



NABO News

The Magazine of the National Association of Boat Owners
Issue 1 February 2022

Coping with illness afloat
CRT privacy issues
The lithium question



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Next NABO News copy date

Articles, letters, cartoons and photos are most welcome. Images in JPEG format please. Please email your contributions to nabonews@nabo.org.uk or post to the Editor by March 19th 2022.

Cover photo

This month's photo was taken by Gillie Rhodes.



Win a year's free membership by having your photo selected for the front cover of NABO News. Please email photos as JPEG attachments, ideally portrait format with a file size of 2MB or larger.

Editor's note: My apologies for the wrong caption to the cover photo in the December issue—it should have read 'A sunrise at Bugsworth Basin' by Steve Barrett.

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As Mike Rodd points out in his Chairman's column, 2022 is an important year for the future of the waterways, with the Defra review of CRT funding underway as well as the (ongoing and seemingly continuous) reorganisation within the EA navigation division. The outcomes of both are difficult to predict. But, in the wider context of Government spending, many commentators are forecasting a reduction in CRT's grant and the transfer of the EA waterways to the Trust. Neither gives much cause for optimism. Unless

2022 will be a significant year

Peter Fellows outlines some important issues that are expected to feature this year.

the Defra review recommends sufficient funding for waterway maintenance to halt the deterioration of infrastructure assets, it is difficult to see how the current situation will improve. To achieve this, I and others have long argued for a separation of CRT's navigation responsibilities from its wellbeing agenda. The waterways are a national asset that requires national (i.e. central Government) funding, with a

Before the Anderton Lift; salt chuting into barges on the River Weaver—article page 13
Photo CRT



So far, a very mild winter has meant that we can all go out and do some lovely, quiet winter cruising.

For my wife and me this always means—after her hectic Christmastime as our vicar—diving out straight after Christmas Day and spending a week on our boat on the beautiful Mon & Brec. Not so easy this year, though, with some major, and essential, canal re-lining work before Christmas having left parts of the canal short of water and the towpath in a total mess—see below. But it was still wonderful.

Before Christmas, probably the most important meeting I attended on behalf of NABO was a session run by Defra, preparing the way for a review of the Government's future funding for CRT. To help inform their deliberations, Defra ran a series of engagement sessions, not only exploring how CRT has performed since being established in 2012, but also considering possible opportunities and challenges in future years. We joined in one of these sessions, with representatives also present from across Government and from other boater organisations. CRT did not attend on the day but was able to view the recording made by the review team.

The initial discussions were focused on CRT's past and possible future interactions with the organisations present, highlighting both challenges and successes. Following the inevitable initial silence, I led off the discussions with what I hope was a balanced NABO view—that CRT has been faced with many difficult issues (several of which result from the present legal basis under which it works—such as the poorly-defined rules on continuous cruising) and it has also had to deal with some major canal and canal-related failures. I also reported our

observation that CRT had clearly felt it necessary to reduce staffing levels, thereby losing much valuable experience and expertise. This has been exacerbated by outsourcing many aspects of its day-to-day work with (as we see it) limited success. The Trust also appears to have adopted a policy of only fixing something after it actually breaks—that is, of doing little regular routine maintenance. I did congratulate them on their excellent water management planning, especially their long-term planning, given the current issues related to climate change.

A critical year for the future of CRT

Chairman, **Mike Rodd**, takes part in the Defra consultation on Government funding.

However, the bulk of the meeting was given over to discussing how CRT could be enabled to meet Defra's four strategic objectives, which are:

- 1 **Protection and long-term resilience, and transition to net zero carbon usage** to deliver, maintain and improve historic waterways infrastructure, heritage assets and open access systems, as well as to ensure navigation, accessibility and public safety;
- 2 **Natural capital** to contribute to, and support, the protection and enhancement of the natural capital and historic environment found in and around the CRT waterways network;
- 3 **Access to the outdoors** to contribute to the nation's prosperity and resilience, cultural capital and the visitor economy;
- 4 **Levelling up** to contribute to national economic resilience and

Many of the EA's proposals will bring them into line with CRT's Terms and Conditions—it's very clear what is going on there!

growth, particularly in areas experiencing economic deprivation and health and wellbeing inequalities.

This latter part of the meeting really reflects what we already constantly see in CRT's apparent shift away from focusing on the needs of us boaters and giving precedence to towpath users and others!

I see that one of the London Borough Councils, Tower Hamlets, has been threatening boaters with prosecution for running their stoves and/or engines overnight. I guess if I had bought a multimillion-pound property next to the canal, I might also get upset by any ensuing noise or smoke. I was very surprised when I found out that, until recent changes to the legislation, the smokeless zone requirements didn't actually apply to boats. Now, the local bylaws may be amended to say they do, which is apparently the case in Tower Hamlets. To me, it seems totally reasonable that these regulations should apply to everyone, and I do feel sorry for property-owners in an area where they have to adhere to the rules, but a boater can use whatever they find lying around near the canal as stove fuel! However, as long as the boaters meet the smokeless zone requirements then there is nothing more that the Council can do about the overnight running of stoves. Conversely, however, it is clear that to comply with CRT licence requirements boaters must not run their engines or generators between 8pm and 8am.

As I mentioned above, we were

pleased to be able to get out after Christmas, as this had been impossible for several months when extensive work to repair the canal bank had been taking place near where we moor. We were delighted to see this work taking place, but were concerned about the way the site was left when the contractors had, apparently, completed their work. The section of canal above the area where the work took place is now very shallow and we and other boats really battled to get through. Does this perhaps indicate that some of the material used in doing the bank work has been dumped in the canal? Additionally, while the towpath where the work took place has been—sort-of—re-instated, there are lots of bits of bright orange plastic fencing (?) etc. left embedded in the mud at the side of the towpath. From there to the road access point it is a totally disastrous mess, left completely churned up by the movement of machinery. I am pleased that the local CRT manager has acknowledged these issues, which will now, hopefully, be sorted—but once again, the issue of CRT's management of its contractors has to be raised.

I am delighted that all the vital roles played by Council members have been filled, as you will have noticed in the inside cover, and I especially want to thank John Devonald for taking on the essential duties as our General Secretary and Peter Braybrook for agreeing both to be our Minutes Secretary and to write our monthly Towpath Talk article. I am also thrilled that Anne Husar has agreed to be our Vice Chair. In what will be a very critical year for the future of both CRT and the EA, it is vital that we have a strong and active team at the core of NABO.

And happy boating to all!

Fly on the wall

Observes proceedings at the Council meeting in January

With a packed agenda, I watched the meeting start with a discussion of the mooring situation in London and how boaters are not visiting because there is nowhere to moor (although a recent visitor reported plenty of things to smoke or drink on sale at locks along the way!).

Living in the raw

Crime on towpaths, thefts from boats and aggressive local residents along the canals—all caused a member to note: "This is living in the raw—if this was my boating experience, I'd give it up immediately".

When there are no moorings, people leave their boats anywhere—either from ignorance by newbies who know nothing about boating, or because people just don't care and are doing what they like—it's anarchy. A horrendous situation without policing or enforcement.

Trouble in Town

Likewise, recent actions by Tower Hamlets Council, which has used environmental bylaws to issue notices against moored boaters to prevent them using multi-fuel stoves.

Certainly, there can be a problem with some people burning any old rubbish, some because they can't afford smokeless fuel. NABO supports the law on smokeless zones, but the council seems to be exceeding its powers when boaters use Defra-approved stoves and fuels.

All has gone quiet on the heritage front, with recent proposed property auctions postponed and no minutes being sent out by the CRT Heritage Advisory Group. But the future of the Ellesmere yard looks more promising.

There have been more closures of waste facilities, often due to the cost of removing rubbish dumped by the public, but CRT could do more to identify and prosecute offenders. Hopefully, a project manager recently appointed to review these facilities will come up with some new ideas.

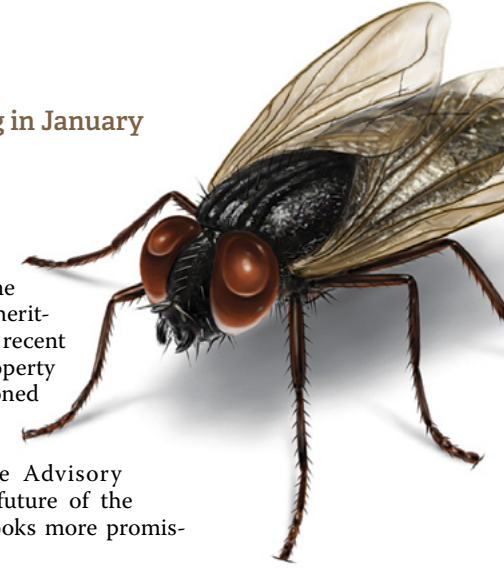
The Defra review

The Defra review of CRT's performance is underway, focusing on four Government objectives (boating isn't one of them) including the 'levelling up' agenda.

