

Volume 13 Number 1 Spring 2000

Electric Boat **NEWS**

The Journal of the Electric Boat Association

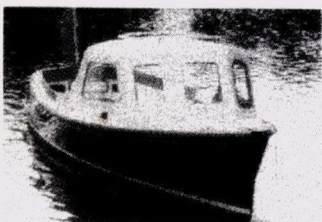
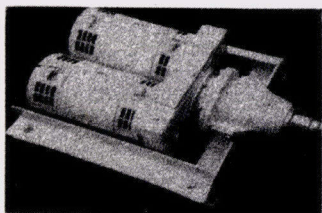


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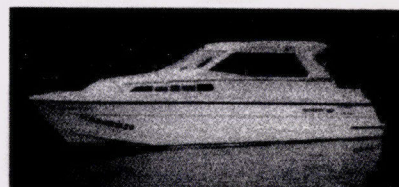


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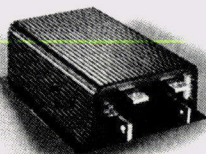
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EBA CALENDAR

April

17th **EBA Event** Launch Supper
Maidenhead

May

5th **EBA Interest** Eco Boat 2000
Oulton Broad, Norfolk

18th-21st **EBA Presence** Boats on Show
Beale Park, Pangbourne

26th-29th **EBA Presence** IWA National Trailboat Festival 2000
Newport, Gwent

June

3rd-10th **EBA Interest** The Great Glen Raid
Scotland

10th & 11th **EBA Presence** Inland Waterways and National
Trail Boat Festival
Newark

18th **EBA Event** Electric Boat Rally
(Inc. presentation of the
Wargrave Trophy)
Cavisham

July

15th **EBA Event** EBA Fenland Event
Hertford Marina, Huntingdon

22nd & 23rd **EBA Presence** River & Launch Weekend
Shrewsbury

28th-30th **EBA Presence** Inland Waterways Festival 2000
Birmingham NIA

August

25th - 28th **EBA Presence** IWA National Waterways Festival
Waltham Abbey

September

2nd **EBA Event** Electric Boat Rally
UTSC Bourne End

16th & 17th **EBA Presence** Silent Sensations
South Walsham Broad, Norfolk

October

TBA **EBA Event** Laying-up Supper

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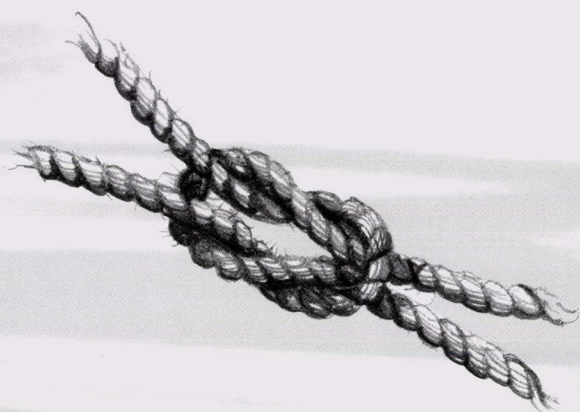
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Editorial

The more observant among you will notice a subtle difference to the design and layout of this edition. This is, in the main, due to a change of printers. Of course the new printers could have reproduced the magazine in exactly the same format as our previous printers, but I suspect they wanted to make their mark, which I, for one, like. No doubt I will be hearing your opinion in

due course! The reasons for the change are hidden away in the item on committee meetings and I will leave you to research them if you feel so inclined.

You will, no doubt, see this as a crude device to encourage you to read something, which you might not have bothered with, and you would be right. One comment that I had on the last issue relating to the meeting's reports was that 'I never read them'. It is not easy to make the reports on the various committee and council meetings dynamic, but I believe they are important. If you want to know what the association is planning and to be part of it, this is where you can find out what is going on and I see them as a plank of the communication within the association.

From close reading of them you could also discover a slight change to the publication schedule of EB News, and that you can expect a Chairman's Letter in December. Among other things, his letter will give you information about the Boat Show at Earls Court pertaining to the activities of our trade members.

This edition has a good input from third parties, which I feel makes the magazine more lively, and I thank them for their contributions. By 'third parties' I mean other than the editorial team. By 'editorial team' I mean me! Please keep them coming in.

Bruce James

Copy Deadlines:

Material to be considered for inclusion in Electric Boat News should be sent to the Editor by the following dates:

Spring	Mid Dec	Summer	Mid March
Autumn	Mid June	Winter	Mid September

THE ANNUAL REPORT

Our Chairman's overview of 1999

Shows

Electric boating was well represented at Earls Court and for the first time a growing number of our Trade members had stands in the same area, presenting the impression that there was an electric boat section. Bossoms displayed their Oyster 14, Creative Marine were showing both the Mayfly 16 and Moth 21 on their stand and Gavin Seward of Brimbelow Engineering was on hand to promote their propulsion systems. New members, the Canadian Electric Boat Company were exhibiting their dayboat for the first time. In another part of the hall, STELCO exhibited Capriole 700 and Val Wyat were marketing the Haines 29, as well as electric boats from Stelco and Creative Marine. Upstairs, Nauticalia retained their familiar position, Fischer Panda displayed an extensive range of generators and Yamaha had a fine array of electric motors.

May saw the first new Inland Waterways Boat Show called Boats 99 held at Beale Park, Pangbourne on the Thames. An entire section was designated to electric boating and the EBA stand was well supported by trade members Bossoms Boatyard, Canadian Electric Boat Company, Creative Marine, Henwood & Dean, Phoenix Fleet, TELCO and Pb Batteries. During the course of the Show we welcomed Peter Freebody and Paul Bennett as new trade members and signed up several new private members.

The Show was extremely busy with electric boats on the water for demonstration and a Phoenix 21 as our electric 'Try A Boat' which was in constant demand throughout the four days of the Show.

A second Windermere Event was organised in June, but did not receive the same trade support as in 1998. New members Lakeland Electric Boat Centre and Water Roo Craft worked tirelessly throughout a cold and wet weekend, with support from LEMCO and Chloride Motive Power. Private members Tony Dunning and Judy and Jim Andrews added invaluable help, but the feeling was that unless more Trade and committee members were willing to share the workload, this would have to be considered a biennial event and indeed has not been scheduled for the year 2000.

At the Thames Traditional Boat Rally, the Simonds Trophy for the best traditional electric boat at the Rally was awarded to Shiel Water, owned by EBA members Terence and Ann Casey.

The Inland Waterways Festival was held over the August Bank Holiday at Worcester racecourse. The EBA was there with its stand plus help from committee members who were kept very busy answering enquiries and promoting electric boating. It is hoped that this level of support will continue to enable the EBA to be represented at the major boating events in the year 2000.

Trade members Canadian Electric Boat Company, Lakeland Electric Boat Centre, Elecsol, Fischer Panda and Reading Marine were all at the Show. John and Sandy Williams brought their Festival 23, sponsored by Tarmac Quarry Products Ltd and used by British Waterways as a community boat. This was the only electric boat on

display on the water and excited a great deal of interest with both press and public.

Although the Southampton Boat Show does not immediately bring electric boats to mind, Bossoms Boatyard again flew the electric flag and this year Water Roo Craft was also present with their 'jet-propelled' craft and Haines Marine also had a stand.

Social Events

The first social rally of the year took place in June at Robin and Eve Bentham's riverside garden in Caversham. Nearly thirty members attended for a pleasant picnic, but sadly only four electric boats took part. The Wargrave Trophy, traditionally awarded for the best decorated boat was won by Chris and Celia Tassell's slipper launch, Sunpenny.

In the East Anglian region, John Williams organised a summer barbecue at Stalham, which was well supported and at which Brian Hedge displayed a selection from his photographic collection and Solar Energy Alliance demonstrated solar powered water fountains.

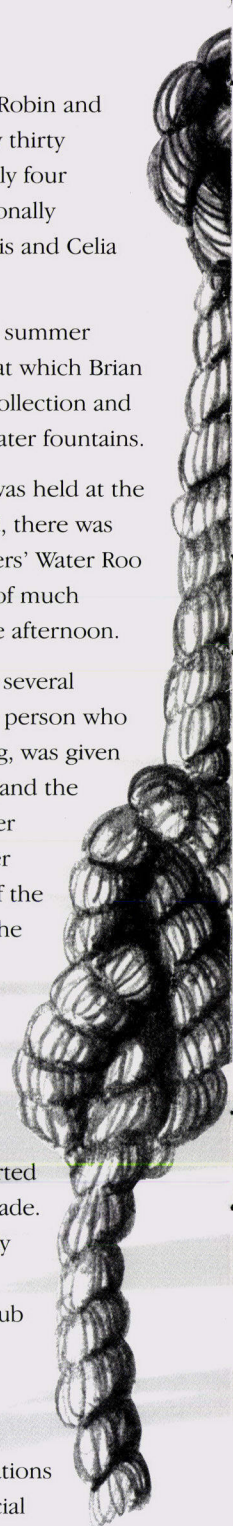
The July E-Boat Rally followed our formal BGM and was held at the Upper Thames Sailing Club. Nineteen boats attended, there was entertainment on the shore for families and Jim Sawers' Water Roo Craft, the jet propelled leisure craft, was the subject of much interest on the water, and indeed was sold during the afternoon.

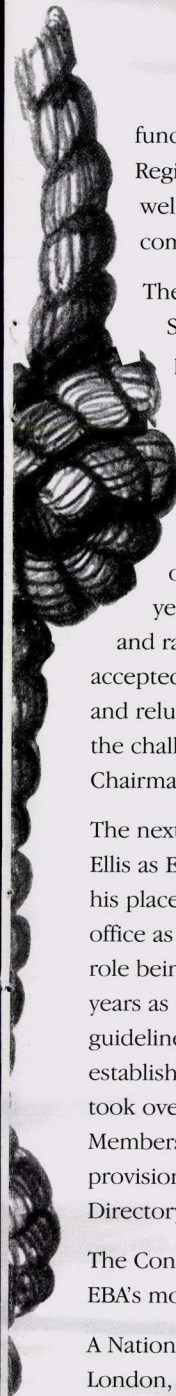
The BGM and E-Boat Rally provided the occasion for several presentations. The St David's Trophy, awarded to the person who has made a significant contribution to electric boating, was given jointly to Phil Horsley and Emrhys and Linda Barrell, and the Emsworth Trophy, for the longest journey made under electric power, was awarded to Richard Leeson. Fraser Brown, current owner of Silver Sail, presented one of the original Lynch outboard motors to the Chairman of the National Motor Boat Museum.

