



SPIRIT OF BATCHWORTH

Crewing Manual

Document Number

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1. Introduction

This handbook contains the instructions for the safe operation of the small trip boat “Spirit of Batchworth”.

This Handbook includes a set of checklists to remind everyone of what to say and do, and sets out the rules by which we operate *Spirit of Batchworth*. Those using it should already be familiar with the Trust’s overall Safety Management Plan and the Boating Safety Management System, which together give rise to it.

2. Safety

The Trustees are responsible for safety and the General Manager supports them by making sure that those who skipper and crew the boats are properly able to do so. When on a trip, the skipper of the boat is wholly responsible for the safe conduct of the boat, crew and passengers when under their charge.

Safety is a responsibility for everyone involved in the Trust. Even our visitors and passengers should make sure that they don’t do anything which would prejudice their own or anyone else’s safety. But the Trust is responsible for making sure that what we do is properly planned and executed, especially when using our boats.

The Skipper may not be the most experienced member of the crew, and in any case may not have noted some hazard or other spotted by one of the crew. So anyone crewing should point out to the Skipper that some risk may be developing: the Skipper will take that advice into account when deciding what to do. Aside from the actual risks, we are likely to find that our insurance is compromised if something unsafe is deliberately undertaken!

One point to emphasise, which is repeated in the text, is that

The crew of RWT boats with passengers embarked, or when conducting training, wear lifejackets and RWT shirts/fleeces.

This makes sure that our crew can be easily identified.

Boating and Accident Log

A logbook is kept in the boat, in the form of a diary. On any day the boat has been used, whether boating or not, a statement must be made in the log that either there were no incidents, or a short synopsis of what the incident was and what was done about it. It is the Skipper's responsibility to make this statement. If others are involved, then their contact details should be recorded if at all possible.

The point of this is to make sure that, if there is a subsequent investigation, we have at least the basis of a record of what happened. If there is no record, we will immediately come under pressure and challenge.

When an incident has been recorded the General Manager must be informed, usually through the Canal Centre but directly if the matter appears serious.

The log also allows us to record what we did with the boats, so a short note of the trip should be included. Maintenance activities will also be reported.



Insurance

The boat and the Trust are covered by insurance.

Any involvement in an incident which might result in a claim either by the Trust or against us must be notified to them. In the first place contact the General Manager and also ensure a message is passed to the Chair of Trustees and follow their advice.

Risks

The main risks when the boat is moving are of collision, of accident in a lock, and (on a river) of stranding on a weir. And of course the risk of passengers or crew falling overboard is always present.

The specific Risk Assessment for the operation of the Spirit of Batchworth is attached (annex B). Note that the Trust believes that the most serious risk to our crew and passengers arises when working through locks.

3. Roles when boating

All those crewing the boats have a responsibility to the Trust for assuring the safety and well-being of the boat and of their fellow crew members. This document gives guidance to all so that everyone has a clear understanding of what we can expect of each other.

A key control is the supervision of passengers by the crew. This will be made easier if the crew are readily identifiable, and they are therefore to wear both the RWT polo shirts or fleeces and the lightweight lifejackets provided.

Crewing Organisers

The General Manager is responsible for arranging crewing rotas for short ferry trips and a volunteer administers the rota for charters and these are coordinated in a single weekly rota.

Their combined responsibilities include: -

- establishing the programme of activities throughout the year
- communicating the programme to crew members
- requesting volunteers to staff the boats for those activities
- assuring that the boat is properly and competently crewed for each trip
- acting as point of contact for skippers and crews whilst the boat is away from its permanent moorings, and have ultimate decision making responsibility on behalf of the Trust for any issues that may arise.

The General Manager has responsibility for: -

- through the Ops Group, authorising repairs to the boat, should any be required
- monitoring and recording fuel and oil usage
- making a report of boating activities to the Trustees for each meeting, and annually to the AGM
- maintaining the register of skippers and their associated competence
- advise as required on the levels of competence in skippers



Skipper

Responsible for:

- Honouring any commitment made to the Crewing Organiser. Where circumstances change and this cannot be achieved, notify the Crewing Organiser immediately and work with them to find a suitable alternative.
- The safety and security of the boat, passengers and crew, and the public as bystanders.
- Briefing the crew on the responsibilities, itinerary and any hazards for the trip. Confirm with each crew member that these are understood and acceptable.
- Ensuring that each crew member:
 - can demonstrate how to put the engine into neutral
 - knows how to stop the engine
 - knows the location of shafts, buoyancy life-ring and first aid kit.
- Providing, as opportunity presents, on-the-job training to crew members so that they have the opportunity to experience steering and managing the boat.
- Ensuring that the boat's log is kept updated on a regular basis to include trip details, any issues, and any purchase of consumables. Ensure that all entries are complete before leaving the boat, especially when there is no immediate following trip.

