

A Sedgwick Club Guide:

PLANNING A MAPPING PROJECT

Two busy geologists preparing for their mapping project on Skye. Image from the Department website.

Hello new(ish) IBs! For some reason, you've decided to stay with our Department, and you've likely undergone Sedbergh too. The next major step in your university career (aside from passing your second year) is going to be the 28 days (minimum) spent in the field mapping rocks. These 28 days will count towards 25% of your third-year mark (i.e. your Bachelors degree), and hence are quite important. At the end of it, you'll be expected to produce not just a report, but a map complete with cross-sections just like those seen hanging around the Department.

Sounds like a lot of work, doesn't it?

The work can be made much, much easier with proper planning. Those of us who still bear fresh wounds from the experience have put together a collection of advice. Although the project guide provided to you covers most of the bases, we've also included several select quotes from the mapping feedback portion of the Club website to show you just how enjoyable (or not) a mapping project can be with the appropriate planning.

PHASE I: WHY and WHO?**Decide whether you want to do a mapping project.**

A mapping project is an immense portion of your summer and Michaelmas term in Part II (and don't forget about the skills training and Skye), so if you aren't planning on going into Part II Earth Sciences you may not want to do a project. That being said, I have known some people who did a mapping project for the experience, because they didn't know if they were doing a Part II Earth Sciences, or just because they wanted to travel. Regardless, the planning and fieldwork involved in a project is a great way of showing off your organisational skills.

Decide who in the year group you can tolerate for a month and more.

By now you've had many field excursions with your year-group, so there (hopefully) will be some people you can see yourself working well with. Who did you share a room with on Arran? Who did you map with on Sedbergh? For the sake of safety and sanity,

try not to map alone if possible.

“DO. NOT. MAP. ALONE!! I had the most boring, tedious and miserable time. Do not make the same mistake I did. Go abroad and have some fun.”

Scottish Highlands, 2006

“Don’t map alone. The only people I had to discuss the geology with were locals who insisted my accretionary wedge pendant was an extinct volcano.”

British Columbia, 2004

Make sure you get an appropriate number of people along on your project though. Invite too few and in the event of a falling out you’ll all have a very uncomfortable time. Invite too many and there may not be enough area for everyone to map. A brief look through the feedbacks seems to suggest that 4 is the sweet spot, but teams can succeed with more/fewer people depending on the region and group chemistry.

Don’t pick a mapping partner until you know what rocks you want to map - that way your interests can align and lead to a lot of interesting discussions in the field. Skye is the perfect testing ground for a mapping partnership. And remember - that unlucky undergrad will be the first person to patch you up if things go wrong...

PHASE II: WHAT and WHERE?

Decide what rocks you’re interested in.

Obvious statement, but very important. Try not to just have one variety, although if you’re taking just ESA you may not have too much choice in the matter. A few dykes or a granitic intrusion can break the monotony of mapping nothing but sediments.

“Find a place with more than one classification of rock - seds got boring after a while.”

Spain, 2016

Sedimentary rocks are generally a safe choice – dips of beds can mark large-scale structures, and evidence for palaeoenvironments is a-plenty (fossils, sediment properties and structures etc.). Igneous rocks are a

bit more of a gamble. You will need to get your hand specimen work up to scratch, and contacts between igneous rocks are also seldom straightforward, as seen in IB map practicals. However, you will be able to say loads about petrology when you get thin sections cut.

“...the mapping was complex as the contacts were irregular. The igneous rocks themselves were quite complex so the thin sections were really interesting. It is as complicated as you make it!”

Isle of Rum, 2004

Metamorphic rocks are for the brave – the IB course does not cover metamorphics until Lent, long past the deadline for mapping forms. Structures within metamorphics are often reasonably clear, and can indicate the large-scale forces at play in the region.

With that in mind, pick some places!

Grab a map, and choose where to go! This is quite fun - I remember many evenings of discussion over Chinese food with my mapping team. Many people go abroad for their project; others stay in the UK. There are benefits to both mapping abroad and at home, which you will need to consider.

“...if possible take a chance to go abroad - although Britain does offer good geology and I found N. Wales very beautiful.”

Snowdonia, 2003

Good geology should be a priority - check the map room in the library for a glimpse of the geology you should expect in a potential area. A not-too-complex mix of lithologies and structures go well together. Another resource is the index of feedback on the Sedgwick Club website (that *someone* sorted out over the summer) - have a browse of it to see what mapping students thought of their area.

Consider the environment and climate of the area you’re looking at. For example, mapping in the Mediterranean may be a lovely thought but is in fact quite sweaty. The local flora and fauna may also be an obstacle to comfortable fieldwork.

“There are bears in the hills so if you’re scared like me it’s a bit tough. There are also super-sized mosquitoes.”

