

BSAC EXPEDITION GRANT SCHEME (BEGS)

2008

CAPE WRATH

Edinburgh University Sub-Aqua Club
Expedition Report

Compiled by Paul Bullen

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Acknowledgements

Thanks go to every team member who contributed to the success of the expedition, including all the planning and preparatory work (such as cylinder filling, engine and boat repairs). The expedition would not have been such a success without them or their assistance. The best expeditions are made of great people and great diving; this was no exception!

Ally Hollins-Kirk, for answering a knock at his window at 05:30 and then very kindly lending us his people carrier to save the trip!

Fiona and Robert Mackay for providing excellent accommodation and the use of their compressor as well as local advice

Marty, a Durness resident who was a massive help in fixing our outboard engine and even offering to lend us a spare!

PART 1: PREPARATION

Inspiration

The original inspiration for running a trip to Cape Wrath was down to two reasons:

- 1) The idea to dive each extremity of the Scottish mainland. It was thought that running these trips would give a regular (annual) opportunity for developing divers and their exposure to unknown sites and the challenges of running expeditions to remote locations.
- 2) A previous trip in 2006 run by Graeme Kirk, also of EUSAC. This showed the potential quality of dive sites at Cape Wrath however, unsurprisingly, the weather is often tricky at these locations and so we didn't manage to dive around the Cape itself and so dived Loch Eriboll.

Objectives

- 1) To explore and document unknown/undocumented dive sites around Cape Wrath.
- 2) To develop dive leader and above level of diving within branches
- 3) Increase confidence in the capability of the expedition team.

Research

Some information was gathered on a previous expedition, however we found the compressor we had used last time was no longer there. In addition, it was felt that though the diving in Loch Eriboll was excellent, in order to get as close to the Cape itself, an alternative launch site closer to the Cape than Loch Eriboll would be needed

Gordon Ridley's 'Dive North West Scotland' was of limited use, it included some site details, but little useful information.

A [SeaSearch report of the marine life around Cape Wrath](#) provided interesting reading for those with a marine life interest but was of limited use in planning the expedition.

Admiralty chart 2720 covers the Flannan Isles to Sule Skerry (and so including the Cape Wrath area), but at a small scale (1:200,000). Better charts for loch Eriboll (2076) and Kinlochbervie (2503) exist and are worthy backup areas to dive. The Royal Navy provide a rough but better [chart on their website](#) . Of-course on any such expedition, the associate OS map for the area is invaluable. The OS Explorer Map 446 is ideal at 1:25,000.

Expedition specific preparation

Besides the usual preparation as needed for any expedition, this trip required the following in addition:

- ☐ Purchase of life jackets for crew
- ☐ Sea-trials of repaired engines
- ☐ Rigging the boats for self-sufficiency (towing bridles, righting lines, lines for VHF/flares)
- ☐ Awareness of what to do in the event of capsize (priorities, righting procedures)
- ☐ Procedures when dealing with landing/launching/loading on beaches exposed to surf

Facts:

- ☐ Nearest lifeboat: Lochinver, approx 33 nm from Cape Wrath
- ☐ Firing schedule showed no exercises on the range during our visit (Range information available from Range Control, 01971511242).

Divers and their roles

Amal Al Sayegh – head chef
Paul Bullen – expedition leader
Sarah Butler - photographer
Sarah Boys – photographer & van driver
Ant Clifford – van driver
Steve Czuprynski – boat manager of Talisker and chief compressor operator
David Gibson – official photographer
Sian Griffiths – head drysuit repairer
Graeme Kirk – boat manager of Macallan
Nix McDonnell – van driver and assistant chef
Max Ruffert – charting and mapping
Sasha Zacheshigriva – kit officer

The plan

Logistics:

Vehicles for 12 divers

The original plan was to have two 3-seater 'kit' vans and a car to carry the kit and people. A subsequent (personal) acquisition of a minibus van by the expedition leader changed this plan to the below.

- 1) hired 3-seater transit van for dive kit
- 2) 6-seater transit van with 'dry kit'
- 3) car, seating for 3, plus 'dry kit'.

Each vehicle was to have a tow-bar for flexibility and redundancy. In the event, the 6-seater transit had engine troubles on the morning of the expedition and was replaced with a people carrier.

Accommodation: Lazy Crofter bunkhouse (booked for whole group), Durness, tel 01971511202.

Breathing Gas:

We assumed that the compressor that was at Loch Eriboll had been removed since our last Cape Wrath expedition. Consequently we had booked compressors from Edinburgh Diving Centre. After further investigation we discovered that a compressor had been installed locally at our accommodation, so we did not need to take the hired compressor.

We considered taking J-cylinders of oxygen for nitrox fills. However, due to the shallow depths planned, we decided to use air. Some divers took their own stage cylinders of nitrox.

Launching, mooring

Balnakeil beach was planned for launch, recovery and loading, with backups in Kinlochbervie (south), Loch Eriboll (east, at fish farm).

Mooring was planned within Balnakeil bay, using three-point anchoring with dedicated secure mooring lines and lashing two boats together.

Loading and recovery:

The main challenge was going to be surf. At the pre-expedition meeting, various scenarios were described and demonstrated on a model boat. Techniques such as bow launch, using anchor to maintain orientation and to 'drift' backwards towards shore were described.

Boats:

Due to the remoteness of the location plus the challenging conditions we would be facing, the boats were prepared to be as self-sufficient as possible and to be ready for assisting the other vessel. Improvements implemented:

- ☐ Permanent towing/mooring bridles mounted from transom up through bow
- ☐ Permanent 'righting' lines attached across beam to allow for quick recovery after capsize
- ☐ Separate kit lines for essential equipment (VHF, flares) in the case of capsize
- ☐ Crew purchase life jackets if they didn't already own one

Dive Equipment:

Divers were made aware that there would be little opportunity to get depths below 30m and so were encouraged to opt for a single cylinder with bailout or twin-7s. This would increase the boats ability to plane, their buoyancy and seaworthiness.

