

CASE STUDY



Ministry
of Defence

de&s



MULTIPLE
DESIGN VISITS



ACCEPTANCE
TRIALS



IN-SERVICE
SUPPORT

ROYAL FLEET AUXILIARY TIDE CLASS TANKERS

UK CUSTOMISATION,
CAPABILITY ACCEPTANCE
TRIALS AND IN SERVICE-
SUPPORT CONTRACT

SCOPE OF WORKS

A&P's full complement of engineering expertise, design skills, global reach and extensive resources were pivotal to the successful delivery of the Ministry of Defence (MoD)'s multi million UK Customisation, Capability Acceptance Trials and Support (UKCCATS) contract, for all four of the new class of fast fleet tankers ships.

We are **A&P**TM



SCOPE OF WORKS

A&P's programme included multiple design visits and modifications during the vessels' build, delivery voyage support, extensive design customisation, devising and delivering capability acceptance trials and providing in-service support for RFA Tidespring, RFA Tiderace, RFA Tidesurge and RFA Tideforce.

Over the course of the contract, A&P undertook 28 significant work scopes and over 1900 discrete scopes of work, requiring 250,000 labour hours and the project management of specialist contractors to deliver the vessels into service within schedule milestone dates and to budget.

The first ship, RFA Tidespring, arrived at A&P Falmouth in April 2017, with the others arriving in six-monthly intervals thereafter. All four vessels are now in service with the Royal Fleet Auxiliary.

THE SOLUTION

Building on A&P's long standing relationship with the MoD through the support of the RFA Bay Class vessels and RFA Argus, A&P

appointed a dedicated and comprehensive six-strong MARS Tanker team. Based at A&P's Falmouth facility comprising of extensive project management, programme engineering and procurement expertise, the team also included sub-teams dedicated to fleet time support, trials and design working with a MoD representative to ensure timely approval and support stakeholder collaboration.

The MoD's programme allowed for a 17-week customisation for the modifications needed to bring each vessel up the required UK military specification for multiple operations. However, thanks to A&P's focus on identifying organisational efficiencies and continuous improvements, the duration was progressively shortened and the final vessel's customisation was completed in 13 weeks.

DESIGN

A&P took a detailed and efficient approach to design customisation by flying members of the design team to South Korea to survey the ships during the build. This enabled accurate plans to be drawn in A&P's design office in Falmouth, while working closely with the ship's designer,

OEM suppliers, multiple UK contractors and the MoD's commercially supported shipping team.

RFA Tidespring arrived in Falmouth in April 2017 and during the process of planning the customisation, the scope of work required highly accurate scheduling from A&P. Each customisation package was planned meticulously and conducted by the waterfront engineering teams in Falmouth. Key work scopes together with modifying gun positions including the supply and fit of ballistic protection panelling, multiple tasks relating to fire detection and suppression systems and the installation of fibre-optic cable infrastructure for internal computer networks.

Two notable structural changes were also required, including the expansion of the forward weapon system operating and maintenance envelope and the installation of additional mini-gun platforms - modifications which required complex design changes to the former and on-site fabrication for the latter. Other significant design modifications included the installation and commissioning of the stern RAS system, which saw A&P responsible for the installation design and complex integration of the system. Modifications to the ships' build standard were required as part of this and involved a series of complex 8 tonne lifts to move the RAS fit system into place.

FLEET TIME SUPPORT

A&P's Fleet Time Support team assisted each of the tankers on their 12,500 nautical mile delivery voyages from South Korea through the Panama Canal and on to Falmouth.

A&P's team also supported all four vessels post customisation during trials, training and operational tasking, to ensure any priority faults were resolved quickly and with minimal impact to the operational programme.

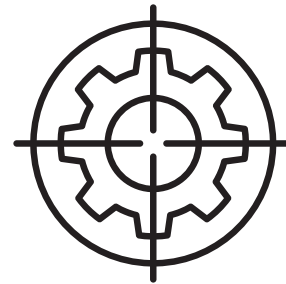
A&P developed the full modification repair scope and appointed a repair partner in Panama to complete the work without delay.

CAPABILITY ACCEPTANCE TRIALS

A&P's trials team spent the first year of the programme liaising with the MoD and the UK's civil and military trials authorities to develop a compliant programme of trials that could be undertaken within the time available.

Once agreed, the team managed more than 80 trials evolutions for each ship in UK waters, including Harbour Acceptance Trials (HATs) and Sea Acceptance Trials (SATs) and covered a wide range of activities to prove the onboard systems and equipment in readiness for In Service Dates (ISD). Typical trials included aviation, communications, replenishment at sea (RAS), cargo operations and military fit equipment.

A&P's procurement team also sourced, procured warehoused and despatched 8,800-line items to the MoD for the initial fitout, voyage spares and insurance spares.



**TWENTY
EIGHT**
SIGNIFICANT

1900
DISCRETE

**SCOPES
OF WORK**



**250K
HRS OF
LABOUR**



**FORTY FIVE
SPECIALIST
CONTRACTORS**

ASSISTED MAINTENANCE PERIOD (AMP)

Following customisation, each MARS tanker required Fleet Time maintenance which included an annual survey and certification period. This began with RFA Tidespring AMP in March 2018. Subsequently, A&P completed five AMP projects in Portland, Dorset, with more than 745 work scopes completed.

Projects of particular note included a 12,000-hour service of one of RFA Tidespring's MDGs. As this work had not been carried out on the Tide Class before, it involved close dialogue with Wartsila to ensure the correct spares could be identified and attained, as well as a service engineer and overhaul facility. Due to the tight time frame, the pumps were sent to Poland for overhaul, the remaining spare parts were obtained and other hydraulic hoses were manufactured by a local specialist.

THE OUTCOME

Over a four-year period, A&P Group delivered a complex and intense programme of UK Customisation and Capability Acceptance Trials, calling on the full extent of its expertise, skills and resource and a dedicated MARS tanker team. The contract has been delivered to a meticulous standard of detail as well as on time and to budget and is the direct result of the well proven cooperative and collaborative working between A&P and the MoD.

A&P also provided In-Service Support to RFA Tidespring, the first vessel to enter service, on its first full operational deployment overseas. All four Three of the four Tide Class ships fast fleet tankers are now in service with the Royal Fleet Auxiliary with the fourth ship, RFA Tideforce, due to enter service in 2019. All and are expected to have a service life of more than 25 years.

Jonathan Adams, Mars Tanker Platform for Defence Equipment and Support (DE&S), the MOD's procurement organisation, said:

"Engineering strength, a high skilled workforce, extensive waterfront infrastructure, global reach and joint working were integral to the success of the MARS tanker contract."

A&P is a proven collaborative partner for the Ministry of Defence DE&S and has ensured precision project management in the face of a challenging and increasing scope of work. The team has delivered these vessels into service successfully, to the highest quality, within schedule milestone dates and on budget."



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