

Geological Survey of Ireland (GSI)

Annual Report 2005 – Appendices

This information supplements that on the GSI website (www.gsi.ie) and in the published GSI Annual Report for 2005, copies of which can be obtained from the GSI Customer Centre. Additional information on the work of GSI is available through “Geology Matters”, the regular GSI Newsletter, copies of which can be accessed through www.gsi.ie or by contacting the GSI Customer Centre, Geological Survey of Ireland, Beggars Bush, Haddington Road, Dublin 4. Phone (01) 6782000, Lo-call 1890 44 9900, Fax (01) 6681782, Email gsisales@gsi.ie.

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1. GSI Committees

GSI Consultative Committee consists of representatives of our customer and stakeholder groups, as well as experts in fields of GSI operations. During 2005 it considered recent work progress in GSI, business plans for 2006, staff recruitment and GSI services to the educational sector. Mr Andrew Caldicott joined the committee and Dr Mark Holdstock resigned during 2005. The membership, in addition to GSI staff, at the end of 2005 was as follows:

Mr. David Ball, Hydrogeologist
Ms. Joan Brownlee, Association of Geography Teachers in Ireland
Mr. Brian Byrne, Arup and Partners
Mr. Viv Byrne, CSA Group Ltd
Ms. Petra Coffey, Wicklow
Dr. Catherine Coxon, Trinity College Dublin
Mr. Michael Daly, Department of Communications, Marine and Natural Resources
Mr. Pat Duggan, Department of the Environment, Heritage and Local Government
Mr. Garth Earls, Geological Survey of Northern Ireland
Ms. Roisin Goodman, CSA Group Ltd
Mr. Eamonn Grennan, Sligo Institute of Technology
Ms. Margaret Keegan, Institute of Geologists of Ireland
Dr. Bettie Higgs, NUI Cork
Mr. Micheal MacCarthaigh, Environmental Protection Agency
Prof. Peter Readman, Dublin Institute for Advanced Studies
Mr. Vincent Reynolds, Cavan Enterprise Board
Mr. Jim Ryan, Department of the Environment, Heritage and Local Government
Mr. Andrew Caldicott, Department of the Environment, Heritage and Local Government
Mr. Iain Williams, Readymix plc

Seabed Technical Advisory Committee provides advice to the Inter-Departmental Steering Group for the National Seabed Survey. During 2005 it examined plans for the surveying season as well as considering the results of earlier surveys. Particular emphasis was placed on effective national coordination. At the end of the year the membership of the committee, in addition to GSI staff, was as follows:

Dr. Simon Berrow, The Heritage Council
Dr. Colin Brown, Department of Earth and Ocean Sciences, NUI Galway
Ms Catherine Sheehy, Department of Defence
Dr. Fiona Fitzpatrick, The Marine Institute
Mr. Tom Furey, The Marine Institute
Dr. Anthony Grehan, Department of Earth and Ocean Sciences, NUI Galway

Mr Frank Sheridan, Department of Communications, Marine and Natural Resources
Lt. Frank O'Connor, The Naval Service
Dr. Fionnbarr Moore, Department of the Environment, Heritage and Local Government
Mr Noel Murphy, Department of Communications, Marine and Natural Resources
Prof. Pat Shannon, University College Dublin
Dr. Liz Sides, Department of the Environment, Heritage and Local Government
Mr. Declan Smyth, Department of Foreign Affairs
Mr. Michael Gillooly, The Marine Institute

The National Landslides Working Group was established in 2004 to collate information and examine the causes of landslides throughout the island of Ireland. The membership of this working group, which is multidisciplinary, is as follows (in addition to GSI staff):

