

YORKSHIRE GEOLOGICAL SOCIETY

President: Professor Paul Wignall



THE LAST GLACIAL MAXIMUM

14.00 - 17.00 Saturday 24th October 2009

Department of Geography, University of Hull

Speakers: Dick Mol, Ian Heppenstall, Jane Bunting, David Bridgeland

9.00 - 16.30 Sunday 25th October 2009

The raised beaches of South Landing and Danes Dykes. Leader: Ian Heppenstall

A JOINT MEETING WITH HULL GEOLOGICAL SOCIETY



THE LAST GLACIAL MAXIMUM

Saturday 24th October 2009, Department of Geography, University of Hull
A JOINT MEETING WITH HULL GEOLOGICAL SOCIETY

- 14.00 - 14.05 **Society Business**
Paul Wignall, President
- 14.05 -14.35 **The North Sea: A treasure trove for
Pleistocene vertebrate palaeontology and archaeology**
Dick Mol, Natural History Museum, Rotterdam, Netherlands
- 14.35 - 15.05 **The Last Glacial Maximum: raised beaches and glacial deposits
at South Landing and Danes Dyke, near Flamborough**
Ian Heppenstall, Hull Geological Society
- 15.05 - 15.50 **Tea Break**
- 15.50 - 16.20 **After the Ice: the recolonisation of Holderness**
Jane Bunting, University of Hull
- 16.20 - 16.50 **Evolution of the Humber Drainage System in response to
Devensian Deglaciation: data from the Swale–Ure Washlands
and the Trent Palaeolithic Aggregates Levy projects**
David Bridgeland, University of Durham
- 16.50 - 17.00 **Closing remarks**



FIELD TRIP - THE RAISED BEACHES OF SOUTH LANDING AND DANES DYKES

9.00 - 15.30 Sunday 25th October 2009

Leader: Ian Heppenstall, Hull Geological Society

Meet at outside Hull University on Cottingham Road at 09.00, leaving at 09.30, arriving at South landing car park 10.30. For people from other areas please allow sufficient time to arrive so that the visit can start at 10.45. **(Please note that the cafe, toilets and parking meter were recently burnt down or vandalised and facilities may not be available. There are some trees and bushes.)** Suitable clothing for the weather should be worn or carried. For further information or to book a place please contact Mike Horne on 01482 346784 (evenings).

This meeting counts as 3 hours (Saturday) & 7 hours (Sunday) of Continuous Professional Development under the Geological Society CPD scheme



THE NORTH SEA: A TREASURE TROVE FOR PLEISTOCENE VERTEBRATE PALAEOLOGY AND ARCHAEOLOGY

Dick Mol, Natural History Museum, Rotterdam

Although the woolly mammoth is certainly the most well known icon from the Ice Age, he was not the only inhabitant of that era. The woolly rhino and the saber-toothed cat roamed Northern Europe as well, in the shade of their mammoth companions. These species lived in the lowlands between the British Isles and the Netherlands, and their fossil remains are uncovered on a daily basis. During the Ice Age, the bottom of the North Sea used to be a vast plain, a delta of the River Meuse and the Thames, which we recognize today as the Mammoth Steppe.

Over the last few decades, close collaboration between the fishermen of the North Sea and scientists has resulted in a complete overview of what used to be the vast plains of the Ice Age. The flora and fauna of that time are now fully mapped and still educate us today.

Apart from the animal remains, it is evidently clear that man used to be part of the Mammoth Steppe. Until about 8,000 years ago, when the North Sea reached its current sea-level, man lived in these lowlands. In this talk I will not only discuss the paleontological facts, but will also deal with the archeological value of this part of Northern Europe, in which man was an important player: Middle-Paleolithic artifacts from several sites of the plains of the North Sea, such as remarkable axes, will be on display for the first time in history. These sites can now be identified for certain as the home of the Neanderthals.

Furthermore, this account will not only deal with the Middle-Paleolithic component of the North Sea. Artifacts from the Mesolithic Age will also be discussed, as well as Mesolithic human remains. Moreover, several Neolithic axes provide proof of transport routes between Great Britain and the European mainland during the Ice Age.



