

Geological Survey of Ireland
Annual Report 2004 – Appendices

This information supplements that in the published GSI Annual Report for 2004, copies of which can be obtained from the GSI Customer Centre.

GSI Committees in 2004

- GSI Consultative Committee
- Irish Geological Heritage (IGH) Thematic Panels
- Seabed Technical Advisory Committee
- National Landslides Working Group

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Research based on GSI databases

Presentations

Field trips led by staff

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National and international representation

Participation in societies and working groups

Staff changes during 2004

GSI Committees in 2004

GSI Consultative Committee consists of representatives of our customer and stakeholder groups, as well as experts in fields of GSI operations. During 2004 it assisted in the development of a new GSI Strategic Vision for 2015, taking account of the planned relocation of GSI to Cavan. It also considered recent work progress in GSI, business plans for 2005, staff recruitment and GSI services to the educational sector. Ms Margaret Keegan replaced Ms Teri Hayes on the committee during 2004. The membership at the end of 2004 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. Róisín Goodman, CSA Group Ltd
Mr. Eamonn Grennan, Sligo Institute of Technology
Ms. Margaret Keegan, Institute of Geologists of Ireland
Dr. Bettie Higgs, NUI Cork
Dr Mark Holdstock, New Boliden – Tara Mines Ltd.
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. John Sadlier, Department of the Environment, Heritage and Local Government
Mr. Iain Williams, Readymix plc

Irish Geological Heritage (IGH) Thematic Panels. The preparation of indicative lists of sites for the various themes of IGH would be impossible without the valuable assistance of the experts who sit on the various thematic panels. Work on the remaining seven themes advanced during 2004 and the final panel, on Economic Geology, was active in 2004. The composition of this thematic panel, in addition to GSI staff, was as follows

IGH15 Economic Geology Colin Andrew, John Colthurst, Garth Earls, Martin Feely, Eamonn Grennan, John Pyne.

Seabed Technical Advisory Committee provides advice to the Inter-Departmental Steering Group for the National Seabed Survey. During 2004 it examined plans for the surveying season as well as considering the results of earlier surveys. Particular emphasis was placed on effective national coordination. During the year Frank Canavan, John Keohane and Mark Mellett left the committee and GSI appreciates the significant contribution that each made to the work of the committee. 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, Martin Ryan Institute, 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

National Landslides Working Group

The membership of this working group, whose remit is described in the body of this report, 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 & 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

GSI Publications

- Anon. 2004. Gold in Ireland. CD-ROM. Geological Survey of Ireland and the Exploration and Mining Division.
- Daly, D. 2004. Groundwater at risk in Ireland: Putting geoscientific information and maps at the core of land use and environmental decision-making. John Jackson Lecture 2004. Royal Dublin Society and Geological Survey of Ireland. 32pp.
- Leader, U. and Daly, D. (Eds) 2004. GSI Groundwater Newsletter N° 43. Includes articles by GSI staff members.
- McConnell, B., Gatley, S. and Sleeman, A.G. 2004. Geology of Ireland, 1:1 million scale map. Geological Survey of Ireland.
- Morris, J.H., Somerville, I.D. and Mac Dermot, C.V. 2004. Geology of Longford-Roscommon: a geological description of Roscommon, Longford, Westmeath and adjoining parts of Cavan, Leitrim and Galway, to accompany Bedrock Geology 1:100,000 scale map Sheet 12. Geological Survey of Ireland. 99pp
- Parkes, M. 2004. The Valentia Island Tetrapod Trackway. The Geological Survey of Ireland and the Department of the Environment, Heritage and Local Government. 16pp.
- Pitcher, W.S. and Hutton, D.H.W. 2003. A master class guide to the granites of Donegal. Accompanied by the 1972 map compiled by M.O. Spencer and W.S. Pitcher. Geological Survey of Ireland. 97pp.
- Sleeman, A.G., McConnell, B. and Gatley, S. 2004. Understanding Earth Processes, Rocks and the Geological History of Ireland. Geological Survey of Ireland. 120pp.
- Stanley, G. (Ed.) 2004. GSI News, No. 1. Geological Survey of Ireland. 12pp.

Scientific Publications

Dubelaar, W., Engering, S., van Hees, R.J.P., Koch, R. and Lorenz, H.G. 2003. Properties of Portland limestone and durability. *Heron* 48, 221-229.