Ms Christine Colgan – Department of Geography, NUI Galway
Dr Eric Farrell – Department of Civil Engineering, Trinity College Dublin
Dr Mike Long – Department of Civil Engineering, University College Dublin
Prof Pete Coxon – Department of Geography, Trinity College Dublin
Dr Robbie Meehan - Teagasc , Kinsealy, County Dublin
Ms Reamonn Fealy - Teagasc, Kinsealy, County Dublin
Mr Tiernan Henry – Department of Earth and Ocean Sciences, NUI Galway
Ms Aileen Doyle – Planning Division, Department of the Environment, Heritage and Local Government
Mr Ken Gavin – Geotechnical Society of Ireland, Institute of Engineers of Ireland
Mr Conor Daly – Met Eireann, Dublin
Mr Terry Johnston – Geological Survey of Northern Ireland, Belfast

2. National and International Representation

Eurogeosurveys

P. McArdle: Meeting of Directors: Belgium - February; France – September.
P.O'Connor: Meeting of Contact Points: Brussels – January, June and December.
P. McArdle and P.O'Connor: Eurogeosurveys General Assembly: Brussels- February
P. O'Connor: Soil Protection Expert Group
G. Wright: Groundwater Expert Group
P. O'Connor: Natural Resources Expert Group
P. O'Connor: Geochemical Mapping Working Group: Ljubljana- October

European Geoparks Network

J.H. Morris: Annual Conference, Mytilene, Greece - Octobe

European Science Foundation, Life, Earth and Environmental Sciences Committee

P. McArdle Irish Representative: Cyprus – April; Zagreb- October

FORFÁS - Working Group on Public Spending on Research

D.Inamdar: Member

Geoscience Information Consortium

M.Carter: Trondheim –June

Global Monitoring for Environment and Security (GMES)

P. O'Connor attended Advisory Council: Geneva- May; Brussels- June, February;
K. Verbruggen: National Contact Point, Terrafirma Project

International Hydrological Programme (Irish Natural Committee)

D. Daly: Member

International Year of Planet Earth

P. McArdle: Senior Adviser

Integrated Ocean Drilling Program – ECORD Council

D. Inamdar, Edinburgh-December; P. McArdle; E. Doyle, Stockholm- April; and
B. McConnell, Edinburgh- December.

ProGEO: The European Association for the Conservation of the Geological Heritage

J.H. Morris and M. Parkes: Irish Representatives

Royal Irish Academy – National Committees:

P.McArdle, M. Parkes; Geosciences. W.P. Warren; Geography
P. McArdle: John Jackson Memorial Lecture Committee.

UK Groundwater Forum

D. Daly: Observer member.

UK-Ireland Groundwater Task Team

D. Daly: Member: (Birmingham, Dublin, Edinburgh, Leeds)

3. PARTICIPATION IN SOCIETIES AND WORKING GROUPS

Applied Agricultural Meteorology Working Group (AGMET)

G.R. Wright: Member.

Bréifne Mountains Co. Ltd.

P. O'Connor: Director.

Copper Coast European Geopark

J.H. Morris: Geological Representative to Co-ordination Committee.

Department of Agriculture and Food - Technical Working Group on earth-lined slurry / effluent stores, out-wintering pads and constructed wetlands

D. Daly: Member.

Environmental Protection Agency

D. Daly and T. Hunter Williams: Members- Steering Committee on Groundwater Recharge and Vulnerability Project.

G.R. Wright: Member- Steering Committee for Project on Characterization of Unpolluted Groundwater:

Member:

D. Daly: Member- Steering Group for Project on Effects of Agricultural Practices on Nitrate Leaching.

Europamines - Project Development Meetings and Site Visits:

J.H. Morris: France/Italy-March; Poland-May; Portugal-July; Killhope, UK-October.

European Federation of Geologists – Geological Heritage Working Group

M.A. Parkes and J.H.Morris

European Palaeontological Association

M. A. Parkes

EU Water Framework Directive (WFD)

Departmental Co-ordination Group

D. Daly (Convenor), G.R. Wright, C. Kelly, M. Lee and N. Hunter-Williams.

Working Group on Groundwater (and sub-committees)

D. Daly: Member. North-South Technical Advisory Group

D. Daly, M. Lee: Members. Steering Committee for WFD soil and subsoil Mapping Project

G. O'Shea, M. Lee, K. Verbruggen, C. Kelly, M. Glennon: Members. GIS Working Group

River Basin District Management Project Steering Groups:

G.R. Wright: South-Eastern.