Following the success of the 1999 Rally, it was proposed that an annual E Boat Rally should be established in the calendar, coinciding each alternate year with the BGM.

Cookham Regatta in early September was well supported and some nineteen electric boats took part in the parade. However, as mooring and disembarking was extremely limited at the Regatta, it was felt that in future EBA members might meet at the Upper Thames Sailing Club for the rally and social and then be encouraged to participate in the parade and support the Regatta at Cookham.

It had been decided by the organisers of Silent Sensations in Norfolk that the 1999 event was to be mainly a social





function and the EBA was therefore represented by our Regional Director, John Williams. The day was a success and well supported, so it is hoped that in future, it will be a combined trade and social event.

The last social event of the year was the traditional Laying Up Supper in October, and as this has been increasing in popularity over the past three years, it has been suggested that a second dinner be arranged in the Spring, as a Launching Supper.

Committee Matters

There were several changes in Officers during the course of 1999, the first being a change of Chairman. After five years of tireless effort to promote electric boating in the UK and raise the profile of the EBA to its present status, Phil Horsley accepted promotion within his company, Chloride Motive Power, and reluctantly resigned as our Chairman. I was happy to accept the challenge of continuing Phil's work and was voted in as Chairman early in the year.

The next change of committee came with the resignation of Tony Ellis as Editor of EB News and the appointment of Bruce James in his place. Paul Jackson had completed his agreed two-year term of office as User Group Chairman and stood down at the BGM, the role being taken up by Ian Rutter. Peter Cook had served several years as our Treasurer and in that time had established budget guidelines for the Association and played a major role in establishing EBA policies. Upon his resignation in July, Brian Pickess took over the finances as Treasurer. Richard Leeson resigned as Membership Secretary in September and Barbara Penniall has provisionally taken on that role in order to produce a Membership Directory to be distributed to all EBA members.

The Constitution of the Association has been rewritten to reflect the EBA's more prominent role in determining inland waterways policy.

A National Council was established, meeting twice a year in London, to which the President, Vice-Presidents, Regional Directors, Technical Liaison Officer, Membership Secretary, Trade and User Non-Executives and the Executive Committee are invited, and at which meetings major policy matters are discussed and ratified. A smaller Executive Committee comprising the EBA Chairman, Trade and User Group Chairmen, Secretary, Treasurer, PR Officer and EB News Editor meet every other month for the routine administration of the Association. It is anticipated that this will improve the efficiency of the day-to-day running of the Association and its communication with members.

Within this constitution, several new appointments were made at the BGM and we now have a strong team of committee members willing to share the increasing workload undertaken by the Association. A full list of Officers is published in the enclosed Directory. The National

Council has already met twice and a report of their most recent decisions will be found under Committee Meetings.

Rapport had been established in 1998 with the previous Waterways Minister, Alan Meale, and this relationship continued into 1999. Discussions have been initiated between the EBA, British Waterways, the British Marine Industries Federation and the DETR for the promotion of electric boating in the Lake District. A date had been arranged for the first meeting when Lord Whitty as the new Waterways Minister succeeded Alan Meale. I am pleased to report that a further date has been set for a meeting to discuss this potentially important development.

The EBA is always represented at the Parliamentary Waterways Group, and since the change of Government these meetings have been held on a more regular basis with the Electric Boat Association at the forefront of any relevant discussions. Between 40 and 50 copies of the EB News are distributed at these meetings and it is noticed that members are now asking for the magazine.

Discussions are also in place with the Environment Agency and British Waterways regarding the promotion of electric boats on the inland waterways. These discussions are slow in maturing, but progress has been made, as can be seen by the installation of charging points on the Thames - albeit with a few teething problems. BW have undertaken a survey on possible hook-up points on their waterways and as soon as we have sufficient material, it is our intention to compile a list of charging points throughout the network of inland waterways.

User Group Members responded to our appeal at the BGM, and more help was forthcoming at shows later in the year. There was a good response from our newer Trade Members, but there was a marked lack of response from our established Trade Members, who were not very supportive throughout 1999. As these members stand to gain the most from the promotion of electric boats, perhaps they should not leave it entirely to the efforts of the EBA.

The capital cost of electric boating is very high and maybe Trade Members could suggest ways this could be reduced. As a Trade Member myself, I understand the problems of the one-off manufacturer as opposed to large scale, and perhaps we should consider some form of co-operative form of merchandising. Another method might be for the boatbuilders amongst our Trade Members to do what they do best and employ EBA trade engineers to handle the propulsion side of the package.

In this new Millennium, we have the opportunity to move forward with electric boating faster than ever before. The EBA is now considered a voice to be listened to by the government and inland waterways authorities and it is our intention to represent ALL our members in the development and promotion of electric boating to the best of our ability.

JIM KEATING
Chairman

COMMITTEE MEETINGS

Executive Committee Meeting 1st January, 2000

MATTERS ARISING

Hybrid Power. The information sheet on hybrid power is in course of preparation by John Hustwick.

CHARGING POINTS

The EA have experienced some problems with their swipe cards. BW expects to be able to report on their progress shortly.

HONOURARY MEMBERSHIP

This has been offered to Alun Meale.

LAKE DISTRICT DEVELOPMENT

We have been in contact with Lord Whitty, the new Waterways Minister, endeavouring to continue the dialogue started with his predecessor.

CHAIRMAN'S REPORT

The main item was a report that Jim had received from John Williams concerning the Norwich City Council. They are conducting a feasibility study in which it is proposed that electric boats be used as water buses and taxis in a designated area within the Norwich City boundary and as an adjunct to a wider park and ride scheme.

Jim also discussed his proposals to improve contact between our trade members and the committee. He recognised that under Phil Horsley contact had been maintained in this area partly as job related fall-out.

SECRETARY'S REPORT

Barbara had been able to use what is traditionally a quiet period to update the membership records, a task that is nearing completion.

The insurance scheme had produced a modest income for the Association. A letter is to be inserted in the next edition of EB News to maintain awareness of the scheme.

EB NEWS

Bruce reported on the late circulation of the last edition. It was agreed to change printers, as a local firm would reduce delays exchanging copy and proofing.

Copy dates were reviewed and modified in an effort to co-ordinate publication with Council meetings, thereby speeding up the dissemination of information to members.

OTHER MATTERS

Work continues on the schools challenge. The EBA leaflet will be redesigned. Regional directors of the EBA will be encouraged to attend local meetings of the Association of Waterways Cruising Clubs, of which the EBA is a member.

National Council Meeting 1st March, 2000

This meeting was an informal meeting of the National Council, held at the Electricity Association offices at Millbank London.

SCHOOLS CHALLENGE

A draft contract has been received from Olden & Co. This generally reflected our mutual intentions, but there are some points of detail that need clarification. The project continues to run to its amended timetable. There was some concern expressed about the workload that the project would put on the Association. Anticipated sponsorship income will be used to organise any necessary additional help, and the project will not go ahead if it does not attract sponsorship.

THE EMSWORTH TROPHY

At the request of the Council, Edward Hawthorne had been asked to submit his ideas for a revised version of the rules for the Emsworth Trophy. The aim of the revision is to encourage longer voyages by electric boats and to differentiate between different systems of recharging to positively reflect the more eco friendly systems. Where a generator carried on board is used, any distance covered while the generator is on should be excluded from the total distance claimed. Points are to be awarded on a variable scale. It was agreed that the revised format would be used for a year and then amended in the light of experience. For further details contact Barbara Penniall. See also Home News in this edition of EBN.

CHAIRMAN'S REPORT

In previous meetings the subject of travelling expenses for those attending the National Council had been discussed, but no decision reached. It was recognised that with meetings held in London, some individuals incur significant expense. Rather than create a complicated formula it was agreed that, to ensure that no member felt unable to attend due to cost, individual could if they wished submit a claim for their out of pocket expenses. The treasurer will produce some appropriate guidelines.

It was noted that membership fees have been unaltered for five years. After a brief discussion it was agreed to increase fees as follows: Private Members will be

£25.00, and for trade members £52.00, £78.00, £156.00 and £225.00 respectively. Individual renewal notices will be prepared.



The Chairman - Jim Keating



Jim Keating presenting flowers to Barbara Penniall

It was agreed that the system whereby a trade member can offer their customers one year's free membership of the Association would be continued for this year. The current conditions will continue to apply.

The next Executive Committee will review advertising charges in EB News.

A list of potential sponsors had been generated, and letters written to them. The response had been disappointing, a euphemism for nil! Undeterred, our search will continue.

Future publication dates for EB News were agreed as mid January, April, July and October. This schedule meshes in with the dates of committee and council meetings, thereby accelerating the dissemination of information. It was recognised that these timings made it difficult to have a timely preview of the Earls Court boat show. It was agreed to overcome this with a Christmas letter from the chairman, including a preview.

Jim Keating then went on to express his concerns that it had proved difficult to organise events in different parts of the country, due in part to an apparent reluctance for trade members to work together to organise them. John Williams expressed surprise at this comment. It was agreed that when trade members exhibit at shows, every effort should be made to group them, thereby displaying 'electric boating' as well as individual stands.

It was reported that the Association, represented by Jim Keating and Ian Rutter, were to meet with Lord Witty, the new Waterways Minister, on 20th March. Representatives from the British Marine Industries Federation and British Waterways had also been invited to attend. This was one of a regular series of meetings, which the Association had initiated with Government, and which are a vital part of our public relations activities.

The new Recreational Craft Directive will outlaw the old BMC type diesel engine, so owners will be looking for clean replacements, providing business opportunities for our members.

British Waterways have announced that £29 million is to be spent on the canals over the next few years, some of which will be directed to supporting electric boating.

SECRETARY'S REPORT

Barbara Penniall reported that new member enquiries are still coming in, but at a slower rate than for the same period last year. The membership database has been reorganised and it is now possible to identify and contact lapsed members, some of whom have rejoined. There are currently 176 private and 39 trade members.

The Directory of Private Members is to be published in the spring edition of EBN. This is for the use of Association members only and not for commercial or trade purposes. Appropriate security steps will be taken.

TREASURER'S REPORT

In the absence of Brian Pickess, Barbara reported that funds currently stand at £3,014.76 in the current account and £6,665.50 on deposit.

ANY OTHER BUSINESS

Eco Boat 2000 was discussed. This conference and trade show is being organised by the Broads Authority, but arrangements are late. The Association has offered to deliver a paper at the conference as it had been seen as an ideal platform for us. However, we have not been invited to do so, and it is now felt to be too late for us to do it justice. It was therefore decided that the association would not take part in Eco Boat 2000.

