



Sailing to Svalbard

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Introduction

Gareth and Fran have been sailors for most of their lives and together have over half a century of experience exploring parts of the world by boat. While Fran has always wanted to explore the Norwegian Sea, Gareth dreamt of sailing north into the Arctic Circle. So with Fran set to finish medical school and start her Foundation Training, they decided that 2015 would be a good time to undertake an expedition from England to Svalbard.

Our aim was to sail Hal, our 35-foot Hallberg-Rassy, across the North Sea to Norway, up the West Coast of Norway to Tromso and from Tromso across the Arctic Ocean to Svalbard. We sailed around the West Coast of Svalbard, where most of the ice was clear in July, making it as far as 80 degrees north, 600 miles from the North Pole and the most northern latitude travelled by an Imperial College student. Our trip started in March and over the course of three months, we sailed from England to Tromso via the Lofoten Islands. In early July we left Tromso for a four-week expedition aboard Hal to Svalbard, returning to Tromso in time for Fran to start her jobs in August and Gareth to return to work. Due to the immense interest shown by friends and family, we had a few hitchhikers and stowaways for various parts of the trip. However we did the entire organisation, passage planning, provisioning and troubleshooting, as well as the vast majority of sailing, ourselves.

An additional aim for this trip was for Fran to complete the practical part of her Ocean Navigation qualification, the highest-level navigation certification offered by the RYA. We have started a blog to record our experiences and hope to have opportunities to update it throughout our travels: <http://halventures.wordpress.com>.



Members and experience

Fran



Fran is a doctor and a sailor from Vancouver. She learned to sail when she was eight and started racing a few years later. In 1998 and 1999, Fran was part of the Canadian National Youth Squad, racing all over Western Canada and the USA. During her BSc in Toronto, Fran started racing skiffs and later tried her hand at yacht racing. After moving to England in 2005, she began offshore racing, predominantly around the Channel. She joined the Royal Ocean Racing Club (RORC) and participated in the 2008 Cowes-Madeira race. Around the same time she joined the Team Racing Squad in Cambridge and competed in BUCS and Varsity races from 2007-2009. While at Cambridge, Fran was Commodore of the Cruising Club, a conglomerate of windsurfing, team racing, yachting and dingy sailing. She helped with the purchase and delivery of Kestrel, a sigma 33, for the yachting section. She also initiated a successful fundraising campaign with team racing alumni for new Fireflies for future racers. Over the past few years, Fran has been cruising along the South Coast of England, in the Mediterranean around Turkey and Malta and in the Baltic around Denmark. She has completed her Yachtmaster Offshore and Ocean navigation theory.

Fran completed her PhD in 2010 and has just finished her final year of medicine at Imperial College London. Her spirit for adventure comes through in her work as well as her extracurricular activities. Growing up Fran moved to South Africa and Australia with her family. Since then, she has lived and worked in hospitals in Soweto, South Africa and Kampala, Uganda. In 2004, Fran spent five weeks in Region 9, The Rupununi, in Guyana with a team of University students travelling through rural communities, sleeping in hammocks and working with locals to improve knowledge of HIV and other sexual health issues. To finish her medical training in 2015, Fran undertook a seven-week elective split between Johns Hopkins Department of Anaesthetics and Critical Care Medicine and visiting communities in the Ecuadorian Amazon Rainforest.

Over the past twenty years Fran has skied, snowboarded, walked, climbed and camped out in the mountains near her hometown Vancouver, British Columbia (BC). She taught snowboarding for three years at Cypress Mountain and moved on to work in aquatics as a first aid instructor, lifeguard, triathlon coach, swimming instructor and supervisor for four years in Toronto during her BSc. She tried teaching sailing for one summer but found that she made a better sailor than instructor! Fran has climbed in England and BC and skied all over Europe and North America. She has been walking in Kakadu National Park, Australia, the Drakensberg escarpment in South Africa, all over BC, Alaska and various other parts of the world. Fran loves being outdoors and is always up for new adventures. She loves the water, helping to organise kayaking trips around the West Coast of Canada during school and learning to dive in Mauritius in 1999. She has since dived around the Mediterranean, Vancouver, Toronto (not very exciting reservoirs), the Canaries, Mozambique and Lake Silfra in Iceland, known for its Cathedral-like rocks and pristine, volcanic filtered water. She has also tried her hand at kite-surfing. Fran played water polo in South Africa, Toronto and London at school, provincial and university levels, including competing in the 2006 European University Championships. Their team lost terribly to the Russians! She has also rowed for Magdalene College in Cambridge and for the Imperial College Medics. Currently, Fran keeps fit with cycling, yoga, climbing and going to the gym. Over the past year she has completed several triathlons, including the Ironman 70.3 Switzerland in June 2014.

Aside from being a medic, Fran has always been interested in out of hospital care. She worked for two years as a Red Cross first aid instructor in Toronto during University and volunteered for the Red Cross in Cambridge. In 2010 she completed a 90-hour Wilderness First Aid course in Vancouver prior to moving to South Africa, where she volunteered at a medical clinic for the homeless in Johannesburg and completed a two-month elective in trauma medicine in Soweto.

Gareth



Gareth has been sailing since he was a child, exploring the South Coast of England with his parents who built their first sailboat in their backyard. He delivered their last boat to the Canaries in 2001 where they lived the first four years of their retirement. Gareth worked through university as crew for yacht deliveries while he developed his sailing skills and started racing. After university he worked for four years as a yacht delivery skipper, taking boats from Europe all over the world. His first transoceanic sailing trip as skipper was a double-handed trip from Newport, Rhode Island to Plymouth, Devon. Since then he has logged over 80,000 miles at sea (so far!). Gareth has sailed across the Atlantic ten times and has spent lots of time cruising the Caribbean. He has sailed the Pacific, exploring the Galapagos, Marquesas, Tuamotu and the Society Islands along the way to Tahiti. Gareth also has extensive racing experience. In 1993, he completed the Double-Handed Round Britain and Ireland Yacht Race. He has raced small keelboats in London for the past ten years and sails regularly around the Solent. Gareth has competed in the JOG (Junior Offshore Group) and RORC (Royal Ocean Racing Club) series as well as events such as Cowes week and weekly spring, winter and frostbite series. He completed his first Fastnet in 1993 and again twenty years later in 2013 on a boat half the size. Last year, Gareth helped his crew win their class in the 2014 Round The Island Yacht Race.

Gareth is a fully qualified Yachtmaster Ocean Sailor and commercial skipper. During university, he taught himself to use a sextant and deduce his position using spherical trigonometry. For many of his early ocean crossings, he used the sun and stars to navigate before GPS was readily available! He also has an Honours BSc in Ocean Science, specialising in Meteorology and Astronomy.

Gareth's passion for adventure has taken him to the top of Mount Kilimanjaro, through the Kalahari desert and down the Skeleton Coast on a motorcycle, trekking in Los Glaciares National Park Patagonia and BASE jumping in the USA, Norway and Italy. Gareth is also a keen diver, both in the sea and from airplanes! He has completed more than 250 sky dives and has dived (scuba) in the Caribbean, Atlantic, Red Sea, Gulf of Oman and Gulf of Thailand. These experiences have taught him that the thrill of adventure must be balanced with careful consideration of risk and personal safety.

Gareth currently works as an IT Programme Manager with BNP Paribas running their global IT services for human resources. He completed an MBA from Cranfield Business School in 2011. As part of this degree he undertook a project in the Brazilian rainforest researching ways to promote sustainability within the local fishing communities.

To keep fit, Gareth enjoys swimming, sailing, walking and cycling. He has completed several triathlons, including the Switzerland Ironman 70.3 in June 2014. He is now training for his second Ironman alongside a ski marathon coming up in early 2016.

Joint Sailing Experience

Fran and Gareth first raced together one very snowy January morning on a reservoir in West London in 2013 and have been sailing together regularly since then. Gareth joined Fran and crew on a J105, a 33ft racing yacht, which they raced for two seasons around the Solent and across the Channel, completing the RORC series and the Junior Offshore Group (JOG) series. They competed in the 2013 Fastnet, a gruelling 600-mile yacht race with three other crew members over 4.5 days. They also race regularly on a three-man keelboat in London, including competing at the European Championship in Lake Garda in the summer of 2013, where Gareth introduced Fran to BASE (Fran stayed on the ground!!!) and Fran took Gareth climbing in the nearby mountains. For the past couple of years however, they have been moving into the world of cruising. Picking up Hal in Plymouth in May 2014, they sailed her for the summer around the South Coast of England on their own and with friends. They have also cruised the Gulf Islands between mainland British Columbia and Vancouver Island.

Hal



Hal is a 35ft Hallberg-Rassy sailing yacht. Hallberg-Rassy is a Swedish shipyard known for producing high-quality sailing yachts (<http://www.hallberg-rassy.com>). The company has been building boats in various forms since 1943 and are known for their strong, durable design fit for the North Seas. A fascinating history of the company is available on their website (<http://www.hallberg-rassy.com/company/>) Hal was built in 1989 to Lloyds A1 standard and has spent most of her life in the West Country. Her 40hp auxiliary diesel engine was replaced in 2007 along with her rigging. Her safety equipment includes radar, chart plotter, AIS, EPIRB, DSC VHF radio, Navtex, life raft, auto-helm and three separate bilge pumps. To make life a little more comfortable on board she is fitted with a diesel-powered heater, hot & cold running water, two hob cooker with oven and grill (capacity of three 2.75kg butane bottles) and accommodation for seven. She has a capacity of 300 litres of fresh water plus a seawater pump for use in the galley for things like washing up. She carries up to 240 litres of diesel giving her a range of 800nm at 5.0 knots.