THE LAST GLACIAL MAXIMUM: RAISED BEACHES AND GLACIAL DEPOSITS AT SOUTH LANDING AND DANES DYKE, NEAR FLAMBOROUGH

I. E. Heppenstall, Hull Geological Society

The raised beach and glacial deposits adjacent to the Sewerby Buried Cliff and those at Hessle are well documented but there are few mentions of deposits at the two major inlets on the coast to the south of Flamborough Head, namely the South Sea Landing and Danes Dyke. They are both documented as stream cut ravines in the glacial deposits of boulder clay filling former valleys in the chalk but there seem to have been few investigations of the nature of the two valleys or of any other deposits associated with them.

In 2002 when attending a course entitled "A second look at the Landscape of Bridlington and its Coastline" a field trip was made to South Landing and the course tutor, Richard Myerscough asked if there was anything unusual about the cliffs on the west side of the landing. It was immediately apparent that a wave cut platform higher in part by about 1 metre than the present day platform and at right angles to the beach could be seen disappearing beneath the glacial deposits and associated with this there is a raised beach made of sea washed, flattened chalk boulders similar to but above those of the modern beach. Other layers are were also noticeable and the line of an old cliff also disappeared beneath the glacial deposits. With this in mind and remembering something similar at Danes Dyke I returned to Flamborough on 22nd. May 2002 and made drawings, took photographs and made notes of the west side of South Landing and both sides of Danes Dyke. The east side of and adjacent to South Landing was then covered by slumped boulder clay and nothing of any notable nature was recorded.

Having written my report entitle "The Ipswichian Buried Cliff, are there more Exposures" I contacted Mike Home and advised him of my findings and conclusions and on visiting South Landing with Richard himself and examining the deposits on both sides of the Landing he called back and told me that there we were looking at a whole series of deposits covering a distance of over 1/8 of a mile (230 metres approx.). Following this a Quaternary Research Group was establish and frequent visits have been made to South Landing, Danes Dyke and Sewerby since then, measuring and recording the measurements of the layers as they are slowly eroded back.

At South Landing there is either a bay or a truncated valley which has previously been invaded by the sea, leaving an old shore line with cliffs, wave cut platforms and raised beach layers, and subsequently filled by interglacial or glacial deposits including rolled, rounded boulders, chalk wash, head or gravels and then covered by glacial tills or boulder clays. Between the raised beach and covering deposits is a layer of calcrete with numerous large and small chalk and various erratic inclusions plus, in some detached calcrete slabs, solidified sand lenses. A similar situation can be found at Danes Dyke, but on a smaller scale as there a narrower, round bottomed valley has been invaded by the sea and then infilled by glacial deposits which have since been eroded out by the present day stream.

The only noteworthy references which I have found are:

Dakyns, J.R., 1879, in Proceedings of the Yorkshire Geological society, Vol. VII 1878-1881 pp246-252: "Glacial Deposits North of Bridlington"

Whitham, F., 2000, in Rawson, P.F. and Wright, J. K.; "The Yorkshire Coast": "Itinerary 13, South Landing to Sewerby Steps". London, The Geologists' Association, guide No. 14

Young, Stephen, 1978; "Geology of the Yorkshire Coast, Whitby to Bridlington".

Clapham, North Yorkshire, Dalesman Books (now available only in libraries or second hand).



AFTER THE ICE: THE RECOLONISATION OF HOLDERNESS

Jane Bunting of the University of Hull

When the ice sheets retreated, the landscape of Holderness was open for colonisation by plants and animals. In the late- and early post-glacial periods, lower sea-levels mean that Holderness was an area of higher land on the edge of a river plain connecting mainland Britain to Europe, so studying events in Holderness provides some insight into the drowned landscapes of the southern North Sea, as well as the dynamics of Holderness itself. Climate oscillations, the recolonisation of Britain by trees migrating back from their glacial refugia and the arrival of human settlers all contribute to the landscape signals preserved in the sediments of the many former meres and bogs scattered across the landscape. This talk will briefly review the evidence for landscape, environment and human communities in Holderness from the late-glacial period to the onset of farming.



