

Expedition Plan

Loch Hourn 2014

Wild Camping and Diving



Expedition Leader Ian Dearden

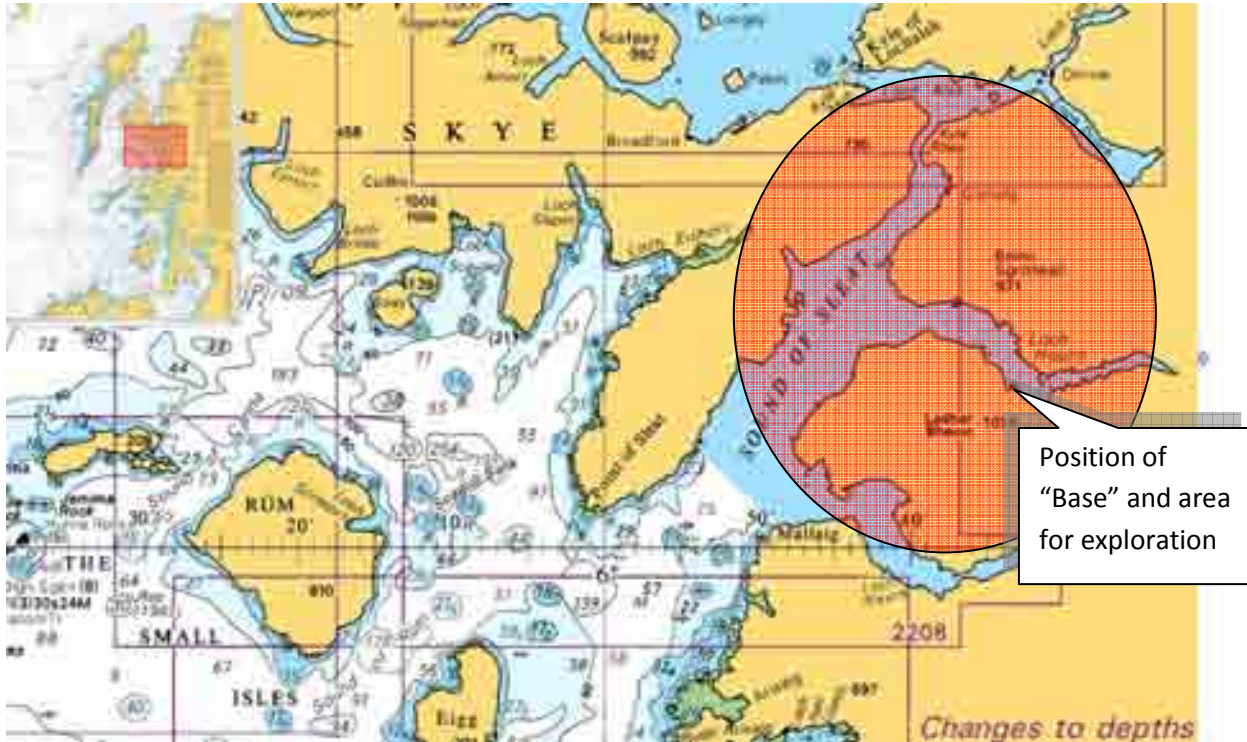
Application for BEGS Grant made on behalf of Darwen Branch 0047

by Duncan Read.

Purpose

To explore and document new dive sites from an isolated base camp without the normal facilities of civilisation we are accustomed to.

Introduction



The week long expedition would be to explore the diving possibilities in Loch Hourn. The 14 mile long sea loch runs inland from the Sound of Sleat, opposite the Isle of Skye, to the head of the loch at Kinloch Hourn. Sometimes described as the most fjord-like of the sea lochs of north west Scotland, it is steep-sided, with the slopes of Beinn Sgritheall to the north and Ladhar Bheinn rising from the southern shore.

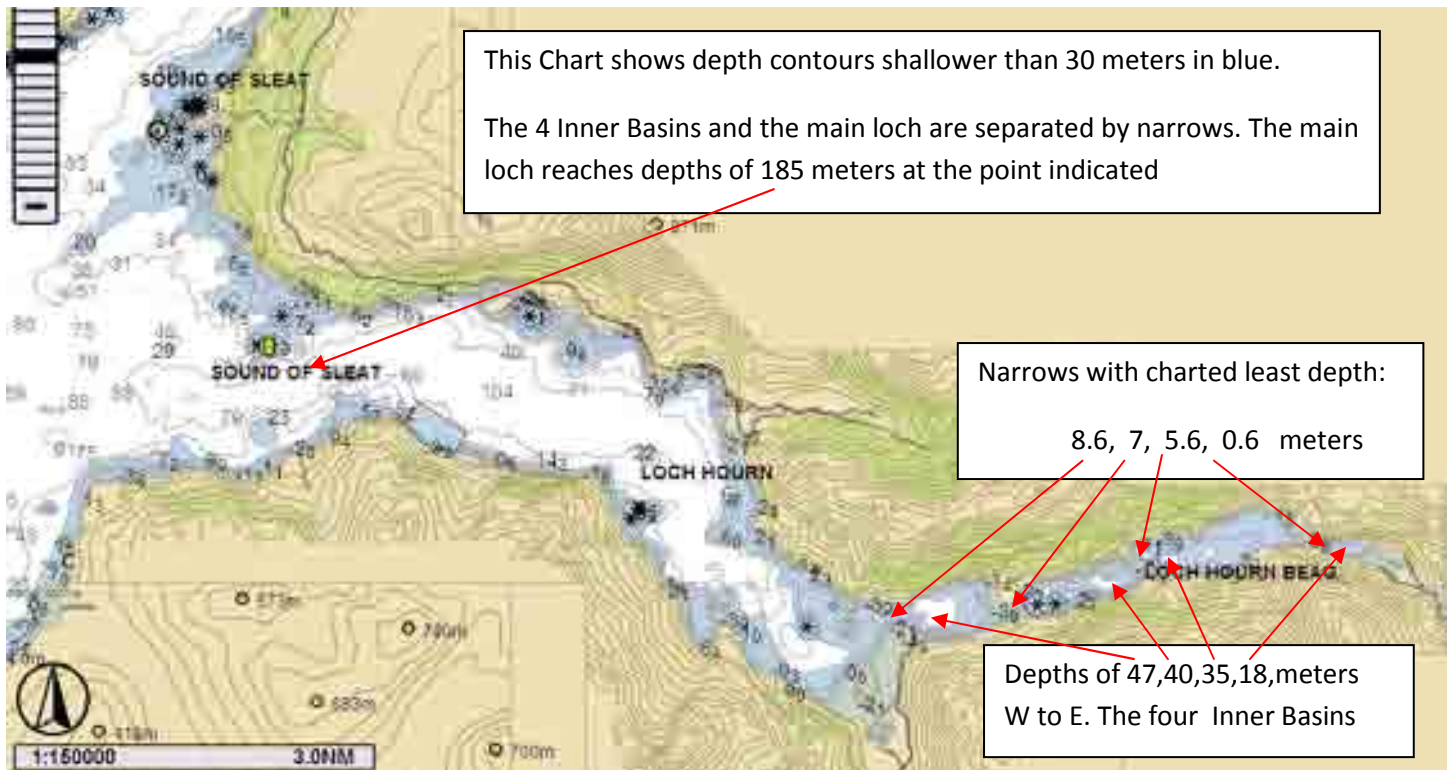
There is no road access to most of the shoreline. Apart from a few isolated cottages, the only community is Arnisdale, with a population of approximately 30 people. Kinloch Hourn is 22 miles on single track road from the A87 near Invergarry.

