

UNIVERSITY OF LONDON SAC BSAC 0069

In collaboration with members of St Albans BSAC



Isle of Skye 2014 – Expedition Plan



Contents

Purpose	3
Resources available.....	4
Diving	4
Dive Platform	5
Backup plan.....	5
Expedition Management.....	5
Trip Members.....	6
Dates	6
Transport.....	7
Food	7
Accommodation.....	7
Costs.....	7
Air and Fuel	8
Personal Equipment.....	8
Other Expedition Equipment	8
Safety	9
Roles and Responsibilities.....	9
Launching and Recovery	10
Tidal Information	10
Cascading Skills	11
Typical Day's Dive Plan.....	12
Dive Sites.....	13
Expedition Reporting	13
Appendix 1 – Dive Site Information	14
Appendix 2 – Skye Team Members.....	15
Appendix 3 – Cost Breakdown	16
Appendix 4 – Risk Assessment	17
Appendix 5 – Key Contacts.....	20

Purpose

ULSAC0069 has been a University BSAC club since 1958. Like many BSAC clubs, following the recession, ULSAC0069 has found that its core membership of instructors and Advanced Divers have been forced to reduce their commitment to the club. This has resulted in the few remaining Advanced Divers and instructors struggling to up-skill the junior members in order to future-proof the club. ULSAC0069 has found itself in a transition period, with an urgent need to support junior members in becoming boat handlers, dive managers, practical rescue managers, Dive Leaders and Advanced Divers in order to run dive trips safely and effectively. This has required a huge amount of commitment from the remaining instructors and Advanced Divers, and a dedication to training of the upcoming Dive Leaders and Dive Leader trainees to take ownership of their club. For the purpose of up-skilling members, in order to create a healthy BSAC club with up and coming future leaders, it was decided to organise a BSAC expedition for late Summer 2014. Following on from the success of a BSAC expedition to Guernsey in 2011, and an adventurous trip to Croatia in 2014, ULSAC gained the confidence to plan and co-ordinate a challenging expedition. In February 2014, a poll of all interested parties was conducted for suggestions for expedition destinations. Locations such as Cornwall, the South of France, Egypt and even Ibiza were discussed; however, it was decided that the destination that would allow ULSAC to invest most in the club's ability to be an independent UK diving branch using its own RIB, would be the Isle of Skye in Scotland. Although not the initial choice of sunshine destination of your average undergraduate student, the passionate arguments for the ability to do 'real UK adventurous and exploratory diving' matched with the exciting option of running a boat handling course to enable expedition members to learn and experience driving the club RIB, won the hearts and minds of the trip members. Initial research indicated that the Isle of Skye is a perfect site for exploratory diving and is remote and unspoilt. Marine life includes minke whales, basking sharks, dolphins, porpoises, seals, dogfish, wrasse, conger eels, octopuses, lobsters, crawfish, jellyfish, crabs among others. The Isle of Skye is known for having beautiful and breath-taking stunning scenic diving, but the sites also have good visibility, in part thanks to the strong currents. These currents mean that tidal information and good dive planning and management are absolutely crucial for safe and enjoyable diving to be carried out at this challenging destination which is unknown to the club.

The primary purpose of this expedition to the Isle of Skye is to explore unknown dive sites to the club, albeit regularly dived, and to also locate new and interesting scenic dives that are not described in diving literature. The aims of the expedition are:

- To explore a challenging dive destination which is currently unknown to trip members
- To conduct a week of challenging diving that will give members of the expedition the opportunity to dive manage, increasing members' competencies and confidence in this crucial skill set. This trip involves members of two BSAC clubs: University of London SAC and St Albans SAC and will provide divers the opportunity to progress from Sports Diver through to First Class. The diving will primarily be safe but challenging diving in a dive location that is completely new to all team members.
- To identify and explore previously undived scenic sites.
- To enhance the diving skills of trip members under more adventurous conditions than they are accustomed to, increase their confidence not just with respect to their diving but also in working as a team to make such a complex expedition successful.

- To assist 1 trainee First Class Diver, 4 trainee advanced divers, 4 trainee Dive Leaders progressing towards their next diver grade.
- Cascade skills from First Class Diver level through to Sports Divers with a view to this translating back to their branches.
- To be self-sufficient in terms of boats, food, accommodation and other equipment.
- Promote expeditionary diving and diving in the Isle of Skye as a dive location to the wider diving community.

Resources available

The following resources have been used to safely plan our expedition:

- Admiralty NP218 Tidal Stream Atlas – North Coast of Ireland & West Coast of Scotland
- Admiralty Chart 2533: Anchorages on the West Coast of Skye – 1:25000
- Admiralty 1795: The Little Minch Southern Part – 1:100000

Information on suitable dive sites has been gathered from the local BSAC branches, Dornie Divers SAC and Manx Divers SAC. Additional sources of information included the local dive shop, Dive & Sea the Hebrides who have an extensive library of online articles and from internet searches. We couldn't find any useful dive guides in print and readily available, which was disappointing, but we did find a post on the BSAC website by Iain Paul

(<http://www.bsac.com/diverreports.asp?section=1248&itemid=2253>) and a useful dive trip report by BSAC branch no. 001.