Within the group, one member had a closed circuit rebreather (Classic KISS). In addition, there were three divers with underwater cameras and one DSLR for surface use.

PART II: THE EXPEDITION

Managers and restrictions

In order to provide practice for progression and knowledge to be passed on to other expedition members, each day was marshalled by a different manager. In addition, boat managers were rotated for the same reason.

When planning a day's diving, the manager had to be aware of the distribution of experience between the vessels and to ensure a good balance of cox'ns and mechanics.

Everyday tasks were distributed around the group, such as cylinder filling, cooking and washing up.

Cape Wrath 2008 short report

Diving at the North West tip of the UK needs self-sufficiency; a healthy respect for the weather; great team work and preparation for whatever is “thrown” at you. The rewards are amazing exploratory diving with stunning scenery above and below water as well as diverse marine life.

As with all good expeditions, a lot of the excitement comes from dealing with the unexpected. Initial van troubles meant that a quick re-work of transport arrangements was needed before we'd even left at 5am. After a 7-hour drive from Edinburgh, we were keen to get into the water but had to man-handle our boats over Balnakeil Beach and through the surf.



Loading boats in surf

With considerable effort the boats were loaded and, of course, to make things interesting, we now had engine troubles. Luckily, the boats had been prepared for self-sufficiency and the staged towing bridle was put to use to get the boat out of the surf so that the engine could be fixed.

Once repaired, we motored round to Faraid Head, which showed promising steep walls which we scanned using the echo-sounder to locate potential dive sites. The dive turned out to be a combination of a steep wall and gullies. The visibility was stunning. There was a profusion of life including a ‘nest’ of dogfish, huge shoals of fish and as an added bonus, a sun-fish at the surface!

The boats were unloaded and secured using a three-point anchor a good distance from the surf zone whilst a couple of people remained to fix the engines. In the end, local assistance helped us resolve the issue with one engine and we were also offered a spare engine should we continue to have issues!!

The following day, once we'd applied the repaired parts to the engine, the boats were again loaded through the increasing surf. We were aiming for Garvie Island, the island regularly used for bombing practice (we had checked there were no raids planned!). As we motored out, the swell increased to a point where “The Perfect Storm” sprung to mind and the crews were grateful for the security of their life jackets. We stopped, turned East and headed to West Faraid Head which was just about divable. The site gave impressive results with spectacular underwater landscape, gullies of different sizes, underwater pinnacles, caves and lots of swim-throughs. Again, an impressive abundance of marine life; dogfish, shoals of pollack, gobies and scorpion fish.

With the weather forecast suggesting stronger winds in the ‘wrong’ direction (F6 NE), it was decided to cut our losses and recover the boats back over the beach. A number of us headed south and after checking charts, launched at Kinlochbervie - which had the luxury of a slipway and a pontoon rather than a beach.

In the meantime, one of our instructors ran a number of back-to-back Compressor Operations Skill Development Courses for the remaining divers.



Compressor Operations SDC

On the third day, we had a short boat journey to the mouth of Loch Inchard. The dive was a steep slope down to 40m. The visibility was incredible, the surface being visible from 30m. Although there wasn't as much life as the northerly sites, there was a stunning crack which ran through the headland. This swim-through was a spectacular end to the dive with an abundance of life and colour; an undercut cave to 15m and wreckage of a relatively modern vessel. Subsequent research revealed this to be the Bon Ami, sunk in 1985. This was undoubtedly one of the highlights of the trip.



Wreckage in gulley

After lunch, we explored some caves near Creag Mor. The caves did not go too far into the headland but they were still interesting and the undulating pristine sands made the water feel tropical. Some divers explored an island a short distance away and had a more interesting dive involving a sheer drop to 20m, with gullies in the shallows. There was the opportunity for plenty of snorkel-exploration of caves whilst waiting for divers.

On return to the harbour we did our bit to help out the locals—two divers carried out a yacht hull inspection whilst another two undertook a search for a concrete block which the harbour master reported as posing a danger to vessels. As with each evening the entertainment included a series of shifts running the compressor.

With the weather continuing to forecast force 5-7 NE, we had to accept we weren't going to be able to head for Cape Wrath itself and so we remained based in Kinlochbervie. On our fourth day we ventured out to Dubh Sgeir for more exploration. The swell and waves were sizable, but some excellent diving rewarded our effort: caves and gullies with life everywhere, and superb visibility. Some divers reported seeing seals.

In the afternoon, we headed to what looked like a promising bay on the charts at Roin Beag. When we arrived there were about 15 seals sat around watching us. I'm not sure I've ever seen divers kit up so quickly! Dropping in at the mouth of the bay we immediately saw a stunning sheer wall to 15m. This was followed by undercutting gullies and, of course, a seal waiting for us. As we headed further into the bay we followed deep gullies into the shallows where we watched seals and they watched us. This was probably one of the best dives of the trip. Other divers reported even more stunning walls beyond 20m and gullies further round the headland.



Diver in gully

The final morning of the trip was finished off with a mixture of surfing (in drysuits!) and exploration of Smoo Cave (a huge, natural limestone cave and cavern). Our drysuits proved very useful!

The joy of diving in this remote area was that every dive was exploratory and became an adventure. This is coupled with amazing visibility, an abundance of marine life and breath-taking scenery above and below the water. Here, more than most places, the weather and its effect on the swell and waves only adds to the challenge and excitement of diving in such a wild location. Unfortunately, the weather prevented us from reaching Cape Wrath itself, however, we will return to attempt it again!

