

Definitions and rationale

1. End-of-life ships contain large volumes of steel and other metals that can be recycled as well as residues of non-recyclable waste, including a variety of hazardous materials such as asbestos, oils and poly-chlorinated biphenyls (PCBs). End-of-life vessels must be recycled in an environmentally sound manner consistent with the UK's national and international sustainable development commitments.

Arisings, trends and projections

Commercial vessels

2. Figures vary based on the market demand for shipping. For commercially operated and owned ships, approximately 700–800 worldwide are sent for recycling each year. A ship will usually reach the end of its trading life after 25–30 years, depending on the type of vessel. However, phase-out plans for single-hull tankers require that some 400 tankers will have to cease operation in EU waters by 2010.

3. An average of five vessels leave the UK flag each year for recycling, although it is not clear how many of these sail directly from the UK to recycling facilities (see Table C17.1 below). While the number leaving the flag has decreased over the past few years, this could be a result of 'flag out' data inaccuracies.

Table C17.1 Summary of fate of UK-flagged vessels

Year	No. leaving UK flag	No. leaving for recycling	Estimated total tonnage
1998/99	30	7	45,000
1999/00	60	6	16,000
2000/01	149	3	14,000
2001/02	91	5	20,000
2002/03	69	4	26,000
2003/04	114	2	7,500
2004/05	97	4	4,000

Source: Maritime and Coastguard Agency.¹

UK Government-owned vessels

4. Based on MOD planning cycles, approximately 30 vessels including seven legacy vessels² were scheduled to come out of operation by 2013 (see Table 2 below). Ships due to be decommissioned after 2006 do not yet have agreed disposal routes. Some may be sold for further use.

¹ The figures presented are based on an analysis of rolling UK flag-out data and should be treated with caution due to historical inaccuracies in some parts of the data.

² Legacy ships are those already decommissioned for which a Government-to-Government sale is not expected.

Table C17.2: Ministry of Defence vessels leaving operational service

Tonnage	Legacy ships	2006	2007	2008	2009	2010	2011	2012	2013
20,000+					2	3		1	2
10,000–20,000	2	1			1	1			
2,000–10,000	3	1			2	1	3	2	1
Under 2,000			1						

Source: *UK Ship Recycling Strategy* – Final Regulatory Impact Assessment, February 2007.

Management Routes

5. End-of-life ships contain a considerable amount of steel suitable for recycling and components that may be re-used. Around 98% of a ship is recyclable. The majority of ships are dismantled at recycling yards, mainly beaching facilities, in India, Pakistan, Bangladesh and China. There is considerable concern about the environmental and health and safety conditions at many such facilities. There are also some facilities operating within the OECD³ area, such as Turkey.

6. At present, a commercial ship-owner will make the decision to send a ship for recycling based on a number of factors, such as the maintenance costs of the vessel exceeding potential revenue, making it unattractive for re-sale. Most commonly, ships are sold to recycling facilities via a broker and intermediary buyers, with few direct sales taking place. The cash intermediary acts as a ‘financing bridge’ mitigating financial risk for the ship-owner. This means that neither the ship-owner nor the ship-owner’s broker have direct contact with the recycling facility, and may be unable to determine the conditions in which a ship will be recycled.

7. During the recycling process, steel is re-rolled or melted down and re-cast, re-usable components are marketed for re-sale and non-recyclable waste is landfilled or incinerated.

Policies and targets

8. In February 2007 the Government published the *UK Ship Recycling Strategy*.⁴ The strategy:
- establishes domestic policy for the recycling of Government-owned vessels;
 - provides guidance on relevant controls for those wishing to establish dismantling facilities in the UK;
 - provides recommendations for ships registered to the UK flag; and
 - informs the UK position for international negotiations on ship recycling.

³ Organisation for Economic Co-operation and Development.

⁴ See <http://www.defra.gov.uk/environment/waste/strategy/ship.htm> for further information.

9. The strategy states that where an end-of-life vessel falls within the definition of waste, as set out in the Waste Framework Directive, controls under the Waste Shipments Regulations (WSR) will apply. These controls are summarised below.

