

Appendix O: List of Data Sources Identified but not Accessed

(Cross reference Section 5 of Report, Appendix L SERs and advice given by Natural England and JNCC)

Data Source	Relevant MCZ (e.g. NG1 or all NG etc)	Year of Survey(s)	Comments (spatial coverage (e.g. proportion of MCZ), feature coverage (which features), format (e.g. raw data, digital data, paper records)	Data acquired and not processed	Prioritisation		
					H	M	L
National Data Sources					H	M	L
<i>Data Sources Identified by Study Team</i>							
Cefas – epibenthic data associated with beam trawl surveys (North Sea, West Coast, Irish Sea, Eastern Channel, Celtic Sea) – Jim Ellis	Relevant to some MCZ in all Regions	Multiple years	Epibenthic data along trawl lines (relatively inspecific location); may identify features associated with specific biotopes; information contained within Cefas database			✓	
<i>Data Sources Identified by JNCC/NE</i>							
BGS Sediment Data	Relevant to many MCZ in all Regions	Multiple years	Point data of positions are available from BGS but not information on actual sediment types		✓		
BGS Rock and thin sediment (MB0103)	Relevant to many MCZ in all Regions	Multiple years	Believed to be incorporated in UKSeaMap, , if not need to be EUNIS classified		✓		

Data Source	Relevant MCZ (e.g. NG1 or all NG etc)	Year of Survey(s)	Comments (spatial coverage (e.g. proportion of MCZ), feature coverage (which features), format (e.g. raw data, digital data, paper records))	Data acquired and not processed	Prioritisation		
Irish Sea Conservation Zones							
<i>Data Sources Identified by Study Team</i>							
Clements, A.J. 2010. Broad-scale ecological investigation of <i>Nephrops norvegicus</i> (L.) Burrow distribution in the Western Irish Sea. Ph.D. Thesis, Queen's University Belfast.	ISCZ region – site overlap not assessed		PhD Thesis. Feature: Seapen and burrowing megafauna community. Data coverage unknown (contained maps, unable to assess intersection with rMCZs).		✓		
Archer, A.M. undated. Ecosystem and fisheries management options for the Pisces reef Complex as a Special Area of Conservation and a possible Marine Conservation Zone.	ISCZ region – site overlap not assessed (possibly ISCZ 06 and/or ISCZ 07).		Report with interpreted data from video surveys at 65 locations of <i>Nephrops norvegicus</i> populations (which may provide data on broadscale and/or HOCI).		✓		
LUMB, C., JOHNSTON, M. & BUSSELL, J. 2011. Evidence on the distribution and quality of mud-related features in the Eastern Irish Sea.	ISCZ 01, ISCZ02, ISCZ 02b, ISCZ RA A		Distribution of mud-related features in the Eastern Irish Sea. Data format unknown.		✓		
BUTLER, P. 2009 Establishing the <i>Arctica islandica</i> archive: Development of the definitive shell-based proxy for the North Atlantic shelf seas. PhD thesis, Bangor University. 3 records from 2009.	ISCZ 06, ISCZ RA F		Feature <i>Arctica islandica</i> , 3 records. Format of data unknown.			✓	

Data Source	Relevant MCZ (e.g. NG1 or all NG etc)	Year of Survey(s)	Comments (spatial coverage (e.g. proportion of MCZ), feature coverage (which features), format (e.g. raw data, digital data, paper records))	Data acquired and not processed	Prioritisation		
Gardline, 2010b. Rhyl Site Survey Report, August 2010. Gardline ref: 8488	ISCZ 02	2010	Rig site survey. Report with interpreted geophysical data based on single beam and multibeam echo sounders, sidescan sonar, pinger, towed squid sparker, geotechnical, environmental camera/grab and high resolution seismic equipment.				✓
Gardline 2005. Ormonde Development Project, May and June 2004, Volume 5 – Environmental Report.	ISCZ 02, ISCZ 02b	2004	Environmental survey. Report with interpreted data on sediment and benthic fauna from side scan sonar, still and video camera and grab samples.				✓
Titan Environmental Surveys Ltd, 2005. West of Duddon Sands Offshore Wind Farm Project: Baseline benthic Survey. Report Number CS0133/F1/V1. October 2005. Report for ScottishPower Generation Ltd.	ISCZ 02, ISCZ 02a	2005	Benthic surveys. Report with interpreted PSA and faunal data.				✓
CMACS, 2009. Walney & Ormonde Offshore Windfarm	ISCZ 02	2009	Pre-development				✓

Data Source	Relevant MCZ (e.g. NG1 or all NG etc)	Year of Survey(s)	Comments (spatial coverage (e.g. proportion of MCZ), feature coverage (which features), format (e.g. raw data, digital data, paper records))	Data acquired and not processed	Prioritisation		
Benthic Survey Report. November 2009. CMACS Project No: J3114. Doc Ref: J3114/11-09 v3.			baseline surveys. Report with interpreted PSA data and biotope classifications from grab, photo and trawl surveys.				
JNCC (2011) Offshore Special Area of Conservation: Pisces Reef Complex. SAC Selection Assessment. Version 5.0. 1 June 2011.	ISCZ 07	Various	Interpreted data on subtidal mud and mud habitats in deep water from multibeam (MBES), Acoustic Ground Discrimination System (AGDS), side-scan sonar, sub-bottom profiler, video data and seabed grab samples in the area of Pisces Reef.			✓	
BLYTH-SKYRME, V. LINDENBAUM, C., VERLING, E., VAN LANDEGHEM, K., ROBINSON, K., MACKIE A., & DARBYSHIRE T. (2008) Broad-scale biotope mapping of potential reefs in the Irish Sea (north-west of Anglesey) JNCC Report No. 423. JNCC Survey.	ISCZ 03	2005	Report with interpreted data on sediments from High resolution multibeam bathymetry, backscatter data, grab samples and video tows.			✓	
CALLAWAY, A., SMYTH, J., BROWN, C.J., QUINN, R.,	ISCZ07		Report with interpreted				✓