Alberta, 2002

Don't forget to make a rough estimate of your budget; you don't want to have massive overspending issues down the road. And throughout all this, keep your safety in mind. Before you head off into the field you'll need to produce a full risk assessment, so it's a good idea to have some idea of what hazards you may expect.

Having assembled a list, talk to people.

"...talk to as many people as possible and choose somewhere you feel comfortable with, not just somewhere exotic. And wherever you go you'll enjoy it however it goes."

Lake District, 2006

There's a list of lecturers and supervisors in one of the Project Guide appendices who will happily discuss a particular region or rock-type with you. If you're looking for sed, Neil's your guy. Planning on looking at France? Try Ed Tipper. Etc.

Another option is to talk to Sarah at the Earth Sciences Library, who can point you towards some third/fourth years, or can possibly contact past members of Department who can give you their two pence, especially if your area hasn't been mapped in the recent past.

If you're feeling brave, contact the local geologists - the Greek teams from 2006, 2016, and 2017 have all been well received by the Institute of Geological and Mineralogical Exploration for example. Even in the UK there may be some BGS geologists who can offer their advice. Local geologists can help sort accommodation and point you towards some prime mapping areas if you're lucky and well-received.

Check your areas on Google Earth.

If you want a nice experience mapping, then make sure that you have plenty of outcrop. Best way to do that is to google your area and stare at it really hard. If you can't see the rocks from space, you likely will have difficulty finding them in the field.

"Exposure, exposure, exposure! My map is predominantly inferred contacts, and its just a bit frustrating."

Norway, 2009

You should also keep an eye out for shear cliffs that may not be noticeable on a geological map, or other extreme topography which may render some exposure inaccessible.

Do not map in a forest.

Do not map in a forest. Plant detritus, soil, and things with six or more legs cover any rock that would normally be visible. You don't want to be doing field-work accompanied by a spade and leaf blower. Do not map in a forest.

"There were a large number of outcrops, but the area is covered in fairly dense forest so you trip over them rather than seeing them from distance."

Alberta, 2003

"Most of it was forested, and we relied a lot on boulders and cobbles in the roots of upturned trees. Luckily there was no glaciation this far south, so we were able to assume boulders were in place."

North Carolina, 2009

"Don't map in a forest. Ever. Even if the coastal exposure is good. 'cause then you have some twats with beachhouses."

Sweden, 2016

Mapping students' hatred of trees transcends generations. Do not map in a forest.

Check your areas' geopolitical climate.

"I'm a geologist doing a third-year project" is not a valid excuse for having an AK-47 pointed at you by the local revolutionary militia.

PHASE III: WHEN and HOW?

With all that in mind, determine when you're all free in the summer to map.

This is quite straightforward, unless there are some awkward internships in the way. Account for the climate too - you may want to start early or late to avoid heat.

Start gathering funds.

The Department and Colleges provide enough for a UK project, but there are other sources out there if you want to go further afield. Pooling cash is a great way to even out funding imbalances (although is a bit frowned upon by some fund givers). A list of funding sources is available on the library website.

"...we pooled all the money within the group as some colleges give more cash..."

France, 2006

A bit of a tedious stage, but make sure you keep an eye on deadlines. Some funding opportunities close quite early.

Look at accommodation options.

What accommodation you end up will depend on where you map. There has been a mixed variety of accommodation options in the past, so make sure you read the TripAdvisor reviews before heading off.

"The house was absolutely filthy. There were maggots, some tar-like substance and rotting food in the oven, earwigs, ants, spiders and other vermin in the entire house. The kitchen drawers had some sandy, tarry stuff in them containing living insects, and the floor had broken glass all over it. All five of us spent from 9am-6pm cleaning the house. Please do not spend money to stay at this accommodation."

Nova Scotia, 2010

"Brilliant place to stay, worked out about £9 per person per night for a very nice cottage with plenty of space to work, cook, eat, sleep and play cards. Wood burner in lounge kept it warm at night (its winter in South Africa during our summer...), and large barbecue area outside. Small infinity pool (not really big enough to swim much) was freezing. TV was temperamental but ok to play VHS and DVDs."

South Africa, 2010

Best also to check that the place you're planning to stay at is a) reasonably close to your field area, b) reasonably close to shops, and c) accessible from the

outside world.

Check that maps exist.

Maps are essential for a project (duh). Make sure that topographic maps exist so you can generate field slips from them. Ordnance Survey maps for example cover every part of the UK. Most countries have something similar - if you're unsure then contact local geologists who can provide you with maps. It's worth checking beforehand whether you'll need to use GPS alongside the maps, especially if they aren't of the best quality.

"GPS vital. We mapped on 1:5000 scale, and to be that accurate in terrain like we encountered there's no way (unless you're very good at triangulation) you can do it without GPS."

Greece, 2006

If you're struggling to find maps, you can also generate your own field slips from NASA Digital Elevation Models, which can be found from a link on the Sedgwick Club website. Students have also been known to map from satellite images, especially in topographically boring areas.