Diving

A list of potential dives and their locations are included in Appendix 1.

Diving will be based out of Stein, Lochbay, Waternish, the North West tip of the Isle of Skye, and we will have access to a number of wrecks, reefs and walls in the waters surrounding the Isle of Skye. This will be new an exploratory diving and is unknown to all members of the expeditionary team. Final planning & choice of dive sites will be completed during the week before the expedition however, some planned sites include:

Isle of Skye

- Wreck of SS Chadwick (collier sunk 2nd July 1892) below cliffs at north end of Oisgill Bay
- Wreck of SS Doris (collier sunk 10th July 1909) on southern side of Neist Point
- Lochbay Pinnacles, close to launch site
- MacLeod's Maidens, near Idrigill Point
- Conger Crevasse, An Dubh Sgeir, drift dive
- Unknown dive sites that are described in Appendix 1.

The Isle of Skye is a remote and isolated dive location, free from the usual shipping channels of busier ports. The Isle of Skye is known for its good visibility, in part due to the fast and complicated currents around the islands. This has created dive sites with diverse marine life and clear waters,

with the opportunity of exhilarating drift dives. However, the fast currents mean that the diving is challenging, with strong currents, and certain sites including wrecks must be dived during slack water. These conditions will require careful and thorough dive planning, and due to weather conditions, alternative sheltered sites must be carefully researched. All members of the team have and will continue to be involved in site selection, planning for tidal waters, and plotting courses to sites. These tasks will be managed by the expedition mentor, Michelle Kim, but the group feels that for the experience of all members, it is important that all members are involved in dive planning. The expedition group has met regularly to plan dive sites and co-ordinate logistics, with tasks such as booking accommodation, journey planning, vehicle allocation and dive planning, shared out equally among members. The next expedition planning meeting is due on the 10th of August 2014, with more meetings to be held as the date of the trip approaches.

As well as the sites listed above, there is the option for us to locate and explore previously undived sites. The waters surrounding the Islands are extremely rocky with many pinnacles protruding from the water and just as many rocky reefs below. One aim of the expedition will be to explore and identify exciting new sites and report these back to the wider diving community.

Dive Platform

We will be taking one of ULSAC's RIBs, Rascal. She is a 6.5m vessel, which will hold a maximum of 10 divers with kit. She has a 4-stroke 140hp engine, which is reliable, so problems are very unlikely. However, we will have standard safety and back-up equipment and radios in case of problems. Using our own RIB will give us complete independence and flexibility to find and explore dive sites around Skye.

Backup plan

The choice of dive sites will ultimately depend on weather conditions and the weather and other salient conditions will be under constant appraisal to ensure safe diving. The final choice of site will therefore be made the night preceding the dive after the weather forecast has been assessed and the choice will be monitored for its suitability right up until the dive time to ensure safety. As we are diving a large island, there should usually be a sheltered dive site as a back-ups particularly in the sea lochs. In the event that no sheltered sites are reachable by boat, there are several sheltered bays which could be used for shore diving. Meanish Pier/Reef is an example of a potentially challenging but sheltered dive site even when winds are quite strong. In the unlikely event that the weather makes it impossible for any diving to take place, the rugged coastline provides excellent walking opportunities with some stunning views. The opportunity could also be taken to undertake theory based skill development courses (for example, chart position and fixing) and as such, sufficient training materials will be available during the expedition.

Expedition Management

Planning and execution of the expedition will be overseen by mentor and First Class Diver Michelle Kim. Michelle will provide support to the daily Dive Managers. All members of the team will be expected to assist with dive management in some capacity. The expedition will provide an excellent opportunity for recently qualified and aspiring Dive Leaders to gain experience in dive managing at a

site unknown to the club (Henry Mosey, Natalie Reeder, Andrew Niewiarowski, Vedika Mehra, Eunsook Park and Karen Ho). Each day's dive management will be under the supervision of Alison Niewiarowska, Hannah Holdcroft and Alison Gaudion. In order to cascade skills Alison N, Hannah and Alison G will guide a less experienced diver to plan and manage a day's diving. Pairings will be based on experience and training needs.

Alison N and Hannah are Open Water Instructors and Dive Leaders training to become Advanced Divers, and Alison G is an Advanced Instructor and Advanced Diver, who is also a Trainee First Class Diver. They have suitable experience of dive planning and management for this undertaking.

