

www.defra.gov.uk

UK ship recycling strategy

February 2007

UK Ship Recycling Strategy

February 2007



Department for Environment, Food and Rural Affairs
Nobel House
17 Smith Square
London SW1P 3JR
Telephone 020 7238 6000
Website: www.defra.gov.uk

© Crown copyright 2007

Copyright in the typographical arrangement and design rests with the Crown.

This publication (excluding the royal arms and departmental logos) may be re-used free of charge in any format or medium provided that it is re-used accurately and not used in a misleading context. The material must be acknowledged as crown copyright and the title of the publication specified.

Information about this publication and further copies are available from:

Waste Management Division
Zone 6/E5
Defra
Ashdown House
123 Victoria Street
London SW1E 6DE
Email address: waste.policy@defra.gsi.gov.uk
Tel: 020 7082 8451

This document is also available on the Defra website.

Published by the Department for Environment, Food and Rural Affairs

TABLE OF CONTENTS

TABLE OF CONTENTS	2
SCOPE	3
Application.....	3
Devolved Administrations	3
Exclusions	3
UK SHIP RECYCLING STRATEGY	4
Strategy Objectives	4
Policy on Government-owned vessels	4
Application of the Waste Shipments Regulation and recommendatory guidance for shipowners	5
Recommendations for recycling facilities	7
The international agenda.....	7
ANNEX I - MINIMUM STANDARDS	9
ANNEX II - WASTE EXPORTS: DECISION-MAKING TREE.....	16

SCOPE

Application

The Strategy applies to all vessels above 500 gross tonnes¹ that are (i) owned by the UK Government and its Agencies or (ii) UK-flagged commercial vessels (subject to the exclusions outlined in the Strategy). The Strategy does not apply to recreational vessels.

Devolved Administrations

The Devolved Administrations of Scotland and Wales and the Administration in Northern Ireland were consulted throughout the preparation of the Strategy. The Strategy applies to vessels owned by the UK Government and its agencies in England, Scotland, Wales and Northern Ireland.

The Scottish Executive supports the aims of the Strategy. The Executive and its agencies will have due regard for the Strategy when considering disposal routes for vessels under their control, both as guidance on the applicable legislation, and as a useful source of further information on decisions to achieve sustainable outcomes.

Exclusions

The 14 overseas territories² are constitutionally not part of the UK and each Territory has its own distinct body of legislation, which differs from UK legislation. The territories are not bound by this Strategy and have not been consulted during its development.

The Government of Gibraltar supports the Strategy, and will have due regard for its provisions when considering disposal routes for vessels under its control, both as guidance on the applicable legislation, and as a useful source of further information on decisions to achieve sustainable outcomes.

The UK Crown Dependencies³ have their own legislative assemblies and systems of local administration and law. They are not bound by this Strategy and have not been consulted during its development.

Oil rigs are excluded from the scope of the Strategy. Further information on applicable legislation can be found in Guidance Notes for Industry on the Decommissioning of Offshore Installations and Pipelines under the Petroleum Act (1998) issued by the Department of Trade and Industry⁴.

The Strategy does not address the issue of abandonment of ships, a practice which reportedly occurs on the coasts of countries in Africa, the Pacific and around the Caribbean Islands. This is a separate and distinct issue requiring a suitably tailored approach.

¹ Vessels outside the scope of the Strategy are still subject to waste management controls, including those for transfrontier shipments of waste, where they fall within the definition of waste. Operators are advised to contact the relevant regulatory authorities for further information.

² Anguilla, British Antarctic Territory, Bermuda, British Indian Ocean Territory, British Virgin Islands, Cayman Islands, Falkland Islands, Montserrat, St Helena and Dependencies (Ascension Island and Tristan da Cunha), (Turks) and Caicos Islands, Pitcairn Island(s), South Georgia and (the) South Sandwich Islands, Sovereign Base Areas on Cyprus.

³ Jersey, Guernsey, Alderney, Sark, Isle of Man.