Swartz, M., Misstear, B.D.R., Daly, D. and Farrell, E.R. 2003. Assessing subsoil permeability for groundwater vulnerability. *Quarterly Journal of Engineering Geology and Hydrogeology* 36, 173-184.

Conference Papers

- Daly, D. 2004. Risk based analysis: providing a framework for evaluating and managing the impact of nutrients. Proceedings of UFFER Conference, Galway.
- Daly, D. 2004. Threats posed by on-site wastewater treatment systems to groundwater. In: Proceedings of Conference on Septic Tanks – the Rural Reality. Clare County Council, Ennis.
- Donovan, A. 2004. Seabed data management in the Geological Survey of Ireland. Geohab: Marine Geological and Biological Habitat Mapping. Fifth International Symposium (Agenda and Abstracts). Earth and Ocean Sciences Department, NUI Galway, 42-44.
- Doyle, E. 2004. Overview and status report on Seabed Survey together with spin-offs in terms of industry/research collaborations. Geohab: Marine Geological and Biological Habitat Mapping. Fifth International Symposium (Agenda and Abstracts). Earth and Ocean Sciences Department, NUI Galway, 45-46
- Feely, M., Hunt, J., O'Connor, P. and Parkes, M. 2004. Urban geology and earth science education: facets of the natural building stone elements in Galway city. In: Parkes, M. (Ed.) Natural and Cultural Landscapes – the Geological Foundation. Proceedings of a Conference. Royal Irish Academy, 265-266.
- Geoghegan, M. and Doyle, E. 2004. An overview of the Irish National Seabed Survey, highlighting recent Quaternary features (Abstract). In: Philcox, M. (Compiler) Atlantic Coastal and Offshore Quaternary: Deposits, Sea-level changes and Archaeology (Programme and Abstracts). The Irish Quaternary Association, Dublin.
- Geoghegan, M. and Fitzpatrick, F. 2004. The Irish National Seabed Survey: A progress update. In: Abbott, V.J. and Atkinson, H.L. (Eds) Proceedings of Hydro4, The Hydrographic Society Special Publication N° 53, 5.1-5.8.
- Geoghegan, M., Fitzpatrick, F., Donovan, A. and Monteys, X. 2004. Charting the Irish/European continental shelf (Abstract). EurOCEAN 2004: European conference on marine science and ocean technology, Galway. Abstract Book.
- Hardy, D. 2004. Discussion of ongoing work into the Quaternary and earlier geology of the Donegal Bay area (Abstract). In: Philcox, M. (Compiler) Atlantic Coastal and Offshore Quaternary: Deposits, Sea-level changes and Archaeology (Programme and Abstracts). The Irish Quaternary Association, Dublin.

- Kilroy, G., Coxon, C., Daly, D., Hunter-Williams, N. and Jennings, S. 2004. Managing groundwater bodies in the Shannon Pilot River Basin for the Water Framework Directive. Pilot River Basin Workshop – Groundwater & Water Framework Directive Management Plan, May 2004, Rome, 1-5.
- McArdle, P. 2004. The Irish National Seabed Survey: matching themes with levels of resolution (Abstract). Geothematic mapping at various scales. 4th ICOGS Meeting, 32nd International Geological Congress, Florence, Italy.
- Monteys, X. 2004. Multibeam seabed classification on the West Porcupine bank Irish margin. Geohab: Marine Geological and Biological Habitat Mapping. Fifth International Symposium (Agenda and Abstracts). Earth and Ocean Sciences Department, NUI Galway, 82.
- Morris, J. 2004. Mining through the millennia: the legacy of Ireland's most ancient industry. In: Parkes, M. (Ed.) Natural and Cultural Landscapes – the Geological Foundation. Proceedings of a Conference. Royal Irish Academy, 129-138.
- Morris, J. and Parkes, M. 2004. Where do we go from here? Geological Heritage Declarations, 1991-2002. In: Parkes, M. (Ed.) National and Cultural Landscapes – the Geological Foundation. Proceedings of a Conference. Royal Irish Academy, 319-329.
- O'Connor, P.J., McKeever, P. and Gallagher, E. 2004. Landscapes from Stone: a successful public outreach initiative in geoscience from Ireland (Abstract). Session T17.03 – Geological Heritage and Tourism, 32nd International Geological Congress, Florence, Italy.
- O'Connor, P.J., McKeever, P.J and Gallagher, E. 2004. Landscapes from Stone. In: Parkes, M. (Ed.) Natural and Cultural Landscapes – the Geological Foundation. Proceedings of a Conference. Royal Irish Academy, 277–280.
- Parkes, M. (Ed.) 2004. Natural and Cultural Landscapes: the Geological Foundation. Proceedings of a Conference. Royal Irish Academy. 329pp.
- Parkes, M. 2004. Graves and gravestones: geological influence on culture. In: Parkes, M. (Ed.) Natural and Cultural Landscapes – the Geological Foundation. Proceedings of a Conference. Royal Irish Academy, 151-152.
- Plant, J.A. and others (including O'Connor, P.J.) 2004. The surface geochemistry of Europe: preliminary findings of the FOREGS geochemical baseline study (Abstract). 32nd International Geological Congress, Florence, Italy.