Our base from which to operate would be accessible only by boat. It will be on the Knoydart peninsula on the south bank of Loch Hourn. The Knoidart Peninsula is the only sizable area in Britain which is inaccessible by motor car. The peninsula is bounded on the south by Loch Nevis and the north by Loch Hourn (Gaelic for the lochs of Heaven and Hell respectively).

There will be no facilities and accommodation will be tents. There is no mobile phone reception and in the words of Stornoway Coastguard : "Loch Hourn is a bit of a black spot as far as VHF coverage is concerned". We will need to be totally self sufficient taking all our fuel, fire wood, food, shelter, oxygen and gas compressors with us.

If weather and fuel reserves allow we would also explore the Sound of Sleat as far north as Loch Alsh through Kyle Rhea and south as far as Loch Nevis. Two RHIBS would be our dive platforms to carry out the exploration of new dive sites.

Bathymetry of Loch Hourn



NB Charts use data from a 1938 survey. (Loch Hourn Baeg 1848) So due caution must be practiced when navigating with GPS chart plotters.

Main Dive Sites

The dive sites will be primarily scenic. There are few wrecks charted in the area but we will be using side scan sonar to identify any interesting dive sites as the week progresses.

Bad weather backup plan

Strong westerly through to north westerly winds may produce some sea states not conducive to diving in the Main Loch. In the event of this happening then we should be able to find some more sheltered sites in the eastern basins of Loch Hourn and Loch Hourn Beag..

Dates

A large amount of preparation of boats, compressors, personal kit and kit provided by the expedition organisers has been necessary throughout the year before the expedition.

18th Sept: The expedition itself will start on Thursday evening. All the kit will be loaded ready for transport.

19th Sept: Further loading and kit preparation as necessary by a few team members. Most people will be unable to help due to work commitments. Early night should be had by all!!

20th Sept : Saturday 4am start from Darwen.

Midday arrive in Fort William, and have lunch. Last of food shopping to be done. Petrol for the boats and cars. We will then travel to Kinloch Hourn at the head of Loch Hourn. The boats will be launched here into Loch Baig (which is the eastern most part of Loch Hourn) and tents and food taken by boat the 6NM up to our base at Poll a Mhuineil. Some people will stay to set up the camp, others will return for the rest of the kit. Several journeys may be necessary.

21st – 26th Sept: We will do 2 dives per day

27th Sept: Early Saturday morning, break camp and ferry equipment to Kinloch Hourn. Recover boats & pack up kit in preparation for the road journey. We will travel to Fort William and stay in a Hotel overnight. Have an evening meal cooked for us and be waited on in a local restaurant.

28th Sept: Sunday. Travel home by road to Darwen and unload.

Costs

The budget has been set at approx £400 per diver. This includes boat costs, diving related costs, food, fuel accommodation and equipment/vehicle hire. This may come a little over budget as we have been notified of a last minute cancellation.

Diving Costs		
O2(diver grade)	3 cylinders	249.38
Compressor hire		150.00
Compressor filters		100.00
Club boat fund	8days	120.00
Private member boat hire	8days	320.00
Club compressor		120.00
Boat Fuel/Oil	1.35/lit	850.00
Non Diving Costs		
Transport		
Price /litre	1.35	
Estimated Milage	730	
Cars Not Towing (10m/litr)	2	197.10
Cars Towing (5m/litr)	3	591.30
Towing allowance(£60/Vehc)		180.00
Accommodation		
Hotel Fort William		450.00
Food		
Entire week £40 each		400.00
Evening Meal Sat £25 each		250.00
TOTAL		3977.78
Total per diver	10	397.78

Calculations for Boat Fuel.

Each boat uses 1 liter per NM an a calm sea, running between 3800 and 4200 rpm. In total we will have 630 litres petrol for the week. This will give us an average range of maximum 60 NM per day. In a rough sea this will be halved. Each boat has a built in fuel capacity of 80 liters. In addition Judy 2 has a spare buit in tank of 20 litres. We will not need to take extra fuel on the boats unless we plan a round trip in excess of 40 miles. Most days we will plan for 30 miles, but occasionally we may want to go further afield.

Participants.

1st Name	2nd Name	Membersh ip No	Qualificati on	BSAC Club	Role within BSAC
Ron	Evans	A712326	FCD	Southport	AI
Ian	Dearden	A112995	AD	Darwen	DO /OWI
Martyn	Dean	A634585	DL	Darwen/Trafford	
William	Bradley	A733881	AD	Farnworth/Darwen	
Paul	Targett	A685484	AD	Darwen	
Jill	Dearden	A686623	AD	Trafford/Darwen	
Duncan	Read	A626039	AD	Darwen	AI
Mike	Coar	A286692	DL	Darwen	
Harry	Hamer	Last Minute Cancellation			
Pat	Booth	A747078	AD	Darwen	OWI
AN	OTHER	?	?	?	?