PART III: OUTCOME

Due to the weather we were unable to reach Cape Wrath itself. However, we did succeed in diving a large number of sites in the vicinity. Without doubt all the diving in the area is of very high quality and we are confident it would yield even more stunning dives given the right conditions. Given the exposed nature of the sites, it is no surprise that the diving will be dictated entirely by the weather and prevailing conditions. Consequently, this will ensure that alternative and previously unconsidered sites will be explored, which can only be a good thing!

The other objectives of the expedition were harder to quantify. Given the advanced nature of this expedition and the requirement for team work, it is doubtless that all divers on the expedition developed and learnt new skills. For example, this was the first time that as a club, we tried 'bow forward' launching, and most divers had little experience of beach launching or swell of such size.

Many positive comments and feedback were expressed during and after the expedition about the new experiences people had gained. In addition, as a result of running the Compressor SDC, the entire expedition were qualified compressor operators at the end of the trip.

Findings

Hopefully this report will enthuse other divers to visit the area. A summary of each dive site can be found below. The diving is undoubtedly superb and warrants more expeditions to investigate its full potential. If we were to repeat the expedition again, there is little we would change (besides the weather!):

- Take another compressor—the small compressor at the Lazy Crofter is slow (15min per 12l cylinder) and so shifts of compressor operation had to take place and lasted late into the night.

However, we were more than happy with how well the trip ran and the following findings are worthy of note:

- Two boats are essential; it is important that there is always cover and support for divers and the other vessel in such remote locations. Vessels need to stay together and provide that support quickly
- The crews and boats, no matter how 'well seasoned', need to be prepared for such exposed diving and conditions. The swell was awe-inspiring!
- Self sufficiency and flexibility are vital for such an expedition
- Bow-forward launching into surf proved successful
- Life jackets are incredibly important and divers should not assume drysuits are a suitable alternative.

Equipment

The permanent towing bridles proved to be very useful and not intrusive in normal operation of the boat. The engine troubles experienced were explained by worn plastic parts in the manual starter mechanism and were cured by stripping the mechanism down and clearing away plastic burrs which were interfering with the operation of the manual starter.

Besides the usual kit issues and the engine problems described, there were also a couple of other small issues of note: during the drive to Durness from Edinburgh, the valve of the O2 cylinder attached to the KISS rebreather opened and was found to be more or less empty. Luckily, a spare cylinder of oxygen is always carried for such an event. It was also noted towards the end of the trip that 'Macallan' was taking on more water than normal (a few inches). Subsequent investigations revealed a tear a third of the hull in length. It is not clear how this damage was sustained.

Summary of dives

Below is a summary of the sites we dived. For each, 12 'man dives' were carried out-i.e. all 12 divers dived each site. There were no major or minor incidents during the dives or their associated preparations (loading/launching).

Site name	Locality	Position	Depth	Rating (out of 10)
North Faraid Head	Balnakeil	58.606N 4.772W	22m	9
NW Faraid Head	Balnakeil	58.596N 4.790W	16m	8
Rubha na Lecaig	Kinlochbervie	58.458N 5.078W	38m	7 (wall) 9 (gulley)
Creag Mhor	Kinlochbervie	58.4783 5.114W	8m	6
Dubh Sgeir	Kinlochbervie	58.482N 5.137W	18m	8
SW Roin Beag	Kinlochbervie	58.476N 5.140W	18m	9.5

