Table 1 below supersedes Table A5.1 (Appendix 5) in SNH and JNCC's 2012 MPA network advice (see http://www.snh.org.uk/pdfs/publications/commissioned reports/547.pdf). Table 2 provides additional details of the changes made since the December 2012 publication.

Table 1 The suite of possible Nature Conservation MPAs in Scotland's seas with proposed protected features and their respective conservation objectives at the time of going out to public consultation in July 2013

Name	Code	OSPAR	Size (km²)	Origins	Proposed protected features	Conservation objectives
Faroe-Shetland sponge belt	FSS	I & II	6,503	LD/MN location	Biodiversity Continental slope; deep sea sponge aggregations; ocean quahog aggregations; offshore subtidal sands and gravels Geodiversity Marine Geomorphology of the Scottish Deep Ocean Seabed	Conserve (uncertain) - all features
					- sand wave field, sediment wave field, Quaternary of Scotland - continental slope channels; iceberg ploughmark fields, prograding wedges; Submarine Mass Movement - slide deposits	
North-east Faroe	NEF	I & II	26,807	LD/MN	Biodiversity	Conserve (uncertain)
Shetland Channel				location	Continental slope; deep sea sponge aggregations; offshore deep sea muds; offshore subtidal sands and gravels	- all features
					Geodiversity	
					Cenozoic Structures of the Atlantic Margin - mud diapirs; Marine Geomorphology of the Scottish Deep Ocean Seabed - contourite sand/silt; Quaternary of Scotland - prograding wedge; Submarine Mass Movement - slide deposits	
Central Fladen	CFL	II	709	New area	Biodiversity	Conserve (uncertain)
					Burrowed mud	- all features
					Geodiversity	
					Quaternary of Scotland - sub-glacial tunnel valley	
East Caithness	ECC	II	116	Existing	Biodiversity	Conserve (uncertain)
Cliffs				protected area	Black guillemot	
East of Gannet	EGM	II	1,838	LD/MN	Biodiversity	Conserve (uncertain)
and Montrose Fields				location	Ocean quahog aggregations; offshore deep sea muds; offshore subtidal sands and gravels	- all features

Name	Code	OSPAR	Size (km²)	Origins	Proposed protected features	Conservation objectives
Fetlar to Haroldswick	FTH	II	218	Existing protected area	Biodiversity Black guillemot; circalittoral sand and coarse sediment communities; horse mussel beds; kelp and seaweed communities on sublittoral sediment; maerl beds; shallow tide-swept coarse sands with burrowing bivalves Geodiversity Marine Geomorphology of the Scottish Shelf Seabed	Conserve - all features except horse mussel beds Conserve (uncertain) - horse mussel beds
Firth of Forth Banks Complex	FOF	II	2,130	Other area- based measure LD/MN location	(components to be confirmed) Biodiversity Ocean quahog aggregations; offshore subtidal sands and gravels; shelf banks and mounds Geodiversity Quaternary of Scotland - moraines	Conserve (uncertain) - all features
Mousa to Boddam	МТВ	II	13	Existing protected area	Biodiversity Sandeels Geodiversity Marine Geomorphology of the Scottish Shelf Seabed (components to be confirmed)	Conserve - Marine Geomorphology of the Scottish Shelf Seabed Conserve (uncertain) - sandeels
North-west Orkney	NWO	II	4,388	New area	Biodiversity Sandeels Geodiversity Marine Geomorphology of the Scottish Shelf Seabed - sand bank, sand wave field, sediment wave fields	Conserve (uncertain) - all features
Norwegian boundary sediment plain	NSP	II	161	LD/MN location	Biodiversity Ocean quahog aggregations; offshore subtidal sands and gravels	Conserve (uncertain)
Noss Head	NOH	II	9	Other area- based measure	Biodiversity Horse mussel beds	Conserve