Gareth purchased her in May 2014 with one aim, to sail to Svalbard. To prepare for this, we wintered Hal in Ipswich, Suffolk. Her mast was removed to facilitate a thorough inspection of the rigging and mast fittings. The running (rope) rigging was replaced, her bottom was faired and epoxied and her engine serviced. Her sails were removed, laundered, serviced and reinforced. Hal was back in the water at the end of February 2015, ready for sea-trials and the sail up the east coast of England in March.

Training and Preparation

Preparation of Hal began in earnest over the winter of 2014/15 when she was out of the water in Ipswich. Her hull was sand-blasted to remove several years of built-up anti-fouling and to allow a fresh primer and new anti-fouling to be applied. The running (rope) rigging was replaced and the engine was serviced. The sails were serviced, new safety equipment was installed and all the bulbs

for the navigation lights were replaced. Old and redundant electrical equipment was removed and the 45m of old anchor chain was replaced with 60m of new chain. We took the advantage of having Hal in a marina so loaded her with non-perishable victuals, spares, clothing, books and a new outboard motor we had purchased at the London Boat Show. The dinghy was delivered last minute to Hartlepool marine just days before we set off across the North Sea.

Although Frances is a qualified doctor, Gareth had not had any formal medical training since his RYA Sea Survival course in the 1990s. To improve his chances of being able to provide assistance to Frances should she not be able to administer treatment herself, Gareth undertook a two day 'field first aid' course. This provided a basic introduction to first aid techniques that should stabilise a patient until professional medical attention could be reached.

We were kindly loaned a Remington .375 H&H rifle by Alasdair Flint but in order to carry and use it we needed a UK Firearms Certificate and suitable instruction on how to use it. The UK Firearms application process involves a lengthy application form, two referees and an interview at your home address from a firearms officer. After the interview and a few anxious weeks waiting the certificate arrived for Gareth. Instruction was provided by Holland and Holland at their shooting grounds in West London, this covered basic rifle handling and use of a smaller calibre 0.22. The 0.375 is a large calibre used for large game and so has an extremely hard 'kick' so only we only fired a few rounds with this rifle. There was much debate regarding the range at which to shoot a polar bear in self-defence. The instructors were all from a hunting background and encouraged us to shoot a threatening bear at 150 yards and thus recommended a scope and bipod. The Sysselmannen enforced a strict policy on not shooting a bear unless it was closer than 50 yards, hence no scope or bipod was necessary. We fitted a scope in the end but luckily didn't have to use the rifle.

Equipment

Sailing offers the relative luxury of being able to carry a significant amount of equipment. Weight should be considered but certainly not micro-managed as is required for expeditions where human effort is required to move the load. We therefore took a significant amount of kit with us, far too numerous to list every item here. Instead we have listed some of the more significant items in our inventory.

For the victualing we weren't restricted in just taking enough for the expedition as we knew that any items left at the end could be stored for future use. As a result, we have lots of food leftover for future use!

Sailing / general equipment

Delta Kedge Anchor	100m x 14mm octoplait line	Avon 3.5m inflatable
Yamaha 6hp 4-stroke outboard	65m x 10mm anchor chain	Norwegian paper charts
Raymarine C80 chart plotter	Roton AIS	Raymarine instruments
ICOM Marine VHF Radio	Handheld VHF x 2	Bolt cutters
Kannad Personal EPIRB	Kannad EPIRB	McMurdo Personal AIS x 2
MOB recovery-sling	Main CQR Anchor	Fully battened mainsail
Furling 130% Genoa	Storm jib	Spinnaker (with snuffer)
Cruising-chute	Autohelm 6000	Fujinon 7x50 binoculars
Eberspacher Heater	Eco-air dehumidifier	2.75 kg Campingaz x 3
2kg AGA Propane x 2	Plastimo 6 man liferaft	Brunton Autofeather propeller
3m boat hook	Iridium Extreme sat phone	Remington H&H .375 Rifle
40 x .375 expanding bullets		

Spares

Engine oil filters x 3	Water pump impeller x 4	Alternator belt x 2
Fuel filters (engine) x 2	Fuel filters (separator) x 2	Engine oil
ATF Gearbox oil	Fuses and bulbs	Electrical spares
Toilet spares		

Clothing – Frances

Musto HPX smock	Musto BR2 jacket	Musto MPX salopettes
MEC merino thermals	Wool socks £10 Norway!!	Merino / silk socks
Sealskinz gloves	Wool sweaters	Dubarry boots
Leather deck shoes	Hunters	Down gilet
Sealskinz hat	Sealskinz socks	Musto technical trousers
MEC Nordic tech trousers	Fleece pyjamas	

Clothing – Gareth

Henri-Lloyd Offshore jacket	Musto midlayer salopettes	Musto midlayer jacket
Henri-Lloyd TP2 salopettes	Musto midlayer fleece jacket	MEC merino thermals
MEC merino top	Sealskin gloves	Musto neoprene gloves
Henri-Lloyd Ocean boots	Dubarry Boots	Musto technical trousers
Sealskin socks	Wool socks	Down Parka

Victuals (high level)

Packet meals	Rice (boil in the bag)	Pasta
Long life milk	Bottled water	Tinned fish and meat
Tinned fruit	Tinned vegetables	Spreads, jams etc
Tea, Coffee, Juices, Soup	Drinking chocolate	Herbs, spices, sauces
Biscuits, cakes, chocolate	Bread (part baked)	Crackers, crisps
Flour, yeast etc	Fresh food (3-4 days per leg)	Wine, beer, spirits, mixers
Dried fruit	Tinned custard	Cereal, porridge, yogurt

Medical

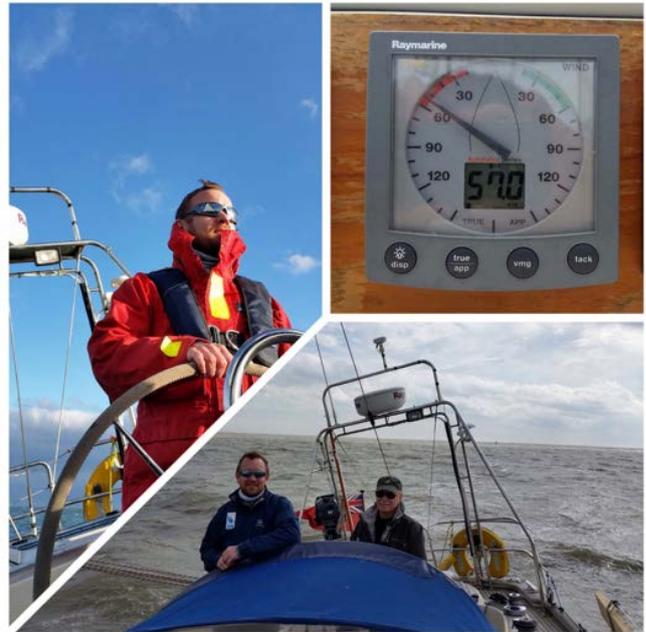
Anti-seasickness tablets	Anti-inflammatories	Flucloxacillin
Acyclovir	Trimethoprim	Oral anti-fungal
Anti-emetics	Salbutamol inhaler	Rehydration salts
Loperamide	Laxatives	Strepsils
Antiseptic cleansing solution	Cream and wipes	Plasters
Cotton wool	Crepe bandages	Gauze swabs
Scissors	Triangular bandages	Thermometer
Survival blanket		

Sailing Diary

Ipswich to Hartlepool

14/03/2015 – 29/03/2015, 280 miles over 2 weekends

We split this leg into two parts, Ipswich to Lowestoft then Lowestoft to Hartlepool two weeks later. In between we spent a final weekend doing last minute jobs and stocking Hal ready for our adventure. Fran was writing exams so Gareth undertook these two sailing weekends with friends. They had rough weather for both legs, seeing gusts of 57 knots on the anemometer. Most of the second weekend was completed with 3 reefs in the main (making it less than a third of its normal size) and the storm jib. This was a great warm up for Hal to demonstrate that she was more than capable of handling what we were about to put her through!



Hartlepool to Bodo

03/04/2015 – 12/04/2015, approximately 985 miles



3-6/4/15 Hartlepool to Alesund, 575 miles

We left Hartlepool on a grey, calm Friday with Terry, a long-time friend who wanted to join us for the long haul across the North Sea. It was grey but mild, less than ten knots of breeze so we motor-sailed the first few days. Our compass course for the almost entire crossing was 025. Every now and then we would veer off to avoid an oilrig or just because someone wasn't paying close enough attention to the compass for a bit. Fran



suffered from sea-sickness and, despite regular anti-emetics, was pretty unwell for the first few days. Our watch system was three hours on, six off during the day followed by two hours on, four off at night to reduce time spent getting cold and free up time to prepare food (we cooked and froze all our hot meals in London prior to leaving), clean, do boat repairs or write blog entries. The only major problem we experienced was with the autohelm. It was sporadic, responding

inappropriately to our adjustments and sometimes veering us far off course. We realised a few days in however that this was due to the little magnets inside the hand-held vacuum we'd placed right next to the compass!



By Saturday night we were amongst the oil fields and on Sunday morning the wind picked up to force 5 or higher for the last two days, initially SW then moving to NW. At this point though, the swell also picked up so we were rocking side to side and forwards and backwards constantly. Bruises everywhere and lots of banged heads all round.

On arrival in Alesund we tried to check in and do customs. We managed a scanty attempt at customs so at least the boat was registered, but couldn't find anyone who wanted to check our passports. This was fine for those of us with EU passports but Terry had a bit of trouble a couple days later when he tried to fly home on his Australian passport with no entry stamp! That night after 4 days at sea, we all tried the traditional salt-dried fish, bacaulau, at a restaurant with a terrible name (XL Diner) overlooking the harbour.

