

# Recycling of OAKLEAF A111

Royal Fleet Auxiliary Tanker



DSA



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# Executive Summary

Ex- RFA Oakleaf (A111) was a single hull 11000 tonne Leaf-class fleet support tanker, formerly of the Royal Fleet Auxiliary, and the second ship to bear the name, which ceased active service with UK MOD in June 2007.

The DSA marketed the vessel to overseas Navies for further use as a Replenishment at Sea (RAS) tanker, however the introduction of regulations by MARPOL in 2010 prevented single hull tankers from operating commercially so could no longer be used. The vessel was eventually consigned to a recycling and recovery operation so an invitation to Tender competition was issued by the DSA in April 2010.

The successful bidder was LEYAL Ship Recycling Ltd who are based in Turkey and on the 29 September 2010 Oakleaf sailed from HMNB Portsmouth in the tow of tug Mega One for Aliaga Turkey for recycling arriving in Aliaga under tow on 22 October 2010, taking just over a month.

On the 31 January 2011 LEYAL Ship Recycling Ltd reported that Ex- RFA Oakleaf (A111) had been completely dismantled and recycled in accordance with all relevant EU Waste Management Legislation and the UK's Ship Recycling Strategy.

Over 97% of the materials were recycled and recovered from Oakleaf, thereby significantly reducing its impact on the environment at the end of its life.

**Ex-RFA Oakleaf departing from HMNB Portsmouth on the 29th September 2010**



To equip and support our Armed Forces for operations now and in the future



## Background

### General Particulars

<b>Date and Place of Build</b>	Formerly the Swedish vessel MV Oktania built by A.B. Uddevalla, Sweden, and completed in 1981, Oakleaf was added to the Royal Fleet Auxiliary in 1986.
<b>Date ceased service</b>	15 June 2007
<b>Type of Vessel</b>	Large Fleet Tanker
<b>Summary of condition</b>	Sound for Towing, not in running condition.
<b>Displacements &amp; Weights in Tonnes</b>	Current: 20700 Lightweight: 10400 Deadweight: 10300
<b>Draughts 15 March 2010</b>	4.4m fwd. 5.0m Mid. 5.55m aft. Ship upright.
<b>Length OA</b>	173.69m
<b>Breadth</b>	32.23m
<b>OA height Mast-head to keel</b>	42.6m

<b>Estimated metal weight</b>	8000 tonnes including machinery
<b>Estimated metal %</b>	90% mild steel
<b>Historical Interest</b>	<p>As well as their role of replenishing warships at sea, support tankers perform the bulk movement of fuels between MOD Navy Depots. Ex- RFA Oakleaf (A111) had three Leaf-class sisters –Brambleleaf, Bayleaf and Orangeleaf. All four were originally designed as commercial tankers and underwent major conversions to bring them up to RFA standards and equip them for naval support.</p> <p>While the ships can provide some food and stores support, their main cargoes are diesel and aviation fuel.</p>
<b>Service History</b>	<p>In Sept 1994 Oakleaf participated in Operation Uphold Democracy in Haiti, replenishing ships of the international task force.</p> <p>In July 1995 Oakleaf supported West Indies Guardship HMS Southampton providing assistance following volcanic activity on the island of Montserrat.</p> <p>Following a refit in December 2008 and BASIC Operational Sea Training (BOST) in January she recommenced her duties in the Caribbean as tanker to the West Indies Guard Ship.</p>

## Background on the Disposal Services Authority (DSA)

- The DSA has delegated authority to dispose of all UK MOD surplus equipment in the UK and overseas.
- The DSA's role is to dispose of surplus assets identified by the owner for release into the commercial market.
- The DSA is the only Government Organisation offering a completely managed service for the Re-use, Recycling and ultimately disposal of surplus government assets

The Ministry of Defence's primary aim is to sell surplus ships for further use but where this is not possible (for instance, when ships are no longer seaworthy and only suitable for recycling) its objectives are to ensure that the vessel is recycled in a safe and environmentally sound manner, and in compliance with its legal responsibilities as a producer of waste.