Accommodation



The picture shows the position of the campsite on the south bank Loch Hourn looking west towards Skye.

The picture on the cover page is looking eastwards up towards the head of the loch. It shows the campsite area in the left foreground.

We will be sleeping under canvas for 7 nights from Saturday 20th to Saturday 27th September. Our campsite will be at Poll a' Mhuineil . We will be "wild camping" which is legal in Scotland since February 2005. See <http://www.mcofs.org.uk> for details of good practice for wild camping suggested by the Scottish Mountaineering Council to minimise impact on the environment.. A leaflet can be downloaded. <http://www.mcofs.org.uk/assets/pdfs/wildcamping.pdf>. On the Saturday night after camping for one week we will be luxuriating in a Fort William Hotel.

Directions to Launch Site

We will travel by road to Kinloch Hourn, which is found at the head of Loch Hourn at its easternmost extremity. We aim to rendezvous in Fort William at midday. Meet in the carpark just after Morrisons at 56°49'17"N 005°6'12"W. Suggested route is M6, M74, M8, across Erskine Bridge, M898, A82 to Fort William. This is 300 miles and estimated journey time is 7 hrs.

From Fort William following lunch refuelling and fuelling of boats/jerry cans we will travel on the A82 to Invergarry, then take the A87. After 5 miles on the A87 turn left taking the single track road for the remaining 22miles. This firstly follows the northern bank of Loch Garry then later on the northern bank of Loch Quoich .

There is a steep descent into Kinloch Hourn. From Fort William to Kinloch Hourn is 52 miles and will take approx 2 hrs 30mins.

The last fuel is available at Invergarry, (PH35 4HL. Tel01809 501288) but will be cheaper in Fort William.

Kit needed to set up the campsite will be unloaded first near to the launch jetty to go with the boats on the first trip to the campsite. Other kit should be unloaded at the end of the track where it can be picked up on the second and subsequent transfers. Cars parked in the car park marked on the map after unloading.

04:00	Set off from Darwen
12:00	Meet at carpark Fort William 56°49'17"N 005°6'12"W
13:00	Set off to Kinloch Hourn
15:30	Arrive Kinloch Hourn 57°6'16"N 005°23'12"W
16:00	Boats Launched and set off with campsite gear to pitch camp.
17:10	Boats return for second trip to take Dive Equipment.
18:20	3rd trip may be needed.
19:15	All divers at base camp.
20:00	Evening Meal and discuss plans for next day



Food

Essentially this will be self catering and we will need to use a camp fire to cook with. Cooking and washing up will be shared between the group. All the food will be purchased before we arrive in Kinloch Hourn excepting a small amount of shellfish we hope to forage for ourselves.

Breakfast: Porridge, dried fruit, honey. Bread & jam. Tea & coffee. We will have a proper “fry up” on the last day. Lunch: sandwiches (cheese, ham, tuna corned beef etc) soup, tea, coffee, juice. Chocolate/cake/cereal bars. Dinner: Chilli-con-carne, Spaghetti Bolognese, corned beef hash, steaks & baked potatoes, seafood night (mussels & scallops with rice), tinned fruit, cake, chocolate.

The last night, Saturday, we will have a meal at The Cranog Restaurant in Fort William.

Transport

Car sharing will be as shown below to keep transport costs as low as possible. It is not possible for the FCD mentor to car share. This is not that he considers himself above us but he will be travelling from a different part of the country.

Car & Trailer: Pat, Duncan

Car: Ron

Mercedes Sprinter Pickup Truck & Boat: Martin, Jill, William

Car & Boat: Ian Harry

Car: Paul, Mike

Please keep receipts for fuel used as this will be used in the final report.

Prerequisites

Be a BSAC member of Dive leader and above, with over 100 uk dives. Be capable of launching a DSMB unaided. Feel comfortable diving to 40 meters on air.

Training needs

The team has a number of experienced boat handlers but some do not have official BSAC Diver Cox'n Qualification. Assessments will be carried out on the expedition.

Non Diving Partners

Non diving partners are welcome and any help they can offer to make the trip run smoothly is gratefully accepted.

Personal Equipment Needed

Tent (3 season, good wind resistance essential).

Sleeping Bag (3 season)

Sleeping Mat (Thin Therm-a-rest type is good)

Waterproof Jacket and Trousers (Essential, best you can afford, getting cold and wet is no fun)

Thermals and thick socks for camping and diving.

Cloths (walking/trekking cloths which wick away moisture and are easy to dry. Avoid cotton)

Hat and Gloves(as above)

Anti Midge equipment (repellent, hat etc)

Camping Equipment. (Chair,plates, cutlery,cup/mug/plastic glass, thermos flask, bottle for water.

Cloths for last night meal out.

Shorts, sun cream, sunglasses (lets be optimistic!).

Towels (microfiber sports towels dry easily are ideal).

Head Torch (essential, also spare batteries).

Personal Dive Kit Including:

Usual dive kit and spares.

Torch (remember we cant recharge batteries)

Alternate source (Pony,twins)

Enough air for 2 dive without refill on some days

DSMB ready to launch. (at least a second surface detection aid ie flag 2nd dsmb, whistle ect)

O2 analyser

Equipment Provided by the expedition.

2 Fully equipped RHIBS. One with side scan sonar.

Shotlines, buoys weights.

Oxygen (both therapeutic and for blending nitrox) O2 analyser, Blending equipment.

2 compressors.

24 large sacks of fire wood (approx 600kg) 3 sacks per night and some spare.

18 x 25 litre jerry cans for fuel.

First Aid Kit including Automatic External Defibrillator

Camping toilet. Toilet paper(one roll each!)

Food. Large pan and gas stove for communal cooking.

Responsibilities

Ian Dearden (Branch DO, Instructor,AD) Overall responsibility

Jill Dearden (Branch Secretary AD) Food and Expedition Planning& Accounts

Ron Evans (FCD AI) FCD Mentor, Diver Cox'n Assessments.

Martyn Dean (Branch Boat Officer, AD) Equipment and Gas Manager

Duncan Read (AD, AI,) BEGS report

Pat Booth (AD, Instructor) Seasearch forms.