Trip Members

The primary aim of this trip is to teach the next generation of club members how to plan and manage challenging expedition diving, so they can pass those valuable skills on to other members of the club by organising similar challenging expedition diving in the future. That will allow skills necessary for expedition planning to be cascaded down to other divers in the club not partaking in this particular expedition. In addition, club members who haven't yet had the opportunity to broaden their sports diving skills will be given the opportunity to take part in this type of expeditionary diving. It is also important to ensure that there are enough experienced divers present in order to run the expedition and achieve its aims. Participants must satisfy the following criteria:

- Be an experienced UK diver with a minimum qualification of Sports Diver
- Dive fit at the time of the expedition with evidence of having recently completed diving from RIBs
- Be committed to the aims of the expedition and to personal and group progression throughout
- Be willing to further their expedition planning and management skills by attending selected skill development courses leading up to the expedition, with the aim of passing that new knowledge onto other members of the club.

A full list of team members can be found in Appendix 2. They reflect a broad range of qualifications:

- 1 First Class Diver
- 1 Advanced Diver
- 4 Dive Leaders
- 4 Sports Divers
- Every participant is committed to significantly extend their own training or cascading their skills to others in the group

Dates

The expedition will begin on 05th September and finish on 13th September 2014, a total of 9 days including travelling days. Since February 2014, many of the team members have been meeting regularly to discuss logistics of the trip, and the training requirements leading up to the trip, to allow the team to meet its objectives. We will start our journey on the 05th September in London, picking up all members of the team, the RIB and all kit. We will travel to Lancaster where we will stay overnight before heading to the Isle of Skye. Upon arriving, a full briefing will be given outlining our

accommodation and base of operations. Between Sunday 07th and Friday 12th September, we will be following the program of diving. We will depart Skye on the afternoon of 12th September and stay overnight near Carlisle. We will travel back to London on the morning of Saturday 13th September, and expect to have everyone home by evening that day.

Transport

The expedition will require two vehicles: we will hire a Ford Tourneo MPV to carry all but two of the team members, some equipment and tow the RIB. A small van will be hired to carry all the diving and boat equipment as well as personal luggage. The driving distance between London and Skye is approximately 12 hours without stops and so we plan to have frequent stops (including an overnight stop), and we'll plan several changes of drivers, to minimise driver fatigue. One of the drivers has held a towing licence for more than 3 years and so can oversee drivers with a provisional towing licence, if the provisional driver's insurance allows.

Food

The accommodation we will be staying in in Waternish has a full-sized kitchen. Local shops are well stocked and within 15 minutes' drive from the accommodation. We will be self-catering throughout the trip with team members preparing their own breakfasts and the means to prepare sandwiches etc. will be provided for lunch. Dinner will be prepared on a rota basis. All team members have been asked to provide any dietary requirements to ensure that a suitable menu is provided to cater for all. Our accommodation is such that we will have access to a full. It is anticipated that on our final evening we will eat out at a local restaurant.

Accommodation

We will be staying at self-catering accommodation in Stein attached to the dive centre, close to the mooring/launching site at Waternish/Loch Bay. The accommodation provides everything required to support the team during this expedition.

Costs

Participants have paid a deposit of £200 to secure their place on the trip. Receipts for expenses will be collected during the trip and the expedition and dive managers will ascertain the final price at the end of the trip. An approximate cost per diver is £500 inclusive of transport, but excluding kit hire. Financial assessments have been made at regular intervals during the planning process. An estimated budget is included in Appendix 3. The cost of any SDCs run during the expedition will be in addition to the above figure and will be borne by the individual.

The estimated cost of this expedition is significantly more than the cost of a usual RIB trip. This is compounded by the fact that as members of a University Branch, ULSAC team members are students and therefore costs have to be kept at a minimum to avoid pricing them out of the expedition. We are therefore applying for BEGS funding to assist with one of the major costs associated with this expedition:

- **The transport of the RIB and kit to the remote Isle of Skye from London: £1,478.**

This site was selected because of its remote location, its being an unknown site to the club, and opportunity for challenging expedition diving. Because of the long distance from London to Skye, the cost of transport will be significantly higher than a standard RIB trip, but we can justify that expense as it is an excellent opportunity to meet the objectives of the expedition.

Air and Fuel

Fuel for the vehicles at the RIB is available at local petrol stations. Atholl Service Station is approximately 15 minutes from our accommodation and base of operations in Waternish; however it is important to note that local petrol stations operate reduced opening hours on Sunday, so this will have to be factored into our planning. Fuel runs will be organised on a rota basis between the vehicle drivers.

Air is commercially available from the Dive & Sea the Hebrides, based in Waternish. Dive & Sea the Hebrides are also providing a mooring for Rascal for the week.