But the Defra bean counters don't really understand the waterways: "If something costs a lot, do we need to keep it?". This approach is difficult to apply to locks.

Finally, Council members were baffled by a recent proposal to reduce the BSS examination interval from four years to two. There is no evidence to justify a need for this and, although examiners might welcome the additional work, it would double the cost to boaters.

Byeeee....



The next Council meeting on 12th March will be by teleconference.

Members are welcome to join in the meeting; please just let the General Secretary or Chair know in advance (contact details inside cover).

The dates for other Council meetings in 2022 are: 23rd April (teleconference), 18th June, 3rd September (teleconference), 8th October (teleconference) and 12th November (after the AGM).

Wales and South West Mike Rodd



A very busy few months for CRT on both the K&A and the Mon & Brec, with some planned winter work having to be re-scheduled when a massive breach in the K&A occurred at the eastern end. This required an extensive operation to re-establish the bank, and also to create an access track to get equipment to the breach! Well done to CRT for sorting this out. Significant winter work has been taking place on both these canal systems. Near my own boat on the Mon & Brec, important canal relining took place in the very steep, sloping area between Cambrian Marina and the Usk aqueduct. This required the canal in that section to be drained. Strangely, when this happened a few years ago, CRT managed to pump water out of the river to ensure that the canal beyond the stoppage was full, but this time it was decided not to do this and simply allow the canal level to slowly drop—to the point when all our boats were sitting on the bot-

Around the regions with NABO's regional reps

tom! The most serious issue, though, was that the hire boat company could not undertake its usual winter work as it couldn't move its boats. Another example of CRT not putting boats at the top of its agenda? I also have to say that the contractors doing the work left the very well-used towpath in the most shocking condition.

On the K&A there are still extensive areas where no vegetation cutting has taken place for at least a couple of years. We are having to do our own tree cutting to wind our trip-boat at Hungerford! We also have to squeeze the boat around the extensive reed growth, praying that no boats are approaching from the other side. We have had to extend our timing of trips as the seeming policy of not repairing a single paddle until both fail means it take us up to 30 minutes longer to do our trips! It's been like this for three years now.

Navigation and liveboards stakeholder engagement session

Defra is running a series of engagement sessions to explore how CRT has performed since 2012, alongside the opportunities and challenges for future years.

The sessions are working within Defra's four strategic objectives: protection and long-term resilience; natural capital; access to the outdoors; and levelling up. The discussion in this session focused on CRT's past and possible future interactions with boating organisations, including challenges and successes.

Mike Rodd writes:

I attended this session on 9th December, together with reps from the RBOA, IWA, CBOA, HNBC, British Marine, the Association of Inland Navigation Authorities and various representatives from across Government.

Generally, it was felt that the past few years

had been bad ones for CRT and that the waterways have been allowed to deteriorate quite significantly. I confess I rather led this as there was a stony silence when the discussions started, so I used it to kick off with our reservations. Others joined in, especially David Lowe of CBOA and Phil Hornsey, the new CEO of IWA, who were largely supportive of my views.

Generally, it was felt that the basic original funding model—that there would be shed-loads of money available to the charity—had not proved correct and that the present level of funding was insufficient to maintain a fully-operational canal infrastructure. This is key, not only to boaters per se, but also to the use of the network for moving freight, water etc. We all agreed that the message to Government is that it is vital to retain the waterways and keep them fully operational—and to do this Government funding is essential.

Crick Boat Show

Advance tickets are now on sale for the 2022 Crick Boat Show, saving up to 15% on the entry price. The event will be held across the Bank Holiday weekend celebrating the Queen's Platinum Jubilee, 3rd–5th June, with an extra 'Trade & Preview Day' on Thursday 2nd June.

The Preview Day will offer a maximum of 1,000 pre-booked visitors the opportunity to talk in-depth with companies offering equipment and services for inland boating and to view the boats before everyone else. The show will be open from 10am to 6pm on Friday and Saturday and to 5pm on Sunday. Evening entertainment will run from 7.30pm to 11.30pm on Thursday, Friday and Saturday. Daily prices for Friday, Saturday and Sunday adult tickets

are £18.00 on the gate, £15.30 if purchased in advance. Entry is free for children aged 16 and under. Three-day adult tickets are £40.00 on the gate or £34.00 in advance.

Tickets for the Thursday Trade & Preview Day, open from 12 noon until 6pm, are only available in advance, from February, and are £25.00 each. Preview Day visitors will have access to an online booking system for boat viewings, which will open in early May.

Advance tickets can be ordered online or by phone and will be sent out in May. 350 camping pitches are available, priced from £45.00 for one night for a 6m x 6m pitch for a tent and car. Moorings for up to 100 visitor boats on the Grand Union canal start at £1.35 per foot.

For more information and to book tickets, camping pitches and moorings, visit www.crickboatshow.com or call 01283 742970, Monday to Friday 9am to 3pm.

Photo: crickboatshow.com



Some better heritage news—for once!

The IWA Shrewsbury District & North Wales Branch hosted an online talk 'Ellesmere Yard—Regenerating Waterways Heritage'. The Ellesmere Yard was the former headquarters of the Ellesmere Canal Company, dating back to 1806, and the last surviving canal maintenance yard that is still being used for its original purpose.

The presenters are Tony Lewery, a local waterways historian and restoration expert, Nicola Lewis-Smith, CRT Enterprise Manager (West Midlands), and Ruth Essex of the Media and Arts Partnership who are leading the Trust's attempts to find sustainable alternative uses for the yard. The presenters



Photo: CRT

give a refreshingly optimistic overview of work that has taken place and is planned to ensure the continued use of the yard, with any sell-off explicitly not on the table

The talk can be viewed at www.youtube.com/watch?v=-Elp5Zf9QHI.

Boating safely with the big boys

Stuart Sampson has written an excellent 'Skipper's guide to the Yorkshire and Trent commercial navigations'. It is mainly for pleasure boat skippers who are unaccustomed to rivers, tides and waterways carrying freight.

It can be downloaded from the NABO website at www.nabo.org.uk.

A SKIPPER'S GUIDE to the YORKSHIRE and TRENT COMMERCIAL NAVIGATIONS



Aggregate barge on the ACN in Knottingley - painting by Stuart Sampson

This is mainly for pleasure boat skippers unaccustomed to rivers, tides and waterways carrying freight.

The advice is given in good faith and **no liability can be accepted for any consequences of its use.**

It cannot be comprehensive in a booklet of this size so you should gather as much information as you can from other sources including CRT's Boater's Handbook, charts, tide tables, experienced personnel and other publications.

Original content courtesy of First Mate Guides, NABO and the barge operators, updated by Stuart Sampson in 2021 with information kindly supplied by IWA, CBOA and CRT.

BOATING SAFELY WITH THE BIG BOYS



CRT trials HVO



HVO is made from waste oils, animal fats and vegetable oil and is more than 90% carbon neutral. It is claimed that the fuel has 30% lower nitrogen oxide outputs than fossil diesel fuel and can reduce particulate emissions by nearly 90%.

The fuel is stable when stored for up to ten years, is free-flowing down to at least -25°C, and does not attract water (or diesel bugs), and it also mixes with other diesel fuels.

CRT is supporting hydrotreated vegetable oil (HVO) as a greener alternative to diesel and has begun a trial of the fuel in its workboats. The trial is continuing until March, initially using the urban litter boat, Berkswell, in Icknield Port, Birmingham.

Early reports are that the craft is operating well, with no issues. If successful, there will be a gradual rollout across the whole CRT fleet from April.

The Trust will also gather feedback from fuel suppliers and boaters across the waterways who are now supplying or using HVO. The rapid adoption of HVO would reduce carbon emissions while not requiring changes to either boat engines or the supply infrastructure.

With the removal of the red diesel subsidy from fuel for propulsion, the Trust believes that the Government has an opportunity to offer tax incentives, making fuel duty on HVO the same or lower than that on standard white diesel.

Another London consultation

CRT is inviting boaters to take part in a consultation on ways to improve the management of mooring space in central London to balance the needs of local and visiting boaters.