EVOLUTION OF THE HUMBER DRAINAGE SYSTEM IN RESPONSE TO DEVENSIAN DEGLACIATION: DATA FROM THE SWALE-URE WASHLANDS AND THE TRENT PALAEOLITHIC AGGREGATES LEVY PROJECTS

David Bridgeland of the University of Durham

The Humber estuary currently carries eastern Pennine drainage via the Yorkshire Ouse system as well as Britain's third largest river, the Trent, which joins from the south, almost as though it were a tributary. In fact, prior to the Devensian the Trent flowed via Lincoln to the Wash, only joining the Humber, it would seem, as the ice disappeared and Lake Humber emptied. These two halves of the Humber system allow a unique comparison to be made between the areas inside and outside of the last glacial limit, since the Trent was largely unglaciated during the Devensian. Thus the Trent has a river-terrace record going back to the Middle Pleistocene, whereas the Ure, Swale and other Ouse-system records begin with Devensian deglaciation. Nevertheless, these rivers also have notable terrace systems, superficially, at least, similar to those from beyond the Devensian limit. Importantly, however, there is considerable difference in the disposition of the post-LGM fluvial deposits in these two subsystems. In the Ure and Swale there are modest terrace staircases, commencing with full glacial deposits that stand up to 30m above the modern floodplain. In the Trent, in contrast, last glacial gravels form the floor of the modern floodplain, with Holocene sediments emplaced directly above them. Thus there is little or no post-LGM incision in the Trent, whereas in the Ure and Swale several incision events are recorded, continuing into the later stages of the Holocene. Wider comparison reveals that the Ure is an exemplar for other sequences within the MIS 2 limit, whereas systems beyond this glaciation typically have last glacial sediments beneath their modern floodplains and show little evidence of post-Devensian incision. The various possible explanations of these differences will be discussed, with emphasis placed on glacio-isostatic uplift of areas glaciated during MIS 2 as the main reason for the significant post-glacial incision that typifies valleys in such regions.

DISPLAYS

Display of bones and shells from the Kelsey Hill and Keyingham Gravel Pits by Stephen Whittaker.
Display of research carried out at Flamborough Head by the Flamborough Quaternary Research Group of the Hull Geological Society.



THE RAISED BEACHES OF SOUTH LANDING AND DANES DYKE

Sunday 25th October

Joint field meeting with the Hull Geological Society

Leader: Ian Heppenstall.

Meet at outside Hull University on Cottingham Road at 0900, leaving at 0930, arriving at South landing car park 1030. For people from other areas please allow sufficient time to arrive so that the visit can start at 1045. **(Please note that the cafe, toilets and parking meter were recently burnt down or vandalised and facilities may not be available. There are some trees and bushes.)**

On the beach we will head for East Nook and after having a brief look at the mediaeval harbour will walk along the cliff side in order to take in the various layer formations eventually reaching the raised beach layer. As there are continual seasonal boulder clay slumps along this cliff it is not possible to predict its condition. After passing the South Landing ravine more layers, including the raised beach, calccrete layer and chalk wash layers become easier to view along with an ancient wave cut platform and cliff line receding into the cliff. The section ends at West Nook. In the vicinity of the ravine it is possible, under some conditions, to pick out the line of a probable fault in the rocks crossing the beach.

Following an hour for lunch we will then proceed to Danes Dyke where another section of raised beach and associated layers are also visible. As the section in the cliff is much narrower it is easier to stand back on the beach and view the section as a whole. Once again the condition of the cliff is influential in the visibility of layers but the raised beach, Danes Dyke fault and other features should be easy to see. If the beach has been swept clean of sand by the sea then the fault may be visible in the rocks crossing the beach.

After Danes Dyke, providing that there is sufficient time, it may be possible to fit in a brief visit to the Sewerby Buried Cliff for comparison; otherwise the visit will end at the Danes Dyke car park so that people may make their way home.