Government-owned vessels

- The sales contract for a vessel destined for further use to be negotiated to contain conditions to ensure that the new owner takes full responsibility for its safe and environmentally sound recycling.
- Recycling only to be allowed in a facility in an OECD country in accordance with acceptable environmental health and safety standards.
- Those vessels exported for recycling to be subject to the Basel Convention principles of prior informed consent and environmentally sound management.

UK-flagged vessels

- Imports of vessels for recycling to be subject to the provisions of the EU WSR or existing international rules (Basel Convention and/or OECD Decision).
- Exports of UK flagged vessels from a UK port for the purpose of recycling to be subject to the relevant provisions of the WSR.

10. The International Maritime Organisation (IMO)⁶ is also working to encourage the design and construction of ships with fewer hazardous materials and is developing a convention to provide globally applicable ship recycling regulations.

11. The Government aims to ratify the new draft IMO legally binding instrument on safe and environmentally sound recycling of ships, following adoption at the IMO by 2008/09.

Roles and responsibilities

12. The key players are:

- Government ship-owners;
- commercial ship-owners and operators, particularly those of UK-flagged vessels;
- ship recycling facility operators;
- non-governmental organisations with an interest in ship recycling; and
- regulatory authorities and agencies.

⁵ The International Maritime Organisation is the United Nations' specialised agency for improving maritime safety and preventing pollution from ships. See <http://www.imo.org/> for more information.

13. Table C17.3 below summarises the role of these stakeholders.

Table C17.3: Roles and responsibilities

Stakeholders/organisation	Roles and responsibilities
Ship-owners	<ul style="list-style-type: none"> • Implement practice of subjecting flagged vessels exported from a UK port for the purpose of recycling to the relevant provisions of the WSR • Follow relevant guidelines of the IMO, the International Labour Organization and the Basel Convention on ship recycling
Ship recyclers	<ul style="list-style-type: none"> • Establish environmentally sound facilities for ship recycling in accordance with the relevant permissions applicable
Government	<ul style="list-style-type: none"> • Limit sales for further use in the commercial market • Lead by example and implement Ship Recycling Strategy for Government-owned vessels • Monitor practice and performance of ship-owners against the Ship Recycling Strategy
Regulatory authorities and agencies	<ul style="list-style-type: none"> • Regulate domestic and transfrontier waste activities under environmental protection and other relevant legislation

Infrastructure and capacity needs

14. Shipping and ship recycling are worldwide activities not confined to a domestic market sector. UK capacity for recycling will, in part, be dependent on growth in demand for environmentally sound ship recycling facilities. To be economically viable, vessel recycling is likely to be associated with the dismantling of other structures, such as oil rigs and floating platforms. The international capacity is likely to remain around 700–800 ships per annum.

References and other information

UK Ship Recycling Strategy, February 2007, available at <http://www.defra.gov.uk/environment/waste/strategy/ship.htm>

A full set of references is included in the UK Ship Recycling Strategy; key references include:

Council Regulation (EEC) No. 75/442/EEC as amended by 91/156/EEC and Commission Decision 96/530/EC on Waste, available at <http://ec.europa.eu/environment/waste/legislation/a.htm>

Dismantling Defunct Ships in the UK, House of Commons Environment, Food and Rural Affairs Committee, Eighteenth Report of Session 2003–2004, available at <http://www.publications.parliament.uk/pa/cm200304/cmselect/cmenvfru/834/83402.htm>

Dismantling Defunct Ships in the UK, Government Reply to the Environment, Food and Rural Affairs Committee's Report, January 2005, available at <http://www.publications.parliament.uk/pa/cm200405/cmselect/cmenvfru/257/25702.htm>

Guidance on all aspects of transfrontier shipments of waste, available at http://www.environment-agency.gov.uk/subjects/waste/1030716/232044/?lang=_e

Basel Convention 'Technical Guidelines for the Environmentally Sound Management of the Full and Partial Dismantling of Ships', 2002, available at: <http://basel.int/ships/techguid.html>

International Labour Organization (ILO) 'Safety and Health in Ship Breaking, Guidelines for Asian Countries and Turkey', 2004, available at <http://www.ilo.org/public/english/protection/safework/cops/english/download/e000020.pdf>

International Maritime Organisation (IMO) Guidelines on Ship Recycling, 2003, available at http://www.imo.org/includes/blastDataOnly.asp/data_id%3D11404/ResShiprecycling962.pdf