Qualifications

The expected qualification to be in charge of the Spirit of Batchworth is the RYA Helmsman Certificate plus having completed the gold star training. Other qualifications may be assessed by the senior trainer as suitable, on a case by case basis and often after an assessment period. A list of star Skippers and competent crew is given to the Crewing Coordinator and is kept up dated by the senior trainer.

Crew

The crew, which includes the Skipper, are responsible for: -

- The safety and general well-being of all crew members and passengers, especially by supervising children and other vulnerable passengers.
- Representing the Trust to the public.
- Discharging all responsibilities associated with the running of the boat, as assigned by the Skipper, to the best of their ability, observing safety guidelines, and consistently applying common sense
- Maintaining the boat's internal and external appearance as tidy and presentable at all times

Qualification

Qualification to act as crew will be determined by the senior trainer, after appropriate training and observation.

4. Operation: Boat, crew and passengers

(This book does not give instruction on boat handling and steering: the most useful reference outside this Handbook is the BW "Boaters Handbook", but there is no substitute for experience.)

4.1 Preparing for the trip - equipment, documentation. Before setting off, the skipper (helped the crew) is to make a set of checks:

Of the boat:-

- check the amount of fuel (only needed when doing the first trip of the day)
- Do the engine running checks: oil, coolant, alternator belts and hot water system.
- Bilges dry, bilge pumps working.
- Cabin and Toilet clean and tidy.
- Clean and ready for catering if intended.
- Documentation:
 - Log book
 - Check lists of the equipment:
- Lifejackets for crew / buoyancy aids for passengers
- Fire extinguishers
- First aid kit
- Horn
- Mobile phone
- Step for passengers
- Life ring or throwing life buoys (usually the latter), rescue ladder
- Ropes – Centreline ropes (each side), mooring lines fore and aft, mooring pins, hammer.
- Bow and stern fenders.
- Depending on the weather the number of side panels opened and window blinds rolled up will be a choice for the Skipper. However, regardless of the weather the front hood above the steps and the 2 supporting side bars **must** be removed and stowed
- **Comment TBD re safe method of achieving above.**

Of the crew:-

- Imperative to have one if passing through a lock.
- Check familiarity with boat and role. First aider?
- Brief on responsibilities of skipper and crew. Ensure understanding of Risk Assessment and importance of following operating procedure to address the risks.
- Brief on intended running schedule, especially if on a charter.
- Locate and point out safety equipment – lifebuoy, fire extinguishers, horn.
- Where are we meant to be going? What time are we due back?
- Do we have a phone no? Do they have ours? (*This will usually be the Canal Centre – 01923 778382*).



- Health problems (not normally a concern on short trips, can be on charters)

5. Spirit of Batchworth Safety Talk

Just as in an aircraft, the crew are responsible for the safety of the passengers, who like to know what is going to happen to them. They are, after all, paying for the trip. The skipper is, therefore, required to welcome people on board and make a short briefing.

Spirit of Batchworth Pre Boarding Safety Talk

1. Welcome passengers and introduce Self and Boat.
2. Suggest purchase of Duck Food
3. Explain how to get on the boat using front steps and handrail
4. Caution head hitting on Cratch Rail
5. Take large step on trip to assist with embarking and disembarking.

Post Boarding Safety Talk

1. Confirm numbers, length of Charter, where we are on Grand Union Canal and direction of travel
2. Explain layout of the boat a) when Crew will be b) areas where customers are allowed and c) areas where customer are not allowed.
3. Advise that children are responsibility of accompanying adults, not crew
4. Check if they wish to help at locks.
5. Explain toilet location and operation
6. Advise re General and Recycling bins. If in doubt – General Waste
7. Explain safety rope lines at bow of boat. No persons forward of the bow ropes. However, if adult passengers you can advise them that they can go forward but not onto the top two steps. NO CHILDREN however.
8. Explain safety when traveling through locks, hands, heads, and feet.
9. Warn not to touch trees (fish-hooks)
10. Explain no smoking policy on board, including E-cigarettes
11. Explain communication with crew is by coming to the rear of the craft or at the side if safe.
12. Explain that buoyancy aids are available if required for those under 12 years.
13. May bump or run aground – unlikely, but not a concern
14. In unlikely event of any emergency, stay seated and follow instructions of crew