John Williams reported that he had received a request that the Association should assist the Broads Society this year with the organisation of Silent Sensations. This will be held on 16th and 17th September, with a barbecue being held on Saturday evening at the show site. For the future, the event is to be organised by the Broads Society, the Electric Boat Association and the Museum of the Broads. John was thanked for his efforts.

John then reported on the Norwich City Council's project of a park and ride, using water taxis to bring passengers into the city centre. The city council have expressed an interest in the taxis, particularly within the city boundaries, being electric powered.

John also reported on Brian Ellis' charging system. Floating charging stations using solar and wind power are to be produced. This project is being promoted with the Broads Authority. It will be on show at The Electric boat Show at Hartford Marina.

It was agreed to arrange the Launching Supper at the Maidenhead Rowing Club.

Robin and Eve Bentham have kindly offered accommodation at Caversham for a rally and suggested the 18th June.

The date of the next meeting of the Executive Committee was agreed as 10th May and the next Executive Council the 13th September.

COMMITTEE MEETINGS

Report on Meeting with the New Waterways Minister

The following report on the meeting with Lord Whitty, referred to in the Council Minutes, was submitted by Ian Rutter. The meeting took place on 20th March 2000 at The Department of the Environment, Transport and the Regions.

Present at the meeting were Lord Whitty, Waterways Minister, Colin Jones, Civil Servant, Jim Keating, EBA, Ian Rutter, EBA, Emrhys Barrell, Thames Electric Launch Co, Howard Pridding, BMIF, Dave Fletcher, Chief Executive, BWB.

Jim requested the meeting as a follow up to the previous meeting with the last minister Alun Meale.

Lord Whitty explained that he did not have the special interest in the Lake District that Alun Meale had and would like to listen to what the EBA had to say.

Jim gave a resume of what had happened up to now with some points about the advantages of electric boats and said that we needed government help to push their use to much greater numbers.

Howard Pridding emphasised that we were not pushing a new experimental technology, but were using standard mass-produced and widely tested motors and batteries.

Emrhys presented the main argument for the specific help that we needed. This was for a massive increase in Charging Points. The uptake of electric boating would not expand until customers could be confident of finding a charging point at the end of at least a two-day cruise. These charging points must be sited 'throughout the waterway system, on rivers, canals and places like the Broads and Lake District. Emrhys gave Lord Whitty a folder showing the details of the charging points. These are industry standard units used in marinas and caravan parks

throughout Europe. Other details in the folder showed the various components used in electric boating – emphasising involvement of large companies, such as Chloride.

Dave Fletcher had some interesting and novel ideas to bring power to the bankside of many canals. He will be pursuing these with renewed interest and if successful they would form a backbone for future charging points.

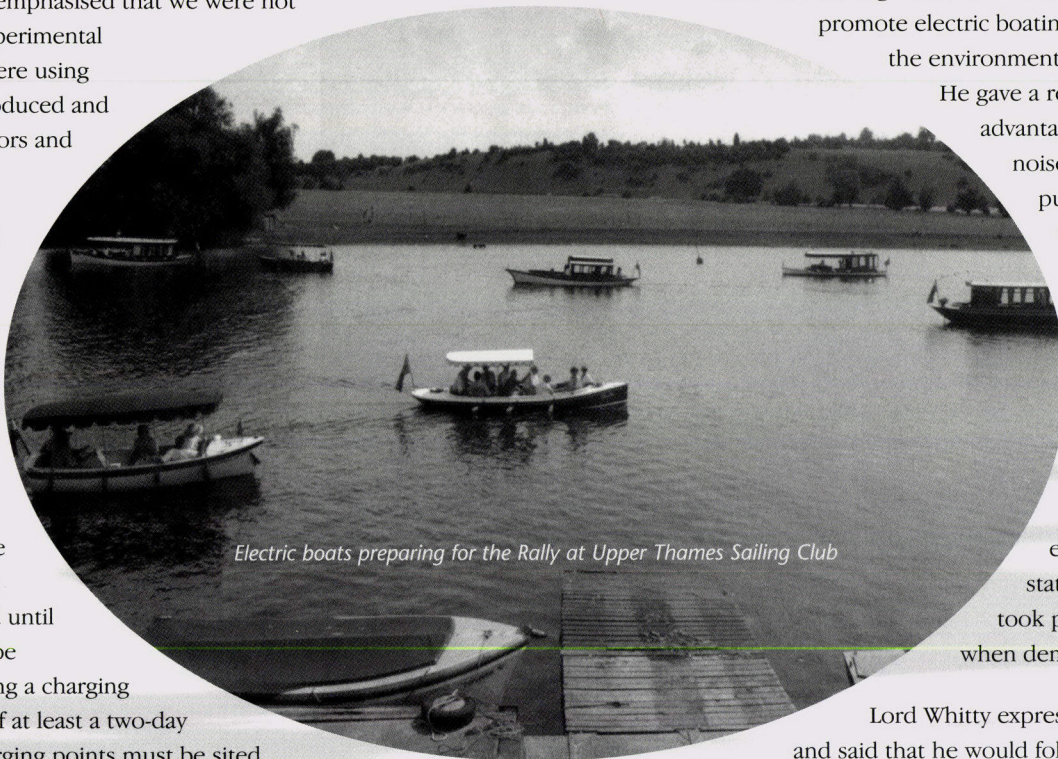
Emrhys stated that there had been some false starts in the past. One public electric utility in the midlands had installed a series of charging points on the local canals with a hire boat operator creating a fleet of electric boats specifically to use the points. When the utility had been privatised policy had changed and the hire boat operator had been left with a fleet of electric boats with no way of charging them. A modest target should be a charging point every 20 miles. This does not mean starting from scratch. There are already charging points at marinas and British Waterways have a policy of converting Elsan disposal stations into Pump Out stations. This will provide a supply of electricity for possible charging points.

Howard Pridding asked the Government to promote electric boating because of the environmental advantages.

He gave a resume of these advantages regarding noise pollution by not putting oil into the water, slower speeds causing less bank erosion etc. He also said that while the electricity had to be generated it was done in an efficient power station and charging took place overnight when demand was lowest.

Lord Whitty expressed great interest and said that he would follow up the points

raised. Ian Rutter asked if he was interested in coming out on an electric boat. Lord Whitty said he would like to but was forbidden to leave the office due to the Government not having a majority in the House of Lords!



Electric boats preparing for the Rally at Upper Thames Sailing Club

BOAT SAFETY

"A personal experience of the Boat Safety Scheme"

By John Hustwick - Technical Liaison Officer.

This is a summary of my own experience in obtaining a Boat Safety Certificate. It is by no means the definitive answer to getting the certificate but I hope it proves encouraging to anyone embarking on this process.

To help guide me with what I needed to do I obtained the Boat Safety Scheme pack from BW at Watford. This was free and came in several sections including the scheme details, a set of guidance notes, a checklist and a list of approved surveyors and/or examiners. I found it very helpful. From the list of surveyors I found that there was one by the name of Roger Roberts who lived in Maldon only a matter of 5 miles away. I spoke to him several weeks before I was actually ready for him, which was lucky because not only was he going on holiday but also I was to be his first electric boat client and he needed time to go over what that involved.

The survey went very well and I found Roger a very amiable person and easy to talk to. He explained what he was looking for and we discussed all the points relating to an electric boat. I had the clear impression that he wanted me to succeed in getting the certificate and he would do his best to help me. At the end of the survey there were a couple of extra things I needed to do which I will discuss later. When he left we had agreed I would call him as soon as I had done the work. This was only about a week later. When he arrived he was clutching a completed certificate in his hand. When I said how come he had already completed the certificate he said that he knew I would do the work exactly as required because he had seen the effort I had already made - nice compliment. His fees were £40 for the survey and certificate and he did not charge me for the second visit.

Now a bit about my boat "Rhapsody" and some of the details to do with the Safety Scheme. The hull is the well-known 18 foot Frolic of what was the Steam & Electric Launch Company. It was built in 1982 and started out as a steam launch, which is how I bought it in 1995. I had intended to completely refurbish it including making a number of improvements to the engine. I realised it would be a fairly lengthy process. Anyway I wanted to use the boat and began to wonder what to do. By chance I saw an article in the Watercraft magazine about an electric auxiliary drive for a sailing boat. Before I knew it I was being talked into joining the EBA by none other than Barbara Penniall and at the same time discussing batteries, motors and controllers with Rupert Latham who was now running Stelco Electroyacht. Actually I was renewing my contact with Rupert as I had talked to him a few years previous about steam launches.

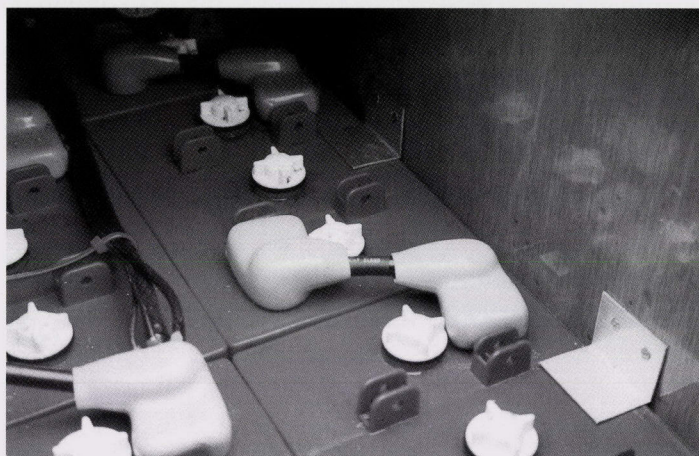
A decision was made and the boat was stripped bare, I even removed the decks as these were looking quite poor. After a lot of head scratching, discussions with Rupert and a yacht consultant friend, a layout design began to take shape. Having used the boat I feel the layout has proved quite reasonable. Eighteen feet does not

give you too much room to play with, especially as the Frolic has quite a narrow hull. When the boat was finished my yacht consultant friend gave it a full survey for the insurance for free, well worth the cost of a few beers!

I will now go over some of the more important points to do with the Safety Scheme. Here I should point out that "Rhapsody" is an open dayboat with no cabin and no gas, or fuel on board which made it less onerous in terms of the safety aspects.