Name	Code	OSPAR	Size (km²)	Origins	Proposed protected features	Conservation objectives
Papa Westray	PWY	II	34	Existing protected area	Biodiversity Black guillemot Geodiversity Marine Geomorphology of the Scottish Shelf Seabed - sand wave field	Conserve - all features
South-east Fladen	SEF	II	416	New area	Biodiversity Burrowed mud Geodiversity Seabed Fluid and Gas Seep - pockmarks	Conserve (uncertain) - all features
Turbot Bank	TBB	II	233	New area	Biodiversity Offshore subtidal sands and gravels; sandeels; shelf banks and mounds	Conserve (uncertain) - all features
Western Fladen	WFL	II	723	New area	Biodiversity Burrowed mud Geodiversity Quaternary of Scotland - sub-glacial tunnel valleys	Conserve (uncertain) - all features
Wyre and Rousay Sounds	WYR	II	16	New area	Biodiversity Kelp and seaweed communities on sublittoral sediment; maerl beds Geodiversity Marine Geomorphology of the Scottish Shelf Seabed (components to be confirmed)	Conserve - all features
West Shetland Shelf	WSS	II & III	4,047	Other area- based measure	Biodiversity Offshore subtidal sands and gravels	Conserve (uncertain)

Name	Code	OSPAR	Size (km²)	Origins	Proposed protected features	Conservation objectives
Clyde Sea Sill	CSS	III	712	Other area- based measure	Biodiversity Black guillemot; circalittoral sand and coarse sediment communities; fronts Geodiversity Marine Geomorphology of the Scottish Shelf Seabed - sand banks, sand ribbon fields, sand wave fields	Conserve - all features
Loch Creran	LCR	III	12	Existing protected area	Biodiversity Flame shell beds Geodiversity Quaternary of Scotland (components to be confirmed)	Conserve - all features
Lochs Duich, Long and Alsh	DLA	III	37	Existing protected area LD/MN location Third-party proposal	Biodiversity Burrowed mud; flame shell beds	Conserve - all features
Loch Sunart	LSU	III	49	Existing protected area Third-party proposal	Biodiversity Flame shell beds, northern feather star aggregations on mixed substrata; serpulid aggregations	Conserve - all features
Loch Sunart to the Sound of Jura	SJU	III	769	Third party proposal New area	Biodiversity Common skate Geodiversity Quaternary of Scotland - glaciated channels/troughs (other components to be confirmed)	Conserve - Quaternary of Scotland Conserve (uncertain) - common skate

Name	Code	OSPAR	Size (km²)	Origins	Proposed protected features	Conservation objectives
Loch Sween	LSW	III	38	Other areabased measure LD/MN location Third-party proposal	Biodiversity Burrowed mud; maerl beds; native oysters; sublittoral mud and mixed sediment communities	Conserve - all features
Monach Isles	MOI	III	65	Existing protected area	Biodiversity Black guillemot Geodiversity Marine Geomorphology of Scottish Shelf (components to be confirmed); Quaternary of Scotland - landscape of areal glacial scour	Conserve - all features
North-west sea lochs and Summer Isles	NWS	III	601	Other area- based measure	Biodiversity Burrowed mud; circalittoral muddy sand communities; flame shell beds; kelp and seaweed communities on sublittoral sediment; maerl beds; maerl or coarse shell gravel with burrowing sea cucumbers; northern feather star aggregations on mixed substrata Geodiversity Marine Geomorphology of the Scottish Shelf Seabed - banks of unknown substrate; Quaternary of Scotland - glaciated channels/troughs, megascale glacial lineations, moraines; Seabed Fluid and Gas Seep - pockmarks; Submarine Mass Movement - slide scars	Conserve - burrowed mud; circalittoral muddy sand communities; kelp and seaweed communities on sublittoral sediment; northern feather star aggregations on mixed substrata; all geodiversity features Conserve (uncertain) - maerl or coarse shell gravel with burrowing sea cucumbers Recover - flame shell beds; maerl beds

