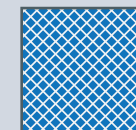




RRS *Sir David Attenborough*

A new polar research ship for Britain



Biological sampling
nets for ecosystems and
biodiversity research



Clean air and aerosol
sampling technology

RRS *Sir David Attenborough*



A new polar
research ship
for Britain

NERC
SCIENCE OF THE
ENVIRONMENT

In 2021 RRS *Sir David Attenborough* will be ready for service. Commissioned by NERC, built by Cammell Laird and operated by the British Antarctic Survey, the new ship is a next-generation polar marine science platform for UK research in both Antarctica and the Arctic.

State-of-the-art onboard facilities and future-proof containerised laboratories on this world-leading science platform will offer new research opportunities for the UK's polar scientists who strive to make sense of our changing world for the benefit of society.

The new ship will ensure Britain's continued position as a world leader in polar science.



Science in polar environments

RRS *Sir David Attenborough*, with its wide range of specialist laboratories, facilities and instruments, will be capable of supporting scientists from many different areas of expertise. These multi-disciplinary research cruises will generate new knowledge and understanding about the societal implications of environmental change from the atmosphere to the sea bed.

Understanding our world

New technologies and techniques are revolutionising ship-based research. Remotely-operated vehicles go under the polar ice to capture data that sheds new light on possible implications of rapid and sudden ice mass loss. Sophisticated instruments and equipment capture important data to reveal the impact of environmental change on marine biodiversity.

Polar Science for Planet Earth



UK science in Antarctica

RRS *Sir David Attenborough* plays an important diplomatic role for the UK, providing a continuing presence in British Antarctic Territory, South Georgia and the South Sandwich Islands, and the South Atlantic.

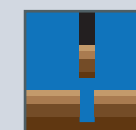


Operational capability

RRS *Sir David Attenborough* can spend up to 60 days at sea unsupported. Her ice-strengthened hull is designed to break through ice up to 1m thick. Operating year-round, the ship will be deployed to the Arctic during the northern summer and to the Antarctic during the austral summer.



Echo-sounding
equipment for biological
and geophysical
investigations



Multi-corer seabed
sediment sampler
with onboard
multi-sensor analysis

RRS *Sir David Attenborough*

NERC
SCIENCE OF THE
ENVIRONMENT

Department for
Business, Energy
& Industrial Strategy

NERC
SCIENCE OF THE
ENVIRONMENT

British
Antarctic Survey
NATURAL ENVIRONMENT RESEARCH COUNCIL

CAMMELL LAIRD

UKSBS
Shared Business Services

www.bas.ac.uk/attenborough

RRS *Sir David Attenborough*

OPERATION
Crew (approx)

30

SCIENCE
Scientists and support staff

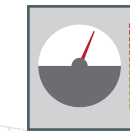
60

CONSTRUCTION

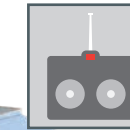
Cammell Laird engineers and apprentices

220

Intelligent instruments
and marine robotics



Remotely piloted
science instruments for
deep-ocean and
under-ice data capture



Launch and recovery of aerial
and marine robotic systems



Handling systems will cover
a wide range of tasks,
including sub-sea acoustic
surveys and towing of
scientific equipment with up
to 12,000m of wire



4.5m CP propellers in a
Promas installation driven by
two independent motors on
each shaft



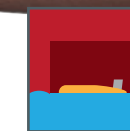
Diesel-electric
propulsion system powered
by Bergen B33:45 engines
(two nine-cylinder and two
six-cylinder engines)



Bridge, officer and crew cabins,
helicopter hangar, aerosol lab
and doctor's surgery



Engines are designed to
run as silently as possible,
and special attention is given
to minimising sweep-down
of bubbles around the hull
that could interfere with
acoustic instruments



Scientific moon pool to
deploy and recover
instruments including
'Boaty' submersible

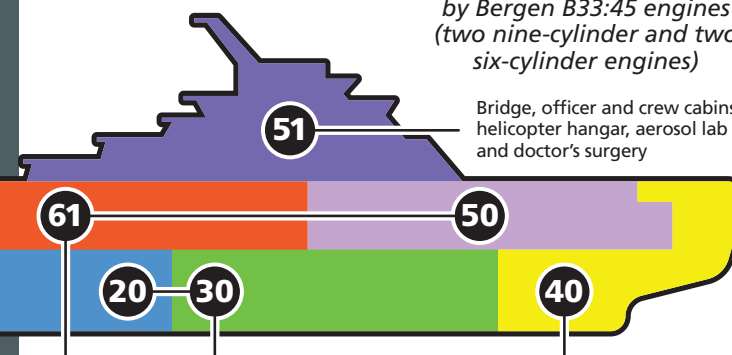


Accurate dynamic positioning
system to keep the ship in
place during instrument
deployment using Tees White
Gill bow and aft thrusters



Extremely low underwater
radiated noise to avoid
interference with survey
equipment or disturbance
to marine wildlife

Cabins for scientists, scientific hangar and laboratory and office spaces;
Laundry facilities and social areas including the mess, bar, and gym



Open aft deck for cargo and scientific
operations: four cranes, stern gantry
and space for lab containers

Cargo and fuel stores, steering gears,
stern thrusters and propellers

Engines and hybrid battery banks,
machinery space and moon pool

Bow thrusters, anchors
and mooring equipment

Minimising our environmental impact

RRS *Sir David Attenborough* will conform to stringent environmental regulations in the International Maritime Organisation's Polar Code.

With greater fuel efficiency and its ability to deploy remotely operated and robotic technologies, the ship is expected to reduce the environmental impact of ship-borne science and save in operating costs over its 25-year lifespan.

Programme timeline

November 2015	Contract signed
October 2016	Keel laid
March 2017	Stern thrusters fitted
June 2017	Rolls Royce propulsion motors fitted
July 2018	Hull in the water ceremony
Autumn 2019	Ceremonial naming
Autumn 2020 to Spring 2021	Sea trials (including engineering and science trials)
Autumn 2021	Ship into service

Fast facts

Length: **128 metres**; beam: **24 metres**;
weight: **15,000 gross tonnes**; draft **7 metres**

Scientific cargo volume: approximately **900m³**

Endurance: up to **60 days**
(Polar Regions)

Range: **19,000 nautical
miles at 13 knots**
(24km/h) cruising speed

Ice breaking capability:
up to **1m thick at 3 knots**
(5.6km/h)

www.bas.ac.uk/attenborough