NATURAL ENVIRONMENT RESEARCH COUNCIL

Marine Facilities Planning [Homepage]

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NATURAL ENVIRONMENT RESEARCH COUNCIL

Profile ID : 595
PS : David Hodell
Agreement Submission Date :

Cruise Planning Supply Agreement Form (Agreement or AGR)

Ship :	RRS James Cook
Sea Systems Cruise Manager :	Jez Evans
Cruise sail date :	02-08-2013
Cruise working area :	Hodell MCS
Cruise number :	JC89

Review Meeting	AGR
Date of meeting	27-02-2013
Review meeting participants	
Cambridge Univ: D Hodell, N White, N McCave; CSIC: J Danobeitia, A Castellon; NMFSS: C Day, J Scott, J Evans, J Wynar, M Bridger, N Sloan	

TABLE : CRUISE ITINERARY - for PROFILE 595

JC089 RRS James Cook 25Days Hodell MCS Profile (595) View SME Hodell University of Cambridge	**Mob Date**	**Sail Date**	**Mid Port Date**	**Dock Date**	**DeMob Date**
	30-07-2013	02-08-2013		27-08-2013	28-08-2013
	MobPort	**Sail Port**	**Mid Port**	**Dock Port**	**DeMob Port**
	ESVGO	ESVGO		ESVGO	ESVGO

TABLE : CRUISE CRITICAL DATES - for PROFILE 595	
The dates shown below should be met to ensure successful completion of the cruise planning process	
Critical Task	**Completion Date**
Diplomatic clearance application submitted to NMFSS Marine Operations	30-12-2012
Outstanding issues within this draft Supply Agreement to be resolved and PI to progress the agreement	30-04-2013
This will then form the scope of supply between NMFSS, the PSO and any third parties	
Chemical and Radionuclide lists, COSHH and MSDS to be sent to NMFSS	11-06-2013

If you have any enquires concerning details contained within these minutes please contact either Sally Heath (NMF-SS Programme & Community Liaison Assistant) or Colin Day (NMF-SS Programme Manager).

Colin Day
NMF-SS Programme Manager
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Fax : 023 8059 6267
E-mail : Colin Day

Sally Heath
NMF-SS Programme & Community Liaison Assistant
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Fax : 023 8059 6149
E-mail : Sally Heath

AGR - PART 1 : Cruise itinerary and support

TABLE : STAFF MOBILISATION - for PROFILE 595			
Updated on 28-02-2013 by jme			
Technical support :	Ian Murdoch Thomas Roberts Jon Seddon Neil Sloan Other S&M BEG Trainee 2x CSIC techs		
Mobilisation officers :			
Mobilise Demobilise	**Date**	**Personnel**	**Personnel Numbers**
No mobilisation information has been input.			

TABLE : CRUISE ITINERARY - for PROFILE 595					
JC089 **RRS James Cook** **25Days** **Hodell MCS** **Profile (595)** **View SME** **Hodell** **University of Cambridge**	**Mob Date**	**Sail Date**	**Mid Port Date**	**Dock Date**	**DeMob Date**
	30-07-2013	02-08-2013		27-08-2013	28-08-2013
	MobPort	**Sail Port**	**Mid Port**	**Dock Port**	**DeMob Port**
	ESVGO	ESVGO		ESVGO	ESVGO

Cruise comment
1) The CSIC MCS winch and streamer is to be loaded in Vigo vessel to sail on completion of mob. 2) A guard boat will be required to protect the MCS during the seismic part of this cruise (c. 10 days). PI to make arrangements for this in consultation with the Portugese scientific collaborators. 3) Gun towing trials to be undertaken en route to work area from Vigo. This is to trial the operation of 2 guns on a single beam. If these trials are unsuccessful, the 2 guns are to be towed singly during JC89. 4) An additional deck officer is required on this cruise to augment the bridge team whilst towing the streamer through the busy shipping lanes in the work area. This officer will use one of the scientific berths.

NMF-SS technical support for; Instrumentation, Mechanical, Computing, Mooring	
@imur @tprob @js2y09 @neoa Other S&M BEG Trainee 2x CSIC techs	
Training	

TABLE : CRUISE RISK ASSESSMENTS - for PROFILE 595 Please download, complete and upload your Profile Risk Assessments - [here].		
Risk Assessment Name	**User Details**	**Uploaded File**
No Risk Assessments have been assigned.		

TABLE : FREIGHT REQUIREMENTS - for PROFILE 595					
Transport type	**Transport description**	**Dispatch location**	**Dispatch date**	**Destination**	**Arrival date**
No freight information has been input.					

AGR - PART 2 : Mobilisation

Mobilisation matters arising	AGR AGR - PART 2 : Mobilisation
Please enter comments	
1) Mob to be underatken in 2 stages. The majority of equipment to be loaded in Southampton. The CSIC MCS winch and 10ft electronics container to be loaded in Vigo. 2) 2 x compressor containers, 1 x reefer and 1 x workshop container in hold in S'oton pre JC88. 3) There may be a requirement to wind on up to 3000m of streamer during the mob. 4) CSIC winch with 3000m streamer weights approx 25T. Base approx 3x3m. Shore crane required for loading. 5) Port side boom to be 'exercised' for use with magnetometer during mob. 6) Gravity base station tie-in required in Vigo.	

AGR - PART 3 : Demobilisation

Demobilisation matters arising	AGR AGR - PART 3 : Demobilisation
Please enter comments	
1) Gravity base station tie-in required in Vigo. 2) Shore crane required for unloading CSIC winch. 3) Return all corers, deck winches etc to UK by road. Number of trucks TBC.	

Return samples and freight AGR AGR - PART 3 : Demobilisation
Type of samples for return freight (aqueous/solid/etc)
Core samples (frozen and chilled) to be shipped to UK at end of cruise (vessel is due to dry dock during recert period so it is safest to remove samples from vessel)
Quantity of samples (kg, ml, etc)
Identify any hazardous items (i.e. RN / Chems / Corrosives)
Identify special packaging required
Do you require dry ice or liquid Nitrogen
Dry ice - TBC
Are DEFRA or CITES clearances required
No
Are samples to be returned by air or sea?
Road - TBC
Do you request to leave any samples or equipment on the ship at the end of the cruise?