The proposals include more pre-bookable paid moorings at ten central London short-stay visitor sites. Combined with two existing sites, the pre-bookable moorings will have 40 berths, with most short-stay visitor moorings and all 14-day towpath moorings unchanged.

Boaters' views are sought on a proposal to make access to short-stay visitor moorings fairer by more active management of the sites, limiting the amount of time individual boats can use them in a year and increasing the overstay charge. Another proposal is to prevent triple mooring and mooring against a widebeam on the busiest central London waterways. CRT says the aim is to balance the needs of boaters with-

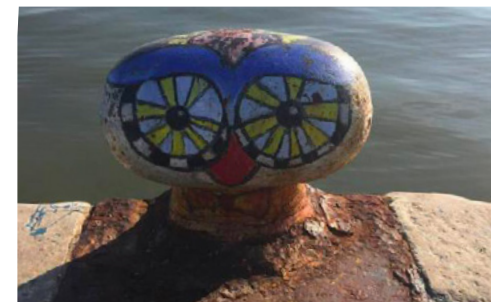


Photo: londonboaters.org

out permanent moorings with those of boaters who want to visit the capital, who have been put off because they don't think they'll find a place to moor.

The consultation runs until March 2022 and can be found at canalrivertrust.welcomesyourfeedback.net/London.

NABO pleased with changes to the EA's proposals on registration charges

Following the eight-week consultation launched in July, the Environment Agency has published its final decisions on boat registration charges on its waterways for the next three years, following feedback from boater representative organisations (including NABO) and individual boaters.

The proposed increases of 6% in year 1, 4% in year 2 and 0% in year 3, have been changed to a new charging scheme, which will see increases of 4% in 2022, 4% in 2023, and 2% in 2024. The proposals had also included a new charging

mechanism based on the area of a boat, but the current charging mechanisms for each waterway will now be continued.

The EA has also advised its National Navigation User Forum, attended by NABO on 1st December, that it will set up user-based advisory groups to work with its staff on various aspects of its operations.

For more information see: www.gov.uk/government/news/environment-agency-navigation-charges-consultation-outcomes.

Improper mooring

CRT's revised 'Improper Mooring Process' came into force on 10th January. Examples of improper mooring are listed in the Boater's Handbook, although this list is not exhaustive. It includes mooring on a bend, under a bridge, on a lock landing etc., mooring lines across the towpath, double mooring where the canal is not wide enough ... and so on: in essence, anywhere that is considered potentially dangerous or inconsiderate.

The process doesn't cover overstaying, which is a licensing issue. Basically, the revised process shortens the number of steps to be taken in cases of infringement, and any investigation will involve a Welfare Officer where appropriate.

CRT promises that the first warning will be based on 'education first', bearing in mind that they may be dealing with a new boater making an honest mistake.

Defra review

The 15-year Grant Agreement, signed in 2012 between Defra and CRT, requires that a review of the grant be undertaken at the 10-year point to inform a decision on any future Government funding beyond 2026-27, when the current grant period ends.

This review is currently underway and will consider the case and context for any future funding arrangements, reporting by 1st July 2022.

Old process

- 1 Letter to boater
- 2 Warning, max 28 days later
- 3 2nd warning, 25 days later
- 4 Suspension, boat told to moor in specific place
- 5 Investigation
- 6 Licence terminated or reinstated

New process

- 1 First warning
- 2 2nd warning after 28 days, possible suspension of licence
- 3 Investigation
- 4 Licence terminated or reinstated

Further details are at www.gov.uk/government/publications/canal-river-trust-grant-review.

Peter Underwood has recorded as issue of 'News from the Water' on the topic, with a contribution from Anne Husar

www.facebook.com/groups/921938364522405/permalink/4677377202311817.

Anderton Lift restoration 20th anniversary

After its closure in 1983, more than £7 million was raised seventeen years later to fund a major restoration of the lift and it started operating again on 26th March 2002.

The 20th anniversary of the first boat passage will be marked with public celebrations on 26th March 2022. There will also be two winter works public open days on 26th and 27th February, when CRT engineers will explain the challenge of keeping the lift in good working order. Visitors will have access to the lift's complex mechanism and be able to see work in progress as the gate

seals are replaced on one of the caissons. Places on the open days are free but need to be booked in advance. Visitors will be updated on a multimillion-pound refurbishment, which is due to take place in the next two years. This will include repainting the iron structure, upgrading the control system, and remedial work to the hydraulic ram cylinders that support the caissons.

The lift replaced three double inclined planes and four salt chutes at Anderton Basin and provided passage between the Weaver and Trent & Mersey without the need to transfer goods between boats.

To book a place on the open days, call the booking team on 01606 786777.

Salt chutes at Anderton Basin before the lift opened
Photo CRT



Belgian connections

Anne Husar traces the origins of continental boat lifts.

By the 1870s, Belgium knew a lot about building canals for their 350-ton 'spitz' commercial boats. Their network linked with those of France, The Netherlands and Germany and carried a lot of freight; so much that queues often formed wherever there was a flight of locks and time spent was money wasted. Meanwhile in England, our canal system, although miniature in comparison, was being watched with interest by the Belgian engineers.

By 1871, the Weaver Navigation Trustees had decided on the novel idea of constructing a boat lift to connect the Trent and Mersey Canal with the River Weaver and they appointed the hydraulic engineer, Edwin Clark, to make this happen. By July 1875, the construction of the Anderton Boat Lift had been

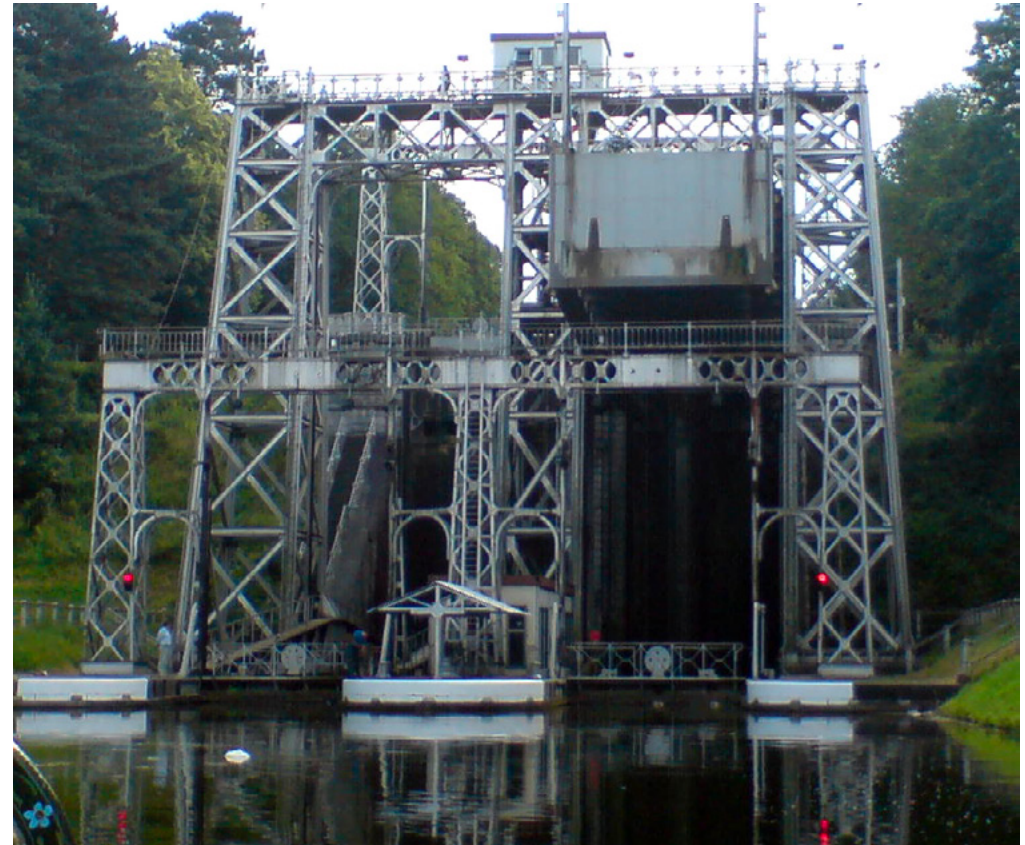
achieved, with two counter-balanced caissons to contain the boats, operated by hydraulic rams.