Data Source	Relevant MCZ (e.g. NG1 or all NG etc)	Year of Survey(s)	Comments (spatial coverage (e.g. proportion of MCZ), feature coverage (which features), format (e.g. raw data, digital data, paper records))	Data acquired and not processed	Prioritisation		
SERVICE, M. & LONG, D.2009. The impact of scour processes on a smothered reef system in the Irish Sea. Estuarine, Coastal and Shelf Science. 84: 409-418.			data (broadscale habitats) from multibeam bathymetry, backscatter data, camera tows, grab samples.				
HUGHES, D.J. & ATKINSON, R.J.S. 1997. Towed video survey of the megafaunal bioturbation in the North Eastern Irish Sea. Journal of the Marine Biological Association. 77 635-653.	ISCZ01	1993	Interpreted data from video tow surveys. Seapens and burrowing megafauna.				✓
Rees, I. 2009. Assessment of Modiolus modiolus beds in the OSPAR area. Report for JNCC. September 2008 (revised January 2009).	ISCZ region – unable to assess site overlap	Various	Interpreted data on Modiolus modiolus beds. Figure 2 shows distribution in UK.				✓
Strategic Environmental Assessment (SEA) 6 data – parts of the Irish Sea	ISCZ region – MCZ/RA overlap unknown	2006	The reports available on BGS website did not contain geo-referenced information Data files, maps, processed data, processed images, raw data, raw images, still images (photographs), reports, video. Features covered include subtidal biogenic reefs,			✓	

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			sediment data, benthic communities and seabed habitats.				
EA_Fisheries_marine Fish Nursery Function in the Lune Estuary.doc	ISCZ 16	2000-2009	Presence of smelt. Data format unknown.				✓
EA_Fisheries_marine Fish Nursery Function in the Ribble Estuary.doc	ISCZ 17	2000-2009	Presence of smelt. Data format unknown.				✓
EA_Fisheries_marine Fish Nursery Function in the Solway.doc	ISCZ 15	2000-2009	Presence of smelt. Data format unknown.				✓
VAN LANDEGHAM, K., WHEELER, A.J., MITCHELL, N.C. (2009) Seafloor evidence for palaeo-ice streaming and calving of the grounded Irish Sea Ice Stream: Implications for the interpretation of its final deglaciation phase. Boreas 38: 119-131.	ISCZ 03	2005	Multibeam echosounder (MBES) data. Evidence for drumlins.				✓
Tittley, I., Paul, A.M., Rumsey, F.J. & Chimonides, P.J., 1999. Monitoring Eel Grass Beds In Morecambe Bay European Marine Site. A report to British gas hydrocarbon resources ltd. NHM, London. Pp 16.	ISCZCZRA W	1998-9	Walkover survey, Distribution and abundance of eelgrass spp., species composition of beds				✓
COVEY, R., FORTUNE, F., NICHOLS, D.M. & THORPE, K. 1998. Marine Nature Conservation Review. Sector 11. Liverpool Bay and the Solway Firth: area summaries. Peterborough, Joint Nature Conservation Committee. (Coasts and seas of the United Kingdom. MNCR series	ISCZ RA T		Un sourced so feature not known – highlighted by SAP.				✓
DAME, RF. 1996. Ecology of Marine Bivalves: An	ISCZ 03		Un sourced so feature				✓

Data Source	Relevant MCZ (e.g. NG1 or all NG etc)	Year of Survey(s)	Comments (spatial coverage (e.g. proportion of MCZ), feature coverage (which features), format (e.g. raw data, digital data, paper records))	Data acquired and not processed	Prioritisation		
Ecosystem Approach. Boca Raton (FL):CRC Press.			not known – highlighted by SAP.				
Brown et al. 2010 (no further detail supplied)	ISCZ 04		Un sourced so feature not known – highlighted by SAP.				✓
Mackie 1995 (book)	ISCZ 05		Benthic biodiversity in the southern Irish sea. <i>Arctica islandica</i> - - highlighted by SAP.				✓
Mapped multibeam imagery of the outer Solway Firth	ISCZ 10, ISCZRA H	2009	Multibeam bathymetry and Backscatter, Physical seabed maps outlining areas of scar ground surrounded by sand banks.			✓	
MANX ELECTRICITY AUTHORITY, Cables, IOM/UK INTERCONNECTOR - EIA	unknown	unknown	unknown				✓
EDF Energy (British Energy), Nuclear, Heysham - EIA	unknown	unknown	unknown				✓
BHP, Oil and Gas Structures, LENNOX - EIA	unknown	unknown	unknown				✓
PROUDMAN, Oil and Gas Structures, LIVERPOOL BAY BUOY 3: KFB 06/2007 - EIA	unknown	unknown	unknown				✓
PROUDMAN, Oil and Gas Structures, LIVERPOOL BAY BUOY 3: KFB 07/2009 - EIA	unknown	unknown	unknown				✓
PROUDMAN, Oil and Gas Structures, LIVERPOOL BAY BUOY 3: KFB 16/2009 - EIA	unknown	unknown	unknown				✓
PROUDMAN, Oil and Gas Structures, LIVERPOOL BAY	unknown	unknown	unknown				✓