P. O'Connor, D. Daly: Shannon.

G.R. Wright: Eastern.

G.R. Wright, C. Kelly: South-Western.
D. Daly, C. Kelly: Western.

D. Daly: Member Technical Co-ordination Group
D. Daly: Member: Two Project Steering Groups. Brussels
D. Daly: Groundwater-EU Working Group 2C. Brussels

Fingal Heritage Forum

M.A. Parkes: February

Geological Journal Editorial Board

B. McConnell- Member

Geotechnical Society of Ireland (Institute of Engineers of Ireland)

J.R. Creighton: Committee Member

Hydrogeology Journal

D. Daly: Associate Editor

Hydrographic Society – Irish Branch

S. Cullen: Chair

IGOS Geohazards Theme

K. Verbruggen: Member, Orleans-June

Institute of Geologists of Ireland

G.R. Wright: Board Member and Honorary Secretary

D. Daly, G.R. Wright, Working Group Members.

E. Doyle, GSI Liaison.

International Association of Hydrogeologists – Irish Group

C. Kelly, T. Hunter-Williams and S. Masterson: Committee Members:

Irish Association for Economic Geology

K. Verbruggen: President

Irish Journal of Earth Sciences

M.A. Parkes: Co-Editor.

J.H. Morris: Editorial Board Member.

Mining Heritage Trust of Ireland Ltd.

K. Verbruggen: Web-Manager.

J.H. Morris: Conservation and Inventory Co-coordinator

M.A. Parkes: Publications

North Atlantic Minerals Symposium – Organising Committee

G. Stanley: Co-Chair

Society for Geology Applied to Mineral Deposits (SGA)

G. Stanley: Chairperson of Local Organising Committee for SGA 2007 in Dublin

Technical Advisory Group on Corrib Project (for the Minister for Communications, Marine and Natural Resources)

K. Verbruggen: Member

Working Group on Groundwater Protection Responses

D. Daly, G.R. Wright and C. Kelly: Members

Programme of Measures Working Group: D. Daly

Monitoring Working Group: D. Daly and T. Hunter Williams

Steering Group for SNIFFER Projects: D. Daly and T. Hunter Williams (Edinburgh, Lancaster)

4. RESEARCH BASED ON GSI DATABASES

The following is a list of research topics and the third level institutes where each was or is being undertaken. Some topics comprise more than one project.

Fracture systems and groundwater yields, post-Silurian (Trinity College Dublin)
Geophysical study of landslides, County Mayo (University of Leeds)
Lowland karst of Roscommon (Trinity College Dublin)
Highly and moderately permeable subsoils (Trinity College Dublin)
Geology and petroglyphs (University College Dublin)
Holocene sediment transport, southeast Ireland (University College Dublin)
Flood risk mapping, Dublin-Wicklow region (University of London)
Web-based geochemical and landslide data (NUI Galway)
Geohazards in Porcupine Seabight (NUI Galway)
River Shannon processes and geoarchaeology (NUI Galway)
Deep ocean habitat mapping with ROV (NUI Galway)
Grid-enabled data mining of INSS (NUI Galway)
Single beam acoustics in habitat mapping (NUI Galway)
Seabed substrate characterisation (NUI Galway)
Tenix waveform analysis (NUI Galway)
Neural networks and seabed backscatter (NUI Galway)
Northeast Atlantic marine system modelling (NUI Galway)
Slope processes in the Rockall Trough (University College Dublin)
Accuracy of tidal prediction (Dublin Institute of Technology)
Quaternary of Donegal Bay (Trinity College Dublin)
Gas hydrate systems, offshore Ireland (University College Dublin)
Cenozoic basin margins, Porcupine and Rockall (University College Dublin)
Quaternary of Clew Bay (Queen's University of Belfast)
Base metal geochemical soil levels, County Meath (Camborne School of Mines)

