



BOESAM 2023

Lee Harrison & Arran Turton-Phillips

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EXPEDITION SUMMARY

Between 27th August and 25th September, Lee Harrison and Arran Turton-Phillips visited the Boesam Valley in the Ghujerab Mountains, to the north of Shimshal in Pakistan. The team had twice needed to radically change their itinerary due to logistical problems. The original objectives in India were cancelled due to permit problems, and upon arrival in Shimshal the team were unable to recruit the sufficient number of porters needed to visit the Virjerab Glacier. The team were forced to change itinerary to somewhere accessible with donkeys and two days later a base camp was placed at Perchodwashk (4580m), to north of the Boesam Pass (4980m).

From here, the team made a successful first ascent of Peak 5880m (36°32'29"N 75°23'60"E) via the SE Boesam Glacier and North Buttress. D- difficulty. Boe Sar SE is suggested as a name, given the peak's location at the head of the SE Boesam Glacier. The ascent was in an alpine style over two days, with a bivouac on the col at the base of the north buttress. During the first day, the team made an impromptu second ascent of Peak 5625m, via a new route up the South Ridge. Alpine grade PD.

The team also climbed Koh-e-Brobar, via a new route up the central couloir of the SW face, in a single day. AD difficulty and 850m gain in height.

Failed attempts were made at Peak 5810m (36°32'23"N 75°23'20"E) and the east ridge of Pir Sar (5683m, 36°32'03"N 75°21'57"E) towards the start of the trip.

The team were suitably satisfied with the outcomes in light of the logistical challenges.

EXPEDITION MEMBERS

Lee Harrison lives in Oslo and has been climbing since 2003. He has made several alpine-style ascents in the Pakistani Karakoram and Himalaya, including Haigutum East, 5783m (first ascent), Khush Dur Sar, 5702m (first ascent), Qalha Sar, 5589m (first ascent), Peak 5665m (first reported ascent, new route), Yazghil Sar, 5976m (new route), Shiftkittin Sar, 5750m, and Rupal Peak, 5642m.

Lee has made various ascents in the Alps up to TD+, including Gabarrou-Albinoni, Modica-Noury, Fil à Plomb, and Frendo Ravanel.

Lee primarily led Scottish V-VI when UK-based. He now regularly leads water ice grades WI4-6, with ascents in recent years of several national and international classics, such as Hydnefossen, Grøtenutbekken, Langåni, Kjølifossen and Juvsøyla.

Arran Turton-Phillips lives in Sheffield, and Arran has made several visits to the Alps, climbing up to ED1, including Banana Republic (ED1 6c), Rebuffat Pierre (TD 6a+), and Grand Montets Ridge (D+ 5c).

Arran regularly leads winter mixed climbs up to Scottish V, with recent ascents including Savage Slit, Scabbard Chimney and The Messenger.



BACKGROUND INFORMATION AND CHANGES TO ITINERARY

The original plan had been to climb in the Indian Karakoram, however Lee and Arran failed to receive the necessary documents in order to apply for the mountaineering visas, in spite of the climbing permits being approved at a late hour.

Approximately two weeks prior to the planned departure date, the itinerary was changed to Pakistan, where no permits would be needed, provided one stayed below 6500 m and away from border areas. On this basis, Lee and Arran applied for regular tourist visas, which were expected to be processed in 7-10 working days. Lee's visa was however approved two days late, which delayed departure by 24 hours.

Several potential climbing objectives had been identified near the junction between the Virjerab and the Second West Virjerab Glaciers, however the expedition failed to find a sufficient number of porters in Shimshal for the approach. Fifteen porters were needed, but only three had been found after two days of waiting. The main issue was that the Virjerab glacier was reportedly very difficult terrain for porters, however the lack of advance notice of our intended itinerary may have impacted outcomes.

The expedition changed the itinerary to the area to the north of Boesam Pass. This area could be accessed using donkeys and therefore resolved the porter issue. This area had seen a number of previous ascents, however there still appeared to be enough interesting options, including the highest peak in the vicinity remaining unclimbed.

