

Recycling of Type 42 Destroyers

Exeter D89
Southampton D90
Nottingham D91



DSA



Type 42 Destroyers

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Executive Summary

In 2011 an open competition for the disposal of three Type 42 Destroyers Ex-HMS Exeter, Southampton and Nottingham was undertaken and the Disposal Services Authority awarded preferred bidder status to the Turkish company LEYAL Ship Recycling Ltd whose formal proposal was to conduct the recycling of all three Type 42 Destroyers at their dedicated ship dismantling facility in Aliaga Turkey.

The vessels were towed independently and the first vessel Ex-HMS Exeter left HMNB Portsmouth under tow on the 22nd Sept 2011 followed by Southampton and finally Nottingham on the 19th October. The first vessel to arrive at LEYAL Ship Recycling Ltd was HMS Exeter on the 25th October, followed by Southampton on the 2nd November and finally Nottingham on the 18th November 2011. On the 13th January 2012 LEYAL reported that Ex-HMS Southampton had been completely dismantled followed by Nottingham on the 27th February and finally Exeter on the 11th April 2012. All three vessels were recycled in accordance with the relevant EU Waste Management Legislation and the UK's Ship Recycling Strategy in just 7 months.

Out of all the materials that are required to build ships of this type 97% of the material was recovered and recycled.

Southampton D90 entering Portsmouth Harbour



Background

General Particulars

Date and Place of Build	EXETER D89 1978 – Swan Hunters – Wallsend-on-Tyne SOUTHAMPTON D90 1976 – Vosper Thornycroft – Southampton NOTTINGHAM D91 1980 – Vosper Thornycroft – Southampton	
Date ceased operational service	EXETER D89 2 June 2009 SOUTHAMPTON D90 31 March 2009 NOTTINGHAM D91 24 March 2010	
Type of Vessel	Destroyer – Anti-Air	
Summary of condition	Sound for Towing, not in running condition.	
Displacements & Weights in Tonnes	All 3600 tons	
Estimated metal breakdown		
	Ferrous	Non-Ferrous in hull and systems
Average per ship	2260 tons	128 tons (Incl. copper cable ex insulation)
Metal ballast (S.I. calc)	Cast Pig Iron	Lead
EXETER D89	64 tonnes	15 tonnes
SOUTHAMPTON D90	77 tonnes	15 tonnes
NOTTINGHAM D91	64 tonnes	15 tonnes
Current deepest draught/trim	21ft (6.7m) at Sonar Dome. Mean draft 13ft (3.9m).	
Length OA	412ft 6ins (125.7m)	
Breadth	47ft (14.3m)	
Height keel to topmast	116ft (35m)	

Type 42 Destroyers

Last Docking	
EXETER D89	2003
SOUTHAMPTON D90	2003
NOTTINGHAM D91	2007
Last Refit	
EXETER D89	2003
SOUTHAMPTON D90	2004
NOTTINGHAM D91	2003
Historical Interest	
EXETER D89	HMS Exeter (D89) is a Type 42 destroyer, the fifth ship of the Royal Navy to be named Exeter, after the city of Exeter in Devon. The ship saw service in the Falklands War and the 1991 Gulf War.
SOUTHAMPTON D90	<p>HMS Southampton was a batch two Type 42 Destroyer of the Royal Navy. She was named after the city of Southampton and was the sixth Royal Navy ship to bear the name.</p> <p>In 1984, she ran over one of the Shambles Buoys off Portland during the final Thursday War intended to prepare her to deploy to the Falklands. The collision sank the buoy and resulted in a period in dry dock for repair.</p> <p>In 1988, whilst serving on the Armilla Patrol, she was involved in a collision with MV Tor Bay, a container ship in the convoy being escorted through the Straits of Hormuz.</p> <p>On 3 February 2006, the ship was involved in the seizing of 3.5 tonnes of cocaine in the Caribbean.</p>
NOTTINGHAM D91	<p>HMS Nottingham was a batch two Type 42 destroyer of the Royal Navy, named after the City of Nottingham and is the sixth ship to bear the name.</p> <p>On her first cruise to Oporto, Portugal and then Gibraltar she lost two sailors to a drowning incident while on shore leave visiting a beach in Oporto.</p> <p>In November 2000, Nottingham completed a major refit, which was intended to extend her operational life to 2012, although she was later placed in reserve and decommissioned on 11 February 2010.</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 ultimate disposal of surplus government assets.

The DSA'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.

Introduction

The DSA conducted a tender exercise for the recycling of the three Type 42 Destroyers in March 2011, the vessels were 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.



Nottingham D91

Type 42 Destroyers

Competition

Information and Requirements

The preparation of the vessels by the MOD's Disposal Reserve Ship Organisation (DRSO) played a vital part in the process and an inventory of Hazardous Materials (IHM) 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.

DRSO played an important part in supporting the towing preparations on deck and contributed to the successful sale and departure of these vessels whose disposal preparations can take many months of hard work to complete.

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). The DSA received 12 compliant bids from companies proposing to recycle the vessels in a range of countries including Turkey, Denmark, Germany, Belgium and the UK.

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



Exeter departs from HMNB Portsmouth under tow 22/09/2011

- Health & Safety at Work etc 1974
- Control of Asbestos at Work Regulations 2006

Ship Recycling Evaluation

Following the recommendations of the SRS, the DSA 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 DSA awarded preferred bidder status to LEYAL Ship Recycling Ltd and a formal contract was awarded in July 2011 once the appropriate consents were obtained, in accordance with the provision of the EC Waste Shipments Regulation 10313/2006.