To begin with all was well, but after a few years the use of salty river water as the hydraulic fluid created major corrosion problems. These often affected the operation of the lift and were never completely resolved. The decision was eventually taken in 1908 to convert the lift to electric rather than hydraulic power and a system of counter-weights and overhead pulleys allowed the caissons to operate independently. The Anderton Lift then operated successfully until the 1960s, when it suffered from the general decline in commercial traffic that was the sad fate of our unique canal system at that time. In 1983, extensive corrosion was found during repainting and the lift was declared structurally unsound and closed. Seventeen years later, after consultation with English Heritage, it was decided to restore the hydraulic operation, using specialist hydraulic oil. The counter-weights were removed and are now a maze in the lift grounds.

Back to the 19th Century and you would think that the Belgians, having learned of the problems that Edwin Clark's lift was suffering, would turn their back on that idea for their canals. Not a bit of it; they asked Clark to come to Belgium and build at least one Anderton-style lift on their busy Canal du Centre in southern Belgium, where a flight of 14 locks was causing considerable hold-ups for their commercial boat traffic. In 1888, the first lift was opened, followed by no less than

The original buildings still in use, containing all the original machinery.

Photo: Anne Husar



three more by 1917. All four operated hydraulically, lifting boats a total of 66 metres in height over a distance of seven kilometres.

The Belgians perhaps learned from the Anderton Lift's problems, as maintenance on their four lifts was top notch, so much so that they were still operating commercially until 2002. At that point on the canal the massive Streppe Thieu boat lift was opened, catering for 2000-ton vessels and lifting them over 73 metres in one operation. The four old lifts had become obsolete and their demise was hastened that year by a malfunction of the oldest lift that began to rise as a commercial barge

was leaving, breaking the back of the barge as well as the caisson.

The Belgians have a strong regard for their history and set to work to restore not only the broken lift but all four, completing this mammoth task in 2005. They retained all the original mechanisms and operational buildings, opening the lifts for leisure boating and funding an enthusiastic and skilled full-time team to keep it that way. So it was that in the summer of 2008, we could enjoy the experience in our narrowboat. While we were there, we also travelled in the gigantic tanks of the Streppe Thieu boat lift, but that's another story.

Approaching lift number 4

Photo: Anne Husar

Illness afloat

NABO Welfare Officer **Ken Hylins** reports on recent problems, with little support from CRT to avoid COVID-19.

This article is not hypothetical; it is based on actual events over six weeks in December and January.

As background information, I had a heart bypass and, as a secondary effect of this, I have been having physiotherapy to alleviate the effects of the operation, which caused me difficulty in using my left arm. During this time, the local CRT welfare and support officer allowed me to stay at Appley Bridge for about eight weeks—no problem. There have also been adverse weather conditions, with two major storms and weather warnings issued, so my movement would have been restricted in any case.

During the last six weeks, I have had three health issues and all have highlighted the difficulties in obtaining care and support afloat. The first was an intestinal blockage and I could only get to hospital with the aid of my daughter—thankfully, it was a day that she was off work or there would have been no support. After fourteen hours in hospital, she then took me back to the boat. The second issue was a visit to my doctors with a suspected blood clot in my leg. This time, I was able to drive there and, after many tests, I was allowed to go back to the boat. The third issue was much more disturbing and is the main reason I want to bring this to the attention of CRT and other waterway authorities.

I was walking my dog when I started to feel dizzy and almost lost consciousness. I had to go on my knees for fifteen minutes to assess the situation, as there was no help

around at all. I managed to get back to the boat and was violently sick; I could only sit on the settee and wait until I felt better. Then I phoned my doctor, finally getting an answer after ten minutes, and I was told to ring NHS 111. It took a good twenty minutes to get through and they said that they would get a doctor to call me back. When the doctor called back, he said I needed to get to Casualty urgently and he would alert the hospital to my imminent arrival. There lay the problem: he said an ambulance would take twelve hours to reach me and that I should ring a taxi as I could not drive. The taxis were booked up for at least three hours. My son had COVID-19 and my daughter was at work, so no help there. The only option I had was local support and I was taken to hospital by a local man some three hours later.

There followed a two-day stay in hospital, having many tests, and I was discharged late on Christmas Eve—only because I had someone to be with me. After the Christmas holidays, I contacted my local CRT welfare and support officer and explained what had happened. There was a different attitude to before: “This will be an issue and we will have to re-evaluate your reasonable adjustments. I will have to consult my supervisor over this”. All generally unhelpful. I said that I am not moving until I seek my doctors’ advice when I see them on 11th January and I emailed the welfare officer, stating my need to stay in Appley Bridge.

This brought home to me the mis-

guided strategy of CRT in managing the present virus situation. The latest form of the virus is more contagious and, to quote the Government, the science is not in place to predict its mode of infection or how serious it would be. But at the time, numbers of infections and hospitalised people were increasing. I feel that there is a lack of understanding of the implications for boaters, as demonstrated by my experience of trying to get to hospital. There is no support available to give care to people afloat. There is no help if you don’t know the local people. Unlike for many of the people who work for CRT, who go home and have all services literally on tap—gas, electricity, sanitation etc.—this is not so on a boat, especially with the need to isolate. When things run out, this becomes an issue.

I asked CRT’s National Boating Manager to apply a reasonable adjustment to the 14-day movement rule and avoid sending out notices for non-movement by either the local officer or by centrally generated emails—an adjustment that does not impact CRT financially but would show a change of attitude to support boaters at this time. This was denied and he said they still expect boaters to move. Later, he said that if boaters who receive a notice for non-movement contact them, they will discuss it.

The Government guidance to work from home and reduce gatherings increases footfall on the towpath, making it a place to avoid close contact. CRT management says that there is no danger of transmission in the open air on towpaths, although, where possible, CRT staff are working from home to reduce human contact. The signs that are being put up about avoiding moored boats are a joke. I have spoken to CRT workers and they

CRT accepts that there is a risk for its staff, yet apparently there is no risk to boaters

are allowed to cancel what they are doing due to footfall on the canal towpaths. Therefore, CRT accepts that there is a risk for its staff, yet apparently there is no risk to boaters, whom people on the towpath often can’t pass at a safe distance—it’s very strange. The Government’s COVID-19 laws and guidelines are intended for people who live in a house, often with a front and back garden to give them distance from potential contamination. But CRT’s master stroke has been to keep our canals open and increase towpath footfall even more. Where is the consideration for boat dwellers? To add salt to the wound, we are then forced to move every 14 days and are given no leeway. This virus affects the healthy and it also has long-term effects (long COVID-19). I think that if boaters feel it’s unsafe, or feel vulnerable on the towpath, and they are expected to move, that is a valid reason why they should not and they should notify the navigation authority to this effect. We should support our membership if they fall foul of the requirements to move under these circumstances.

**Matthew Symonds,
the National Boating
Manager of CRT, responds
to Ken Hylins’ article**

I’m sorry to read Ken’s article about his recent ill health and his views on how the Trust responded to this and to COVID-19 more widely.

It is important that we hear, and take on board, feedback about how

If any boater is facing difficulties, please contact us as soon as possible, and we will provide help where we can.

COVID-19 FAQs on the CRT website: canalrivertrust.org.uk/enjoy-the-waterways/safety-on-our-waterways/coronavirus

we can improve the support we give to boaters, but there are several aspects of Ken's account that we would disagree with and we are grateful to NABO for the chance to set out our response.

A large part of our licence support team's time is spent helping boaters who are facing short or longer-term difficulties, including health related matters like those Ken describes. Our colleagues based in the area have continued to help Ken over a long period of time, including with extended mooring when he has been unable to move. All requests for a longer-term reasonable adjustment are reviewed with the licence team supervisor, and in this case an extended stay was agreed, with the local team helping to facilitate the adjustment.

Since the start of the pandemic in March 2020, we have followed government advice and taken steps to manage the inevitable disruption, specifically to support our boating customers and also ensure our colleagues have been able to work safely. We developed new risk assessment materials, published in line with government guidelines, along with eight protocols detailing the measures that we were taking in each of our working environments. The protocols covered risks to our colleagues and volunteers, and risks to the public using our waterways. As government guidance has changed, we have updated the information and communicated this to boaters. Our website has a comprehensive COVID-19 FAQ section which includes details about who boaters should contact if they need

extra support.

Our operational teams have continued to work outside on the bank, in line with our protocols. During the first COVID-19 lockdown there was still a great deal of uncertainty and concern about how the COVID-19 virus was transmitted. In line with the government guidance, we suspended the requirement for boaters to move every 14 days and asked people to limit the use of towpaths to local daily exercise.

By December 2021 there was far greater understanding of how the virus was transmitted, with indoor, poorly ventilated spaces being of greatest concern. This was reflected in the government's December 'Plan B' measures which required face masks inside shops and indoor entertainment venues, with no restrictions on use of outdoor spaces where the risk of COVID-19 transmission is much reduced.