5. GSI Publications

- Anon. 2005. Geosolutions: A strategic vision of the Geological Survey of Ireland (GSI) to 2015. Geological Survey of Ireland.
- Anon. 2005. Cherishing Our Earth: The value of geological services. Geological Survey of Ireland. 24pp.
- Anon. 2005. Integrated Ocean Drilling Program (IODP) scientific drilling of a modern carbonate mound in the Porcupine Seabight. Seminar Proceedings. Geological Survey of Ireland. 24pp.
- Gatley, S., Somerville, I., Morris, J.H., Sleeman, A.G., and Emo, G., 2005 Geology of Galway-Offaly. A geological description to accompany Sheet 15 of the Bedrock Geology 1:100,000 scale map series. (Map published earlier) Geological Survey of Ireland. 90pp.
- Geoghegan, M., Croker P., Doyle, E. and Monteys, X. 2005. Regional setting of the Belgica mound province based on GSI and PAD datasets. In: Integrated Ocean Drilling Program (IODP) scientific drilling of a modern carbonate mound in the Porcupine Seabight. Seminar proceedings, Geological Survey of Ireland, 17-21.
- Leader, U., and Daly, D., (Eds). GSI Groundwater Newsletter Nos 44 and 45. Include articles by GSI staff members
- Pracht, M., Lees, A., Leake, B., Feely, M., Morris, J., and McConnell, B. 2005 Geology of Galway Bay. A geological description to accompany Sheet 14 of the Bedrock Geology 1:100,000 scale map series (Map published earlier) Geological Survey of Ireland. 76pp.
- Stanley, G. (Ed.) Geology Matters. The GSI Newsletter. Issue Nos 2 and 3. Include articles by GSI staff members.

6. Scientific Publications

- Nagy, Z.R, Somerville, I.D, Gregg, J.M, Becker, S.P, Shelton, K.L, and Sleeman, A.G. 2005. Sedimentation in an actively tilting half-graben: sedimentology and stratigraphy of Late Tournaisian-Visean (Mississippian, Lower Carboniferous) carbonate rocks in south County Wexford, Ireland. *Sedimentology* 52, 489-512.
- Pracht, M. and Timmerman, M.J. 2005. A late Namurian (318Ma) $^{40}\text{Ar}/^{39}\text{Ar}$ age for kaersutite megacrysts from the Black Ball Head diatreme: an age limit for the Variscan deformation in southwest Ireland. *Irish Journal of Earth Sciences* 22, 33-44.
- Salminen, R. (Chief Editor) and others (including O'Connor, P.J) 2005. *Geochemical Atlas of Europe. Part 1: Background information, methodology and maps.* Geological Survey of Finland. 526pp.