There was little interest in preserving Oakleaf for further use; the DSA was approached by one company who wished to conduct a major conversion of the vessel turning it into a fish processing plant which if used for this purpose would not contravene the MARPOL regulations.

Unfortunately the offer for re-generation was withdrawn.

# Introduction

The DSA conducted a tender exercise for the sale and recycling of Ex-RFA Oakleaf in April 2010.

The vessel was sold on an 'as seen as lying' basis for recycling within the organisation for Economic Co-Operation (OECD) and in full compliance with

the principles of the Basel Convention and all other associated EU & UK legislation including Regulation (EC) No 1013/2006 of the European Parliament and the Council of 14th June 2006 on Shipments of Waste.

**Ex-RFA Oakleaf arrives at LEYAL Ship Recycling Ltd on the 22nd October 2010**



# Competition

## Information and Requirements

Tenders were limited to bidders from within the Organisation for Economic Co-Operation and Development (OECD) – as recommended by the UK Ship Recycling Strategy (SRS). 16 companies were invited to tender. Tenders were received from a number of UK recycling facilities, Belgium and Turkey. The preparation of the vessel by the MOD's Disposal Reserve Ship Organisation (DRSO) played a vital part in the process and an inventory of hazardous materials and a 'Green Passport', highlighting the hazardous material on board was produced, along with a Type 2 Asbestos survey. Both of which were included as part of the tender documents. The activity conducted by DRSO demonstrated to ship owners the value in investing in the preparation of vessels for disposal which is of enormous benefit to the UK MOD as it continues to set standards for the dismantling of Government owned vessels.

This information was provided to all bidders to enable them to identify key environmental issues and cost drivers in their tender responses. The DSA secured additional provisions from the bidders in the form of a substantial financial bond, acting as security to ensure that the vessel was recycled in the destination stated and not reflagged and taken to a non-compliant yard outside the OECD.

The recycling of ships is covered by a range of UK and EU legislation for which Department for Environment, Food and Rural Affairs (DEFRA) is the lead department in the UK. This Legislation includes but is not limited to:

- The Waste Shipments Regulation (EC) No 1013/2006 of the European Parliament and of the Council of 14 June 2006
- Parts of the Radioactive Substances Act 1993
- Environmental Protection (Duty of Care) Regulations 1991 SI 2839
- Hazardous Waste (England and Wales) Regulations 2005 SI 894
- Health & Safety at Work etc 1974
- Control of Asbestos at Work Regulations 2006

## Ship Recycling Evaluation

Following the recommendations of the SRS, the DSA once more convened a Ship Recycling Evaluation Committee, involving representatives from Defra, Maritime Coastal Agency (MCA), DRSO and the DSA to assess the tender responses against set criteria called for in the Strategy. Prospective purchasers were required to produce a detailed Ship Recycling Plan, demonstrating their understanding of all the requirements involved in Ship Dismantling against each of the following:

- Facilities & dismantling methodology
- Health & Safety
- Environmental plans
- Operations, sub-contractors
- Licences & permits
- Media, and Trans-Frontier Shipment of Waste (TFS)

The Ship Recycling Plan is paramount to the consideration of offers to purchase and should provide evidence to enable the Evaluation Committee to score against.

## Award of Preferred Bidder Status

The committee awarded preferred bidder status to LEYAL Ship Recycling Ltd in Turkey and a formal contract was awarded in July 2010 once the appropriate consents were obtained, in accordance with the provision of the EC Waste Shipments Regulation 10313/2006.

On the 29th September 2010 Ex-RFA Oakleaf was transferred from MOD ownership and Naval Base Commander (Portsmouth) custody to LEYAL Ship Recycling Ltd.

# Recycling of Ex- RFA Oakleaf (A111)

LEYAL Ship Recycling Ltd was required to provide a monthly breakdown of the outturn of metals and waste during the recycling programme. Audits were conducted by DSA staff during the life of the project which involved a physical inspection of the yard in Turkey, together with an audit of weighbridge tickets, licences and consignment notes which were checked against the reported outturn.