⁴ Guidance Notes for Industry on the Decommissioning of Offshore Installations and Pipelines under the Petroleum Act (1998), DTI, available at: <http://www.og.dti.gov.uk/regulation/guidance/decommission.htm>

UK SHIP RECYCLING STRATEGY

Strategy Objectives

1. To develop a strategic approach to the recycling of UK-flagged⁵ vessels consistent with the UK's national and international sustainable development commitments.
2. To encourage, through the provision of guidance, the development of UK capacity for recycling of end-of-life vessels in an environmentally sound manner.

Policy on Government-owned vessels

Vessels destined for further use

3. When a vessel is sold for further use, either to foreign Governments or commercial entities, the Government seller will undertake a market assessment of the vessel prior to its sale. If this indicates that the age, condition and value of the vessel make it likely that it is close to the end of its working life, the vessel will then be sent for recycling instead. In marginal cases, the vessel will be sent for recycling.
4. Government will negotiate for inclusion of the following provisions relating to the new owner's responsibilities when the vessel reaches its end-of-life. These are based on the policy provisions Government will adopt for recycling its own vessels.

The new owner has the responsibility:

- To ensure that the vessel's Green Passport is updated throughout the remainder of its service and passed to the recycling facility;
- Not to dispose of the vessel without prior consent in writing of the UK Government;
- To demonstrate that the vessel will be recycled in accordance with all applicable legislation, and with reference to the International Maritime Organisation Guidelines on Ship Recycling⁶ and the Basel Convention Guidelines for the Environmentally Sound Management of the Full and Partial Dismantling of Ships⁷;
- To take appropriate steps to ensure the facility where the recycling is to take place abides by acceptable environmental, health and safety standards.

⁵ Government-owned and commercial vessels flagged to the UK mainland.

⁶ International Maritime Organization (IMO) Guidelines on Ship Recycling, 2003, available at: http://www.imo.org/includes/blastDataOnly.asp/data_id%3D11404/ResShiprecycling962.pdf.

⁷ Basel Convention 'Technical Guidelines for the Environmentally Sound Management of the Full and Partial Dismantling of Ships', 2002 – see Annex III.

5. Where the new owner breaches its contractual obligations, Government will review the options it has available for recourse on a case-by-case basis.

Vessels destined for recycling

6. In the case where a Government-owned vessel is to be recycled, Government will tender the contract for recycling only to facilities in OECD countries.
7. Government will specify minimum environmental, health and safety standards⁸ that must be demonstrated and adhered to by the recycling facility during the recycling operation. An example of the minimum standards required of a ship recycling facility is available at Annex I. Clear specifications of standards are to be provided in tender documentation and in the criteria for evaluating tender bids.
8. Government will adhere to the Basel Convention principles of prior informed consent and environmentally sound management when exporting its vessels for recycling.
9. Government commits to obtaining the best possible value when selling its assets within the parameters of the policy on the recycling of Government-owned vessels.

Application of the Waste Shipments Regulation and recommendatory guidance for shipowners

10. The Strategy sets out the relevant waste controls applicable to the export of UK-flagged end-of-life vessels for recycling from UK ports, and provides recommendatory guidance for shipowners.
11. The EC Waste Shipments Regulation⁹ (WSR) implements the Basel Convention in the EU and covers the supervision and control of shipments of waste within, into and out of the EU. The WSR provides detailed rules for the control of transboundary movements of waste, the central aspect of these being a notification procedure involving the competent authorities¹⁰ of dispatch, transit and destination. The WSR defines waste in accordance with article 1(a) of the Waste Framework Directive¹¹ which states:

‘waste’ shall mean any substance or object...which the holder discards or intends or is required to discard.

⁸ An example of the minimum standards required of a ship recycling facility is available at Annex I.

⁹ Council Regulation 259/93/EEC. To be replaced by a revised Regulation (EC) No. 1013 of the European Parliament and of the Council on Shipments of Waste, which applies from July 2007

¹⁰ The Competent Authorities of dispatch (for exports) and destination (for imports) in the UK are the Environment Agency in England and Wales, the Scottish Environment Protection Agency (SEPA) and the Environment and Heritage Service of the Department of the Environment in Northern Ireland.