In line with this, Trust colleagues and volunteers continued to work in outdoor settings, and there were no restrictions on boaters' ability to navigate or on use of the towpaths, so Ken is incorrect to say that our advice to boaters was different to our advice to colleagues and volunteers. Ken is also incorrect in suggesting that there was 'no leeway' given. We spoke with Ken in December and explained to him that if any boater was in a vulnerable situation and was unable to move, they should contact the Trust as soon as possible so we would try to help them as best we could. We appreciate that, although there are no national restrictions on movement, there are still some boaters who, due to their circumstances, cannot move or find it difficult to do so. We continue to offer these boaters support. If any boater is facing difficulties, please contact us as soon as possible, and we will provide help where we can.

Better late than never

Basic antifreeze maintenance for your engine

John Devonald has some tips on a topic often overlooked... until too late.

I should have written this article before winter set in, but, as I am still getting queries from people about issues with their cooling systems, here are a few points and tips to help anyone who is unsure as to what it entails.

On most canal boats, the cooling system is a closed loop with a water pump that moves coolant through the engine to cool it and then into a skin-tank to reduce the temperature of the coolant before recirculating it back to the engine, in some cases an extra loop is used to heat a calorifier. Basically the same as a car with the skin-tank taking the place of the radiator.

What liquid is used in this system is important: it must not freeze in cold weather or there could be a catastrophic engine failure from expansion when it freezes—split hoses at a minimum and, worst case, a cracked engine block. It must transfer heat effectively cooling the engine and also inhibit corrosion in the engine passageways.

There are three main types of coolant in use: Inorganic Additive Technology (IAT), Organic Acid Technology (OAT) and Hybrid Organic Acid Technology (HOAT) and the basic rule is 'never mix them' as there is the chance of sludge forming that will inhibit water flow and cooling. I would be very surprised if anyone has HOAT coolant in their boat; it's relatively new and, the last time I looked, expensive. You cannot totally rely on colours to differentiate between IAT and OAT, but nearly all the time IAT is a blue/green colour and OAT is a red/orange colour.

I have to admit I have mixed coolants with nothing to go on except colour in the past but it's not really recommended. If you changed your coolant during an engine service, you should have details of what is in your system. Put the same product in to top it up. This eliminates any of the issues of mixing coolants.

Of course, that's in an ideal world. In my present boat, I have no idea of the brand, just the colour it is—so where do I go from here? The coolant in my boat is blue. There is also a half-empty container of IAT in the engine room and my Webasto heating system has blue antifreeze, so I'm sure enough to risk topping-up with that if I need to. If I had any doubts, there is a choice of things I could do; change the coolant completely, I will do so soon anyway as IAT coolant is only good for two years—OAT is good for five; if I need to top-up in the meantime, then, for a small amount, deionised water will do. A skin tank cooling system is pretty big and you aren't going to dilute it too much from a small top-up; or you can use a coolant that is compatible with both, eg, 'Prestone'.

A couple of other points to finish: if you can, buy concentrated coolant that you dilute with deionised water to the correct ratio as this will work out a lot cheaper than buying premixed at almost the same price per litre. A useful addition to your toolbox is an antifreeze tester. This is a bit like a battery hydrometer and will give you an idea of the protection the coolant is giving. Available for few pounds upwards, it will give you a bit of peace of mind over winter.

Smoke control and boating

John Devonald considers the implications for boat stoves of new environmental laws.

All the Government approved stoves in England:

<https://smokecontrol.defra.gov.uk/appliances.php?country=england>

All the Government approved fuels in England:

<https://smokecontrol.defra.gov.uk/fuels.php?country=england.>

Boaters on the inland waterways of England and Wales have, up until now, not had to worry about smoke control areas, with boats being exempt from the rules in said zones. This has now all changed with the passing into law of the Environment Act 2021. In this Act it adds boats to the Clean Air Act of 1993, as can be seen in Section 73(c) below.

73 Smoke control areas: amendments of the Clean Air Act 1993 Schedule 12 makes provision:

- (a) *For imposing financial penalties for the emission of smoke in smoke control areas in England*
- (b) *About offences relating to the sale and acquisition of solid fuel in England*
- (c) *For applying smoke control orders to vessels in England, and*
- (d) *For authorised fuels and exempted fireplaces to be listed in Wales.*

So what are the repercussions with this change of legislation for boaters who are living on boats either in marinas or on the canals within clean air zones?

It's rather a difficult one to forecast at the moment and I would have said it won't, in practice, make much difference. However, as some of you will be aware, Tower Hamlets Council are already targeting boats on canals in their jurisdiction for smoke emissions and running engines. This is being contested by the Bargee Travellers Association (NBTA) as unlawful harassment and we will see whether or not anything comes from it. Whatever happens

with this case, the council's action is probably going to be the first of many in towns and cities.

The Government is already limiting the fuels that can be sold for use in stoves, so the worst of the smoke and fume emitters will not be easy to purchase anyway. But if you collect wood for your fire, to comply with the legislation you will have to ensure that it is dry when you burn it. Also, if you are burning solid fuels in stoves on boats, you have to burn it in a Defra-approved stove to comply, as well as use only authorised fuels. The Government lists all the approved stoves and fuels. I've had a look and mine isn't listed ... oops! ... and my boat is in a smoke control zone as well!

Which brings us to the question: what difference will it actually make to us and what can we expect the future to bring? In most cases, I suspect it will have very little effect at all. From people I know, a very high proportion only burn smokeless fuel of the readily available types that you get in marinas or farm shops and, even when burned in non-Defra-approved stoves, it is still smokeless. Again, if you scavenge wood it needs to be dry before you burn it for it to be (relatively) smokeless. On a BBC site, I found the following in an article about selling and burning wood: *'There are loopholes. It's unlikely that local councils will prioritise inspections of garage forecourts when their ranks are depleted by spending cuts and there are no powers to inspect homes, so any rules on the use of wet wood cannot be enforced.'*

I am presuming that nothing has

changed since that article was written and that councils cannot enter your boat to examine your stove. But note, that is a presumption on my part from looking at various sources. I am not a lawyer.

In the case of Tower Hamlets, it seems that the environment people were also complaining about boat engines being run while the boats were moored up. Obviously, this is done for battery charging and hot water, and is allowed only within the hours of 8am—8pm (except on Eco-moorings where electrical bollards are installed), so I can't see anything coming of that at the present time. As an item of interest, while reading through parts of the Environment Act 2021, I came across the definition of what constitutes a motor vehicle with reference to environmental recall of motor vehicles. It makes interesting reading:

74 The Secretary of State may by regulations make provision for, about or connected with the recall of relevant products that do not meet relevant environmental standards.

[...]

(3) Only the following types of product may be specified or described in the regulations:

- (a) *A mechanically propelled vehicle;*
- (b) *A part of a mechanically propelled vehicle;*
- (c) *An engine that is, or forms part of, machinery that is transportable (including by way of self-propulsion);*
- (d) *A part of such an engine, or any other part of such machinery that is connected with the operation of the engine.'*

Any part of that definition could be applied to a canal boat engine or diesel powered heater. I'm not saying it would be, just that it could be.

This is not going to go away. It's not going to get any easier for us



on boats. It seems that gone are the days when we could happily burn anything and everything, and now we are going to have to stick to approved fuels or else the environment arms of various organisations will be down on us. Maybe they don't have the power to enter boats and houses, but you can bet that sometime in the future they will. It's another part of the green crusade and we are going to be swept along with it. There have always been people in houses who have complained about smoke from boat fires and running engines and generators, but up until now there wasn't really that much that the relevant authorities could do. That seems to be changing.

We at NABO can only recommend that when our members are in towns and cities they use approved smokeless fuel where possible and are considerate when needing to run engines. Simply put, no council is going to side with a boater over a rate-paying householder, so the onus is going to be on us to comply as best we can.

Autumn stove smoke
Photo: Beth Chambers

How many people does it take to moor a narrowboat?



Cartoon: Nick Watton

Paul Monahan viewed proceedings from the comfort of his bow deck.

The best answer this week is twelve, plus a dog. The cast of this tragi-comedy comprised:

- 1 Crew of six**, of whom two only watched and advised from the stern deck, two wound the ends of the lines into tangled bundles but contributed nothing further, while the remaining two rushed from bow to stern pulling first at one end, then the other.
- 2 Crew of three from another boat** tied nearby, two tugging in opposition to the first two, and the third shouting orders.
- 3 Two cyclists** who were unable to go past

the ruck on the towpath, so then 'helped' by heaving very hard indeed, but in different directions to everyone else.