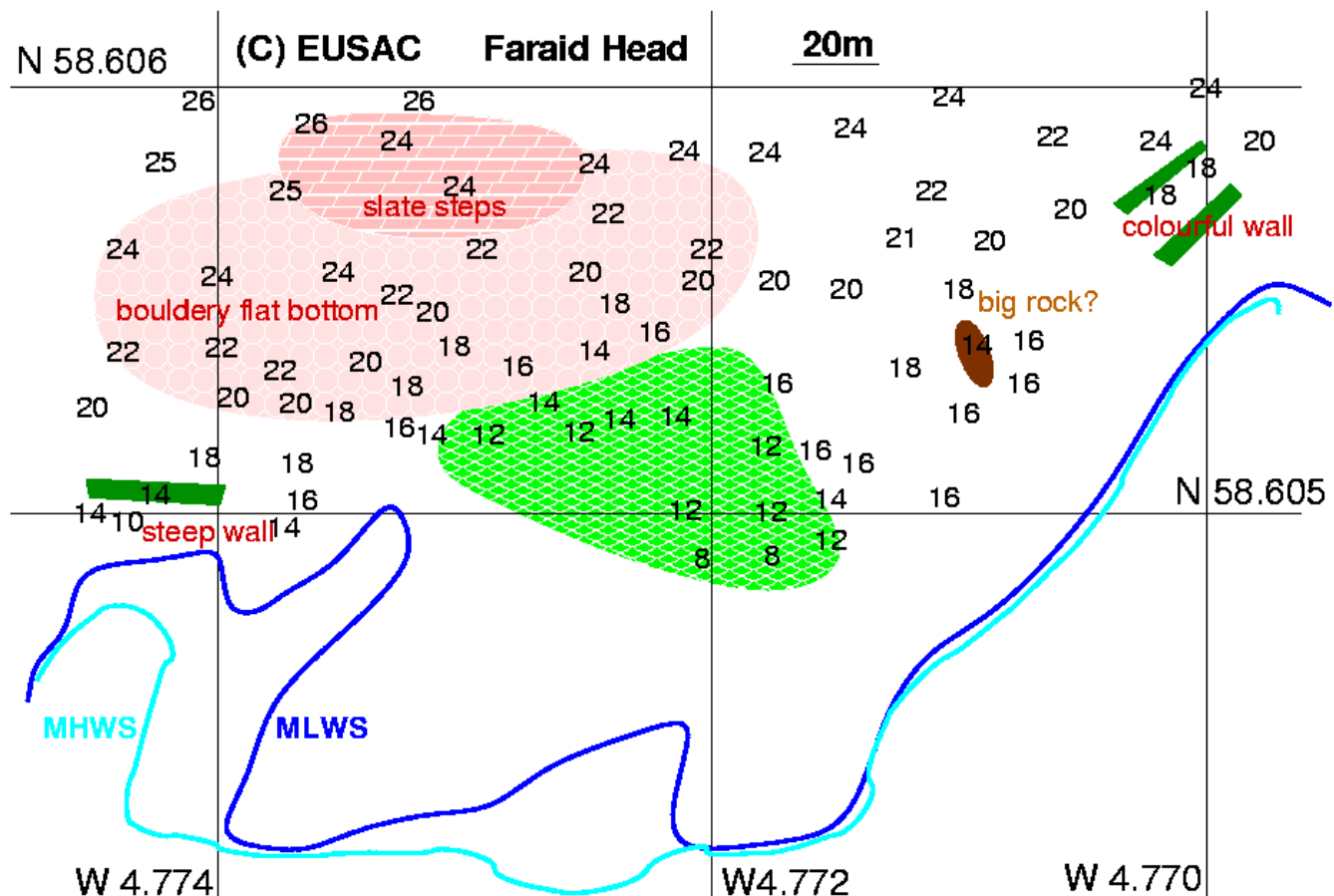
The dive sites

A more detailed account of the dive sites follows. All charts are shown at chart datum. Green bar lines indicate a wall, magenta blobs indicate a depression or gully, green areas indicate kelp, yellow areas indicate sand.

(Collated and produced by Max Ruffert)

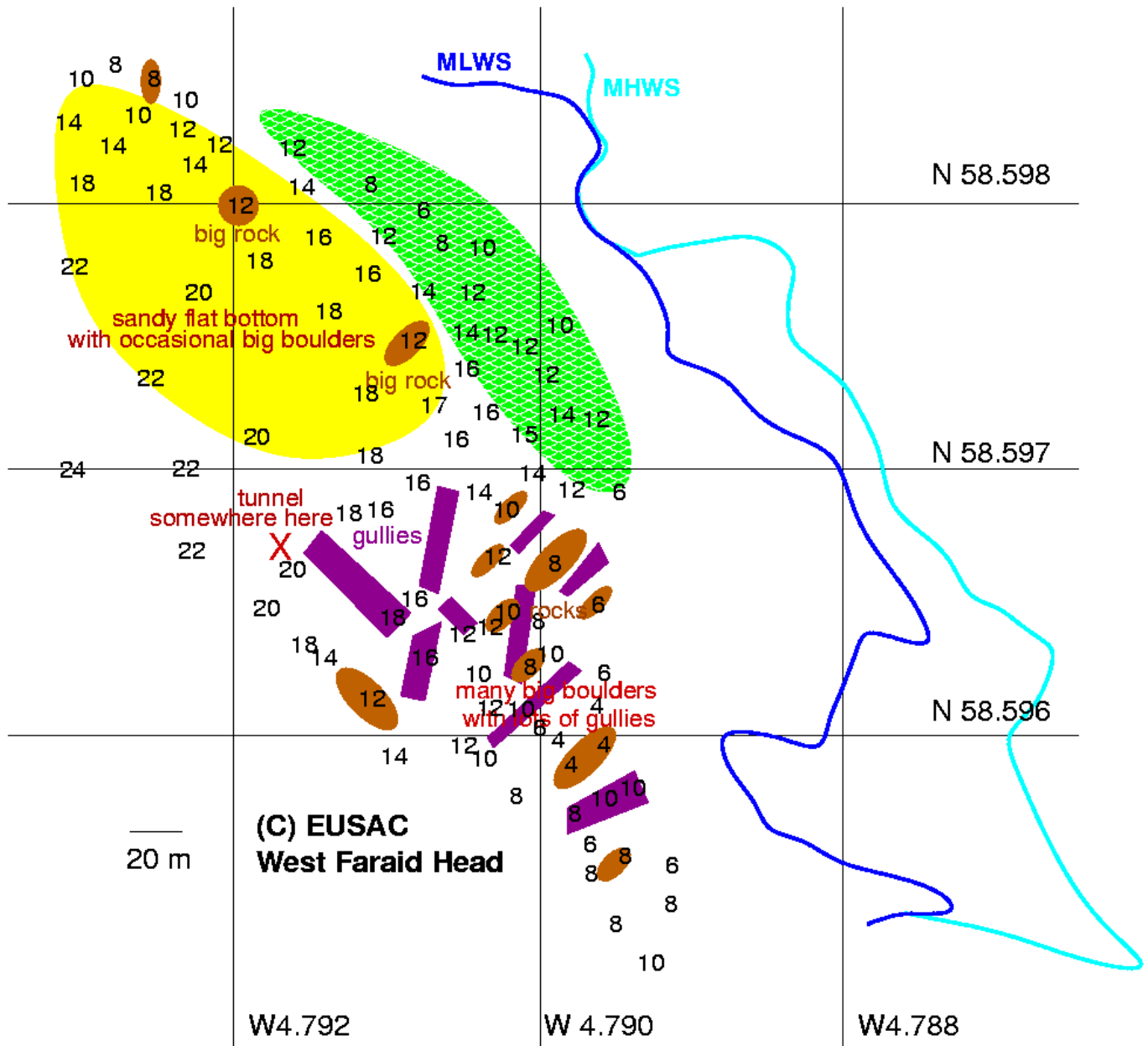
Balnakeil area

North Faraid Head (An Fharaid)



This site is quite exposed and as with everything on the North coast, is subject to very large and long swell, which is impressive to watch as long as your boat doesn't get too close. You can see the sea drop a number of metres as the swell retreats. Spectacular scenery on the surface including a view of the Cape itself and the lighthouse. Underwater, a series of steep walls and bouldery slopes which are swept by the current provides excellent visibility and an abundance of life. A 'nest' of dogfish was reported, with huge shoals of fish. Comments included "champagne entry" in reference to the effect of the waves; "stunning visibility"; "lots of juvenile sunstars, edible crab, velvet swimming crab and spider crab. Dogfish aplenty" and "huge amount of life". A sun-fish was spotted on the surface by a few lucky divers.