Southampton departs from HMNB Portsmouth 14/10/2011

Recycling of Ex-Type 42s

LEYAL Ship Recycling was required to provide the DSA with a monthly report which showed the 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 Aliaga Turkey, together with an audit of weighbridge tickets, licences and consignment notes which were checked against the reported outturn.



Arrival of Southampton 2/11/2011



Arrival of Exeter 15/11/2011 at LEYAL Ship Recycling Ltd



Arrival of Ex-Nottingham 18/11/2011 along side Exeter & Southampton

Type 42 Destroyers

Photographic Evidence

The photographic evidence shows the dismantling progress and this coincides with the monthly reports, Demo Schedule and the sales progress.



Recycling of Exeter 24/12/2011



Recycling of Southampton 13/01/2012

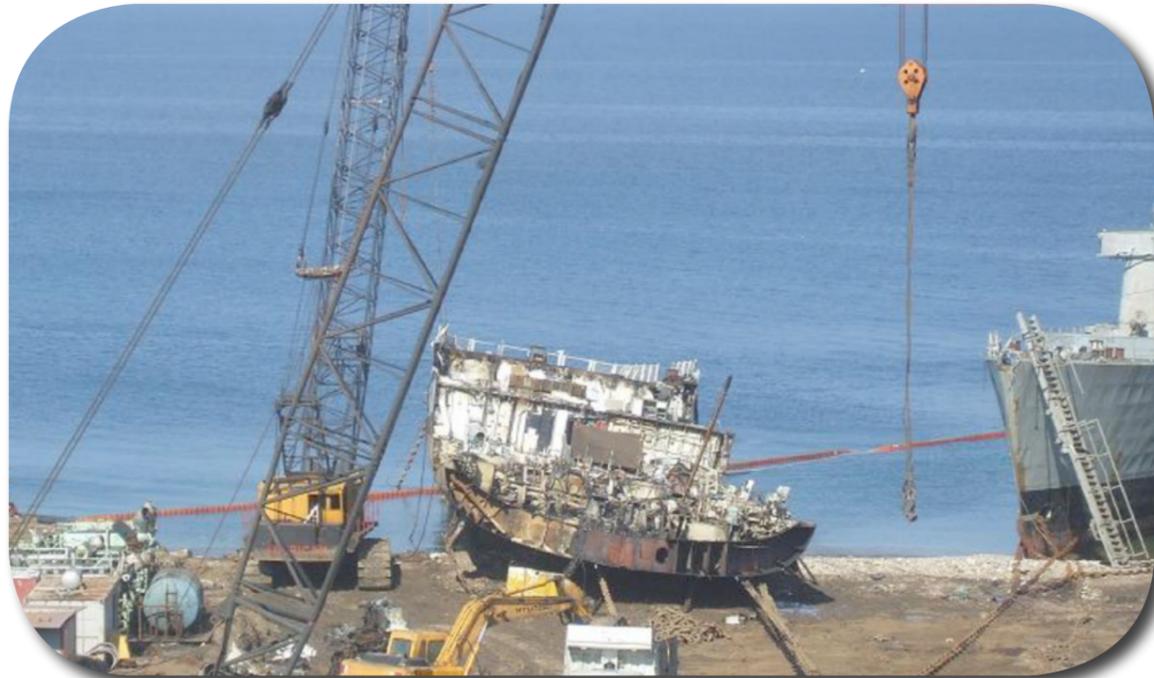


Photograph showing Nottingham & Exeter in various stages of dismantling
Southampton's Propellers in the foreground



Southampton's Propellers –the rest of the vessel already dismantled

Type 42 Destroyers



Recycling of Nottingham 20/02/2012



Nottingham partly dismantled

Final Outturn

At the start of the project DRSO produce an Inventory of Hazardous Materials (IHM), the purpose of this was to identify what hazards were contained in the vessel

which is then compared with the final outturn figures reported to the DSA by LEYAL Ship Recycling.

For each Vessel

(All figures in Tonnes)	Expected	Actual	Destination
Ferrous Metals	2,200	2,288	Recycled
Non-Ferrous Metals	150	128.4	Recycled
Other Products	50	33.9	Sale/Recycled
Remnant Waste	50	70.1	Disposed
Total	2,450	2,520.40	

Final Destination	Tonnes	%age of Total
Sold or Recycled	2,450.30	97%
Disposed	70.1	3%
Totals	2,520.40	100%

The total quantity of materials dismantled was 7,562 tons, on average a total of 2,520 tons was dismantled for each ship.

The final outturn figures were consistent with the final outturn figures from the first batch of Type 42 Destroyers, Cardiff, Glasgow and Newcastle

successfully recycled by LEYAL Ship Recycling in July 2009 with over 97% of these vessels recycled.

The average weight for these Type 42s was approx 2,470 tons; the vessels were very similar in make and materials to this batch of T42's.

Conclusion

The Type 42's Exeter, Southampton and Nottingham were completely recycled in April 2012.

The DSA have now successfully conducted the sale of 17 vessels in which all have complied with all international agreements and principles concerning environmentally sound management of waste. Since 2008 LEYAL Ship Recycling has won eight Recycling projects including the Type 42 Destroyers Cardiff, Glasgow and Newcastle, Royal Fleet Auxiliary Tanker Ex-RFA Oakleaf and the high profile ship Ex-HMS Invincible successfully recycled in January 2012.

The report will be sent out to senior internal stakeholders and a growing number of other foreign Governments as they view the UK MOD as the lead when it comes to recycling warships.

The report will be up loaded on to the DSA website <http://www.mod.uk/DefenceInternet/AboutDefence/CorporatePublications/FinanceandProcurementPublications/DSA/Recycling.htm>



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