¹¹ Council Regulation 75/442/EEC as amended by 91/156/EEC and Commission Decision 96/530/EC, subject to amendment.

12. Where a UK-flagged vessel is being exported from a UK port for recycling, it is likely to fall within the definition of waste and thus be subject to the EC WSR¹². Recital 35 of the revised Waste Shipments Regulation (EC) No 1013/2006, notes that a ship may become waste as defined in Article 2 of the Basel Convention and that at the same time it may be defined as a ship under other international rules.

13. Thus, in the absence of any internationally recognised mandatory regime for end-of-life vessels, Government expects:

- Where an end-of-life vessel falls within the definition of waste, as set out in the Waste Framework Directive, controls under the EC Waste Shipments Regulation will apply.
- Any imports of vessels for the purposes of recycling to be notified in accordance with the provisions of the Waste Shipments Regulation or existing international rules (under the Basel Convention and/or OECD Decision¹³) as appropriate.
- Any exports of UK-flagged vessels from a UK port for the purposes of recycling to be notified in accordance with the provisions of the Waste Shipments Regulation¹⁴.

14. The WSR implements the Basel Convention's Decisions II/12 and III/1, known as the 'Basel ban', whereby exports of all hazardous wastes to non-OECD countries are prohibited. Given the range of hazardous materials found in end-of-life vessels, it is likely that an end-of-life vessel would be classified as hazardous. In practice, this means that they may only be exported to OECD countries.

15. Government recommends that shipowners make reference to the IMO Guidelines at all stages when a ship is sold for recycling, paying particular attention to the following elements:

- Design of ships and ships' equipment to facilitate recycling
- Inventory of hazardous materials onboard and preparation of a Green Passport (for newbuilds and existing ships);
- Selection of an acceptable recycling facility

¹² The WSR is applied in the UK by the Transfrontier Shipment of Waste Regulations 1994 (SI 1994 No. 1137). These Regulations will be replaced on 12 July 2007 by the Transfrontier Shipment of Waste Regulations 2007. Guidance on all aspects of TFS is available at http://www.environment-agency.gov.uk/subjects/waste/1030716/232044/?lang=_e and http://www.netregs.gov.uk/netregs/275207/275512/?lang=_e

¹³ C(2001)107/FINAL.

¹⁴ Shipowners wishing to export UK-flagged end-of-life vessels from the UK are encouraged to contact the appropriate competent authority as early as possible and consult the guidance available on TFS controls. A flowchart covering the process of export of vessels as waste from the UK is available at Annex II.

- Preparation of a Ship Recycling Plan
- Pre-decontamination
- Gas freeing

16. Shipowners are encouraged to review their current ship recycling practices in line with this strategy in preparation for the introduction of the new International Convention on the Safe and Environmentally Sound Recycling of Ships, expected to be adopted in the 2008/09 biennium.

Recommendations for recycling facilities

Expansion of capacity

17. It is recommended that site operators wishing to undertake ship recycling activities in the UK consult the Defra guidance 'An Overview of the Ship Recycling Process in the UK'¹⁵. Given the complexities of the applicable regulatory regimes, this guidance does not negate the need for operators to take their own legal advice. It is strongly advised that those wishing to recycle vessels in the UK engage with the relevant regulators at the earliest stage possible.

18. Government encourages other OECD countries to consider undertaking studies to improve information on current and potential ship recycling capacity.

Upgrading facilities

19. Joint technical cooperation programmes between the International Labour Organization, IMO and Basel Convention are welcomed and Government commits to participation in these activities through the relevant bodies.

20. Government will work to develop suitable projects to promote responsible ship recycling, especially through the implementation of the IMO, ILO and Basel Convention Guidelines on ship recycling.

21. Government will also support development of a technical co-operation project, based on the Basel Convention Guidelines, to assist in the upgrade of standards at facilities in developing countries and to expand the provision of Environmentally Sound Management compliant ship recycling capacity.

The international agenda

22. Government encourages other countries to consider development of their own ship recycling strategies, examining national fleets, where relevant, and looking at domestic ship recycling capacity.