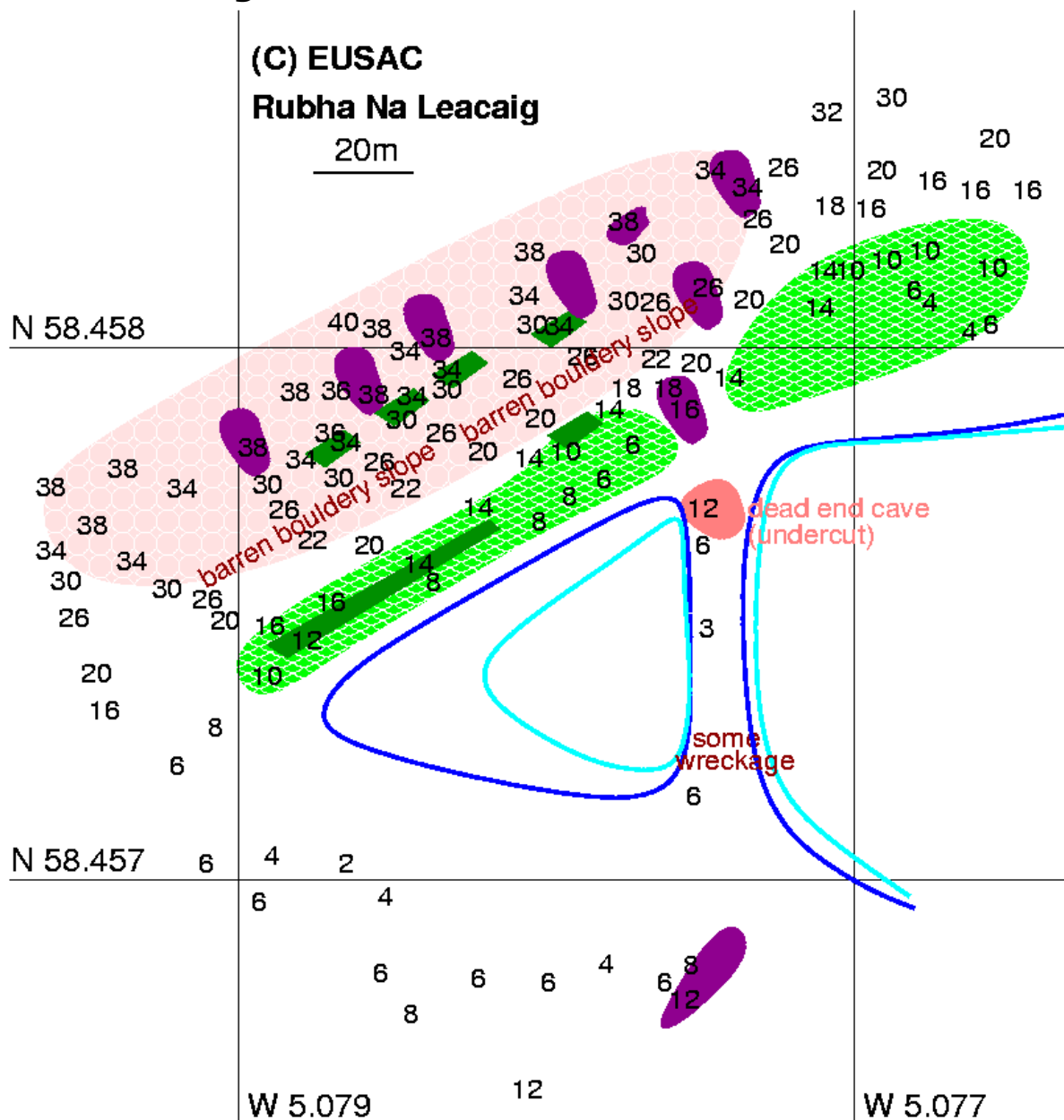
North West Faraid (An Fharaid), Balnakeil Bay



As can be seen from the chart, the south of the area is more interesting than the north! This dive site is to the north of the skerries in Balnakeil bay. Sheer drop along rocky surface covered with kelp to white, rocks and pinnacles rising up from 20m. Some excellent swim-throughs and tunnels, many gullies. Very bright due to the sand. Lots of sand dwelling fish like gobies and flatfish. Some scorpion fish, and large number of varying crabs.

Kinlochbervie area

Rubha na Leacaig, mouth of Loch Inchard



This site is a short distance from the harbour at Kinlochbervie, and is easily found at the mouth to Loch Inchard. The wall to 40m had stunning visibility but the life became quite sparse at around 25m. What appeared to be hard coral was found. More life to be found in the shallows amongst cracks in the rock, and amongst the kelp. A dive into the gap at the end of the headland is strongly recommended. This gap is divable even at LW and is very colourful with lots of life. There is an undercutting cave which is at 15m, and wreckage of the MFV Bon Ami (sunk in December 1985), including winches and the engine block can be explored.