- Salminen, R. and others (including O'Connor, P.J.) 2004. FOREGS Geochemical Baseline Mapping Programme – a new European-wide database and geochemical atlas (Abstract). 32nd International Geological Congress, Florence, Italy. Session DWO 16 – Global geochemical baselines.
- Stanley, G., Carroll, B., Connolly, J., Gallagher, V. and McKeon, C. 2004. A review of Ireland's potential for bedrock gold mineralization. Sediment-Hosted Gold Deposits – Weekend Course 2004. Irish Association for Economic Geology, Bundoran
- Sutton, G.D., Tully, O., Hervas, A., Hickey, J. and Monteys, X. 2004. Multibeam sonar mapping and scallop stock assessment: GIS data integration in support of sustainable fisheries management. Geohab: Marine Geological and Biological Habitat Mapping. Fifth International Symposium (Agenda and Abstracts). Earth and Ocean Sciences Department, NUI Galway, 96.
- Verbruggen, K. 2004. Research on data from the Geological Survey of Ireland (Abstract). In: 47th Irish Geological Research Meeting, Programme and Abstracts, Department of Earth and Ocean Sciences, NUI Galway, 33.
- Verbruggen, K., Colgan, C., Creighton, J.R. and O'Connor, P.J. 2004. The Irish National Landslide Working Group and Database (Abstract). Workshop on National Landslide Databases. 32nd International Geological Congress, Florence, Italy.
- Wright, G. 2004. The role of the Geological Survey of Ireland in supporting groundwater resource development. Groundwater Challenges of the National Development Plan. Proceedings of the IAH (Irish Group) 24th Annual Groundwater seminar. Tullamore, April.

General Articles

- Anon. 2004. Irish National Seabed Survey: ground-truthing or dare. *Oceanology International* 2004, Exhibition Catalogue, 106-107.
- Daly, D. 2004. The relevance of the Walkerton pollution incident (2000) to Ireland. *Sherkin Comment* 2004, Issue N° 36, 19.
- Engering, S. and Dubelaar, W. 2004. The building stones of Old Amsterdam. *Down to Earth* 48, 6-8.
- Gallagher, E. 2004. National Seabed Survey. *Science Spin Magazine*, Issue 8, 13-14.
- Hall, A.M., Jarvis, J. and Connell, E.R. 2004. Glacial Lake Knockando and its bearing on the timing and sequence of the last deglaciation in Strathspey, northeast Scotland. *Quaternary Newsletter* 104,52-54.
- McAteer, C. and Parkes, M. 2004. Carlow, Clare and Sligo lead the way: County Geological Sites. *Sherkin Comment* 2004, Issue N° 37, 20.
- O'Connor, P.J. and Verbruggen, K. 2004. Geology and Peace. *Congress Newsletter*. 32nd International Geological Congress, Florence, Italy.
- Parkes, M. 2004. Bray fossil once considered the oldest in the world. *Science Spin Magazine*, Autumn 2004, 19.
- Parkes, M. 2004. A slice of early life. *Science Spin Magazine*, Summer 2004, 8-9.
- Stanley, G. 2004. Geological Survey of Ireland: Activities 2004. In: *Irish Association for Economic Geology Annual Review* 2004, 47-49.
- Stanley, G. 2004. Mining for information. *The Engineers Journal* 58, 459-462.
- Verbruggen, K. 2004. A review of mining and mineral exploration in Ireland in 2004. In: *Irish Association for Economic Geology Annual Review* 2004, 34-36.
- Verbruggen, K. 2004. Landslides in Ireland, a soft problem? *Sherkin Comment* 2004, Issue N° 36, 6.
- Verbruggen, K. 2004. Gold deposits – review of conference excursion. *Irish Association for Economic Geology Annual Review* 2004, 19-20.