Members should be equipped with safety helmet, waterproof, walking boots, warm clothing, packed lunch and drink. Hammering is not permitted but loose material may be collected. There are steep footpaths to and from the beach. Some sections of the beach may be stony or rocky or rocks may be covered in seaweed so care must be taken when crossing these areas and a walking stick may be handy.

Please Note: For further information or to book a place please contact Mike Horne on **01482 346784** (evenings). If you would like a lift or can offer other members a lift please let Mike know. Unless stated, booking is not essential, but it does help the leader of the meeting organise the event if we have an idea of the number of people who plan to attend.



BCRA

21st British Cave Research Association Cave Science Symposium
Saturday 6th March 2010

21st British Cave Research Association Cave Science Symposium

Saturday 6th March 2010
University of Bristol

With a Cave Science Field Trip on Sunday 7 March
to Gough's Cave, Cheddar.

Presentations are invited on any cave science topic. Those that fall within one of the four BCRA cave science themes will be especially welcome (see the cave science policy via www.bcra.org.uk/detail/cstri_info.html), as will those from undergraduates and other students. This year's special theme will be *'The science and archaeology of the Mendip caves'*.

Further information, including directions to the venue will appear on the BCRA website www.bcra.org.uk as the Symposium approaches.



NEW MEMBERS

Dr Christine Connolly
Miss Lisa Craddock
Mr Sam Wiltshire

Wakefield
Rotherham
Keighley

Ordinary membership
Student
Student

JACK HARTLEY

The General Secretary has been informed of the passing of Jack Hartley of Leeds. He was a life member and had joined the YGS in 1946. Jack served on Council as our Librarian from 1959 to 1984.



PRESIDENT'S DAY - AGM

Saturday 28th November 2009

PROGRAMME

- 11.00 - 1.00 AGM Council Meeting (Snell Building) - Council members only.
1.30 - 2.00 Tea / Coffee / Mince Pies (Dining Room).
2.00 - 3.00 AGM & Presentations (Fountain's Lecture Theatre).
3.00 - 4.00 Presidential Address: Mass Extinctions (Fountain's Lecture Theatre).

Ticket required for events below

- 4.30 - 5.00 President's Reception (Skell Building*): Menu on page 9.
5.00 - 6.30 Buffet & Speeches (Skell Building*).*
7.00 Close

Tickets £26.00 per person. Please note price change from circular 554.

Tickets can be obtained for the Reception & Buffet from the General Secretary, Dr Trevor Morse, 19 Thorngate, Barnard Castle, Co. Durham, DL12 8QB. Cheques made payable to the Yorkshire Geological Society.

Tickets only issued on receipt of a cheque and your address, please.

* New Venue.



MENU 2009

THE PRESIDENT'S RECEPTION

Two glasses of house wine and soft drinks,
served with a selection of canapes

BUFFET

Sliced roast beef with beetroot and horseradish relish

Roast turkey breast and cranberry sauce

Yorkshire blue cheese and tomato quiche

• • •

Served with a selection of salads

• • •

Citrus tartlet garnished with fresh fruit raspberry sauce

• • •

Tea and coffee



Fig.1. The large pipe in Flixton Quarry - View north.



Fig.2. One of the smaller pipes at the top of the quarry just below the natural ground surface.

Cemented flint breccias which appear to fill pipes and fissures in the Yorkshire Chalk, and weather out as “Fairy Stones”, have been recognised for well over a century (Mortimer 1885, Gobbett 2006). Excavation in the large quarry on the Wolds plateau above Flixton worked by Brown and Sons has exposed a number of pipes, the largest of which is about 8 metres in diameter and about 25 metres deep. However, only the smaller ones are currently accessible. These are about 1 metre in diameter and are filled with uncemented and unsorted angular flint and chalk clasts ranging from 2 -200mm across in a reddish brown matrix of clayey silt, and fine-grained sand composed of yellow quartz and iron oxide grains. Some of the flint appears to be desilicified and has a sugary appearance. No organic remains have been identified. At least some of the fill of the large pipe appears similar. This sediment is comparable to the clay-with-flints recorded from Staxton and elsewhere on the Yorkshire Wolds by Matthews(1977). The fill of the large pipe may repay further study once it becomes approachable in reasonable safety.