Cruise Planning Questionnaire - included in the Agreement

The PI's completed Questionnaire is - [here]
The Agreement (pages 3-15) include the PI's Questionnaire with further modifications.

Cruise Number :	JC089
Institution :	University of Cambridge
PI Last Name :	Hodell
Sea Systems Cruise Manager :	Jez Evans
Vessel :	RRS James Cook
Sail date :	02-08-2013
Dock date :	27-08-2013
Cruise working area :	Hodell MCS

Questionnaire Index

Part 1

A : A check list of the main categories of portable equipment available from the NMF-SS equipment pool.
B : A check list of the ship fitted scientific equipment.
C : National Marine Equipment Pool. A breakdown of main equipment categories together with required operating details.
D : Main items of ship fitted scientific equipment. A breakdown of the ship fitted scientific equipment together with required operating details.
E : NMF-SS shipboard computing system.
Appendix RRS Discovery/RRS James Cook computing specifications.

Part 2

A : User supplied equipment (main items).

Part 3

A : Use of ships laboratory spaces.

Part 4

A : Hazardous substances.

1. Chemistry AGR AGR - PART 3 : Demobilisation	
1.1 Radionuclide laboratory container.	
1.1 Clean chemistry laboratory container.	Yes
1.1 General purpose chemistry laboratory container.	
1.2 Ship fitted laboratory fume hood.	
1.2 Ship fitted laboratory laminar flow hoods.	
1.3 Laboratory hydrogen gas generators.	
1.3 Laboratory pure air gas generators.	
1.3 Laboratory nitrogen gas generators.	
1.4 Laboratory liquid nitrogen generator.	
1.5 Laboratory pure water system (Millipore).	Yes
1.6 Underway water sampling system (Trace Metal Spec).	
1.7 Liquid scintillation counter.	

2. Seismics/Echo Sounders/Coring	AGR AGR - PART 3 : Demobilisation
2.1 Bolt 1500LL seismic airguns.	Yes
2.1 Multi-channel seismic systems.	Yes
2.2 Magnetometers.	Yes
2.2 Gravity meters.	Yes
2.3 Sub-bottom profiler (3.5 kHz echo sounder).	Yes
2.4 PES - Precision echo sounder 10kHz (10/12 kHz fish and hull mounted system).	Yes
2.5 Mini box corer (200mm square box).	
2.5 Standard piston core system.	Yes
2.5 Long piston core system (Giant piston core).	
2.5 SMBA multicore.	
2.5 Gravity core.	Yes
2.5 NIOZ box corer (500mm square box).	
2.5 SMBA box corer: stainless steel (500mm square box).	Yes
2.5 Kasten corer.	Yes
2.5 Mega corer.	Yes
2.5 Day grab.	Yes
2.5 Shipek grab.	
2.6 Agassiz trawl systems.	
2.6 OTSB trawl systems.	
2.7 Seabed dredging.	
2.9 Sound velocity probe (SVP).	Yes
2.10 Seismic compressor container.	Yes

3. Deep Platforms.	AGR AGR - PART 3 : Demobilisation
3.1 Towed ocean bottom instrument (TOBI).	
3.2 ISIS 6500m remotely operated vehicle (ROV).	
3.3 Shrimp platform.	
3.4 Bridget platform.	
3.5 Autosub 3/Autosub 6000	
3.6 Underwater gliders	

4. Sensors and Moorings.	AGR AGR - PART 3 : Demobilisation
4.1 Moorings & mooring instrumentation.	
4.1 McLane moored profiling CTD systems.	
4.2 Seasoar system.	
4.3 CTD / rosette sampler systems (Stainless steel).	Yes
4.3 CTD / rosette sampler systems (Titanium).	Yes
4.4 Stand alone pumps (SAP).	Yes
4.5 Moving vessel profiler (MVP300).	
4.6 CI FASTRACKA FRRF.	
4.7 Scanfish.	
4.8 Salinometer.	Yes
4.9 XBT/XCTD System.	Yes
4.10 10kHz Waterfall Monitoring System	
4.11 SC ADCP RDI WH long ranger 75kHz (1500m depth rating - 2 off).	
4.11 SC ADCP RDI WH long ranger 75kHz (3000m depth rating - 1 off).	
4.11 SC ADCP RDI WH sentinel 300 kHz (6000m depth rating - 2 off).	
4.11 SC ADCP RDI WH sentinel 600 kHz (6000m depth rating - 2 off).	
4.11 SC ADCP RDI WH monitor 1200kHz (@500 depth rating - 2 off).	
4.11 L ADCP RDI WH monitor 300kHz (6000m depth rating - 2 off).	Yes
4.11 L ADCP RDI narrow band 150kHz (2 off).	
4.12 Rockland VMP 5500 Deep Sea Microstructure Turbulence Profiler	

5. Miscellaneous	AGR AGR - PART 3 : Demobilisation
5.1 -85 degree centigrade freezer.	Yes
5.1 -20 degree centigrade freezer.	Yes
5.1 Refrigerators.	Yes
5.1 Ice making machine.	
5.2 Gas bottle storage racks.	Yes
5.3 User supplied laboratory container.	
5.4 User supplied storage container.	
5.5 Cold storage container.	Yes

QUE - PART 1 : Equipment Pool SECTION B : Ship Fitted Equipment

Ship fitted equipment	AGR QUE - PART 1 : Equipment Pool SECTION B : Ship Fitted Equipment
If you have selected the barter ship option then this page **should be empty**.	