Data Source	Relevant MCZ (e.g. NG1 or all NG etc)	Year of Survey(s)	Comments (spatial coverage (e.g. proportion of MCZ), feature coverage (which features), format (e.g. raw data, digital data, paper records))	Data acquired and not processed	Prioritisation		
WAVERIDER BUOY D: KFB 07/2010 - EIA							
CEFAS, Oil and Gas Structures, OCEANOGRAPHIC BUOY: KFB 12/2010 - EIA	unknown	unknown	unknown				✓
UNKNOWN, Oil and Gas Structures, WEST DUDDON SANDS WAVERIDER BUOY: KFB 20/2009 - EIA	unknown	unknown	unknown				✓
UNKNOWN, Oil and Gas Structures, BARROW-IN-FURNESS GAS TERMINAL - EIA	unknown	unknown	unknown				✓
Port of Heysham - EIA	unknown	unknown	unknown				✓
<i>MCZ Verification Surveys</i>							
EA MCZ Verification Survey - Allonby Bay	ISCZ 10	2012- 2013	Grab samples and video		✓		
Cefas MCZ Verification Survey - Mud Hole	ISCZ 01	2012-2013	Grabs and video		✓		
Cefas MCZ Verification Survey - North St Georges Channel	ISCZ 03	2012	Multibeam, grab and video		✓		
Cefas MCZ Verification Survey - Mid St Georges Channel	ISCZ 04	2012-2013	Multibeam, no samples		✓		
Cefas MCZ Verification Survey - North of Celtic Deep	ISCZ 05	2012	Multibeam, video and grab		✓		
Cefas MCZ Verification Survey - South Rigg	ISCZ 06	2012-2013	Multibeam and grab		✓		
Cefas MCZ Verification Survey - Slieve Na Griddle	ISCZ RA G	2012-2013	Multibeam, video transects		✓		
<i>Data Sources Identified from Gardline Database</i>							
Commercial Development (Gardline Client)	Fylde Offshore ISCZ 08	May-04	Grab and Benthic Samples				✓
Commercial Development (Gardline Client)	Fylde Offshore ISCZ 08	Jun-04	SBES, MBES, SSS, SBP, Mag, Vibrocores				✓

Data Source	Relevant MCZ (e.g. NG1 or all NG etc)	Year of Survey(s)	Comments (spatial coverage (e.g. proportion of MCZ), feature coverage (which features), format (e.g. raw data, digital data, paper records) and CPT	Data acquired and not processed	Prioritisation		
Commercial Development (Gardline Client)	Fylde Offshore ISCZ 08	Nov-08	Grab and Benthic Samples				✓
Commercial Development (Gardline Client)	Fylde Offshore ISCZ 08	Oct-08	Grab and Benthic Samples				✓
Commercial Development (Gardline Client)	Fylde Offshore ISCZ 08	16/11/2008	SBES, MBES, SSS, SBP, HRS, Boomer, Digital Seismic				✓
Commercial Development (Gardline Client)	Fylde Offshore ISCZ 08	Oct-08	SBES, MBES				✓
Commercial Development (Gardline Client)	Walney and West Duddon Sands Co Location Zone	Aug-10	Grab and Benthic Samples				✓
Commercial Development (Gardline Client)	Walney and West Duddon Sands Co Location Zone	Aug-10	Grab and Benthic Samples				✓
Commercial Development (Gardline Client)	Walney and West Duddon Sands Co Location Zone	Aug-10	Grab and Benthic Samples				✓
Commercial Development (Gardline Client)	Walney and West Duddon Sands Co Location Zone	30/08/2010	SBES, MBES, SSS, SBP, Mag, Pinger				✓
Commercial Development (Gardline Client)	Walney and West Duddon Sands Co Location Zone		Grab and Benthic Samples				✓
<i>Data Sources Identified by Study Team</i>							

Data Source	Relevant MCZ (e.g. NG1 or all NG etc)	Year of Survey(s)	Comments (spatial coverage (e.g. proportion of MCZ), feature coverage (which features), format (e.g. raw data, digital data, paper records))	Data acquired and not processed	Prioritisation		
Scira Offshore Energy Sheringham Shoal Offshore Windfarm EIA	NG 04	2006	Sediment mapping and sample locations		✓		
Triton Knoll OWF ES	NG 06	Unknown	Biotope mapping, epibenthic data, sediment mapping and benthic samples		✓		
Talisman Energy Auk North Environmental Statement _	NG 17	Unknown	Sediment mapping, sediment samples and photographs		✓		
Purango Durango Field Oil and Gas Environmental statement	NG 04 and RA 08	2007	Sediment map			✓	
SMart Wind Hornsea Round 3 Offshore Wind Farm Zone	NG 07 and 09	2011	Biotope mapping			✓	
Bolam, S.G., Barrio-Frojan, C.R.S., Eggleton, J.D., 2010. Macrofaunal production along the UK continental shelf. <i>Journal of Sea Research</i> , 64 166-179	NG 01b, 02-06, 08-12, 14-16 RA01-05, 08-13	2005-2007	Sediment sampling – macrofauna and sediment analysis Data format unknown			✓	
Foster-Smith, J. 2000. The marine fauna and flora of the Cullercoats District. <i>Marine species records for the North East coast of England</i> . University of Newcastle, Department of Marine Sciences and Coastal Management. Newcastle upon Tyne.	NG 13	Unknown	Possible SOCI Data format unknown				✓
Hendrick, V.J., Foster-Smith, R.L., Davies, A.J., & Newell, R.C. 2011. Biogenic Reefs and the Marine Aggregate Industry. Cefas.	All NG	Unknown	Biogenic reefs Data format unknown				✓
Thomson, A.G., Fuller, R.M., Yates, M.G., Brown, S.L., Cox,	NG 02, 05 and 08		Intertidal zone mapping				✓