Battery Installation

I have 8 CMP Trekker Monoblock 6V batteries rated at 175Ah each connected in a series/parallel arrangement to give 350Ah at 24V. 6 batteries are contained in a full width locker just forward of midships and 2 are contained in a seat locker immediately aft of the main locker. I restrained them in the forward/aft and side to side directions but not vertically. They must be held from moving vertically as well, an aspect of safety commonly misunderstood apparently.



The main battery locker with the brackets added to stop vertical movement

You are actually allowed 10mm in any direction to be precise. Note that the battery terminals are covered. Ventilation of the battery compartment is very important and I have hinged locker tops that can be opened during charging. If you intend living on the boat whilst charging is taking place, I suggest you pay particular attention to this point.

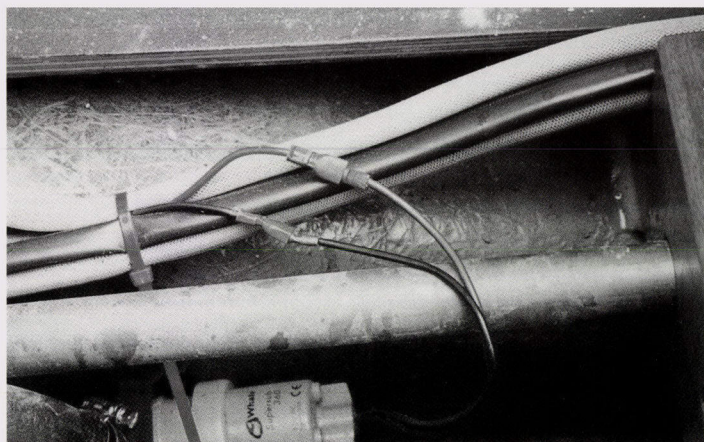
Battery Master Switch

The battery master switch must be easily accessible and capable of shutting down the complete electrical system. The switch should be close to the batteries. My switch is still accessible when the seat cushions are in place.

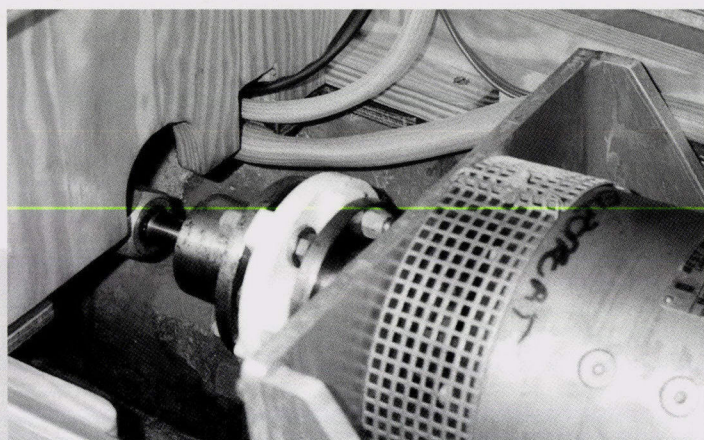
BOAT SAFETY

Cabling

The main power cables are 25mm 2 multi-stranded conductors and have crimped lugs on each end. It is important to ensure the cables are adequate for the job. The lugs should also be the correct size. These are designated by cable size and hole size, for instance a 25/10 lug is for 25mm 2 cable and has a 10mm diameter hole through it for attachment. I bought the cable and lugs from an electrical hardware supplier in Maldon. They also rented me the heavyweight crimping tool needed for the lugs for £5 a day. If you do all the measuring and cutting of the cable first, the crimping can be done very quickly and I might add quite easily, but mind your fingers. For the navigation lights, horn, bilge pump etc. I used cable that is easily available for the motor trade and has adequate current carrying capacity. Crimp connectors are also readily available for this size of cable. Cables need to be adequately supported every 300mm, or if in a conduit, the conduit needs to be supported every 900mm. I needed some extra supports. Pads that can be glued down which take cable ties are quite satisfactory. Cable ties should be used to keep things tidy and I found expandable sleeving that was sold by RS Components to be very useful as a form of conduit.



The cable runs under the floor by the stem tube. Note the lighter gauge wiring used for the bilge pump connection

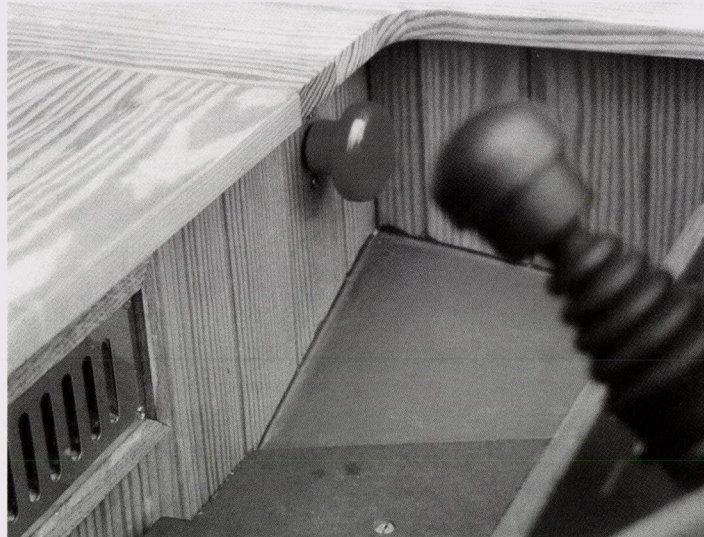


The motor compartment with the control and power cables in sleeving

It is obviously important to keep cables away from rotating shafts and machinery. One point worth noting was that I left open some seat tops, which I was going to permanently fix down, just so the surveyor could see the cable runs underneath. This saved having to take things apart after they were screwed down tight.

Motor Isolating Switch

The switch is under the edge of the seat and is a pull-on, push-off switch for emergency stopping of the motor. It cuts the power to the controller and needs to be accessible from the helm position. The Zapi high frequency controller is housed in the seat locker behind the switch. The switch is not too vulnerable to being accidentally knocked but you should be careful in choosing a suitable position.



The Motor Isolating Switch

Shore Power Supply

I have a Zivan high frequency battery charger on board the boat and therefore need a shore power supply. The power supply panel supplied by Rupert Latham also has a residual current device (RCD) fitted to it.

This is to protect the system on board should there be a problem. However this is not strictly necessary as I do not have mains power generated on the boat. The shore supply to the boat should have an RCD at the shore end i.e. at the socket where you plug the extension cable in. This will then protect the whole system should the cable, or plugs etc. get damaged. A long extension cable can be quite vulnerable as anyone using an electric mower probably realises. Remember water and electricity does not mix. The plug to connect to the extension cable is also shown in this picture. It retracts behind the cover and when closed the cover is only about 12mm from the bulkhead. This picture also shows the 12V isolator switch. Power is fed to this from a 24V to 12V converter switch is housed in the main battery compartment. Do not try to tap a 12V

supply from only a couple of 6V batteries as it can cause damage due to the imbalance of load. The converters are not very expensive for low current draw, such as navigation lights, horn, bilge pump etc.

Fuses

Fuses, or circuit breakers, of the correct rating should adequately protect all circuits. I have a fusebox for the 12V system under the helm seat. Do not forget to have spare fuses with you especially if you have an electric bilge pump.

Motor Installation

The drive motor should be securely fastened in the boat. I have my motor rigidly fixed to the hull as shown in picture 4. I will discuss the reason for this in another article on noise and vibration. If your motor is fitted on anti-vibration mounts these should also be well secured and in good condition.

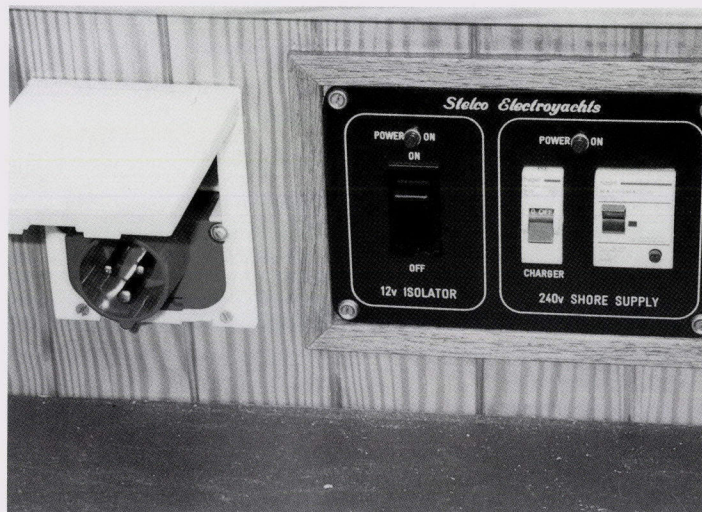
Fire Extinguishers

Be very wary about this because not all fire extinguishers sold actually meet the Safety Scheme requirements. If you have not yet purchased them make sure you know what type approvals are acceptable otherwise you might be wasting your money. Apparently according to Roger Roberts this has caused quite a few problems especially as fire extinguishers are not cheap items. For my boat I only needed one extinguisher, as I did not have cooking and other fuel burning facilities on board. If I had I would have needed

two extinguishers for the size of boat. Obviously they need to be kept in an accessible position as you never know when you might need them and that may not be for your own boat.

I hope my experience of the Boat Safety Scheme will be helpful ! to those of you ! trying to get the certificate. I have not covered every aspect but I can provide more information and attempt to answer any questions you may have.

Power Supply Panel



Safety Inspections

The following letter was sent to Barbara Penniall, but as it is pertinent to this item on the Boat Safety Scheme we hope that Mr Sadler will not mind it being published.

Dear Mrs Penniall,

Safety Certificate

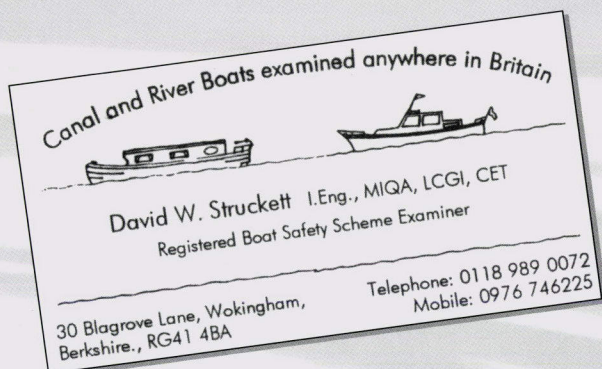
Thank you for your help in finding an examiner authorised to issue a safety certificate. Following your telephone message I got in touch with Mr Struckett who issued a certificate for a fee of £40.