Submit your project area proposal, and good luck!

Not that you'll need luck. Unless you've ignored everything that the Department and your future project advisor has said to you, you should have a brilliant time out in the field, being independent and looking at amazing rocks.

"Take lots of music - after 5 weeks of the same three cds you will regret it!"

Spain, 2001

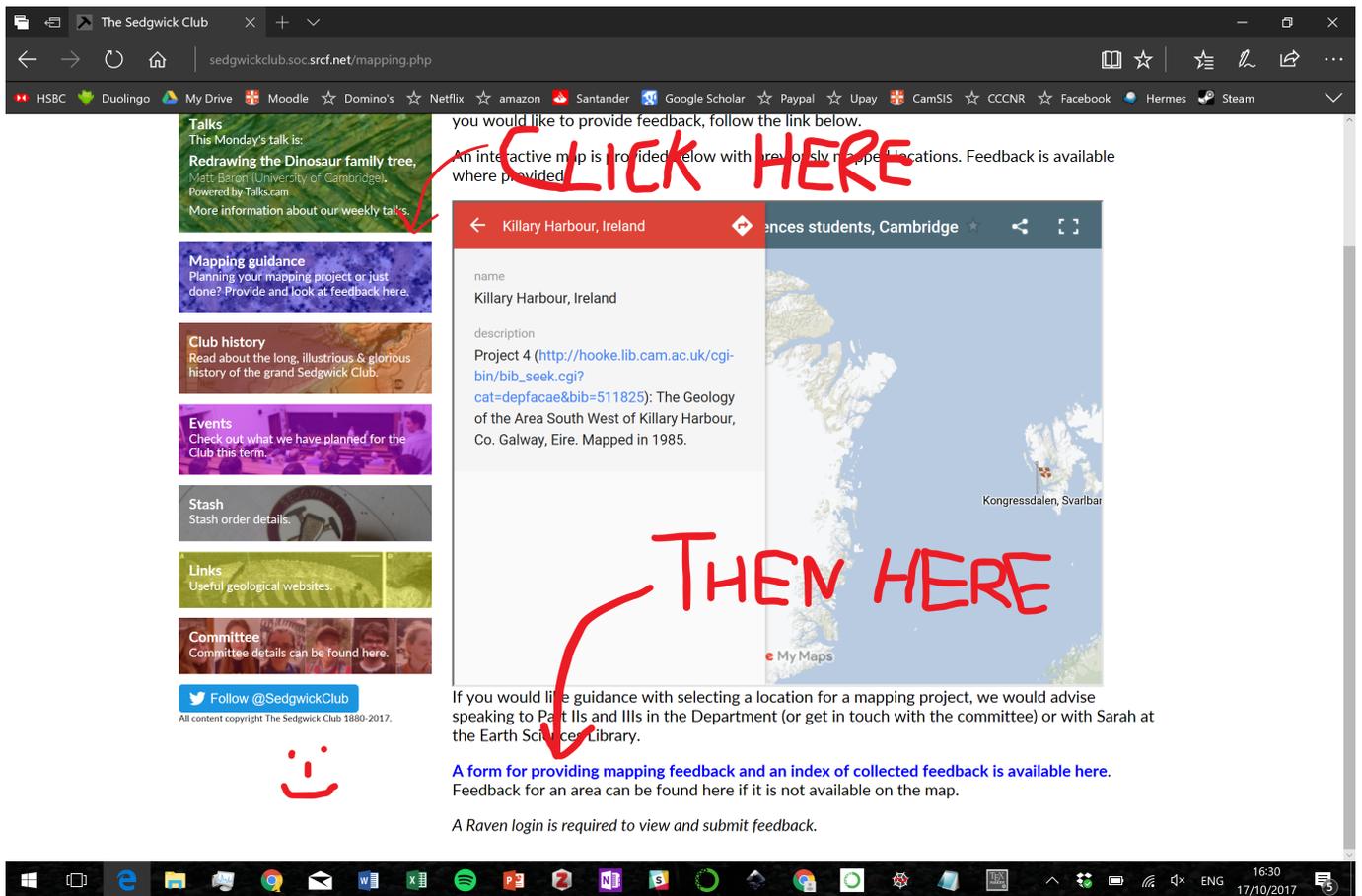
"Sheep ticks: turn them anticlockwise to get them out."

County Kerry, 2006

"Don't take going crazy personally. It happens to everyone."

Northwest Wales, 2004

Quotes are taken from feedback provided to the Club, available from the 'Mapping guidance' page on the Sedgwick Club website.



Top quality MS Paint guide to finding the mapping feedback part of our site. A Raven login (and at least two brain cells) are needed to get here. Feedback available is entirely dependent on feedback received, so if you're interested in mapping a past area then do badger Part IIs and IIIs if they mapped there.

The Editor thanks everyone who has contributed mapping feedback so far, and encourages those who haven't to do so.