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)

Presentations

- Carter, M. Data management in the Irish National Seabed Survey. GIC Conference, Denver, Colorado, August.
- Coffey, P. The remarkable Mr. Du Noyer. Royal Society of Antiquaries, Dublin. September.
- Creighton, R. Landslides in Ireland. Geohazards – Ireland at risk. Institute of Geologists of Ireland, Geological Survey of Ireland and Geological Survey of Northern Ireland, Dublin Castle, October.
- Creighton, R. The Quaternary geology of Ireland. Homebond Ltd, Newbridge, October.
- Cullen, S. Dublin Bay, amalgamation of 2003/2004 datasets. Irish National Seabed Survey Seminar, Galway. November.
- Daly, D. Vulnerability mapping and the EU Water Framework Directive. Groundwater Vulnerability Assessment and Mapping, IAH Conference, Poland. June.
- Daly, D. Groundwater Protection Schemes – a national methodology for protecting groundwater. FÁS nutrient management training course, Tullamore.
- Daly, D., Kelly, C. and Lee, M. Site suitability assessment for on-site wastewater management. Lectures and field demonstrations for FÁS courses. May and November.
- Donovan, A and Geoghegan, M. Presentation on datasets from the Irish National Seabed Survey. Marine Grid Conference, Cork. April
- Doyle, E. Shallow seismic results for NW of Donegal. Atlantic Coastal and Offshore Quaternary: Deposits, Sea-level Changes and Archaeology. The Irish Quaternary Association, Dublin. November.
- Doyle, E. Major slide into Rockall Basin. Atlantic Coastal and Offshore Quaternary: Deposits, Sea-level Changes and Archaeology. The Irish Quaternary Association, Dublin. November.
- Gatley, S. Bedrock geology of Ireland. Homebond Ltd, Newbridge, October.
- Geoghegan, M. National Seabed Survey data and images. New exploration opportunities in Ireland. Petroleum Affairs Division. July
- Geoghegan, M. 2004 Activities and Review. Irish National Seabed Survey seminar, Galway. November.

- Geoghegan, M. The Irish National Seabed Survey – Keynote Address. Gulf of Maine Marine Initiative. Maine, USA. October. Also: Irish Sea Forum, Liverpool. October.
- Geoghegan, M. and Cullen, S. Seminar on marine mapping. Southampton Technical Institutes.
- Geoghegan, M. and Cullen, S. The Dublin Bay inshore survey. Institute of Master Mariners, Dublin. June.
- Geoghegan, M. and Donovan, A. Presentation on datasets from the Irish National Seabed Survey, Dublin Institute of Technology, April
- Geoghegan, M. and Gallagher, E. The Killala Bay inshore survey. Moyvalley Resources Seminar, Ballina.
- Gillooly, M. and Doyle, E. Ireland’s inshore mapping strategy. Irish National Seabed Survey Seminar, Galway. November.
- Hardy, D. Irish National Seabed Survey and ancient landscapes. Atlantic Coastal and Offshore Quaternary: Deposits, Sea-level Changes and Archaeology. The Irish Quaternary Association, Dublin. November.
- Hardy, D. The Irish National Seabed Survey: an overview. Onshore/offshore structural tectonics, Cenozoic landscape evolution and the environment: Discussion meeting in memory and celebration of the life and work of Prof. Adrian Phillips, Trinity College, Dublin. September.
- Hardy, D. Discussion of ongoing work into the Quaternary and earlier geology of the Donegal Bay area. Onshore/offshore structural tectonics, Cenozoic landscape evolution and the environment: Discussion meeting in memory and celebration of the life and work of Prof. Adrian Phillips, Trinity College, Dublin. September.
- Hardy, D. Quaternary and earlier geology of Donegal Bay. Irish National Seabed Survey Seminar, Galway. November.
- Kelly, C. Field demonstration to Civil Engineering students from Carlow Institute of Technology, November.
- Kelly, C. and Stanley, G. Presentation to St. Thomas’ Community School, Bray. December.
- Kilroy, G. and Daly, D. Groundwater risk assessment, Shannon Pilot River Basin, Workshop on groundwater risk assessment, EU WFD Working Group 2C, Brussels.
- McArdle, P. Geohazards: a geoscience response to national needs. Geohazards – Ireland at risk. Institute of Geologists of Ireland, Geological Survey of

Ireland and Geological Survey of Northern Ireland, Dublin Castle, October.