I found Mr Struckett, whose full time job is an instructor at the Army Apprentices School at Aborfield, very easy to deal with and reasonably unfussy (by the standards typical of inspectors!). Mine was the first electric boat that he had been asked to certify and I think that he would welcome more such work. My experience leads me to recommend him highly to other EBA members in this area.

With best wishes for 2000.

Yours sincerely

Jerome Sadler



A PASSAGE TO INDIA

Sylvia Rutter reports on an interesting assignment to repair electric boats

It began with a telephone call: "The Maharana of Udaipur needs somebody to mend the solar-powered electric boats on his lake". Would Ian be able to help? And the best bit "Of course you would be welcome to go too and stay as the Maharana's guest in his marble palace on the lake shore". Ian was at Boats 99 at Beale Park and came home full of enthusiasm for a number of interesting projects. "I've got an interesting project too", I said....



Lake Palace from boat workshop

Several months later, after lots of questions to Malcolm Moss who had started the whole thing off (such as 'where is Udaipur?' - Answer: northern India, south of Delhi, and 'what is a Maharana?' - Answer: the rulers of Udaipur are titled not Maharaja (Great Ruler) but Great Warrior because of their courage in battle), Ian and I were in a small and very crowded aeroplane flying from Delhi to the lake city of Udaipur. At the bottom of Ian's suitcase were a propeller and gearbox, a volt meter and a comprehensive tool kit which to my



RA 11 in front of the Palace

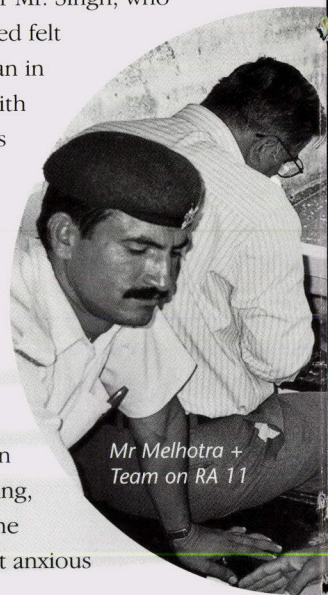
great relief had not set off the security alarms at Delhi Airport. One question, which had not really been answered, was exactly why the Maharana's two electric boats were not working. The smaller one apparently had sunk in a storm and spent twenty-four hours under water, which sounded ominous. The larger one just had a tendency to stop in the middle of the lake, often with distinguished guests on board, necessitating an ignominious tow

back to shore. As well as not knowing the cause of the problems, Ian had very little idea what equipment would be available in India, whether local manufacturing was possible and how long it would take to get replacement parts.

Our arrival at the Palace was straight out of a fairy tale - courtyard with fountains, huge brass-studded doors, a giant chandelier, beautiful ladies in saris to welcome us with garlands and lead us up a marble stairway to a suite with two private terraces overlooking the lake and the town. The first working day brought us back to reality. The smaller boat, Ra I, was in a very sorry state, needing fibreglass to repair a hole and several coats of paint before it could even go back in the water. 'When will it be done?' asked Ian. 'Tomorrow' they said. 'Tomorrow' in India is a bit like 'manana' in Spanish but without the same degree of urgency. However, things began to look up when we met the chief electrician, Mr. Melhotra. He was enthusiastic about the electric boats and keen to have them working again.

Ian soon found that the way to get things done was to have a detailed discussion first with the man in charge of the team. For the electric boats there were three teams - the electricians under Mr. Melhotra, the boatmen who drove the boats and wore their uniforms, including wool berets, with great pride even on the hottest day and the maintenance team under Mr. Singh, who had gold earrings and wonderful embroidered felt slippers which curled up at the toes. The man in charge would then have a long discussion with his team in which they all had a say. This was in Hindi, but, as technical terms were in English, it was Hindi liberally sprinkled with phrases like 'DC motor' and 'solar voltage'. Then the man in charge would come back to Ian with everyone's comments. These discussions could last some time but once everything was agreed, work got underway surprisingly fast. And when all three teams were pulling together Ian would disappear in the middle of an excited crowd, some working, some giving instructions, some arguing, some offering advice and some just passing by, but anxious not to miss anything!

Trials began on Lake Pichola in the larger boat, Ra II, using the new prop and gearbox that Ian had brought out from England. The lake is stunningly beautiful - one reason it has featured in a number of films, most famously the James Bond film 'Octopussy'. Ian was a bit disappointed that the island with the pure white marble palace in the middle of the lake was not occupied solely by glamorous women as in the film. In fact it is now a hotel, where William Hague and Ffion spent part of their honeymoon, and a wonderful place



Mr Melhotra + Team on RA 11

Electric Boat Association

UK Trade Member's Product Guide



Batteries

- Brimbelow Engineering
- Canadian Electric Boat Company
- Chloride Motive Power
- ELECSOL Europe
- Peter Freebody & Co.
- Lakeland Electric Boat Centre
- L.E.M.C.O.
- Nauticalia Boats
- Pb Batteries (SE) Ltd
- Phoenix Fleet Ltd
- Reading Marine Co.
- STELCO UK Ltd
- Stelco Yachttechnik (UK),
- Thames Electric Launch Company
- John Williams Boats

Battery State Meters

- Brimbelow Engineering
- Curtis Instruments (UK) Ltd
- Designeta Consultants
- Peter Freebody & Co.
- Lakeland Electric Boat Centre
- L.E.M.C.O.
- Nauticalia Boats
- Phoenix Fleet Ltd
- Reading Marine Co.
- STELCO UK Ltd.
- Stelco Yachttechnik (UK)
- Thames Electric Launch Company
- John Williams Boats

Boat Hire - Launches

- Lakeland Electric Boat Centre
- John Williams Boats
- Phoenix Fleet Ltd
- Rivertime
- G H Rose & Son
- Swancraft & Benson Waterfront (STELCO UK Ltd)

Boat Hire - Narrowboats

- Castle Narrowboats

Boat Sales

- Amourelle Products Ltd.
- Bossoms Boatyard Ltd
- Canadian Electric Boat Company
- Creative Marine
- Peter Freebody & Co.
- Haines Marine
- Lakeland Electric Boat Centre
- Nauticalia Boats
- Phoenix Fleet Ltd
- Reading Marine Co.
- STELCO UK Ltd
- Stelco Yachttechnik (UK),
- Thames Electric Launch Company
- John Williams Boats

Chargers

- Pb Batteries (SE) Ltd
- Brimbelow Engineering
- Chloride Motive Power
- Curtis Instruments (UK) Ltd
- Designeta Consultants
- ELECSOL Europe
- Peter Freebody & Co.
- Lakeland Electric Boat Centre
- L.E.M.C.O.
- Morven Electronics Ltd
- Nauticalia Boats
- Phoenix Fleet Ltd
- Reading Marine Co.
- STELCO UK Ltd
- Stelco Yachttechnik (UK)
- Thames Electric Launch Company
- John Williams Boats

Charging Pillars/Points

- Nauticalia Boats

Controllers

- Brimbelow Engineering
- Curtis Instruments (UK) Ltd
- Designeta Consultants
- Peter Freebody & Co.
- Lakeland Electric Boat Centre
- Laurence, Scott & Electromotors Ltd
- L.E.M.C.O.
- Nauticalia Boats
- Phoenix Fleet Ltd
- Reading Marine Co.
- STELCO UK Ltd
- Stelco Yachttechnik (UK)
- Thames Electric Launch Company
- John Williams Boats

DC-DC Converters, DC-AC Inverters

- Brimbelow Engineering
- Chloride Motive Power
- Curtis Instruments (UK) Ltd
- Designeta Consultants
- Peter Freebody & Co.
- Lakeland Electric Boat Centre
- L.E.M.C.O.
- Morven Electronics Ltd
- Nauticalia Boats
- Phoenix Fleet Ltd
- Reading Marine Co.
- STELCO UK Ltd
- Stelco Yachttechnik (UK)

Electric Conversion

- Brimbelow Engineering
- Creative Marine
- Curtis Instruments (UK) Ltd
- Designeta Consultants
- Peter Freebody & Co.
- Haines Marine
- Henwood & Dean Boatbuilders
- Lakeland Electric Boat Centre
- L.E.M.C.O.
- Lynch Motor Co.Ltd.
- Nauticalia Boats
- Phoenix Fleet Ltd
- Reading Marine Co.
- STELCO UK Ltd
- Stelco Yachttechnik (UK)
- Thames Electric Launch Company
- John Williams Boats

Electric Fun Boats/Leisure Craft

- Amourelle Products Ltd.
- Bossoms Boatyard Ltd.
- Water Roo Craft Ltd

Electric Fuel Cells

- Zemar Ltd

Electric Inboard

- Brimbelow Engineering
- Designeta Consultants
- Peter Freebody & Co.
- Haines Marine
- Lakeland Electric Boat Centre
- Laurence, Scott & Electromotors Ltd
- L.E.M.C.O.
- Lynch Motor Co.Ltd.
- Nauticalia Boats
- Phoenix Fleet Ltd
- Reading Marine Co.
- STELCO UK Ltd
- Stelco Yachttechnik (UK)
- Thames Electric Launch Company
- John Williams Boats

Electric Outboards

- Canadian Electric Boat Company
- Lakeland Electric Boat Centre
- Lynch Motor Co.Ltd.
- Nauticalia Boats
- Thames Electric Launch Company
- John Williams Boats

General Boat Builders

- Creative Marine
- Peter Freebody & Co.
- Haines Marine
- Henwood & Dean Boatbuilders
- Nauticalia Boats
- Phoenix Fleet Ltd
- Reading Marine Co.
- G H Rose & Son
- STELCO UK Ltd
- Thames Electric Launch Company
- John Williams Boats

Generators

- Brimbelow Engineering
- Fischer Panda UK Ltd
- Peter Freebody & Co.
- Lakeland Electric Boat Centre
- Nauticalia Boats
- Reading Marine Co.
- Stelco Yachttechnik (UK)

Hour Meters

- Curtis Instruments (UK) Ltd
- Designeta Consultants
- Peter Freebody & Co.
- Lakeland Electric Boat Centre
- L.E.M.C.O.
- Nauticalia Boats
- Phoenix Fleet Ltd
- Reading Marine Co.
- STELCO UK Ltd
- Stelco Yachttechnik (UK)

Hybrid Motors

- Brimbelow Engineering
- L.E.M.C.O.
- Lynch Motor Co.Ltd.
- Phoenix Fleet Ltd
- Reading Marine Co.
- STELCO UK Ltd
- Stelco Yachttechnik (UK)
- Thames Electric Launch Company
- John Williams Boats

Plugs, Sockets, Connectors

- Peter Freebody & Co.
- Lakeland Electric Boat Centre
- Nauticalia Boats
- Phoenix Fleet Ltd
- Reading Marine Co.
- STELCO UK Ltd
- Stelco Yachttechnik (UK)
- Thames Electric Launch Company
- John Williams Boats

Repairs

- Bossoms Boatyard Ltd
- Creative Marine
- Peter Freebody & Co.
- Haines Marine
- Henwood & Dean Boatbuilders
- Lakeland Electric Boat Centre
- Nauticalia Boats
- Phoenix Fleet Ltd
- Reading Marine Co.
- STELCO UK Ltd
- Stelco Yachttechnik (UK)
- Thames Electric Launch Company
- John Williams Boats

Restaurant/Party Boat Charter

- Grebe Canal Cruises

Sterngear, Steering Etc.