5. RRS James Cook	AGR QUE - PART 1 : Equipment Pool SECTION B : Ship Fitted Equipment
Computing systems [scientific data acquisition] are required.	Yes
Pumped sea water sampling system [from 6m depth] is required.	Yes
Sea surface monitoring system [salinity, temperature, transmissometer, fluorimeter] are required.	Yes
Meteorology monitoring package is required.	Yes
75 kHz hull mounted ADCP system is required.	Yes
150 kHz hull mounted ADCP system is required.	Yes
Ultra Short Base Line acoustic navigation is required.	Yes
Hull mounted wave height recorders are required.	Yes
SIMRAD EM120 Deep Water Multibeam (1 ° x 1 °).	Yes
SIMRAD EM710 Shallow Water Multibeam - Drop Keel - is required.	
SIMRAD SBP 120 Sub Bottom Profiler (3°).	Yes
SIMRAD EA600 - 12 kHZ Single Beam Echo Sounder - Drop Keel - is required.	Yes
SIMRAD EK60 - Fisheries Echo Sounder (18,38,70,120 & 200 kHz) is required.	Yes
Long Base Line Acoustic Navigation System (LBL) is required.	
Clean Air Sampling System is required.	
Gas Distribution System to Laboratory is required.	Yes
SPD11 Dynamic Positioning System is required.	Yes

QUE - PART 1 : Equipment Pool SECTION C : Full Equipment Descriptions

National Marine Equipment Pool Main Items - Specialist Container Laboratories	AGR QUE - PART 1 : Equipment Pool SECTION C : Full Equipment Descriptions
The page requests further information about the Chemistry equipment which you have chosen. **This page may be empty.**	

1.1 Clean Chemistry Containers	AGR QUE - PART 1 : Equipment Pool SECTION C : Full Equipment Descriptions
Container safety checklist must be completed before container is used on board vessel.	
Do you require a Laminar Flow Hood.	Yes
Do you require a container Millipore.	
Do you require compressed air/other gas.	
Do you require a Niskin bottle mounting rack	Yes
Please state below any specific container layout/requirements, and preference of deck installation i.e. Aft deck, upper deck etc:	
How many NMF-SS alarm boards required. NMF-SS use only.	
Deck bed plates/deck shoes required. NMF-SS use only.	
State location of containers on deck. NMF-SS use only.	
Mezzanine deck; inboard slot (under hatch)	
Please give additional details on the use of the Clean Chemistry Container.	
PI to confirm quantity of water bottle racks needed. There may be a requirement to pipe gasses into container.	

1.5 Ship Fitted Laboratory Pure Water Systems	AGR QUE - PART 1 : Equipment Pool SECTION C : Full Equipment Descriptions
Millipore: 16Amp single phase. Spec: Elix 10 UV, nominal output 10LPH with 60L external tank. Milliq ADV A10 with Q-pod dispenser, output 0.05-2.0 LPM, supplied with point of use final filter type biopak ultrafilter. Please state if an alternative millipak express 40 is required.	
Estimate the required daily volume of RO water (in litres).	
Estimate the required daily volume of Polished water (in litres).	
Please give additional details about the use of the Laboratory Pure Water Systems.	
General use; deck lab	

National Marine Equipment Pool Main Items - Seismic Systems	AGR QUE - PART 1 : Equipment Pool SECTION C : Full Equipment Descriptions
This page may be empty.	

2.1 Seismic Systems	AGR QUE - PART 1 : Equipment Pool SECTION C : Full Equipment Descriptions
Millipore: 12 Litre/day & 16Amp single phase	
Do you require single towed airguns.	Yes
Do you require a multi gun array.	Yes
State the number of airguns in the array.	2
How many separate lines are to be shot.	1
Do you require a 96-channel streamer.	Yes
Do you require a 12-channel streamer.	Yes
Will you be using OHS's & OBH's.	
Will the OHS's & OBH's be deployed from this ship.	
Do you want to fire on distance.	
Planned firing rate (in seconds).	20
State total survey line length (in nautical miles).	
Please add any additional information about the use of the Seismic Systems.	
Two 355 std cubic inch GI gun @ 3000psi, 3km Spanish Sercel streamer Up to 10 days shooting continuously, ideally 1 MCS deployment. 3000m active MSC. 5m gun depth. 20sec firing rate. generator/chamber time delay tbcf 7 - 10m MCS depth. 24hr may be required to stablise the MCS when deployed. NMF to supply: 5 x GI guns, 2 x compressor containers, caterpillar sheave, air distribution board, 20x digicourse birds & controller (NB all birds and controllers will reside with CSIC at the time of the mobilisaion (ex- Gamboa Svalbard cruise)). CSIC to supply: 3km MCS, MCS winch, 10ft container with recording system & bigshot firing system & navigation system. PI to supply Passive Acoustic Monitoring (PAM) equipment. NMFSS to supply a hand-operated winch for its deployment.	

2.2 Magnetometers	AGR QUE - PART 1 : Equipment Pool SECTION C : Full Equipment Descriptions
Do you require the Magnetometer to be towed :	For short periods.
Please add any additional information about the use of the Magnetometers.	
2x units required winch required for deployments through port-side boom.	

2.2 Gravity Meters.	AGR QUE - PART 1 : Equipment Pool SECTION C : Full Equipment Descriptions
Do you have base station data available.	Yes
Please add any additional information about the use of the Gravity Meters.	
Base/land station ties required for Vigo at start and end of cruise	

2.3 Sub Bottom Profiler (3.5kHz fish)	AGR QUE - PART 1 : Equipment Pool SECTION C : Full Equipment Descriptions
Please add any additional details concerning the use of the Sub Bottom Profiler.	
SBP required for coring ops	

2.4 Precision Echo Sounder (10khz / 12Khz PES)	AGR QUE - PART 1 : Equipment Pool SECTION C : Full Equipment Descriptions
Do you require a colour hard copy print.	
Do you require the 'Waverley 3710' line scan recorder.	
Do you require the PES beam steering facility.	
Please add any additional details concerning the use of the Precision Echo Sounder.	
Required for coring ops	

2.5 Seabed Coring System - Standard Piston	AGR QUE - PART 1 : Equipment Pool SECTION C : Full Equipment Descriptions
Piston corer to be supplied :	NIOZ Piston Core
Water depth (in meters) :	4900
Number of cores required :	20
Average required barrel length (in meters) :	12
Please gives additional details as required - include details on specific sample processing/ handling, transport of samples etc..	
Liner hydraulic pusher machine and davit juntion box required for this cruise! ;-)	

2.5 Seabed Coring System - Kasten	AGR QUE - PART 1 : Equipment Pool SECTION C : Full Equipment Descriptions
Water depth (in meters) :	4900
Number of cores required :	5
Core length (in meters) :	3
Please gives additional details as required - include details on specific sample processing/ handling, transport of samples etc.	
Use the purpose made NIOZ Kasten bomb (check with Jez for clarification if required). Deployed using NIOZ piston corer deployment frame. 1, 2 & 3 m barrels & box of catchers/consumables required. Wooden barrel stands required.	