THE BOESAM REGION AND CLIMBING HISTORY

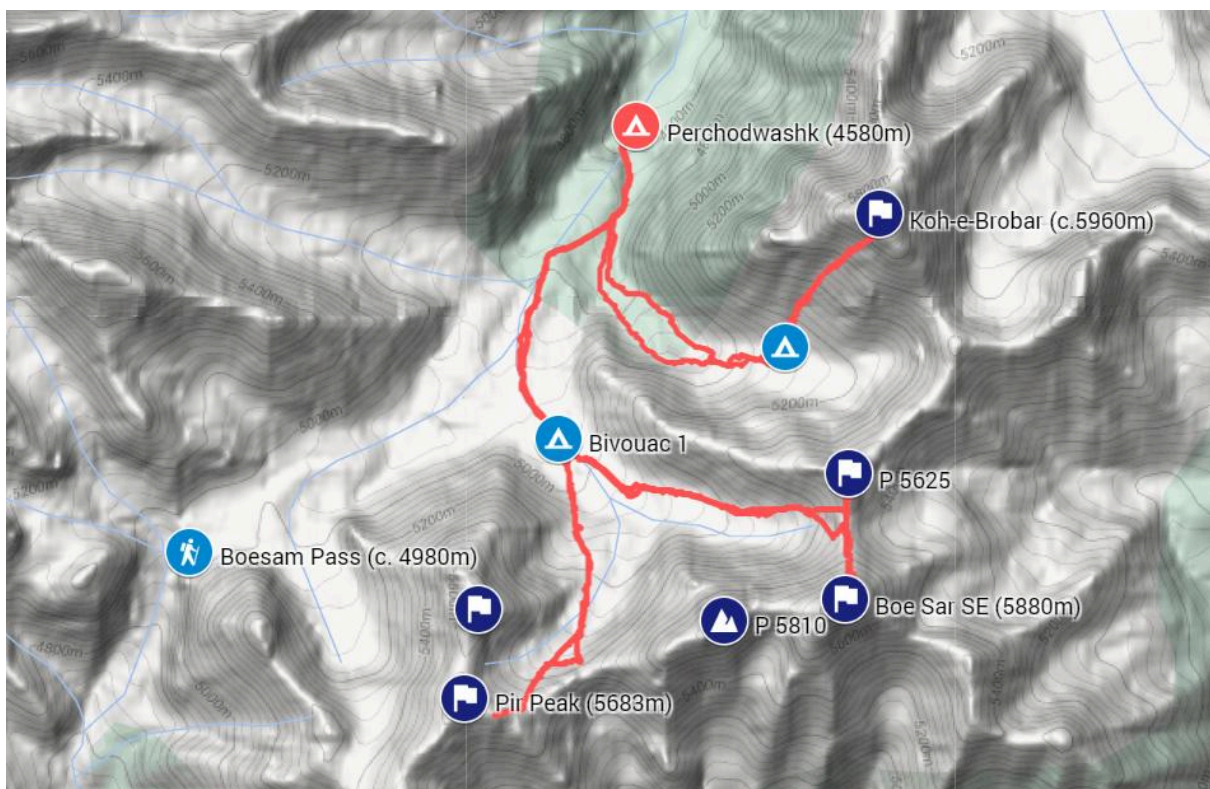
The Boesam (also spelled Boisum) Pass is a non-glaciated, relatively accessible pass in the Ghujerab (Ghuzherav) mountains to the north of Shimshal. The area has seen a steady trickle of climbers, with the following known ascents in the area:

- Pir Peak was summited in 1999 by the Pakistan Alpine Club.
- François Carrel and Abdullah Bai climbed Boe Sar and Shah Imit Peak in 2005.
- Mirza Ali and Samina Baig summited Koh-E-Brobar in 2011.

- A British team, consisting of Tim Seers, James Lawson, and Will Smith visited the pass in 2017 and made first ascents of Arman Sar, an unnamed 5700m peak, and an unnamed 5503m peak. They also summited Peak 5625m whilst attempting a full traverse of the ridge leading to the southwest ridge of Koh-e-Brobar.
- A Polish team in 2018 climbed a point between Boe Sar and Pir Sar and named it Lal Sirang Kateth Sar (5680m).