- 4 A man and his dog.** Their part in proceedings was never clear, although the dog may secretly have been in command of operations. After twenty-five minutes the boat was tied up two feet from the bank but lodged on an underwater obstruction. Five minutes later and obviously dissatisfied, the crew untied and left for another mooring two boat-lengths further along the pound.

In my Very 'umble Opinion

Signposting the Ganges ... and the Yangtze and the Mekong

Ian Hutson fulminates on CRT's corporate attitude to signage.

The other day, soon after my customary mid-morning fortifying sea-kale croissant and de-toxing latte-with-pomegranate-sprinkles, my exercise-gland irked and irritated me to hop off the boat and to go for a random walk in the dull and the grey and the drizzle.

It was then that my eye-buds (for mine are now on stalks) noticed two liveried CRT vans and a flat-bed Ford Transit, with three equally-liveried workers abounding. Being shame-free and as nose as they come, I lurked. I loitered. I lingered. I hid under my king-sized flat-cap on a bench, and I waited.

Lo and behold the workers were there to replace the new blue plastic sign that replaced the 'old' black and white metal sign, that replacement having only been made not some four months previously. Replacing it, not because it was damaged or because of any sudden surge of plastics-guilt arising in the throbbing heart of CRT Corporate but, as far as the naked layman's eye could see, simply to tweak the wording and to add an exhortation to 'Enjoy. Volunteer. Donate.'

Enjoy this sign while it's here; it'll probably be replaced again by January at this rate. Volunteer for a sign-changing working party, saving staff costs. Donate towards the ever-rising and ruinous cost of wholly unnecessary new signs.

What of the removed 'old' sign? Doubtless recycled on expensive subcontract by an order of eco-monks, then blessed, bleached

white and made into Well-B toys. Oh sorry, my mistake—each Well-B is made from eight drinking bottles and a bit of comfort-blanket fabric. Well, be then perhaps these discarded near-new blue plastic signs will be 'up-cycled' into designer coffee tables? Be they perhaps well-used to patch the roofs of some of the "held in trust" publicly-owned canal buildings? Or be they left in the nearest CRT yard until it becomes acceptable again to ship containers of such stuff to the Far East, to be dumped into the Ganges or the Mekong or the Yangtze. Hands up in class all of those who think that this is the only such sign to be changed entirely unnecessarily—again—on the two-thousand miles of the system. I'll bet my last farthing that this is not the only one, not by a long chalk.

The bottom of the canal is nearly higher than the top in many places, the edge of the towpath often sports more "interesting crinkly bits" than does the award-winning Norwegian coastline, and mowing and trimming work has, unlike the overgrowth, been slashed. The priority would appear—from the evident evidence—to be image, branding, surface gloss. Ooh—shiny, yeah?

Dear CRT Corporate, don't you ever dare to tell me again about how money is in short supply. What price this change; sign and labour?

NB—not one iota of criticism intended of the workers involved; all hooting and derision aimed squarely—and I think fairly—at the policies and the sheer humbuggery of CRT Corporate.



CRT privacy issues

Still not happy with the legal consents in the Trust's privacy policy, **David Fletcher** investigates.

In December 2020, while the terms and conditions consultation was in progress, we reviewed the privacy documents and made a submission on our concerns.

They were numerous, but three stood out: the first was readability; the second was that the documents were obviously written at different times, so they did not link up; and, thirdly, we did not agree with the legal consents. We felt that many of the matters were not compliant with the law. We heard nothing for six months, no request for clarification, no phone call, just the usual legal blanking that we have become used to from the CRT in-house legal department. They don't do customer relations.

We did finally get a written response at the same time that the new terms and conditions were produced in May 2021. The privacy documents were also republished, like a rabbit out of the hat. Thankfully, many simple issues have been addressed, so we are making progress. Are we happy now? No, we are not. We have offered to help CRT, but they have not responded.

CRT says that these documents are not part of our licence agreement. NABO does not agree. They are the legally-binding promise by CRT as to how it handles our data. They go together with the terms and conditions document and, because they are part of the offering to boaters at a time of purchase when they buy a licence, they are therefore part of the contract.

The privacy laws require

Although CRT has wide powers under the 1962 Transport Act, in our view these do not extend to changing the scope of the 1995 Act.

documents to be readable and understandable, but the current versions are not well composed and don't meet the accepted standards. CRT understands this because it rewrote the terms document to comply. So why not the privacy documents as well?

For data handling, CRT has to identify each parcel of data, say what it is going to do with it and why, and then identify the legal basis of the agreement to hold the data. This is the 'legal consent'. For our boat licence, the consent is 'public task' because the activity is a legal duty of CRT governed by the Acts. Although CRT has wide powers under the 1962 Transport Act, in our view these do not extend to changing the scope of the 1995 Act.

CRT has assumed your agreement to holding and using, say, your email address for activities other than licensing, for example consultations, marketing, advertising etc. It says this is a legitimate interest. Legitimate interest is in itself a valid legal consent, but there are limits and it places a high duty of care on CRT. There can be no transfer of data from one parcel of data to

another. For example, your email address should not be transferred from your licence application, to be used for marketing, customer research or self-promotion. In general, public bodies are not allowed to use legitimate interest as a consent. They need to ask.

CRT says it uses legitimate interest as the consent to cover boat insurance details, but any request for data other than specifically required in the Act exceeds CRT powers. They've tried to get around this by putting a clause in the terms document. Is this legal? We don't think so.

So what have we done about all this? Fortunately, the Information Commissioner's Office is responsible for enforcement of UK privacy

law, so we have made a formal complaint. We await their response. In the meantime, if you are in any doubt about the customer friendliness of CRT legal, have a look at this statement in the Privacy Policy: 'We may change this Privacy Policy (or the individual Privacy Schedules below) from time to time to ensure it reflects current legislation without notice to you'. So please do check it regularly. One day, when you are moored up and unable to move because of an unscheduled stoppage, do go and check the CRT privacy documents. They might have been changed yet again, to reflect their own self-serving view of the law. And according to them, they don't even have to tell you! I doubt a judge would agree.

Throwing away the bins... ...water taps, Elsans and pump-outs

Ian Hutson smells a weasel.

Is it a deliberate policy of closure-by-neglect designed to move all service facilities into the private sector? I do wonder.

Anyone who has moored at Barbridge Junction on the Shropshire Union can attest to the numbers of boats that moor on the bollard and sign-bedecked 'service' mooring, and who then spend quite some time looking for the water tap and rubbish disposal that their guide books still assure them are available. The water tap disappeared years ago; some guff about the supply having to cross under the canal and potentially being contaminated, or something. Oddly, there are multiple houses on both sides of the canal and a marina alongside the 'service' area—all with mains water supplies.

The rubbish facility was removed early in 2020 and the fenced compound dismantled. The reason given was '...damage to Goodwin Bridge, Bridge 101, and a new weight limit preventing the contractors from servicing the refuse point'. The good news is that repairs were undertaken

in October 2020. There are now no outstanding roadworks. Better yet, the nearby house and marina get their wheelie bins emptied. Oil tankers, albeit stubby ones, still cross the bridge to deliver bulk orders. The bad news is that the CRT update June 2020, the last such, changed the wording from 'out of use to 'closed and under review'. I smell a weasel. I smell a rat.

Losing the last of the facilities at Barbridge is hardly an extinction-level event. There are—at least for the moment—a tattered selection of CRT alternatives available some miles and locks in other directions, although none at all on the Middlewich Branch itself. I do think it's suggestive of a deliberate policy.

The signposted weight limit is 16.5T. Looking at the bridge, I can't imagine it was ever very much higher. Is there really nothing in the CRT or waste contractor's fleet less than 16,500kg laden, obviously something about the same weight as the pictured oil tanker?



TECHIES'



CORNER

Aspects of boat design, construction, equipment, facilities or maintenance

Probably not the best title but it might describe the cascade of thoughts and questions that go through people's minds as their current set of lead-acid lumps struggle to squeeze reluctant electrons round their starving appliances and yearn for the great scrapyard in the sky.

Until recently, the only option that could be seen as viable was investing in some new lead lumps and the shortcomings that go with them were just accepted for what they are. Things such as: only use 50%; charge fully regularly; long charging times as the current tapers down while the engine guzzles diesel doing next to nothing; forgetting to top them up etc.

Lithium battery conundrums

Phil Brooke-Little believes this technology consignes lead-acid to history for onboard use.