7/4/15 Alesund to Kristiansund, 80 miles

We departed early with clear skies and 20 knots from the SW for the long sail to Kristiansund. With weather warnings coming through we decided to stay inland so aimed to navigate the hundreds of islands in the daylight. We saw beautiful countryside, with snowy mountains behind us and rugged coastline dotted with little villages. Able to relax and enjoy the nice weather, we got a few jobs done on board that we hadn't had time for before we left. Unfortunately Terry decided he'd had enough of PG Tips, but other than that it was pleasant sailing.



8-9/4/15 Kristiansund to Brekstad, 60 miles and a (forced) day of rest

Our original plan was to make our way directly from Kristiansund to Bodo, almost 350 miles. We departed at 6am only to find that even through the protected channel inside the islands it was blowing 50+ knots so we headed back in to wait for the gale to blow through. This meant Terry had to leave as we were no longer sure whether we'd make it all the way to Bodo with time for him to get to work on Monday. He jumped on a flight a couple of hours later back to London. We slept a bit and then set off this time in 30+ knots, following an inland passage past two Islands, Smola and Hitra, towards Brekstad. It was cold by this point, with the thermometer reading 2.9 degrees! The water was lovely and calm though and the wind slowly dropped off through the day until it was positively tranquil!



Unfortunately the good weather didn't last. Overnight the wind filled in again to 50+ knots so we spent the next day and night in Brekstad marina at the entrance to the Trondheimfjord, waiting for the next window for sailing. Even the ferries to Trondheim stopped running as the weather was so awful. This gave us a chance to catch up on blog entries, have a warm shower and go for a long walk around an empty little coastal town.

10-12/4/15 Brekstad to Bodo, 270 miles



This last leg was surprisingly easy, perhaps because the conditions were milder or we'd adapted to watch systems and the big swell. We left Friday evening and caught the last of the light as we navigated our way past the islands into the Norwegian Sea. About 100 miles into the journey the weather cleared enough to see the beautiful snow-capped hills along the coastline up to Bodo. It was spectacular.

On Saturday night around 11:30pm, we crossed 66 degrees 33.9 minutes North into the Arctic Circle. We toasted with rum and Gareth paid tribute to King Neptune, requesting that He look after us on our adventures. We also thanked Hal for taking care of us so far, particularly as she was making such good headway - we averaged 7.1 knots over 38 hours to Bodo.

We arrived in Bodo around 10:45 am and were greeted by friendly people full of useful information. From here we packed up the boat for a few weeks and headed back to London via Oslo, to work and other commitments. Gareth flew out for a long weekend in May to do some boat work and get the dinghy working.





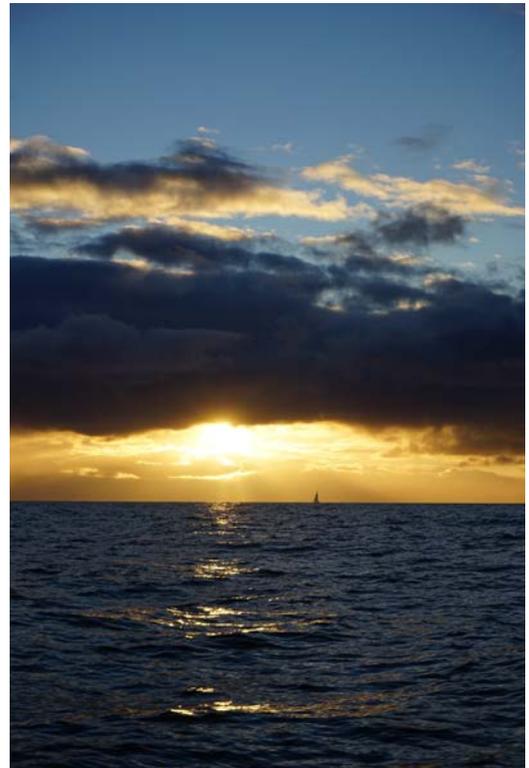
Bodo to Tromso

15/06/2015 – 21/06/2015, 271 miles

15-16/6/15 Bodo to Reine, 56 miles

This next part of our trip started in the rain, leaving Gatwick airport for Oslo at 5:50am. We arrived in Bodo early afternoon and did some last minute jobs and shopping, including picking up more navigation books we'd ordered locally. We set off for the Lofotens after a steak dinner in a local restaurant, aiming to do the 60 miles from Bodo to Reine, on Moskenesoy island, under the midnight sun. It was freezing cold but we had amazing scenery - first through the islands off the coast of Norway and then as we pushed out to sea, we could see the mountains and valleys of the Lofotens off in the distance.

At the entrance to Reine harbour was a pod of killer whales. Gareth was on watch and he woke Fran so they motored into Reine with the sun rising and whales cruising past. We spent ages mooring up and were finally in bed at around 6:30am for a few hours' kip. We spent a few hours exploring the area and taking in the sights and sounds of the tiny fishing village, including the rows and rows of fish (or worse, fish heads) drying in the sun.





16/6/15 Reine to Nusfjord, 12 miles

At around 4pm we set off for Nusfjord on Flakstadoy island. Our plan was to slowly make our way north through the Lofoten Islands, arriving in Tromso on Sunday. The sail started brilliantly, but the offshore breeze meant that we had new direction and velocity every few minutes as the wind made its way around the islands. It was still freezing too, but we braved the cold and tried our hand at fishing – very unsuccessfully! Gareth eventually caught his first fish on the way down from Tromso again to Bodo over the August bank holiday weekend!



Nusfjord is a very sweet little fishing village. So sweet in fact that the villagers have cottoned on to its tourist appeal and charge visitors a 30Kkr entrance fee. It's a further 30Kkr to watch a video about the town's history and local fishing industry. This was included in our mooring fee, which was the most expensive by far.

The whole area was incredibly beautiful and worth the high fees. We went for a long walk around the village and up a hill to a series of inland lakes with delicious, fresh glacier water.



17/6/15 Nusfjord to Kabelvag, 30 miles

The sun came out and we had some beautiful flat water sailing with spectacular scenery as we made our way to Kabelvag on Austvagoya island. More fishing and Fran went for a swim! Lovely calm day with the up just cruising along. Cooked dinner on board Hal and had a long walk around the small town. Probably the most exciting thing we found in this sleepy place was an old telephone box that someone had turned into a library!!



18/6/15 Kabelvag to Lodingen, 46 miles via Svolvaer



From Kabelvag it was just around a corner past some little islands to the biggest town in the Lofotens, Svolvaer. Our main reason for stopping here was the infamous climb, Svolvaergeita, the Goat. We wondered around town and hiked up to the base of the Goat and continued past it up into the mountains. It was nice to stretch our legs after a few days at sea. Fran brought some beautiful, brightly coloured Norwegian wool to make a blanket.



19/6/15 Lodingen to Finnsnes, 86 miles



This was a mixed day with some beautiful scenery, a tiny bit of sailing but a lot of motor sailing either in flat calm conditions or with a moderate headwind. Finnsnes was a bustling little town, about 30 minutes walk from the marina. We were able to pick up supplies from a massive fishing and boating shop, as well as stock up on food for Svalbard. The only challenge was dodging the Arctic Terns as they dived at us in the parking lot outside one of the shops! They weren't selective, they'd have a go at anyone who walked into their territory. Fran slowed down for too long and ended up with a good-sized wound on her hand from a particularly aggressive attack.



20-21/6/15 Finnsnes to Tromso, 41 miles



We had a lovely final day's sail up through the islands along Norway's NW coastline, arriving in Tromso around midnight. Apart from getting all the tides wrong it was fairly easy navigation around the Lofoten's and up to Tromso. It was the annual midnight sun run through the town so we sat and had beers outside a local pub and watched the runners circle past us.



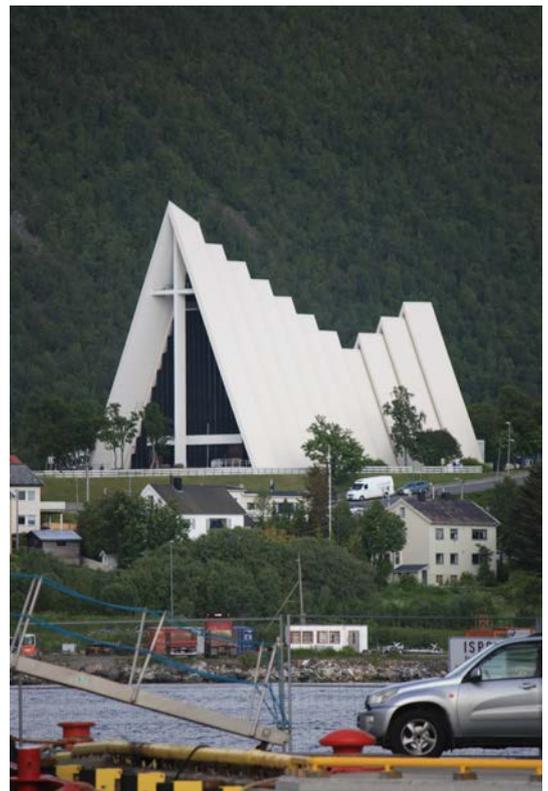
Tromso to Longyearbyen

06/07/2015 – 12/07/2015, 676 miles of cold, wet and waves



This was our longest stint so far and the beginning of our real adventure. Gareth arrived in Tromso on the Saturday to prepare for our big departure. His parents came over with him to see us off and visit Tromso. Fran and her parents flew over on Sunday after graduation in London. We all had a lovely dinner Sunday night and sent Monday doing a massive shop and some last minute provisioning. Gareth went off to find an extra butane tank only to discover they don't sell it this far north – Norwegians use propane as it freezes at a lower temperature. This meant a taxi to the other side of the island to find the only shop that sells the right adapter and two new bottles of propane. We also had to check out with customs, which turned out to be very easy once they agreed to let us use email!