- McArdle, P. Ireland's bid for the 2012 IGC. Council of IGC. 32nd International Geological Congress, Florence, Italy. August.
- McConnell, B. Appalachian geology of Newfoundland and some correlations with Ireland. Cork Geological Association. September.
- Monteys, X. Irish National Seabed Survey datasets: an overview. Institute of Ocean Sciences, Vancouver, Canada. May.
- Monteys, X. Giant carbonate mounds on the West Porcupine Bank, Irish Margin. 32nd International Geological Congress, Florence, Italy. August.
- Monteys, X., Collins, B. and Doyle, E. Multibeam seabed classification; research and industry applications. Irish National Seabed Survey seminar, Galway. November.
- Morris, J.H. Presentation on landscapes and geology at formal launch of Breifne Project. Cavan. May.
- Morris, J.H., O'Connor, P.J., McKeever, P.M. and Verbruggen, K.M. Developing geological heritage landscape and geotourism potential in northwest Europe: Bréifne Project (Poster), 32nd International Geological Congress, Florence, Italy, August.
- O'Connor, P.J. Contamination of soils and stream sediments as a consequence of mining activities at Silvermines, County Tipperary. Workshop on soils. Eurogeosurveys-FOREGS. Berlin. July.
- Parkes, M. Irish Geological Heritage activities. Irish Geological Association, Dublin. June.
- Parkes, M. Geological attractions in County Sligo and their place in landscape tourism. Sligo Marketing Forum. Sligo. June.
- Parkes, M. The rich geological heritage of County Sligo. Sligo Field Club. Sligo. September.
- Parkes, M. Management of the geological heritage of Ireland. MA course in Archaeological Landscapes. University College Dublin. November.
- Parkes, M. Outreach – geology for all. Geology Department, Trinity College Dublin, December.
- Sheehy, M. An analysis of the Dublin InSAR dataset. Terrafirma Workshop, Poland. July.
- Sleman, A. Developments in bedrock mapping in Ireland. 32nd International

Geological Congress, Florence, Italy. August.

- Stanley, G., Carroll, B., Connolly, J. and Doyle, E. A review of Ireland's potential for bedrock gold mineralisation. Prospectors and Developers Association Convention, Toronto. March.
- Verbruggen, K. The Irish Landslides Working Group: basis and partners. Irish Quaternary Association, Spring Meeting and Annual General Meeting, Trinity College, Dublin. April.
- Verbruggen, K. Slipping and sinking, some recent initiatives on Irish geohazards. ES2k Meeting, Belfast. September.
- Verbruggen, K. The Terrafirma Project. Geohazards – Ireland at risk. Institute of Geologists of Ireland, Geological Survey of Ireland and Geological Survey of Northern Ireland, Dublin Castle, October.
- Verbruggen, K. Geology as a career. Science Week, University College Dublin. November.
- Verbruggen, K. GSI's Document Management System. Info-IE Annual Meeting, Dublin. September.
- Verbruggen, K. Research using GSI datasets (Poster). Irish Geological Research Meeting, NUI Galway. February.
- Verbruggen, K. GIS usage in the GSI. Geomatics Department, Dublin Institute of Technology. February.
- Walsh, T. Presentation on seabed work to primary level pupils. Scoil Muilrean, Tallaght, Dublin. April.