William Bradley TBD (To Be Decided)

Harry Hamar (TBD)

Mike Coar (TBD)

Paul Targett (TBD)

Daily Time Table

07:00	Wake up call	12:30	Air Fills & Lunch
07:30	Breakfast	13:45	Brief on Afternoons Activities
08:00	Brief on Days Activities	13:55	Ropes Off
08:10	Prep Kit	14:55	Transit to/Locate/Shot Dive site
08:30	Ropes Off	15:10	1st Wave Divers
09:30	Transit to/Locate/Shot Dive site	16:20	2nd Wave Divers
09:45	1st Wave Divers	17:35	Return To Camp
10:45	2nd Wave Divers	18:20	Air Fills/Campfire lighting/prep evening meal.
11:45	Return To Camp	19:30	Evening meal/Debrief/Plan for next day's diving.

This Time Line is just a start point and will be refined before and during each days diving on the expedition.

End of Expedition Time Table

Saturday	27th Sept
06:45	Breakfast
07:15	Boats set off with dive kit to Kinloch Hourn
08:30	Boats return from Kinloch Hourn. Break Camp
09:30	Boats set off with rest of camp gear.
10:40	3rd trip may be needed
11:15	Recover Boats and Pack up kit
12:15	Set off for Fort William
14:45	Arrive Fort William
	Check in to West End Hotel possible from 14:00 . PH33 6ED · 56°48'55"N 005 ° 7 '2"W
19:00	Meal at Crannog Seafood Restaurant. At the Pier, 200m from Hotel.
Sunday	28th Sept
10:00	Set off from Fort William for Darwen
17:00	Return Boats, Trailer, Pickup Truck to Storage.
Tuesday	30th Sept
19:00	Clubnight: Clean and wash off Boats etc.

Dive Safety

All divers are expected to adhere to the practices outlined in the BSAC publication “Safe Diving Practices”. A risk assessment is detailed in appendix 2. This is based on BSAC’s generic open water risk assessment with additions as deemed appropriate for this expedition. Due to the isolated nature of the base camp, it is advantageous to have medically qualified participants. There are 2 qualified healthcare professionals taking part in the expedition. Ron Consultant Hand Surgeon, Duncan Dental Surgeon. The risk assessment has been adjusted to reflect the increased options available when providing first aid. If any expedition participants identify additional hazards please bring this to the notice of the acting Dive Manager, who will take steps to reduce the risk as appropriate. Due to poor VHF reception our “log” has been opened by email with HMCG. See Appendix 4

The diver recall signal will be continuous revving of dive boat engine and/or banging on a metal pipe underwater. This will be done in groups of 3 with a short space between them to help distinguish from incidental engine noise or banging. If an SMB is in use, by the diver to be recalled, a clip/carabine will be dropped down the line.

Dive Management

The dives will be managed by Ian Dearden from his RHIB, Judy2. The RHIBs will do their utmost to keep visual contact and will always be in radio contact with each other. Ch 8 will be used during radio communications. A dual watch will be kept on Ch 16 and Ch8. An assistant dive marshal (usually on the other RHIB) will be

appointed acting Dive Manager when Ian is diving. Diving will be in waves and a buddy pair will remain on each boat.

Dive Plan

Diving will be mainly scenic diving. This will include boulder slopes, walls, pinnacles, drift and “mud” dives. The deeper dives, or where a specific point must be reached at the start of a dive a shot line will be used.

Decompression gas 80% EANx. will be available on the deep dives at the shot line. This will have its own buoy with a 9 meter line to the bottle. It will be attached to the shot line with a hoop. The hoop will consist of a stiff length of hosepipe with a 3 strand 8mm nylon line threaded through the middle to provide strength. The same hoop and bottle can be lowered down a DSMB line in the same way as the shot line in response to a yellow DSMB being deployed in an out of gas/loss of deco gas situation. Very little boat space is needed to store the hoop, so for RHIB diving this is much more convenient than a decompression trapeze when space aboard is at a premium. It easier to deploy than a trapeze, but does not have the same “space” to accommodate several divers. A Jon line can be used to reduce crowding and the broken hoop can be used as a type of short Jon line.

See Appendix 3

Weather and Tidal Information

Tidal Streams within Loch Hourn will only be significant in the narrows were drift dives of up to 3 knots are expected.

Stream	Sat	Sun	Mon	Tue	wed	Thu	Fri	Sat	On HW Ullapool
starts	20th	21st	22nd	23rd	24th	25th	26th	27th	
Out-going	05:50	06:29	17:02	07:31	08:00	08:28	08:59	09:30	0005After
In-going	11:47	12:23	12:55	13:25	13:54	14:25	14:57	15:30	0610Before
Out-going	18:02	18:38	19:10	19:40	20:09	20:40	21:12	21:45	0005After
Streams in Kyle Rhea (up to 8kts!!) are similar in timing to Loch Hourn.									
They start N bound 2 mins later than the Flood into Loch Hourn.									
The S bound starts 5mins before ebb out of Loch Hourn.									
Streams into Loch Nevis									
In going begins 30 mins earlier than Loch Hourn									
Outgoing begins 55mins earlier than Loch Hourn									
HW	Sat	Sun	Mon	Tue	wed	Thu	Fri	Sat	
Ullapool	20th	21st	22nd	23rd	24th	25th	26th	27th	
	05:45	06:24	06:57	07:26	07:55	08:23	08:54	09:25	
	17:57	18:33	19:05	19:35	20:04	20:35	21:07	21:40	

For Tidal Graphs and Tidal Ranges See Appendix 5

The sound of Sleat and lochs on the mainland side, including Loch Hourn are sheltered from the open sea. Consequently swell should not be a problem. The surrounding mountains are subject to severe squalls. The Base Camp at Poll a’ Mhuineil is subject to severe squalls from the south.

