

# WHAT DID WE DO BEFORE GIS? ARCHAEOLOGICAL SURVEY ON A NORWEGIAN SUMMER'S DAY...

July 27, 2013 Kevin Wooldridge Day of Archaeology 2013, Digital Archaeology, Excavation, Survey Archaeology, Excavation, GIS in archaeology, Norway

My contribution to the Day of Archaeology in 2011 was as part of a University of Nottingham field school in Bulgaria. Although still working for a university, this summer I am on a site in the west of Norway. This time the 'day job' rather than the interesting summer holiday project.



The Norwegian archaeology system bears many similarities to the UK, in that most developments are subject to evaluation, with planning consent often dependent on fulfilling an archaeological access condition. Unlike the UK however, only a limited number of organisations (mainly university museums) are legally allowed to undertake archaeological excavation in Norway. The country is divided up into areas based on the Norwegian county (fylke) system where a single museum has control of excavation. The University Museum, Bergen excavates in an area stretching along the Atlantic and North Sea coast from Ålesund down to just north of Haugesund and a couple of hundred kilometres inland into the mountainous and glacier area that lies between Oslo and Bergen, an administrative area roughly twice the size of Wales.

8am.... Our project involves the excavation of a site ahead of a housing development ...a type of project which many UK based archaeologists will be familiar with – well if anyone is still building houses in the UK that is!! We have been here since the end of April and will remain here until the end of August. This is the second season on the site – we came here for a brief 'look-see' last autumn, mainly to confirm the

findings of the site evaluation originally carried out in 2006. We have opened an area measuring about 10,000m<sup>2</sup> in 3 separate trenches.



For the most part the features on site are associated with agricultural occupation and use of the site – houses, cooking pits, cultivation and industrial activities but there are also a number of structures on the highest part of the site that we are tentatively interpreting as burial mounds, one of which has so far produced more than 30 stone loom weights.



The first discussion of the day, with the excavation field leader, is whether the two of us spend the day finishing excavation of one of the 'graves' or concentrate our activities on the lower site. The field leader is off on holiday next week, so we agree that she should spend part of the day finishing excavation of features in the lower field and maybe making a dent in the rapidly expanding record backlog...

Today our project has 4 staff working, myself, the field leader and two assistants – 2 others are on leave. Our background is definitely international. I am British, my 5 colleagues are Norwegian and we have a Danish project manager. Last year's field assistant was Swedish, we had another Brit working on the earliest phase of this year's fieldwork and recently lost our Irish-American back to the call of the wilds of the northeast US. As in the UK demand for work as an archaeologist exceeds the number of jobs available and there is much discussion both locally and nationally about the treatment of staff on short term contracts...



My job is to try and make some sense of the site survey and recording systems. We use the *Intrasis* GIS system (developed by the Swedish Antiquities Board) as our main recording medium, but there is also a large ArcGIS component in the day to day survey work. I am currently using a Leica 1205 robotic total station and the accompanying Leica Geo-office software. It's nice kit and up to everything we ask of it, although I do have a sneaking preference for the Trimble equivalent. There is something about the synthesized voice on the Trimble thanking you for every 'observation stored' that endears even the most skeptical surveyor to the yellow goddess. All site photography these days is by digital camera and we download survey and photographic record to two lap-top computers with an external hard drive as back-up. The project is very keen to integrate the site records into the *Intrasis* database as soon as possible so we have an A3 format scanner on site for record sheets and drawn plans. There is also a comprehensive feature and topographic survey created through the total station.



10am... Our museum has another project of similar size and duration to ours running at a site about 150km to the south of us that is also using the full-on *Intrasis* package. I am in contact with the site surveyor most days exchanging *Intrasis* and survey equipment battle experiences and sometimes just because it's good to talk!! A useful way of ironing out bugs in the system and sometimes occasionally sharing good ideas. So around tea-break today the first message of the day – a short discussion on whether anything is happening in Bergen this coming weekend... an update on local weather conditions... and of course being archaeologists, any recent gossip!! All quiet on the gossip front.

I am a big fan of GIS in archaeology; it seems to me the natural destination for the single context stratigraphic recording system. And at present here in Norway the colour of the GIS money is *Intrasis*. I do wish sometimes that more of my Norwegian colleagues would pay heed to the principles that underpin stratigraphic excavation and recording, as I see so much time wasted trying to integrate a modern GIS with excavation techniques that metaphorically and literally came out of the archaeological stone-age. But I am allowed I think (due to my great age) some leeway to moan about archaeological methodology.



One aspect often overlooked regarding the use of GIS directly on site is the need to define/redfine site responsibilities. The use of GIS shifts the balance of the work split between excavation and post-excavation and creates an interesting frisson between the site surveyor/GIS supervisor and the excavation field leader. Greater resources are required at the section face to collect and collate data, but this is more than repaid by savings in the time it no longer takes in 'routine' post-excavation tasks e.g compiling indexes and lists, digitizing the drawn record, cross referencing data, establishing inter-relationships between the site data. Physically creating a Harris matrix for example becomes redundant when every context relationship is already logged in the site database. Any questions which used to be asked of the site matrix can now be answered by simple Boolean querying of the integrated database. In fact GIS allows a greater degree of detail in context relationships than was ever possible using the traditional Harris matrix, to the extent that *Intrasis* allows realtionships to be entered (and retrieved) based upon spatial and/or contextual and/or stratigraphic definition.



Sure things aren't always perfect, but they could be a lot worse... which brings me to the weather. I need to mention something about the weather. Bergen and the west coast of Norway in general is famed for its wet weather. It is claimed it rains 250 days a year in Bergen and there is a local joke that there is no such thing as bad weather only bad wet weather gear!! But the last week we have had temperatures of 30° during the working day.

12pm... lunchtime and visitors. As it is Friday (and 30°) we decide that we and the visitors need ice-cream, so drive into the nearest town. Our usual car-park is crowded with Swedish coaches and I wonder aloud why Swedish tourists are so keen on holidaying in Norway. I'm told that one of the fascinations is actually seeing a sea with tides, but am not sure whether my Norwegian colleagues are making it up. Last night the Norwegian women's football team got through to the final of the European championship where they will play Germany. The ice-cream shop is displaying the headline in today's VG newspaper... 'Achtung!!'. The UK is clearly not the only country to have 'imaginative' gutter-press headline writers....



3.30pm... another day/week is over. My colleagues are all away for the weekend, leaving me alone in our rental house. Plan an evening of G&T, fish and chips, laundry, the Archers and a late night movie, but Friday evening turned into a 'Thor's Hammer' of a thunderstorm, losing TV and internet contact. I now know what the end of the world will be like!! So I will write my Day of Archaeology blog instead...