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R. & Wadsworth, R.A. 2003. The use of airborne remote sensing for extensive mapping of intertidal sediments and saltmarshes in eastern England. <i>International Journal of Remote Sensing</i> . 24(13)			Data format unknown				
Stride,A.H.; Wilson,J.B.; Curry,D., 1999. Accumulation of late Pleistocene and Holocene biogenic sands and gravels on the continental shelf between northern Scotland and western France. <i>Marine Geology</i> , 159(1-4), 273-285	NG17	Various	Interpreted sediment data.	✓		✓	
Westminster Gravels Ltd, Aggregate, 440 - EIA	NG 04	Unknown	Environmental Impact Assessment Data coverage unknown Data format unknown				✓
Amethyst E. (Pre - ES requirement), DECC licence Blocks, 47/14b - EIA	Unknown	Unknown	Environmental Impact Assessment Data coverage unknown Data format unknown				✓
Chiswick, DECC licence Blocks, 49/4c - EIA	NG 07	Unknown	Environmental Impact Assessment Data coverage unknown Data format unknown				✓
TALISMAN, Oil and Gas Structures, AUK A - EIA	NG 17	Unknown	Environmental Impact Assessment Data coverage				✓

Data Source	Relevant MCZ (e.g. NG1 or all NG etc)	Year of Survey(s)	Comments (spatial coverage (e.g. proportion of MCZ), feature coverage (which features), format (e.g. raw data, digital data, paper records))	Data acquired and not processed	Prioritisation		
			unknown Data format unknown				
SHELL UK, Oil and Gas Structures, AUK A OCEANOGRAPHIC BUOY - EIA	NG 17	Unknown	Environmental Impact Assessment Data coverage unknown Data format unknown				✓
UNKNOWN, Oil and Gas Structures, BACTON GAS TERMINAL - EIA	NG 02	Unknown	Environmental Impact Assessment Data coverage unknown Data format unknown				✓
CENTRICA, Oil and Gas Structures, CHISWICK PLATFORM - EIA	NG 07	Unknown	Environmental Impact Assessment Data coverage unknown Data format unknown				✓
BP, Oil and Gas Structures, AMETHYST A1D, A2D, C1D - EIA	NG 06, 09	Unknown	Environmental Impact Assessment Data coverage unknown Data format unknown				✓
TALISMAN, Oil and Gas Structures, CLYDE - EIA	NG 17	Unknown	Environmental Impact Assessment Data coverage unknown				✓

Data Source	Relevant MCZ (e.g. NG1 or all NG etc)	Year of Survey(s)	Comments (spatial coverage (e.g. proportion of MCZ), feature coverage (which features), format (e.g. raw data, digital data, paper records))	Data acquired and not processed	Prioritisation		
			Data format unknown				
UNKNOWN, Oil and Gas Structures, EASINGTON/DIMLINGTON GAS TERMINAL - EIA	NG 08	Unknown	Environmental Impact Assessment Data coverage unknown Data format unknown				✓
TALISMAN, Oil and Gas Structures, FULMAR A, AD - EIA	NG 17	Unknown	Environmental Impact Assessment Data coverage unknown Data format unknown				✓
MAERSK, Oil and Gas Structures, JANICE ALPHA - EIA	NG 17	Unknown	Environmental Impact Assessment Data coverage unknown Data format unknown				✓
CENTRICA, Oil and Gas Structures, ROUGH AD, AP, BD, BP, CD - EIA	NG 09	Unknown	Environmental Impact Assessment Data coverage unknown Data format unknown				✓
Aquarium Top Stormwater Outfall - Yorkshire Water Services Ltd	NG 10		Unknown				✓
Briardene Pumping Station - Northumbrian Water Limited	NG 13		Unknown				✓
Gardline client survey data (confidential)	NG 07	~2000-2008	Sediment and faunal analysis – Grab and				✓

Data Source	Relevant MCZ (e.g. NG1 or all NG etc)	Year of Survey(s)	Comments (spatial coverage (e.g. proportion of MCZ), feature coverage (which features), format (e.g. raw data, digital data, paper records))	Data acquired and not processed	Prioritisation		
			trawl samples. Raw data				
Gardline client survey Westminster Gravels Ltd.	NG 07	2000, 2001	Aggregates licence areas 440 and 441: Sediment analysis ~70 Grab samples. Raw data	✓			✓
Gardline client survey data (confidential)	NG 01b, NG 09	2001-2003	Sediment and faunal analysis ~ 100+ Grab and <20 trawl samples. Raw data				✓
<i>MCZ Verification Surveys</i>							
EA MCZ Verification Survey - Alde/Ore	NG1c	2012	benthic species abundance, particle size, redox depth, salinity		✓		
EA MCZ Verification Survey - Cromer Shoal	NG2, NGRA1	2012	camera images, multibeam backscatter & bathymetry		✓		
EA MCZ Verification Survey - Lincs Belt	NG5	2012	Multibeam, grabs and video		✓		
EA MCZ Verification Survey - Holderness Inshore	NG8	2012	Grabs and video		✓		
MCZ Verification Survey - Orford Inshore	NG1b	2012	Bathymetry, Multibeam backscatter data, grabs		✓		

