table 2.2. Site locations and details of sublittoral grab and dredge sites, August 2003. (BSL – Below Sea Level).

Site no.	Depth (metres BSL)	Latitude (start)	Longitude (finish)	Latitude (start)	Longitude (finish)	Location and substrata
G1	9	53.3440 N	6.1943 W			Liffey estuary, black anoxic mud
G2	5	53.3448 N	6.1892 W			Liffey estuary / Tolka estuary, Black anoxic mud
G3	9	53.3441 N	6.1184 W			Liffey estuary / Tolka estuary, Black anoxic mud
G4	9	53.3438 N	6.1835 W			Liffey estuary, black anoxic mud
G5	2	53.3485 N	6.1863 W			Tolka estuary, anoxic mud and broken shell
G6	5	53.3390 N	6.1445 W			Just west of Liffey mouth, fine compact sand
Da	6	53.3348 N	6.1413 W	53.3363 N	6.1420 W	South west of Liffey mouth, fine compact sand
Db	6	53.3397 N	6.1445 W	53.3417 N	6.1452 W	Just west of Liffey mouth, fine compact sand
Dc	4	53.3490 N	6.1497 W	53.3508 N	6.1472 W	North of north Bull Wall, fine compact sand
Dd	4	53.3538 N	6.1400 W	53.3557 N	6.1378 W	Seaward of south Bull Island, fine compact sand
De	2	53.3647 N	6.1292 W	53.3670 N	6.1258 W	Seaward of Bull Island, fine compact sand
Df	3	53.3688 N	6.1178 W	53.3687 N	6.1140 W	Seaward of north end Bull Island and Sutton, fine compact sand
Dg	5	53.3668 N	6.1097 W	53.3653 N	6.1080 W	Seaward side of Sutton, south of Howth Head, fine compact sand with some mud

Table 2.3. Abundance of flora and fauna recorded during the present littoral survey. P=Present; O=Occasional; F=Frequent; C=Common; A=Abundant, after Hiscock (1996). Biotope no. is the reference number for Biotope codes (Appendix 4 Table 4.1).

Species/higher taxa	C1	C2	C3	C4	La	Lb	Lc	Ld	Le	Lf	Lg	Lh	Li	Lj
Cnidarians (hydroids and sea anemones)														
<i>Metridium senile</i>	-	-	-	-	A	-	-	-	-	-	-	-	-	-
Polychaetes (worms)														
Polychaeta indet.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nereididae indet.	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Hediste diversicolor</i>	6	-	-	6	-	-	-	-	1	16	-	-	-	-
<i>Neanthes virens</i>	-	-	-	-	-	-	1	1	-	-	-	-	-	-
<i>Nephtys</i> sp.	-	-	1	-	-	-	-	-	-	-	-	3	2	-
<i>Scolelepis squamata</i>	2	2	-	2	-	-	-	-	-	-	-	1	-	-
<i>Magelona mirabilis</i>	-	-	-	-	-	-	-	-	-	-	-	-	1	-
<i>Capitella capitata</i>	-	4	-	8	-	-	-	-	-	-	-	-	-	-
Terebellidae indet.	-	-	-	-	-	-	-	-	-	-	-	1?	-	-
Crustaceans (crabs, barnacles and amphipods)														
<i>Semibalanus balanoides</i>	-	-	-	-	F	A	-	-	-	-	-	-	-	-
Amphipoda indet.	1	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Bathyporeia</i> sp.	-	1	-	-	-	-	-	-	-	-	-	-	1	-
<i>Corophium</i> sp.	-	-	-	2	-	-	-	-	-	-	-	-	-	-
<i>Cancer pagurus</i>	-	-	-	-	P	-	-	-	-	-	-	-	-	-
<i>Carcinus maenas</i>	1	-	1	-	-	-	-	-	-	-	-	-	-	1
Molluscs (snails and bivalves)														
<i>Hydrobia</i> sp.	-	C	C	-	-	-	-	-	-	-	-	-	-	-
<i>Patella vulgata</i>	-	-	-	-	-	P	-	-	-	-	-	-	-	-
<i>Mytilus edulis</i>	-	-	-	-	SA	-	-	-	-	-	-	-	-	-
<i>Cerastoderma edule</i>	3	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Angulus tenuis</i>	-	-	15	-	-	-	-	-	-	-	-	1	9	-
<i>Macoma balthica</i>	-	-	-	1	-	-	-	-	-	-	-	-	-	-
<i>Donax vittatus</i>	-	-	-	-	-	-	-	-	-	-	-	-	1	-
<i>Scrobicularia plana</i>	-	-	-	-	-	-	-	-	-	4	-	-	-	-
Bryozoans (seamats)														
Bryozoan crust indet.	-	-	-	-	-	P	-	-	-	-	-	-	-	-
Echinoderms (urchins, seastars and seacucumbers)														
<i>Amphiura chiajei</i>	-	-	-	-	-	-	-	-	-	-	-	-	1	-
Tunicata (sea squirts)														
Tunicata indet.	-	-	-	-	-	P	-	-	-	-	-	-	-	-
Rhodophycota (red algae)														
Rhodophycota indet.	-	-	-	-	P	A	-	-	-	-	-	-	-	-
<i>Porphyra</i> sp.	-	-	-	-	P	P	-	-	-	-	-	-	-	-
Chromophycota (brown algae)														
<i>Fucus ceranoides</i>	-	-	-	-	P	P	-	-	-	-	-	-	-	-
<i>Fucus serratus</i>	-	-	-	-	P	P	-	-	-	-	-	-	-	-
<i>Fucus spiralis</i>	-	-	-	-	P	C	-	-	-	-	-	-	-	-