Personal Equipment

Amongst their personal equipment, participants are expected to bring:

- Complete set of personal (or club if required) dive gear
- Delayed Surface Marker Buoy
- Cylinders: At least 2 depending on configuration – enough for 2 dives a day
- Knife/shears/torch and back-up
- Foul weather clothing and sun cream

Other Expedition Equipment

Supplied by the expedition as a whole:

- 2 full sets of scuba equipment as spares
- University of London SAC RIB Rascal (with inbuilt VHF radio, GPS and echo sounder), shot and tools
- Fuel containers
- Emergency RIB fuel can
- Throw bags
- Handheld backup GPS and VHF radio
- 2 x 3L Emergency Oxygen kits plus additional 3L O₂ cylinders
- First Aid Kits
- Flares Kits
- Charts & Pilotage Books
- Small Craft Almanac
- Safety & Medical Proforma

Safety

The safety of all team members during this expedition is our main priority. The minimum qualification required for the trip is Sports Diver to reflect the challenging diving conditions in the Hebrides. In addition, we have run several safety-related skills development courses in order to up-skill before the expedition, in particular, we ran an O₂ admin and PRM course specifically for this expedition. Almost all members hold O₂ admin and PRM qualifications, and we have 3 team members who additionally hold the advanced lifesaver and first aid qualifications who will act as expedition medics. In addition, 2 members hold a VHF radio license. In case of emergency, one expedition medic will be designated to take the lead in the event of diver injury for each day on a rota basis. Adequate water and oxygen will be available at all times both on the boat and on shore. In addition, we also carry a first aid kit and throw rope.

We held a boat-handling course before this expedition (in July 2014) with the aim of giving more members of the club knowledge and experience to plan, manage and operate diving from small boats. 4 members of the expedition attended that course, and 2 other members were instructors for that course. In total, we have 2 Diver Cox'ns (both of whom are boat handling instructors) and 4 boat handlers on the expedition. One of the diver Cox'ns gained her instructor qualification in the run-up to the expedition for the purpose of instructing less experienced boat handlers on the expedition.

Everyone will be expected to have read and understood BSAC safe diving practices and the expedition risk assessment – Appendix 4. Each day an individual risk assessment for each dive site will be conducted dependent on the conditions. The Coastguard will be kept informed of our dive plan. Many of the sites are expected to have a short slack window of approximately 30 minutes. After this time there is a chance that the currents will pick up considerably. Divers will be asked to put up a DSMB after 25 minutes and to ascend as soon as they feel the current start to increase.

See Appendix 5 for a full list of safety contacts.

Roles and Responsibilities

Provisional roles have been assigned to team members based on their expertise and experience in specific areas. However, this is subject to change as the plan is to build up the experience of junior members of the team via a buddy system to enable them to take responsibility for certain roles towards the end of the expedition e.g. boat co-ordinator.

Role	Team Member(s)
Mentor and First Class Diver Oversees the expedition and supports dive managers and expedition leader	Michelle Kim
Expedition Leaders Manages expedition under guidance of mentor Responsible for BEGS application and reporting	Alison Niewiarowska and Alison Gaudion
Dive Managers Co-ordinates dive plan & logistics for the expedition	Alison Niewiarowska and Andrew Niewiarowski
Assistant Dive Managers Shadows or takes part in dive planning tasks depending on experience	Henry Mosey and Vedika Mehra

Drivers x3 – small van Can drive small van during expedition	Andrew Niewiarowski, Alison Niewiarowska and Hannah Holdcroft
Drivers x2 – MPV and towing Can drive & tow with MPV during expedition	Michelle Kim and Alison Gaudion
Expedition Treasurer Collates receipts and finalises accounts	Andrew Niewiarowski
Equipment Manager Ensures correct equipment is brought on trip	Henry Mosey
Dive Site Information Co-ordinator Records information about dive sites dived for trip reporting	Natalie Reeder
Boats Coordinator Ensures boat is fuelled, oiled and in working order	Natalie Reeder
Food Coordinator Plans shopping runs, ensures boat stocked with water & snacks	Eunsook Park and Hannah Holdcroft
Website Coordinator Writes trip report for club website/posts comments during trip	Karen Ho
Expedition Medics Divers who hold – O ₂ admin, advanced lifesaver, PRM and First Aid qualifications (and VHF for MK and AG)	Michelle Kim, Alison Gaudion, Alison Niewiarowska
Media Write up of expedition for SCUBA	Alison Niewiarowska
Training Coordinator Ensures training needs within team are met Ensures cascading of skills	Hannah Holdcroft

Launching and Recovery

We will be launching and recovering from the slipway in Stein which is a small village in north-west Skye. The concrete slipway is $\frac{3}{4}$ tidal and only inaccessible at low tide. We will launch on arrival and moor the boat on a mooring for the week before recovery on the final day. From this base we will be able to explore much of the area between Loch Bay and Loch Bracadale.

Tidal Information

Spring tide falls on Thursday 11th September which is at the end of the diving period. With neap tide being on 03rd September the tide will be getting “springier” as the week goes on. The tidal range during the week will range from 3.5m to 5m thus the first few dives of the week will be on relatively sheltered sites to build up confidence levels of the team members and boat handlers.

Tidal information for Ullapool, September (BST):

Saturday 06	Sunday 07	Monday 08	Tuesday 09	Wednesday 10	Thursday 11
0530 4.5	0621 4.8	0102 0.7	0148 0.4	0231 0.2	0312 0.2
1146 1.5	1238 1.1	0704 5.2	0745 5.4	0825 5.5	0904 5.5
1746 4.9	1833 5.3	1324 0.8	1407 0.5	1449 0.4	1531 0.4
0013 1.2		1916 5.6	1957 5.8	2039 5.8	2121 5.6

Loch Dunvegan tide time adjustment table in relation to standard port Ullapool

Tide height adjustments are negligible (maximum 10cm) and so have been omitted from the table below.

