The

Green Boat Mark

Criteria

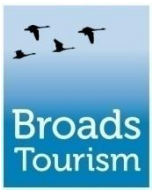
Prepared by

The team that developed and operate the Green Tourism Business Scheme

Green Business UK Ltd & Shetland Environmental Agency Ltd

In conjunction with

The Broads Authority and Broads Tourism



GREEN ACCREDITATION – HIRE BOATS CRITERIA

Eligibility

To participate in the scheme the hire yard must have achieved a minimum of a Green Tourism Business Scheme (GTBS) Bronze level accreditation for its yard operations. An individual boat or class of boat can not apply for the Green Boat Mark unless the company holds a GTBS grading.

For full GTBS criteria and terms and conditions contact Green Business, 4 Atholl Place, Perth, PH15ND, email gtbs@green-business.co.uk or ring 01738 632162. More information can be found on the website: www.green-business.co.uk.

Requirements

The following criteria are based on 25 measures that operators can take to "green" their hire boats. These measures cover most recognised boating issues, some measures are easily implemented while some will take planning and financial investment to complete. Each measure will be scored from 0-5, 5 being best practice and measure fully complete.

If 25 measures are scored at 5 points total score will be 125 (100%), to gain a BRONZE award vessels must score over 48% (60), to gain SILVER a Vessel must gain over 64% (80) and for GOLD a vessel will have to score over 80% (100).

The first four measures are compulsory
They must be scored at 3 or above to gain an award

Compulsory Measures

1 Provision of Phosphate free cleaners (Including phosphonates and orthophosphoric acid)

Phosphate and nitrates in the aquatic environment are responsible for nutrient enrichment of watercourses causing excessive algal growth and sometimes 'blooms', which harm fish and other aquatic life. The main source of phosphates has been from detergents that end up in the effluent from sewage works.

Much work has been done to install phosphate -stripping equipment in sewage works around the Broads, resulting in a significant drop in phosphates and an improvement in water quality. However, the direct discharge of wastewater containing detergents from boats into the river is also a contributory factor to poor water quality.

Full credit will be given where all cleaning products used during turn-round on the boat or supplied on board for the customer are phosphate-free. Clear guidance should be provided to encourage guests to use phosphate-free options. Details of chemical make-up of all cleaners should be available at the grading visit.

2 Regular Servicing and Maintenance.

Maintenance regimes are important to maintain engine and hull efficiency so that operators can benefit from fuel savings and reduced gaseous emissions over the lifetime of the vessel. If the hull and prop have many marks, dents and other wear and tear they are less efficient and will cause even a well-serviced engine to use more fuel due to increased drag and cavitation. A well-balanced and clean prop will also cause less disturbance to sediments and reduce impacts to bottom dwelling species. Proper maintenance of fuel lines, seals and connections will also reduce the possibility of spillage.

A pass for this measure will be given to operators that can demonstrate that they have a set service and inspection regime in place for the boat in accordance with manufactures and governing body specifications. Engine drip trays should be bunded with precautions to prevent spilt oil or fuel from entering bilge water.

3 Hire Guidance Manual/Green File.

The wetland environment of the Broads is very fragile, but it is also the primary reason why tourists come to visit the area. Consideration must also be given to the people that live and work in that area and it is vital to preserve this environment for future generations.

All the measures in this accreditation scheme are designed to protect and enhance the local environment for the benefit of visitors and local people alike. Facilities are provided around the area to encourage responsible behaviour, regulations limit navigation in certain areas and restrictions are in place on vessel speed. Information should be provided in the Green Manual about the water system and the need to conserve water.

Credit will be given on a boat that has a green file for guests outlining conservation areas, local by-laws, information provided about the need to reduce water use, recycling facilities, specialised waste disposal facilities, local food producers and details of the impact of phosphate on the broads and how to reduce this.

Guidance should also include details how clients can avoid noise pollution from running engines to recharge batteries or heat water in at night or early morning on quiet moorings. A copy of the boat operator's environmental policy should be included in the file.

4 Grey Water Disposal (toilets including sea toilets).

Sewage is a complex mixture and can contain many types of contaminants. The greatest threats posed to water quality arise from contamination by bacteria, nitrates, phosphates, metals, trace quantities of toxic materials, and salts. Seepage overflow into drinking water sources can cause disease from the ingestion of microorganisms such as E Coli, Cryptosporidium and Hepatitis A amongst others.

Direct discharge of sewage to the water course increases the Biological Oxygen Demand and reduces the Dissolved oxygen in the water which has a detrimental effect on an area's biodiversity. Credit will be given for toilet flushing systems that use river water, but no discharge is allowed back into the river. If domestic cistern-fed toilets are fitted the cisterns must be dual flush and fitted with a storage tank. Small, closed circuit systems that recycle the flushing water are also acceptable.

