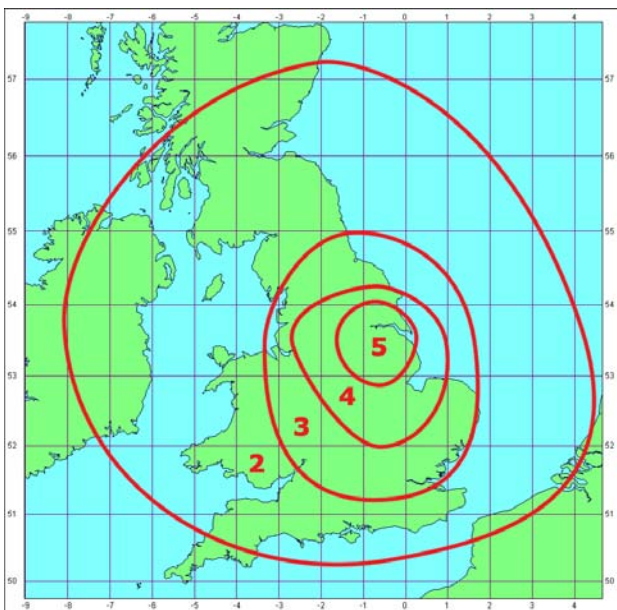




Newsletter January - March 2008 Issue no. 17

Lincolnshire Earthquake



Preliminary macroseismic map showing the [EMS Intensities](#) for the Market Rasen earthquake of 27 February 2008.

The largest UK earthquake for nearly 25 years occurred on the 27th February in Market Rasen, Lincolnshire. With a magnitude of 5.2 on the Richter scale, the earthquake was felt over much of the UK, even though it occurred at 00.56 GMT. A preliminary iso-seismal map, which records the intensity of deformation derived from responses to a British Geological Survey questionnaire, shows that the eastern part of Ireland falls within a low intensity zone

in which the earthquake is ‘scarcely felt’ and ‘vibration is felt only by individual people at rest in houses, especially on upper floors of buildings’. One geologist based in Dublin felt ground motion whilst lying in bed at 00.58 GMT, suggesting a travel time which is in agreement with the earthquake occurrence! The earthquake was characterised by strike-slip motion on either a N-S or E-W striking fault at a depth of 18.5km. The associated fault has yet to be identified, but potential candidates include Carboniferous normal faults or Caledonian strike-slip faults. Further details about the earthquake are available at: <http://www.earthquakes.bgs.ac.uk/>.

John Walsh (Fault Analysis Group, UCD School of Geological Sciences, University College Dublin)

New Quarry Regulations

Safety, Health and Welfare at Work (Quarries) Regulations 2008 (S.I. No. 28 of 2008)

The new quarry regulations in respect of health and safety were signed into law on the 14th February, 2008 and will come into effect as of the 1st of May 2008. The relevant legislation outlining the new regulations is Statutory Instrument (S.I.) No. 28 of 2008 and S.I. 29 of 2008 which repeals the areas relevant to quarries in the Mines and Quarries Act of 1965.

The new regulations include a general duty to ensure the safety of excavations, tips and lagoons and require an appraisal to be undertaken by a competent person of the safety of proposed and existing excavations, tips and lagoons. Where required, a full geotechnical assessment is to be undertaken by a geotechnical specialist. The requirements of the geotechnical assessment are outlined in paragraph 55 and Schedule 3 of S.I. 28. A geotechnical specialist is defined as “a professional engineer or professional geologist competent to carry out a geotechnical assessment under Part 6” of S.I. 28.

John Kelly JBA Ltd, IGI Board Member

Aggregate Industry News

Both Tanaiste Brian Cowen and Tom Parlon (CEO - Construction Industry Federation) have recently said that the sustainable level of new homebuilding is “in the region of 60,000 – 70,000 units per year” and “medium-term demand lies in the region of 65,000 annually”, respectively.