Loch Dunvegan	High Water		Low Water	
	0000 and 1200	0600 and 1800	0300 and 1500	0900 and 2100
	-0105	-0030	-0020	-0040

According to chart tidal information and the Admiralty tidal stream atlas, the strongest currents run down the centre of the Little Minch, between Skye and the Isle of Harris from SSW to NNE on the flood tide and NNE to SSW on the ebb. Sites close inshore to the western edge of Skye seem to be out of the strongest tidal flow and thus will be the focus of the expedition. General slack in the area appears to be HW +2 and HW -4 at Ullapool.

We will arrive on site approximately an hour before 'slack', to monitor the current in the area and to provide ample opportunity to explore the area and locate a suitable dive site. As we are diving in waves, it is likely that the last buddy pair will not be able to dive when it is fully slack and will therefore deploy a DSMB as soon as the current picks up. Where a dive site can only be dived on slack such as all of the wreck sites, a maximum dive time will be set and divers will deploy a DSMB and return to the surface as soon as the current picks up. In this situation a separate dive site may need to be planned for the final buddy pair to ensure that they get a slack dive.

Cascading Skills

One of the expedition's key aims is to ensure that skills are passed down through the group from First Class Diver level to Sports Diver. The opportunity to be involved in such adventurous and challenging diving does not come around too often and this provides an excellent platform for the team members to build up the necessary skills to organise this type of diving in the future and to progress through the BSAC qualification levels.

Several club members in the club training team, including Michelle Kim (National Instructor), Alison Gaudion (London Regional Coach), Hannah Holdcroft (Advanced Training Officer), and Alison Niewiarowska (Diving Officer), have arranged specific skills development courses leading up to the expedition to optimise the skills and learning opportunities available during the expedition. These include a boat handling, PRM, O₂ admin and DPM course.

Team members were selected based on their commitment to either their own progression (particularly in attending the courses listed above), the progression of other team members or both of these. A buddy system will be in place in order to support less experienced team members in all tasks related to the running of an expedition. It is anticipated that the less experienced members of the club will pass on the skills learned leading up to and during this expedition to other members of their club. This will allow for the next generation of club members to start becoming more independent and nurture adventurous club diving.

In terms of personal progression during the expedition, one of the Advanced Divers is currently working towards First Class Diver and will be shadowing the expedition mentor. 2 of the Dive Leaders will be working towards their Advanced Diver qualification and will help prepare the expedition report. All other members will be working towards either Advanced Diver or Dive Leader.

Typical Day's Dive Plan

We will be diving in waves due to the fact that we're diving from a RIB. As there will be 10 team members, two divers will remain on the boat at all times. There are sufficient diver cox'ns and boat handlers – 6 in total. Most days we will be able to return to land to refill cylinders between dives. For dive sites further afield, sufficient air will be brought on the boat for two dives. The means to make lunch will be provided each day and on days where we are not returning to base between dives a packed lunch will be taken on the boat.

Below is an outline plan for a typical day's diving:

Day One	Person	Time
Breakfast	All	07:30
Prepare coolbox for lunch	NR	07:45
Travel to base	All	08:00
Group briefing	Day Manager	08:15
Prepare boat – fuel, oil etc.	NR	08:30
Kit up and load onto boat		08:30
Depart for dive 1		09:30
Arrive site, locate and wave 1 divers kit up		10:30
Wave 1 in		11:00
Wave 1 out and wave 2 kit up		11:40
Wave 2 in		11:50
Wave 2 out		12:30
Return to base		13:30
Fill cylinders at air shop & have lunch		13:30
Group briefing	Day Manager	14:10
Depart for dive 2		14:30
Arrive site, locate and wave 1 divers kit up		15:00
Wave 1 in		15:15
Wave 1 out and wave 2 kit up		15:45
Wave 2 in		16:00
Wave 2 out		16:30
Return to base		17:00
Two divers to return to accommodation and cook meal	NR	17:00
One diver to fuel and oil boat	NR	17:00
Two divers to return to accommodation and plan next day	Various	17:00
Log days diving, update expedition blog	All	18:30
Evening meal	All	19:00
De-brief and discuss following day's diving	MK and various	20:00
Relaxation time	All	20:15

Dive Sites

A list of potential dive sites and navigational waypoints can be found in Appendix 1.

Due to the fact that access to sites is weather dependent it is not possible to specify which sites will be dived on which days. Overall the aim is to dive a mixture of sites, those for which we have been able to get information from the local dive club and completely new sites. The latter will be with a view to increasing the depth of site knowledge for Skye. Where a potential new dive site has been identified via the chart, time will be allocated during the following day's dive plan to allow us to explore the area and assess its suitability as a dive site based on depth, underwater topography and exposure to currents.