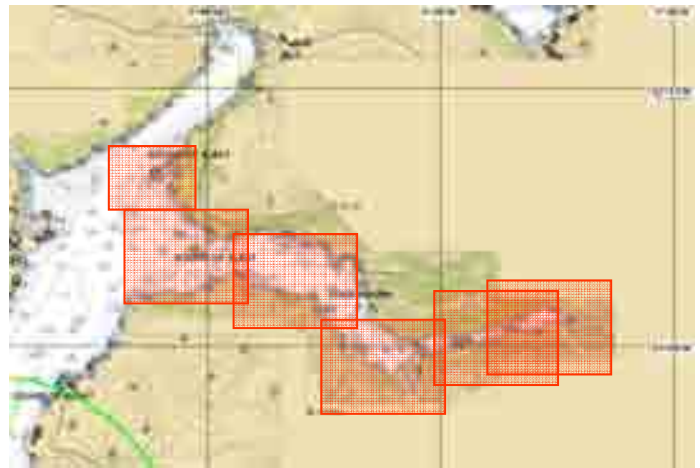
Likely temperatures: Sea Temperatures 13-16. Min air temp 8-10. Max air temp 17-14

Would expect it to rain >1mm 17.8 days in September. However during any week in September it may rain all the time or not at all...lets hope for the best. Generally the Midge Season lasts until early September. If we are lucky with the weather, the temperature and humidity could give a problem with midges!! Due to recent settled weather and low rainfall underwater visibility should be very good if it continues(written on 15/9/14). Sunrise and sunset about 07:02 and 19:28 at the start of the week and 07:16, 19:08 at the end. The Autumnal Equinox is on Tuesday 23 September 0329(BST), will this herald a change in the weather?

Dive site information

	Comments on site	GPS Coordinates (WGS84) dd.mm.mmm
WPT306	Pinnacle Depths10-20m	N57 09.780 W5 42.604
WPT307	Wall/slope 15-33m	N57 10.083 W5 42.411
WPT308	Pinnacle. 18-48nw 18-23sw	N57 07.842 W5 39.509
WPT309	Wall 10-43m	N57 06.954 W5 34.899
WPT310	slope/wall 10-30m	N57 06.198 W5 33.744
WPT311	slope/wall ?13-30m?	N57 06.073 W5 33.356
WPT312	deepest part of Bay. 33m	N57 06.055 W5 33.960
WPT313	Wall 1-60m??sw	N57 05.909 W5 32.419
WPT314	Drift on Ebb. 20-8-25m depth gradually increases after 0.6NM	N57 06.044 W5 30.700
WPT315	Potential for deep (80m) walls nw	N57 06.681 W5 33.854
WPT316	Wall ?10-36	N57 06.975 W5 33.513
WPT317	Wall 15-30 (?40)	N57 06.139 W5 30.620
WPT318	Drift Flood.14-8-30m Keep south to avoid deep(48mwater nw of shallows)	N57 05.977 W5 31.144
WPT319	Drift flood or Ebb. 5-35m	N57 06.026 W5 29.170
WPT320	Wall 1-23?m	N57 06.212 W5 27.966
WPT321	Wall/slope 3-33m	N57 06.291 W5 28.292
WPT322	Mud Dive 18m	N57 06.540 W5 24.166
WPT323	Wall onto mud 3-20m	N57 06.614 W5 26.341
WPT324	Drift Ebb 30-5-30..40max	N57 06.414 W5 26.919
WPT325	Wall 15-42m	N57 06.473 W5 27.105
WPT326	Wall 3-40m	N57 06.205 W5 27.718
WPT327	Wall 0-15	N57 06.107 W5 28.512
WPT328	wall 0-22	N57 06.114 W5 28.755
WPT329	0-10 steep sided gully	N57 06.317 W5 28.683
WPT330	slope 3-20m	N57 06.140 W5 29.681
WPT331	wall 0-20m	N57 05.894 W5 30.613
WPT332	Wall 0?-20m	N57 05.550 W5 32.687
WPT333	drift flood or ebb 15--20	N57 06.010 W5 31.709
WPT334	Wall 2-22m	N57 08.557 W5 37.304
WPT335	Wall10- 30?, slope to 40m?	N57 08.235 W5 34.933
WPT336	Possible wall or steep slope 7-60m?	N57 07.893 W5 34.737
WPT337	Mud dive 25m	N57 08.221 W5 35.653
WPT338	Wall10-30m	N57 07.230 W5 35.570
WPT339	Possible deep wall 20-60m	N57 07.230 W5 36.048
WPT340	Potential deep wall 27 to over 60m	N57 07.271 W5 36.260
WPT341	Pinnacle, falling to depths of over 100m within 150 radius to the north	N57 07.318 W5 34.801
WPT342		N57 08.232 W5 40.778
	Wall 0-20m	
WPT343	Wall 20-30m	N57 08.157 W5 40.817
WPT344	Pin 9-25?m	N57 08.575 W5 41.238

Dive sites have not been named. The numbers are indicated on the chart extracts. They are positioned where interesting topography may be found, or where expected currents will produce drift dives. The sites will be named after they are dived. It will not be possible to dive all the sites noted and there may be sites that are dived which are not noted here. Seasearch Observer forms will be used to document some dive sites.

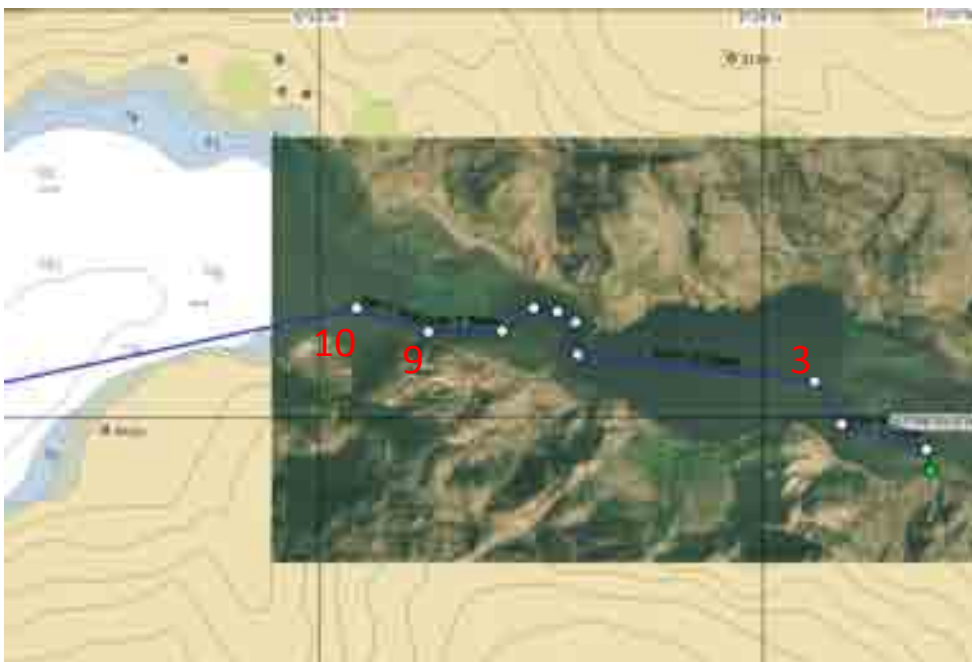




Routes.