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MCZ Verification Survey – Compass Rose	NG RA 10	2012	Bathymetry, Multibeam backscatter data, grabs, camera images		✓		
MCZ Verification Survey - Farnes East	NG 14	2012	Bathymetry, Multibeam backscatter data, camera images and grabs		✓		
MCZ Verification Survey - Rock Unique	NG 15	2012	Bathymetry, Multibeam backscatter data, camera images and grabs		✓		
MCZ Verification Survey - Fulmar	NG 17	2012/2013	Bathymetry, Multibeam backscatter data,		✓		
<i>Data Sources identified from Gardline Database</i>							
Commercial Development (Gardline Client)	NG 17	May-05	Habitat Survey				✓
Commercial Development (Gardline Client)	NG 17	May-05	SBES, MBES, SSS, SBP, HRS				✓
Commercial Development (Gardline Client)	NG 17	May-04	SSS, MBES, Pinger, Digital Seismic				✓
Commercial Development (Gardline Client)	NG 09	Jun-05	SBES, MBES, SSS, SBP, HRS				✓
Commercial Development (Gardline Client)	NG 08	May&Jun 2010	SSS, Pinger, Boomer				✓
Commercial Development (Gardline Client)	NG 09	Jun-05	Habitat Survey				✓
Commercial Development (Gardline Client)	NG 09	Jun-05	SSS, Pinger, Digital				✓

Data Source	Relevant MCZ (e.g. NG1 or all NG etc)	Year of Survey(s)	Comments (spatial coverage (e.g. proportion of MCZ), feature coverage (which features), format (e.g. raw data, digital data, paper records)	Data acquired and not processed	Prioritisation		
			Seismic				
Commercial Development (Gardline Client)	NG 09	Jun-10	Grab and Benthic Samples				✓
Commercial Development (Gardline Client)	NG 09	Oct-09	Grab and Benthic Samples				✓
Commercial Development (Gardline Client)	NG 09	May&Jun 2010	SSS, Pinger, Boomer				✓
Commercial Development (Gardline Client)	NG 09	Oct-09	SSS, Pinger, Boomer, Digital Seismic				✓
Commercial Development (Gardline Client)	NG 09	Jun-07	Grab and Benthic Samples				✓
Commercial Development (Gardline Client)	NG 09	Jun-07	Grab and Benthic Samples				✓
Commercial Development (Gardline Client)	NG 09	Jun-07	Grab and Benthic Samples				✓
Commercial Development (Gardline Client)	NG 07	Jul-10	Grab and Benthic Samples				✓
Commercial Development (Gardline Client)	NG 07	Apr-09	Grab and Benthic Samples				✓
Commercial Development (Gardline Client)	NG 07	Jul-07	Habitat Survey				✓
Commercial Development (Gardline Client)	NG 07	Apr-09	SSS				✓
Commercial Development (Gardline Client)	NG 06	Jun-08	Grab and Benthic Samples				✓
Commercial Development (Gardline Client)	NG 06	Aug/Sept 2009	Grab and Benthic Samples				✓
Commercial Development (Gardline Client)	NG 06	Jun-08	SSS, Pinger, Digital				✓

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			Seismic				
Commercial Development (Gardline Client)	NG 06	Aug/Sept 2009	SSS, Pinger, Sparker				✓
Commercial Development (Gardline Client)	NG 06	Aug-09	MBES, SSS, Grab Samples				✓
Commercial Development (Gardline Client)	NG 06	Aug-09	Video				✓
Commercial Development (Gardline Client)	NG04	Aug-09	MBES, SSS, Grab Samples				✓
Commercial Development (Gardline Client)	NG 02	Apr-08	Benthic Samples				✓
Commercial Development (Gardline Client)	NG 17	Jul-05	Habitat Survey				✓
Commercial Development (Gardline Client)	NG 17	Sept/Oct 2010	Grab and Benthic Samples				✓
Commercial Development (Gardline Client)	NG 09	Oct-00	Habitat Survey				✓
Commercial Development (Gardline Client)	NG 09	Nov-93	Habitat Survey				✓
Commercial Development (Gardline Client)	NG 09	Aug-05	Habitat Survey				✓
Commercial Development (Gardline Client)	NG 09	Nov-01	Habitat Survey				✓
Commercial Development (Gardline Client)	NG 09	Dec 2003 - Jan 2004	Habitat Survey				✓
Commercial Development (Gardline Client)	NG 01	May-09	Grab and Benthic Samples				✓
Commercial Development (Gardline Client)	NG 04	Feb-08	Grab and Benthic Samples				✓
Commercial Development (Gardline Client)	NG 04	Feb-08	SSS, Pinger				✓
Commercial Development (Gardline Client)	NG 04	Dec-07	Benthic Samples				✓
Commercial Development (Gardline Client)	NG 12	Apr-06	Grab Samples				✓