References

- Gobbett, D.J. 2006, St. Austin and the Fairy: a tale of two RIGS. *Humberside Geologist*, **14**, 33-38
- Matthews, B. 1977, Clay-with Flints on the Yorkshire and Lincolnshire Wolds. *Proceedings of the Yorkshire Geological Society*, **41**, 231-9
- Mortimer, J.R. 1885 On the origin of the chalk dales of Yorkshire. *Proceedings of the Yorkshire Geological Society*, **9**, 29-42



BOOK REVIEW

A BUILDING STONES GUIDE TO CENTRAL MANCHESTER FOUR WALKS THROUGH THE CITY CENTRE by Morven Simpson & Fred Broadhurst

2nd Edition 2008

Manchester Geological Association

Life does seem to have its patterns. In June 1967 I graduated as a very green geologist from Manchester University having been taught by Morven Simpson and Fred Broadhurst. Forty two years later and almost to the day, I find myself back in Manchester on a very hot June day practically reviewing the 2nd edition of their publication *A Building Stones Guide to Central Manchester*.

Central Manchester in 2009 turned out to be a complete contrast to the city I had known between 1964 and 1967. Then the city was very black and soot encrusted with over 100 years of industrial and domestic pollution, the streets grubby and rather seedy, and the whole exuding a general air of neglect. Forty two years later this is now a vibrant city with an active programme of cleaning and renewal of the grand Victorian and Edwardian buildings, exciting interesting open spaces used by Mancunians and visitors, and a dynamic programme of new building projects.

This busy rejuvenated city centre is the very back-drop to the small but detailed publication produced by Morven and Fred. Following the four itineraries set out in the guide, the trails combine the older grander 19th century buildings now hardly recognisable in their cleaned up state and the bright skilful use of "exotic" dimensional and ornamental stone in the new buildings. The security man at one newly opened building (wonderfully finished Portland Stone!), a born and bred Mancunian, told me that as a boy he'd always believed that the Cathedral was built from smoke blackened brick and was surprised and delighted at the stonework when it was cleaned! The general interest that the security and desk staff took in the buildings where they worked and this building stones guide was a delightful feature of this exploratory visit.

Having followed the four itineraries I am in admiration of the detailed work and ordered approach achieved by the authors in what could have been a difficult situation. There is so much interesting use of stone in the buildings of Central Manchester and it must have been a real problem of what to leave in the guide and what to ignore. Certainly you could be critical and say "why was this building left out and that one put in" but I believe that the authors have achieved a general overall balance in the stone types used and displayed. One of the major problems is that this city centre and others in this country are in a constant state of change with demolition, new buildings or frontages re-clad. It certainly set me thinking that the stone work of changing city centres could and should be recorded for posterity.

Back to original the theme of life coming full circle. In 1967 I wasn't particularly interested in building stones either in Manchester or elsewhere, wanting to follow research in palaeontology (influenced by Fred Broadhurst!). Now after an academic career as a palaeontologist, geologist etc, I find myself still continuing work - but now in building stone research and renewal!

This small informative and interesting guide is to be highly recommended. However take my advice and don't attempt the four itineraries all on the same hot day in June as I did. It took me a further 48 hours to recover from pounding the unforgiving streets of Manchester!!

John R Senior



THE PREHISTORY OF THE YORKSHIRE DALES

A one-day conference to be held in the Devonshire Institute (Town Hall) Grassington, on Saturday 31st October 2009

9.30am - 5.00pm

Speakers will include:

Terry O'Connor, Roger Jacobi, Tom Lord, Alan King, Mark Simpson, Tim Laurie, Roger Martlew and Robert White

Delegates should make their own arrangements for lunch. A small charge is payable for the conference, further detail are available by e-mail: place@yorks.ac.uk

Cheques should be payable to 'PLACE' and bookings sent to: Dr Margaret Atherden, PLACE Office, York St John University, Lord Mayor's Walk, York, YO31 7EX.