7. Conference Papers

- Balassone, G., Rossi, M., Boni, M., Stanley, G. and McDermott, P. 2005. Supergene non-sulfide Zn-Pb ores at Silvermines and Galmoy (Ireland). In: Non-sulfide Zn-Pb ores: genetic models and exploration - the European deposits. European Science Foundation, Iglesias, Italy.
- Daly, D., 2005. The characterisation and analysis of Ireland's River Basin Districts: groundwater aspects. In: Groundwater in Ireland. 25th Anniversary Proceedings, International Association of Hydrogeologists (Irish Group), Tullamore, 141-150.
- Doyle, E. 2005. The ABC of the INSS. (Abstract). In: Irish National Seabed Survey Seminar 2005, Presentation Abstracts: The Geological Survey of Ireland and the Marine Institute. Cork, 6-7.
- Gillooly, M., Fitzpatrick, F., and Doyle, E. 2005. Integrated mapping for the sustainable development of Ireland's marine resource (INFOMAR)- a proposed successor to the Irish National Seabed Survey. (Abstract). In: Irish National Seabed Survey Seminar 2005, Presentation Abstracts. The Geological Survey of Ireland and the Marine Institute, Cork, 8-10.
- Hardy, D. 2005. Integration and correlation of Donegal Bay (2002) data with onshore glacial deposits. (Abstract). In: Irish National Seabed Survey Seminar 2005, Presentation Abstracts. The Geological Survey of Ireland and the Marine Institute. Cork, 31-32.
- Horne, R.R. 2005. Transverse fault zones and mineralization in Ireland: 30 years of new evidence. (Abstract). In: Mineral Deposits in the 21st Century. The Mineral Deposits Study Group, The Ulster Museum, Belfast.
- McArdle, P. 2005. Developing the geoscience sector to meet the needs of Ireland's future infrastructure. (Abstract). In: Casey, S. and O'Connell, Y (Eds) Breaking ground: The role of geology in the successful delivery of major infrastructure projects. Conference organised by the Institute of Geologists of Ireland, the Geology Survey of Ireland and the Geological Survey of Northern Ireland, Dublin, 7.
- McArdle, P. 2005. The role of geology in long-term monitoring. In: Solbe, J. (Ed.) Long-term monitoring: Why, what, where, when and how? Sherkin Island Marine Station, County Cork, Ireland, 56-65.

- McArdle, P. 2005. The Irish National Seabed Survey: matching themes with levels of resolution. In: Seminar on geothematic maps at various scales. International Consortium of Geological Surveys (ICOGS) and APAT, Italy. Organised in conjunction with 32nd IGC, Florence, Italy, 2004. (CD Rom)
- McConnell, B. and Riggs, N. 2005. Sedimentary response to ignimbrite emplacement across a subaerial to subaqueous plain; Mweelrea Formation, South Mayo. (Abstract). 48th Annual Irish Geological Research Meeting, Trinity College Dublin.
- Misstear, B., Brown, L. and Hunter Williams, T. 2005. The Knockatallon aquifer in County Monaghan: A bedrock aquifer in Ireland under significant stress from pumping. In: Groundwater in Ireland. 25th Anniversary Proceedings, International Association of Hydrogeologists (Irish Group), Tullamore, 41-48.
- Monteys, X. and Tenix LADS survey team. 2005. Mulroy Bay airborne survey. (Abstract). In: Irish National Seabed Survey Seminar 2005, Presentation Abstracts. The Geological Survey of Ireland and the Marine Institute. Cork, 11-12.
- Monteys, X. and Geoghegan, M. 2005. Iceberg scour marks on the West Porcupine Bank, Irish Margin. (Abstract). 48th Annual Irish Geological Research Meeting, Trinity College Dublin.
- Riggs, N. and McConnell, B. 2005. Detrital zircon provenance and Grampian terrane amalgamation in western Ireland. Geological Society of America, Abstracts with Programs 37-7, p389.
- Verbruggen, K. and Stanley, G. 2005. Irish copper mineralization. In: Copper Deposits: Genetic studies and case histories. 2005 Weekend Course. Irish Association for Economic Geology, Rosslare.
- Wright, G. 2005. The origins of the IAH Annual Seminar. In: Groundwater in Ireland. 25th Anniversary Proceedings, International Association of Hydrogeologists (Irish group), Tullamore, I-II.

8. General Articles

- Brown, K, Morris, J.H, Perez Sanchez, A.A. and Critchley, M. 2005 Interpreting the ruins of Cornish design engine houses. EUROPAMINES, Killhope, County Durham, UK. 96pp. (English and Spanish: ISBN 0-955 1301-0-7).
- Daly, D. 2005. Land use and environmental decision-making in Ireland. European Geologist No.20, December 2005, 4-8
- Gallagher, E. 2005. What lies beneath? Inshore Ireland 1, Issue 1, January 2005, p8.