Field Trips Led By Staff

Colgan, C. and Redmond, N. Visit to the Pollatomish landslide area. Heritage Week, September

Gatley, S. Killiney Beach .Heritage Week, September

Gatley, S and Sleeman, A. Geology of Killiney Bay, Outreach / Crosscare, June

McArdle, P. Some Silent Place – the Blackstairs. Heritage Week, September

McArdle, P. Siúlóid ar an Taobh Tuathail. Seachtain na Gaeilge, Márta

McArdle, P: Mineral deposits in the Leinster Granite. Segment of a nationwide excursion. Eurogranites, September

McConnell, B. Volcanic Dublin (Portrane). Heritage Week, September

Morris, J. Ice, Fire and Water: Building the Physical Foundation of the Copper Coast, County Waterford. Heritage Week, September, and school excursion, October

Morris, J. Archaeological excavations at Tankardstown Engine Houses, near Bunmahon, County Waterford. Heritage Week, September and guided tour, December

O'Connor, P.J. A Walk Through Time in Carlingford. Heritage Week, September

Pracht, M. Killala Bay Geology. Heritage Week, September

Verbruggen, K. Geology and Nature of Bray Head. Heritage Week, September

Exhibitions

GSI staff attended the following exhibitions, trade shows and conferences. They mounted exhibitions on relevant GSI activity and networked with participants.

Energy Ireland, Dublin: Organized by Sustainable Energy Ireland

Fish Ireland, Killybegs: GSI featured in association with BIM. – June

Irish National Seabed Survey: Currently at GSI, available for display elsewhere on request

Maynooth Library, County Kildare: “What on Earth?”, Exhibition on geological heritage – September

Oceanology 04, London - March

Prospectors and Developers Association of Canada Convention, Toronto – March

Stone Show, Dublin – November

Young Scientist and Technology Exhibition, Dublin: GSI featured in association with the Marine Institute – January

32nd International Geological Congress, Florence, Italy – August.

Overseas Meetings Attended

Dimension Stone Conference, Prague, June – P.O'Connor

Earth Heritage - World Heritage: An international conference exploring geological and geomorphological conservation in a national and global context, Dorset, UK, September – M.A. Parkes

Engineering Geology Conference, Liege, Belgium – J.R.Creighton

European Minerals Foundation Conference, Brussels, November – P.O'Connor

Groundwater Vulnerability Assessment and Mapping, Ustron, Poland – D. Daly

IAVCEI General Assembly and excursion to volcanoes in Chile, November – B.McConnell

Mine Wastes Conference, Bratislava – G.Stanley

Risk Analysis IV Conference, Rhodes, Greece, October – P.O'Connor

Strategic Environmental Assessment and future aggregate extraction, Nottingham, February – G.Stanley

32nd International Geological Congress, Florence, Italy, August – M.Carter (in addition to earlier entries)

NATIONAL AND INTERNATIONAL REPRESENTATION

Eurogeosurveys

Meeting of Directors: P.McArdle: Belgium - February; Germany – October.
Meeting of Contact Points: P.O’Connor: Brussels – June and December.

Soil Protection Group: P.O’Connor: Berlin – July

Euroseismic Project: D.Inamdar and A.Donovan: Paris – July.

Groundwater Topic Network: G.Wright.

Natural Resources Expert Group: P.O’Connor: Brussels – February.

European Geoparks Network

J.H. Morris: Sicily – October

European Science Foundation, Life and Environmental sciences Committee (Irish Representative)

P.McArdle: Vienna – April; Hamburg – February

FORFÁS - Working Group on Public Spending on Research

D.Inamdar

Forum of European Geological Surveys (FOREGS)

Meeting of Directors: P.McArdle: Germany – October

Geochemical Working Group: P.O’Connor: Florence – August; Lisbon – November

Geoscience Information Consortium

M.Carter

International Union of Geological Sciences – Statutes Committee

P.McArdle (Chairperson)

International Year of Planet Earth – Senior Advisor

P.McArdle

John Jackson Memorial Lecture Committee

P.McArdle

Integrated Ocean Drilling Program - ECORD

D.Inamdar, P.McArdle, E.Doyle and B.McConnell (Observers)

JEODI Representative

D.Inamdar,

ProGEO: The European Association for the Conservation of the Geological Heritage (Irish Representatives)

J.H.Morris and M.Parkes

Royal Irish Academy – National Committees:

Geosciences - P.McArdle, M.Parkes; Geography – W.P.Warren

PARTICIPATION IN SOCIETIES AND WORKING GROUPS

Applied Agricultural Meteorology Working Group (AGMET)

Member: G.R. Wright

Bréifne Mountains Co. Ltd.