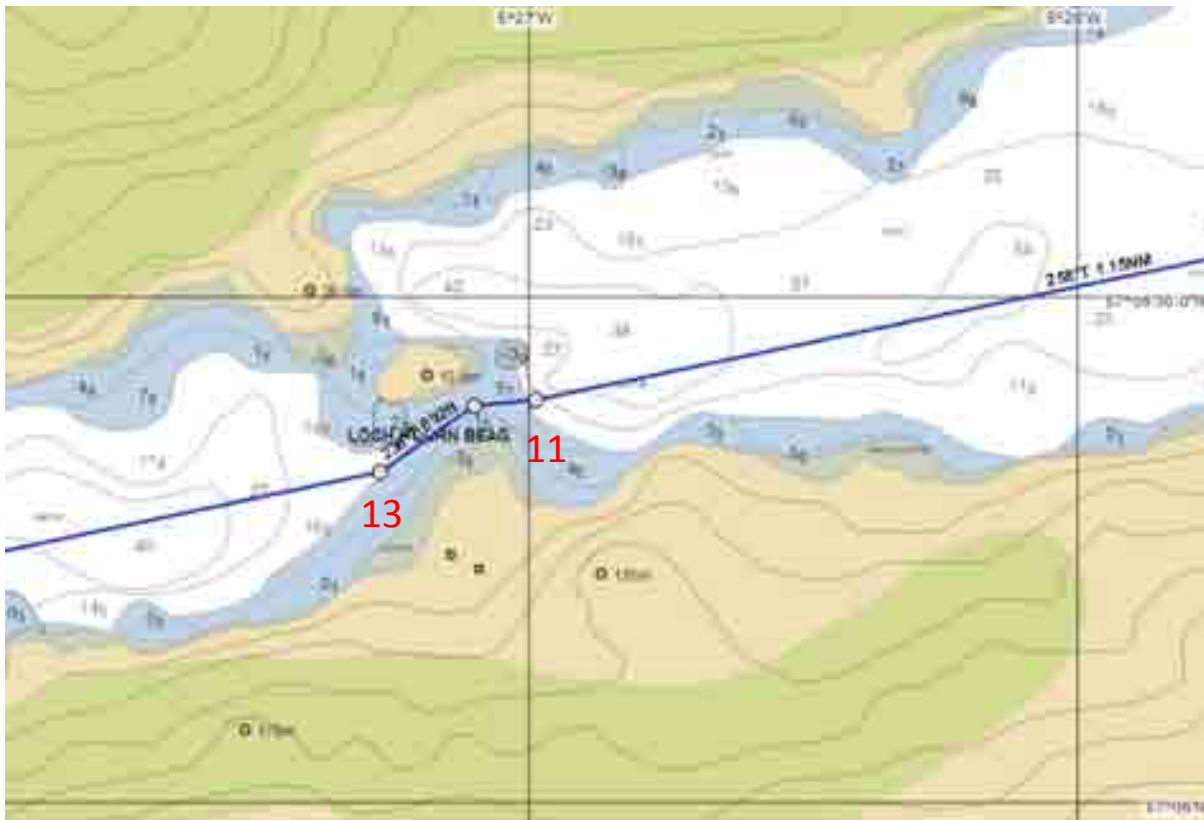
Both RHIBs are equipped with chart plotters and these will be used to navigate under normal circumstances. In the event of a failure of these we have hand held GP with pre prepared routes in them. There will also be paper charts to refer to in a protective sleeve.