Each evening the dive plan for the following day will be prepared based on the up-to-date weather forecast, tides and the training needs of the divers. The dive managers and mentor will have overall responsibility for dive planning and for ensuring that the sites provide adequate range to meet the expedition aims.

The Isle of Skye provides a wealth of different sites with wrecks, walls, caves and drift dives all being available. There will also be the opportunity to do night dives, if conditions allow. There is also the prospect of diving to a variety of depths, to suit the needs of all team members. We will direct our attempts to identify new dive sites towards finding new scenic dives

Expedition Reporting

During the expedition we will be reporting our experiences on the ULSAC website expedition 'blog', which can be found at <http://blog.ulsac.net/>. We will use personal laptops with wi-fi or mobile phone coverage to allow us to keep this up-to-date.

The expedition has a dedicated media co-ordinator whose aim is to promote Skye as a diving destination. As well as our blog, there will be a full trip report available on the ULSAC and St Albans SAC websites www.ulsac.net and www.sasac.co.uk and the Expedition Report will be made available to BSAC. We will also contact SCUBA magazine regarding running an article.

Appendix 1 – Dive Site Information

Launch Site Information

Name	Location	Reference	Type
Stein Slipway	57 30.956N 06 34.684W	L1	Sheltered Loch
Meanish Slipway	57 27.388N 06 44.785W	L2	Sheltered Loch
Bracadale (Struan) Slipway	57 21.360N 06 24.598W	L3	Sheltered Loch

Waypoints

Waypoint Ref	Name	Location
WP1	Loch Bay Entrance - mid channel	57 32.105N 06 39.447W
WP2	2 miles NW of An Ceannaich	57 28.365N 06 48.954W
WP3	3.5 miles S of Neist Point	57 21.790N 06 47.175W
WP4	South tip of An Dubh-Sgeir	57 19.995N 06 40.158W

Possible Dive Sites

Site	Location	Depth (m)	Nearest Tidal Diamond (Admiralty Chart 1745)	Launch Site	Waypoint From	Waypoint To	Bearing	Distance (nm)	Alternative Port (AP)	Bearing to AP	Distance to AP (nm)
SS Chadwick	57 27.081N 06 47.059W	25	B	L1	L1	WP1	295°	2.8	Meanish Pier	70°	1.8
					WP1	WP2	235°	6.5			
					WP2	SS Chadwick	142°	1.6			
SS Doris	57 25.148N 06 47.126W	25	B	L1	L1	WP1	295°	2.8	Meanish Pier	North then East	North - 2.5nm East - 1nm
					WP1	WP2	235°	6.5			
					WP2	SS Doris	160°	5.2			
Lochbay Pinnacles	57 30.655N 06 35.549W	6m to 20m	n/a - sheltered	L1	L1	Lochbay Pinnacles	270°	0.8	n/a - less than 1nm from launch site	n/a	n/a
Macleod's Maidens	57 319.931N 06 34.989W	20	B	L2	L2	WP2	296°	1.5	Bracadale	East then North East	East - 4.2nm North East - 1.8nm
					WP2	WP3	173°	6.6			
					WP3	WP4	115°	4			
					WP4	Macleod's Maidens	90°	2.8			
Conger Crevasse	57 20.077N 06 40.158W	6m to 21m	B	L2	L2	WP2	296°	1.5	Bracadale	East then North East	East - 7nm North East - 1.8nm
					WP2	WP3/An Dubh Sgeir (dive site)	173°	6.6			
Meanish Reef	57 27.248N 06 44.706W	6m to 20m	B	L1	L1	WP1	295°	2.8	Meanish Pier	At dive site	At dive site
					WP1	WP2	235°	6.5			
					WP2	Meanish Reef	115°	2.5			
Neist Point Wall/Pinnacle	57 25.706N 06 47.158W	0m to 30m	B	L1	L1	WP1	295°	2.8	Meanish Pier	North then East	North - 1.8nm East - 1nm
					WP1	WP2	235°	6.5			
					WP2	Neist Point	162°	2.8			
Lampay Island	57 30.090N 06 38.667W	0m to 50m+	B	L1	L1	Lampay Island	270°	2.5	n/a - very close to launch site	n/a	n/a
Sgeir a Chuein (off Isay Island)	57 31.613N 06 38.938W	3m to 20m	B	L1	L1	Sgeir a Chuein	290°	2.7	n/a - very close to launch site	n/a	n/a
Watnash Point drift	57 33.909N 06 38.531W	25m	B	L1	L1	WP1	295°	2.8	Stein Pier	no closer AP	no closer AP
					WP1	Dive Site	0°	1.5			
Clett Island	57 31.813N 06 38.430W	25m	B	L1	L1	Clett Island	295°	2.3	n/a - very close to launch site	n/a	n/a
Ann Ceannaich	57 27.369N 06 47.005W	30m	B	L1	L1	WP1	295°	2.8	Meanish Pier	North then East	North - 0.5nm East - 1nm
					WP1	WP2	235°	6.5			
					WP2	Ann Ceannaich	135°	1.4			