We set off for Svalbard after lunch. Or so we thought. We motored / sailed through the islands surrounding Tromso and straight into gale force winds and massive swell. A combination of factors, including Janis and Fran not feeling great, hearing the word "gale" on the Norwegian forecast and the knowledge that the forecast we'd downloaded predicted it to get worse, meant that 20 miles off the outer coast of Norway, we turned and surfed the waves back to the shelter of the islands. Admittedly, that bit was a lot of fun.





We couldn't escape the gale unfortunately and found an anchorage in a small bay with 40-50 knot gusts. Needless to say it wasn't the best sleep and we ran an anchor watch through the night. Based on the weather forecast we to knock another 20 or so miles off the journey by heading a bit further north along the coastline for another night. Even this turned into an adventure, as we couldn't find a bay where the anchor would hold. We tried at least four bays with eight or nine anchoring attempts. After a quiet dinner and an excellent night's sleep we set off again on Wednesday into the wild Barent's Sea.



The next few days were spent bouncing around trying to get our boots on, sitting freezing cold on deck for a couple of hours and then crawling back down, tails between our legs into the nearest bunk to sleep. This sounds oddly reminiscent of the North Sea crossing, except without the oilrigs. We did see some wildlife - a few puffins here and there initially then just sea gulls. I saw a whale coming into the lee of the islands. And we had dolphins join us for several hours. They were probably checking up on us to make sure we were still going. Unfortunately Janis felt awful

so the watch was shared by Fran, Gareth and David doing two hours on, four off. This was tough for the first 24 hours but after that we were got into a good routine and while it was pretty miserable at the time, we arrived feeling well rested albeit very bruised.



Hal probably faired the best of all: One broken shelf, a small tear in (a non-vital part of) the genoa and a bit of water here and there, typically because we left a seacock open that we shouldn't have. Her batteries don't particularly like the cold weather so we ended up having to run the engine more than normal to recharge. Other than that, she kept plodding along through the swell and the autohelm kept us on track much better than our fed-up, cold attempts at helming!

By Friday afternoon we reached the west coast of Svalbard and were finally protected from the swell. Over the next 24 hours the wind progressively eased and the fog settled lower and lower around us. We didn't see land until turning into Isfjorden to get to Longyearbyen. By this time it was flat calm and we cruised into Longyearbyen late Saturday night. There were a surprising number of boats around. We tied up to a little floating dock and said goodbye to Janis who was flying back to London.



The following morning we awoke to discover a large cruise ship had tied up to a nearby dock and their lines were right in our path – we couldn't get out if we wanted to! This conveniently meant all the shops were open however so we spent the day wondering around Longyearbyen and provisioning for the next two weeks. It wasn't necessary to carry a rifle here so we only pulled it out for a token photograph next to the polar bear sign.



The second night we anchored offshore to save on the ridiculous mooring fees. There was a fair amount of administration required for boats visiting Svalbard. We did most of this before we arrived but still had to check in with the Sysselmannen when they opened on Monday morning.



Svalbard

13/07/2015 – 24/07/2015, 648 miles to 80 deg North and back again

13-14/7/15 Isfjord to Kongsfjorden, 150 miles

Heading out of Isfjord on Monday morning the fog began to lift. It was still pretty grey and dreary though. We went straight off to see our first glaciers, Ymerbukta and Trygghamna. These spectacular feats of nature were even more amazing up close. We spent several hours at the mouth of Isfjord motoring up as close as we could brave and trying to get good photos. There are many local weather patterns in the fjords and near the glaciers, some worse than others, but all of them challenging!





Out of Isfjord, we turned right and did a 15-hour slog North between mainland Spitsbergen and Prins Karls Forland, a long thin island that runs up the West Coast. The scenery was spectacular, with massive glaciers jutting down around the mountains on both sides of the channel. However the sun didn't come out until late in the day and beating into 20-30 knot winds became very tiresome very fast. We were originally hoping to head right up to the NE corner of Svalbard, the northernmost destination on our itinerary, so that we could work our way back south again slowly. Instead we ended up turning the engine on to motor-sail into Kongsfjorden.



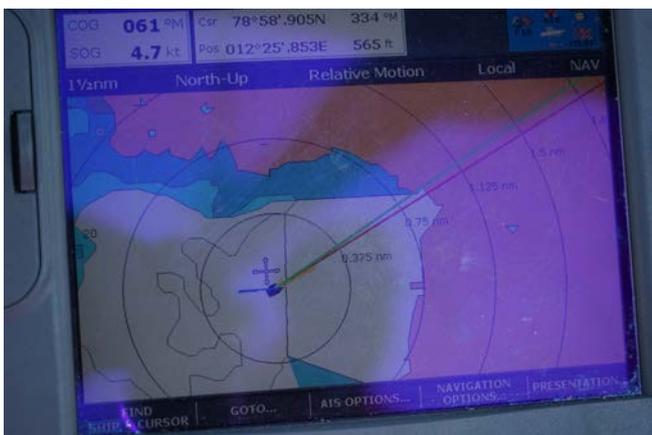
We spent the night anchored in Peirsonhamna, a bay on the south side of a little island called Blomstrandhalvoya across from Ny Alesund, one of the most northerly settlements in the world. It was calm, quiet and after a short trip ashore to explore the remains of an abandoned mining settlement called Ny London, we slept.

15/7/15 Kongsfjorden, 34 miles

After a very tasty bacon sandwich for breakfast we set off in search of more glaciers and the perfect glacier photo. The sun finally appeared and we spent most of the morning just cruising around the fjord. We circumnavigated Blomstrandhalvoya and made our way back out to sea again.



Our plan was to try to continue to head north, but as soon as we reached the mouth of the fjord we had another 30+ knots bearing down on us. We headed to Ny Alesund with the wind funnelling us back in again. Here we had a wonder around, including sending novelty postcards from the world's most northern post office, before joining some new friends on their sailboat for drinks and brownies.





16-17/7/15 Krossfjorden to Magdalenefjorden, 88 miles

After showering, downloading weather gibs and having breakfast, we set off late for Lloyds Hotel at the top of Krossfjorden. We were hoping to reach a little bay call Mollerhamnen. Unfortunately, it was another beat into a strong northerly funnelling straight down the fjord from the glacier, so our quick ten-mile trip turned into a six-hour slog. The biggest gust we had was

58kts, hard work with only 2 reefs! Eventually we succumbed to the weather and anchored in a branch of the fjord.



The next morning after an exhausting night at anchor watch, we set off early for Mollerhamnen into gusts of 40+. Another trip ashore in the dinghy to visit Lloyds Hotel and sign our names in the guestbook like so many travellers before us. It was a cold walk and slightly nerve-wrecking as we'd heard of polar bear sightings there a few days earlier. We did see some reindeer though, which helped us relax – if they felt safe then we were too...?





From here we headed back out of Krossfjorden and Kongsfjorden and turned north past the Seven Glaciers to Magdalenefjorden. Leaving the fjords we had a short run-in with a large field of ice. Flying along at seven knots (with only half our genoa, no main) in the breeze, this was not ideal but we managed to swerve round the massive chunks floating and crackling on the surface. Eventually, the sun came out again and the visibility was amazing. We had to confirm on the charts that the landscape in the distance really was over 40 miles off (Spitsbergen and Prins Karls Forland).



18/7/15 Magdalenefjorden and Gravneset



We reached Magdalenefjorden well into the early hours of the morning and anchored with all the other boats in the only bay offering any protection. Unfortunately even that didn't last long and we were woken up at 5:30 in the morning to the sound of ice scraping along the hull. The wind had filled in and blown the icebergs from the glacier to our little bay. We were very envious of the crews fast asleep in the aluminium boats! After about half an hour of fending them off we were able to close our eyes for a few more hours before going ashore to see Gravneset. Getting there was another adventure as the ice had gathered along the beach. We had a brief look at the mounds of rocks where the graves once were and then went off for a bit of a hike around the coast to Trinityhamna another small bay with an enormous glacier. The arctic terns along the beach were very territorial so we had to walk along waving our arms about our heads the whole time. It looked pretty silly!



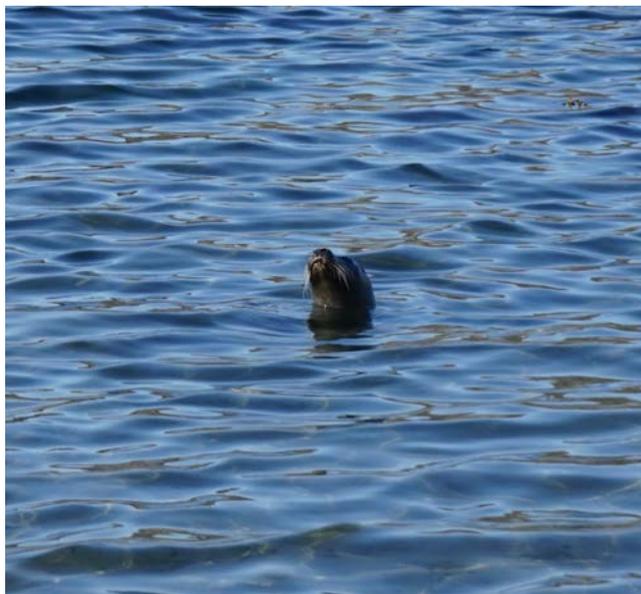


18/7/15 Magdalenenfjorden to Sallyhamna via Virgohamna, 29 miles

We set off from Magdalenenfjorden up towards Sallyhamna where we hoped to find more evidence of whaling settlements from 300 years ago. First though, we stopped in at Virgohamna, a sacred place for its history and ruins. This was where the first attempts to reach the North Pole started. We really felt the cold around here. The weather was pretty good but there is a clear temperature



change between 'day' and 'night' so as soon as it starts getting late, we would have to bundle up to stay comfortable. We went for a walk along the beach through all the ruins and disturbed a group of seals playing in the water as we headed back to the boat. They were a little apprehensive of us motoring past in our 6 HP dinghy, but they chased us around and popped up every now and then to say hello and see what we were up to.



