Supplementary material

Table S1. UK fisheries nominal catches (> 100 t yr^{-1}) in 2018 for divisions e and f within the FAO Major Fishing Area 27 and subarea 7. Divisions e and f correspond to the southern and northern coasts of the SW Peninsula. Catch data and methods were extracted from publicly available ICES and MMO data respectively.

Division	3-α	Common name	Species or family	Catch (t)	Catch method
27.7.e	PIL	European pilchard	*Sardina pilchardus*	5717.53	Seine, demersal trawl, drift and fixed nets
	SCE	Great Atlantic scallop	*Pecten maximus*	5039.02	Dredge
	CRE	Edible crab	*Cancer pagurus*	3766.14	Pots and traps
	CTL	Cuttlefish and bobtail squids	Sepiidae and Sepiolidae	3694.82	Beam trawl
	SPR	European sprat	*Sprattus sprattus*	1803.55	Demersal trawl/seine
	WHE	Whelk	*Buccinum undatum*	1462.77	Pots and traps
	PLE	European plaice	*Pleuronectes platessa*	1376.65	Beam trawl
	ANF	Anglerfishes	Lophiidae	1150.94	Beam trawl
	SYC	Small-spotted catshark	*Scyliorhinus canicula*	878.45	Beam trawl
	GUX	Gurnards and searobins	Triglidae	798.82	Beam trawl
	SOL	Common sole	*Solea solea*	791.94	Beam trawl
	POL	Pollack	*Pollachius pollachius*	659.99	Drift and fixed nets
	WHG	Whiting	*Merlangius merlangus*	537.85	Demersal trawl/seine
	BIB	Pouting	*Trisopterus luscus*	530.12	Beam trawl
	LEM	Lemon sole	*Microstomus kitt*	484.91	Demersal trawl/seine
	ANE	European anchovy	*Engraulis encrasicolus*	446.76	Demersal trawl/seine, drift and fixed nets
	MAC	Atlantic mackerel	*Scomber scombrus*	400.24	Hooked gear
	HKE	European hake	*Merluccius merluccius*	390.42	Demersal trawl/seine, drift and fixed nets
	HAD	Haddock	*Melanogrammus aeglefinus*	301.05	Demersal trawl/seine
	QSC	Queen scallop	*Aequipecten opercularis*	282.6	Beam trawl
	TUR	Turbot	*Psetta maxima*	252.14	Beam trawl
	RJH	Blonde ray	*Raja brachyura*	236.52	Demersal trawl/seine, drift and fixed nets
	SQC	Common squids	*Loligo* spp.	229.91	Demersal trawl/seine
	BLL	Brill	*Scophthalmus rhombus*	221.38	Beam trawl
	LEZ	Megrims	*Lepidorhombus* spp.	220.32	Beam trawl
	RJC	Thornback ray	*Raja clavata*	206.55	Demersal trawl/seine, drift and fixed nets
	LBE	European lobster	*Homarus gammarus*	190.39	Pots and traps
	OCT	Octopuses	Octopodidae	178.29	Beam trawl
	BSS	European seabass	*Dicentrarchus labrax*	172.46	Demersal trawl/seine, hooked gear

	SCR	Spinous spider crab	*Maja squinado*	164.5	Pots and traps
	JOD	John Dory	*Zeus faber*	161.65	Demersal trawl/seine
	JAX	Jack and horse mackerels	*Trachurus* spp.	161.19	Demersal trawl/seine
	SMD	Smooth-hound	*Mustelus mustelus*	144.46	Demersal trawl/seine, drift and fixed nets
27.7.f	PIL	European pilchard	*Sardina pilchardus*	2413.289	Drift and fixed nets
	CRE	Edible crab	*Cancer pagurus*	1749.635	Pots and traps
	WHE	Whelk	*Buccinum undatum*	1313.553	Pots and traps
	MAC	Atlantic mackerel	*Scomber scombrus*	364.767	Hooked gear
	RJH	Blonde ray	*Raja brachyura*	294.672	Demersal trawl/seine
	ANF	European pilchard	Lophiidae	282.676	Beam trawl
	HKE	European hake	*Merluccius merluccius*	233.017	Drift and fixed nets
	POL	Pollack	*Pollachius pollachius*	228.8	Drift and fixed nets
	JAX	Jack and horse mackerels	*Trachurus* spp.	224.577	Drift and fixed nets, hooked gear
	LBE	European lobster	*Homarus gammarus*	193.425	Pots and traps
	SCR	Spinous spider crab	*Maja squinado*	192.596	Pots and traps
	LEZ	Megrims	*Lepidorhombus* spp.	171.028	Beam trawl
	SYC	Small-spotted catshark	*Scyliorhinus canicula*	168.7	Drift and fixed nets
	SOL	Common sole	*Solea solea*	155.152	Beam trawl
	RJC	Thornback ray	*Raja clavata*	146.76	Demersal trawl/seine
	SCE	Great Atlantic scallop	*Pecten maximus*	105.711	Dredge

3-α = unique taxonomic FAO code for each species.

Table S2. Gamma generalised linear model results obtained from type II or III sums of squares tests. Where the interaction term is not present, it was not significant and removed during model fitting. Where the interaction is significant, results are given for each combination of ALDFG type (twisted, braided and filament) and coast (north and south). See code in the open-access repository at github.com/lukaseamus/marine-microplastic for details of the analysis procedure.

Response variable	n	Explanatory variable	df	X^2	*p*	
Abundance (m^{-1})	18	Type	2	5.99	0.05	
		Coast	1	19.41	**< 0.001**	***
Filaments ($rope^{-1}$)	115	Type (North)	1	8.63	**0.003**	**
		Type (South)	1	0.007	0.93	
		Coast (Twisted)	1	19.16	**< 0.001**	***
		Coast (Braided)	1	0.4	0.53	
		Type × Coast	1	6.33	**0.01**	*
Length (cm)	374	Type (North)	2	18.69	**< 0.001**	***
		Type (South)	2	46.1	**< 0.001**	***
		Coast (Twisted)	1	13.47	**< 0.001**	***
		Coast (Braided)	1	1.53	0.22	
		Coast (Filament)	1	1.47	0.22	
		Type × Coast	2	12.33	**0.002**	**
Volume (cm^3)	374	Type (North)	2	134.16	**< 0.001**	***
		Type (South)	2	100.69	**< 0.001**	***
		Coast (Twisted)	1	28.31	**< 0.001**	***
		Coast (Braided)	1	1.11	0.29	
		Coast (Filament)	1	1.05	0.31	
		Type × Coast	2	19.72	**< 0.001**	***

Table S3. Estimates of ALDFG plastic volume and potential number of released microplastic pieces per metre of beach in the UK's region of highest ALDFG density.

	Plastic volume (cm^3 m^{-1})				**Potential microplastic pieces (m^{-1})**			
ALDFG	$\bar{x}$	CI	$\tilde{x}$	IQR	$\bar{x}$	CI	$\tilde{x}$	IQR
Twisted	4.07	0.08–8.05	0.23	0.11–0.71	664	13.6–1314	111	51–336
Braided	2.24	0.02–4.47	0.53	0.18–1.19	538	3.6–1071	167	58.1–374
Filament	0.07	0.002–0.15	0.02	0.01–0.05	75.3	2.1–148	22.6	17.2–62.2

$\bar{x}$ = mean, CI = 95% confidence interval, $\tilde{x}$ = median, IQR = interquartile range.