Prof. John Cosgrove
Professor, Structural Geology, Imperial College London, & consultant, responsible for deduction of basement structures & sections in the Atlas for their impact on cover rocks.

Dr. Jacqueline Skipper
Senior Geologist, Geotechnical Consulting Group & leading the section in the Atlas for the Lower Palaeogene & the implications of its variability for engineering.

Dr. Ursula Lawrence
Geotechnical Engineer, Crossrail, & responsible for aspects of the Atlas dealing with the effects of the Quaternary on the engineering properties of rocks & soils.

The Atlas; be a sponsor

The budget for the Atlas is £850,000. All sponsors and contributors will be credited and logos of organisations displayed. Recognition will also be given for sponsorship *in kind* such as access to facilities and staff time.

- **Principal;** one of possibly two who wish to take *"ownership"* of the project and cover the bulk if not all of the cost.
- **Corporate, Institutional & Agency;** to accommodate organisations and designed but not limited to those who wish to sponsor a Part or a Chapter
- **Individual;** to recognise the support from Fellows and others.

To become a Sponsor or to learn more about sponsorship please contact the Secretary to the Forum, Dr Christine Butenuth, (First Steps Geo Ltd,) 0207 736 6889 or admin@firststepsgeo.co.uk

FUND SCIENCE & ENGINEERING

The Atlas; its associated scientific meetings

Research is now underway and will be presented at a number of public meetings as follows;

October 2010
One-day Regional meeting of the Thames Valley Group of the Geological Society, with one day Field trip following to link with local knowledge.

October 2011
One-day Ordinary Meeting of the Geological Society to present a summary of progress to date.

October 2012
An international meeting (post Olympics) to compare findings with international analogues. Atlas production commences.

2013
Orders taken for the Atlas, its Electronic version, and its CD Rom.

2014 Publication of the Atlas
With joint meeting of The Geological Society of London, The Institution of Civil Engineers and The Chartered Institution of Water & Environmental Managers.

Rengmain boring machine enters shaft.

Picture courtesy of Thames Water

Current participants

British Geological Survey
Cambridge University
ChalkRock
Dr. Chris King
Crossrail
First Steps Ltd
Network Stratigraphic Limited
Geological Society
Geotechnical Consulting Group
Imperial College London
University College London

To become a Sponsor please contact

Dr Christine Butenuth
Secretary to the Forum and Co-Director of First Steps Ltd
0207 736 6889
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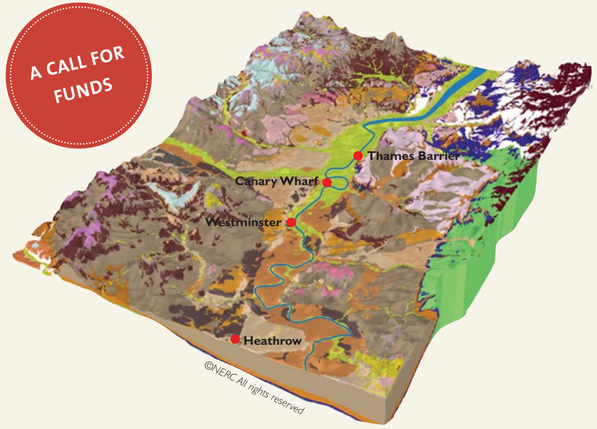
Geological Atlas of the London Basin

LONDON BASIN FORUM

A KEY RESOURCE FOR SCIENCE, INDUSTRY AND GOVERNMENT

A CALL FOR FUNDS



The Geological Society

The Atlas; why we need it

The population of London is around 21 million and produces more than 40% of total tax revenues for the UK. Not surprisingly, the infrastructure to support this makes London and its surroundings one of the most intensively investigated areas of the upper crust on the surface of the Earth. Countless boreholes have been drilled for ground investigations and water supplies; many kilometres of tunnels have been excavated for railways and sewers; immense volumes of ground have been excavated for foundations, cuttings, pits and quarries, and a considerable amount of geophysical surveying has been completed for commercial purposes. From all this it might be expected that the geology of London and its surrounding areas is well known - but not so!
There is a very large volume of unpublished and unsynthesised data for this area which has the potential, when integrated with current databases, and presented in an effective format, to transform our understanding of the region and assist the solution to many current geological, geotechnical and hydrological problems, and 'anomalies'.

FUNDING FOR AN ATLAS

This Atlas will synthesise old and new data in a format which will enable them to be used, for the first time, in:-

- **scoping and funding all major engineering and development projects in the capital and its environs,**
- **managing risks and contracts for all projects,**
- **guiding local and regional development, and**
- **directing strategic planning decisions influencing the economy not only of London but of the whole United Kingdom.**

Dr. Michael de Freitas
Chairman of the London Basin Forum, Emeritus Professor of Engineering Geology, Imperial College London & consultant, responsible for management & delivery of the Atlas.

Prof. Rory Mortimore
Professor Emeritus, Engineering Geology, Brighton University & consultant, leading the contributions to the Atlas for the Cretaceous & its links with geotechnics & water supply.

Dr. Chris King
Research Associate, University of Portsmouth, & stratigraphic consultant, responsible for sections in the Atlas on the Harwich, London Clay & Bagshot Formations, including their influence on development.

Dr. Katherine Royse
Principal Geologist, British Geological Survey, Specialist in urban geology & natural hazards, leading the use of the Atlas for local, regional & strategic planning, & decision making.

Prof. Philip Gibbard
Professor of Quaternary Palaeoenvironments, Cambridge University, & consultant, leading the Quaternary terrestrial aspects of the region in the Atlas & their relationships to neotectonics.