Small Isles S	SMI	III	808	Existing	Biodiversity	Conserve - all
				protected area	Black guillemot; burrowed mud; circalittoral sand and mud communities; fan mussel aggregations; horse mussel beds; northern feather star aggregations on mixed substrata; northern sea fan and sponge communities; shelf deeps; white cluster anemones Geodiversity Quaternary of Scotland - glaciated channels/troughs, glacial lineations, meltwater channels, moraines, streamlined bedforms	features
South Arran A	ARR	=	283	Other areabased measure (not considered an enhancement because of the difference in scale between the fisheries restriction and the resultant MPA proposal)	Biodiversity Burrowed mud; herring spawning grounds; kelp and seaweed communities on sublittoral sediment; maerl beds; maerl or coarse shell gravel with burrowing sea cucumbers; ocean quahog (species); seagrass beds; shallow tide-swept coarse sands with burrowing bivalves	Conserve - kelp and seaweed communities on sublittoral sediments; seagrass beds Conserve (uncertain) - burrowed mud; herring spawning grounds; maerl or coarse shell gravel with burrowing sea cucumbers; shallow tide-swept coarse sands with burrowing bivalves; ocean quahog Recover - maerl beds

Name	Code	OSPAR	Size (km²)	Origins	Proposed protected features	Conservation objectives
Upper Loch Fyne and Loch Goil	LFG	≡	87	Other area- based measure	Biodiversity Burrowed mud; flame shell beds; horse mussel beds; ocean quahog (species); sublittoral mud and mixed sediment communities	Conserve (uncertain) - burrowed mud; horse mussel beds; ocean quahog (species); sublittoral mud and mixed sediment communities
						Recover - flame shell beds
Geikie Slide and Hebridean slope	GSH	III & V	2,269	Other area- based measure LD/MN	Biodiversity Burrowed mud; continental slope; offshore deep sea muds; offshore subtidal sands and gravels Geodiversity Submarine Mass Movement - slide deposits, slide scars	Conserve (uncertain) - all features
South-west Sula Sgeir and Hebridean slope	SSH	III & V	2,093	location Other area- based measure	Biodiversity Burrowed mud; continental slope; offshore deep sea muds; offshore subtidal sands and gravels Geodiversity	Conserve (uncertain) - all features
				LD/MN location	Quaternary of Scotland - iceberg ploughmark fields, prograding wedges; Submarine Mass Movement - slide deposits	

Name	Code	OSPAR	Size (km²)	Origins	Proposed protected features	Conservation objectives
The Barra Fan and Hebrides Terrace Seamount	BHT	III & V	4,701	Other area- based measure	Biodiversity Burrowed mud; continental slope; offshore deep sea muds; offshore subtidal sands and gravels; orange roughy; seamounts; seamount communities	Conserve (uncertain) - all features
				LD/MN location	Geodiversity Features and components: Cenozoic Structures of the Atlantic Margin - continental slope, Hebrides Terrace Seamount; Marine Geomorphology of the Scottish Deep Ocean Seabed - scour moat; Quaternary of Scotland - iceberg ploughmark field, prograding wedges; Submarine Mass Movement - continental slope turbidite canyons, slide deposits	
Hatton-Rockall Basin	HRB	V	1,265	LD/MN location	Biodiversity Deep sea sponge aggregations; offshore deep sea muds Geodiversity Marine Geomorphology of the Scottish Deep Ocean Seabed - sediment drifts; Polygonal fault systems	Conserve (uncertain) - all features
Rosemary Bank Seamount	RBS	V	7,413	Other area- based measure	Biodiversity Deep sea sponge aggregations; seamounts; seamount communities Geodiversity	Conserve (uncertain) - all features
				LD/MN location	Cenozoic Structures of the Atlantic Margin - Rosemary Bank Seamount; Marine Geomorphology of the Scottish Deep Ocean Seabed - scour moats, sediment drifts, sediment wave fields; Quaternary of Scotland - iceberg ploughmark field; Submarine Mass Movement - slide scars	

Table 2 Summary of changes to the proposed protected features and Conservation Objectives (COs) for the possible MPAs in Scottish waters since submission of SNH and JNCC's MPA network advice in December 2012