- Brimbelow Engineering
- Peter Freebody & Co.
- Lakeland Electric Boat Centre
- Nauticalia Boats
- Phoenix Fleet Ltd
- Reading Marine Co.
- STELCO UK Ltd
- Thames Electric Launch Company
- John Williams Boats

Surveyors, Consultants

- Designeta Consultants
- Paul E Bennett
- Peter Freebody & Co.
- Haines Marine
- Lakeland Electric Boat Centre
- Morgan Marine Surveys (also Boat Safety Examiner)
- Nauticalia Boats
- Reading Marine Co.
- Stelco Yachttechnik (UK)
- Thames Electric Launch Company

Trailers

- Lakeland Electric Boat Centre
- Nauticalia Boats

Contacts for Product Guide

Amourelle Products Ltd

Tel: 0118 969 4657 Fax: 0118 962 8682
e-mail: nick@amourelle.co.uk
website: www/electricCanal.co.uk

Paul E Bennett

Tel: 07971 620145
website: www.amleth.demon.co.uk

Bossoms Boatyard Ltd

Tel: 01865 247780 Fax: 01865 244163
e-mail: info@bossoms.co.uk
website: www.bossoms.co.uk

Brimbelow Engineering

Tel: 01692 582707 Fax: 01692 580036
website: www.e-drive.co.uk

Canadian Electric Boat Company

Tel: 01628 621770 Fax: 01628 773802

Castle Narrowboats

Tel: 01873 830001 Fax: 01873 832341
e-mail: castle.narrowboats@btinternet.com
website: www.canaljunction.com/castlenarrowboats

Chloride Motive Power

Tel: 01204 64111 Fax: 01204 62981
e-mail: sales@cmpbatteries.co.uk
website: www.cmpbatteries.co.uk

Creative Marine

Tel: 01692 407843

Curtis Instruments (UK) Ltd

Tel: 01604 629755 Fax: 01604 629876
e-mail: e-mail@curtisinst.co.uk
website: www.curtisinst.com

Designeta Consultants

Tel/Fax: 01628 636500

ELECSOL Europe

Tel: 01244 281171 Fax: 01244 281176

Fischer Panda UK Ltd

Tel: 01202 820840 Fax: 01202 828688
e-mail: info@fischerpanda.co.uk
website: www.fischerpanda.co.uk

Peter Freebody & Co

Tel: 01628 824382 Fax: 01628 820238
website: www.boatbuilder.co.uk

Grebe Canal Cruises

Tel/Fax: 01296 661920

Haines Marine

Tel: 01692 582180 Fax: 01692 582441
e-mail: mary@hainesmarine.co.uk

Henwood & Dean Boatbuilders

Tel: 01491 571692 Fax: 01491 411514
e-mail: hdboat@globalnet.co.uk
website: henley-on-thames.org.uk/river/boatyard.htm

Lakeland Electric Boat Centre

Tel: 01768 482 393 Fax: 0113 295 9025

Laurence, Scott & Electromotors

Tel: 01603 628333 Fax: 01603 610604

L.E.M.C.O.

Tel: 01404 44132 Fax: 01404 47050
e-mail: sales@lemcoltd.com
website: www.lemcoltd.com

Lynch Motor Co.Ltd.

Tel: 0171 607 8141 Fax: 0171 609 3625
e-mail: lynch_motor@compuserve.com
website: www.lynchmotor.com

Morgan Marine Surveys

Tel/Fax: 01772 690232
e-mail: peter@jrbc.freemove.co.uk
website: www.jrbc.freemove.co.uk

Morven Electronics Ltd

Tel: 0141 810 3100 Fax: 0141 810 3111
e-mail: sales@morven.co.uk
website: www.morven.co.uk

Nauticalia Boats

Tel: 01932 254844 Fax: 01932 254775
e-mail: info@pushtheboatout.com
website: www.pushtheboatout.com

Pb Batteries (SE) Ltd

Tel: 01206 792449 Fax: 01206 860438
e-mail: pbbatts@FSBDial.co.uk

Phoenix Fleet Ltd

Tel: 01692 670460
e-mail: phoenixfle@aol.com

Reading Marine Co.

Tel: 0118 971 3666 Fax: 0118 971 4271
e-mail: readingmarine@compuserve.com

Rivertime

Tel: 01628 530600 Fax: 01628 810550
e-mail: boating@rivertime.com
website: www.rivertime.com

G H Rose & Son

Tel/Fax: 01789 267073
e-mail: boats@stratford.u-net.co.uk

STELCO UK Ltd

Tel: 0118 940 2577 Fax: 0118 940 1800

Stelco Yachttechnik (UK)

Tel: 01603 722117 Fax: 01603 722337

Thames Electric Launch Company

Tel: 01491 873126 Fax: 01491 872217
e-mail: thameselectric@goring.co.uk

Water Roo Craft Ltd

Tel/Fax: 01364 642073

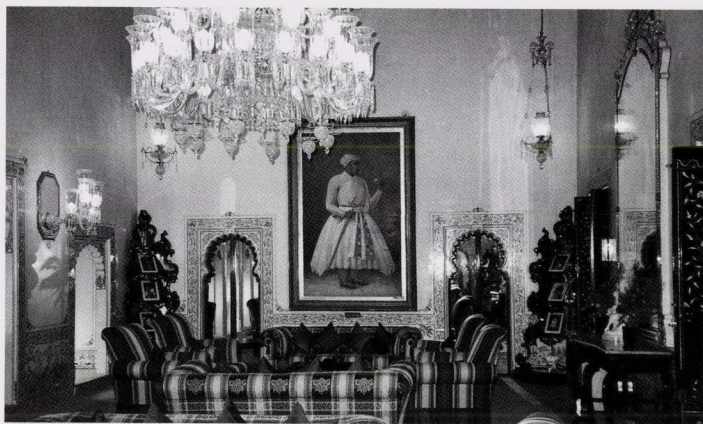
John Williams Boats

Tel: 01692 580 953 Fax: 01692 582132
e-mail: jwb580953@aol.com
website: <http://www.electriclaunch.co.uk>

Zemar Ltd

Tel: 020 7377 5999 Fax: 020 7247 4447
e-mail: stuartlaycock@zetekpower.com
website: www.zetekpower.com

for lunch or dinner as we discovered when we had some time off. But in working mode we cruised gently round it and also round Jagmandir, the other large island with its fountains and life-size marble elephants. While I enjoyed the scenery, Ian did technical measurements at various speeds.



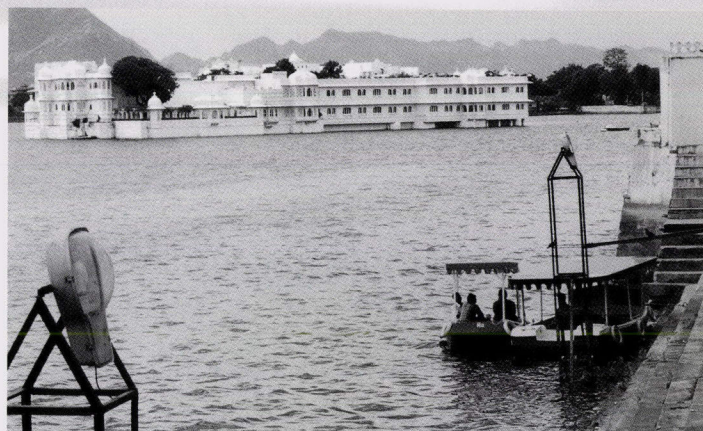
Inside the Palace where we stayed

The problem with the motor was that, although adequate for use in England, it tended to overheat in the much higher temperatures of India. As a long-term solution Ian recommended replacing it with a Combi which would be more robust and, since it was in the water, would not overheat when sitting for long periods in the blazing sun.

To get the boat working reliably as it was, Ian downgraded it to operate at a lower speed (provoking a bit of muttering from the boatmen who liked to whiz about, especially at the end of a shift). The team produced a miniature fan to blow as much cooling air as possible over the controller and Ian recommended an aluminium heat sink to diffuse the heat below it. With aluminium difficult to obtain, they compromised on copper which Ian would not advise for England but felt was acceptable in the drier climate of India.

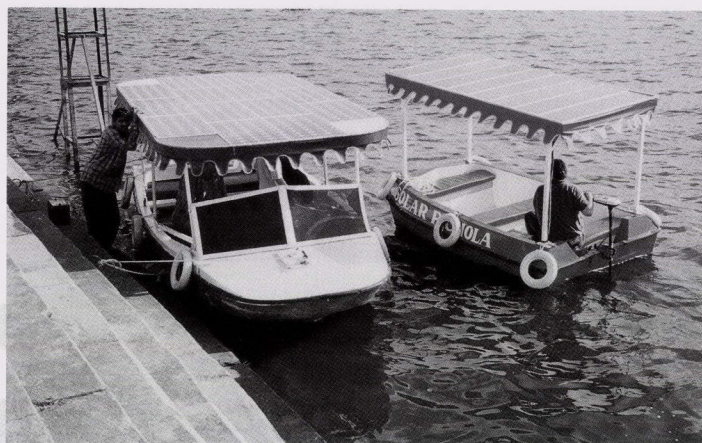
Meanwhile the maintenance team were hard at work on Ra I, and before too long it was on the water with shiny new paint and canopy. Surprisingly the electrics had survived their submersion and after a lot of testing Ian declared it ready for service.