Photographic evidence was also provided at key stages of the dismantling process, which ensured that the DSA could be confident on the method and manner in which the Vessel was dismantled and completed in accordance with the aims of the SRS.

Dismantling of Ex RFA Oakleaf



# Photographic Evidence



Early stages of Dismantling



The stern of RFA Oakleaf showing the propeller



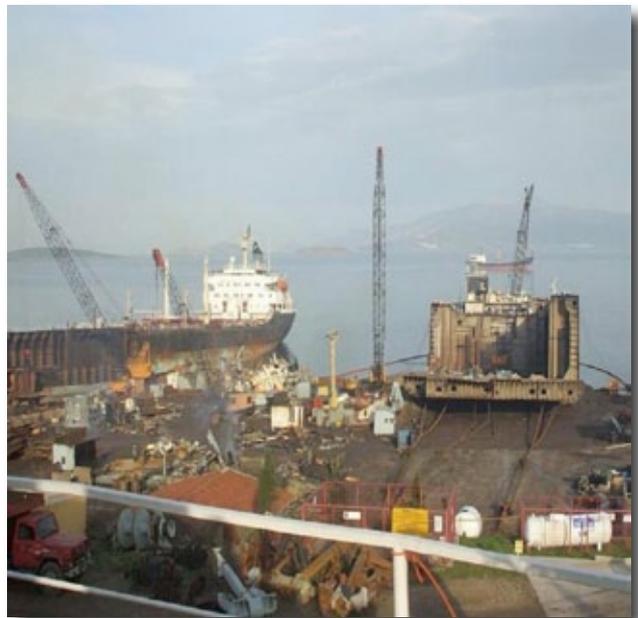
Recycling of the Vessel on the slipway



Recycling of the Vessel on the slipway



Deck 3 prior to being cut & removed Heavy Machinery is used to remove large pieces of the vessel for processing



2 photographs showing the processing area for material segregation

# Final Outturn

At the start of the project DRSO produce a 'Green Passport', the purpose of this is to identify what hazards are contained in the vessel and the final report produced by LEYAL Ship Recycling Ltd shows the actual outturn.

(All figures in Tonnes)	Actual	Destination
Ferrous	8,915	Recycled
Non Ferrous	88	Recycled
Asbestos	1.3	Industrial Landfill
Other Regular Waste	199	Landfill
Re-sale Equipment	126	Re-use/Sale
<b>Overall Total</b>	<b>9,329.30</b>	

Final Destination	Tonnes	%age of Total
Re-use/Sale	126	1%
Recycling	9,003	97%
Industrial Landfill & Other Regular Waste (Landfill)	200.3	2%
<b>TOTALS</b>	<b>9,329.30</b>	

## Conclusion

Ex-RFA Oakleaf was completely recycled January 2011, just 4 months after arriving at LEYAL Ship Recycling Ltd in Turkey; Ex-RFA Oakleaf was fully dismantled with just 2% going to landfill and over 97% of the vessel recycled and recovered.

The whole process from start to finish took just 10 months with Transfrontier Shipment (TFS) process alone taking 6 weeks. Two audits were conducted throughout the dismantling process which was completed relatively quickly due largely to the fact that the ships construction was simple for dismantling with large spaces and limited accommodation.

This is the seventh ship successfully exported for recycling by the DSA in line with full Transfrontier Shipment of Waste Regulations and is the fourth vessel consigned to LEYAL Ship Recycling Ltd. In July 2009 Leyal successfully dismantled three Type 42 Destroyers, HMS Cardiff, Glasgow and Newcastle all of which have complied with all international principles concerning environmentally sound management.

There were low levels of non-ferrous metals from this vessel and in the short time in which the ship was recycled and a stable commodity market, the level was in line with DSA expectations.

Ex- RFA Oakleaf nearing completion





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