2.5 Seabed Coring System - Gravity Core	AGR QUE - PART 1 : Equipment Pool SECTION C : Full Equipment Descriptions
Water depth (in meters) :	4900
Number of cores required :	10
Core length :	6
Please gives additional details as required - include details on specific sample processing/ handling, transport of samples etc.	
NIOZ piston corer to be used in 'gravity corer mode' - ensure one-way flap valves included with spares.	

2.5 Seabed Coring System - Box Corers	AGR QUE - PART 1 : Equipment Pool SECTION C : Full Equipment Descriptions
Water depth (in meters) :	4900
Number of cores required:	15
Core length (in meters) :	
Please gives additional details as required - include details on specific sample processing/ handling, transport of samples etc.	
SMBA box corer required. NMFSS supply NIOZ 110mm liner & caps for subsampling.	

2.5 Seabed Coring System - Grabs	AGR QUE - PART 1 : Equipment Pool SECTION C : Full Equipment Descriptions
Water depth (in meters) :	4900
Number of cores required :	5
Core length (in meters) :	
Please gives additional details as required - include details on specific sample processing/ handling, transport of samples etc.	
Day grab required with wooden stand. To be deployed on core wire.	

2.5 Seabed Coring System - Mega Core	AGR QUE - PART 1 : Equipment Pool SECTION C : Full Equipment Descriptions
Water depth (in meters) :	4900
Number of cores required :	15
Core length (in meters) :	
Please gives additional details as required - include details on specific sample processing/ handling, transport of samples etc.	
NMFSS to supply 2x complete sets of core tubes. PI to supply a drilled version to accomodate Rhizosphere sampling. NMFSS to supply wooden stands for tubes.	

2.9 Sound Velocity Probe (SVP)	AGR QUE - PART 1 : Equipment Pool SECTION C : Full Equipment Descriptions
Is SVP probe to be :	CTD frame mounted
Please give additional details about the use of the Sound Velocity Probe.	
For calibrating MCS for water column	

2.10 Seismic Compressor Container	AGR QUE - PART 1 : Equipment Pool SECTION C : Full Equipment Descriptions
Deck bed plates/deck shoes required. NMF-SS use only	
Please give additional details about the use of the Seismic Compressor Container including the location of container on deck.	
2 x containers required. To be located in hold.	

National Marine Equipment Pool Main Items - Deep Platforms	AGR QUE - PART 1 : Equipment Pool SECTION C : Full Equipment Descriptions
This page may be empty.	

National Marine Equipment Pool Main Items - Sensors and Moorings

AGR QUE - PART 1 : Equipment Pool
SECTION C : Full Equipment Descriptions

This page may be empty.

4.3 CTD Systems (Stainless Steel)	AGR QUE - PART 1 : Equipment Pool SECTION C : Full Equipment Descriptions
A standard Stainless Steel CTD system comprises a 12 or 24 bottle frame/rosette together with the following instruments: 1. Seabird 911 CTD, 2. Transmissometer, 3. Fluorimeter, 4. 0xygen sensor, 5. Light scatter sensor, 6. PAR sensor, 7. Pinger, 8. Altimeter, 9. Other. NMF-SS does not own CFC-free bottles, NMF-SS can supply 10L and 20L bottles and 10L trace metal free bottles. NMF-SS has six 10Lit and fifteen 30Lit GOFLO bottles available for use.	
Do you require a 12 or 24 bottle frame/rosette.	24
Do you wish to carry out trace metal work.	Yes
Do you wish to carry out CFC work.	
Do you require 10Ltr or 20Ltr bottles for the CTD frame.	10
Do you require GOFLO bottles to be fitted to the CTD frame.	
Please indicate the sensors you wish to use on the frame.	
1. Seabird 911 CTD :	Yes
2. Transmissometer :	Yes
3. Fluorimeter :	Yes
4. 0xygen sensor :	Yes
5. Light scatter sensor :	Yes
6. PAR sensor :	
7. Pinger :	Yes
8. Altimeter :	Yes
9. Other :	
Estimate the maximum number of deployments.	15
Estimate the minimum depth for casts (in meters).	1100
Estimate the maximum depth for casts (in meters).	4900
Estimate the salinity samples numbers per casts.	6
Do you require NMF-SS to supply salinity bottles and caps.	Yes
Estimate salinity samples to be taken per day from online sea water supply.	
Specify what level of support you want from NMF-SS staff for salinity sampling.	
Do you require NMF-SS to supply standard sea-water for salinity sampling.	Yes
Do you anticipate continuous 24hr CTD operations.	
To what extent will you want any Seabird CTD data post-processed.	STD Seabird package
Specify any additional requirements for the CTD system.	
Possible requirement for 2 off 300kHz adcp fitted to frame - PI to confirm. S/Steel system as spare - Ti system to be used predominantly.	