Safety Whilst Helping at Locks

1. Encourage passengers to help at locks if they want to.
2. Ensure they have suitable footwear
3. Advise them not to cross the lock gates but stay on the towpath side.
4. Assist passengers and hold boat for them to disembark and re-embark
5. Do not give a windlass to a customer but assist them if they want to try winding the different paddles up. Be especially mindful if they are children. Keep hand on gate paddle spindle as safety break
6. **DO NOT LEAVE WINDLASS ON OPEN PADDLE SPINDLE** whilst waiting for lock to fill / empty.
7. Check for medical conditions before asking them to use windlass and push lock gates.
8. Check on safety around lock chambers, steps and steep walls - advise no running.



At night

Rickmansworth Waterways Trust do not operate trip boats beyond dusk.

Good behaviour – care for the environment

With our strapline describing ourselves as “home of environment”, we in RWT want to make sure that we preserve our own environment during our boating, and also to set a good example to other who see us. So we:

- observe the speed limit – 4mph. But if we make waves, or if wash is hitting the bank, we’re going too fast regardless of our speed – slow down!
- go very slowly past moored boats and anglers.
- respect the wildlife of the area. There are swans, herons and other wild birds: and many sorts of animal living in and around the canal; and many plants on the water’s edge. Do not pollute the water, especially by careless pumping of the bilge, and do not throw, or allow the passengers to throw, litter out of the boat – even apple cores can take a long time to rot!
- do not allow the passengers to play loud music, or to shout out: these can be a real nuisance to other people, and to wildlife.
- take care, when mooring on the towpath, not to obstruct the path with mooring pins or lines.

The Cruise Phase

When steering the boat always stand in front of the tiller arm not to one side. if you have to take emergency action with increased power the tiller will move quickly to port and may well try to push you off the boat. Normal cruise speed with passengers is achieved at 1000 RPM just above tick over. At this setting the steering is light and easily managed.

Before returning to Batchworth skippers should phone the lock centre to ask that Pride be moved back to allow disembarkation.

Disembarking the passengers

If at all possible disembark the passengers either at the lockside where Pride is normally moored or on the opposite side by the Education Centre. If coming down from Lot Mead it is ok to drop passengers above Batchworth Lock if the lock basin is busy.

Under no circumstances should passengers be embarked or disembarked from the small quay under the bridge in front of the Chess Lock.

Leaving the Boat

- Shut down engine
- Ensure no litter left in cabin – clean and tidy, ready for next use
- Check toilet. Capacity, cleanliness
- Complete log.
- Stern Gland.



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- All equipment (except mooring lines) inside cabin
- Isolate batteries – by steering position
- Make sure securely tied
- Lock rear cabin from inside exit through side / front flap, padlock the rear hatch, return key and rubbish to Canal Centre

Annex A

Technical Details: Construction, Engine, systems and Bilges

Spirit of Batchworth was built in steel in 2018. She was acquired by RWT in 2023. She is 44' long and 6'10" wide.

She is licensed to carry a maximum of 12 passengers and 2 crew.

Engine

The engine is a 40 Hp Yanmar diesel engine installed in 2018 when the boat was built

The engine has a header tank on the bulkhead in front of the helm position and is water cooled by a closed cycle with a skin tank fitted to the keel. The water pump is integral to the engine.

The single right-hand propeller has a standard stern tube, greased by a greaser fitted just to the starboard of the weed hatch.

Lube oil is 15W-40 diesel-spec multigrade, which should be changed every 100 running hours.

Gas System

There is no gas on board Spirit

Electrical system

There are two main electrical circuits – one powering the lights and water pump, and the other the engine services. The isolators are just above the floor on the starboard by the battery box. The battery box is situated on the starboard side and contains 3 batteries. 2 leisure and one starter battery. These are checked during the maintenance schedule.

There is also a Transformer on the boat that provides 240volts to standard 3 pin plugs and mobile phone charging points.

The batteries are charged by an alternator attached to the engine. The transformer is powered by a separate alternator also attached to the engine.