Now, lithium batteries have been around for a long time, back to the dawn of mobile phones and beyond. It is only relatively recently, however, that they have become much more mainstream, largely thanks to the energy crisis, the growth of renewable energy sources and the electric vehicle movement. I probably don't need to point out why the technology has developed so much over that of lead-acid, which has been around for well over a century; however, you guessed it, I'm going to. First though, I must emphasise that there are dif-

ferent lithium chemistries when it comes to batteries: lithium polymer, which you see in radio-controlled gubbins and the like; Li-NMC (nickel manganese cobalt oxides), which is largely used in cars, consumer electronics such as drill batteries, 18650 batteries etc.; and then there is the type we are interested in, which is LiFePO₄ or lithium iron phosphate or LiFe batteries. These have the longest cycle life, don't catch fire as the others can, are the most stable, and have a voltage that lends them, ideally in banks of four cells, to the '12-Volt' voltages we use (12-14.4V).

The upside

OK, so the reasons, in case you don't already know them, why LiFe batteries eclipse lead-acid are as follows:

- 1 They don't mind not being full, whereas lead-acid like to be full or they sulphate.
- 2 You can use over 80% of their capacity and get a huge cycle life. Lead-acid is 50% and, with expensive ones you might be quoted 1,200 cycles, normal ones maybe 300. Lithium at 100% might give 3,000 and at 80% 5,000 cycles.
- 3 They can take a high current right up to full, enabling a full charge in as little as an hour, if you have the charging capacity, while lead-acid from flat would take nearer 10 hours.
- 4 They are about 16% more efficient than lead-acid, so you need to generate 16% less power to put a given amount back in.
- 5 They are about 20% of the weight of an equivalent usable capacity of lead-acid.
- 6 They are about 25% of the size of lead-acid for a given capacity.
- 7 They are maintenance free. Some lead-acid obviously also advertise that. However, the charging regime might well be regarded as 'maintenance' as it is something

that will well and truly murder them if neglected. Lithium batteries have a Battery Management System (BMS) that will protect them from you.

I could go on, but that will do for now.

The (perceived) downside

Now we get to the bits that put people off. The first thing that comes to mind is: "It's complicated; I'd have to change all my charging systems to lithium compatible ones". This is simply not true.

A lithium battery with a decent BMS will look after the battery and will disconnect the charge sources when full. The only thing you need to do is to ensure that the alternator goes to the starter battery and that you have a conventional, not clever, split charging relay to the lithiums. This ensures the alternator has a load when the lithiums are full. If you have a small alternator, the size of the connecting wire can limit the charging current to a value the alternator can cope with, as lithiums can accept large amounts of current. You set the cut-off voltage of the lithium to be below the minimum charge voltage of the system (14V is generally ideal).

Lifetime price comparison

The second, and main thought people have is: "It's too expensive". I think what might be helpful here is to compare two comparable systems in terms of usable capacity.

Best buy lead-acid

I am choosing 4 x T105 Trojan batteries from Tayna Batteries who are a well-known battery seller.

Because there are transport discounts for multiple ones etc., I'm going to round this to £600 delivered for a set of four. This gives 12V at 450Ah but only 225Ah is usable to

get their quoted life of 1,200 cycles. It should be noted that these cycles depend on perfect treatment and other conditions that they won't get!

Based on this, with lead-acid you have 225Ah at an average of 12.4V for 1,200 cycles at a cost of £600. Doing some maths $600 / (225 * 12.4 * 1,200 / 1,000)$ you get 17.9p per lifetime kWh.

Off-the shelf lithium

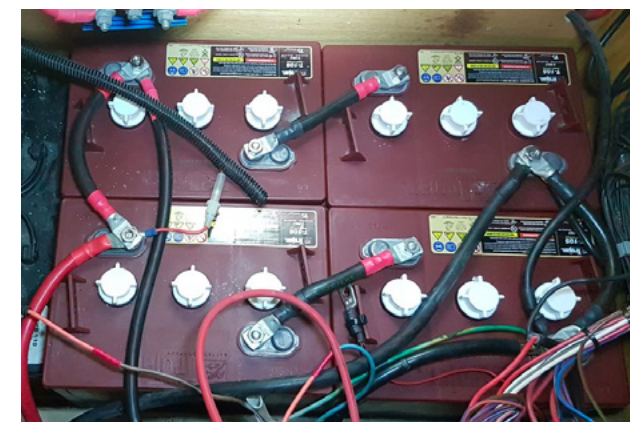
For the lithium, I am using this 100Ah battery from LiFe Batteries.

It has a very good BMS, which is bluetooth connectable, fully adjustable, with free UK delivery, and has what are recognised to be good cells. The life of this is quoted as

Further reading about cycle life and the technology: www.powertechsystems.eu/home/tech-corner/lithium-iron-phosphate-lifepo4.



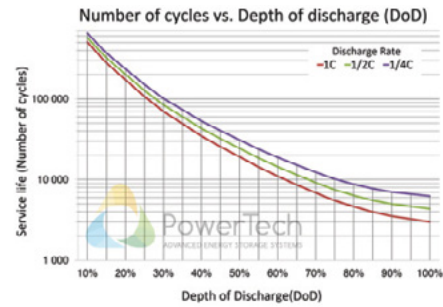
100AH LiFePO₄ Battery
330 x 173 x 220mm 10.6kg
www.lifebatteries.co.uk/product-page/12v-100ah-lifepo4-battery



4 x Trojan T-105 in a typical professional installation.
Each: 62 x 181 x 281 35kg
As pictured: 524 x 362 x 281 140kg

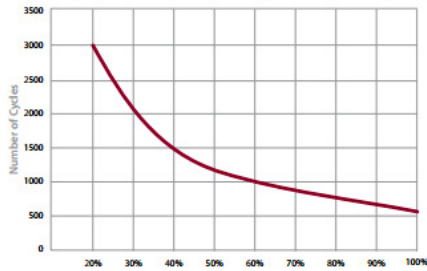
Photo: Four Counties Marine

>2,000 cycles. The actual cell spec. is 3,000 cycles at 100% charge cycles. However, I'll go with 100% at 2,000 cycles, as that is in the info. So we get $435 / (100 * 13 * 2,000 / 1,000)$ 16.7p per usable kWh. At face value



Typical Lithium cycle/life graph

Image: powertechsystems.eu



Typical Trojan T-105 cycle/life graph

Image: trojanbattery.com

you therefore have a saving of 1.2p per lifetime kWh.

When it comes to reality, your lead-acid won't last that long as they can never be looked after perfectly as boating simply doesn't allow that. You might be very lucky and get 1,000 cycles. The lithium will last a lot longer as you won't cycle them 100% — probably nearer 5,000 cycles at 80%. This would change the costs to 21p and 6.8p respectively.

Leisure Lead-Acid

Just for completeness, here is a 'cheap' 110Ah lead-acid leisure battery from Alpha Batteries.

I use this as they actually dare to quote expected cycle life! $110 / (55 * 12.4 * 150 / 1,000)$ equals £1.07 per lifetime KWh, which also indicates why cheap = expensive.

You can see that lithium really isn't expensive compared to good lead-acid, but the savings are by no means just there. If you run your engine just to charge, or charge from a generator, your charging times can be drastically cut due to the fast-charge acceptance. They will basically take charge at whatever rate you can supply it.

You can expect to cut your charging times by at least 2/3 or more if you have big charging sources, with subsequent reductions in fuel and maintenance. You also have the advantage that you can do top-up charging to any level because you don't have to get the batteries full

to avoid damage. You will get better performance from solar, as the panels will be regulating for less of the day and in fact will only regulate when the batteries are full. This is opposed to lead-acid, where they can be regulating for hours in the day and still not get them full, as the sun sets before they get there.

Low temperature issues

Right, now how many of you have done your homework and are screaming: "What about temperature in the winter?"

I'm not going to gloss over this as it can be an issue. It isn't for the batteries, as they simply protect themselves from under-temperature charging, but it does mean you can't charge them when they are below 0°C. You can use them down to -20°C, so use isn't an issue. If your batteries live in a place where they can expect sub-zero temperatures at a time when you might want to charge them, then you could consider moving them into the cabin.

They are completely sealed and are not going to catch fire, so there are none of the gas/explosive risks of lead-acid. You could insulate them, which might work for brief cold snaps when running the engine to charge will also warm them up—probably enough to still be above freezing next time you come to charge them.

To self-build and beyond

I could go on and talk about self-build ones and the economies to be had there but I have exceeded my word count and have probably bored you all 'til your eyes leak!