Species/higher taxa	C1	C2	C3	C4	La	Lb	Lc	Ld	Le	Lf	Lg	Lh	Li	Lj
Chlorophycota (green algae)														
<i>Enteromorpha</i> sp.	-	-	-	-	P	P	-	-	-	-	-	-	-	-
<i>Ulva</i> sp.	-	-	-	-	P	P	-	-	-	-	-	-	-	-
Total no. species / higher taxa	5	4	4	5	11	11	1	1	1	2	0	4	6	1
No. individuals	13	7+	17+	19	-	-	1	1	1	20	0	6	15	1
Biotope number	13	10	7	16	-	-	14	14	14	17	9	10	11	-

Table 2.4. Abundance of flora and fauna recorded during the present littoral biotope survey of Irishtown. P=Present; O=Occasional, F=Frequent; C=Common; A=Abundant, after Hiscock (1996). Biotope no. is the reference number for Biotope codes (Appendix 4 Table 4.1).

Species / Higher taxa	LGS.BarSnd	LGS.AP	LGS	LGS.Lan	LGS.Tal	LGS.HedMac	LMS.Pcer	MLR.EntPor	SLR.Asc	SLR.EphX	SLR.Fspi	SLR.Fves	SLR.Pel
Cnidaria (hydroids and sea anemones)													
<i>Actinia equina</i>	-	-	-	-	-	-	-	-	O	-	-	-	-
Polychaetes (worms)													
<i>Hediste diversicolor</i>	-	-	-	-	-	P	P	-	-	-	-	-	-
<i>Nephtys</i> sp.	-	-	P	-	-	-	-	-	-	-	-	-	-
<i>Scolelepis squamata</i>	-	P	-	-	-	P	P	-	-	-	-	-	-
<i>Capitella capitata</i>	-	P	-	-	-	P	P	-	-	-	-	-	-
<i>Lanice conchilega</i>	-	-	-	C	-	-	-	-	-	-	-	-	-
<i>Arenicola marina</i>	-	P	P	-	-	P	-	-	-	-	-	-	-
Crustaceans (crabs, barnacles and amphipods)													
<i>Semibalanus balanoides</i>	-	-	-	-	-	-	-	C	O	-	F	-	-
Amphipoda indet.	-	-	-	-	-	-	P	-	O	-	-	O	-
Talitridae indet.	-	-	-	-	P	-	-	-	-	-	-	-	-
<i>Bathyporeia</i> sp.	-	P	-	-	-	-	-	-	-	-	-	-	-
<i>Corophium</i> sp.	-	-	-	-	-	-	P	-	-	-	-	-	-
<i>Carcinus maenas</i>	-	-	P	-	-	P	P	-	-	-	-	P	-
Molluscs (snails and bivalves)													
<i>Littorina littorea</i>	-	-	-	-	-	-	-	-	-	-	-	O	-
<i>Littorina saxatilis</i>	-	-	-	-	-	-	-	-	-	-	F	-	-
<i>Hydrobia</i> sp.	-	-	-	-	-	-	-	-	-	-	P	-	-
<i>Mytilus edulis</i>	-	-	-	-	-	-	-	-	O	-	-	C	-
<i>Cerastoderma edule</i>	-	-	-	-	-	-	P	-	-	-	-	-	-
<i>Angulus tenuis</i>	-	-	P	-	-	-	-	-	-	-	-	-	-
<i>Macoma balthica</i>	-	-	-	-	-	P	P	-	-	-	-	-	-
Rhodophycota (red algae)													
<i>Porphyra</i> sp.	-	-	-	-	-	-	-	F	-	-	-	-	-
<i>Polysiphonia lanosa</i>	-	-	-	-	-	-	-	-	O	-	-	-	-
Chromophycota (brown algae)													
<i>Ascophyllum nodosum</i>	-	-	-	-	-	-	-	-	C	-	-	F	-
<i>Fucus spiralis</i>	-	-	-	-	-	-	-	P	F	-	C	-	O
<i>Fucus vesiculosus</i>	-	-	-	F	-	-	-	P	O	-	-	A	-
<i>Pelvetia canaliculata</i>	-	-	-	-	-	-	-	-	-	-	-	-	F
Chlorophycota (green algae)													
<i>Enteromorpha</i> sp.	-	-	-	F	-	-	-	C	F	A	C	A	O
<i>Ulva</i> sp.	-	-	-	F	-	-	-	-	-	-	-	A	-
No. species / higher taxa	0	4	4	4	1	6	8	5	9	1	5	8	3
Biotope no.	9	10	7	12	8	16	13	6	3	5	1	2	4

Table 2.5. Abundance of flora and fauna recorded during the present sublittoral survey. P=Present; O=Occasional, F=Frequent; C=Common; A=Abundant, after Hiscock (1996). Biotope no. is the reference number for Biotope codes (Appendix 4 Table 4.1).