Sea toilets discharging directly to water-courses will cause the boat class to fail the accreditation.

Water Quality Issues

5 Water saving measures – showers

Water is a vital resource that should not be squandered, as some areas of even the UK have limited resources, especially East Anglia. Drinking water (potable water) requires chemical and energy intensive treatment and transportation. Storage on board most pleasure vessels is also limited and saving water will reduce the need for constant top up.

To pass this measure each vessel should be fitted with showerheads that have flow rate less than 7 litres per minute.

6 Minimising Pollution from diesel/oil/fuel handling. (Provision of spill kit)

The transfer of oil and fuel if not properly controlled can cause significant pollution in an aquatic environment. Clients should be instructed to purchase fuel from recognised hire yards and to rely on personnel at those yards to carry out the refuelling operation.

Refuelling during weekly turn-round of the boat must be correctly controlled with procedures documented and spill kits, appropriate to the size of the vessel, must be available for use in the event of inadvertent spillages. Emergency procedures in the event of serious spillages must be documented and understood. This will become a yard measure under section 1.

7 Formaldehyde-free toilets.

Credit will be given on a boat in which formaldehyde chemicals have been replaced with alternatives that also do not contain chlorine. Documentary evidence will be required such as COSHH sheets.

8 Over the side is over, collecting waste cooking oils.

Many pleasure vessels are fitted with toilet and kitchen facilities that discharge directly to the water course. Many vessels still discharge to water courses from sinks and drains. Although these fats will eventually break down naturally, the process uses a great amount of the oxygen available in the water course, oxygen that would otherwise be available for wildlife. Even a small amount is harmful and has a detrimental effect on many species.

The presence of nitrates in the watercourses, which is also a major contributor to poor water quality, is mostly as a result of agricultural run-off and boat operations have little impact on this.

Credit will be given to operators that inform guests or visitors of the environmental consequences of fat discharge and offer the means to collect waste cooking oils for correct disposal.

9 Eco-sensitive underwater hull coating/antifouling.

Antifoul products are used to inhibit growth of organisms on the hull or stern gear of a vessel. Most commonly antifouls (paints and greases) contain Copper or Zinc compounds. Once applied, these products leach these metal compounds in to the water that can bio-accumulate in the food chains of marine organisms.

Credit will be given to operators that use less toxic compounds low in copper or heavy metals or paint free solutions such as ultrasonic alternatives. Credit will also be given for boats that have a reduced area of coverage of antifouling through the use of only a strip coating of approx 400mm at the waterline.

Winter maintenance must include thorough cleaning of the underwater hull. However, if correct procedures are not used during maintenance, concentrated amounts of antifoul compounds may enter watercourses in the form of paint dust and scrapings.

To complete the measure, maintenance must be done is a secure wash down bay preventing scrapings or dust entering the water. This is covered under Section 12 of main criteria.

Engine Performance and Boat Design

10 Speed display system

All areas of the Broads have fixed speed limits as part of the bylaws; these have been introduced to reduce wash and disturbance to wildlife and to prevent unpleasant impacts on other river users. It is important that guests are able to comply with these speed limits.

To pass this measure the vessel must be fitted with a tachometer clearly marked to show the required engine revs for all the Broads speed limits and details of the speed limits in all areas of the Broads should be included in the Green Manual.

Information must be provided in the Green Manual to discourage excessive use of the engine at moorings to heat the water. Credit will also be given to yards that have installed engine limiters.

11 Low drag hull design

The reduction of the drag of a hull will reduce the power required to drive the boat through the water and will also minimise the generation of wash. Low drag hull designs will enable a reduction in fuel use and reduction in damage to the river environment.

Several existing hull designs used in Broads cruisers have been documented as low drag and credit will be given for vessels that use such hulls with an appropriate propeller set up. Appropriate paperwork describing hull type will be required, such as marine architect drawings or design specifications.

Maximum credit will be given for vessels that incorporate new designs of low drag hull and appropriate propeller set up. Documentary evidence of drag calculations and measurement should be provided together with marine architect drawings or design specifications

12 Engine efficiency

Documentary evidence will be required for each class of boat. Operators should ensure that engines used meet EC stage 3B emissions regulations.

Information concerning recommended boat speed settings to achieve maximum engine efficiency should be provided in the Green Manual.

13 Effective engine silencing

Documentary evidence will be required to confirm observations of apparatus fitted to each vessel. Specifically, specialist exhaust systems and engine bay insulation. Both must be in place to pass measure.

