

# UK Marine Research Infrastructure and Strategy Marine Facilities Advisory Board

LEIGH STOREY  
ASSOCIATE DIRECTOR, NATIONAL MARINE FACILITIES  
NATIONAL OCEANOGRAPHY CENTRE



**National  
Oceanography Centre**  
NATURAL ENVIRONMENT RESEARCH COUNCIL

[noc.ac.uk](http://noc.ac.uk)

**NERC** SCIENCE OF THE  
ENVIRONMENT

# National Marine Facilities (NMF)

NMF's aim is to develop, co-ordinate and provide the major platforms, observing systems and technical expertise required by the UK's marine science community.



# Marine Facilities Advisory Board (MFAB)

The purpose of the MFAB is to provide advice to the Executive Director of the National Oceanography Centre on current capability and future strategic development of the National Marine Equipment Pool (NMEP) and ship-fitted equipment operated by NMF. MFAB will respond to and reflect the UK marine science community's needs.



# MFAB

MFAB stood up in 2013 as a result of the Marine Facilities Review Group splitting into MFAB (forward looking) and the Cruise Programme Review Group (CPRG) which reviewed previous performance.

MFAB meets every six months

The Chair is independent of NOC (currently Professor Carol Robinson, UEA)

Secretariat support provided by Jackie Pearson, NOC

Membership includes representation from European Partners (Dr Joerg Bialas, GEOMAR).

# Membership of Board including **NOC Advisory members**



**Prof Carol Robinson**  
Microbial Oceanographer  
University of East Anglia



**Prof Mike Elliott**  
Marine Biologist  
University of Hull



**Dr Kate Hendry**  
Geochemist  
University of Bristol



**Dr Joanne Hopkins**  
Physical Oceanographer  
NOC



**Dr Kerry Howell**  
Deep-sea Ecologist  
Plymouth University



**Dr Chris McGonigle**  
Marine Geophysicist  
Ulster University



**Prof Mark Moore**  
Biological Oceanographer  
University of Southampton



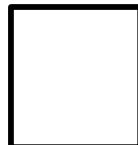
**Prof Nick Wright**  
Marine Engineer  
Newcastle University



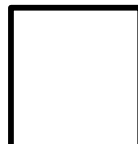
**Dr Tim Smyth**  
Optical Oceanographer  
Plymouth Marine Laboratory



**Dr Adrian Baker**  
Hydrogeologist  
Defence Science & Technology  
Laboratory



**Randolph Sliester**  
Ship Operations Manager  
British Antarctic Survey



**Dr Mike Webb**  
Head of Marine Science  
NERC



**Leigh Storey**  
Associate Director, NMF  
NOC



**Julie Pringle Stewart**  
Chief Operating Officer  
NOC



**Colin Day**  
Head of Programme  
Management, NOC



**Dr Graham Allen**  
Chief Information Officer  
NOC



**Prof Angela Hatton**  
Director of Science &  
Technology, NOC



**Dr Maaten Furlong**  
Head of Marine Autonomous  
& Robotics Systems (MARS)  
NMF, NOC

# MFAB

The Chair of MFAB is a member of NERC's Cruise Programme Executive Board (CPEB) chaired by Dr Phil Heads.

The Chair of MFAB provides an annual report to the CPEB.

So MFAB is a conduit for the views of the marine science community on the UK's NMEP and Royal Research Ships to be presented to the NOC Executive Director and the NERC Director of Science and Innovation.

**NERC Chief Executive**  
Duncan Wingham

**NERC Director, Science and Innovation**  
Phil Heads

**NERC Cruise Programme Executive Board (CPEB)**

- Approve NERC Cruise Programme, managing science and financial risks
- Forward planning (including large science programmes)
- Oversee capital expenditure

**NERC Cruise Programme Review Group (CPRG)**

Review of Principal Scientists' post-cruise assessments

**NERC Marine Facilities Advisory Board (MFAB)**

Review current capability and future strategic development of UK marine facilities

**UK Marine Science Community**

Interaction with MFAB members  
Post-cruise assessments to CPRG

# MFAB Working Groups

## Seismics working group

Reviewed the seismic source capability within the NMEP

Membership included Professor Christine Peirce (Durham), Professor Rob Larter (BAS), Colin Day (NMF), Dr Natalie Powney (NERC), Leigh Storey (NMF)

Considered options: remain as is, remove, barter, charter or upgrade

Recommendation to upgrade presented to the CPEB in Oct 2018.  
NERC decision pending.



# MFAB Working Groups

## Remotely Operated Platforms (ROP) working group

Reviewing the current ROP capability within the NMEP

Membership includes Professor Paul Tyler (Southampton), Dr Kerry Howell (Plymouth), Dr Veerle Huverne (NOC), Professor Nick Wright, (Newcastle) Dr Maaten Furlong (NMF), Leigh Storey (NMF), Dr Natalie Powney (NERC)

Due to report to CPEB in Oct 2019.

# MFAB Working Groups

## Data working group

Reviewing the technology and processes associated with the acquisition, management and delivery to end-users of marine science data

Membership includes Dr Graham Allen (NOC), Dr Tim Smyth (Plymouth), Dr Kate Hendry (Bristol), Lou Darroch (NOC), Alex Tate (BAS), Alvaro Lorenzo-Lopez (NMF), Juan Ward (NMF)

Due to report to CPEB in Oct 2019.