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Commercial Development (Gardline Client)	NG 12	Apr-06	SSS, Boomer, Digital Seismic				✓
Commercial Development (Gardline Client)	NG 02	Sep-00	SBES, Grab Samples				✓
Commercial Development (Gardline Client)	NG 17	22/12/2006	SBES, MBES, SSS, SBP, Pinger				✓
Commercial Development (Gardline Client)	NG 04	Jul-00	Grab Samples				✓
Commercial Development (Gardline Client)	NG 04	Aug-99	SSS, Boomer, Grab Samples				✓
Commercial Development (Gardline Client)	NG 12	Feb-10	SSS, Pinger				✓
Commercial Development (Gardline Client)	NG 12	Aug-09	SSS, Pinger, Vibrocore and CPTs				✓
Commercial Development (Gardline Client)	NG 02	Feb-02	SBES, Boomer				✓
Commercial Development (Gardline Client)	NG 02	Aug-06	SSS, SBES, SBP				✓
Commercial Development (Gardline Client)	NG 02	Ovt 2008	SSS, Mag, Boomer				✓
Commercial Development (Gardline Client)	NG 05	Mar-03	SBES				✓
Commercial Development (Gardline Client)	NG 05	Apr-00	SBES, SSS				✓
Commercial Development (Gardline Client)	NG 05	Mar-03	SBES, SSS				✓
Commercial Development (Gardline Client)	NG 05	March/April 2001	SBES, SSS				✓
Commercial Development (Gardline Client)	NG 05	Apr-02	SBES				✓
Commercial Development (Gardline Client)	NG 07	Oct-06	SSS, SBES				✓
Commercial Development (Gardline Client)	NG 04	Nov-09	SBES, MBES				✓
Commercial Development (Gardline Client)	NG 04	Jul-06	Borehole and CPTs				✓
Commercial Development (Gardline Client)	NG 04	Apr-07	SBES, MBES				✓

Data Source	Relevant MCZ (e.g. NG1 or all NG etc)	Year of Survey(s)	Comments (spatial coverage (e.g. proportion of MCZ), feature coverage (which features), format (e.g. raw data, digital data, paper records))	Data acquired and not processed	Prioritisation		
Balanced Seas							
<i>Data Sources Identified by Study Team</i>							
ROGERS, S. I. AND MILLNER, R. S., 1996. Factors affecting the annual abundance and regional distribution of English inshore demersal fish populations: 1973 to 1995. ICES J. mar Sci., 53: 1094-1112.	Unknown inshore BS sites	1973 to 1995	Data format unknown from Cefas on fish abundances from the inshore English Channel. May include data on <i>Anguilla anguilla</i> , <i>Osmerus eperlanus</i> , <i>Raja undulata</i> .				✓
Parker-Humphreys, M. (2005). Distribution and relative abundance of demersal fishes from beam trawl surveys in the eastern English Channel (ICES division VIIId) and the southern North Sea (ICES division IVc) 1993-2001. <u>Technical Reports.</u>	BSRA14, BS08, BS09, BS11.4, BS13.1, BS14, BS17, BS29, BS29.2, BS30, BS31.	1993-2001	Data format unknown from Cefas on fish abundances from the Eastern English Channel and Southern North Sea. May include data on <i>Anguilla anguilla</i> , <i>Osmerus eperlanus</i> , <i>Raja undulata</i> .				✓
The distribution and abundance of young fish on the east and south coast of England (1981 to 1997). (PDF, 2.4 MB) S.I. Rogers*, R.S. Millner* and T.A. Mead* (1998) Science Series, Technical Report, CEFAS, Lowestoft, 108: 130pp	Unknown inshore BS sites		Data format unknown from Cefas on fish abundances from the inshore English Channel. May include				✓

Data Source	Relevant MCZ (e.g. NG1 or all NG etc)	Year of Survey(s)	Comments (spatial coverage (e.g. proportion of MCZ), feature coverage (which features), format (e.g. raw data, digital data, paper records))	Data acquired and not processed	Prioritisation		
			data on <i>Anguilla anguilla</i> , <i>Osmerus eperlanus</i> , <i>Raja undulata</i> .				
Bolam, S. G., Rees, et al. (2006). "Ecological consequences of dredged material disposal in the marine environment: A holistic assessment of activities around the England and Wales coastline." <i>Marine Pollution Bulletin</i> 52(4): 415-426.	Unknown inshore BS sites	1973 to 1995	Data format unknown from Cefas on fish abundances from the inshore English Channel. May include data on <i>Anguilla anguilla</i> , <i>Osmerus eperlanus</i> , <i>Raja undulata</i> .				✓
Portsmouth University	BS19, BS20, BS23, BS22, BSRA18, BS25.1 and BS25.2.	Various/ not known	Local knowledge from colleagues, MSc and PhD theses at Portsmouth University.			✓	
CEMEX UK Marine Ltd, Aggregate - EIA	BS05, BS30, BS11.1, BS31, BS17	Recent/ Current	Shallow seismic and side-scan sonar surveys of areas of marine aggregate. Raw/digital data.				✓
Kendall Bros (Portsmouth) Ltd, Aggregate - EIA	BS28	Not known	Surveys of areas of marine aggregate. Data format unknown.				✓
CEFAS, Oil and Gas Structures, BUOY 1: KFB 24/2002 -	unknown		BSH's; raw data/ digital				✓