But is there such a demand in the immediate term? There has been a noticeable downturn in concrete production, in particular **block** production in the latter quarter of 2007, which has continued into 2008. Furthermore, cement sales are down around four to five per cent over the same period.

Approximately 30 million tonnes of aggregate were necessary to feed construction in the residential sector in 2006 (based on 90,000 units and 350 tonnes per unit average). In 2008, it is estimated that 45,000 units will be rolled out, therefore reducing aggregate demand by about 15 million tonnes.

However, despite this ‘slow-down’ an upturn is expected in 2009 as confidence returns. It is reported that demand for aggregate products in Ireland is at an all time high. In 2006, around 150 million tonnes of aggregates were necessary to feed demand in Ireland. It is expected that this demand will, in general be maintained to 2021. At 32 to 35 tonnes of aggregate per capita per annum, this is approximately four times the EU average and is a clear indication of the strength of the Irish Construction Sector and in particular of our infrastructural requirements.

The National Development Plan, National Spatial Strategy, Transport 21 etc. led the GSI in 2006 to estimate a need for over 2 billion tonnes of aggregates over the 15 years to 2021. It is important to note that the overall demand for aggregates will not be significantly reduced by a slowdown in the Housing Sector.

A short note regarding rural demand for aggregates; as farmyards are being upgraded by requirements under the Nitrates Directive etc., a significant downturn in aggregate demand has not been noticed, except in the demand for blocks. However, a decrease in aggregate demand may be noticed towards the end of 2008 as the demand for slatted units, effluent tanks etc. will be reduced as these upgrades are expected to be completed.

Barry Balding, Golder Associates, IGI Board member

The Tellus Effect – increased licensing in Northern Ireland

In the IGI Newsletter for March - April 2005 (Issue 6), the Tellus project was introduced. That article laid out the scope and remit of the project - a high-resolution geochemical and airborne geophysical survey to cover the whole of Northern Ireland. Originally scoped as a joint project with GSI, the geoscientific data comprise high-resolution airborne geophysics (magnetics, electrical conductivity and radiometrics) and regional geochemistry for soils, waters and stream sediments. Northern Ireland can now claim to be the only country in the world surveyed in such detail.

The promotion and release of data from the Tellus project changed the Northern Ireland licensing map dramatically. Areas licensed or under application now cover more than 70% of the land area. 44 mineral prospecting licenses are held (or are in application) by 11 companies. In addition, five companies hold or have applied for hydrocarbon exploration licenses, covering 7%. Before the survey started there were 17 licenses in Northern Ireland held by eight companies (25% of the country).

Anomalies highlighted by the Tellus data have sparked interest in nickel, copper and platinum group minerals and identified additional areas for gold exploration. Conceptual plays for carbonate-hosted zinc-lead and VMS mineralisation have been presented in applications. Geothermal potential and gas storage are also being addressed as a result of the project data. The economy of Northern Ireland should benefit from the exploration investment.

Alongside the increased exploration, other aspects of public interest stand to benefit. The data can be applied to groundwater and waste management, environmental monitoring and radon potential mapping, and two PhD studies are already making use of the information gathered.

Examples of the products and information on data licensing can be found at www.bgs.ac.uk/gsni/tellus/. This site also has a link to the 2007 Tellus Conference where the data were presented over a two-day event held in Belfast. PDF versions of the presentations with accompanying mp3 audio are available for download.

For more information contact tellus@detini.gov.uk.

Mark Patton Minerals and Energy Resources Sector Manager, GSNI

International Year of Planet Earth A Year in progress

Now a quarter way through 2008, the year dedicated by the United Nations as the International Year of Planet Earth (IYPE), Ireland's celebration of the initiative has embraced an ever-increasing range of events and activities for all to enjoy.