CORRESPONDING SOCIETIES

Contact society representatives for the latest information

CRAVEN & PENDLE GEOLOGICAL SOCIETY

Contact: Paul Kabrna, tel: 01282 813772; e-mail: paul_kabrna@msn.com or www.cpgs.org.uk
Venue: Rainhall Centre, Barnoldswick.

Turbulence, displacement, Death, and Worms:

Friday 13th November

Molluscs in the Millstone Grit

Ian Kane Ph.D., Leeds University

Rhyolite Glaciovolcanism at Oraefajökull Volcano, SE Iceland:

Friday 11th December

a window on Quaternary climate change

Angela Walker BSc (Hons), Manchester University

EAST MIDLANDS GEOLOGICAL SOCIETY

Janet Slatter, tel. 01509-843.297; e-mail: sec@emgs.org.uk or www.emgs.org.uk
Venue: Lecture Theatre B3, Biological Sciences Building, University of Nottingham

Charles Darwin (1809-1882) - a Mercian 'Glacial' Geologist

Saturday 14th November

Peter Worsley

My house fell in a hole - problems with soluble rocks

Saturday 12th December

Followed by our Christmas cheese and wine evening

Anthony Cooper



CORRESPONDING SOCIETIES

Contact society representatives for the latest information

HUDDERSFIELD GEOLOGY GROUP

Julie Earnshaw (Secretary). Telephone: 01484 311 662 or e-mail: earniehome@ntlworld.com

Member's short talks: offer a 10-15 minute talk on your pet subject.

Monday 9th November

We all want to hear about your enthusiasms!

Please let Alison know (01484 608004) if you would be interested in giving a talk.

Annual General Meeting

Monday 7th December

Followed by meal at the Cropper's Arms, Marsh, Huddersfield (SE 128 173).

Phone Alison on 01484 608004 at least a week before if you want to book a meal.

LEEDS GEOLOGICAL ASSOCIATION

Anthea Brigstocke (General Secretary). Tel: 01904 626 013; E-mail: abrigstocke@hotmail.com or www.leedsgeolassoc.freeserve.co.uk Venue: Mathematics & Earth Sciences, University of Leeds)

Plate tectonics and Human Evolution

Thursday 12th November

Prof Geoffrey Bailey, Dept of Archaeology, York University

AGM and Conversazione

Thursday 10th December

Short Talks and Displays by Members

LEICESTER LITERARY & PHILOSOPHICAL SOCIETY SECTION C (GEOLOGY)

Chairman: Dr Joanne Norris. Tel: 0116 283 3127, e-mail: j.e.norris@ntlworld.com, www.charnia.org.uk/
Venue: Ken Edwards Building, University of Leicester

Rebuilding Afghanistan through Geoscience.

Wednesday 4th November

Professor Mike Petterson, Dept. of Geology, University of Leicester

Permian extinctions

Wednesday 18th November

Professor Paul Wignall, School of Earth and Environment, University of Leeds

MANCHESTER GEOLOGICAL ASSOCIATION

Jane Michael. Tel: 0161 366 0595, e-mail: outdoor@mangeolassoc.org.uk or www.mangeolassoc.org.uk
Venue: Williamson Building, Department of Geology, University of Manchester

Darwin and the Voyage of the Beagle

Saturday 21st November

Please book a place as this is expected to be a popular event and space is limited in the lecture theatre - email lectures@mangeolassoc.org.uk

Volcanoes and Volcanic Hazards

Saturday 12th December

Submarine Volcanism in the Western Pacific - Dr: Peter Floyd, University of Keele

Volcan de Colima, Mexico - Dr: John Stevenson, University of Manchester

Iceland - Dr: Dave McGarvie, The Open University



CORRESPONDING SOCIETIES

Contact society representatives for the latest information

NORTH EASTERN GEOLOGICAL SOCIETY

Mavis Gill. Tel: 01207 545907, e-mail mavisgill@btinternet.com or www.northeast-geolsoc.50megs.com