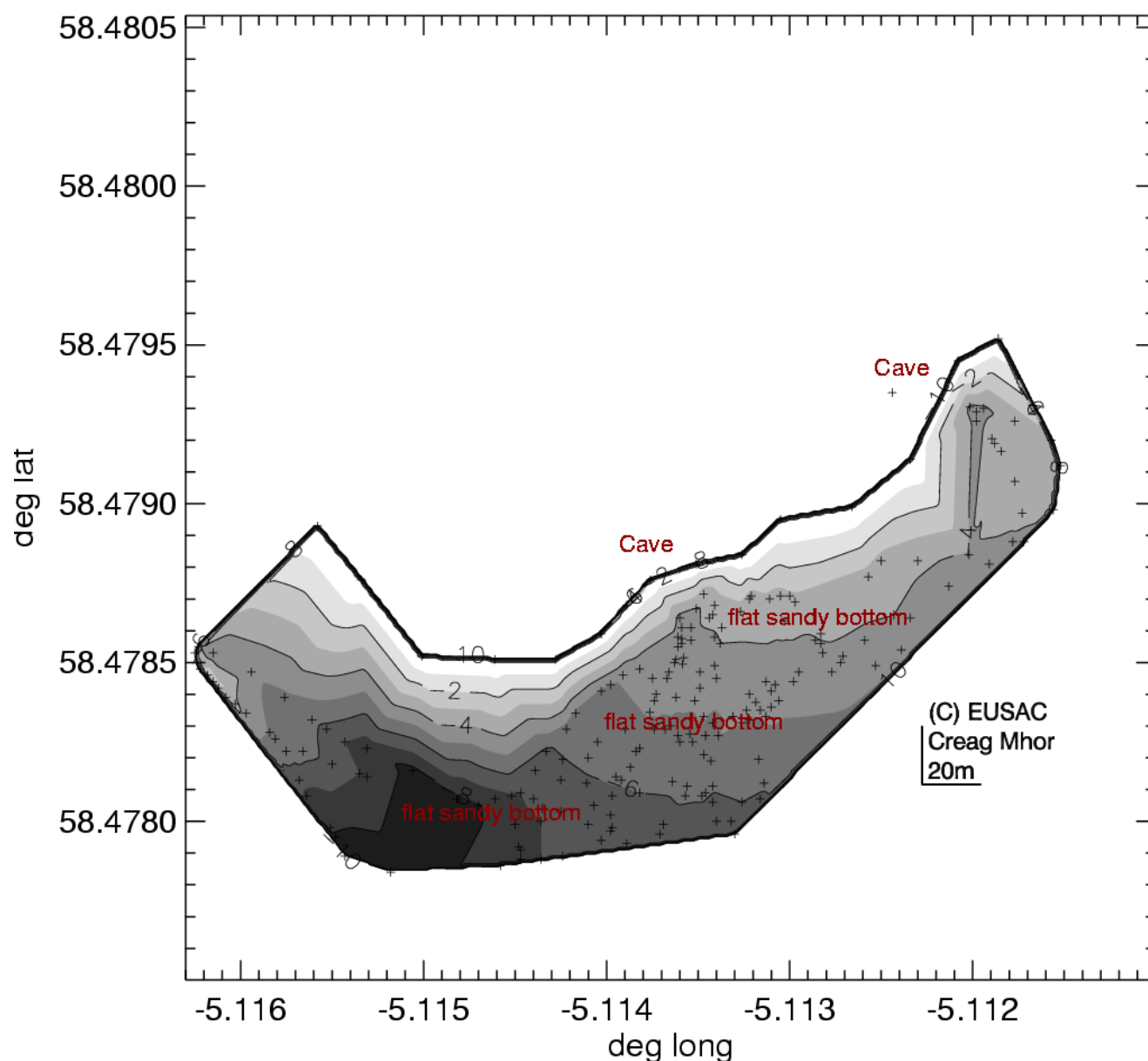
Lochbervie Harbour

We carried out a 20 minute search of the SW corner of the main harbour (north of the large pier). As is to be expected on any harbour dive, the usual 'overboard' junk was found. The visibility was quite good,

approximately 8m. Seabed was fairly coarse (for a harbour). Obviously, usual commonsense should be applied if diving from the harbour: contact the harbour master, carry an SMB, stay away from vessels.