Ref.	Possible MPA	Code	Change description	Comments
Α	Boundary ch	anges		
A1	All	All	Boundary setting principles applied. Modifications to all possible MPAs in territorial waters.	Boundary setting principles applied to all possible MPAs in territorial waters as part of SNH's formal corporate adoption of the polygons. Primarily small re-shaping consequences. Some possible MPAs had previously been cut to MHWS when features were all subtidal, subsequent cut to MLWS has changed overall area measurements but of small scale / minimal consequence to headline values given in the 2012 advice. Exclusions around key coastal infrastructure include areas such as Oban Harbour (in discussion with Argyll & Bute Council).
В	Feature com	plement	(and finer resolution components)	
B1	Loch Sween	LSW	Feature dropped Loss of inshore deep mud with burrowing heart urchins feature.	Feature not recorded in 2013 survey. Small number of previous data points considered dubious. In combination with loss of this feature from DLA (see B2 below), it is now not known to be included within the suite of possible MPAs. Survey work will continue.
B2	Lochs Duich Long and Alsh	DLA	Feature dropped Loss of inshore deep mud with burrowing heart urchins feature.	Feature not recorded in 2012 survey. It was necessary to wait until publication of the final survey report in early 2103, following detailed infaunal sample analyses. The small numbers of previous data points are now considered dubious. See also B1 above.
В3	Upper Loch Fyne and Loch Goil	LFG	Feature dropped Loss of low or variable salinity habitats feature.	Feature not recorded in 2013 survey. The low or variable salinity habitats feature is now considered to be largely restricted to small areas around the margins of the possible MPA subject to freshwater influence.
B4	North-west sea lochs and summer Isles	NWS	Feature dropped Loss of native oysters feature.	Feature dropped upon a more detailed analysis of available data. Native oyster beds have not been recorded within the possible MPA. The proposal within the 2012 MPA network advice was for representation of the species. There were records of individual oysters from two discrete areas within the possible MPA in the 1980s but despite targeted sampling in 2010 one of these locations failed to reveal a continued presence of the species. Scattered individuals at low abundance have persisted at the other location but the density of individuals appears to have declined since the 1980s. The population here is believed to represent the remnants of oyster cultivation experiments in this location undertaken between the 1950s - 1980s. Native oysters were not a driver in MPA selection due to a lack of suitable data and were proposed as representative features here and in Loch Sween. Alternative representation is not proposed. Conservation measures will be delivered through the species protection pillar of the Scottish Marine Nature Conservation strategy.

Ref.	Possible MPA	Code	Change description	Comments
B5	The Barra Fan and Hebrides Terrace Seamount	BHT	Feature dropped Coral gardens (suspected) feature. Refinements to 'suspected' status of seamount communities - changed to confirmed.	Processing of survey data could not confirm the presence of the coral garden feature in the possible MPA. The presence of seamount communities was confirmed.
B6	Small Isles	SMI	Addition of component interests of geodiversity feature.	Work to review the Small Isles geodiversity evidence-base in early 2013 confirmed that a wider area around the Small Isles possible MPA qualifies as a key geodiversity area in Scottish waters. The findings are presented in an updated, 2013, version of the related SNH commissioned report. Additional components of the Quaternary of Scotland geodiversity feature have been incorporated into the possible MPA, including rock basins; meltwater channels; moraines; and streamlined bedforms. The rock basins supplement the existing glaciated channel / trough. The interests combine to form the shelf deeps biodiversity feature which now has a more coherent shape.
В7	Clyde Sea Sill	CSS	Refinements to component biotope classes of feature. Coarsening of focus of Level 5 biotope SS.SCS.CCS.MedLumVen to level 4 biotope complex with a particular interest in the sub-biotope SS.SCS.CCS.[MedLumVen]	SS.SCS.CCS.MedLumVen has been modified to SS.SCS.CCS.[MedLumVen] as per Fetlar to Haroldswick possible MPA. This representative feature was originally set (for the 2012 MPA network advice) using the provisional results of the 2012 infaunal survey. A number of the biotope assignments were subsequently allocated to this coarser level in the biotope classification. The refinement encompasses a number of additional records to NE and SW of Sanda.
B8	Upper Loch Fyne and Loch Goil	LFG	Refinements to component biotope classes of feature. Coarsening of focus of the Level 5 biotopes SS.SMu.IFiMu.Ocn and SS.SMu.OMu.StyPse to respective Level 4 biotope complexes with a particular interest in the subbiotopes. We will be explicit that not looking to encompass SS.SMu.IFiMu at Level 4 within Upper Loch Fyne. Loss of SS.SMx.CMx.ClloMx level 5 biotope.	Changes recommended on the basis of the March 2013 survey work. Coarsening of Level 5 component biotopes SS.SMu.IFiMu.Ocn and SS.SMu.OMu.StyPse from the sublittoral mud and mixed sediment communities representative feature to respective level 4 biotope complexes SS.SMu.IFiMu[.Ocn] & SS.SMu.OMu[.StyPse]. Specific sea cucumber and sea squirt species characteristic of these biotopes were not recorded in 2013 and a significant uncertainty remains but this may be related to sampling resolution and timing. The changes relate to these features within Loch Goil only. Loss of the SS.SMx.CMx.CIIoMx sub-biotope. The distribution of this component biotope does not align closely with that of SS.SMx.CMx.CIIoModHo which is linked to the horse mussel beds feature (but with a lower abundance of <i>Modiolus</i>).