Fuel system

The fuel tank is located at the stern of the boat, The lid has a security bar and lock and is filled and vented on the gunwale. It holds about 250 litres. The contents are checked by taking the security bar and lock off, undoing the screw cap which is attached by a lanyard and then dipping the tank using the sectioned stick provided. The stick is kept just inside the cabin on the port side. Do not let go of the stick when dipping the tank as it will float and sink into the tank.

Water, Toilet etc

The water tank is filled on the at the bow of the boat on the starboard side. It contains about 50 gallons, and supplies the toilet and basin. The water pump switch is part of the

main switch board on the starboard side of the helm position and must be on to supply toilet flushing as well as taps. The pump itself is in the cupboard under the wash hand basin in the heads.

Hot water is provided via a calorifier which is situated on the engine bay wall forward on the starboard side. There is a mixer tap under the sink in the toilet which regulates the temperature of the water coming out of the mixer tap. This is set by the maintenance team and should not be altered.

The toilet is a pump-out unit, whose holding tank is towards the stern under both the toilet. The pump-out deck fitting is on the port side gunwale.

Safety Equipment

The equipment should be checked before each trip. It comprises:

- Firefighting – three extinguishers.
- Three life rings (and two Perry lines,). One to be carried on the roof of the cabin in front of the helm the others are situated on the walls at the front passenger area these must be readily available when cruising.
- Lifejackets – quick-acting for adults (and crew), some smaller orange buoyancy jackets for children.
- Horn, mounted on the steel roof and the headlamp, mounted on the front of the boat are both switched from the steering position using the user switch panel.
- One long shaft and a “boathook” (cabin shaft), to be carried on the roof.
- Fenders (bow, stern and side), centre lines (one on each side), mooring ropes.
- One rescue ladder.

Engine operation

The engine and its services are all controlled from the steering position. One battery is dedicated to them. It is activated by an isolating switch, and operated by a key.

The Morse control lever controls the engine power and in turn boat speed. The engine is connected to the propeller by a very short shaft (60cm) therefore there is very little power loss through the drive train. If the throttle is opened fully in either forward or reverse gears it has an immediate effect on the rudder and makes the steering very heavy and robust.

Starting the engine

Having carried out engine pre-start checks (oil, coolant, alternator belt, bilge).

Ensure battery isolator is on.

With the control lever in neutral turn key so that heater indicator light illuminates. After approximately 6 seconds the light will go out. Turn the key to engage starter. The engine will start immediately.

Using the control lever, engage the forward and reverse gears in turn to check connectivity and correct operation

Setting off

Engage drive and push ahead or astern as required. The position of tick-over is when the

lever is vertical. The engine ticks over at approx. 800 to 900 RPM. The gear engagement can be felt through the boat and a good cruise power setting is 1000 RPM. At this power setting the steering pressure on the tiller is light and easy to handle. As the throttle is opened the tiller pressure increases substantially and pushes the tiller to port. **This tiller movement is particularly powerful if an emergency application of power is required.** For this reason it is essential that helmsmen stand in front of the tiller arm.

The boat is very responsive and answers to the rudder and engine well when manoeuvring at slow speed.

Stopping the engine

The engine is stopped as in a car, by switching it off.

Bilges

There are two bilges and pumps on the boat. One in the engine bay the other in the main cabin. The cabin bilge pump is situated on the port side aft of the toilet in front of the engine bay bulkhead. The engine bay pump is in the section under the prop shaft and stern gland.

It is essential to make sure that there is no oil in the pumped water – if any appears, stop pumping and investigate where the oil is coming from.

Annex B - Risk Assessment – Spirit of Batchworth

No.	Hazard	Cause	Consequence	Mitigation	Assessment	Action required
1	Water – sinking the boat (flooding or overturning)	1. Overloading above safe waterline. 2. Instability leading to overturning 3. Water entering from above (esp at lock). <i>This is the most severe risk.</i>	Loss of boat. Injury or drowning of crew and passengers.	<ul style="list-style-type: none"> Trained, qualified and experienced crew, operating in accordance with Crewing Manual. Stability Test conducted as required by Small Passenger Boats Code. Appreciation of safe loading limits – mainly number of passengers (max 12), and disposition of them. Proper control of passengers, after careful initial briefing. Proper and careful operation of locks. Most accidents happen due to people not paying attention, and rushing the procedure. 	Risk moderate – tolerable. When locks are not used, the risk is Low and Acceptable.	Careful supervision always required.
2	Water – people falling in. Includes trip hazards on bank.	Falling into canal, from boat or bank.	Drowning.	<ul style="list-style-type: none"> Everyone properly dressed, especially footwear. Proper briefing of passengers. Lifejackets to be worn as required by Crewing Manual. First aid with resuscitation expertise to be available. 	Risk moderate - tolerable	Careful supervision of passengers always required
3	Motion of the boat. Includes trip hazards on board.	Collision with another boat, or with canal structure.	Injury to crew or passengers.	<ul style="list-style-type: none"> Trained, qualified and experienced crew, operating in accordance with Steerers' Handbooks. Everyone properly dressed, especially footwear. Proper briefing of passengers. Crew keeping boat tidy and in good order. Prevent people jumping on or off the boat. Avoid crush hazard by keeping all parts of passengers inside the boat 	Risk moderate - tolerable	Care to spot and avoid trip and other hazards. Supervise crew and passengers.