That evening we had dinner with the Maharana (William and Ffion were only invited for drinks!) on his private terrace overlooking the lake and sat under a silver awning eating exotic food from solid silver plates while enjoying lively conversation. Ian was pleased to report that both solar boats were working and as we left Shriji (the Maharana's courtesy title) said that he would come for a test ride at 1030 the next morning. Ian tried to move this to a bit later in the day, knowing that the teams didn't normally appear until around ten, but Shriji was firm, and you don't argue with Maharanas.



RA 1 and 11

The next morning found Ian and me on the dot of ten all alone apart from two not quite finished electric boats, one without its motor that was locked away in the workshop. However, our shouts of "Shriji is coming" to Mr. Melhotra when he at last turned up sparked a explosion of activity with running, shouting, drilling, hammering, cleaning and polishing at a pace that we had never seen in India before. One of the boatmen rushed off to get cushions; red carpet appeared and was cut to size on the quayside steps. With time rapidly running out Ian did a quick test run and, with a short prayer of thanks to whichever Hindu god was responsible for solar-powered boats, pronounced both satisfactory. Dead on cue a shooting brake with servants riding shotgun roared up in a cloud of dust and the Maharana came on board.



RA 1 RA 11 just before Shriji inspection

He enjoyed his boat trips, he asked lots of questions and took lots of photographs and he congratulated Ian very warmly as he left. Our last few days in Udaipur were spent in final testing and minor modifications. Information coming out of India since we got home is that the boats are still working, Ra II now with its new motor, and are very popular with visitors and tourists. Perhaps the Maharana will decide to convert more of his fleet to solar power. If so, I think Ian would be happy to volunteer for another trip.

HOME NEWS & EVENTS

Earls Court



The Canadian Electric Boat Company at Earls Court

EBA members Creative Marine, Bossoms Boatyard, Lakeland Electric, The Canadian Electric Boat Company and Val Wyatt Marine exhibited at this year's Earls Court Boat Show. Unlike last year, they tended to be spread throughout the show, so there was no particular feel of an 'electric boat' presence. Whether they are together or not is more a matter of accident than design as the organisers have their own divisions' e.g. boats, engines, chandlers and so on. However, from the Associations point of view it is better when our members are grouped together.

As someone who has organised exhibitions, I was impressed with the Creative Marine stand, built by themselves in a slack moment between boats. Should the boats not work out, this could be their fall back job!

The Emsworth Trophy

The main changes to the rules for the Emsworth Trophy are the schedule of points. These will be awarded as follows. For distance travelled under electric power only, one point per mile on rivers and one and a half points on canals. For passage through a manned lock, one point and through an unmanned lock, one and a half points.

The points calculated will then be multiplied by one of the following factors. Boats that draw propulsion energy from solar power only, 2.5. Batteries charged from a shore based mains supply, 2. Boats that recharge from an on-board internal combustion engine, 1.

For full details of the rules or notification of entry, please contact Barbara Penniall.

The Great Glen Raid

This 'raid' may well appeal to the adventurous, masochists or the hard of understanding among us! Organised by Albacore with the support of The Highland Council, the Highlands and Islands Enterprise Network, and the Highlands of Scotland Tourist Board, it is planned for the 3rd to 10th June, 2000. It will cross the whole of northern Scotland, from the Atlantic to the North Sea by the Caledonian Canal and the big Lochs of the Great Glen, a distance of 150 KM. It is primarily intended for boats propelled by sail or oar, but it is hoped that a small fleet of electrically powered boats will, without any spirit of competition, accompany the Raid. The organisers see this as an opportunity to promote electric boats as a quiet, non-polluting form of navigation and the proximity of this fleet with sail and oar powered craft to make for harmony, boding well for the future navigation on inland waterways, a sentiment shared by the EBA.

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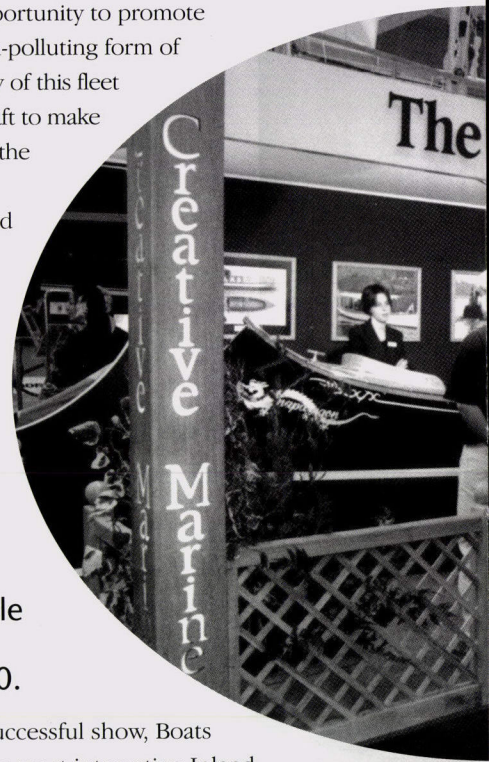
Boats on Show, Beale Park, Pangbourne 18th-21st May 2000.

Following last year's very successful show, Boats on Show promises to be the most interesting Inland Waterways Show for lovers of river craft. We shall be there with our stand, together with several EBA Trade Members with their boats and products on display, offering technical advice and practical help, whether you are choosing a boat or wanting information on maintenance.

There will be an electric Try A Boat on the water, courtesy of Phoenix Fleet, who are bringing along a Phoenix 21 modified for use by the disabled, including a wheelchair hoist, and trips on the lake will be offered free of charge via the BMIF Try Boating stand.

Phoenix Fleet will also have their standard Phoenix 21 on land, alongside examples of their restoration work to two conventionally propelled 1930s boats and new Trade Member Amourelle Products will have their electric canoe Silent Explorer on the water.

Bossoms Boatyard from nearby Oxford will be displaying craft from their Oyster range, and also unveiling their latest project of a 25ft

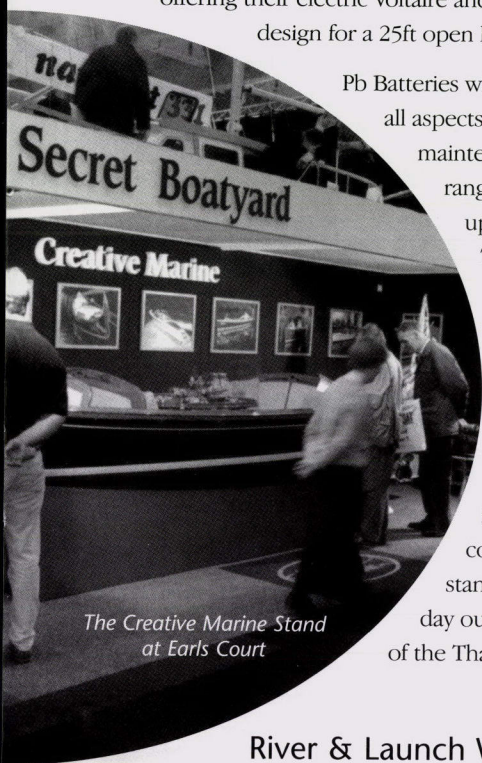


slipper launch offered with diesel or electric option. The Canadian Electric Boat Company will have two examples of their day boat on display, together with a selection of outboard motors and batteries, and Creative Marine will show their Mayfly 16 and the 25ft electric canoe that were on Show at Earls Court this year.

Peter Freebody will be exhibiting a 30ft electric slipper launch, together with various other craft including an electric canoe and we understand they will be taking their special electric rowing skiff. For lovers of a traditional Thames punt, Henwood and Dean will be offering their electric Voltaire and will also be unveiling a new design for a 25ft open launch.

Pb Batteries will again be offering advice on all aspects of battery use and maintenance and displaying their range of batteries and topping up equipment and the Thames Electric Launch Company will be bringing a variety of craft and propulsion systems.

Other EBA Trade Members will also be at Beale Park, so please come and introduce yourselves to the committee on the Association stand and enjoy a pleasant day out on a beautiful stretch of the Thames.



The Creative Marine Stand at Earls Court

River & Launch Weekend 22-23rd July 2000.

The Shrewsbury River Users Group (SHRUG) in association with Shrewsbury & Atcham Borough Council are planning the above weekend to celebrate over 2,000 years of navigation on the River Severn to Shrewsbury. If successful, they hope that it will become an annual event.

The river encircles Shrewsbury and the event will offer visitors the opportunity to explore the town and this largely unexplored stretch of the River Severn. Free launching facilities will be available. In addition to waterborne activities, the it is anticipated that the waterside park known as the Quarry will be available for static and trade displays, this year without cost.

To quote the organisers, electric craft will be able, '...to demonstrate their appeal as highly ecologically friendly boats able to operate without disturbing wildlife, fishermen or other river users'.



Bossoms Boatyard Stand at Earls court

The EBA will be attending this event and hope that as many members as possible will attend with their craft.

For further information contact the Shrewsbury Tourist Information office, Phone 01743 281222, e-mail www.shrewsburytourism.co.uk

Newark on Water Festival Riverside Park, Newark-on-Trent June 10th & 11th 2000.

This will be the second year of what is hoped to become a regular weekend on the waterways calendar. Last year over 100 private boats were on the river, as well as a good programme of events and entertainment. Over 10,000 people attended over the two-day event. Exhibitors can bring their own accommodation and stay with their unit. In addition to open air spaces, there are cover sites inside the marquee.

For further information contact Bran Saunders, phone 02476 407070, e-mail bss@4t49.fsnet.co.uk

I.W.A. National Trail Boat Festival 2000 26th-29th May 2000.

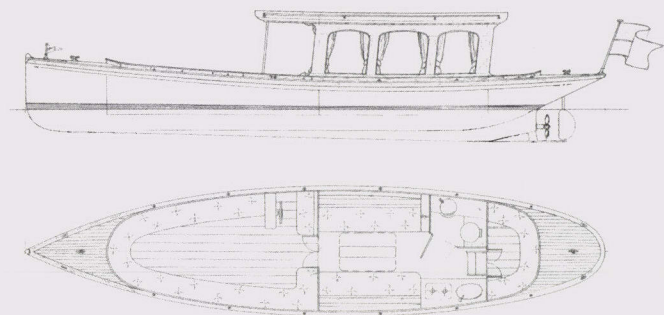
The Monmouthshire, Brecon & Abergavenny Trust is hosting the above event at Kimberley Park, which is on the southern end of the canal adjacent to Junction 26 on the M4 motorway at Newport Gwent.

There will be a full programme of field events and visits to the Fourteen Locks Canal Centre.

For further information contact Tony Edwards telephone 01495 270579.