Appendix 2 – Skye Team Members

Name	Branch	Diver Grade	Skills	BSAC Number	BSAC Role
Michelle Kim	ULSAC	FCD/NI	BHI/O2/PRM/DPM/FAD/ALS/AED	A706452	National Instructor
Alison Gaudion	ULSAC	AD/AI	BHI/O2/PRM/DPM/FAD/ALS/AED	A781110	London Regional Coach
Alison Niewiarowska	ULSAC	DL/OWI	BH/O2/PRM/DPM/FAD/ALS	A772908	Branch Diving Officer
Hannah Holdcroft	ULSAC	DL/OWI	BH/O2/PRM/DPM/AED	A813584	Branch Advanced Training Officer
Henry Mosey	ULSAC	DL	O2/PRM/DPM/FAD/AED	A816922	Branch Training Officer
Vedika Mehra	ULSAC	DL	O2/PRM/DPM	A814385	
Andrew Niewiarowski	ULSAC	SD	BH/O2/PRM/DPM	A825225	Branch Equipment Officer
Karen Ho	SASAC/ULSAC	SD	O2/PRM/DPM	A821691	Branch Website Officer
Natalie Reeder	ULSAC	SD	BH/O2/PRM/DPM	A813573	
Eunsook Park	ULSAC	SD	BH/DPM	A808268	
Skills Codes					
BHI	Boat Handling Instructor				
BH	Boat Handler				
O2	Oxygen Administration				
PRM	Practical Rescue Management				
DPM	Dive Planning & Management				
FAD	First Aid for Divers				
ALS	Advanced Life Saver				
AED	Automated External Defibrillator				

Appendix 3 – Cost Breakdown

All of the costs outlined below are estimates unless otherwise stated. Every effort has been made to reduce the cost of the expedition.

Description of Cost		Total
Diving Costs		
Fuel for RIB	Estimated from fuel costs for 9 day trip at Easter	£900.00
Mooring	6 days	£120.00
Boat Hire	£5/person/diving day	£300.00
Air	Estimated from cost for 9 day trip at Easter	£180.00
		Total Diving Costs: £1,500.00
Transport Costs		
MPV Hire	£20/day charge from student union	£180.00
Small Van Hire	1 week + weekend hire rate	£378.00
Fuel	650 miles each way, 2 vehicles	£920.00
		Total Transport Costs: £1,478.00
Other Costs		
Accommodation	7 nights in total	£1600.00
Food	Based on 3 meals/day, estimated from food costs for 9 day trip at Easter	£500.00
		Total Other Costs: £2,100.00
		Total Cost: £5,078
Estimated cost per diver based on 10 divers for whole trip (excluding kit hire): £508		
Additional personal cost for kit hire (up to £25 per diving day*, depending on kit required): £0–150		
* BCD, cylinder and regs charged at £2.50/day each or £6/day for all 3; full kit hire, including exposure suit and dive computer, charged at £25/day		

Appendix 4 – Risk Assessment

All divers will be expected to have read and understood the below risk assessment. Individual dive site risk assessments will be completed before each dive and the dive manager will refer to the risk assessment during the briefing before the start of each dive.

Hazard	Frequency	Severity	Evaluation	Controls	Immediate measures if risk occurs
Injury from heavy lifting/loading heavy items	Occasional	Major Injury	Medium	Ensure personnel are made aware of correct lifting and carrying techniques	Provide First Aid then refer for emergency treatment
Tiredness or illness whilst driving	Rare	Fatal	Medium	Ensure 2 drivers per vehicle who change over at regular intervals, driver to tell passengers if feeling tired or unwell	Exit at nearest safe exit and park vehicle, switch drivers or take a rest stop. Provide First Aid as required or contact emergency services
Incorrect stowing of heavy equipment	Rare	Fatal	Medium	Ensure all heavy equipment is secure and stowed safely while stationary and before vehicle is driven	Provide First Aid, contact medical personnel if required. Assess damage and record for insurance purposes
Injury whilst hitching/unhitching boat	Occasional	Minor Injury	Medium	Experienced personnel to co-ordinate trailer hitching in a safe manner	Secure trailer in safe manner. Remove injured personnel if possible, provide First Aid and/or contact emergency services as required
Trailer becoming detached whilst moving	Rare	Fatal	Medium	Ensure trailer is correctly secured to the tow bar and emergency brake cable is connected and working properly. Ensure drivers are aware of appropriate speed limits and motorway restrictions	Contact emergency services if there is danger to other road users. Remove vehicle and personnel to safety. Retrieve trailer and hitch if it is safe to do so. Administer First Aid if required. Note details of incident for insurance
Heart attack/unconscious diver	Rare	Fatal	Medium	Self-declaration/medical, buddy monitoring, all divers trained in CBL/RB, 9 divers qualified in oxygen administration	CBL to surface, RB, recovery to boat, provide oxygen assisted BLS, diver recall, contact emergency services for evacuation
Ear damage	Occasional	Moderate	Medium	Divers not to dive with a cold, care taken when ascending and descending	Assistance from buddy, refer to hospital or GP
Out of gas	Occasional	Fatal	High	Buddy checks, self and buddy monitoring on dive, all divers to carry AS	AS ascent with buddy, casualty assessment with first aid, O ₂ , fluids and evacuation where necessary