9. Presentations

- Cullen, S. Presentations on the Irish National Seabed Survey to the Maritime Institute of Ireland, Dun Laoghaire Motor Yacht Club and Rush Yacht Club.
- Daly, D. Presentations on hydrogeology and risk assessment, groundwater protection, visual assessment, trial hole test and difficult sites. An Bord Pleanála.
- Daly, D. What is groundwater? Presentation to WFD Groundwater Working Group, Dublin.
- Daly, D. and Glasgow, G. Groundwater monitoring-an update. Presentation to WFD Monitoring Working Group.
- Daly, D. and Kelly, C. The County Kildare Groundwater Protection Scheme. Presentation to monthly meeting of Kildare County Council.
- Daly, D. Kelly, C. and Lee, M. Using the County Monaghan Groundwater Protection Scheme. Presentation to staff of Monaghan County Council, June.
- Gallagher, V. and Stanley, G. Gold potential in the Caledonides of southeast Leinster (Poster). 4th North Atlantic Minerals Symposium, Nova Scotia.
- Geoghegan, M. A review of the Irish National Seabed Survey. FEMME Conference-Kongsberg Simrad User Group Forum. Dublin, May.
- Hardy, D. (Co-Author). Seminar on petroleum geoscience collaborations, Geological Society London.
- Hardy, D. Research in Donegal Bay utilising INSS data. Seminar at Geology Department, Trinity College Dublin.
- Hunter Williams, T. Poster. European Workshop on Groundwater Bodies. Berlin, October.
- Kelly, C. Groundwater vulnerability and the web. Presentation to the Environmental Protection Agency, February.
- Lee, M. Trialing the WFD Groundwater Risk Assessment Methodology. IAH Technical Discussion Meeting, March.
- Lee, M. and Daly, D. Groundwater Protection Scheme - a national methodology for protecting groundwater. Presentation to Nutrient Management Planning FAS Course.

- McArdle, P. Convincing society to fund and use geological expertise. Conference on Cost Benefit Analysis. Geological Survey of Austria, Vienna, October.
- McArdle, P. GSI and the Copper Coast. In: The promotion of geotourism in NW Europe. European Geopark Network Meeting, County Waterford, June.
- McConnell, B. (Poster). Geological Society of Canada Annual Meeting, Halifax, Nova Scotia.
- Monteys, X. Seabed classification offshore Ireland. Balkan Geophysical Society, Bucharest, October.
- Monteys, X. Iceberg keel marks on the Porcupine Basin, Irish Continental Shelf (Poster). EGU 2005 Conference, Vienna.
- Monteys, X., Doyle, E. and Hardy, D. Shallow gas in the Malin Sea. 8th International Conference on Gas in Marine Sediments, Vigo, Spain, September.
- Morris, J., Mining through the millennia: an exploration of 9000 years of Irish mining history. Lecture to joint meeting of the Irish Mining and Quarrying Society, the Irish Association for Economic Geology and the Mining Heritage Trust of Ireland. Dublin, May.
- O'Connor, P.J. Environmental Databases, Geoscience and Health: An international course and workshop on medical geology. Organised by international consortium, including GSI. Dublin, October.
- Parkes, M. Presentation to pupils of Alexandra Junior School, Milltown, Dublin, February.
- Pellicer, X. Ongoing Quaternary and Geotechnical projects in GSI. Presentation at the Irish Quaternary Association (IQUA) Spring meeting, Dublin.
- Pellicer, X. and Warren, W. Eskers and associated landforms and deposits: The key to the pattern of deglaciation in the Midlands of Ireland (Poster). 6th International Geomorphology Conference, Zaragoza, Spain, September.
- Pracht, M. Late Namurian megacrysts from the Black Ball Head diatreme: an age limit for the Variscan Deformation in southwest Ireland. IGCP 497 Conference, Portsmouth, UK, July.
- Stanley, G. Presentation on the proposed SGA 2007 conference in Dublin. SGA 2005 conference, Beijing, China.