Creag Mhòr

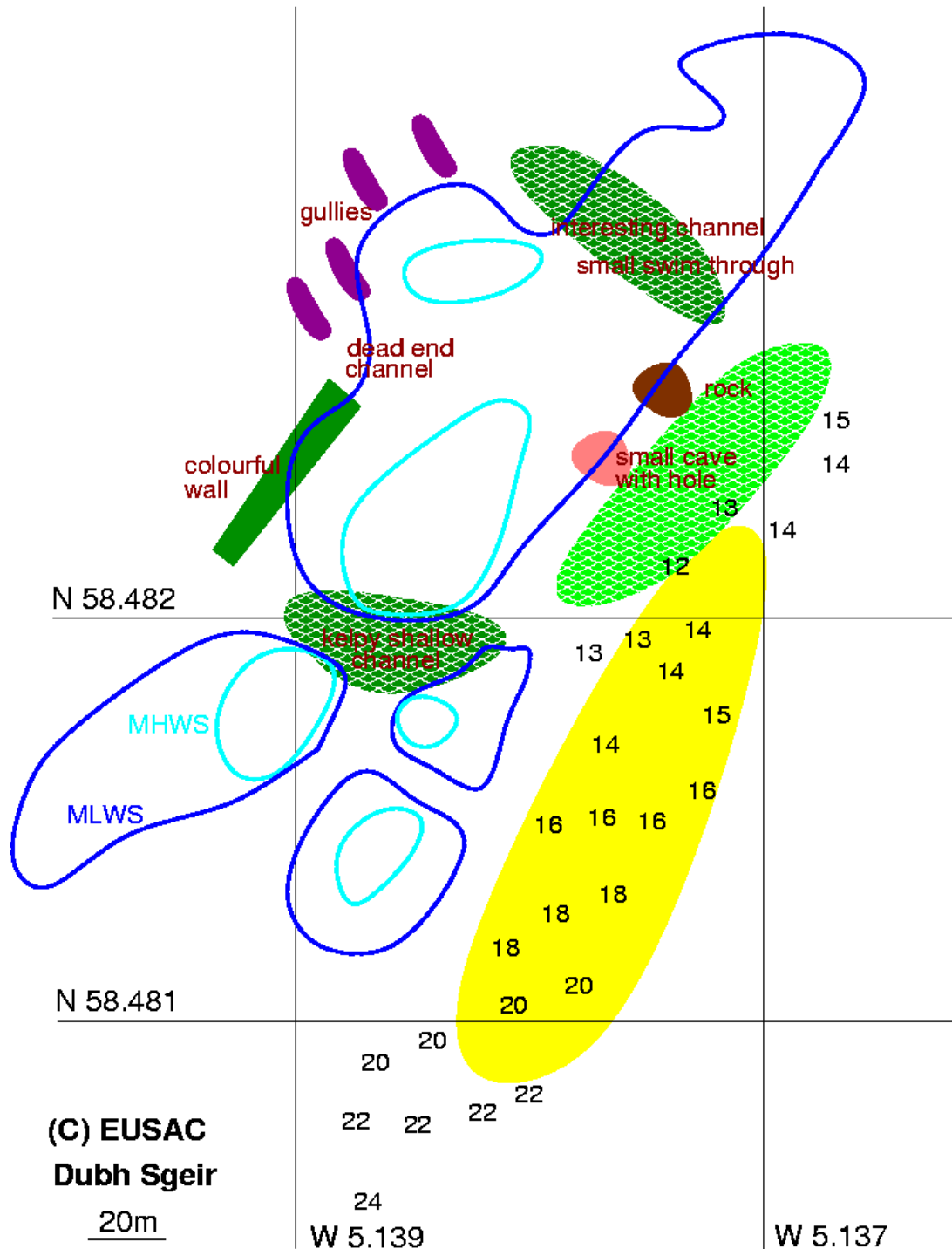
(‘cave’ marked on OS map)



With so many caves in the area, it is hard to resist exploring at couple. These caves on the south east of the headland do not go too far into the land, but are worthy of snorkel exploration. The surrounding sea bed is pristine sand with the odd outcrop of rock (which have quite a lot of life on them). Other divers explored the south east of Eilean An Ròin Mòr and reported “sheer drop to 20m, sandy bottom, line of lobster pots. Shallow cracks/gullies but filled with lots of kelp and life”

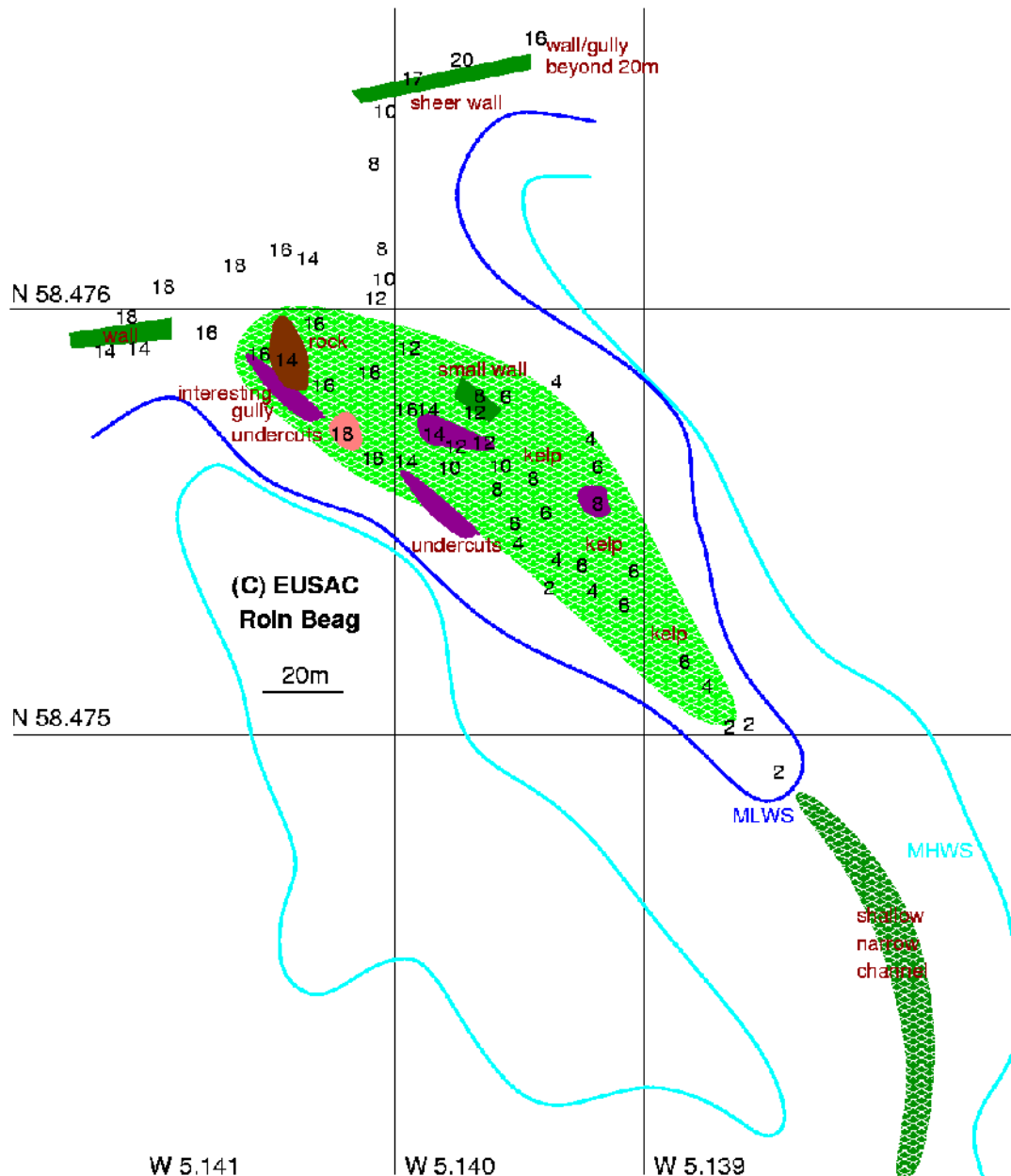
Dubh Sgeir

(West of Droman)