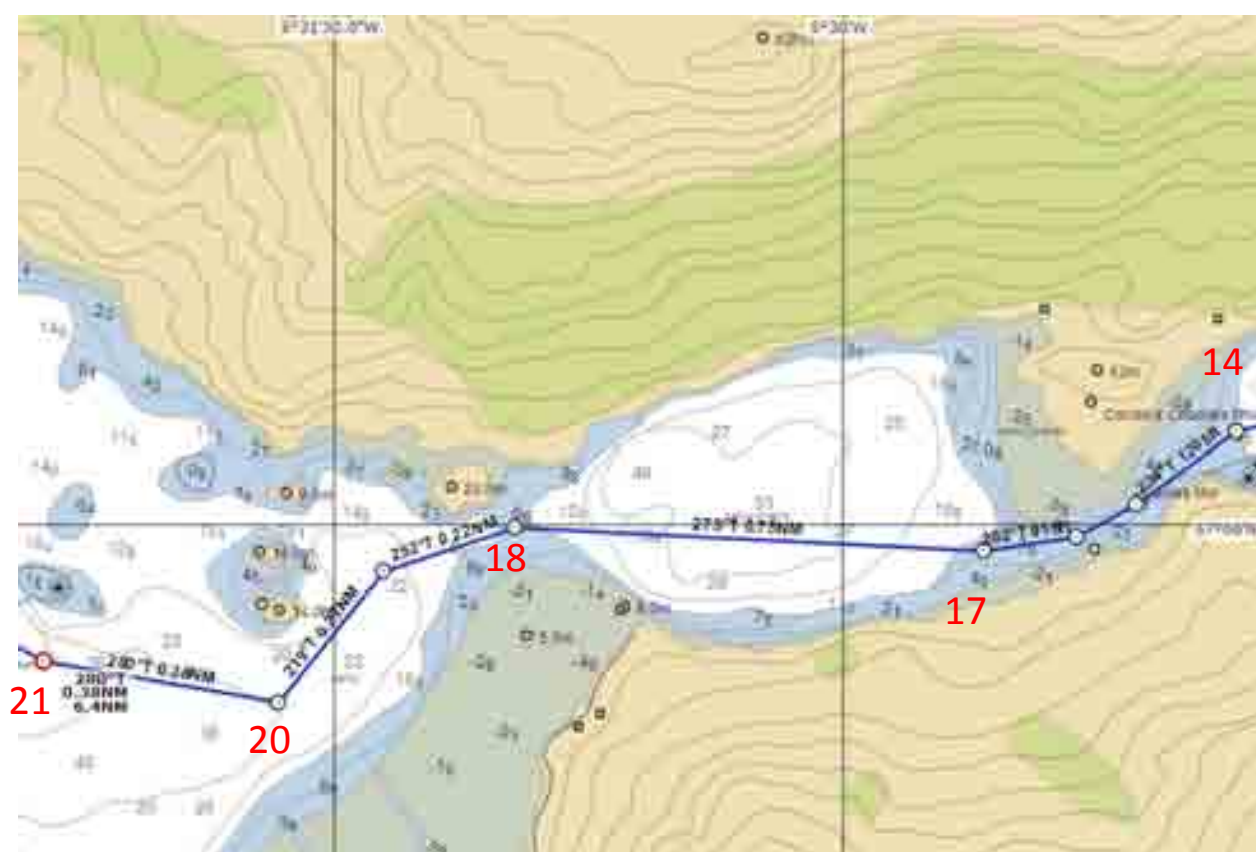
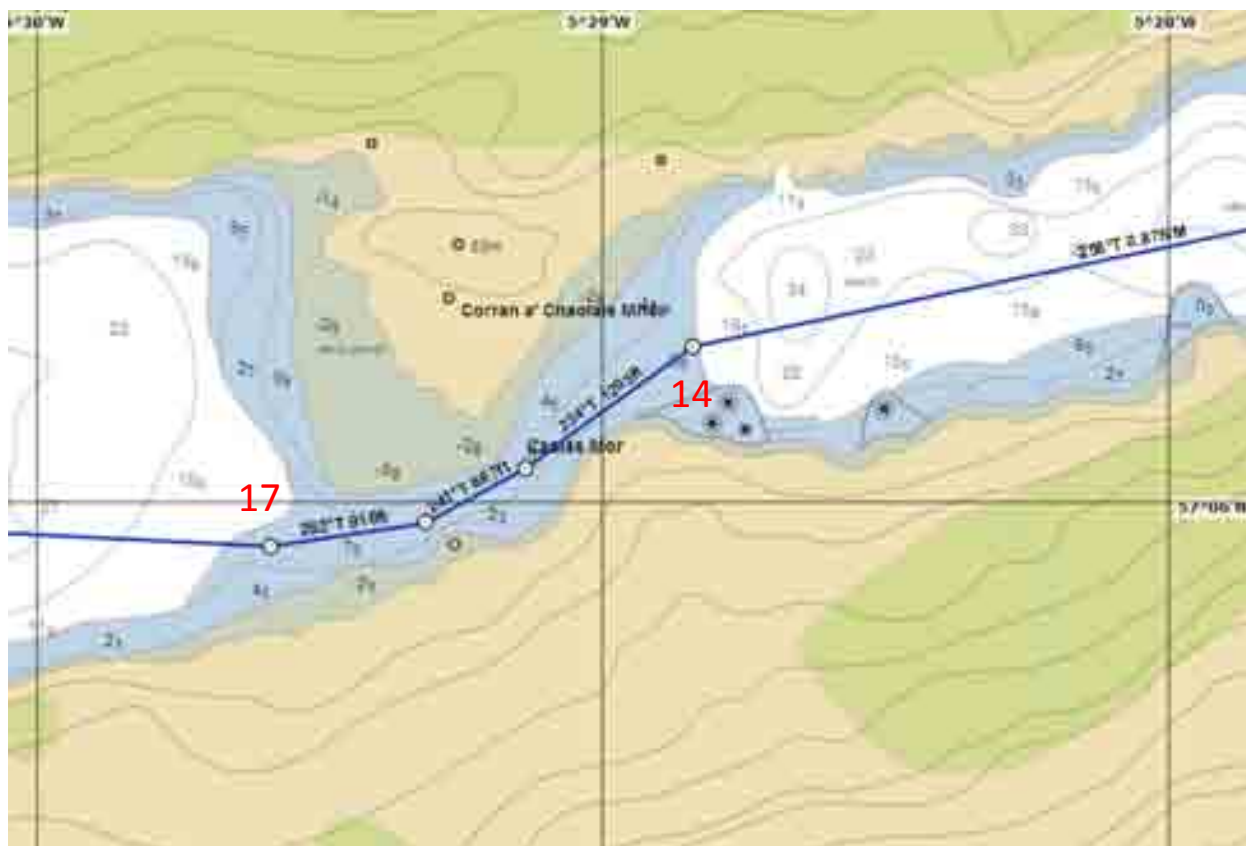
Probably the most difficult navigation will be from the launch site to the base camp. Chartlets have been prepared for this and can be referred to. The survey data for the head of the loch is very old (1800s) and so navigation using the chart plotter should be done conservatively. The survey data for the rest of the loch is from 1938 so is better, but care should be taken as all hidden rocks may not be charted. A Google map overlay has been put on the chartlet and this may give a better indication of the deepest water through the initial