ROUTES ATTEMPTED

The map below shows Lee's GPS data for all peaks attempted. Attempts were made from a base camp at Perchodwashk (4580m), which lies a couple of hours' walk north of the Boesam Pass.



Peak 5810m (36°32'23"N 75°23'20"E)

On 4th September 2023, from a bivouac site at 4970m (36°33'10"N 75°22'28"E), near where the SE Boesam Glacier splits into its two branches, Lee and Arran attempted Peak

5810m (height from Google Earth). They pragmatically chose to attempt a single day ascent due to an unsettled forecast the following day.



Arran approaching the bivouac site on the SE Boesam Glacier, beneath Boe Sar SE (left) and Peak 5810m (right)

They initially climbed the SW (right) branch of the SE Boesam Glacier, with the plan to continue up the NW slopes to the col ($36^{\circ}32'10''\text{N}$ $75^{\circ}22'36''\text{E}$) on the WSW Ridge. From here they planned to follow this ridge to the summit. This would have entailed approximately 840m of height gain over a length of 3-4 km.

The attempt was abandoned a short way up the NW slopes, where the snow was becoming increasingly deeper and unconsolidated. With enough digging, it quickly became apparent that the unconsolidated snow was resting on a poorly bonded deeper hard layer of ice. With the slope approximating 45 degrees, there was deemed to be too much avalanche risk to continue the attempt, and retreat was made from the modest height of 5375m. The initial glacial ascent was alpine grade PD, and the NW slopes looked to potentially be around AD(+) in good conditions. The main difficulties would have probably been found on the moderately complex WSW Ridge.

Four days later, when back at the same bivouac, a narrow section of the face had indeed avalanched, stripping it down to the deep hard layer. This was much further left of the line that Lee and Arran had attempted and looked to have been triggering by falling serac debris.

Pir Peak, 5683m (36°32'03"N 75°21'57"E)

After the abandoned attempt at Peak 5810m, Lee and Arran continued up the SW branch of the SE Boesam Glacier to attempt Pir Peak near its head. They reached a col at 5500m (36°32'01"N 75°22'17"E) from where the East Ridge was followed. By this point, the ridge was becoming enveloped in a thick cloud cover, however visibility was satisfactory in order to see the outlines of the main features. The weather was otherwise stable and played no part in any decision making. Snow conditions had remained firm since descending back to the glacier from Peak 5810m. Upon reaching a high point of 5625m (36°31'59"N 75°22'08"E), Lee and Arran momentarily thought they had reached the summit, until the clouds lifted and the true summit showed itself approximately 300m horizontal metres further along the ridge. With tanks depleted due to poor acclimatisation and fatigue, they opted to turn around and descend the way they had come.



Left photo: Arran traversing beneath the cornice on the east ridge of Pir Peak;

Right photo: View towards the summit of Pir Peak from the high point

The detour up the NW slopes of P 5810 likely contributed to the unsuccessful attempt to some degree in light of the team's poor acclimatisation at this early stage in the trip. Difficulties were largely Alpine grade PD until close to where the team retreated, where they increased to around AD-.

Peak 5625m (AAJ) / Peak 5575m (Jerzy Wala) (36°33'01"N 75°24'02"E)

At 5am on 8th September, Lee and Arran left the same bivouac site between the left and right hand branches of the Boesam SE Glacier. With a stable forecast, the plan was to attempt a first ascent of Peak 5880m (height from Google Earth) over two days, bivouacking on the col (36°32'47"N 75°24'01"E) on the north-south ridgeline between Peak 5625m and 5880m at the head of the SE Boesam Glacier.



South Ridge of Peak 5625m

Unroped for the duration, they followed the eastern (left) branch of the SE Boesam Glacier, then continued up the west facing slopes at the head of the glacier where it steepened, staying to the left side of the glacier itself. Lee and Arran gained the ridgeline to the north of the col, at a height of 5550m. With the summit of Peak 5625m in such close proximity, they chose to make an impromptu ascent, reaching the summit at 9am. Difficulty was PD, and a height of 5640m was recorded on Lee's Garmin Instinct 2 watch. They then descended to the col between Peak 5625m and P 5880m where they bivouacked for the night. A tent pole was lost down the mountainside whilst erecting the tent, but after some experimentation it was concluded that the remaining pole would suffice in light of the fine weather.