- Van der Meer, J, Blotjes, O. and Warren, W.P. When glaciers break-up: the role of water. International conference on glacial sedimentary processes and products. Aberystwyth, UK, August.
- Verbruggen, K. The Terrafirma Project. Presentation to Irish GMES Group, Dublin, January.
- Verbruggen, K. Landslides in Mayo. Presentation and field trip in Dooncarton, County Mayo for party from Universities of Durham and Huddersfield, February.
- Verbruggen, K. Slipping and Sinking: some recent initiatives on Irish geohazards. Irish Geological Association, Dublin, October.
- Verbruggen, K. GIS use in GSI and Breifne projects (2 posters). ESRI European Users Conference, Warsaw, October.
- Verbruggen, K. Donovan, A. and Parkes, M. Review of GSI activities. Presentation to BSc (Tourism and Marketing) students, Dublin Institute of Technology, March.
- Wright, G. Groundwater aspects of the Water Framework Directive. Presentation to delegation from Bosnia-Herzegovina, Dublin, July.

10. Field trips led by staff

- Daly, D. and Kelly, C. Field trip to Pollardstown Fen and Clara Bog attended by representatives of the UK-Ireland Groundwater and Wetland Task Teams.
- Doyle, E. Field trip to Feltrim limestone quarry, County Dublin, for participants of the IODP seminar (Leg 307), May.
- McArdle, P. Glenmalure Valley. An environmental walk for Post Leaving Certificate students at Crumlin College, Dublin, January.
- McArdle, P. The Avoca copper deposit. Field trip as part of: Copper Deposits- Genetic studies and case histories. 2005 Weekend Course. Irish Association for Economic Geology.
- McArdle, P. A walk on Mount Leinster, Carlow County Council. Heritage Week 2005, September.
- McKeon, C. and Sheehan-Clarke, A. Field trip to Killiney Beach, County Dublin, for second level students of Scoil Eoin, Ballybrack, June.
- Morris, J. and Preteseille, S. The Copper Coast, Field trip as part of: Copper Deposits- Genetic studies and case histories. 2005 Weekend Course. Irish Association for Economic Geology.
- O'Connor, P.J. and McArdle, P. Avoca Mines field trip. Geoscience and Health: An international course and workshop on medical geology. Organised by an international consortium, including GSI, October.
- Preteseille, S. The Copper Coast European Geopark - Summer Walks 2005. A series of 7 walks along coastal County Waterford during July and August.

11. Exhibitions

FEMME Conference-Kongsberg Simrad User Group Forum, Dublin, May. Display on the Irish National Seabed Survey.

Irish Science Teachers Association Annual Conference. Stand on work of GSI.

NUIG Science Careers Fair, Galway, March. Geoscience stand.

Prospectors and Developers Association of Canada Convention, Toronto, March. Joint stand with Exploration and Mining Division and the Geological Survey of Northern Ireland.

What on Earth? Exhibition on geological heritage. ENFO, Dublin, July- August.

12. Overseas Meetings Attended

ESRI World User Conference, San Diego, USA. E. McMonagle.

European Association of Exploration Geophysicists Conference, Madrid, June.
D. Inamdar

Geoline 2005- Geology and Linear Infrastructures, Lyon, France. J.R. Creighton.

IAMG Conference, Toronto, August. M. Carter.

INSPIRE Meeting, Utrecht, Netherlands, September.

International Continental Drilling Programme, Potsdam, March. B. McConnell.

Marine Earth Science, postgraduate research meeting, Southampton. D.Hardy.

North Atlantic Minerals Symposium, Nova Scotia, May. E. Doyle, V. Gallagher, R.
Horne, B. McConnell, G. Stanley.

Oracle User Group Conference, UK, November- M. Carter, J.Trench, M. O'Dwyer.