Title to be announced

Dr Michael Lim, University of Durham

Tuesday 17th November

Title to be announced

Dr Steve Arnott, University of Leeds

Tuesday 15th December

NORTH STAFFORDSHIRE GROUP OF THE GEOLOGISTS' ASSOCIATION

Eileen Fraser Tel: 01260 271505 email: fraser@fraserco.co.uk or www.esci.keele.ac.uk/nsग्ga/
Venue: School of Earth Sciences and Geography, University of Keele

The Professor Wolverson Cope Annual Lecture:

Charles Darwin, the Beagle and Quaternary geology

Professor Peter Worsley, University of Reading

Thursday 12th November

WESTMORLAND GEOLOGICAL SOCIETY

E-mail: mail@westmorlandgeolsoc.org.uk, westmorlandgeolsoc.org.uk/
Venue: Shakespeare Centre, Kendal

**Mid-ocean ridges, black smokers, strange animal communities
and the origin of life?**

Professor Joe Cann, WGS

Wednesday 18th November

Jacob's Join with members' talks

Wednesday 16th December



SUBMISSION OF PAPERS

Manuscripts for publication in the Proceedings should be submitted to 'The Editors, Proceedings of the Yorkshire Geological Society, Geological Society Publishing House, Unit 7, Brassmill Lane Enterprise Centre, Brassmill Lane, BATH, BA1 3JN'. Typescripts should be prepared using the updated instructions for authors given on the inside back cover of the latest issue (Volume 57 Part 1, November 2008).

Publication of manuscripts may be expected in the next, or next but one part, following acceptance. The Proceedings will be abstracted and/or indexed in, GeoArchive, GeoRef, Geobase, Geological Abstracts and Mineralogical Abstracts, Research Alert and Science Citation Index Expanded (SCIE).

COPY FOR CIRCULAR

Copy deadline for Circular 556 is the 2nd November 2009

NEXT YGS MEETINGS

28th November - Presidential Address: Mass Extinctions,
AGM and President's Day, York

CONTACTS

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THE LAST GLACIAL MAXIMUM

14.00 - 17.00 Saturday 24th October 2009

Department of Geography, University of Hull

Speakers: Dick Mol, Ian Heppenstall, Jane Bunting, David Bridgeland

9.00 - 16.30 Sunday 25th October 2009

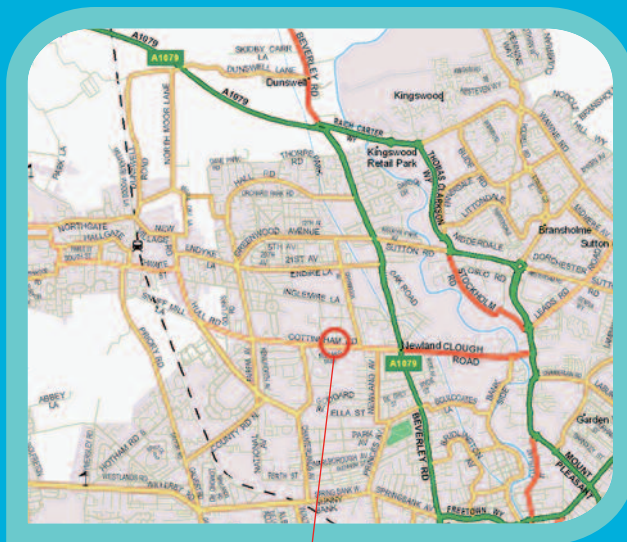
The raised beaches of South Landing and Danes Dykes. Leader: Ian Heppenstall

This meeting counts as 3 hours (Saturday) & 7 hours (Sunday) of

Continuous Professional Development under the Geological Society CPD scheme

A JOINT MEETING WITH HULL GEOLOGICAL SOCIETY

Please Note: Articles and opinions published in the YGS Circular reflect the view of the individuals writing those parts of the Circular and in no way necessarily reflect the view of Council or of the Society as a whole.



○ Department of Geography, University of Hull