¹⁵ Available at: <http://www.defra.gov.uk/environment/waste/strategy/ship.htm>.

ANNEX I- MINIMUM STANDARDS

RECYCLING FACILITY

(IMO) indicates standards or criteria recommended in 'Guidelines for the Development of the Ship Recycling Plan' issued by the International Maritime Organization.

The facility:

- will be a registered business entity within the applicable national framework;
- will be auditable by the organization selling the vessel and provisions should be made for site visits (if required);
- will be in possession of all relevant permits, approvals and licences required by international, national and local agencies, and will provide a list and evidence of these on request (IMO);
- will have adequate insurance to cover health and safety liabilities and environmental remediation in compliance with local legislation;
- will identify all entities to be involved in the ship recycling process, including sub-contractors, waste management companies, asbestos removal companies, and provide evidence of their licences, approvals, permits, etc (IMO);
- will provide a list of hazardous materials the facility is capable of handling including related details of the final disposal facility;
- will have prior experience in recycling ships and other marine structures and will have professional references readily available (not applicable for new facilities);
- will declare whether it, its parent company(ies), subsidiaries or affiliates, or any proposed sub-contractors or other entities involved in the recycling process, has received any fines, notices, etc. from regulatory entities in the last five years (IMO);
- will be in receipt of the following documents prior to the commencement of recycling to assist in the development of a Ship Recycling Plan:
 - A 'Ready for Recycling' certificate (or its equivalent);
 - The vessel's Green Passport including a list of hazardous materials (and their location) onboard (IMO);
 - Any ship plans or drawings.

- will issue a 'Recycle' certificate upon completion which confirms the remainders of the ship have been processed and removed;
- is recommended to make reference to the following sets of Guidelines throughout the recycling process:
 - Technical Guidelines for the Environmentally Sound Management of the Full and Partial Dismantling of Ships developed by the Secretariat of the Basel Convention¹⁶;
 - IMO Guidelines on Ship Recycling developed by the International Maritime Organization¹⁷;
 - Safety and Health in Shipbreaking: Guidelines for Asian countries and Turkey developed by the International Labour Organization¹⁸.
- The facility, in conjunction with the shipowner, will be responsible for the development of a ship recycling plan for the vessel and should have procedures in place to develop such a plan (IMO). The plan should include provisions for:
 - Worker health and safety;
 - Environment including waste management.

It should be noted that both existing and new facilities should be acceptable, provided that they have or obtain all the necessary regulatory consents and satisfy all other requirements, including those of the competent authorities for transboundary waste controls.

Worker Health & Safety

The facility is required to implement methods and procedures to protect, monitor and enforce worker health and safety. These should reflect applicable requirements of national legislation and, where appropriate, the ILO Guidelines on Safety and Health in Shipbreaking.

- The facility is required to have procedures in place to cover the following operations in respect of worker health and safety:
 - Confined and enclosed spaces (procedures for identifying and working in dangerous atmospheres) (IMO);
 - Welding, cutting, grinding and heating (procedures for ventilation, personnel monitoring for lead/cadmium/mercury/beryllium exposure, protection of personnel, training, respiratory protection, torch cutting, permits and inspections (including hotwork certification)) (IMO);

¹⁶ Basel Convention 'Technical Guidelines for the Environmentally Sound Management of the Full and Partial Dismantling of Ships', 2002, available at: Annex III.

¹⁷ International Maritime Organization (IMO) Guidelines on Ship Recycling, 2003, available at: http://www.imo.org/includes/blastDataOnly.asp/data_id%3D11404/ResShiprecycling962.pdf.

¹⁸ 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>.