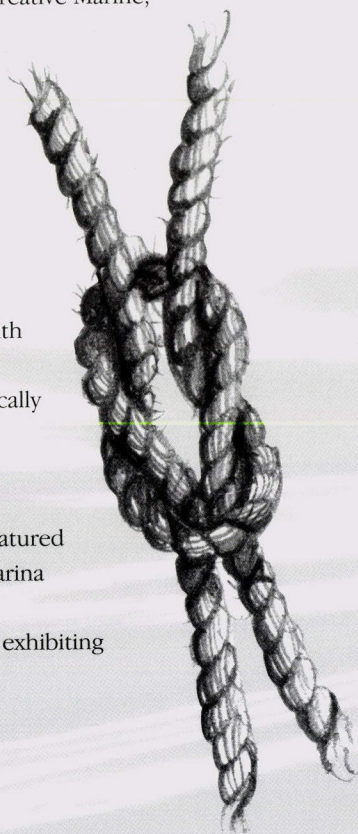
Creative Marine announces their new boat, the Moth 36. Designed by Andrew N. Wolstenholme, it is the logical development from the Frolic 31. The width is the same as the Frolic 31, so the extra few feet of length makes the new launch a lot sleeker and similar proportions to the launches around at the turn of the 'last' century. Most of the increased space has been used to make the cockpit larger, although the toilet and galley have been slightly increased. The new launch also has a more pleasing counter stern.

Production will commence at the end of the summer, with the first production boats being launched next year. Simon Reed of Creative Marine said, "We think that the Moth 36 will be the most attractive boat that we have ever built. It will be a winner on rivers and larger lakes".



For further information, contact Creative Marine,
The Secret Boatyard,
The Folly,
Gaymers Way,
North Walsham,
Norwich,
Norfolk,
NR28 0AN,
Telephone 01692 407843

Val Wyatt Marine, in association with Rupert Latham, are planning to launch a new beaver stern, electrically propelled craft, priced in the mid £20,000 bracket, the first of which should be available in June. It is intended that the vessel will be featured at an Open Weekend and their marina on 27th & 28th May. As a result of this they will not be exhibiting at Boats 2000.



Electric Boat News thanks Kevin Desmond for some of the articles contained in this section. Kevin, as many of you know, edits the International Electric Boat newsletter. He is always on the lookout for interesting bits of information about electric boats and boating so if you have any information please contact him at: 54, Route de Latresne, 33-360 Carignan, France. (E-mail desmond.writer@wanadoo.fr) – but only after you've sent the information to Electric Boat News first!

US Navy To Go All Electric

THE US NAVY has announced plans for a new generation of electrically propelled destroyers and is suggesting that all of its surface vessels – and possibly its submarines as well – will eventually use electric drive systems.

Initial plans are to build 32 destroyers at a cost of around \$25bn. It is claimed that the electric drive systems will be smaller, more efficient, and stealthier than conventional propulsion systems. Less maintenance and smaller crews, 95 rather than the current 300, are among the anticipated benefits.

Diesel engines or gas turbines will still be used, but to drive generators powering electric motors rather than the ships' propellers, thereby avoiding the need for bulky and difficult to maintain reduction gears.

The absence of reduction gears and the short drive shafts will make the vessels quieter and harder for submarines and mines to detect. The new drive configuration also means that the various components will not have to be aligned along the bottom of the ship. Also because the engines will be generating power both for the drive and for other ship installations, just four engines will be needed instead of the seven found on a typical destroyer today.

The Navy has budgeted \$250m over the coming six years to fund the development of the drive technology. Two teams of contractors are bidding for the work. The first electric destroyer is expected to enter service in about ten years' time.

EBAA's Electric Boat Journal Ceases Publication.

The Electric Boat Association of America (EBAA) has recently announced a 'strategic partnership' with Magellan Inc., publishers of EV News & Advanced Technology Vehicles. In future members of the EBAA will receive a subscription to this magazine and the Association's own journal will cease publication. EV News, which is published six times a year, will carry several pages of news on electric boats and boating as well as information about all forms of electric propulsion technology.

AMERICAN 100-PASSENGER BOAT CONVERTED

The 100-passenger Angela Louise, a United States Coast Guard riverboat built almost one hundred years ago, has returned to work at California's Newport Beach with her diesel engine replaced by a DC electric motor. Her owner-operator is Captain Joseph Warren. Until her conversion, the US Coast Guard had certified only 16-passenger capacity launches. But the 70ft, twin-deck Angela Louise, with her bar, restrooms, dining room and dance floor, is the first 100-capacity electric boat to start service in the USA. Angela Louise can cruise electric for one day on a single charge of her batteries. Speed control

is dialed-in on a radio knob.

Her sponsors are Trojan for batteries, Trace Engineering for the sophisticated charger/inverter system, Cruising Electronics for the Battery Conditioning system. Captain Warren is grateful for their help.

"There is nothing like cruising through the harbor under the moonlight with Bocelli on the sound system," remarks the Captain. "Candles on the table. No noise. No diesel smoke to overcome your appetite. It's magic!"

News from France

At the 39th Paris International Boat Show the French Electric Boat Association (AFBE) and French Waterways (VNF) shared Stand L18 to publicly link hands with the 21st Century ambitious joint goal of further developing electric passenger boats and houseboats across that country. In conjunction with an Electric Vehicle Interministerial group, the "Entre Deux-Mers" canal will be experimentally fitted-out with a charging point infrastructure to support a fleet of houseboats. Elsewhere in France, the electric passenger boat under construction for use in Strasbourg will go into operation from Easter 2000. After this, existing diesel-engined passenger boats in this European city will be converted to "cruise electric".

The Netherlands

Thanks to the sustained efforts of the Dutch association, SEV, the installation of a network of electric charging points for E-boats in Holland/Utrecht is well underway. Eight out of the 28 are being installed. The official launch of one of the charging points (coin operated) took place in Leiderdorp in June.

An interview has taken place with DUBA Elektra, one of the pioneers in electric -boats in Amsterdam. DUBA will eventually have a total of thirty E-boats on hire on the "Amsterdamse grachten" which comfortably transport 7 to 8 persons each. Since 1995 one can only rent electrically propelled boats in Amsterdam, combustion driven rental boats are not permitted.

Another highlight from the Netherlands was the appearance of the new saloon boat Voyager 780, owned by a tour operator to be used for tours in the Netherlands. Also, the official opening by Her Royal Highness, Princess Margriet, of a second sightseeing electric boat tour in restored Hertogenbosch, called the Groote Stroom (the first tour, de Binnendieze, "under the houses", was opened last year).

AUSTRALIA

The 2000 Bayer Solar and Advanced-Technology Boat Race held annually in Canberra as part of the Australian Science Festival is again on course, but with some interesting rule changes. The most significant is the allowance of boats powered by hydrogen fuel cells. Hydrogen is considered to be non-polluting, as only water vapours are emitted.

And for the future...in November 2001, Adelaide hosts the World Solar Congress, during which several solar boat displays will be organised by Phil McLaughlin, of Prince Alfred College, whose Sunboat II holds the world distance record.

There will be solar and electric boat racing, similar to the above Bayer Race. There will be a swimming pool race for model solar-powered boats built by schoolchildren, and finally Prince Alfred College is planning to race their Sunboat II into a new record – 1000 km – 500 km upstream/500km downstream in the quickest possible time.

"We here at Prince Alfred College, feel this type of record - distance over time taken - is more valid to the development of solar boats than total distance covered."



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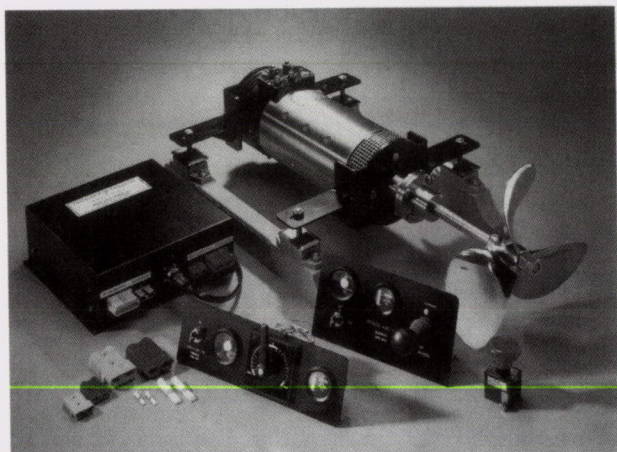
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Mayflower, Stratford upon Avon, 1999

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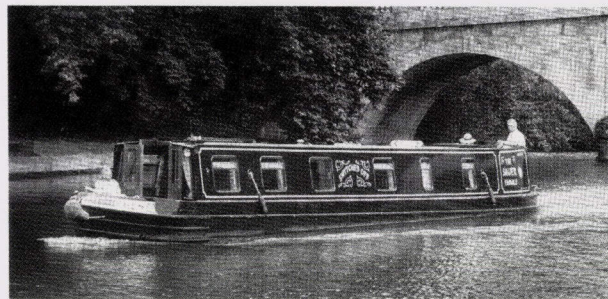
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David Graham, Thames Edwardian launch
Trip Boats, Scanship, Holland
First Passenger Solar Boat, Neuchatel, Switzerland
Columbia University, First in Class, Solar Splash, 1995

Oco-Sachs/Lynch Electric Outboard
First Solar Crossing of English Channel, 1997
Reading Marine, Diesel-electric hybrid, 1999
Rose, Stratford upon Avon, 60 passenger launch, 1999

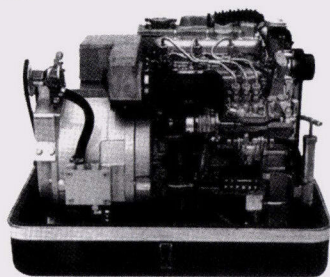
Reading Marine, hybrid narrow boat, 1999





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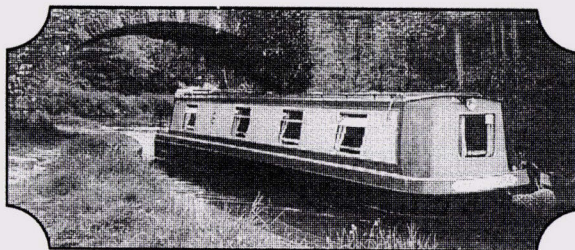
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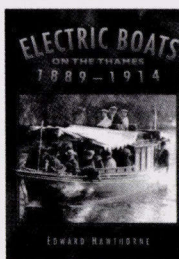

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