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No.	Hazard	Cause	Consequence	Mitigation	Assessment	Action required
4	Fire	Source of ignition in contact with flammable materials	Injury to member of public or staff.	<ul style="list-style-type: none">No smoking in the boat at any time.Remove sources of ignition from the boats.<ul style="list-style-type: none">Residual risk is from diesel engine.Ensure first aid FF equipment as required by BSSC.Keep boat tidy to reduce fire risk.	Risk very low - acceptable	None.
5	Operating injury	<ol style="list-style-type: none">Pushing or pulling boat.Operating canal equipment.Lifting heavy loads	Injury to crew or passengers	<ul style="list-style-type: none">Trained, qualified and experienced crew, operating in accordance with Crewing Manual.Proper control of passengers, after careful initial briefing.Avoid situations requiring pushing/pulling of boat.Avoid need to manually lift heavy loads. If essential, conduct special man handling RA and proceed in light of it.	Risk low – acceptable.	Vigilance essential to make sure that people do not make unnoticed errors.



Annex C - Checklists

Routine Maintenance

Daily checks

These are to be carried out, and noted in the log, on any day the boat is to be used.

Fuel level.

Engine oil level

Alternator drive belts tension.

Coolant level.

Horn. Headlamps.

Bilge pump

Water level

Fuelling

Our usual fuelling point will be Bridgewater Basin, at Croxley. The tank capacity is about 250 litres. The amount of fuel should be checked by use of the dip stick. Fuel boats can be used and there are jerry cans of diesel in the workshop in an emergency.

The filling point is on the rear gunwale, and the tank vent is next to it. Care must be taken not to fill too quickly. Start by knowing how much you intend to take, and aim only to fill to three quarters.

Have plenty of paper towel arranged round the filler and nozzle, to act as a bund. Also have a bottle of washing up liquid to hand – this can be used at once after a very small spill, to prevent fuel spreading in the canal.

Listen carefully to the note of the flow, and stop in good time as soon as it begins to “gurgles”. If there is a spillage, report to the operator of the pump.

Other checks – Maintenance Day

Battery cell level

Stern tube greaser

Engine oil change?

Water tank.

Pump out.



Spirit of Batchworth

Pre-departure Check list

Of the boat:

- Check the amount of fuel (only needed when doing the first trip of the day)
- Do the engine running checks: oil, coolant, hydraulic oil.
- Bilges dry, bilge pump working.
- Radio system working.
- Cabin clean and tidy.
- Clean and ready for catering if intended.
- Documentation:
 - Log book
 - Emergency numbers for Canal and River Trust and non-emergency number for police and Batchworth Canal Centre
 - Check lists

Of the equipment:

- Lifejackets for crew.
- Fire extinguishers.
- First aid kit.
- Horn.
- Mobile phone
- Step for passengers
- Life Ring or throwing “Perry” life lines (usually the latter).
- Ropes – Centreline ropes (each side), mooring lines fore and aft, mooring pins, hammer.
- Bow and stern fenders.

Of the crew:

- Imperative to have one if passing through a lock.
- Check familiarity with boat and role. First aider?
- Brief on responsibilities of skipper and crew. Ensure understanding of Risk Assessment and importance of following operating procedure to address the risks.
- Brief on intended running schedule, especially if on a charter.
- Locate and point out safety equipment – lifebuoy, fire extinguishers, horn.



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Of the trip:

- Where are we meant to be going? What time are we due back?
- Canal Centre has the details of Charter customer, and of the crew.
- Health problems (not normally a concern on short trips, can be on charters)