Ref.	Possible MPA	Code	Change description	Comments
С	Revised Cor	ided in 2012 network advice - see Table 1 in this paper		
C1	Upper Loch Fyne and Loch Goil	LFG	Change in Conservation Objective for the burrowed mud feature. CO changed to conserve (feature condition uncertain). Listed as recover in 2012 advice.	Refined to ensure consistency in CO setting across the series of possible MPAs with this feature. Modified in the absence of a clear understanding of what the 'condition' of the burrowed mud would/could be in the absence of anthropogenic pressures (epi- and in-faunally).
C2	Upper Loch Fyne and Loch Goil	LFG	Confirmation of the Conservation Objective for the flame shell bed feature. CO set to recover . Listed as <i>TBC</i> in 2012 advice.	The 2012 survey results concluded that the flame shell bed in Upper Loch Fyne (extent, distribution and associated diversity) has deteriorated since ~2001. The northern end of the bed used to form a mosaic with a maerl bed. The maerl bed is no longer present and the area where the features used to overlap no longer supports flame shells either. The infaunal diversity across the remaining area of flame shell bed is lower than previously recorded. This is believed to be linked to the loss of the maerl habitat and associated bivalve communities.
C3	Upper Loch Fyne and Loch Goil	LFG	Change in Conservation Objective for the horse mussel beds feature. CO changed to conserve (feature condition uncertain). Listed as recover in 2012 advice.	There is insufficient evidence to maintain the draft 'recover' objective. Some evidence of declines exists from one location where horse mussels were recorded previously at Common abundance. However, the diver observations at this location in 1989 did not describe a substantial 'bed' of the species so some uncertainty remains. Other historical records are broadly comparable and a relatively recent record was assigned to parts of a video run undertaken in 2010. The densest bed of the species has not been re-surveyed since first described by the MNCR survey in 1990.
C4	Upper Loch Fyne and Loch Goil	LFG	Change in Conservation Objective for the ocean quahog feature. CO changed to conserve (feature condition uncertain). Listed as conserve in 2012 advice.	There is currently insufficient information available regarding the distribution and status of ocean quahog populations throughout the possible MPA to be able to maintain an unqualified 'conserve' objective.
C5	Upper Loch Fyne and Loch Goil	LFG	Change in Conservation Objective for the sublittoral mud and mixed sediment communities feature. CO changed to conserve (feature condition uncertain). Listed as conserve in 2012 advice.	Uncertainties remain regarding the status of two of the component biotopes of this representative feature within Loch Goil (SS.SMu.IFiMu.Ocn and SS.SMu.OMu.StyPse - both recorded in the late 1980s). Specific sea cucumber and sea squirt species characteristic of these biotopes were not physically sampled (i.e. specimens not recovered) in 2013 (although ascidians were observed on the remote video footage). The Ocnus planci sea cucumber biotope would need to be validated using diving methodologies. Additional targeted sampling required. See also B8.

