

Update on Electric Boating
Report by Senior Waterways and Recreation Officer

Summary: This report provides members with an overview of electric boating in the Broads. The report particularly considers how electric boating relates to the Broads Plan and how the Broads Authority encourages the development of electric boating in the Broads through its toll structure and the provision of facilities. Members are asked to note the report.

1 Background and Broads Plan Context

- 1.1 The Broads Plan sets out three key priorities for the Broads Authority and its partners over the lifetime of the plan. One of the priorities identified in the Plan is the encouragement of the sustainable use and enjoyment of the Broads. Under this theme the Broads Authority is committed to improving the quality of the facilities available for boats and continuing to work with the local business community to foster sustainable tourism in the Broads. Additionally, the Plan identifies a further priority of working in partnership on the sustainable management of the Broads. This theme places emphasis on the need for the Authority to continue to improve the management of the navigation by working with user groups and partners to improve the sustainable management of the waterways.
- 1.2 The Plan also recognises the need for low carbon initiatives to be promoted in the Broads. The Authority therefore works through the Integrated Access Strategy and Broads Sustainable Tourism Strategy to deliver improvements in this area and encourage businesses to improve their environmental performance through entry to schemes like the Green Tourism Business Scheme and the Green Boat Mark Scheme.
- 1.3 The Broads Authority considers that encouraging and supporting electric boating in the Broads is important as electric boats are quiet and have finer hulls which create less resistance as they move through the water. The environmental benefits of quiet boats which produce less wash are significant as they cause less bank erosion and habitat damage. The promotion of good boating practice and encouragement of the development of new designs and technologies to reduce impacts from boat wash, noise and pollution caused by spent fuel is therefore prioritised in the Broads Plan and the way in which the Authority manages the navigation area.

2 Tolls

- 2.1 One way in which the Authority supports and encourages environmentally friendly boating is by giving electric powered boats a 30% discount on the annual toll for motor craft. Reduced tolls are also charged for sailing craft and the tolls system is structured to encourage small craft to come onto the Broads river system.

3 The Broads Green Boat and Tourism Show

- 3.1 The Broads Authority has also promoted environmentally friendly and electric boating through its involvement in and support of the Green Boat Show. The Show, which was originally organised by the Broads Society as a small event called "A Silent Sensation", was expanded in 2006 into an event intended to promote greener and sustainable boating to the general public and encourage the conversion of boats to electric propulsion. This change was initiated through a significant grant from Leader + and the Broads Sustainable Development Fund. The grant had some success and resulted in approximately 20 boats being converted to electric propulsion.
- 3.2 In 2012 the name of the show was changed to the Green Boat and Tourism Show and the organisers worked with the hire boat industry and in particular Norfolk Broads Direct to promote the Green Boat Mark Scheme. This year the show was timed to take place in the final week of The Broads Outdoors Festival focusing on the promotion of greener boating. A variety of electric, wind and human powered vessels were demonstrated at the event and visitors were encouraged to take them on the water to try out.
- 3.3 While the event was well attended with 484 members of the public attending the future of the event is currently being reviewed as it has been identified that there is a need for commercial sponsorship to make the event financially viable.

4 Electric Charging Points

- 4.1 In order for electric boaters to be able to use and enjoy the Broads it is essential that charging facilities are available throughout the river system. The Authority therefore developed a ten year strategy in 2006 to develop the provision of charging points at Broads Authority moorings. At that time the Authority had 16 charging units in various locations around the Broads system. Currently there are 28 charging units and some of the new units have been funded through the EU Interreg STEP Project. A number of private charging points are also situated throughout the system. Work on developing future locations is informed by a user survey which was carried out when the strategy was being developed and ongoing customer feedback. A number of new sites are currently being investigated by the Authority for delivery this year.
- 4.2 The ambition of the strategy is to increase the provision of electric charging points at a minimum of one new site per year, either by extension of existing

provision or by expanding the network to new sites where electricity connection can be achieved at reasonable cost. The continued development of the moorings network through the Integrated Access Strategy also considers the feasibility of providing charging points at new mooring sites.

- 4.3 The cost of installing a new charging point varies from approximately £3,000 to £10,000 per unit. The cost of providing an individual unit is affected by a range of factors including the availability of electricity supply, the distance of cabling required to link into the supply and the isolation of a number of the Broads Authority's 24-hour moorings. All the units installed by the Broads Authority allow for 16 amp and 24 amp charging which means that they can be used for domestic power by hire craft and for battery charging by electric powered boats. While having the ambition to see more electric powered craft using the Authority's charging points their use by hire craft for domestic supply is also valuable as it can reduce the amount of time that engines are run at moorings to power appliances.
- 4.4 Currently 210 cabin hire craft in the fleet are equipped for shore power electric hook up but few hire craft are electrically powered. This is primarily because the leading hire boat operators have reservations about the use of weekly electric hire boats as they consider that further advances in battery technology are needed to provide hirers with the same sort of freedom they currently enjoy with diesel powered craft. However there are many electric powered day boats available for hire in the Broads. Day boats are ideally suited to electric propulsion as they are small and can be recharged overnight.

5 Conclusions

- 5.1 The Broads Authority is committed to encouraging further research into electric boating and developing the range of craft that are electrically powered on the Broads. The Authority supports the Electric Boat Association, encourages the development of craft with low wash hulls and continues to give an incentive to electric powered craft through the tolls structure.
- 5.2 Work to improve charging facilities in the Broads is dependent on a number of factors including cost which, in the final analysis, dictates whether the provision of a charging point at a particular location is feasible. The Authority is also keen to explore the possibility of solar powered charging units but it is likely that external funding will be required to achieve a marked increase in the provision of charging points or the development of solar technology. A revised leaflet showing the location of electric charging points throughout the Broads is currently being worked on.
- 5.3 As indicated at paragraph 4.4 it is likely that commercial appetite for developing battery technology will be necessary before weekly hire craft are commonly available on the Broads. However, the number of small electric powered craft and sailing craft using electric outboard motors is likely to increase.

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Appendices: None