In its preparation for the year the All-Island Committee for IYPE was mindful that the aim of IYPE is to promote the importance of geoscience to the wider public and it planned events accordingly. So far there have been events geared towards families, students at both second and third level, the wider public and, of course, geoscientists. The All-Island Committee was established by GSI, with the support of the Royal Irish Academy and GSNI, and is broadly representative of geoscience across the island of Ireland.

In early January, even prior to its official launch, the year had kicked off in style with a joint IYPE/DIAS (Dublin Institute for Advanced Studies) stand at the **BT Young Scientist & Technology Exhibition** in the RDS. The stand was manned by representatives of GSI and DIAS and as well as offering students the opportunity to carry out seismology experiments, they promoted IYPE, in particular the erratics competition for transition year students and the 2009 Geoscience Prize to be sponsored by GSI. Stand personnel also found time to provide talks on IYPE in the lecture theatre in the RDS.

Whilst the RDS Expo was ongoing, Mr. Eamon Ryan, T.D., Minister for Communications, Energy & Natural Resources, was busy launching the newly revamped, dedicated website www.planetearth.ie, as well as announcing the winners of the first IYPE competition of the year. This was a **third level student competition**, coordinated by GSI on behalf of UNESCO, which sought creative entries around the concept of Planet Earth. The entries here in Ireland included essays, poems and paintings and, following evaluation by an expert panel, three winners were selected to represent Ireland at the official international launch of IYPE in Paris in February.

The official **Launch of IYPE** in Ireland by Minister Ryan took place in Dublin Castle on 18th January and was attended by over 150 people. Attendees of the launch were able to inspect a seventeen-stand exhibition on various aspects of IYPE and geoscience initiatives in Ireland, as well as an exhibition of a

selection of the 2007 entries in GSI's annual "Du Noyer Landscape Photography Competition."



Minister Eamonn Ryan with the three Irish winners

The launch event incorporated the commencement of one of the cornerstones of the IYPE events calendar – the GSI/Irish Examiner **"Planet Earth" Lecture Series**. The lectures in this series are being delivered by excellent communicators, skilled in reaching out to the general public. Topics include climate change, energy for the future, Ireland's 750 million year history and deepest earth. Each lecturer delivers his/her lecture in Trinity College Dublin as well as one other nationwide venue. At the launch, Professor Aubrey Manning delivered a rousing opening to the series with his well-articulated discussion on how the earth sciences and biology have come together to help us understand something of how planet earth "works." Since then the renowned palaeontologist Dr. Richard Fortey has delivered an excellent talk on the history of biodiversity and Professor Chris Clark has skilfully orated on the landscapes of ice-age Ireland. To date the series has visited Cork, Enniskillen and Belfast with the next axis being Dublin/Wexford in April for a talk on "The Greenhouse effect and Global Warming" by Professor Ray Bates.

March 21st saw the closing date for an interesting competition aimed at transition year students – **"How Erratic is your Block?"** A range of intriguing and entertaining entries have been received detailing students' perspectives (often brilliantly creative!) on the origins of certain identified rocks. A winners' ceremony will take place on the 9th of May.

This review has highlighted just a few of the key IYPE events to have occurred so far this year, a whole range of other IYPE events and activities have also taken place across the island of Ireland – to date they number about 50. Please visit the website

www.planetearth.ie/events for further information and details of forthcoming events.

Enda Gallagher, IYPE All-Island Committee
Geological Survey of Ireland

Hydrogeology Plays key role in EPA Oral Hearing

The important role of groundwater within the planning and licensing process was reflected in the large number of Professional Geologists giving evidence in the recent EPA Oral Hearing for the proposed landfill at Nevitt in the Fingal administrative region in north County Dublin. The two week hearing held in early March heard submissions from five PGeos relating to the geology and hydrogeology of the proposed development site and a past-president of the Institute from the GSI also briefly attended the hearing to outline the basis of the national Groundwater Protection Scheme. The EPA Panel will now consider the evidence submitted at the hearing in respect of the Agency's earlier Proposed Decision for the landfill proposal and a final decision is expected in mid-summer.