This is quite an exposed site and so it may be necessary to shelter on the landward side of the islands. Once underwater, the gullies allow you to explore the sea-ward side of the islands, though you may have to go quite shallow to achieve this. The north east of the island is the most interesting, with numerous gullies and even some caves to explore. Lots of life, plentiful jewel anemones, crabs (velvet, edible, spider), sunstars and the purple versions, fish, dead means fingers, sponges. . Curious and playful seals added to the diving experience.

South West Ròin Beag



Quite possibly the best dive of the trip! At the very west of the island is a bay, which turns into a channel cutting through the island. At the mouth of the bay, sheer walls on the surface drop down to 15-20m and then lead into undercutting gullies. Gullies were very narrow, some were wide, some undercut going down to 20m or so. Many juvenile red scorpion fish, edible, velvet swimming and spider crabs. Add the additional excitement of lots of inquisitive seals, great visibility, and this really is a site worth repeating.

Launching Facilities

Balnakeil / Durness

Balnakeil

Balnakeil beach is suitable for launching/man handling small boats or inflatables over. At low tide, it can be a long way to the water! The sand can be pretty soft so probably not suitable for a 4x4 on all parts of the beach. Worth considering launching bow-forward into the waves to stop a transom-breach.



Balnakeil beach

Loch Eriboll



This is probably better as 'access to the water' than a place to launch. The guy who runs the fish farm (01971 511347) near Laid is very friendly and willing to help launch the boats with his 4x4. Given the limited options, this could be worthy as a backup place to launch if the weather is bad.

Kinlochbervie

Loch Bervie Harbour



A large fishing harbour with a decent slipway (not quite reaching LW), and some steps and a pontoon to load kit over. Harbour dues paid to harbour master office at the north end of the buildings. Has a small chandlery. Village has a couple of shops. Rumour of a compressor but no confirmation of this from our investigations. A hardboat takes fishing and dive charters, details below

Cape Wrath Charters Limited
8 Bervie Road
Kinlochbervie IV27 4RY
01971 521 359

Droman Pier / Port Chaligaig



A small, picturesque, slipway further west of Kinlochbervie. Possible to launch a small rib or inflatable by hand (there is a 90 degree turn at the top of the slip). Probably more use as a shuttling point, sending boats round with kit from Kinlochbervie and picking divers up from here. Harbour dues paid at Kinlochbervie.

APPENDIX I: Photographs

A consolidated collection of expedition photographs will be available
www.eusac.co.uk/begs/capewrath2008

APPENIX II: Divers

Grade
Training?
BSAC/branch Role

Paul Bullen
AD
1st
Expedition leader

Amal Al Sayegh
AD
1st
Area coach

Max Ruffert
1st
No
Expedition trophy winner

Graeme Kirk
AD
1st

Sian Griffiths
DL
AD

Peggy Butler
DL
AD
Chairperson, EUSAC

Ant Clifford
DL
AD

Steve Czuprynski
DL
AD
Branch Diving Officer

Dave Gibson
AD
1st

Sarah Boys
DL
AD

Nix McDonnell
DL
AD
South Scotland SDCO

Alexander Zacheshigriva
DL
AD
Treasurer, EUSAC

APPENDIX III: Expedition Expenses

A summary of the main expenses are below

	FORECAST				ACTUALS	
	per day	Total pp	Total	Forecast Notes	Total	Actual Notes
Accommodation	£ 16.00	£ 80.00	£ 960.00	May be less if c	£ 960.00	Forecast was for 5 days (n
Compressor hire			£ 150.00	£75/ea from ED	£ 50.00	used compressor at accom
Transit hire 1	£ 45.00		£ 225.00	shorts lw b+tow	£ 250.00	Cost increased
Transit hire 2	£ 45.00		£ 225.00	shorts lw b+tow	£ 100.00	People carrier
Boat fees (club	£ 4.00	£ 3.00	£ 36.00	may be able to c	£ 168.00	only used 3.5 days worth
Boat 1 fuel	£ 15.00		£ 180.00		£ 167.00	Significantly less than expe
Boat 2 fuel	£ 15.00		£ 180.00			Included in boat 1--breakdov
Food	£ 8.00	£ 40.00	£ 480.00		£ 242.71	Decided on self-catering an
Car 1 fuel	£ 100.00		£ 100.00		£ 291.00	Total vehicle costs forecast
Car 2 fuel	£ 100.00		£ 100.00		£ -	included in car 1 fuel -break
Van 1 fuel	£ 60.00		£ 60.00		£ -	included in car 1 fuel -break
Van 2 fuel	£ 60.00		£ 60.00		£ -	included in car 1 fuel -break
Launching			£ 20.00		£ -	None--charges waived for l
		Total	£ 2,776.00	Total	£ 2,228.71	
				Actual total spe	£ 2,700.83	

The other expenditure on the trip included 'one off' purchases such as lifejackets, and unexpected costs such as towing fees.

A more detailed breakdown of costs is available.

APPENDIX IV: Boat changes

As mentioned earlier in the report, a number of changes were made to the boats on the expedition, in order to decrease any time needed in a rescue and enable as much self sufficiency as possible.