The Virgohamna anchorage wasn't great so we headed around Amsterdamoya to a bay near Sallyhamna. Before bed we had a small celebration with Bailey's and ice calved from a glacier in Magdaleneffjorden. It was no trouble keeping it cold for a couple of days and we used a hammer and screwdriver to split the chunk of ice into smaller pieces. Delicious!

19-20/7/15 Sallyhamna to Poolepynten via 80°N, 119 miles

We'd headed to Sallyhamna because we were advised by some of the other boats that there were interesting remains to see. Unfortunately though, there was a little confusion. Sallyhamna in the guidebook was not the Sallyhamna on the chart. This wasn't the first time the guidebook had "got it wrong", but we had to work out whether the remains were in the real Sallyhamna, or in the guidebook version. This is reflective of the lack of reliable survey data for the area. With the glaciers retreating and changing the landscape so quickly, it's hard to keep up to date. Our chart updates ranged from the 1970s to 2014 and the pilot books and mooring guides are generally just a result of some eager sailors / explorers hoping to make a bob on the side.



So we took our little dinghy zooming around the three bays in the little fjord. Turns out the remains of the whaling station were in the guidebook version. We pulled up on the beach and watched the geese before wondering through the remains and checking out the trappers hut. We zoomed about in the dinghy exploring the whole area, which was now deserted apart from us and various sea birds, then we climbed aboard Hal again and headed North.

With a lovely easterly breeze we set sail for eighty degrees, the furthest north any Imperial student has travelled (to our knowledge). There were some traumatic moments – we thought we had run out of Branston Pickle! Luckily we found some a few days later amongst our copious supplies around the boat. We made our first loaf of bread on the way too, which was later improved upon by our second, third and fourth loaves!

It wasn't long before we said goodbye to our electronic charts and sailed off the edge. Our paper charts, kindly loaned to us by Simon Finch who did the trip a few years ago, were there to keep us going. Given how great the sailing was, it was hard to resist the temptation to keep going and find the pack ice. However time wouldn't allow this and we had plans back south again to see walrus and visit more fjords.

At 16:39 on July 19, 2015, we crossed 80 degrees under full sail, just 600 miles from the North Pole. We popped the champagne and celebrated with gifts to Neptune and Hal for getting us there in one piece. We've sailed her close to 5000 miles in just a year and a half of ownership and were well over 3000 when we reached 80 degrees.

Getting there on a beautiful sunny day with perfect winds was a real energy booster. We got the sextant out and practiced our celestial navigation skills all the way back down the coast. Fran even managed to take some readings around the midnight sun during my late watch. She took sightings every few minutes looking for the lowest point the sun reached on the horizon. And, somehow was only 6 minutes off!!

We continued sailing through the night with the aim of going past Magdalenefjorden and Kongsfjorden. Past Isfjorden where Longyearbyen is, all the way down to Bellsund. First though, we went on a walrus hunt in Poolepynten.

20-21/7/15 Poolepynten to Bellsund, 79 miles

We arrived at Poolepynten, which is about halfway down Prins Karls Forland, around 1pm on the 20th, a day after we'd left our north pole. Either our body clocks were so confused by this point or we were just used to our erratic watch system, but none of us seemed to notice the time anymore.

There was a boat of tourists ashore as we arrived but apart from a slight incident with their dinghy drifting away, they were off before we landed. With the place to ourselves, we walked past remains and explored the trappers hut and some strange wooden pyramid built next to it. It occurred to us that this could've been some sort of memorial or burial ground. Then we made our way over to the walrus piled up along the beach. They were fascinating to watch, sluggish but oddly predetermined, almost melodramatic, like they know they're being watched.

We headed off again after maybe an hour ashore and sailed / drifted / motored the rest of the way to Bellsund another 15 or so hours later. We even had the spinnaker up for a bit!

Slight 21st century moment on route: we intentionally motored several miles out of our way into

Isfjord to get a data connection from Barentsburg, a Russian mining town on the south side of the fjord. Then, rather than just motor past and accept defeat when we lost connection again, we spun back and did circles until we'd finished checking and sending emails!! It was pretty good going though as the last connection we'd had was a line in Ny Alesund that we could plug into a computer.

We were aware that the tides flowing in and out of this little channel between Askeloya Island and the north side of the fjord could get very strong, reaching up to 6 knots at their fastest. By some wonderful stroke of luck, we managed to get them right and were carried in beautifully with just a couple of knots under us. This is also one of the few places where there are actually channel markers!

We anchored in a sheltered bay next to Fridtjovbreen glacier just inside Akseloya Island, which protects the entrance to the northern arm, Van Mijenfjorden. After breakfast we went back to sleep for a few hours.

21-22/7/15 Bellsund, 26 miles

We had a brilliant couple of days of exploring this southern fjord. First the Fridtjovbreen glacier area then down the other side to see Fleur de Lyshamna, Ingebrigtsenbukta and finally visit the Polish research station on Calypsobyen. We had some long walks along the beach and into the hills, took some awesome drone shots, disturbed the arctic terns and even came across the odd reindeer. Unfortunately still no polar bears. There were some interesting sites in each of the bays we visited, including several trappers' huts and big open racks for drying fish and seals. We saw whaling boats from 200-300 years ago and possibly the one of the hardest things was walking along a beach with piles and piles of bones from a hundred years of whaling. Gareth and David had a go on the rifle. Fran was happy to watch and take photos.

Along the South side of the fjord was an area called Ahlstrandodden, which runs from Malbukta bay along the southern shore of Van Keulenfjorden, to Ingebrigtsenbukta. The headland itself is called Kvitfiskneset, which means "white whales point" in memory of the whales and hunting that took place. Right in the middle is an area called Fleur de Lyshamna and to the East, further up the fjord, was Ingebrigtsenbukta, where the remains of all the bones were piled up along the beach.

Our final stop was Calypsobyen. Fortunately it was flat calm as there was absolutely no shelter. We figured, as it was pretty late (close to midnight), that we'd have a quick wonder then get on our way back to Isfjord and Pyramided, our last stop on the spectacular adventure. Researchers Piotr Zagorski and colleagues from the Marie Curie-Sklodowska University (Lublin, Poland) had other ideas in mind however. As we anchored we noticed smoke coming from one of the bigger cabins.

We didn't want to skirt around it in case they preferred not to have visitors so late at night, but we definitely weren't expecting to be invited in! Piotr popped his head out the front door as we wondered past and immediately suggested we come in for a cup of tea (do we look that English?!). Piotr heads up a team of PhD students, post-docs, technicians and surveyors in Svalbard. He's been visiting for almost fifteen years now, studying glaciology in the Arctic. If you want to know anything about the geology or geography (and probably various other 'ologies) of Bellsund, he is definitely the person to talk to. And was more than happy to share. His team wasn't just studying glaciers; they were doing surveys of the landscape, looking at the flora and fauna and of course, becoming avid Arctic photographers. We saw maps and movies and photographs that put our efforts to shame.

We drank tea and met the whole team as they trickled in from various excursions. It was a fascinating evening! Eventually though, we made our excuses and went for a short walk along the beach to see the old buildings and bits of machinery dotted about.

22-23/7/15 Bellsund to Pyramiden, 94 miles

We did eventually head off again; around 1am we climbed back into our dinghy and headed for Pyramiden, the Russian mining town tucked up at the tip of Isfjord. It was our last big sail and our last stop before heading back to London.

Where the NEC tried many times with little result, the Russians thrived, creating a small mining empire under the pyramid-shaped peaks that gave this town its name - Pyramiden. We found a mooring, just as big and industrial as the town itself, with large spikes jutting out of the wood. It took 9 lines to secure us (and the ladder) to the dock and well clear of the spikes! At least we were sheltered from the 50+ knot winds blowing off the glacier!!

We went ashore around midnight to have a quick wander around. And, as always, our little venture lasted much longer than planned! We were pretty lost initially, just taking in all the elements of communist Russia visible about us. After about half an hour we were met by one of the seven people who live in this ghost town. He didn't speak a word of English but we got the impression that one of his roles was to find confused tourists and make sure they went in the right direction – to the bar of course!

The bar is in the hotel, which apparently still functions as a hotel for some of the year. The rest of the time it houses the few people who keep the place running. As it was well after midnight when we pitched up on the doorstep we weren't expecting to be let in, never mind served local vodka! Well Russian vodka, locally bottled. There was also a small museum and gift shop. Apparently the place is popular amongst Russian tourists in May and June.

After we'd worn out our welcome in the bar, we walked for another hour or so, seeing as much of the town as possible. We stuck our heads (and toes) in the old swimming pool and saw the cultural centre. We found a building on the outskirts of town made almost entirely of bottles cemented together.

It was close to 4am by the time we made our way back to the boat. The following morning we had another short walk in the other direction to see the old power plant. It was basically a big abandoned building now although it looked like someone's pulling apart its insides, asbestos and all. Interestingly, there was a fair amount of work going on near the docks - possibly to make them more accessible for tourists, or to recycle all the old scrap metal that was piled up.