14 Heat recovery from Engine for heating and/or hot water

The operation of an engine generates vast quantities of heat through the combustion process, this heat can be wasted, leaving the vessel through the exhaust system or transferred to the water via the cooling system. This heat is a valuable resource and can easily be captured and reused to heat the cabin or hot water storage.

Credit will be given where a vessel design incorporates heat recovery from engine to heat cabin and/or hot water. Design/Documentary evidence will be required to compliment visual inspection.

15 Use of recycled materials in construction

Credit will be given for boats which have recycled materials in their construction. Documentary evidence will be required in addition to visual inspection.

16 Alternative drive options

As fuel costs spiral there are incentives for introducing other types of drive units. These include hybrid drives, fully electric vessels and even fuel cells.

Credit will given for boats that incorporate alternative propulsion systems that are designed to reduce carbon emissions.

Hirer Information

17 Responsible Marketing

The provision of details of the boat within guides, brochures and websites with accurate and responsible information about the green criteria will be credited. Information on the Broads and surrounding area should also be accurate and realistic.

18 Local Food/ Organic/Fair trade welcome pack

Local producers are vital to the economic stability of the local area and should be supported where ever possible. Fairly traded produce ensures that third world farmers are fairly rewarded for their efforts. Such items are widely available and are easily sourced. Produce covered in this measure could include drinks such as tea, coffee, hot chocolate and fruit juices, as well as sugar, chocolate and fruit.

Credit will be given for boats that have a Local food/organic/Fair Trade welcome pack/hamper for guests, including details of where to source local and Fair Trade Items locally.

Energy and Resource Efficiency

19 Provision of Energy Efficient appliances

'A' rated appliances are the most energy efficient choice when purchasing appliances to fit to a vessel. The rating for domestic units goes from A++ to G, with G being poor. The energy technology list gives details of over 6000 commercial products that meet the government's energy efficient criteria.

Credit will be given to boats that are fitted with 'A' rated or appliances from the ECA list (Enhanced Capital Allowance). If 12volt will need evidence from supplier on the energy efficiency of the appliances. Documentary evidence should be provided.

20 Provision of HFC free refrigerators.

The 1st January 2010 saw the phase out of a refrigeration gas known as R22. R22 is anHCFC, or hydrochlorofluorocarbon and is no longer available unless as a recycled product for use in older cooling apparatus. It is no longer being produced as a virgin product and its only use is as a recovered material from the degassing of older R22products. By 2015, no cooling apparatus will be allowed to contain this environmentally hazardous gas. Fridges are now available which use hydrocarbons, normally propane (R290HC), or R600. Traditional chiller plants use ammonia which has a GWP of zero.

Credit will be given on boats that have both A rated HFC free refrigerators fitted.

21 Facility for segregated waste storage for recycling

Credit will be given to boats in which a minimum of two segregated waste bins are provided. Separation of recyclables makes recycling easier for guests when on holiday and a separate bin for paper, cans and plastic bottles must be provided. Credit will also be given for a storage area for glass bottles.

Details of the location of shore based recycling points should be provided both in the Green Manual and adjacent to the waste bins.

22 Use of solar panels and other renewables

Credit will be given for operators that installed renewable technology in vessels. Documentary evidence will be required supplemental to visual inspection.

23 Grey water storage

Most marine leisure industry vessels still discharge grey water from sinks and toilets directly into the watercourse, although some new build vessels are designed to store water in tanks for pumping to shore based facilities.

Credit will be given to boats that have fitted grey water collection to their vessels for on-board use or correct disposal to land based treatment. Recirculation for toilet flushing.

24 Use of LED lighting

LED lights produce light even more effciently than a CFL, with a typical unit using less than 9 watts reducing load on gen sets. LEDs are a relatively new lighting technology and the quality of the lights emitted is usually similar or better than equivalent CFL units.

Full credit will be given where the vessel is fitted with a significant amount of LED lighting.