Kevin Cullen, President, IGI.

Groundwater Course Success

The Courses Committee of the IGI held a second bespoke course on the **Validation and Interpretation of Water Level Data** on February 26th, 2008 in the GSI. Run with the support of the GSI, EPA and Waterra UK Ltd the 36 registrants attended a morning of lectures followed by an afternoon workshop. The course received a very high satisfaction rating from the Evaluation Sheets filled in by those attending reflecting the timely nature of the event and the high standard of presentation and content.



Participants at the recent Groundwater Monitoring Course

It is planned to host a similar course in Belfast later in the year, possibly October.

Forthcoming Conferences - Nationwide

The 28th IAH Annual Conference. Groundwater – A Resource at Risk?

The 28th annual conference of the International Association of Hydrogeologists (Irish Group) will be held on Tuesday 22nd & Wednesday 23rd April, 2008 at the Tullamore Court Hotel, Tullamore, Co. Offaly. This years conference theme is '**Groundwater – A Resource at Risk?**' Registration is now being taken. For full details refer www.iah-ireland.org.

Green Mines Conference

'Green mines' will be holding a conference entitled: "Environmental remediation of former mining areas for tourism".

Date: 20th to 23rd April 2008

Venue: Abbey Court Hotel, Nenagh

For details and registration contact John Morris (john.morris@gsi.ie), 01-678 2871

Field excursions on April 22 to:

Silvermines region, Co.Tipperary (environmental remediation and conservation works in progress).

Castlecomer coal mining district, Co. Kilkenny [new Coal Mining Heritage Centre) and related developments]

Copper Coast Geopark, Co. Waterford (a UNESCO supported European and Global Geopark)

GREEN MINES is a consortium of partners from Spain, Portugal, the UK and Ireland collaborating to advance environmental remediation of abandoned mine areas and their conversion into economically sustainable heritage resources.

"Water: the challenges for users" - Sherkin Island Marine Station's 24th Annual Environmental Conference

Venue: Thursday 17th and Friday 18th April 2008 at the Carrigaline Court Hotel, Carrigaline, Co Cork.

Details: www.sherkinmarine.ie/conferences.htm

Contact: Matt Murphy (sherkinmarine@eircom.net), 028-20187

Forthcoming Conferences - International

Geology and Water management: Resources, Risks and Regulations, 30 May 2008, Athens, Greece

This one-day international conference is organized by the European Federation of Geologists in collaboration with the Association of Greek Geologists, in the premises of the Greek Ministry of Development. Among the themes of this event are: monitoring design and good management and maintenance practices. In order to register please contact the organizers efgbrussels@gmail.com

Renewable Energy in Islands: markets for the future 29-30 May 2008, Tenerife, Spain

More information <http://www.islandsonline.org>
E-mail: c.marin@unescocon.org.

The II European Conference of the International Association for Engineering Geology "Euroengeo 2008", Madrid, 15-20 September 2008.

The main theme of the Congress will be "Cities and their underground environment". In this Forum experts and specialists will hold meetings and exchanges of ideas about geology applied to engineering.

More information on: <http://euroengeo.com/english/>

Geosciences for Geothermal Exploration. An integrated approach, 9 June 2008 Rome

A workshop dedicated to geothermal exploration. Details can be found on EAGE website: <http://www.eage.org/events/index.php?eventid=57&Opendivs=s2>

ConSoil 2008, 3-6 June 2008, Milano, Italy

Besides the traditional focus on contamination of soil and groundwater, the event will deal with the functioning of the soil-water systems following EU policy that aims at the sound and integrated management of soil-water systems in Europe.