23-25/7/15 Pyramiden to Longyearbyen and home (for some), 29 miles

We left before we'd overstayed our welcome and before the next boat of tourists showed up. Day trips are available here from Longyearbyen as well as cruise ship excursions. Time to head back to Longyearbyen and then home to jolly ol' England! Fran's grandfather passed away on July 16th 2015 so she flew back on the 25th for the memorial, leaving Gareth to do the trip home with another friend, Steve. The trip down was uneventful, with 40+ knots initially sending us out of the fjord but dying down pretty quickly until it was flat calm around Longyearbyen. We never did grow accustomed to the local weather patterns. We had a day in Longyearbyen to clean up, refuel and pack our things. Fran flew with David and members of another crew we'd met along the way. Steve arrived about an hour before then and we sat around catching up and reminiscing about the trip. It was sad to be heading off after such an adventure.

Longyearbyen to Tromso

25/07/2015 – 31/07/2015, 661 miles

25-27/7/15 Longyearbyen to Bear Island, 331 miles

After a brief tour of Longyearbyen with fresh coffee in Rabalda Gareth and Steve set off for Bear Island (Bjornoya). There had been some chat amongst the other boats of an approaching gale. This was backed up by the grib files we downloaded. It looked like we would reach 30 knot winds within 24 hours, possibly building to 40 or 50 knots, easing for a bit but building again in a few days. The trip from Longyearbyen back to Tromso was about 600 miles or 5 days sailing, this meant we were likely to have to endure some strong winds but could seek shelter if necessary at an anchorage on Bjornoya (about halfway) for the worst of it.

We'd heard that a female polar bear and her two cubs had been sighted in Trygghamna a few days before so we visited this fjord and its neighbour, Ymerbukta, on our way out of Isfjorden. Unfortunately we were too late to see the bears but had an excellent opportunity for one last glacier cruise.

As we left Isfjorden and headed down the coast the wind died away completely and we were left with glassy calm conditions. Not great for sailing, but a good way to get our sea-legs and settle into the watch system. Now only two crew on board, we ran a reduced watch system, which meant three hours on watch followed by three hours off watch.

We motored through the night and following morning towards Hornsund, the southerly most fjord system in Svalbard. As we were keen to reach Bjornoya before the worst of the weather hit there wasn't time to go ashore but we motored to the Polish research station at Isbjornhamna and then to Gashamna, both near the mouth of the fjord. Still no polar bears.

We left Sorkapp, the most southerly part of Spitsbergen to port and started sailing south towards Bjornoya 130 miles away. Still with flat calm conditions. We knew it wouldn't last...

Within a few hours we had strong winds with a double-reefed mainsail and about half of the genoa. Hal was taking the 30 knot winds in her stride and we sailed at 6.5-7.0 knots directly towards hopeful shelter at Teltvika, a little bay on the north-west corner of Bjornoya. We saw a minke whale and loads of puffins and other seabirds flying about.

At around 6pm on the 27th, approximately ten miles out from Teltvika, the wind increased to 40 knots and the swell built up around us reaching 3m+. This was partly due to the effect of the island disturbing the general airflow. We dropped the sails to motor the last half mile into the relative shelter of Teltvika only to find four other boats already hunkered down. This was not great news as the west coast of Bjornoya only has two tenable anchorages and Teltvika is by far the most sheltered. However as three boats were already settled in, there wasn't much room left for us. So we decided to try the alternative anchorage, Landnordingsvika, 7 miles down the coast. Unfortunately this was even worse and with 55+ knots of wind, Hal was back in Teltvika within the hour.

At the second attempt, Hal's anchor held and Gareth was happy – well as happy as he could be anchored with 40 knot gusts, a large swell and rocks 500ft behind us. Hal swung through a large arc around the 45m of anchor chain as the wind shifted with each gust. This made transits on the shore relatively useless so we reverted to monitoring the track on the chart plotter to see if we were drifting. It appeared the anchor was holding.

That night was spent eating (we'd eaten pretty much nothing during the day), listening to weather forecasts from Bjornoya Radio (the only inhabitants of the island are at the weather station) and chatting to the other boats via VHF all the while keeping an eye on the chart plotter. We reverted to two hours on, two hours off whilst on anchor watch and got some much needed rest.

The wind continued throughout the following day but did eventually start to ease. After lots of VHF chat, four of us decided to make a dash for Tromso a further 300 miles south. This was despite the forecast of strong winds and 3m swell again as we were approaching the coast.

28-31/7/15 Bear Island to Tromso, 330miles

We were the last of the four boats to leave but rather than head directly towards Tromso we snuck along the coast. This was primarily to see the view but it also kept us out of the not insignificant foul tide that the others were experiencing further offshore.

The 48 hours to landfall near Torsvag about 50 miles north of Tromso was tough. The winds rose consistently and we had 40 knots again which only died off as we sighted land. The sun came out and soon the temperature was close to 20 degrees. This was a pleasant change compared to the previous few weeks.

We stayed in Grunnfjordbotn, a beautiful anchorage at the head of a small fjord on the island of Ringvassoy and sheltered from the local winds that were funnelling through the fjords. Gareth had the best night's sleep for ages and had his batteries fully charged for the final day heading back to Tromso. After another beautiful anchorage for lunch found by Steve we tied up alongside the gjestehavn pier in Tromso, the same pier that we had left four weeks earlier.

History & Culture

We learned so much during our adventures, about the history and geography of the areas and the endurance and perseverance shared by the different communities that lived up here. Below is just a taste of some of what we saw, learned, experienced.

Ny London

Ny London is a tiny abandoned mining village on the south side of a little island called Blomstrandhalvoya across from Ny Alesund, the most northerly settlement in the world. The story goes that Ernest Mansfield started a mine here looking for marble through the Northern Exploration Company (NEC). Unfortunately, the marble cracked or crumbled a couple of weeks after installation in London, rendered worthless from all the freezing and thawing. There are still various remnants of the mine left however and we managed a scramble over the rocks to see the little huts and old train tracks running to a hoist by the sea.



Ny Alesund

Ny Alesund is considered one of the most northern permanent settlements in the world. We think there may be another one in Greenland somewhere but at 78 degrees latitude, it's hard to beat. The population varies from 30 in the winter to 150 in the summer when teams come from various nations to conduct research on anything imaginable - global warming, glaciers, weather, marine biology, biochemistry, geology. When we arrived the harbour master immediately advised us to turn off all mobile phones, wifi, data and radios as there were teams were conducting research and our various frequencies may interfere! There was however a little room on the pier with a phone box and two ethernet cables so we could Skype Fran's mum in London and upload a few photos on Flickr.



Ny Alesund boasts the most northern railway (with the exception, we noticed, of the old tracks laid out in Ny London across the fjord!). "Ny" by the way, means "new". The original Kings Bay Coal Company that started this northern settlement was based in Alesund, Norway. There was a very successful mining industry here for many years. However a serious of accidents with several fatalities led to its eventual closure in 1963. The town was also used as a starting point for expeditions to the North Pole, including Roald Amundsen's successful attempt in 1926 in the airship Norge. Here is a photo of a memorial dedicated to Amundsen, who also happens to be the first person to reach the South Pole.



The old telegraph station had been turned into a little museum. Here we read some of the stories and history of Ny Alesund, including one where the telegraph operator was killed by an accidental gunshot. The doctor was unable to save him and as a result, the whole settlement was completely cut off from the outside world for months! The doctor spent weeks working with an electrician to figure out how to send a message. Eventually they got through and the doctor

laboriously transcribed the messages that had come through for various inhabitants of Ny Alesund. It certainly helps to be resourceful and have a diverse range of skills!



Eventually the post office was established. The story goes that eventually the telegraph operator tired of sending messages for people so he posted a large sign outside his building saying "Use the post office. Letters are faster than telegrams." In response, the postman put up a sign saying "Telegrams are faster than letters. Go to the telegraph office"!!



Each nation had its own building or part of a building for accommodation, all clearly identifiable with flags and other insignia. The Chinese building had two large stone lions guarding the front door. The edge of the settlement was clearly marked with polar bear warnings. We didn't bother with our gun here, although there were a few people cycling back and forth with rifles strapped to

their backs; it looked very peculiar but better than being eaten!!!



The area around Ny Alesund is protected for the birds. We saw hundreds of Barnacle geese, who are reported to be the most studied birds in the world due to their vicinity to the settlement. It was not uncommon to see them tagged repeatedly by different research groups.



There were also a few arctic terns about too. These sea birds are incredibly territorial, particularly during breeding time. They start chattering away and diving to attack. As soon as we left their territory they'd ignore us again. The Sysselmannen (governor of Svalbard) had posted signs around Longyearbyen and Ny Alesund warning people of them and advising how to avoid getting attack without risking harm to the birds. The effort to preserve the ecosystem, from the wildlife to the geology and the rich history of the islands has been spectacular. We have found extensive information regarding protected areas, historical sites and polar bear protection.



Lloyds Hotel



Lloyds hotel was built prior to 1928 (possibly around 1912) by Hapag-Lloyd shipping company. However it was predominantly used by cruise companies, making it one of the oldest remnants of tourism in Svalbard. The most interesting thing about this cabin however is the decor. For the past hundred years people have been visiting Lloyds Hotel and leaving remnants behind so that cabin is stuffed with all sorts of oddments and the walls are covered in signs from around the world.



Needless to say we made sure to leave our mark by signing the guestbook. The cruising guide we picked up laid out clear instructions to not take anything and not leave anything behind. Judging by the cramped quarters this seemed pretty reasonable.



Gravneset, Magdalenefjorden

Gravneset is one of the largest burial grounds in Svalbard, dating from the whaling period in the 17th and 18th centuries. There are accounts from this era of thousands of whales in the fjords and surrounding water. Initially whalers could row out with nets still attached to the land. Whales would get caught in the nets to be dragged back into land and killed using harpoons. Blubber ovens would be set up on the beach and all the preparation done on site for shipping of oil, meat and skin to Europe and Russia. Unfortunately it only took a hundred or so years to decimate the populations. Eventually the hunters had to move out of the fjords, harpooning the whales from ships. For a while they continued to use the blubber ovens on shore, but eventually, when the

populations dwindled and catches were scarce, they did everything aboard the ships.