4.3 CTD Systems (Titanium)	AGR QUE - PART 1 : Equipment Pool SECTION C : Full Equipment Descriptions
A standard titanium CTD system comprises a 12 or 24 bottle frame/rosette together with the following instruments: 1. Seabird 911 CTD, 2. Transmissometer, 3. Fluorimeter, 4. 0xygen sensor, 5. Light scatter sensor, 6. PAR sensor, 7. Pinger, 8. Altimeter, 9. Other. NMF-SS does not own CFC-free bottles, NMF-SS can supply 10L and 20L bottles and 10L trace metal free bottles. NMF-SS has six 10Lit and fifteen 30Lit GOFLO bottles available for use.	
Do you require a 12 or 24 bottle frame/rosette.	24
Do you wish to carry out trace metal work.	Yes
Do you wish to carry out CFC work.	
Do you require GOFLO bottles to be fitted to the CTD frame.	
Please indicate the sensors you wish to use on the frame.	
1. Seabird 911 CTD :	Yes
2. Transmissometer :	Yes
3. Fluorimeter :	Yes
4. 0xygen sensor :	Yes
5. Light scatter sensor :	Yes
6. PAR sensor :	
7. Pinger :	Yes
8. Altimeter :	
9. Other :	Yes
Estimate the maximum number of deployments.	15
Estimate the minimum depth for casts (in meters).	1100
Estimate the maximum depth for casts (in meters).	4900
Estimate the salinity samples numbers per casts.	6
Do you require NMF-SS to supply salinity bottles and caps.	Yes
Do you require any support from NMF-SS staff for salinity sampling.	Yes
Do you require NMF-SS to supply standard sea-water for salinity sampling.	
Do you anticipate continuous 24hr CTD operations.	
To what extent will you want any Seabird CTD data post-processed.	STD Seabird package
Specify any additional requirements for the CTD system.	
Possible requirement for 2 off 300kHz adcp fitted to frame - PI to confirm. CTD work required as per GEOTRACES 'standard'.	

4.4 Stand Alone Pumps (SAP'S)	AGR QUE - PART 1 : Equipment Pool SECTION C : Full Equipment Descriptions
How many SAP's do you require.	7
How many SAP's do you require to deploy at any one time.	9
To what depth (in meters) do you wish to deploy the SAP?s.	5000
Will you be carrying out trace metal work.	
How do you wish to deploy the SAP's.	Directly on a wire
Please specify any additional requirements for the Stand Alone Pumps system.	
1) 8x requested; PI will confirm how many (if any) to be user supplied. ***PI confirmed 7 off required from NMFSS. Sci party will provide a further 3 off units. Total of up to 10 SAPs to be deployed at one time. *** 2) Deploy on steel core wire. 3) PI to provide filters. 4) SAPs weight required - approx. 500kg	

4.8 Salinometers	AGR QUE - PART 1 : Equipment Pool SECTION C : Full Equipment Descriptions
Do you require a Portasal or Autosal.	Autosal
How many instruments do you require.	2
Please give additional details about the use of the Salinometers system.	
As required. Setup in electronics workshop.	

4.9 XBT/XCTD Systems	AGR QUE - PART 1 : Equipment Pool SECTION C : Full Equipment Descriptions
All probes must be supplied by the user, NMF-SS no longer provides probes via the UKHO. Ship systems are compatable with XBT, XCT1 and XCTD2 probes.	
How many XBT deployments do you wish to carry out.	50
How many XCTD deployments do you wish to carry out.	
Please give additional details about the use of the XBT/XCTD systems.	
PI to supply probes.	

4.11 SC ADCP / L ADCP option - L ADCP RDI WH Monitor 300kHz	AGR QUE - PART 1 : Equipment Pool SECTION C : Full Equipment Descriptions
How many requested.	2
How do you wish to deploy the instruments.	Fixed to a frame
Please give additional details about the use of the SC ADCP / L ADCP.	
PI to confirm if required	

National Marine Equipment Pool Main Items - Miscellaneous Equipment	AGR QUE - PART 1 : Equipment Pool SECTION C : Full Equipment Descriptions
This page may be empty.	

5.1 -85 Degree Centigrade Freezer	AGR QUE - PART 1 : Equipment Pool SECTION C : Full Equipment Descriptions
Please give details of samples/materials to be stored.	
2x freezers required	
Please give the storage volume required (in cubic feet).	

5.1 -20 Degree Centigrade Freezer	AGR QUE - PART 1 : Equipment Pool SECTION C : Full Equipment Descriptions
Please give details of samples/materials to be stored.	
2x freezers required	
Please give the storage volume required (in cubic feet).	

5.1 Fridges and Ice Maker	AGR QUE - PART 1 : Equipment Pool SECTION C : Full Equipment Descriptions
Please give details of samples/materials to be stored.	
4x fridges required. Ice maker not required.	
Please give the storage volume required (in cubic feet).	

5.2 Compressed Gas Bottle Storage Racks	AGR QUE - PART 1 : Equipment Pool SECTION C : Full Equipment Descriptions
Estimate numbers gas bottles to be stored.	
Please indicate the sizes of gas bottles to be stored.	
Nitrogen for glove bag. PI will confirm other gas requirements.	

5.5 Cold storage container	AGR QUE - PART 1 : Equipment Pool SECTION C : Full Equipment Descriptions
Deck bed plates/deck shoes required. NMF-SS use only	
Please give additional details about the use of the Cold Storage Container including the location on deck.	
In hold for sediment sample storage. Set at +4deg C.	

QUE - PART 1 : Equipment Pool SECTION D : Full Ship Fitted Systems Descriptions

National Marine Equipment Pool Main Items	AGR QUE - PART 1 : Equipment Pool SECTION D : Full Ship Fitted Systems Descriptions
If you have selected the barter cruise option **this page may be empty**.	

Surface Pumped Sea-water Sampling System	AGR QUE - PART 1 : Equipment Pool SECTION D : Full Ship Fitted Systems Descriptions
Is the requirement for continuous use throughout the cruise.	Yes
What equipment is to be used with this water supply.	
TSG. MCS winch cooling. Deck and core wash down.	