Internet: <http://www.consoil.de/>

The 3rd International UNESCO-Conference on Geoparks, June 22-26, 2008, Osnabrück, Germany

The goal of the event is to create appropriate methods to raise the awareness of the geological heritage of our planet - far beyond the Geopark's borders. <http://www.geoparks2008.com/>

Forthcoming Public Lectures

Galway

The IAEG in association with Galway Earth & Ocean Society (GEOS) presents:

Minerals of the Granite Planet - Metallogeny of Granites in Newfoundland and Labrador by **Prof. Derek Wilton, Department of Earth Sciences Memorial University of Newfoundland**

Date/time: Thursday 17th April 2008, 8pm
(refreshments from 7.30pm)

Venue: ECI Seminar Room Orbsen Room, NUI Galway

Cork

"Tidal sedimentation and what it tells us about the history of the Moon" by **Paul Dowdall B.Sc. UCC**

Organised by the Cork Geological Association and is opened to all.

Date/time: 30th April 2008, 8pm

Venue: University College Cork, Room G1, Kane Building (also known as the Science Building)

Contact: Bettie Higgs (b.higgs@ucc.ie), tel: 021-4902117

Dublin

Geothermal Energy in the Paris Basin
Large Scale Heat from an aquifer at 2km depth
by **Pierre Ungemach, GPC IP, Paris**

Joint Geothermal Association of Ireland and IAH Irish Group meeting.

Venue: Geological Survey of Ireland, Beggars Bush, Haddington Road, Dublin 4

Time: Tea/Coffee 17.30; lecture 18.00 hr

For further information contact either Donal Daly (01-268 0186), Gerry Baker (01-293 1200) or Taly Hunter Williams (01-678 2780)

Dublin and Clare

The IYPE/GSI Lecture series presents:

"Energy for Ireland's future" by Prof. Pat Shannon Professor of Geology at University College Dublin.

Date: 7th May 2008, 6pm.

Venue: Burke Theatre, Trinity College Dublin

And

Date: 8th May 2008, 8pm.

Venue: Ennis, Glor Theatre

Dublin and Kilkenny

"The origin of Ireland's ore deposits" by Prof. Mike Russell, NASA Senior Research Fellow at the Jet Propulsion Laboratory in California.

Date/Time: 4th June 2008, 6pm.

Venue: Burke Theatre, Trinity College Dublin

Date/Time: [5th June 2008](#), 6pm.

Venue: Castlecomer Discovery Park and Mining Museum

Forthcoming Courses

Weekend Course IAEG

The Irish Association for Economic Geology (IAEG) will be holding a weekend course on 'Exploration and Environmental Geochemistry' preceded by a trip to Galmoy mines on the 9th May.

Date: 9th to 11th May 2008

Venue: Hotel Kilkenny, Kilkenny (056 7762000).

Contact conference@iaeg.org

Forthcoming Fieldtrips

Dublin

Field trip to Loughshinny, Co. Dublin, led by Dr. John Walsh, UCD

Hosted by the Irish Geological Association the trip will explore basic structural geology, looking at spectacular folds and faults. The fieldtrip is aimed at members of the IGA but non-members are welcome to join.

Date: 3rd May 2008

Meet: 12 noon, Loughshinny car park, Co. Dublin

Cavan

"The private life of quarries" - guided tour and quarry talk

Venue: Quinn's Quarry, Scotchtown, Ballyconnell, Co. Cavan.

Date: 29th May 2008 Time to be confirmed
And

Talk on the impacts of quarries on the environment in the Courthouse, Ballyconnell. Laverne Bell, Quarry Products Association Northern Ireland.

For further details contact: Kirstin Lemon (Kirstin.Lemon@fermanagh.gov.uk),

Tel: 028 66348855/NI - 048 66348855/ROI

Cork

"Blackwater anomaly" - boat trip with Jim Curtin B.Sc.

A return boat trip on the river Blackwater from Youghal Pier to Cappelquin Bridge. Organised by the Cork Geological Association. Non members are welcome to join.

Date/Location: 17th May 2008, Cork.

For further details contact: Bettie Higgs (b.higgs@ucc.ie), tel: 021-4902117

Kilkenny

Friday 9th May: visit to Galmoy Mine - see Forthcoming Courses section for further details.