Gravneset is now all mounds of graves and remains of blubber ovens on the beach. These were basically just piles of rocks demarcated by ropes. The first tourists came to the area in 1836. A French traveller, Leonie d'Aunet, noted that some of the graves had been heaved to the surface by the permafrost, lying open and empty because of the polar bears. Unfortunately as tourism grew in the 1960s and 70s, crews would write their boat name on the rocks around the graves, dig up coffins to take bones as souvenirs and burn the wood in campfires. The Sysselmannen now has a hut on site and there is someone there for four months through the summer to keep an eye on the many tourists going through. This role is incredibly sought after too - the Norwegian policeman who lives there now was saying it's his 4th summer but not consecutively as the waitlist is so long! It is apparently the most visited site in Svalbard. The area is covered with arctic tundra, which is apparently incredibly bio diverse! Some of the guidebooks suggest trying not to walk on it, but here it was unavoidable.

Virgohamna

This is a very special place in Svalbard's history. In order to visit, a separate permit is required from the Sysselmannen. Fortunately we overheard someone else asking for it in the office in Longyearbyen and when we inquired they offered us one too! It didn't seem to be an issue but if we hadn't known to ask, it would've been disappointing to arrive and not be able to go ashore.

Located on the northern edge of Danskoya, Virgohamna contains relics from several different eras. The oldest remains are from a Dutch whaling station called Harlinger Kokerij, which was established in 1636. There are some piles of rocks along the beach that are meant to be the remains of the foundations of blubber ovens. There were several graves laid out too. No bones though. The polar bears are pretty quick to make the most of anything that sprouted up through the permafrost.

Whaling continued in this area for almost 200 years. Then in the late 1800s, a different type of explorer established base here. Swedish engineer Salomon August Andree came first in 1896. He wanted to reach the North Pole in a hot air balloon. The remains of a balloon shed were still visible on the shoreline. There were heaps of wood and a border of massive stone structures with large bits of iron to tie down the balloon.

Unfortunately this adventure came to a devastating end, which no one discovered for over thirty years. Andree took off in his hot air balloon, Ornen, with another engineer and his photographer in 1897. Their bodies were found on the island of Kvitoya. They'd flown from the NW to the NE corner of Svalbard. There were nails, bolts, wires, wood, piles of rusty iron filings and loads more scattered around the beach. Virgohamna received its name from Andree's steamship, Virgo.

There were even more remains from a second expedition. Well three expeditions really. Walter Wellman had three failed attempts at reaching the North Pole, in 1906, 1907 and 1909. He built a large hangar for his airship, America. And there were massive ceramic gas tanks and iron fillings for the hydrogen gas works.

Sallyhamna



Sallyhamna was another important whaling site, now just a mass of graves and more remnants of blubber over. There were more coffins and bones strewn about. When whalers died, a fairly common occurrence, every effort would be made to ensure a burial on land (rather than at sea). It became traditional to hold mass burials and memorials at the end of the season when everyone was back on land. Bodies are incredibly well preserved here because of the temperatures – wood and bones seem to last forever, whereas the metal rusts in the salty air. There was a trapper hut located on the edge of the small bay as well. These huts are dotted along the coastline all over Svalbard. There are probably some inland as well. They are rented out by the Syssemmannen to trappers, travellers and probably adventurous scientists as well.





Fridtjofhamna and Fleur de Lyshmana

The landscape here is a vast change from the barren rocky hills and glaciers we'd seen elsewhere. The hillside is covered in green Arctic Tundra. Fields of it compared to the patches we walked across in Magdalenefjorden. There were more trapper huts here, dotted about the bays, far enough apart that each one felt completely secluded. They were well stocked with wood for the stove and each one had basic amenities laid out inside – bedding, cutlery, crockery, cooking utensils, furniture, etc.

At the other end of the beach in Fleur de Lyshamna, old grey seine whaling boats, incredibly well preserved in the cold climate were pulled up on the pebbles. These aren't as old as the remains we saw up north, but served a similar purpose; they were used for hunting white whales in the 1930s, giving the area its name. Large seine nets were tied to the land and transported out in the fjord with the rowboats. When the whales swam in they closed the seine and rowed it back to shore. Once the whales were trapped they were shot or lanced near land. It was awful imagining what the fjord must've looked like in those times. Reports describe the blood and bones and carcasses sprawled about from the massacres that took place.

Calypsobyen

Calypsobyen is the largest NEC installation in Bellsund. NEC, the Northern Exploration Company (yes the same one that had the disappointing attempt at extracting marble from Ny London), set up camp here at the end of WW1. The area was named after the HMS Calypso that surveyed it in 1895. By 1920 however, attempts to mine coal were finished. Not only was the source small, but the bay provides no shelter, making it near impossible to transport coal in bad weather or big swells.

Pyramiden

It was actually a Swedish expedition in 1910 that initiated coal mining in this remote corner of Isfjord. However the challenging conditions outmatched the promise shown in early prospects so in 1927, they sold to Russkij Grumant, a Russian mining company. Perhaps it was sheer

determination or some crazy front for the SIS, but where most groups had limited or no success, this town persevered and was by and large, successful.

Pyramiden thrived in the 60s, 70s, and 80s. Workers came in on two year contracts and supplies were shipped in and provided free of charge. In typical communist fashion, everything was accounted for - sports centre, swimming hall, cultural centre, schools library, cinema and museum. Wages were good and with the political situation in the Soviet Union it probably wasn't a bad option for a lot of people.

From 1955 to 1998, approximately 9 million tons of coal was produced. One million was consumed in the local power plant. It wasn't easy work - the coal was several meters thick but broken up by "dislocations". Combined with the harsh Arctic conditions, the mine closed down in 1998.

The area was completely abandoned for 8-9 years apart from the odd adventurous tourist. Unfortunately, those tourists did what any explorer might do and take souvenirs home with them. Apart from the ruins occurring over eight years of being left to nature's forces, there were emblems missing, samples taken from a stuffed polar bear (all his teeth, patches of fur and claws were removed) and other artefacts that had been taken apart one eager visitor at a time. Perhaps that's part of the reason the Russians came back in 2008. Or perhaps because the area was already well-stocked with radio transmission receivers and well-placed for listening in on America, but that's just the conspiracy theory in us!!

Navigation

We did the passage-planning using the RCC Pilot for Norway which have us recommended routes and high level navigational information as well as small scale charts of harbours and anchorages. This Pilot book covered Norway and Svalbard. For more detailed pilotage on the Norwegian coast the wonderful pictures and descriptions in Norwegian Harbour Guide allowed us to further refine our route. We combined this information with distances obtained from the Navionics App for which we had purchased the Norwegian charts. This allowed us to calculate estimated times for each leg and build up a sensible and achievable itinerary.

Once a route had been agreed, this was manually transferred to the on-board Raymarine C80 chart-plotter. The chart-plotter is located a sheltered spot in the cockpit and is easily readable from the helming position and so was our primary navigational instrument for the entire expedition. Entering a route consisted of marking each turning point of the route using a cursor on a map. Small rocks and islands are only visible when 'zoomed-in' so it was easy to inadvertently set a route that crossed land or dangerous rocks. To avoid these silly mistakes, one person would enter the route and another would check it.

The chart plotter was sufficient for most of the navigation. We only had to revert to eyeball navigation on a few occasions, generally when avoiding ice or entering tiny harbours.

In order to provide backup for our almost entirely electronic navigation we maintained a Ship's Log with entries every 2 or 3 hours depending on the watch system. This recorded time, position (from the ship's GPS), log reading, course steered, engine hours, wind speed and direction and barometric pressure. If the electronics failed for any reason we would be able to determine our position relatively easily using the log and our paper charts.

Accounts

We kept a detailed account of all costs incurred associated with Hal and our expedition. Some of the costs were definitely outside of the scope of the expedition and have been omitted here.

Category	Total GBP
Engine	635.34
Flights	2,103.54
Food	944.74
Fuel	872.86
Funding	-3,250.00
General Kit	1,463.91
Insurance	1,165.96
Maintenance	612.60
Mooring	3,159.94
Navigation	361.48
Safety	3,615.40
Travel	517.80
Total	12,202.59

Some of the costs associated would have been incurred even the expedition hadn't taken place such as mooring and fuel. These have been included to provide a complete account of the costs.

A full list of itemised costs associated with the expedition can be found in the appendix.

Lessons Learned

- The time-cost-weather 'triangle' is a good model for the planning such an expedition. Time is limited, money is limited and it is all subject to the weather. Planning a contingency in these three items is wise. We all wished we could have stayed longer, it cost more than we planned and the weather effected our itinerary but luckily we were flexible enough to still reach our primary aim.
- Prioritise the worklist. You will never manage to complete everything you wish so make sure it is prioritised so you can concentrate on the important items. Using a MoSCoW (must, should, could, won't) rating would have removed some of the worry regarding preparation.
- A quick plug for Helly Hanson and any other old school plastic kit: it was warmer and drier than all our fancy new stuff! Janis and David picked up their oilies in the late seventies and stayed completely dry. On the other hand, Fran sent her oilies (less than 10 years old) back to their manufacturer (no names!!) for re-waterproofing and had a wet bum for most of the trip. The only time it wasn't wet was when it was too cold!
- Customs in Norway is important, but can be done by email and definitely doesn't need to be stressed over.
- Lots of little things, such as the fact that propane freezes at a lower temperature than butane so Norwegians don't sell butane in the Arctic Circle. We had to venture all over Tromso to find a replacement valve and new tanks of propane. Just to make it easier, it wasn't possible to buy either in Svalbard! Fortunately we didn't run out during the trip.
- There can never be too much packet soup, or Branston pickle. Hot drinks were on the go a lot of the day, especially when people were changing shifts every three hours. So a savoury

soup was always a nice substitute to tea and coffee.