Society of Exploration Geophysicists, 75th Anniversary Conference and Exhibition,
Houston, USA, November. D. Inamdar.

Submarine Mass Movements Conference, Oslo, September. B. McConnell.

22nd International Cartographic Conference, A Coruna, Spain. P. Connaughton.

UK OUG, Birmingham, October-November. M. Carter, J.Trench, M. O'Dwyer and J.
Carey.

WIT Course on Water Resources Management, Carvoeiro, Portugal, April.
P. O'Connor.

16. Staff Changes

The following staff joined or returned to GSI in 2005: John Dalton, Paula Gormley, Taly Hunter Williams, Gordon Poole, Joseph Whelan.

The following staff left GSI in 2005: Brian Carroll, Petra Coffey, Christine Colgan, Jane Coll, Roger Connell, John Dalton, Laurence Dempsey, Fiona Dunne, Scott Engering, Paddy Fitzsimons, Lorraine Gallagher, Vincent Gallagher, Michael Geoghegan, Jim Graham, Kathryn Hill, Ralph Horne, David Ivers, Siobhan McLaughlin, Oisín O'Briain, Matthew Parkes, Gordon Poole, Niamh Redmond, Aaron Sheehan-Clarke, Joseph Whelan.

GSI ORGANISATION CHART

(GSI is a division of the Department of Communications, Marine and Natural Resources)

Senior Management		
Peadar McArdle	Director	
Pat O'Connor	Assistant Director, Finance, Support Services	
John O'Donoghue	Assistant Principal, Administrative Services	
John Morris	Principal Geologist	
Eibhlin Doyle	Principal Geologist	
Koen Verbruggen	Principal Geologist	
Clive Murray	Chief Technologist	
Bedrock	Groundwater	Marine Geophysics
Andy Sleeman	Donal Daly	Deepak Inamdar
Brian McConnell	Geoff Wright	Archie Donovan
<i>Sarah Gatley</i>	<i>Monica Lee</i>	Irene Hogan (part—time)
<i>Markus Pracht</i>	<i>Taly Hunter Williams</i>	<i>Seán Cullen</i>
<i>Ray Scanlon</i>	<i>Coran Kelly</i>	<i>Xavier Monteys</i>
	<i>Caoimhe Hickey</i>	<i>Enda Gallagher</i>
	<i>Sonja Masterson</i>	<i>David Hardy</i>
	<i>Eamonn O'Loughlin</i>	
Cartography	Minerals	Information Management
Padraig Connaughton	Gerry Stanley	Charise McKeon
John Dooley	Irene Hogan	<i>Silvia Caloca</i>
Marie Marini		
Raymond Weafer	Information Technology	Quaternary & Geotechnical
Eddie McMonagle	Mary Carter	Willie Warren
Eddie Hand	Joe Carey	Ronnie Creighton
Ann Scanlon	James Trench	John Butler
Gerry French	Mairéad O'Dwyer	<i>Xavier Pellicer</i>
Michael Kinsella		<i>Beatriz Mozo</i>
		<i>Michael Sheehy</i>
Central Administration	Bréifne Project	Copper Coast Project
Ann Monaghan	<i>Vincent Gallagher</i>	<i>Sophie Preteseille</i>
Philip Earley	<i>Gráinne O'Shea</i>	<i>Margaret Cosgrave</i>
Paula Gormley	<i>Schalk Van Lill</i>	
Margaret Nolan	<i>Chris McWilliams</i>	Irish Geological Heritage/Archive
Caroline O'Shea		Vacancy
Bernadette Mockler		
Gerry Wright	Drilling Unit	Central Technical Services
	Kevin Crilly	Tom McIntyre
Services Officers	Dick O'Brien	Chris McDonnell
Jimmy Kennedy		
Peter Eccles		Section Heads in bold .
Joseph Comerford		Contract Staff in <i>italics</i> .