Dr. Willy Burgess
Senior Lecturer, Hydrogeology, University College London, & consultant, responsible for those sections in the Atlas on groundwater storage & flow, & associated geochemical reactions.

The Atlas; its format

- 320 pages (A3) and fold-out multiples of A3
- available as a conventional hard-copy A3 size reference book
- housed in a protective wallet
- available in electronic form enabling users to compare their data banks with those used by the Forum
- all illustrations used also available on CD Rom
- each chapter will contain a full explanatory text with maps, extensive text figures and relevant photographic images
- maps will record the structure and history of the Basin, and their relationship to features of geological, hydrogeological, geotechnical and geo-environmental significance
- many maps will be further illustrated with block diagrams showing the geology in 3D
- case histories from industry will be used to explain the relevance of the geology to planning, design, construction, supply and maintenance
- linked to the BGS data base of more than 738000 BH records.

The Atlas; its content

The Atlas will be in three parts, each containing relevant case histories of Basin geology applied to the avoidance of risk and the solution of practical problems.

PART 1
Introduction, Contents, Sponsors
Context, use of the Atlas
Nature of the evidence & uncertainty
Commonly occurring geological processes
History of research in the London Basin

PART 2
Basement
Cretaceous
Thanet Sand Formation
Lambeth Group
Thames Group (Harwich & London Clay Formations)
Bracklesham Group (Bagshot & Windlesham Formations

PART 3
Clay with Flints & related geology
Quaternary
Hydrogeology
Regional planning and infrastructure development

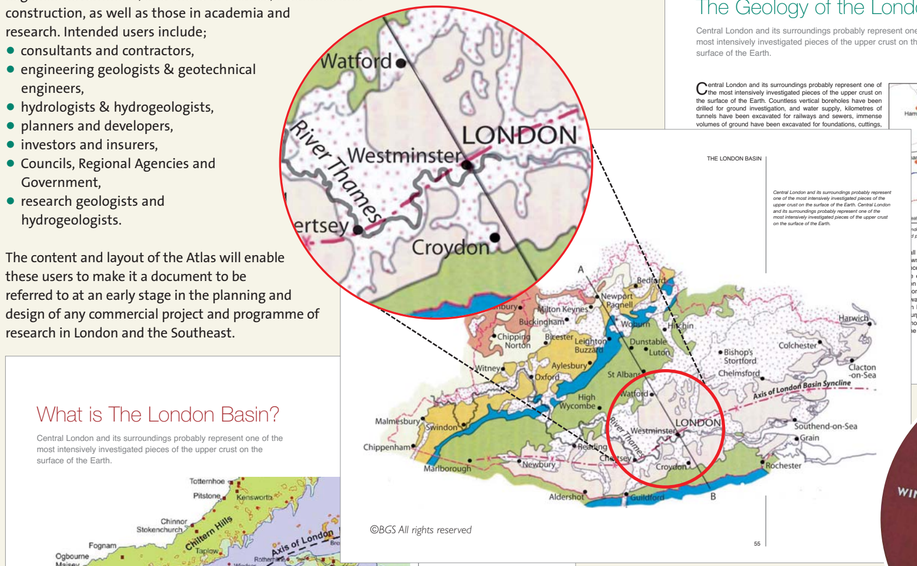
PART 4
References & Index
Glossary
CD Rom

The Atlas; intended users

The Atlas will support those in planning, development, Local and Regional Government, and those in finance, insurance and construction, as well as those in academia and research. Intended users include;

- consultants and contractors,
- engineering geologists & geotechnical engineers,
- hydrologists & hydrogeologists,
- planners and developers,
- investors and insurers,
- Councils, Regional Agencies and Government,
- research geologists and hydrogeologists.

The content and layout of the Atlas will enable these users to make it a document to be referred to at an early stage in the planning and design of any commercial project and programme of research in London and the Southeast.



All other map graphics reproduced with kind permission of Prof. Rory Mortimore

The Atlas; how we will produce it

Producing the Atlas is the responsibility of **The London Basin Forum**, a Working Party of the Engineering Group of the Geological Society of London. Its 12 members, specialists with both academic and industrial experience (see photos) will direct the work, complete much of the work required, and be responsible for the work of other contributors. Many other geologists from across the disciplines are involved, including retired senior figures in the subject, active leaders in their fields from academia and industry, as well as Final year and Post Graduate students, all working under the leadership of the Forum members.

The Atlas will be compiled so as to produce;

- an holistic approach to the Basin integrating its tectonic development, record of sedimentation and long history of uplift, weathering and erosion.
- a data-base integrated with that of the British Geological Survey, in a format that can be used by geologists, hydrogeologists, geotechnical and environmental engineers, and others involved with private industry and public works.
- a geological basis for guiding local and national Government decisions concerning planning and development.
- a resource of relevance to basic geological research.

The Forum is open to contributions from anyone whose expertise is relevant to its work. Access to it can be found via its web site hosted by the British Geological Survey

BE PART OF THE TEAM

www.bgs.ac.uk/londonBasinForum
and its portal
www.firststepsgeo.co.uk/londonbasinforum
provided by First Steps (Geo) Ltd.

Dr. Richard Ghail
Lecturer, Engineering Geology, Imperial College London, & consultant, responsible for sections in the Atlas on intra-plate tectonics & dynamics of the basin opening & inversion.

Neil Hadlow
Specialist in geotechnical data management, with Halcrow, & the geologist supervising creation, curation & use of the data banks for production of the Atlas.

Andrew Thompson
GIS technical manager, geographer, professional cartographer & illustrator, responsible for the management, compilation & production of all illustrations and maps in the Atlas.