Data Source	Relevant MCZ (e.g. NG1 or all NG etc)	Year of Survey(s)	Comments (spatial coverage (e.g. proportion of MCZ), feature coverage (which features), format (e.g. raw data, digital data, paper records))	Data acquired and not processed	Prioritisation		
EIA			data/ paper records				
CEFAS, Oil and Gas Structures, OFFSHORE HASTINGS: KFB 09/2003 - EIA	unknown		BSH's; raw data/ digital data/ paper records				✓
Ports, London – EIA Fish & Epibenthic Invertebrate Resources, Princes Channel, outer Thames Estuary, 2002. Client: Port of London Authority. Baseline biological resource surveys of the benthic & epibenthic fauna of the lower Thames Estuary relating to the London Gateway Port Development, 2001-2003. Client: Posford Haskoning Ltd on behalf of P&O. Seasonal Changes in Fish & Epibenthic Invertebrate Resources, Princes Channel, outer Thames Estuary, 2002. Client: Port of London Authority.	BS05	2000-2003	Fauna/ flora of outer Thames Estuary. Data format unknown.				✓
Ports, Tilbury - EIA	BS05	Unknown	BSH's; raw data/ digital data/ paper records				✓
Intergen, Power stations, Coryton, gas - EIA	BS05	Unknown	Fauna/flora of outer Thames Estuary. Data format unknown.				✓
Scottish and Southern Energy, Power stations, Medway, gas - EIA	BS06 and BS10	Unknown	Fauna/flora. Data format unknown.				✓
Tarmac	unknown		BSH's; Andrew Bellamy contacted but data not available.				✓
Gardline client survey data (confidential) 22-24	BS 08, BS 07, BS 10	~2005-2007	Fauna and sediment analysis – 100+ Grab				✓

Data Source	Relevant MCZ (e.g. NG1 or all NG etc)	Year of Survey(s)	Comments (spatial coverage (e.g. proportion of MCZ), feature coverage (which features), format (e.g. raw data, digital data, paper records))	Data acquired and not processed	Prioritisation		
			and some core samples. Raw data				
Gardline client survey data (confidential) 9-21	BS 05	~2001-2011	Sediment and faunal analysis – 100+ Grab and trawl samples. Raw data				✓
Gardline client survey data received with permission to use from: CEMEX and Westminster Gravels Ltd. 29-31, 35	BS 17	2006	Aggregates licence area 451: Sediment and faunal analysis ~80 Grab samples, and 11 trawl samples. Raw data				✓
Gardline client survey data received with permission to use from: Westminster Gravels Ltd. 36	BS 28	2008	Aggregates licence area 351: Sediment and faunal analysis – 12 Grab and 6 trawl samples. Raw data				✓
Gardline client survey data (confidential) 25-27	BS 29.2, BS 13.1	2005	Sediment and faunal analysis ~100+ Grab, and trawl samples. Raw data				✓
Gardline client survey data (confidential) 2-8	BS 29, BS 14 NG 06	~2000-2008	Sediment and faunal analysis – Grab and				✓

Data Source	Relevant MCZ (e.g. NG1 or all NG etc)	Year of Survey(s)	Comments (spatial coverage (e.g. proportion of MCZ), feature coverage (which features), format (e.g. raw data, digital data, paper records))	Data acquired and not processed	Prioritisation		
			trawl samples. Raw data				
Cliff Quay, Sewage treatment works - Anglian Water Services limited	BS 02		Unknown				✓
West Thurrock Pumping Station - Anglian Water Services Ltd.	BS 05		Unknown				✓
Long Reach Sewage treatment works, Kent - Thames Water Utilities Limited.	BS 05		Unknown				✓
Crossness Sewage treatment works - Thames Water Utilities Limited.	BS 05		Unknown				✓
Beckton Sewage treatment works - Thames Water Utilities Limited.	BS 05		Unknown				✓
Portobello Wastewater Treatment Works, Brighton - Southern Water Services Ltd.	BS 13.2		Unknown				✓
<i>MCZ Verification Surveys</i>							
MCZ Verification Survey - Folkestone Pomerania	BS11.4, BSRA25	2012	Multibeam backscatter & bathymetry,		✓		
MCZ Verification Survey - Beachy Head East	BS13.1	2012	Multibeam backscatter & bathymetry, grabs and video		✓		
MCZ Verification Survey - Bembridge	BS22, BSRA15, BSRA21	2012	Multibeam backscatter & bathymetry		✓		
MCZ Verification Survey - Yarmouth to Cowes	BS23	2012	Multibeam backscatter & bathymetry, grabs and video		✓		
MCZ Verification Survey - Hythe Bay	BS26, BSRA8	2012	Multibeam backscatter		✓		

Data Source	Relevant MCZ (e.g. NG1 or all NG etc)	Year of Survey(s)	Comments (spatial coverage (e.g. proportion of MCZ), feature coverage (which features), format (e.g. raw data, digital data, paper records) & bathymetry and grabs	Data acquired and not processed	Prioritisation		
MCZ Verification Survey - Norris to Ryde	BS19, BSRA17	2012	Grab		✓		
MCZ Verification Survey – Dover to Deal	BS11.1	2012 - 2013	Grabs and video		✓		
MCZ Verification Survey – Dover to Folkestone	BS11.2	2012 - 2013	Grabs and video		✓		
MCZ Verification Survey - Kingmere	BS16	2012- 2013	Video		✓		
MCZ Verification Survey - Utopia	BS28	2012 -2013	Videos		✓		
MCZ Verification Survey – Swale Estuary	BS10	2012 -2013	Grabs		✓		
MCZ Verification Survey – Offshore Brighton	BS14	2012 -2013	Video		✓		
MCZ Verification Survey – Wight Barfleur + Extn	BS21	2012	Videos		✓		
<i>Data Sources Identified from Gardline Database</i>							
Commercial Development (Gardline Client)	BS 09	Sep-04	MBES, SSS, SBP				✓
Commercial Development (Gardline Client)	BS 29	Aug-01	Grab and Benthic Samples				✓
Commercial Development (Gardline Client)	BS 29.2	Jul-01	Grab Samples				✓
Commercial Development (Gardline Client)	BS 29.2	Aug-01	Grab and Benthic Samples				✓
Finding Sanctuary							
<i>Data Sources Identified by Study Team</i>							
ERCCIS (Cornwall Wildlife Trust)	All FS, FS28	c. 2005	There are recent (c. 2005?) ERCCIS records for seaweeds but data from ERCSIS was not available				✓
Cefas	FS2	Recent	Data from JR Ellis on South West Deeps				✓

