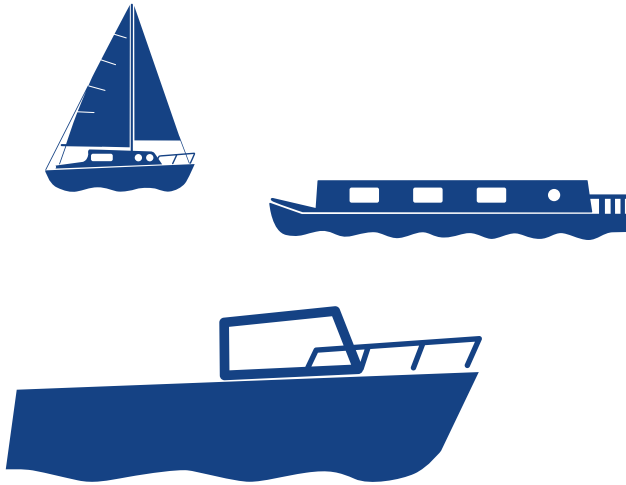


Lithium-ion Battery Safety on Boats



Installed Lithium-ion Batteries



**E-bikes, e-scooters, cordless tools
and other large portable devices**



**Phones, tablets, laptops
and other small portable devices**

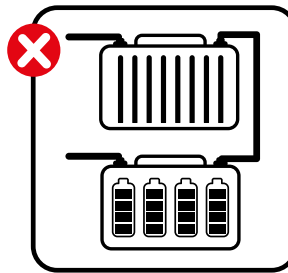
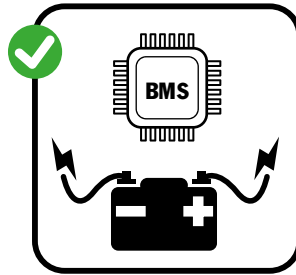


Installed lithium-ion batteries

Take control. Stay safe.

To operate installed lithium-ion batteries with a low likelihood of safety issues:

- Never DIY - only use a professional who installs marine-suitable equipment to the manufacturer's instructions and to industry standards (i.e. ISO 23625).
- Insist on certified batteries meeting the IEC 62619 and IEC 62620 standards.
- Insist on a well-matched and robust Battery Management System (BMS) and charge regulation equipment.
- Always use lithium-ion batteries in line with the manufacturer's instructions to keep them within safe operating limits.
- Never mix and match lithium-ion with other battery types by connecting them in parallel or in series.
- Do not use batteries, charging equipment, or connected cables that show any signs of damage or problems.

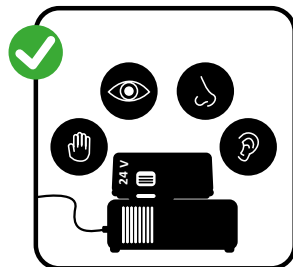
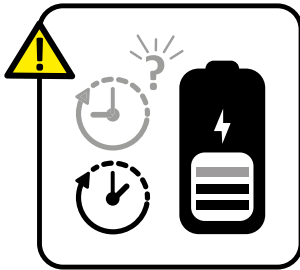


Large portable devices

Take control. Stay safe.

Follow these tips to ensure that e-bikes, e-scooters, cordless power tools, electric outboards, and battery-powered water toys can be used onboard as safely as possible:

- Only buy CE or UKCA marked devices from trusted sellers.
- If you're planning an e-bike conversion, always choose the professional option - don't DIY.
- Use manufacturer recommended batteries and chargers.
- Do not use batteries, devices, chargers, or cables that show any signs of damage or problems.
- Use your senses to check the condition of the devices routinely
- Avoid extreme temperatures when storing and charging batteries.
- After use, let batteries cool down before recharging.
- Be aboard, awake and alert during charging.
- Unplug the charger once the battery is fully charged.

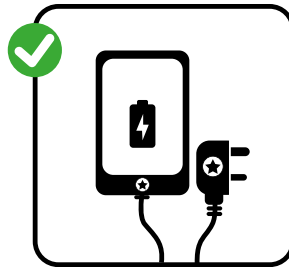
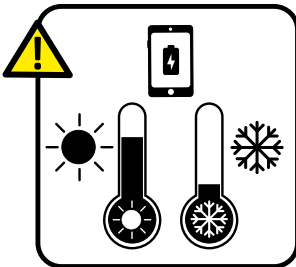


Small portable devices

Take control. Stay safe.

Follow these tips to ensure that devices such as phones, tablets, laptops, toothbrushes, watches, cameras and powerpacks, can be used onboard more safely:

- Avoid extreme temperatures when storing and charging batteries.
- Use original chargers and batteries. Always buy genuine or known and trusted brands when replacing them.
- Avoid damaging batteries e.g. crushing, puncturing or immersion in water.
- Do not use batteries, devices, chargers, or cables etc. that show any signs of damage or problems.
- Don't cover chargers or devices while charging. A phone, tablet or laptop on charge should never be under a pillow, blanket or duvet.



Find out more about planning for the safe use of lithium-ion batteries on boats on the Boat Safety Scheme website:

boatsafetyscheme.org.uk/lithium-ion-battery

Always dispose or recycle lithium-ion powered devices safely and responsibly at approved facilities.

Check out recycleyourelectricals.org.uk

Endorsed by



Canal &
River Trust



Environment
Agency



Broads
National Park



ASSOCIATION OF
INLAND NAVIGATION
AUTHORITIES

Boat Safety Scheme Limited is public safety initiative run as a not-for-profit company limited by guarantee registered in England and Wales with company number 15501423, registered office address c/o National Waterways Museum Ellesmere Port South Pier Road Ellesmere Port Cheshire CH65 4FW V1.0 May26