Sea Surface Monitoring System	AGR QUE - PART 1 : Equipment Pool SECTION D : Full Ship Fitted Systems Descriptions
Salinity :	Yes
Surface Temp :	Yes
Transmission :	Yes
Fluorescence :	Yes
Please give additional details about the use of the Sea Surface Monitoring System.	
Run and logged during cruise. PI to confirm water sampling for salinometer.	

Meteorology Monitoring Package	AGR QUE - PART 1 : Equipment Pool SECTION D : Full Ship Fitted Systems Descriptions
Wind direction/speed :	Yes
Barometric pressure :	Yes
Air temp/humidity :	Yes
Light meters : TIR - Total irradiance	Yes
Light meters : PAR - Photo synthetic radiation	Yes
Please give additional details about the use of the Meteorology Monitoring Package.	
Run and logged during cruise.	

75khZ Acoustic Doppler Current Profiler (ADCP)	AGR QUE - PART 1 : Equipment Pool SECTION D : Full Ship Fitted Systems Descriptions
Please give details of configuration setup and software requirements.	
Bin numbers :	
PI will confirm set up on board.	

Ultra Short Base Line Navigation System (USBL)	AGR QUE - PART 1 : Equipment Pool SECTION D : Full Ship Fitted Systems Descriptions
Please give details of activities for which you require the USBL system.	
Core operations 2 beacons required, clamp to wire or to frame depending upon depth - NB beacons are 4000m depth rated.	

150khZ Acoustic Doppler Current Profiler (ADCP)	AGR QUE - PART 1 : Equipment Pool SECTION D : Full Ship Fitted Systems Descriptions
Please give details of configuration setup and software requirements.	
Bin numbers :	
PI will confirm set up on board.	

Wave Height Recorder	AGR QUE - PART 1 : Equipment Pool SECTION D : Full Ship Fitted Systems Descriptions
Please indicate the level of use you anticipate from the Wave Recorder.	
Run and logged during cruise.	

Seismic Air Compressor	AGR QUE - PART 1 : Equipment Pool SECTION D : Full Ship Fitted Systems Descriptions
Please indicate the level of use you anticipate from the Seismic Air Compressor.	
2x containerised units in hold.	

SIMRAD SBP 120 Sub Bottom Profiler (3°).	AGR QUE - PART 1 : Equipment Pool SECTION D : Full Ship Fitted Systems Descriptions
Please add any additional details concerning the use of the SIMRAD SBP 120 Sub Bottom Profiler (3°).	
Run and logged	

SIMRAD EA600 - 12 kHZ Single Beam Echo Sounder - Drop Keel	AGR QUE - PART 1 : Equipment Pool SECTION D : Full Ship Fitted Systems Descriptions
Please add any additional details concerning the use of the SIMRAD EA600 - 12 kHZ Single Beam Echo Sounder.	
Run and logged	

SIMRAD EK60 - Fisheries Echo Sounder (18,38,70,120 & 200 kHz)	AGR QUE - PART 1 : Equipment Pool SECTION D : Full Ship Fitted Systems Descriptions
Please add any additional details concerning the use of the SIMRAD EK60 - Fisheries Echo Sounder.	
PI to confirm requirements NB: depending upon scientific requirements, this system may require calibration. Calibration takes approx 18 hours at anchor in sheltered waters in a water mass as close as possible to the working area.	

Gas Distribution System to Laboratory	AGR QUE - PART 1 : Equipment Pool SECTION D : Full Ship Fitted Systems Descriptions
Please add any additional details concerning the use of the Gas Distribution System.	
Nitrogen to be piped to CT lab for glove bag	

Ship Fitted Systems - SIMRAD EM120 System	AGR QUE - PART 1 : Equipment Pool SECTION D : Full Ship Fitted Systems Descriptions
How many days do you wish to use the SIMRAD EM120 System during the cruise	25
Is the survey to be one continuous operation or broken into specific blocks	Continuous
Do you require NMF-SS staff to process the data on board	Yes
Specify any additional requirements for the EM120 system.	
Science team to manage processing	

Ship Fitted Systems - SPD11 Dynamic Positioning System	AGR QUE - PART 1 : Equipment Pool SECTION D : Full Ship Fitted Systems Descriptions
Please give additional details about the use of the SPD11 Dynamic Positioning System	

QUE - PART 1 : Equipment Pool SECTION E : Shipboard Fitted Computing

Shipboard Fitted Computing Systems	AGR QUE - PART 1 : Equipment Pool SECTION E : Shipboard Fitted Computing
Do you require any of your equipment data to be logged to the ship computer systems?	
Does any of your equipment require data inputs from the ships systems e.g. GPS, time etc?	Yes
Do you require support from NMF-SS staff for user supplied software/applications?	
Specify data format for archive :	
Please give additional details about the use of the Shipboard Fitted Computing Systems.	
Navigation data required for seismic operations. Standard navigation and time stamping of data gathering systems.	

Data Logging Requirements	AGR QUE - PART 1 : Equipment Pool SECTION E : Shipboard Fitted Computing
Magnetometer :	Yes
Gravity meter :	Yes
USBL Acoustic Navigation :	Yes
C-Nav - Differential GPS/GLONASS Receiver (10cm Accuracy)	
OLEX Swath data and USBL data (Display only)	Yes
WAMOS (Wave Radar - James Cook)/Shipborne Wave Recorder (Discovery)	Yes
Please identify other sources to be logged.	
Seismic system...	
The following data are logged as standard; Gyro compass EA500/600 Echo Sounder (Depth) ADCP: 150Khz, 75Khz: DAS required for logging EM Log: (Ship speed) Underway Sea-surface sampling: Salinity, temperature, transmission, fluorescence Meteorology Package: PAR/TIR Light Sensors, Wind speed. Air temperature, pressure, humidity GLONASS GPS ASHTEC: Attitude detection Trimble GPS 4000 (Discovery Only) POSMV - Motion Reference Unit (James Cook Only) SeaPath 200 - Motion Reference Unit (James Cook Only)	

QUE - PART 2 : User Supplied Equipment SECTION A : User Supplied Equipment

1. User Supplied Equipment

AGR QUE - PART 2 : User Supplied Equipment
SECTION A : User Supplied Equipment

Please itemise the main items of equipment outside the NMF-SS equipment pool to be used during the cruise (i.e. over-side equipment, laboratory equipment, specialist containers etc).