Data Source	Relevant MCZ (e.g. NG1 or all NG etc)	Year of Survey(s)	Comments (spatial coverage (e.g. proportion of MCZ), feature coverage (which features), format (e.g. raw data, digital data, paper records))	Data acquired and not processed	Prioritisation		
			(West)				
Western Channel Beam Trawl	Western Channel rMCZ	Recent	Data available from Brian Harley; some benthic sample data plus epifaunal data				✓
CEFAS (2005). Environmental impacts resulting from disposal of dredged material at the Rame Head disposal site, S.W. England: An analysis of existing data and implications for environmental management. <u>Work performed under CEFAS Contract BA004</u> A CEFAS Multi-disciplinary Project Team.: 120.	FS 28	c. 2005	Data requested from CEFAS. Benthic and sediment surveys near the disposal site.				✓
Garrick-Maidment, N. and L. Jones (2004). The British Seahorse Survey Report. Topsham, Devon, The Seahorse Trust.	FS15. Possibly: FS 28, FS22, FS 29, FS 43, FS24.	Unknown	Dataset of sightings for <i>Hippocampus</i> spp. Movement of a pair of spiny seahorses (<i>Hippocampus guttulatus</i>) seen during the summer of 2010 at Studland Bay in Dorset			✓	
The distribution and abundance of young fish on the east and south coast of England (1981 to 1997). (PDF, 2.4 MB) S.I. Rogers*, R.S. Millner* and T.A. Mead* (1998) Science Series, Technical Report, CEFAS, Lowestoft, 108: 130pp	Unknown inshore FS sites		Data format unknown from Cefas on fish abundances from the inshore English Channel. May include data on <i>Anguilla anguilla</i> , <i>Osmerus</i>				✓

Data Source	Relevant MCZ (e.g. NG1 or all NG etc)	Year of Survey(s)	Comments (spatial coverage (e.g. proportion of MCZ), feature coverage (which features), format (e.g. raw data, digital data, paper records))	Data acquired and not processed	Prioritisation		
			<i>eperlanus, Raja undulata.</i>				
Tarmac	unknown		BSH's; Andrew Bellamy contacted but data not available.				✓
MCA - NE Start Point to Plymouth Sound multibeam survey	FS24	2011	Multibeam, Distribution of habitats, psa		✓		
MCA - W Approaches to English Channel	FS24; FS34	2005	Multibeam, Distribution of habitats, psa		✓		
MCA - Barnstable Bay	FS41; FS43; FS44;	2008	Multibeam, Distribution of habitats, psa		✓		
Strategic Environmental Assessment (SEA 8)	FS region – site overlap not assessed	2006	multibeam swath bathymetry, sidescan sonar and underwater video footage, grab samples. Interpreted data on biotopes.				✓
Gardline client survey data (confidential) 28	Finding Sanctuary: Devon Avon Estuary	2000	Sediment sampling - <10 Grab samples. Raw data				✓
<i>MCZ Verification Surveys</i>							
EA MCZ Verification Survey - Upper Fowey & Pont Pill	FS29	2012	Unknown		✓		
EA MCZ Verification Survey - The Manacles	FS32	2012	Grabs and video		✓		
EA MCZ Verification Survey - Mounts Bay	FS33	2012	Grab and video		✓		
EA MCZ Verification Survey - Land's End	FS34	2012	camera images		✓		
EA MCZ Verification Survey - Morte Platform	FS44	2012	Grabs and video		✓		

Data Source	Relevant MCZ (e.g. NG1 or all NG etc)	Year of Survey(s)	Comments (spatial coverage (e.g. proportion of MCZ), feature coverage (which features), format (e.g. raw data, digital data, paper records))	Data acquired and not processed	Prioritisation		
MCZ Verification Survey – North-West of Jones Bank	FS4	2012 -2013	Multibeam backscatter & bathymetry and grabs		✓		
MCZ Verification Survey – East of Jones Bank	FS6	2012 -2013	Multibeam backscatter & bathymetry		✓		
MCZ Verification Survey – South of Celtic Deep	FS9	2012	Grabs and video		✓		
MCZ Verification Survey – East of Celtic Deep	FS11	2012 -2013	Multibeam backscatter & bathymetry, grab and video		✓		
MCZ Verification Survey – Western Channel	FS12	2012 -2013	Multibeam backscatter & bathymetry, grab and video		✓		
MCZ Verification Survey – East of Haig Fras	FS7	2012 -2013	Multibeam backscatter & bathymetry, grabs and video		✓		
MCZ Verification Survey – South East of Falmouth	FS31	2012 -2013	Grab and video		✓		
<i>Data Sources Identified From Gardline Database</i>							
Commercial Development (Gardline Client)	South of Portland	Spring 2005	Grab Samples				✓