# NMF Technology Roadmap

Against a backdrop of tight budgets, rapid technical development, big data and the increasing use of Marine Autonomous Systems (MAS) platforms, National Marine Facilities (NMF) is committed to delivering the best possible support and value for money to the UK science community. We will constantly strive to develop equipment and improve processes to deliver more efficient and effective support to the Natural Environment Research Council's (NERC) Marine Facilities Programme (MFP). The direction of this progression is necessarily driven by future science needs and relies heavily on the input of the UK science community. The Roadmap is updated annually to reflect science priorities communicated via the Marine Facilities Advisory Board or other forums and/or advances in technology.

# NMF Technology Roadmap

The environmental impact of NMF's activities at sea will be assessed from 2019 onwards with actions taken to mitigate the impact wherever possible.

# NMF Technology Roadmap

The Roadmap is structured to present sequentially each area of capability, categorized as follows:

**Current Capability** – a description of the current capability in that area

**Science Drivers** – an overview of the science pulls requiring new technology developments

**Future Capability** – developments that are planned and have associated funding in place

**Aspirations** – potential future capabilities for which funding will be sought

# NMF Technology Roadmap

## Capability areas include:

Seismics

Coring

Fixed and Towed Water Column Sampling

Remotely Operated Platforms

High Power Autonomous Platforms

Gliders

Long Range Autonomous Platforms

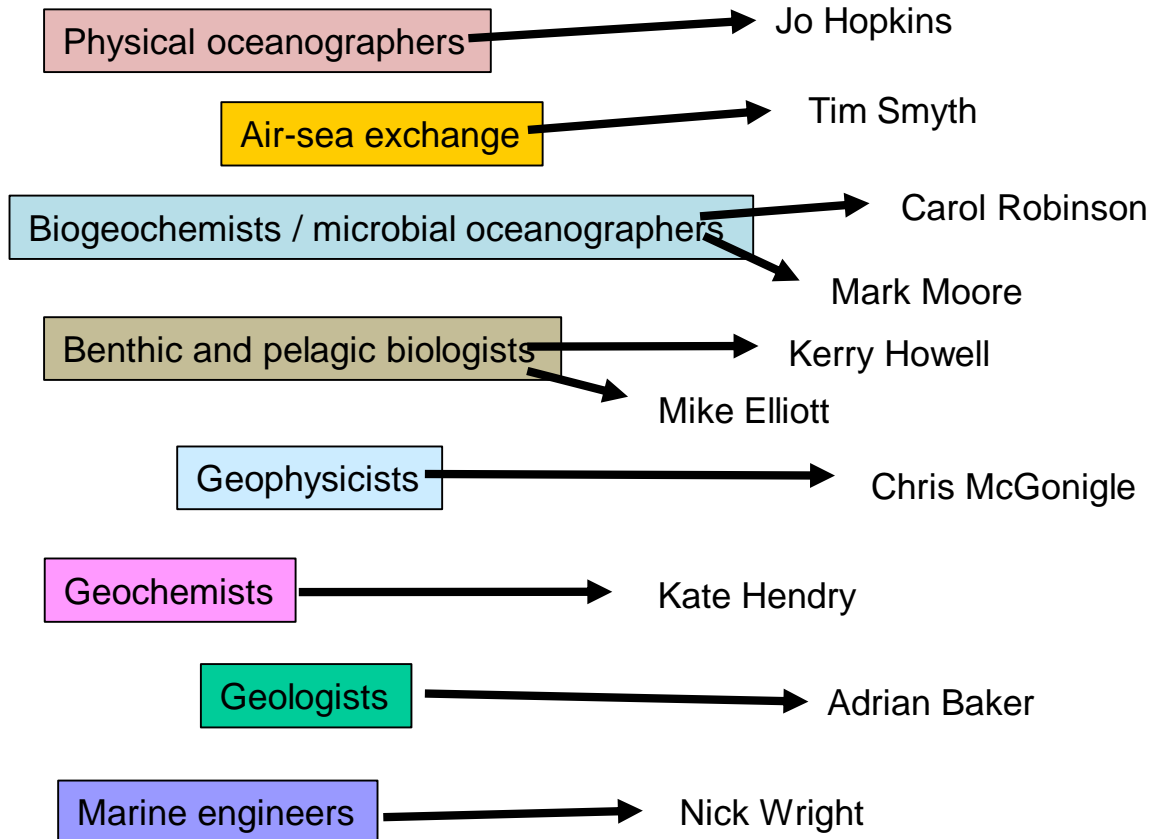
Ship-fitted Acoustics



## Marine Science Community

## MFAB members

## NMF Technology Roadmap



Gliders                      Hydro acoustics  
   CTD  
Ocean / atmosphere monitoring  
   Surface vehicles  
  
   Moorings, towed samplers  
  
   Remotely Operated Platforms  
  
   Marine Autonomous Systems  
  
   Autonomous Underwater Vehicles  
  
   Coring  
  
   Seismics  
  
   Gravimeter                      Magnetometer

# Capital Proposals

UK marine science community invited to submit proposals for purchase and/or development of technology to support UK marine science.

Equipment purchased/developed would be incorporated into the NMEP.

First call in September 2018 attracted four proposals which were reviewed by MFAB with subsequent recommendations made to NMF.



# How to get involved

Open call for member of MFAB – please apply and/or encourage colleagues to apply

Open call for capital proposals (every six months)

Input into the NMF Technology Roadmap - please contact MFAB member or attend dedicate sessions e.g Challenger AMBIO mtg UEA.

Comment on Post Cruise Assessments regards equipment capability and suggestions on how to improve.

# Summary

MFAB has clear remit and access to senior management at NOC and NERC

Working groups provide ability to deep dive into current and future capability. NMF Technology Roadmap provides guidance on current and future direction

MFAB is a critical friend to NMF.