Bivouac on the col between Peak 5625m & Boe Sar SE (minus a tent a pole)

Boe Sar SE, 5880m (36°32'29"N 75°23'60"E)

On 9th September, Lee and Arran roped up and left the bivouac site on the col at 4am to attempt a first ascent of Peak 5880m via the north buttress. Low on the route, whilst skirting a small serac, they were startled by a thunderous boom that coincided with Lee striking an axe into the mountainside. Some excited discussion followed, whereupon it

became apparent that a section of serac had fallen off in Arran's vicinity. Cracks were also visible in the surrounding névé, suggesting this was no place to linger. Both Lee and Arran were to the right of the serac by this point, however the terrain ensured that any debris would be funnelled down the east face, rather than down the chosen route.



The North Buttress of Boe Sar SE

Further up the buttress they met with the first broad serac barrier, whereupon the remainder of the route was pitched. The barrier was breached via a short, steep snow bank in its centre. 45 degree slopes led to another serac barrier. This was breached via a left-to-right ramp that offered another line of weakness. More 45 degree slopes led to a third serac barrier, which was easily skirted to the right. Despite the presence of seracs, their arrangement limited the objective danger since any potential debris would be funnelled down the faces either side. More 45 degree slopes led a further 90m to where

a break in the cornice offered an obvious weakness to gain the East ridge. From the top of the buttress Lee and Arran continued up the East ridge for one more pitch, reaching the corniced summit at around 10am.

Descent was via the line of ascent, down-climbing for the entirety. Difficulty was judged to be D-. Lee and Arran continued down to BC the same day. The name Boe Sar SE is suggested, since Peak 5880m lies at the head of the SE Boesam Glacier.

Koh-e-Brobar (Barabar Sar), c. 5960m (36°34'10"N 75°24'12"E)

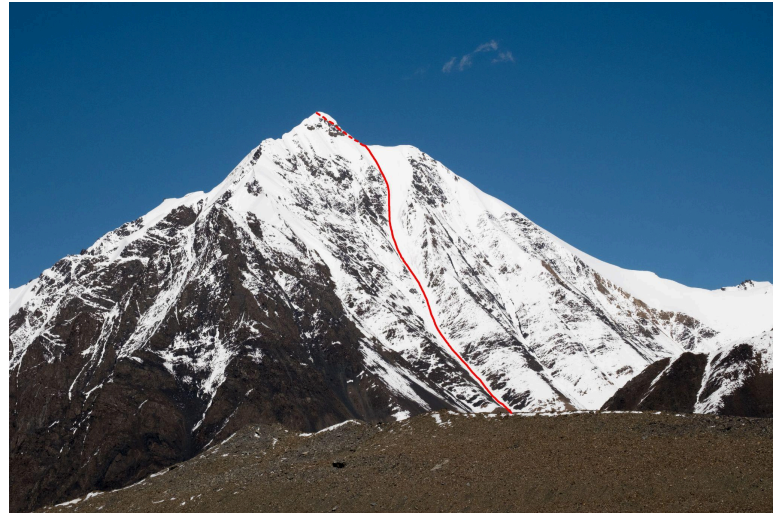
In light of the lost tent pole, together with stable weather, Lee and Arran opted to make an open bivouac on the lateral moraine of the Boesam Right Ice Flow at around 5100m. Departing at 3am on 15th September, they attempted a new route on Koh-e-Brobar via the central couloir on the SW face.

The couloir involved easy snow slopes in the lower half, with steepness increasing with height to around 45-50 degrees towards the top. There was largely good névé, although a little icy in the upper half. A short distance below the summit they met with the SW Ridge, then traversed beneath its cornice to the summit, arriving at around 8am.



Left photo: Arran midway up the Central Couloir on the SW Face of Koh-e-Brobar;

Right photo: Traversing beneath the summit cornice



The Central Couloir of the SW Face of Koh-e-Brobar

CLIMBING CONDITIONS

Fine, stable weather predominated for the majority of the trip, with only the first days at base camp being unsettled. Snow conditions were excellent, with a mild thaw during the day and a refreeze during the night on all attempts. There was limited precipitation during the trip which led to steady reduction in snow cover as the expedition progressed. There was clearly considerably less snow than experienced by the British trio in 2017, with south faces being almost entirely dry.