Innovation

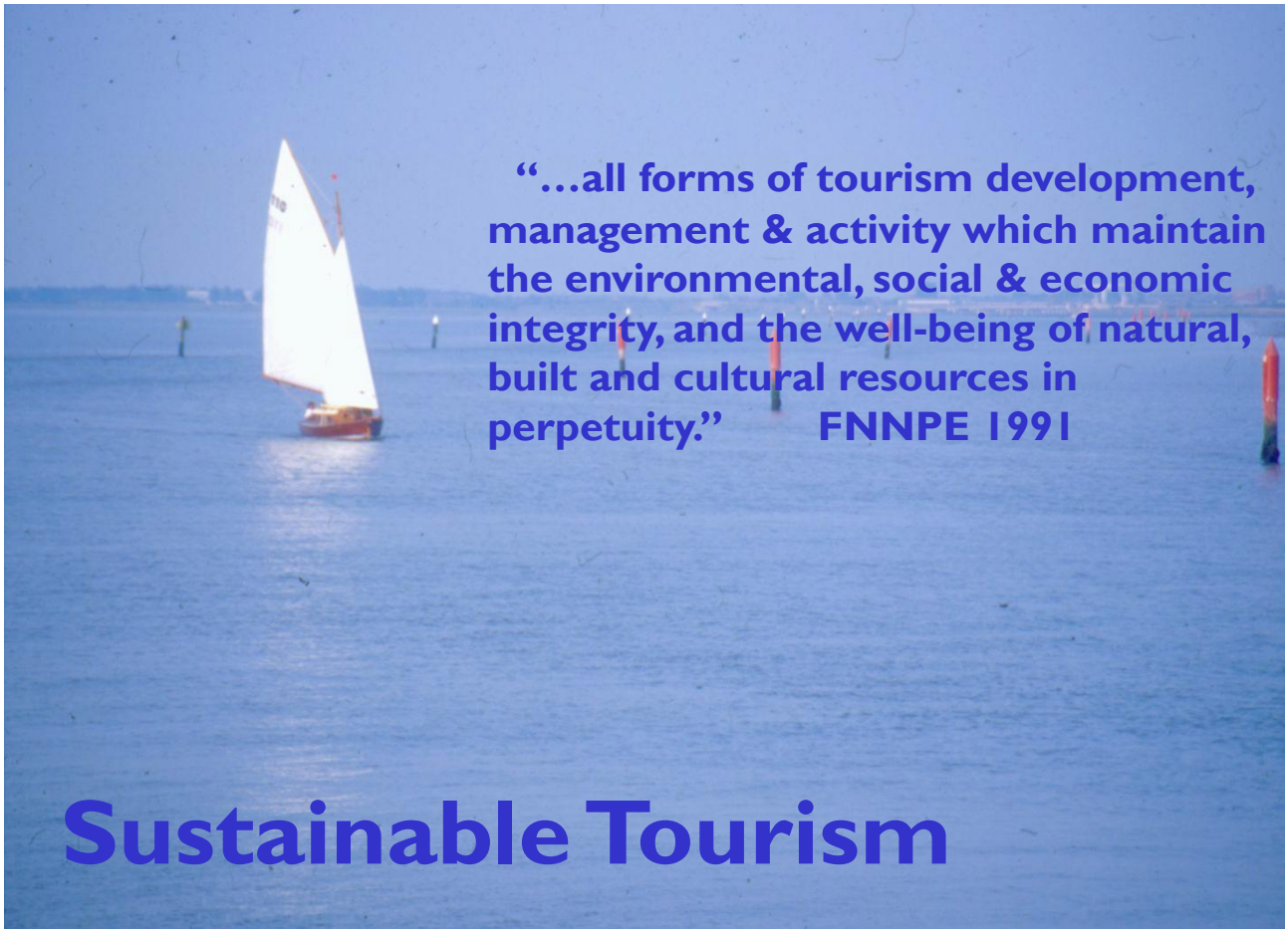
25 Bonus Credit

New technologies, innovative management techniques and exemplary actions may be credited with an additional bonus credit. Ideas for innovation may include use of recycled oils, biofuel choices specialised activities to green the supply chain activities which allow the boat fleet to be zero carbon or carbon neutral or specialist activities with social or community groups.

It will be at the assessor's discretion whether the boat will be credited and by how many points (maximum of 5). It should be noted that actions which gain credit for the boatyard may not be relevant to the specific boats in the fleet.

The Green Tourism Business Scheme is operated in the UK by Green Business UK Ltd, a not-for-profit organisation, limited by guarantee.
4Atholl Place, Perth PH1 5ND Tel 00 44 (0) 1738 632162 General Enquiries Email - gtbs@green-business.co.uk
Registered in Scotland 227139 VAT No. 789 0298 74

SEA Ltd is the Standards Agency for the GTBS including Criteria, Destination and International Development Projects
4Atholl Place, Perth PH1 5ND Tel 00 44 (0) 1738 632162 General Enquiries Email - jon@green-business.co.uk
Registered in Scotland 128822 VAT No. 5531 228 666



"…all forms of tourism development, management & activity which maintain the environmental, social & economic integrity, and the well-being of natural, built and cultural resources in perpetuity." FNNPE 1991

Sustainable Tourism