- Fire prevention/protection (procedures for fire watch, raising alarm, hazards, fire extinguishers, hose lines, water supply, fire fighting equipment, training, proper handling and storage procedures and identification of potential ignition sources) (IMO);
 - Compressed gas cylinders (procedures for transporting, moving, securing and storing, and the use of hoses and torches in the vicinity of or on the bottles) (IMO);
 - Scaffolds, ladders and workman aloft, other working surfaces (procedures for use of personnel flotation devices, guarding of deck openings and deck edges, platforms, personnel fall arrest systems, guardrails and access to ships) (IMO);
 - Housekeeping and temporary lighting (procedures for work areas, including aisles, passageways and temporary floor openings) (IMO);
 - Health and sanitation (availability of toilet and washing facilities, changing rooms and eating and recreational areas) (IMO);
 - Communication of hazards (procedures for providing information to employees on potential hazards associated with the job) (IMO);
 - Asbestos Abatement Programme or similar (exposure assessment processes, use of regulated areas, in-process monitoring procedures, engineering controls and work practices, qualified personnel, measures to prevent exposure of workers and the environment to asbestos) – see ILO Code of Practice (Appendix C of Basel Guidelines) (IMO);
 - Gear and equipment for rigging and material handling (procedures for testing and inspection of ropes, chains, slings and hooks, chain-falls and hoisting and hauling equipment) (IMO);
 - Personal Protective Equipment (procedures and equipment for protection of employees from risks associated with ship recycling) (IMO);
 - Employee emergency plans (emergency escape routes, procedures to account for employees during evacuations, alarm systems, weather plans, rescue and medical duties, treatment of injured personnel and training procedures) (IMO);
 - Lead Abatement Programme or similar (procedures to provide ventilation, hygiene facilities and practices, shower/change rooms, warning signs, medical surveillance, exposure monitoring, testing and training) (IMO);
 - Spill containment and emergency response plans (procedures for clean-up activities, emergency equipment, site security, etc.) (IMO);
 - Diving operations (a full diving programme, if required) (IMO).
- The facility is required to have a system which reports, records and notifies work-related injuries, diseases and death;
 - The facility is required to ensure the competence of its employees through safety and skills (use of tools, machines and other equipment) training;
 - The facility is required to monitor its workers' health and work environment and provide occupational health services as required.

Environment

The facility will implement methods and procedures to protect the environment. These should reflect applicable requirements of national legislation and, where appropriate, the Basel Convention Technical Guidelines for the Environmentally Sound Management of Dismantling of Ships. (See Annex III.)

- The facility is required to demonstrate the following in respect of the environment:
 - That it engages in safe and effective waste management and has operational waste reception facilities (for storage of waste on site prior to remediation, recycling and/or disposal either on or off site) (IMO);
 - Has procedures in place for managing (including identification (sampling/analysis), abatement, removal, treatment, storage, transportation and disposal) potentially hazardous materials, including (IMO):
 - Fuel, lubricants and coolants; chemicals in drums, buckets, pressurized bottles, stored solvents and other chemical stocks;
 - Cargo residue
 - Floatable materials (e.g. Plastics, Styrofoam, etc)
 - Materials possibly containing PCBs, such as wiring insulation, paints, transformers, lighting ballasts, capacitors and other electrical items if installed before 1986);
 - Waste water/sludges, sewer or grey water, residues of bilge and ballast water;
 - Harmful aquatic organisms, non-indigenous species and marine growth in ballast water and on the hull, and sediments in ballast tanks;
 - Asbestos used in older ships as insulation material;
 - Chromium (ballast water treatment, paint coatings, gaskets, etc.)
 - TBT paints (collection and containment of all wastes resulting from paint removal process).
 - That work will be carried out in a controlled environment so that any loss of pollutants can be monitored and managed (e.g. Bunds and booms for wet dock work, work planning to minimise pollutant loss, etc.). Best practice suggests that full recycling should be undertaken in a dry dock, or within an area that allows full capture of all liquid/solid waste (e.g. oil/water/bilge/ballast/etc.);
 - That the local environment is monitored at regular intervals to mitigate the effects of pollution. A monitoring programme is required for:
 - Ground/groundwater;
 - Seawater/sediments;
 - Air, noise, vibrations.

- Has management controls and procedures in place.

Operations

The facility will provide details of the methods and procedures involved, and sequencing of, the ship recycling process, including work that will be accomplished prior to and after the ship arrives at the facility. These should reflect practices recommended in the ILO, IMO and Basel Convention Guidelines on ship recycling.