Mayo

Fieldtrip to the Mullet Peninsula led by Dr Julian Menuge

This fieldtrip is jointly organised by the Irish Geological Association (IGA) and the Cork Geological Association. The fieldtrip is aimed at members of both association but non-members are welcome to join. For details of membership, please visit [IGA](#) and [CGA](#) websites. Details of the week end fieldtrip are being finalised and will be available on both Associations newsletters and websites.

Contact: Susan Pyne (susan.pyne@ucd.ie)

Date: 21st-22nd June 2008

Forthcoming IGI AGM

The Annual General Meeting of the Institute of Geologists of Ireland Limited will be held at 7.00 p.m. on Thursday 15th May, 2008 at the Geological Survey, Beggars Bush, Haddington Road, Dublin 4. Tea, coffee and sandwiches will be served from 6.00pm.

All members are encouraged to attend the AGM and to participate in the review by the present Board of the Institute's activities and performance over the past year. The incoming Board will be formally elected at the AGM and the President will set out the Board's primary objectives for the forthcoming year.

Those unable to attend the AGM are encouraged to forward any views and suggestions to the Secretary ahead of the AGM.

The purposes of the meeting are set out as follows:

1. To receive and consider the Directors' Report and Audited Accounts for the year ended December 31st 2007.
2. To elect Directors.
3. To re-elect Casey McGrath and Associates as Auditors and to authorise the Directors to fix their remuneration.
4. To transact any other ordinary business of the Annual General Meeting.

The following candidates are standing for election:

EXECUTIVE DIRECTORS

President Kevin Cullen (2nd year of term)
 Vice President Fionnuala Collins
 Secretary Craig O'Connor
 Treasurer Stephen Bradley (2nd year of term)

DIRECTORS

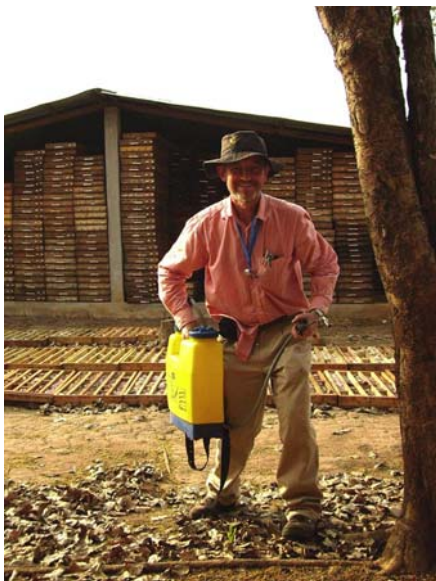
Barry Balding; John Kelly; Deirdre Lewis;
 Sean Moran and Marie Ryan

Further nominations closed on the 3rd April 2008.

Member News

Bill Sheppard makes complete recovery

IGI are pleased to hear of the full recovery of Bill Sheppard following a car accident in Sierra Leone in October 2007. By the time of 'going to print' he has already completed at least two extended projects in Africa in 2008.



Bill Sheppard on a recent assignment

Ed Slowey in New Role

Ed Slowey (PGeo) is winding down his consultancy work with the CSA Group in Dublin to take on a new role as Managing Director of a London-based start-up company, Silvrex Ltd. The new company is focussed on silver/gold exploration and development opportunities in North America, Europe and Africa and has recently signed an agreement covering an advanced Ag-Au project in Mexico, with other projects under negotiation. Ed will continue to base himself in Dublin during the development stage of the new company.



Ed Slowey on a recent trip to the Sub Polar Urals

IGI Website Re-Design

The IGI website is currently being redesigned. The new revamped website should be up and running shortly. In the meantime, if members have activities or positions they wish to advertise they are encouraged to send them in to admin@igi.ie.

Many thanks to all who contributed to this issue of the newsletter. We encourage all members to forward items of news or general interest.