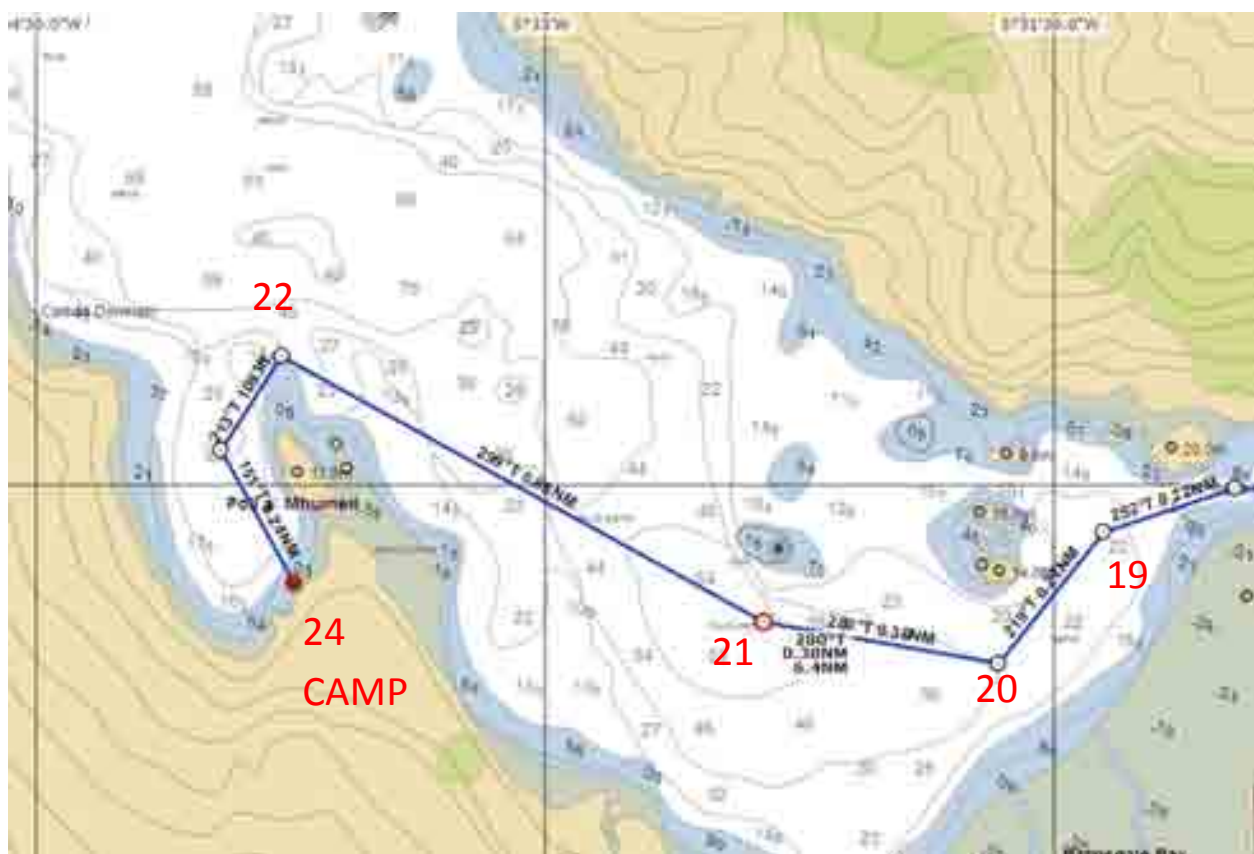


narrow channel. The channel appears to be in a slightly different place to the one on the chart. The first and last chartlet have been shown.

Waypoint Lat/Lon	Electronic Wpt ID	Total	Leg Length to get to this wpt	C/S (°) to get to this wpt	Notes (Magnetic variation 4'40"W 2014)
N57 06.434 W5 23.621	RT1P0	0 m			Pier
N57 06.461 W5 23.629	RT1P1	51 m	51 m	351°	NB Chart very old (mid 1800s) Accuracy??
N57 06.492 W5 23.822	RT1P2	0.1 nm	0.1 nm	286°	
N57 06.544 W5 23.883	RT1P3	0.2 nm	115 m	328°	
N57 06.577 W5 24.419	RT1P4	0.5 nm	0.3 nm	276°	Very Shallow Caution Tide can run 2kst in these shallows.
N57 06.616 W5 24.423	RT1P5	0.5 nm	72 m	357°	Very Shallow Caution
N57 06.629 W5 24.464	RT1P6	0.6 nm	48 m	300°	Very Shallow Caution
N57 06.634 W5 24.518	RT1P7	0.6 nm	55 m	279°	Very Shallow Caution
N57 06.607 W5 24.589	RT1P8	0.6 nm	87 m	235°	Very Shallow Caution
N57 06.605 W5 24.756	RT1P9	0.7 nm	167 m	269°	
N57 06.634 W5 24.917	RT1P10	0.8 nm	171 m	288°	Chart now from 1938 More accurate, but still??
N57 06.398 W5 26.989	RT1P11	2.0 nm	1.2 nm	258°	Drying RK Abeam Port
N57 06.392 W5 27.101	RT1P12	2.0 nm	114 m	265°	Keep N of mid ch to avoid drying bank on S
N57 06.328 W5 27.274	RT1P13	2.1 nm	0.1 nm	235°	Shallow bank extends from end of Island on S'B side, 90 meters off
N57 06.148 W5 28.842	RT1P14	3.0 nm	0.9 nm	258°	
N57 06.032 W5 29.138	RT1P15	3.2 nm	0.2 nm	234°	Tide may run 3 kts through these and next narrows
N57 05.980 W5 29.315	RT1P16	3.3 nm	0.1 nm	241°	Keep within 100m of S shore to avoid Drying Bank on N Shore
N57 05.957 W5 29.589	RT1P17	3.5 nm	0.2 nm	261°	Keep within 100m of S shore to avoid Drying Bank on N Shore
N57 05.995 W5 30.968	RT1P18	4.2 nm	0.8 nm	273°	CD 8.3, Drying Bank to Port, so keep 100m off(island) north shore to avoid
N57 05.925 W5 31.356	RT1P19	4.4 nm	0.2 nm	252°	
N57 05.715 W5 31.665	RT1P20	4.7 nm	0.3 nm	219°	Dont cut out next wpt!
N57 05.780 W5 32.357	RT1P21	5.1 nm	0.4 nm	280°	Keep 280.Dont Cut corner. Ellis Shoal Dangerous SubRk Abeam 200m Port
N57 06.206 W5 33.779	RT1P22	6.0 nm	0.9 nm	299°	
N57 06.056 W5 33.956	RT1P23	6.2 nm	0.2 nm	213°	
N57 05.844 W5 33.742	RT1P24	6.4 nm	0.2 nm	151°	Campsite







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