Uncontrolled ascent	Occasional	Serious	High	Ensure divers have dived recently and are familiar with their equipment. Boat cover at all times, O ₂ kit available	Recover diver, administer O ₂ and fluids, casualty assessment, monitor and arrange evacuation if necessary
Entanglement	Rare	Fatal	Medium	All divers to carry cutting implement	Assistance from buddy
Diver separation	Occasional	Moderate	Medium	Divers to dive in buddy pairs, briefed on separation drill	Search for maximum of 1 minute then surface. If both divers do not return, recall divers, contact coastguard, begin search if possible
Poor underwater visibility	Frequent	Minor	Medium	Divers told to dive close together if visibility is poor, torch use if appropriate	Divers to stay in close contact, abort dive if necessary
Cold/Heat	Frequent	Moderate	Medium	Divers to wear adequate thermal protection including suit, gloves and hood. Water to be available at all times for hydration. Sun cream carried	Abort dive if a diver is too cold. Treat for hypothermia/hyperthermia, hospitalise if necessary
Rough sea conditions	Frequent	Moderate	Medium	Weather forecast checked daily, monitor conditions, land used as shelter, divers to carry DSMB/flag, back up dive site and plan prepared	Abort plan if conditions worsen, diver recall if appropriate. Boat cover to keep good lookout, knowledge of tidal patterns for search. Coastguard contacted immediately if diver not found
Poor surface visibility	Occasional	Moderate	Medium	Check weather forecast, no diving if poor surface visibility, use of distance line to return to shot line if possibility of poor visibility, preparation of passage plan suitable for low visibility, divers to carry torch, DSMB, whistle etc.	Monitor conditions and recall divers if necessary. Boat cover to keep good lookout. Boat cover to keep good lookout, knowledge of tidal patterns for search. Coastguard contacted immediately if diver not found
Deep dive sites such as wall dives	Frequent	Moderate	Medium	<ul style="list-style-type: none"> - Good buoyancy control - Divers will be advised to monitor depth regularly - Divers will be reminded to plan dives in accordance to Safe Diving Practices, and to stay within the limit of their qualification and recent experience 	<ul style="list-style-type: none"> - If no harmful consequence occurs, divers will be reminded again of the need to abide by the controls detailed here and will be informed that if they transgress again they will miss the next dive - If adverse consequences result – treatment with O₂ and fluids, contact emergency services
Strong currents	Frequent	Serious	Medium	Divers to stay close together, use of buddy	Divers to stay close together, boat cover to

				line if appropriate, divers to be briefed to send up DSMB the moment they feel the current pick up	keep a good lookout for divers, knowledge of tidal patterns for search. Coastguard contacted immediately if diver not found
Slips and trips hazards	Occasional	Moderate Injury	Medium	Check suitability of entry/exit sites, warn of potential hazards, buddies to help whilst kitting up	Provide First Aid and refer for medical treatment if necessary
Other water users	Frequent	Fatal	Medium	All divers to put up DSMB when ascending, boat cover to protect dive site	In case of injury, recover diver from water, administer First Aid, contact emergency services as required
Boat Breakdown	Rare	Moderate	Medium	Boat will always have a dedicated cox'n onboard. The boat will have an anchor, spare fuel tank, 2 x VHF radios, flares, oars and first aid kit onboard at all times.	If problem is with fuel the emergency fuel can will be attached. If the fault is mechanical the coastguard will be notified via VHF radio.

Appendix 5 – Key Contacts

Emergencies	
Stornoway (Coastguard)	VHF Channel 16/ Operations Room on 01851 702013
Recompression Information – London Hyperbaric Chamber 24hr helpline BHA / RN Diver Helpline	07 999 292 999 07831 151 523
Nearest recompression facility – Seafeld Recompression Chamber, Strathcarron	01520 722215 Seafeld College Kishorn Strathcarron IV54 8YA
Nearest A&E – Portree Community Hospital, Isle of Skye	01478 613 200 Portree, Isle of Skye, North and West Highland. IV51 9BZ
Transport	
Glenelg - Skye Ferries	info@skyeferry.com
Alternatively use the Skye bridge	
Isle of Skye	
Dive & Sea the Hebrides – Air Shop	Gordon MacKay and Aileen Robertson, Dive & Sea the Hebrides, t/a Hebridean Diving Services, Shorepark, Lochbay, Waternish, Isle of Skye, IV55 8GD, Phone: 01470 592 219, email: diveskye@dive-and-sea-the-hebrides.co.uk
Manx Divers SAC	07624 465441
Dornie Divers SAC	01599 555718
Portree Police Station	Somerled Street, Portree, IV51 9EH. Non-emergency 101