Director: P.O'Connor

Cooper Coast European Geopark

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

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

Member: D.Daly

Dun Laoghaire-Rathdown Heritage Forum

M.A. Parkes

European Federation of Geologists – Geological Heritage Working Group

M.A. Parkes and J.H.Morris

Environmental Protection Agency

– Expert Group on Silvermines: Member: P.J.O'Connor

– Steering Committee on Groundwater Recharge and Vulnerability Project: Member: D.Daly

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

Europamines - Project Development Meetings and Site Visits:

J.H.Morris: UK – September; Spain – December

European Palaeontological Association (Irish Representative)

M.A.Parkes

Fingal Heritage Forum

M.A.Parkes

Geotechnical Society of Ireland

Committee Member: J.R.Creighton

Global Monitoring for Environment and Security (GMES)

P.O'Connor attended Advisory Council: Brussels - December

Terrafirma Project: Ireland national contact point: K.Verbruggen, Rome - February

HADES Project Group

M.Geoghegan

Hydrogeology Journal

Associate Editor: D.Daly

Hydrographic Society – Irish Branch

S.Cullen (Chair)

Institute of Geologists of Ireland

Board Member and Honorary Secretary: G.R.Wright. Observer: G.Stanley. Working Group Members: D.Daly, G.R.Wright, E.Doyle. GSI Liaison, P.J.O'Connor

International Association of Hydrogeologists – Irish Group

Seminar Sub-committee: C.Kelly and N.Hunter-Williams

International Hydrological Programme (Irish National Committee)

Member: D.Daly

Irish Association for Economic Geology

G.Stanley, (Past President), V.Gallagher (Treasurer)

Irish Journal of Earth Sciences

Co-Editor: M.A.Parkes

Editorial Board Member: J.H.Morris

Mining Heritage Trust of Ireland Ltd.

Web-Manager: K.Verbruggen

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

Publications: M.A.Parkes

Speleological Union of Ireland

Librarian: M.A.Parkes

North Atlantic Minerals Symposium – Organizing Committee

G.Stanley (Co-Chair)

UK Groundwater Forum

Observer Member: D.Daly

Water Framework Directive

Inter-Departmental Co-ordination Group

Members: D.Daly and G.R.Wright

Working Group on Groundwater

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

North-South Technical Advisory Group

Member: D.Daly

UK–Ireland Groundwater Task Team

Member: D.Daly

Steering Committee for Teagasc soil and subsoil Mapping Project

Member: D.Daly

GIS Working Group

Member: G.O'Shea, M.Lee, K.Verbruggen

River Basin District Management Project Steering Groups:

South-Eastern: G.R.Wright

Shannon: P.O'Connor

Eastern: G.R.Wright

South-Western: G.R.Wright

Technical Co-ordination Group

Member: D.Daly

Two Project Steering Groups

Member: D.Daly

EU Working Group 2C - Groundwater

D.Daly

Working Group on Groundwater Protection Responses

Members: D.Daly and G.R.Wright

STAFF CHANGES DURING 2004

The following staff joined or returned to GSI: Cathal Brugha, Joe Carey, Jane Coll, Margaret Cosgrave, Fiona Dunne, Laurence Dempsey, Rory Dunphy, Scott Engering, Mairead Glennon, Jim Graham, Tracy Hall, Jimmy Kennedy, Claire McAteer, Siobhan McLaughlin, Chris McWilliams, Shane Miley, Orla Murphy, Shane Murphy, Finnian O'Connor, Mairead O'Dwyer, Niamh Redmond, Anne-Veronique Rizzo, Paul Ryan, Ray Scanlon, Aaron Sheehan-Clarke, Katherine Smith, Schalk Van Lill, Ekaterina Viventsova, Gerry Wright.

The following staff left GSI: Wendy Bastick, David Broderick, Cathal Brugha, Jacqui Connolly, Niamh Connolly, Rory Dunphy, Scott Engering, Joanne Gavigan, John Greene, Rosemary Jordan, Phelim Lally, Carol Lodola, Claire McAteer, Sean McKeon, Emma McSweeney, Shane Miley, Orla Murphy, Shane Murphy, Finnian O'Connor, Anne-Veronique Rizzo, Jenny Rush, Paul Ryan, Roger Sweetman, Katherine Smith, Denise Taylor, Tracey Walsh, Theresa Williams.