Species / higher taxa	Da	Db	Dc	Dd	De	Df	Dg	G1	G2	G3	G4	G5	G6
Cnidarians (hydroids and sea anemones)													
<i>Hydractinia echinata</i>	-	P	-	-	-	-	-	-	-	-	-	-	-
Actiniaria indet.	-	-	-	-	-	-	-	-	-	-	-	P	-
Polychaetes (worms)													
Polychaeta indet.	-	-	-	P	-	-	P	1	-	-	-	-	1
Polynoidae indet.	-	-	-	P	-	-	-	-	-	-	-	-	-
Sigalionidae indet.	-	-	-	-	-	-	-	-	-	-	-	-	1
<i>Nephtys</i> sp.	-	-	-	-	-	-	P	-	-	-	-	-	-
<i>Capitella capitata</i>	-	-	-	-	-	-	-	3	-	-	-	-	-
<i>Pomatoceros triqueter</i>	-	-	-	-	-	-	-	-	-	-	-	P	-
Crustaceans (crabs, barnacles and amphipods)													
<i>Balanus crenatus</i>	-	-	-	-	-	-	-	-	-	-	-	P	-
Amphipoda indet.	-	P	P	P	P	P	P	-	1	-	-	-	6
Decapoda indet.	P	-	-	-	-	-	-	-	-	-	-	-	-
<i>Crangon crangon</i>	F	F	C	A	A	-	C	-	-	-	-	-	-
<i>Pagurus bernhardus</i>	F	P	-	-	-	-	-	-	-	-	-	-	-
<i>Pisidia longicornis</i>	-	P	-	-	-	-	-	-	-	-	-	-	-
<i>Macropodia rostrata</i>	-	-	P	P	-	-	-	-	-	-	-	-	-
<i>Liocarcinus</i> sp.	-	P	-	-	P	-	-	-	-	-	-	-	-
<i>Liocarcinus holsatus</i>	P	-	P	P	-	-	-	-	-	-	-	-	-
<i>Carcinus maenas</i>	-	-	-	P	-	P	-	1	-	-	-	-	-
Molluscs (snails and bivalves)													
<i>Nucula sulcata</i>	P	-	-	-	-	-	-	-	-	-	-	-	-
<i>Mytilus edulis</i>	-	-	-	-	-	-	-	-	-	-	-	P	-
<i>Parvicardium ovale</i>	-	-	-	-	-	-	-	-	-	-	1	-	-
<i>Fabulina fabula</i>	-	-	-	-	-	-	P	-	-	-	-	-	-
<i>Donax vittatus</i>	P	-	-	-	-	-	-	-	-	-	-	-	-
<i>Chamelea gallina</i>	P	-	-	-	-	-	P	-	-	-	-	-	-
<i>Corbula gibba</i>	-	-	-	-	-	-	-	-	-	-	-	-	1
Bryozoans (sea mats)													
Bryozoa indet	-	-	-	-	-	-	-	-	-	-	-	P	-
Echinoderms (urchins, seastars and sea cucumbers)													
<i>Asterias rubens</i>	O	-	-	-	-	-	-	-	-	-	-	-	-
<i>Amphiura chiajei</i>	-	-	-	-	-	-	-	-	1	-	-	-	-
<i>Ophiura ophiura</i>	F	P	-	-	-	-	-	-	-	-	-	-	-
Pisces (fish)													
<i>Syngnathus typhle</i>	-	-	-	-	P	-	P	-	-	-	-	-	-
<i>Limanda limanda</i>	-	-	-	P	P	-	-	-	-	-	-	-	-
<i>Pleuronectes platessa</i>	P	C	C	P	P	-	P	-	-	-	-	-	-
<i>Solea</i> sp.	-	-	-	-	P	-	-	-	-	-	-	-	-
Chlorophycota (green algae)													
<i>Ulva</i> sp.	-	-	-	-	-	P	-	-	-	-	-	-	-

Species / higher taxa	Da	Db	Dc	Dd	De	Df	Dg	G1	G2	G3	G4	G5	G6
No. Species / higher taxa	10	8	5	9	7	3	8	3	2	0	1	5	4
No. individuals	-	-	-	-	-	-	-	5	2	0	1	-	9
Biotope no.*	18	18	18	18	18	18	19	20	20	20	20	21	18