Compared to photos taken by the British team in 2017, seracs looked to have become more numerous, particularly on the Northern aspect of Peak 5810m.

EXPEDITION DIARY

26/08/2023

Lee and Arran flew overnight from Oslo and London to Islamabad via Doha with Qatar Airways.

27/08/2023

Arrival in Islamabad. Connection to a morning domestic flight to Skardu. Lee had a very tight transfer to the domestic flight, and would have likely missed it, were the departure time not delayed.

Upon arrival in Skardu, the team travelled to Karimabad by private minibus, stopping in Gilgit to change a limited amount of dollars to rupees. There was no time for food shopping due to the late arrival in Karimabad.

28/08/2023

Lee and Arran met the cook, Jaffar, in Karimabad. Food and kerosene were purchased in Aliabad and additional rupees withdrawn. The team then drove to Shimshal (3000m) in the afternoon by private jeep, stopping briefly whilst a landslide was cleared.



Shimshal village

29/08/2023

Provisions, fuel and equipment were organised into 20kg porter loads. Fifteen loads needed to be carried, which included three loads of kerosene. Only two porters had however been found. The day was therefore spent in Shimshal in the hope that more porters could be found by the following day.

30/08/2023

A total of three porters had now been recruited, however this was still a long way short of the required number. It was therefore decided to switch objectives to north of the Boesam Pass as Lee knew the highest peak in this area remained unclimbed. The approach was suitable for donkeys, which resolved the porter issue. Within hours of changing our itinerary the team had departed from Shimshal. Prior to departure, a cook

assistant was hired, called Ali. The team trekked to Zardgarben (4075m) with eight donkeys (and a foal), six donkey drivers, and a sirdar (head porter).



Left photo: Trek up to Zardgarben

Right photo: Shimshal Whitehorn & Distaghil Sar from Zardgarben

31/08/2023

The trek continued over the Boesam Pass (c. 5000m) and down to Perchodwashk (4580m) in the Boesum valley, where a base camp was set.



Left photo: View North from the Boesam Pass

Right photo: Base camp at Perchodwashk

01/09/2023

Donkeys, drivers, and our sirdar departed early in the morning. Lee explored the West Boesam Glacier to the NW of base camp to check the viability of Peak 5623m (36°34'51"N 75°20'44"E, height from Soviet 1:100,000 military maps) for an acclimatisation climb. This peak however looked lower than the quoted height and also lower than other peaks in the vicinity. Other peaks looked to involve significant climbing on shale and were therefore unappealing. From the screens slopes bordering the northern edge of the glacier, at around 5190m, Lee was able to view the eastern aspect of Peak 6175m at the head of the glacier, and this approach looked to be a possible viable means of ascent.



Left photo: Peak 5623m (left), with Peak 6175m at the head of the West Boesam glacier

Right photo: View SW from the West Boesam Glacier towards (L-R) Koh-e-Brobar, Peak 5625m, Boe Sar SE, and Peak 5810m

02/09/2023

Rest day due to heavy snow in the morning. During the afternoon, a huge avalanche fell from the NW face of Koh-e-Brobar, down the largest glacial tongue a short distance north of BC. The avalanche crossed the valley and climbed a short way up the opposite side, also covering the grazing areas immediately north. Fortunately none of the grazing yak were injured.



Avalanche near to BC, down the NW face of Koh-e-Brobar

03/09/2023

Light snow in the morning, followed by finer weather. Encouraged by this, Lee and Arran hiked up to a bivouac site (4970m) in the afternoon, on a strip of central moraine, close to where the SE Boesam Glacier splits into its eastern and southwestern branches.

04/09/2023

Failed attempts at Peak 5810m and Pir Sar.

05/09/2023

Rest day

06/09/2023

Rest day. Lee explored up the Boesam right hand flow during the afternoon, however turned back at 4960m due to new snowfall and poor visibility.