Name and equipment description.

We will be analysing multicores for pore water chemistry at each site. Multi-cores for pore water work will be transferred immediately from the work deck to a climate control room (4oC) for processing inside an oxygen-free glove bag at near bottom water temperatures. Compressed gas cylinders of oxygen-free N2 will be used to fill glove bags.

Pore-water oxygen gradients will be determined using micro-electrodes and interstitial waters will be extracted at 1-cm intervals using Rhizon samplers (Rhizosphere Research Products, http://www.rhizosphere.com/) through sealed ports in the multicores (Seeberg-Elverfeldt et al., 2005).

Ephemeral measurements will be made onboard and pore water fluids will be preserved for shore-based analyses. Following pore water extraction, sediments will be subsampled to study the vertical distribution and shell geochemistry of living benthic foraminiferal species by utilizing two staining methods (rose Bengal and cell tracker green (CTG); Bernhard et al., 2006).

Note from planning meeting:
PI may bring a centrifuge.
Core splitter

QUE - PART 3 : Laboratory Space SECTION A : Laboratory Space

Laboratory Space	AGR QUE - PART 3 : Laboratory Space SECTION A : Laboratory Space
Please itemise the main items of equipment you wish installed in each of the lab spaces below.	
Main Laboratory	
Deck Laboratory	
Millipore, SAPs	
Scientific Plot	
Chemistry Laboratory	
Water Bottle Annexe/Wet Laboratory	
Core splitting/extruding	
Controlled Temperature Laboratory	
Glove bag Setup at +4 deg C	
Scientific Cold Room	
Reefer container in hold	
Dark Room	
Stable Laboratory - Discovery only	
Gravity meter	
Meteorology Laboratory - James Cook only	
Hanger	
10ft MCS container; Airgun workbench	

PART 4 : Hazardous Substances SECTION A : Hazardous Substances

1. Radioactive Isotopes	AGR PART 4 : Hazardous Substances SECTION A : Hazardous Substances
PI notes for use of NMF-SS Radio Nuclides. No radio active substances (other than sealed sources contained within specific laboratory equipment) are to be stored or used within the ships permanent structure. NMF-SS request that the PI designate a member of the scientific party as a point of contact for all radio isotope activities during the cruise. At the end of the cruise the PI will ensure the container is de-contaminated and a de-contamination certificate passed to the NMF-SS TLO before leaving the vessel. The PI is to ensure that the monitor provided is appropriate for the isotopes being used. Users are responsible for removal and disposal of radioactive materials from the working/storage spaces at the end of the cruise, this includes fume hood filters. Users are advised to check that the de-contamination certificate from the previous cruise is in the container manual located inside the container. The PI/TLO is to ensure the log sheets in the container manual are completed for all isotopes and fume hood activities during the cruise.	
Please give the name of the nominated scientist for isotope activities on board the vessel.	
Which Institute or University is responsible for the removal, de-contamination and disposal of used isotopes from working areas	
State which isotopes are to be used on board the vessel.	
State activities of each isotope.	
State type of monitoring instrument to be used on the vessel.	
State monitoring instrument certificate number.	
State monitoring instrument expiry date.	
Estimate volume and activity of waste likely to be generated during the cruise.	
What arrangements are in place to remove and dispose of the waste (including filters) generated during the cruise	
Please give additional details about the use of Radioactive Isotopes.	

2. Compressed Gas	AGR PART 4 : Hazardous Substances SECTION A : Hazardous Substances
Please state type of gas bottles to be loaded on the vessel.	
Please state the number of gas bottles to be loaded on the vessel.	
Please state size of gas bottles to be loaded on the vessel.	
Please state where gases are to be used within the ship space.	
Please give additional details about the use of Compressed Gas.	
Nitrogen. PI will confirm quantities and other gases if required.	

4. Chemicals	AGR PART 4 : Hazardous Substances SECTION A : Hazardous Substances
Please give the name of the nominated scientist for hazardous chemical activities on board the vessel.	
Date chemical lists required by (to be completed by NMF-SS)	31/5/13
Chemical list and UN Numbers;	
PI to confirm what chemicles will be embarked. Date for confirmation May 31st 2013.	

AGR - PART 4 Section A : Outstanding Matters Relating to the Questionnaire

Questionnaire matters arising	AGR AGR - PART 4 Section A : Outstanding Matters Relating to the Questionnaire
Please enter comments	
1) Additional port-call in Vigo to load CSIC streamer winch and 10ft electronics container. 2) A guard boat is required to guard MCS whilst towing in shipping lanes in work area. PI to make arrangements in conjuntion with Portuguese scientific collaborators. 3) Dip clear for Spain will be required (for Vigo port-call and possible additional core sites). 4) Passive Acoustic Monitor(PAM) required for seismic survey work. Nicky White to supply recorder; NMF to supply hand winch for deployment. 5) Gravity base station tie-in required (at NOC & Vigo?). NMFSS to make arrangements. 6) NMFSS to supply PI with drawing of mega-core tube. PI to supply drilled tubes for use with rhizosphere samplers. 7) 8x SAPS required - PI to confirm how many to be supplied by NMFSS and how many supplied by scientific party. **NMF to supply 7 off units, sci party to supply a further 3 units** 8) NMFSS to confirm diameter of SAPS filter heads to PI. 9) PI to confirm quantity of gas bottles to be stored on board. 10) NMFSS OPS to provide PI with shipping dates. 11) PI to progress EIA asap. 12) PI to provide chemical/gas list by 31/5/13 13) PI to confirm requirement for lowered ADCP. 14) PI to confirm number of water bottle racks to be installed in container lab. 15) 20x NMFSS owned Digicourse birds and controller will reside with CSIC (ex-Gamboa Svalbard cruise) and will be loaded onto JC in Vigo. CSIC to arrange for sevicing of these units at NMFSS expense. 16) NMF to supply a weight of approx 500kg for use with 10 off SAPs on core wire.	