Acknowledgements

We had so much support for this trip from so many people in terms of planning, funding and helping with various legs: Dr Lorraine Craig for turning our trip into a full-blown expedition and making sure we were well-prepared for everything. Lorraine thank you also for all the brilliant resources you sent our way. Alasdair Flint for loan of rifle, provision of kit and advice. Andrew Croft Memorial Fund, Gino Watkins Memorial Fund and Imperial Exploration Board for funding and the use of a sat phone. Andrew Graham and his team at British Exploring Society for the polar bear protection information. Terry, Patrick, Alex, Stef and Steve for their help with sailing and getting Hal to the Arctic and back again. Simon Finch for the loan of the Norwegian charts. Simon again and Shaun Crofton for their tips and advice on Arctic sailing. Graham Shaw for sending us regular weather and ice updates via the sat phone. David Wensley for all his help sailing to 80N and back. Janis for standing anchor watches and her immense character in sailing to Longyearbyen despite horrible conditions. Lynn and Irene Watkins for casting us off in Tromso and providing the Bailey's and more importantly for introducing Gareth to sailing.

Watch this space...!

It's never over til it's over. Or maybe it's never over 'til we sell the boat. So what next? Why didn't we come all the way back to the UK? Well that second question's easy: time, we would've had to cut the Svalbard trip short to get all the way back to England before returning to the real world. And more importantly, Fran's happy to never cross the North Sea by boat again so it would mean sailing all the way down to France for a much easier (and shorter) Channel crossing instead. But the more exciting answer is that we never planned to come back to England. People always ask where the boat is based and our response is that Hal has no home! She is in Bodo, Norway for the winter. Then next year we plan to sail south along the coast of Norway and into the Baltic Sea. Hopefully we will eventually make it as far as St Petersburg, past Denmark, Sweden, Finland, Lithuania, Latvia and Germany. After that, who knows? Maybe then we'll head to warmer climes. So check in on our blog every now and then for updates: halventures.wordpress.com

Thanks for reading!

Appendix

Itemised Costs

Date	Category	Item	Amount GBP
28/05/14	Safety	EPIRB	429.95
16/06/14	Navigation	RCC Norway Pilot	43.59
14/07/14	Safety	AIS - Roton, Vancouver	437.69
14/09/14	Safety	PLB	179.99
14/09/14	Safety	AIS Personal Beacons	359.98
14/09/14	Navigation	Flags (Q, Canada & Norway)	22.50
14/09/14	Navigation	Norway Navionics Chart	180.00
30/11/14	General Kit	Jerry cans x 2	54.00
30/11/14	Engine	Air filter + Engine Service Kit	149.92
30/11/14	Engine	Crossland Fuel Filter	10.14
30/11/14	Safety	Liferaft Service	122.78

30/11/14	Engine	Volvo Separator Filter	25.28
31/01/15	Maintenance	Sails service and repair	495.60
31/01/15	Engine	Propeller service	288.00
31/01/15	Fuel	Diesel from petrol station	50.00
31/01/15	General Kit	Snatch block	70.00
31/01/15	General Kit	Kedge Anchor	245.00
31/01/15	General Kit	100m 14mm Octoplait mooring line	245.00
31/01/15	General Kit	65m 10mm anchor chain (7.90 per meter)	513.50
08/02/15	Safety	Bolt Croppers	45.00
08/02/15	General Kit	Windex	47.00
08/02/15	Maintenance	LED Tricolour Light	34.00
08/02/15	Maintenance	LED Anchor Light	9.00
08/02/15	General Kit	Outboard lifting strop	35.90
08/02/15	Navigation	North Sea and Norwegian Sea Charts	48.80
08/02/15	General Kit	Spare Kill Switch and Bucket	24.00
08/02/15	Maintenance	Spare nav bulbs	24.00
08/02/15	Maintenance	Sail Repair Kit	50.00
13/02/15	Insurance	SAR Insurance	233.20
13/02/15	Insurance	Personal Accident Insurance	153.00
13/02/15	General Kit	Anchor Shackles (from Flints)	25.34
13/02/15	Navigation	Svalbard Environmental Fee (2 people)	26.00
19/02/15	Engine	Engine service kit, 10 micron fuel filter & diesel bug treatment	120.00
14/03/15	Mooring	Berthing in Lowestoft	300.00
19/03/15	Food	Sainsbury's shop for Norway	597.40
20/03/15	Travel	Train tickets Hartlepool to London	68.80
24/03/15	Funding	Funding from Exploration Board Imperial College	-750.00
25/03/15	Funding	Funding from Gino Watkins	-1,500.00
25/03/15	Safety	Iridium SIM Card. 30 days, 50 Units.	85.20
27/03/15	Safety	MOB Heaving Line	29.46
27/03/15	General Kit	Boat hook	39.99
02/04/15	Travel	Train tickets to Hartlepool	264.00
03/04/15	Fuel	Fuel in Hartlepool	107.64
03/04/15	Mooring	Marina fee Hartlepool	97.50
03/04/15	Food	Tesco Online Shop delivered to Hartlepool	200.00
07/04/15	Mooring	Alesund	12.78
08/04/15	Fuel	Fuel in Kristiansund	129.41
08/04/15	Mooring	Kristiansund	12.78
09/04/15	Mooring	Brekstad	12.78
10/04/15	Mooring	Bodo (til end of April)	173.87
12/04/15	Flights	Gareth & Frances, Bodo to Oslo (Oslo to London via airmiles)	351.64
30/04/15	Flights	Gareth. Oslo to Bodo Return (London Oslo leg via airmiles)	155.19
04/05/15	Mooring	Bodo (May)	396.40

04/05/15	Safety	Handflares	50.70
04/05/15	Engine	5l of engine oil	42.00
09/05/15	Safety	Shooting Lessons @ Holland and Holland	300.60
10/05/15	General Kit	Fresh water pump	65.00
10/05/15	General Kit	Fresh water strainer	11.99
16/05/15	Mooring	Kusfjord	20.35
25/05/15	Safety	Firearm licence	50.00
30/05/15	Safety	Shooting Lessons @ Holland and Holland	118.30
01/06/15	Funding	Funding from Andrew Croft Memorial Fund	-1,000.00
01/06/15	Flights	Gareth & Frances London Bodo (Norwegian)	303.60
01/06/15	Flights	Gareth & Frances Tromso London (SAS)	676.80
01/06/15	Mooring	Bodo (first 15 days of June) including electricity	233.26
01/06/15	Flights	Gareth. London to Tromso, Bodo to London (SAS)	159.11
01/06/15	General Kit	Sale of anchor chain and gypsy on eBay	-125.00
06/06/15	Safety	Shooting Lessons @ Holland and Holland	130.00
12/06/15	Safety	Rifle Scope	200.00
12/06/15	Safety	Rifle Scope Rings and Rail	105.00
12/06/15	Flights	Gareth. Tromso Return for Svalbard Trip (Norwegian)	431.20
14/06/15	Travel	Taxi to Gatwick	50.00
14/06/15	Food	Fresh food in Bodo	59.94
15/06/15	Mooring	Reine	12.21
15/06/15	Navigation	Norwegian Harbour Guide (for Alasdair Flint)	40.59
17/06/15	Mooring	Kabelvag	12.21
18/06/15	Mooring	Lodingen	6.11
19/06/15	Mooring	Finnsnes	12.21
20/06/15	Mooring	Tromso - 1 night	21.98
21/06/15	Mooring	Tromso - 9 nights	197.82
21/06/15	Travel	Taxi from Heathrow	25.00
22/06/15	Safety	Rifle case	35.00
27/06/15	Safety	Rifle lessons for Frances, Janis & Gareth	340.55
27/06/15	Safety	Satphone SIM card. 50 units	85.20
02/07/15	Insurance	Insurance extension for Svalbard	129.37
03/07/15	Safety	40 x 0.375 H&H bullets	236.00
03/07/15	Insurance	2015 Hull and third party insurance	650.39
04/07/15	Travel	Taxi to Gatwick	50.00
06/07/15	Fuel	Petrol in Tromso	5.10
06/07/15	Fuel	Diesel in Tromso	138.25
06/07/15	Mooring	Tromso - 4 nights	791.28
06/07/15	General Kit	Propane gas bottles (x2)	144.11
06/07/15	General Kit	Propane regulator	26.67
13/07/15	Mooring	Longyearbyen	25.48
13/07/15	Fuel	Longyearbyen @ 108 litres	91.48

15/07/15	Mooring	Ny Alesund	22.69
22/07/15	Mooring	Pyramiden	18.31
24/07/15	Mooring	Longyearbyen	25.48
24/07/15	Fuel	Longyearbyen @ 207 litres	164.39
24/07/15	Food	Food - Longyearbyen - Tromso	87.42
24/07/15	Flights	Excess baggage for Tromso - London	25.00
31/07/15	Mooring	Tromso - 1 night	25.48
01/08/15	Mooring	Tromso - Eidkjosen - 26 nights	310.51
01/08/15	Safety	Survival Suits	274.00
02/08/15	Travel	Taxi from Gatwick	60.00
31/08/15	Fuel	Fuel in Lodingen @133 litres	95.54
28/08/15	General Kit	Gas in Tromso. 2x refills	41.40
28/08/15	Mooring	1 night in Tromso	21.50
03/09/15	Mooring	1 night in Sorvagen	14.32
05/09/15	Fuel	Fuel in Bodo @ 105 litres	91.04
14/09/15	Mooring	Berthing in Bodo September	162.00
10/10/15	Mooring	Berthing in Bodo October	162.00
18/10/15	Mooring	Electricity for Bodo	58.64