07/09/2023

Lee and Arran returned to the previous bivouac on the SE Boesam glacier during the afternoon.

08/09/2023

Lee and Arran made an ascent of Peak 5625m via the South Ridge (new route) and then bivouacked on the col between Peaks 5625m and 5880m.

09/09/2023

First ascent of Peak 5880m via the north buttress. Descent down to base camp the same day.

10/09/2023

Rest day. Our cook Jaffar complained of stomach pain and nausea, to which it was agreed that he should return to Shimshal if necessary.

11/09/2023

Rest day. Our cook Jaffar, together with our cook assistant Ali, returned to Shimshal after lunch due to Jaffar continuing to experience stomach pains and nausea. Both reached Shimshal the same day. Lee descended north to the grazing pasture of Mandikshlakh, at the junction with the Ghujerab Valley, and returned to BC the same day.

12/09/2023

The new cook and assistant, Khushdil and Qalander, arrived at base camp during the afternoon, after departing Shimshal that morning.

Lee and Arran attempted to approach Peak 6175m in the afternoon via the West Boesam Glacier valley. Unfortunately Arran wasn't feeling 100%, and it was decided to return to base camp.

13/09/2023

Lee reconnoitred the Boesam left hand flow to around 5300m with the view to maybe soloing something the following morning. The south face of Peak 6175m was unfortunately totally dry and other peaks were unappealing to solo due to large cornices on the northern and eastern aspects. Lee therefore returned to base camp during the late afternoon. Arran felt better and meanwhile walked part way to the Ghujerab Valley junction.



Boesam Left Hand Flow: Arman Sar (left) and the south face of Peak 6175m (right)

14/09/2023

Lee and Arran opted to attempt a new route on Koh-e-Brobar, partly because this peak was more accessible than Peak 6175m, and also more aesthetic. They ascended the Boesam right hand flow in the afternoon and made a bivouac on the lateral moraine without the tent, beneath the southwest face of Koh-e-Brobar at 5100m.

15/09/2023

Ascent of Koh-e-Brobar via the central couloir of the SW face. New route. Descent the same day back to BC.

16/09/2023

Rest day. Items at BC were weighed and a message was sent to Shimshal that donkeys were needed to carry seven 20kg loads. Planned departure from BC on the 18th.

17/09/2023

Rest day. The donkeys, drivers and sirdar arrived during the afternoon.

18/09/2023

Fresh snow during the night. Base camp was struck during the morning, donkeys were loaded, and the expedition trekked back over the Boesam Pass to Zardgarben. Peter Thompson's expedition (ref MEF Dih Sar 2023 Expedition) was also at Zardgarben, after descending from the Joshi Pass.

19/09/2023

The expedition trekked to Shimshal and hired staff paid off. Lee and Arran drove to Karimabad by private transport during the afternoon.

20/09/2023

Lee took a Jeep to the start of the Gharesa valley with the plan to spend two days and two nights exploring the area. Access along the water's edge, as shown on maps, was impossible due to a steep gorge at the mouth of the valley. Lee walked along the road towards Hispar for a few kilometres in order to understand the way into the valley. The (presumably) original way crosses several loose rocky sections for which terraces had been constructed. These looked to have degraded, however a higher route looked to avoid these difficulties. Unfortunately the time dedicated to identifying a possible way into the valley left no time to attempt the approach and descend to the valley again before nightfall. Lee therefore opted to return to Karimabad that same day. Any expedition planning to visit the Gharesa valley may need to dedicate some time checking that the approach will be safe for porters.

21/09/2023

Lee and Arran drove to Gilgit by private vehicle during the afternoon.

22/09/2023

Lee and Arran continued to Skardu, taking a scenic route via the Deosai plains.

23/09/2023

Day in Skardu.

24/09/2023

Lee and Arran flew to Islamabad. Lee visited the Margalla Hills on the outskirts of Islamabad in the afternoon. Arran flew home during the evening.

25/09/2023

Lee flew home during the night.