- This facility is required to detail the following elements in a ship recycling plan or similar document:
 - A schedule showing the progressive order in which the work will be carried out (IMO);
 - Details of the arrangement of the facility to accommodate the flow of regulated material and completion of recycling, including the production flow of hazardous/regulated material and the layout/arrangement of the facility (IMO);
 - Details of the arrangements with other facilities for the safe handling, transport and ultimate recycling/disposal of all wastes;
 - Provide step-by-step procedures to be followed when performing ship recycling, including (IMO):
 - Plans for using dry dock, slipway, floating dry dock or other method;
 - Procedures for identification and labelling of hazardous materials;
 - Measures to be taken to ensure stability and strength during hull recycling;
 - Procedures for final recycling of underwater hulls;
 - Measures to be taken to prevent flooding/sinking of the hull;
 - Measure to be taken to prevent slag or other contaminants from entering the water;
 - Cleaning tanks and bilges prior to recycling;
 - Dealing with piping and fittings (not burning but cutting).
 - Procedures to be used for securing the vessel in the event of severe weather (IMO);
 - Procedures for spill cleanup and notification (IMO).
- The facility is required to have procedures in place for hot work, cutting and entry into enclosed spaces onboard ships including (IMO):
 - 'Gas free for hot work' certification carried out by a relevant and appropriate body;
 - Continuous monitoring of enclosed spaces;
 - Continuous ventilation of tanks and compartments;
 - Cleaning of oil tanks and compartments before hot work commences;

- Testing of compartments for presence of toxins, corrosives, irritants and flammable vapours before entrance and commencement of cutting and hot work.

SHIPOWER

Design and Construction of vessels

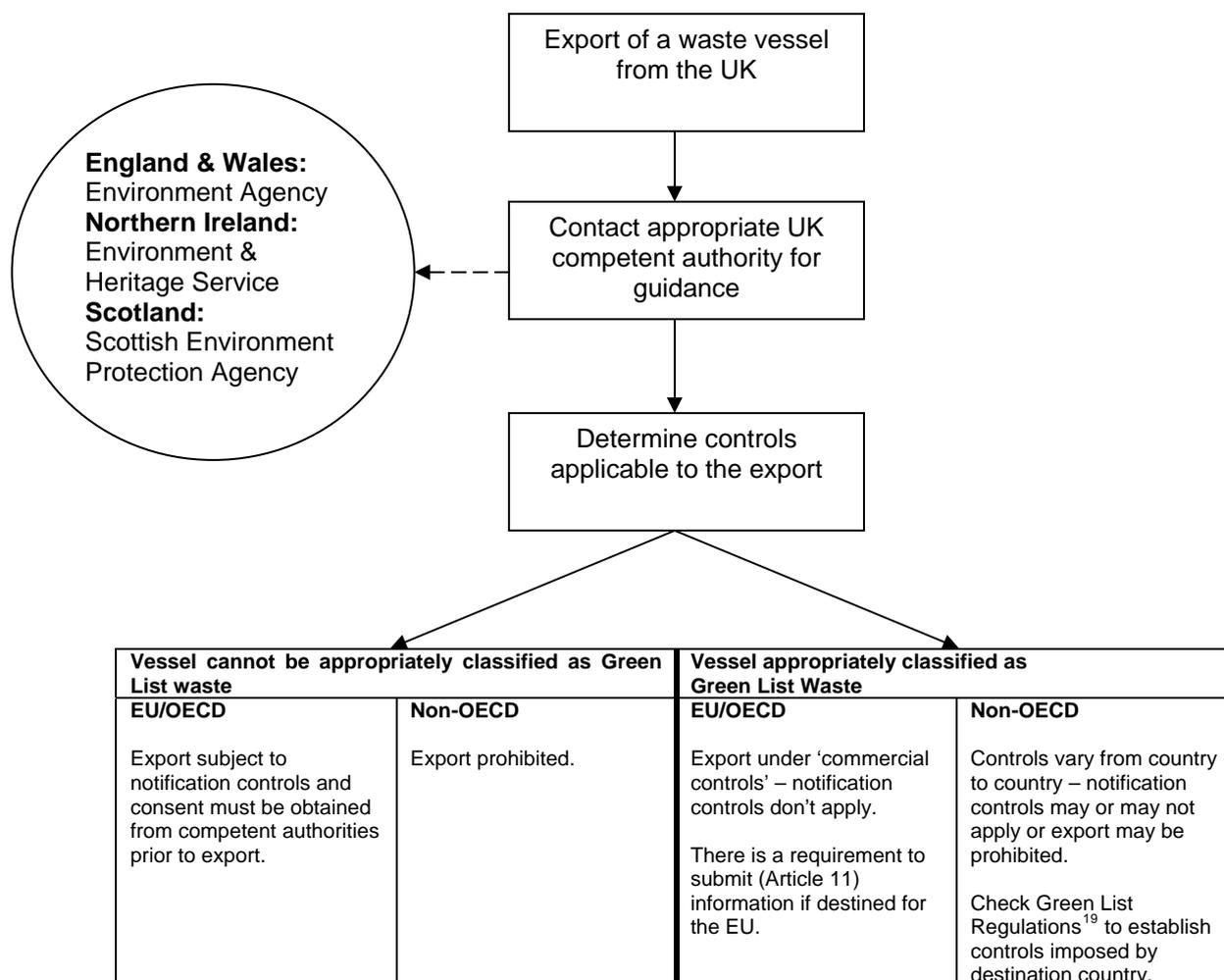
The shipowner:

