

Passage Plan:
Sydney - Ushuaia - Hammerfest

Yacht Loquax – 60 foot cutter
October 2020– July 2021

Distance 18,000 miles

Duration 8 months

Longest leg: Southern Ocean 4500 miles

Skipper

Peter Edington

MCA skipper, 200 tons ,worldwide

RYA Ocean Yachtmaster Instructor

Overview

The plan is to sail the yacht from Ushuaia to Hammerfest. Leaving from Sydney, the voyage will be approximately 18,000 miles; to have a safe and pleasant voyage; to visit the world's most extreme cities in consecutive summers; to enable as many people as possible to experience Ocean Sailing to the level they want; to undertake scientific data collection; to raise awareness of and funds to fight Climate Change and Ocean degradation

To do this we have to consider several elements, some of which overlap but for this passage plan we looked at

- Safety
- Crew management to maximise skills and enjoyment
- Pre-departure procedures
- Standing Orders
- High Latitude/ Heavy weather sailing
- Tropical revolving storms

Safety

The crew's safety is at risk from

- drowning, hypothermia, hunger, thirst
- injury
- illness

It's the skipper's duty to minimise these risks and to have a plan for getting the best outcome if such an event happens.

Is this Yacht strong enough for the voyage?

What do I know about its construction/sea-worthiness? I have skippered Loquax over 50,000 miles.

Sailing record: Comment [Excellent]

Loquax is regularly maintained for offshore passages. She had completed Australia-New Caledonia-Australia passage in 2015. In all, with me as skipper, she has made the following passages:

- Mediterranean each way (Marseilles -Turkey – Gibraltar)
- 3 Atlantic crossings
- 2 Caribbean cruises
- UK – Australia via Panama & South Pacific.
- 5 Tasman Sea crossing
- 2 Sydney Lord Howe trips
- Hamilton Island return
- 3 Australia – New Caledonia – Australia round trip (once via New Zealand)

Construction: Comment [Excellent]

- Built UK 1992. LOA 60', LWL 56', Beam 13'3", draft 6'; Displacement 14.5T
- Fully encapsulated lead keel – no keel bolts to check
- Ballast ratio 40%
- 25-37mm thick solid GRP below water line
- Separate engine room – top entry with crash bulkhead
- Separate foc'sle – top entry with crash bulkhead

Rig: *Comment [Excellent]*

- Aluminium mast, keel stepped.
- Masthead sloop single-spreader re-rigged over the last 7-8 years
- New rigging to be fitted including inner forestay for cutter rig
- New lowers 2017
- New roller furler 2015
- New chain plates 2017

Sails: *Comment [Moderate]*

- Headsail : New Ian Short genoa 2017
- Slab reefing mainsail 3 reefs. 6 years old plus spare 8 years old – both good condition
- New mainsail, staysails and storm sails to be ordered
- Code zero Reacher 6 years old – furl early, can jam if furled in over-strong conditions

Machinery: *Comment [Good]*

- Mercedes Benz 70 HP diesel new 1998. Totally reliable, excellent condition for age – major service including of heat-exchanger manifold and sea water pump 2017
- ‘Sonic’ sail-drive rebuilt 2005 – excellent condition, avoids need for stern-gland
- Consider rebuild of gearbox
- Propeller woodruff re-keyed 2017

Skin fittings: *Comment [Excellent]*

- All skin fittings and sea-cocks replaced 2013
- Consider replacing all through hull fittings
- Wooden plugs attached to every skin fitting

Tanks: *Comment [Very good]*

- Diesel tank 350 litres, stainless, securely mounted
- Water, integral flexible new 2017
 - Port side flexible tank 300 litre
 - Starboard side flexible tank 150 litre
 - In Jerry cans stored in keel, 150 litres

Does the yacht carry sufficient Safety Equipment?

Abandon Ship: *Comment [Very good]*

- Conforms to UK Class XII regulations
- 8 person SOLAS ocean life-raft with EPIRB, water and food. (replace existing for trip)
- 8 person inflatable
- 406 EPIRB with GPS in companionway
- Consider 2nd EPIRB
- Large escape hatches to all accommodation areas – 5 in total
- Comprehensive rocket/hand-held flares (red/white/smoke) in cabin and grab canister
- Fog signal (rechargeable)
- V sheet, signalling mirror
- Life jackets with harnesses, lights and whistles
- Jack-stays running each side
- Rope-cutting clasp knife and whistle in cockpit
- 6 x 10 litre floating containers of emergency water.

MoB Equipment: *Comment [Good]*

- Dan-buoy on pushpit
- 4 horse-shoe life-rings, with, respectively, drogue, lights, floating line
- Floating smoke canister
- 2 GPS with MoB buttons
- Spare floating harness with line for lifting MoB on board
- High intensity rechargeable floating torch

Fire fighting equipment: *Comment [All new 2017]*

- Saloon – 1 large dry powder
- Companionway – 1 large dry powder
- Engine Room – 1 large Co₂
- Galley – fire blanket

Flood control: *Comment [Very good]*

- Crash bulkheads
- No stern-gland
- Rudder tube stands 600mm above water line
- 1 bilge pump in Engine Room compartment
- 3 bilge pumps in Main section
- 1 manual bilge pump in Foc'sle compartment with electric automatic pump.
- 10L buckets on lanyards

Loss of steerage: *Comment [Very good]*

- 7x7 stainless in conduit onto Whitlock aluminium quadrant
- Consider remove/check/replace quadrant
- Separate hydraulic autopilot direct to quadrant
- Emergency tiller – bolt-on to rudder post

Does the yacht carry sufficient Communication Equipment?