PLANNING AND LOGISTICS

Logistical support and hiring of labour

Adventure Tours Pakistan (ATP) were used for logistical support, including arrangement of land travel, our cook, and visa support. Regarding the latter, ATP were instrumental in helping to chase up Lee's visa approval, which had been delayed in Islamabad. In addition, ATP arranged for rupees to be wired through to a bank in Aliabad in order to overcome money changing issues, which the team were very grateful for. Overall, the team was very satisfied with the agency.

All services were arranged directly by expedition members where practical. ATP arranged travel between Skardu and Shimshal, and between Shimshal and Karimabad, in order to maximise efficiency. Onward travel between Karimabad and Skardu was arranged by Lee and Arran in Karimabad.

A cook was hired via ATP to similarly simplify logistics, although the cook assistant was hired locally in Shimshal.

The donkey drivers, sirdar, and cook assistant were hired and paid for as directly as possible in order to maintain a clear overview of wages paid and to cut out middlemen where possible. This arrangement also meant that Lee and Arran were the sole employers in the event of injury, sickness, etc, which was deemed to be a clearer, more responsible arrangement.

Shimshal Tourist Lodge located donkey drivers and our sirdar on our behalf, as well as our cook assistant. Payment of the donkey drivers and sirdar was made in advance via Shimshal Tourist Lodge at their request for the outward journey, but directly on the return leg. The cook assistants were paid for directly. All hired labour would have ideally been paid for directly in both directions, however this is probably unrealistic, since the guesthouse arranged services on our behalf and would inevitably want a cut of the payments as middlemen.

Transport

Transport was straightforward throughout. Flights were booked to Skardu, rather than Gilgit, as the former are less often cancelled due to bad weather and poor visibility. This

arrangement however added four hours to the journey.

Afternoon travel to Shimshal was previously very difficult due to a problematic water crossing, however the construction of a new bridge has resolved this issue.

Reaching Base Camp

The expedition made a base camp to the north of the pass, at a place called Perchodwashk (4580m). This took two days to reach, with a first night spent at Zardgarben (4000m). The gain in altitude was fairly rapid, since the Boesam Pass lies approximately 2000m higher than Shimshal village. The only suitable camp between Zardgarben and Perchodwashk when travelling with porters or donkey drivers is Shpodeen (4400m), which is only a couple of hours walk north of Zardgarben. Jafarvask (4600m) further north towards the pass has no permanent shelter for porters/donkey drivers. The expedition therefore trekked from Zardgarben, over the Boesum Pass (4980m), to Perchodwashk in a single day. Another potential base camp was later found towards the Boesum Right Hand Glacier at approximately <>. It sits a little higher at 5000m.

Food, fuel and Accommodation

All food, fuel and accommodation was paid for directly by the expedition.

Accommodation was easy to arrange without any prior booking. Food and kerosene was purchased in Aliabad, together with our cook, Jaffar. Freeze dried expedition meals were brought from home and used above base camp.

Kerosene was used in base camp, while camping gas was used above. Camping gas was purchased from ATP. New gas canisters have been difficult to purchase in Gilgit Baltistan in Lee's previous experience.

Cooking equipment

This was the first time that the expedition members had hired a cook. The meals were considerably more varied than on previous trips, and Lee and Arran enjoyed the social

interaction at base camp. The one negative aspect that we noted though was the significantly increased weight of food and fuel that needed to be transported to base camp. On Lee's previous expedition to Pakistan in 2015, he had comfortably managed to limit kerosene consumption to less than twenty litres for a similar period. On this trip, sixty litres were transported, which equated to three porter loads. The conventional Pakistani stove and kitchen tent was roughly another couple of porter loads. Lee and Arran were very happy with the arrangements, however the additional loads are something to consider where there is likely to be limited porter availability.



Donkey transporting the cooking stove, close to the Boesam Pass

Local currency

The decision was made to avoid any delays in Islamabad in order to maximise the number of days at base camp. A small amount of currency was exchanged at the International terminal upon arrival, however this was not straightforward due to the money changer being located within the departure area, rather than arrivals. Without a valid flight ticket, it depends entirely on the willingness of the security guards outside

departures to bend the rules and allow admittance. Exchange was limited to a few hundred dollars here.

Lower exchange rates were expected in Gilgit Baltistan, however there was the more serious problem that money changers were unable to exchange anywhere near enough currency.