Ref.	Possible MPA	Code	Change description	Comments
C6	South Arran	ARR	Change in Conservation Objective for the burrowed mud feature. CO changed to conserve (feature condition uncertain). Listed as recover in 2012 advice.	Refined to ensure consistency in CO setting across the series of possible MPAs with this feature. Modified in the absence of a clear understanding of what the 'condition' of the burrowed mud would/could be in the absence of anthropogenic pressures (epi- and in-faunally).
C7	South Arran	ARR	Confirmation of the Conservation Objective for the ocean quahog feature. CO set to conserve (feature condition uncertain). No CO listed in 2012 advice.	The ocean quahog feature was not assigned a draft conservation objective in the 2012 network advice. We currently know relatively little about the distribution and status of ocean quahog populations throughout the possible MPA. Further details are provided in the Detailed Assessment Against the Guidelines (DAAG).
C8	South Arran	ARR	Change in Conservation Objective for the shallow tide-swept coarse sands with burrowing bivalves feature. CO changed to conserve (feature condition uncertain). Listed as conserve in 2012 advice.	Limited potential evidence of impacts to this feature is reported in the 2010 Lamlash Bay No Take Zone (NTZ) monitoring implementation study. The scale and significance of possible anthropogenic modification have not been quantified and uncertainties remain.
C9	South Arran	ARR	Change in Conservation Objective for the maerl or coarse shell gravel with burrowing sea cucumber feature. CO changed to conserve (feature condition uncertain). Listed as recover in 2012 advice.	There is currently insufficient information available regarding the distribution and extent of this feature to maintain the draft 'recover' objective. Preliminary analysis of available Vessel Monitoring System (VMS) data suggests that this feature, which is closely related to the maerl beds proposed protected feature, may be subject to pressures associated with demersal fishing. However, it is unclear what the scale and consequences of this interaction are.
C10	Mousa to Boddam	MTB	Change in Conservation Objective for the sandeel feature. CO changed to conserve (feature condition uncertain). Listed as conserve in 2012 advice.	CO refined following the review of the DAAG by SNH's Scientific Advisory Committee (SAC) and in discussion with Marine Scotland Science (MSS). The condition of the sandeel feature within the possible MPA is unknown. MTB serves a valuable role in the dissemination of recruits to other Shetland grounds when young sandeels (<1-yr old) make it to these grounds in the first place. This is subject to other environmental parameters affecting dispersal from the large spawning area to the north and west of Orkney (subject of the North-west Orkney possible MPA).

Ref.	Possible MPA	Code	Change description	Comments
C11	Loch Sunart to the Sound of Jura	SJU	Change in Conservation Objective for the common skate feature. CO changed to conserve (feature condition uncertain). Listed as conserve in 2012 advice.	CO refined following review of DAAG by SNH's Scientific Advisory Committee (SAC) and in discussion with MSS colleagues. Concerns have been raised following a more detailed analysis of recent common skate tagging data that the current levels of mortality within the population are unsustainable. However, there are a number of uncertainties associated with these conclusions that are the subject of ongoing studies. A good number of reproductively mature skate are still being caught (and released).
C12	North-west sea lochs and summer Isles	NWS	Change in Conservation Objective for the maerl or coarse shell gravel with burrowing sea cucumbers feature. CO changed to conserve (feature condition uncertain). Listed as conserve in 2012 advice.	The feature was not validated in 2010. The presence of the characterising burrowing sea cucumber was not confirmed, but the feature is believed to be present and more widely distributed than existing records indicate within the possible MPA. Further details are provided in the Detailed Assessment Against the Guidelines.
C13	North-west sea lochs and summer Isles	NWS	Change in Conservation Objective for the flame shell beds feature. CO changed to recover. Listed as conserve in 2012 advice.	There is some evidence that examples of the feature have been lost from discrete locations within the possible MPA, and also that the remaining example of the feature within the Sruth Lagaidh Narrows in Loch Broom has contracted over the last 20 years.
C14	Fetlar to Haroldswick	FTH	Change in Conservation Objective for the horse mussel beds feature. CO changed to conserve (feature condition uncertain). Listed as conserve in 2012 advice.	There is some evidence of declines in the feature but multiple new records were made within the possible MPA in 2012.