AGR - PART 5 : Winches Wires and General Planning SECTION A : Wires, Winches and Cranes

Ships winches and wires
CTD, steel core (Plasma - if available for bottom work)
Ships cranes
Port boom required for magnetometer tow. 2x rotzler winches on both aft A-frame and on stbd paralellogram required. 2 x aft cranes; Hydramarine & yellow portable cranes required.
Portable winches and handling systems
Magnetometer winch, 2 x 5T deck winches for towing guns; deck winch (ROV A frame mounted winch?) for lifting caterpillar sheave; hand winch for passive recorder, CSIC or NMFSS Romica MCS winch (NB CSIC winch with streamer weights c.25T, c. 3x3m footprint)

AGR - PART 6 : Hazardous material Section A : Hazardous material

Hazardous material matters arising	AGR AGR - PART 6 : Hazardous material Section A : Hazardous material
Please enter comments	

AGR - PART 7 : Health and safety Section A : Health and safety

Miscellaneous information

Please read the following carefully as it lists the documentation and actions required by the PI and the scientific party under current marine legislation for UK Class VII Cargo vessels. Further details and assistance is available from the NMFSS Operations Group - [here].

Health & Safety:
Scientific and Technical personnel will sign on the Crew Agreement prior to sailing. All participants will be made aware of the Health and Safety Policies used for operations on board the vessel. Newly embarked personnel will undergo a Safety Briefing prior to departure. This will be held during the mobilisation prior to sailing, the PI can discuss the most suitable time for this briefing with the Master. All personnel are responsible for the supply and wearing of their own PPE and safety clothing.

Joining documentation:
All participants must be in possession of a valid Medical Certificate (ENG1or Equivalent) and must have the ORIGINAL certificate when joining then vessel - photocopies are not acceptable. NMF SS Operations can advise on equivalent qualifications for non-UK participants. All participants are to attend a Personal Survival Techniques (PST) course prior to sailing and need to have the ORIGINAL certificate with them when they join the vessel. Venues and dates of courses can be obtained from NMF SS Operations. Copies of Embarkation forms (RRS 12) can be found within Annex 2 of the PSGN and need to be forwarded to NMF SS Operations Office at the earliest opportunity. All personnel must have a valid passport with a minimum of 6 months remaining until expiry on joining even if the cruise runs from a UK port back to a UK port.

Working hours policy:
In accord with ILO180 (the International Labour Organisation framework for seafarers hours of work), working hours of personnel on board must be monitored and documented. To comply with the UK Maritime and Coastguard Agency (MCA) an 'Hours of Rest' form must be completed by all personnel sailing. The working hour's policy is summarised as follows:

Each person must have no less that 10 hours rest in any 24-hour period, and a minimum of 77 hours rest per 7-day period. Hours of rest in any 24-hour period may be divided into no more that 2 periods, one of which to be at least 6 hours. The Principal Scientist (PS) will oversee the working hours and completion of hours of rest forms of all of the science party, with each individual monitoring their own hours. NMF-SS staff working hours will be monitored by the TLO. Copies of the form are available for the purser. The PS is requested to complete the working schedule for science activities for display on board at the beginning of the cruise.

Risk assessments:
Risk assessments are required for activities identified as hazardous. All cruise participants are requested to provide assessments for their own areas of operation. Risk assessments will be managed through the NMF-SS planning process.

IMO Standards of Training, Certification and Watch keeping (STCW 95):
As Class 7 Cargo Ships, RRS DISCOVERY and RRS JAMES COOK are required to operate under STCW 95 and meet the standards for this type of vessel in respect of the personnel on board. To meet these requirements the PS is requested to consider the overall safety of scientific activities for the cruise. The PS is requested to verify the competence of his personnel working on board; a statement which meets the requirements of provision of evidence of training and competence can be requested from NMF SS. This may be used as evidence that training has been given and competence proven. NMF SS will provide such evidence for their technical support staff. The Principal Scientist will be required to provide a letter detailing their competence to sail as a PS from their line manager.

International Ship and Port Facility Security Code (ISPS):
The ships operate under the ISPS code. All personnel embarking or visiting the vessel are notified to the ship in advance (via NMF SS Operations Office). Equipment, personnel or baggage may be inspected prior to being loaded. All personnel are required to carry identification prior to embarkation. Further details can be obtained from NMF SS Operations.

On board housekeeping:
Each individual is personally responsible for maintaining their own cabins in a clean and tidy condition. Public spaces such as communal bathrooms, lounge etc. will be serviced by members of the ships catering department. Cruise participants should inform a member of the ships company if any defect is noted within their cabin. The NERC Alcohol policy is strictly enforced on board at all times and more details can be provided by NMF Sea Systems Operations. The vesels are both 'non-smoking' with smoking only allowed on certain external deck areas. Details will be promulgated during the on board pre cruise briefing.

AGR - PART 7 : Health and safety Section A : Health and safety

Health and safety matters arising	AGR AGR - PART 7 : Health and safety Section A : Health and safety
Please enter comments	
1) PI to provide RA's for all lab work undertaken on cruise.	

AGR - PART 8 : Additional Uploads Additional Uploads

Additional File Uploads	AGR AGR - PART 8 : Additional Uploads Additional Uploads
Any additional information in support of your application may be uploaded here. A number of files may be added. Files must be in the **doc**, **gif**, **jpeg** or **pdf** format. The size of individual file uploads **must not** exceed - 150 Kilobytes. Please split larger files. Diagrams should be loaded in either a **gif** or **jpeg** image format. Diagrams will be displayed as part of a printable web page. Please crop images so that their width does not exceed 720px. Documents can be loaded as either Word documents or Adobe pdf files. A document cannot be displayed inline but will be available online to download and view. Marine Facilities Planning Guide - see File Upload (in new browser window) -	
Additional Uploads	No files uploaded

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