Fortunately, our agent ATP was able to wire rupees to a bank in Aliabad and add the amount to the bill. In hindsight though, it is recommended that any future expeditions change all necessary money in Islamabad before travelling to Gilgit/Hunza.

Mapping

The Jerzy Wala Mai Dur Mountain Subgroup pdf map, published in 2014, was the best map for the area.

Lee also used the Gaia GPS app with premium membership in order to download map data for the local region. Custom GPX data was imported into this map.

Communications

Lee and Arran both used an inReach in order to send messages and receive weather reports. Both members subscribed to the expedition service for one month. Lee's partner, Anna Kennedy, sent daily forecasts to Lee's inReach. The mountain-weather.com and yr.no forecasts for Karun Koh were used as this was the closest major peak to base camp. Overall, the Garmin inReach basic forecast proved more accurate.

Insurance

Both members used the Garmin expedition insurance. This provided a high level of cover compared to other providers, and included search and rescue, which was deemed important for a low-key expedition. It also provided a simple means to initiate rescue via the inReach SOS function.

Climbing Equipment

Limited rock protection was taken as the rock quality was expected to be very poor. All rock north of the Boesam Pass was poor quality shale and best avoided. Rock gear therefore never went further than base camp.

A small selection of ice screws were taken, and these proved very useful towards the top of the central couloir on Koh-e-Brobar, and whilst descending Boe Sar SE.

Half ropes were taken, however only one rope was used for both moving together and pitching. This was partly because there was little expectation that much abseiling would be required, or be efficient.

CARBON FOOTPRINT & OFFSET

Carbon footprint was calculated via myclimate.org:

- Oslo-Islamabad-Skardu (return): 1.9t
- London-Islamabad-Skardu (return): 2.2t
- Gilgit-Shimshal (410 km return): 0.17t
- **Total:** **4.27t**

It was practically impossible to enforce a meaningful reduction in the carbon emissions of the team through personal lifestyle changes in order to accommodate the expedition. Carbon emissions relating to travel were therefore purchased via Atmosfair.de based on the website's own calculations at the time of travel. This was as follows:

- Oslo-Islamabad-Skardu (return): £49
- London-Islamabad-Skardu (return): £58
- **Total:** **£107**

ACCOUNTS

Outgoings	
Visas and permits	£154
Insurance	£648
International travel	£2843
Domestic flights and transport	£772
Sirdar, donkeys and donkey drivers	£934
Cook & cook assistant	£1289
Food and fuel	£500
Accommodation	£224
Agency fees	£160
InReach connection	£219
Carbon offset	£107
Total	£7850

Income	
MEF grant	£4500
Montane Alpine Club Climbing Fund	£1000
BMC expedition grant	£350
Personal contributions	£2000
Total	£7850

SUMMARY AND FUTURE POTENTIAL FOR OTHER EXPEDITIONS

Lee and Arran were satisfied with the expedition outcomes in light of the logistical challenges during the lead up.

Despite a steady flow of expeditions to the Boesum valley, there still remains good potential for first ascents.

- Peak 6175m was reconnoitred from the west and south by Lee during the expedition, however no attempt was made. Approaching via the West Boesam Glacier looked a more attractive option in the conditions we found due to better snow cover. It may be this peak is easiest from the western side, via the Yazpurz Col.
- Peak 5810m is still an attractive objective, despite being slightly lower than Boe Sar SE. Had Lee and Arran been adequately acclimatised, and with improved snow conditions, then a more attractive, direct line looked to be up a snow spur on the NW aspect, immediately left of the prominent rocky buttress. Traversing the ridge linking Peak 5880m and 5810m also looked an excellent objective for a suitably strong and motivated team.
- Peak 5870m to the SE of Arman Sar has also seen no attempts. Lee reconnoitred the northern aspect via the Boesam left hand flow, however the cornice leading to the col to the north of the peak looked too complicated to pass. A full ridge traverse from the east would be one option, or possibly via the glacier on the south side.



(Clockwise) Peak 6175m from the West Boesam Glacier; NW spur of Peak 5810m; North face of Peak 5870m

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Sunrise over Distaghil Sar from the slopes of Koh-e-Brobar