Radio: *Comment [Excellent]*

- VHF with DSC at nav station
- Hand-held VHF
- HF radio with all bands from 2 – 14 MHz
- Spare VHF aerial on after deck

Other: *Comment [Very good]*

- Immarsat C (not commissioned)
- Consider Iridium or other
- Waterproof mobile phone
- High intensity lamp
- Flares

Do we have sufficient Fuel and Water?

Diesel tank filled and adequate for duration: *Comment [Yes]*

- Capacity – 350 litres of diesel
- Hours available – 100 Hrs

- Range - 500 miles motoring
- Longest leg of voyage 4500 miles

Water containers filled and adequate for longest leg of 28 days : Comment [Yes]

- Fixed capacity - 450 Litres in two tanks & 6 x 25 litre jerry-cans in keel
- Emergency water – 6 x 10 litre floating containers emergency water
- Total water on board = 660 litres
- Water maker (4l/hr at 6 amps/hr)
- Water required – 6 people @ 4 litre/day each = 24 litres/day for 28 days 672 Litres
- Consider reserve allowance 120 litres = 5 days reserves

Do we have tools and spare parts?

Tools: Comment [Yes]

- Comprehensive mechanical tool boxes for both light and heavier engineering
- Full ranges of spanners suited to the yacht
- Wood and metal-working tools
- Grips, vice and clamps
- Full range of screws, nuts, bolts, washers, hose clips
- Voltmeter/multimeter
- Jump leads
- Shore powered fast-charger
- 2 Electric drills
- Angle grinder
- Soldering equipment.

Spare: Comment [Yes]

- Steering – separate hydraulic autopilot system– separate bolt on tiller arm
- Engine – inc belts, water-pump, impellers, filters, oils
- Consider spare alternator/starter motor
- Consider spares for Maxwell 3500 anchor winch
- Electrical – inc fuses, connectors, light bulbs, cable
- Demountable navigation lights
- Sail-repairs, battens, thread, sliders, patches
- Winch handles
- 3 Anchors with chain and rode
- Consider 200 metre rolls of polypropylene mooring lines
- Duct tape and WD40.
- Plumbing
- Consider heavy duty cables/connectors for windlasses

Can we generate electricity for essentials?

Adequate non-engine based power generation: Comment [Yes]

Equipment that requires electricity in order of priority:

- Nav lights(LED)
- GPS
- HF radio/VHF radio/iridium phone
- Engine starting

- Chart Plotter
- 240v inverter for power tools
- Refrigerator
- Radar
- Water-maker
- Microwave

Electricity sources:

- 2x 220A/h and 1x 120A/h gel batteries, properly secured
- Separate starter battery, properly secured
- 220 watt solar panel
- 100 watt Ampair 100 tow-able generator

Electricity monitoring devices:

- 2 separate meters at chart table and cockpit
- Hand-held voltmeter/multimeter

Is there adequate navigation equipment/resources?

Navigation Equipment: Comment [Yes]

- Electronic chart plotter
- Garmin battery-operated hand-held GPS
- Barograph with 48 hour history display and alarm
- Air and sea temperature thermometers
- Charts and Pilot books
- Admiralty almanac with ephemeris and sight reduction tables
- Breton Plotters, dividers, compasses, pencils etc
- 2 hand bearing compasses
- Radar
- HF Radio
- VHF Radio fixed and hand-held
- 2 Sextants

Charts and resources: Comment [Yes]

- World Cruising Routes (Cornell 2018)
- Cape Horn & Antarctic Waters (RCCPF 2017)
- List of Charts and Pilot books to be created
- Maritime Safety Information (MSI) 2009

Weather routing/forecasts: Comment [Yes]

- HF Radio forecasts
- HF / Iridium GRIB files
- PredictWind weather and routing software
 - PredictWind has been utilised to help plan a weather-based route
 - It can give up to 10 day forecasts of wind, wave and swell information
 - It can be updated with GRIB files
- List of forecasts for regions to be created
- Consider external weather routing by text from base

Navigation

The navigation for each leg will be discussed on the Planning page for that leg (see website)

Will the outside world know we are OK?

Do we have a good communication strategy: *Comment [Yes]*

Daily HF / Iridium scheds will be set up with appropriate shore stations and forwarded by them to Sally Edington in Sydney who can collate and send them on to crew's families by email.

There is a radio log book.

What contingency plan is the in the event of a medical emergency?

Opportunities for external support: *Comment [limited]*

- Number of days at sea, away from quick, shore-based support – up to 40
- Are we on a well populated shipping route - No
- For how many days are we out of helicopter range – 90% of time in Southern Expedition legs. These will be addressed on each leg's Planning page
- Are there any refuges? These will be addressed on each leg's Planning page

What is our first-aid training: *Comment [good]*

- Skipper is remote area first-aider, STCW First Aid 2017
- Consider including a medically trained crew member on each expedition leg

First Aid: *Comment [Good]*

- Comprehensive first aid kit (contents attached)
- Second comprehensive first-aid kit for grab-bag
- Equipment for splinting and immobilising, hypothermia wrap
- Extra pain-killers, sea-sickness tablets and under-tongue wafers, bandages, Steristrip wound closures, sutures and local anaesthetics.
- First-aid manual for remote first aid
- Topical antibiotic cream, Keflex and anti-biotic eye ointment
- local anaesthetic and stitching equipment
- Comprehensive list to be created