- will abide by criteria required by the IMO Guidelines or other relevant standards, including:
 - Minimisation of hazardous materials used in construction of new vessels;
 - Minimisation of potentially hazardous materials used in construction of new vessels;
 - Design ship/equipment to facilitate recycling and removal of hazardous waste;
 - Preparation of a Green Passport;
 - Minimisation of waste generation.

Disposal

- Shipowner should ensure transparency in all phases of the recycling process:
 - Announce intention to sell a ship;
 - Tender/bid process (including confirmation that facility meets minimum environmental, health and safety standards);
 - Negotiation and main terms;
 - Preparation of documentation (contracts, sales agreement, and memorandums of understanding between the owner and facility);
 - Pre-cleaning (Ready to recycle certificate);
 - Delivery/decommissioning of vessel.
- Shipowner should select a facility that is in compliance with the minimum environmental, health and safety standards required of recycling facilities. Best practice suggests adherence to the IMO/ILO/Basel Convention Guidelines at all stages of recycling;
- Shipowner should make provisions for facility audits to verify standards and site visits (if required);
- Where required, the shipowner should be in possession of a 'Ready for Recycling' certificate, signalling that all hazardous materials onboard the vessel have either been removed or notified to the recycling facility;
- Shipowner should present an updated version of the vessel's Green Passport to the recycling facility;
- Shipowner should be in receipt of a contract, sales agreement and a ship recycling plan (issued by the recycling facility) prior to dispatch of the vessel to the facility.

ANNEX II - WASTE EXPORTS: DECISION-MAKING TREE



Where notification controls apply, it is important that a UK competent authority of dispatch is consulted before any shipment of waste vessels begins because the requirements related to transboundary movement of waste are complex. However, to summarize these requirements:

1. Complete the notification documents (which may be obtained from UK competent authorities) – these must provide details about the waste to be moved, how it will be moved and about the proposed recovery operation and facility;

Submit the completed notification documents and all required supporting the competent authority of dispatch;

2. Ensure all necessary permissions (consents) are in place from the competent authorities of dispatch, destination and (if applicable) transit and that a financial guarantee is in place before proceeding with the export.

¹⁹ Council Regulation (EC) No 1420/1999 and Commission Regulation (EC) No 1547/1999 (as amended), available at: <http://europa.eu.int/comm/trade/issues/global/environment/waste.htm> These Regulations are planned to be replaced by a single Commission Regulation in 2007. Contact a UK competent authority for further details.