



MOUNT EVEREST FOUNDATION

Patron: HRH The Duke of Edinburgh KG KT



BRITISH MOUNTAINEERING COUNCIL

SUMMARY REPORT FORM

from an MEF and/or BMC SUPPORTED EXPEDITION

Support for an expedition is offered on condition that you submit detailed reports to the MEF and/or BMC. To assist in fulfilling this commitment, it is requested that you fill in this form and return (preferably by E-mail) to the secretary (ies) of the organisation(s) within four weeks of return from the expedition. Please expand/contract the spaces in this form as required. Include or attach at least one good digital photo of your main route, with the line of your route marked.

1 - Name of Expedition: Understanding the formation and significance of the surface debris cover of Khumbu Glacier

2 - Expedition Leader/Organiser: Dr Martin Kirkbride

Address: Geography, University of Dundee, Dundee DD1 4HN

Preferred telephone number(s):

Home: - Work: 01382 384513 Mobile: 07746 483664

e-mail address: m.p.kirkbride@dundee.ac.uk

3 - MEF reference: 18-17

BMC reference:

4 - Country/Region: Nepal, Khumbu Glacier

5 - Names of all expedition members, indicating leader, climbing members, and support:

Dr Martin Kirkbride

Dr Ann Rowan

Dr Duncan Quincey

Dr Evan Miles

Prof Bryn Hubbard

Josephine Hornsey (PhD student)

Katie Miles (PhD student)

Support was provided by Himalayan Research Expeditions (Kathmandu): Sherpas, kitchen staff, and logistics. This was a very effective arrangement which meant the scientists could focus on their work fully.

6 - Original objective(s) of expedition – mountaineering / scientific / medical, include location of objective (or study area) with indication of special points of interest (e.g. ‘first ascent of NW Ridge’) and heights of peaks:

Objectives stated in the MEF application form were:

1. Data acquisition from Khumbu Glacier to support Dr Rowan’s glaciological modelling of climatic sensitivity of the glacier.
2. Data to include debris sources, transport pathways and melt-out processes.
3. Collection of rock samples for dating lateral moraines using ¹⁰Be exposure-age dating.

7 - Overall dates of expedition (e.g. 'March-June 2015'), showing time spent on approach, climbing, and return:

15 April	departed UK .
19 April	flew Kathmandu to Lukla and started approach (following weather delay).
24 April	commenced field work.
17 May	end of field work.
18-22 May	return trek and flight to Kathmandu
24 May	return to UK

8 - Give the following details for each route climbed or attempted:

Name of mountain/crag, altitude, estimated route length, dates, grade, style (eg alpine, fixed rope), whether first ascent, successful or not, high point reached, reason for retreat (if applicable), weather conditions, and names of climbers:

Not applicable: scientific expedition.

9 - Any other relevant comments (permits, liaison officer, etc):

Field work and sampling was carried out under the relevant scientific permits and authority from the Sagarmatha National Park. Sampling strictly adhered to the number and location of samples agreed in the research permit. Samples were checked by the National Park authority in Namche Bazar on the return trek.

The Liaison Officer provided by Himalayan Research Expeditions was effective, helpful and built excellent relations between scientific and local expedition members.

10 - Expected date of submission of Final Report:

Awaiting the first round of laboratory results: late September 2018 is realistic. I can send a report sooner if required.

Figure 1. Typical debris-covered terrain below Gorak Shep, across which sediment samples for geochemical analysis were collected along 7 transects located along the length of the glacier and tributaries. These chemical “fingerprints” are matched to source areas to track trajectories of debris transport through the glacier system. Full details will appear in the Final Report.