Hopefully, this has covered some of the perceived issues and costs that conundrumulate around your mind as you sit in the fading light of the last LED that your venerable lead-acids struggle to keep alive!

Rewind

Issue No 1, 2007

With Howard still recuperating, Peter Fellows looked into the issues concerning NABO 15 years ago.

Yet more déjà vu in this issue ... including Howard making his first appearance.

Shared owners: "NABO has always welcomed members who part-own a boat, provided they can identify which boat (we haven't opened our doors to timeshare owners who only own a week on an unspecified fleet boat). The former Shared Inland Boat User Group have dissolved and passed on their assets to NABO. Further, we have offered a place on Council to Howard Anguish, who will be our point of reference on any matters specific to boat share owners."

Defra Cuts: The Chairman wrote: "The Defra Cuts Campaign has dominated my agenda. The fight must go on and we must take the battle to the towpaths. The general public, who account for over 90% of the 300 million visits to BW waterways, must be made aware that this is not a bunch of 'middle class boaters' whingeing about lack of support from the public purse for their minority hobby. It is a threat to the nation's heritage that must be tended properly for the benefit of all."

Red diesel: "Even though the red diesel derogation battle seems to have been lost with the EU, we can still encourage the Government to mitigate the effects on the ordinary boater. There are two possible solutions. Change the colour of rebated fuel, or raise the duty rate on all red diesel to the minimum rate acceptable to the EU, and allow anyone still legally entitled to a lower rate to reclaim the difference."

Boat Safety Scheme:

"Maggie Thatcher talked about the 'trickle-down effect'. The stinking rich would have more money to spend, and thus they would boost the whole economy. The converse is certainly true. Make huge cuts in grant-in-aid to the navigational bodies and those cuts will be passed down. Neither BW nor the EA will be upholding their financial contributions to the Boat Safety Scheme this year. Who will have to make up the shortfall? Boaters, of course. By its own 'trickle-down effect', Defra is threatening boat safety and killing off the golden goose."

Customer Service Standards: "The 'Waterway Standards' have been expanded, some may say diluted, to become a document that sets out what BW intends to provide for all waterway users. The Standards have three levels: 1) Minimum standards that must be achieved for safety; 2) Standards that must be met according to a contract BW is drawing up with the Government—effectively what Defra can expect from BW in return for the grant-in-aid; and 3) The expectations of the customers.

Waterways are divided into: heavy leisure use; light leisure use; mixed freight and leisure use; not for navigation. Towpaths have four levels of use, down to and including totally unusable."



NABO News back issues are available online at nabo.org.uk/index.php/reference/nn-back-issues-2

Letters to the Editor

Opinions expressed here are independent of NABO policy and statements made have not been verified as true.

Inland waterways—a housing issue

I read Paul Monahan's views on the housing issues facing our inland waterways to be most perceptive and in line with my own thoughts over recent years. When I was on NABO Council, we had protracted discussions on the problems of long-term mooring in the Bath area. I well remember saying at the time that this was a 'Housing Issue' and, until CRT recognises the fact that it is a housing provider (albeit unwittingly), the problems will persist.

The issue requires a pragmatic approach to resolve the increasing demand for affordable housing and the acknowledged shortage of housing in the UK. The answer is NOT to strengthen enforcement or amend licensing conditions.

Many people who live on boats do so because they cannot afford homes in their chosen locality and, if prevented from living on board, would be classed as homeless. The Local Authority would then have to intervene and provide accommodation in most cases, especially if the subjects were considered to be 'vulnerable'. It is a fact that many local councils will pay housing benefit to cover mooring fees rather than place families in scarce and expensive emergency accommodation. There is a statutory obligation on councils to review and assess local housing needs and this includes the provision of live-aboard boats.

CRT must acknowledge that customers will wish to live on its waterways as their chosen or necessitated lifestyle and it must draw up policies to meet the needs. Sweeping the problems into the long undergrowth or imposing tougher enforcement will not solve the situation.

The existence of a Welfare Officer within CRT is a step in the right direction but until a Housing Officer is appointed all boating organisations will continue to devote time and discussion to the subject without any prospect of the issues being seriously addressed by CRT and other waterway authorities.

Stephen Peters

CRT review

We have been invited by Defra to put our views about CRT's management of the waterways. Where do we start?

As part-owner of one of the leading marinas in the UK, with 634 berths at 95% occupancy, including 360 local authority approved residential berths, and 20 businesses in premises that we have developed, which includes the international HQ of a Pharma Co., two restaurants, three cafes and nine shops, I'd like to comment as follows:

The CRT model should be that of Highways England, but for canals rather than roads. CRT should operate, maintain and improve the canals and associated infrastructure, such as locks, towpaths and bridges. The business of providing services along the network should be with marinas, which in effect act as motorway service stations.

But marinas and similar private businesses go much further, providing the tourism infrastructure of parking, shops, cafes, tourist information, etc.

CRT is trying to do things it is no good at, competing with private businesses at the same time, and it is failing to maintain the infrastructure, which should be its primary objective.

CRT has adopted the wrong model and it is not working. The National Trust model would work if the canal network was the destination, but it is not. Rather, it is a pathway, albeit a pleasurable one, that people use in the same way that people used to go for a drive in their family car. Boaters use the canal in the same way that car drivers use roads.

Similarly, this is true of carrying companies and trucks. The public use the canals for leisure by walking or cycling along them. The canals are a path, the same way that a pretty road is a path, which is used for occasional enjoyment, or as a route to somewhere, be it to the local privately-owned pub or privately-owned workplace.

Robert Neff, Mercia Marina

Long distance carrying

In Paul Monahan's thoughtful and well-argued piece 'Three ages of the waterways' (December NABO News) Paul refers us to 'the cessation of regular long-distance carrying in 1970'. Paul is, no doubt, referring to narrow boat carrying between the Midlands and London. Of course, it depends on how you define 'long distance' (the 'Jam 'Ole Run' from Atherstone to Southall was 121 miles) but we shouldn't overlook other regular long-distance carrying on the waterways which continued for some time after that (and in at least two cases still do).

On the North East waterways, oil products were carried for many years (until the 1990s, albeit with a break) from Hull to Colwick, Nottingham (around 103 miles) and aggregates from Besthorpe to Hull (65 miles), to Leeds (82 miles) and, until 2013, to Whitwood (75 miles). In 1977 a new traffic started, aggregate from Besthorpe to York (95 miles) and ran for many years, while today aggregate is carried from Hull to Leeds and oil from Hull to Rotherham, both around 60 miles.

David Lowe

Boating under the influence

Members may have watched the recent TV drama documentary concerning the speedboat accident on the River Thames a few years ago, which resulted in the death of a young woman. The assertion by the eventual suspect in the case, that there was no law covering boating whilst drunk, took me by surprise. But he was absolutely right. Despite the enactment of the Railways and Transport Safety Act 2003, the section covering non-professionals navigating boats has never been brought into effect. Consultation on proposals in draft regulations did take place and NABO responded in 2009. At that stage there were to be exemptions based on speed and length of craft; together with a blood alcohol limit based on drink-driving legislation. Apparently, nothing came of these proposals and Section 80 of the Act remains in abeyance. The proposed law would cover offences involving alcohol and drugs' misuse whilst navigating or controlling a vessel and in this day and age would seem to be a worthwhile contribution to public safety. Does

I name this boat ...

If you have spotted a boat name that made you smile while cruising, please let me have a photo to use in future issues. Here's one from Helen Hutt.



NABO have a view or policy on this subject? And would our members welcome such legislation?

Stephen Peters

John Devonald comments:

This probably won't be a popular view but.... More legislation, especially legislation that won't be enforced in an impartial way, is not good. There are plenty of laws that can be applied if necessary, especially if injury occurs, which on the canals and rivers is incredibly rare. If there are serious transgressions, as with the speedboat driver in question who got six years, prosecutions can and will occur. The 'don't drink if you are in charge of the boat' bylaw is adequate enough in my view.

There will be no proactive policing of the canals by the police to check if helmsmen are under the influence; they have, at present, pretty well given up on towpath crime completely so I can't see them supplying coppers to spot-check boats. How it would be policed is by people phoning up, accusing someone of being under the influence, and not by law enforcement agencies, except in retrospect in cases of accidents, which they do already. Can you imagine hire boating where, according to many on Facebook, the hirers all wear pirate hats, are p**sed 100% of the time and never slow down passing moored boats? The police would be having call-outs every five minutes in the summer season. In my view, it's a case of being very careful what you wish for.

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