



British
Geological Survey

NATURAL ENVIRONMENT RESEARCH COUNCIL



Gateway to the Earth

National Geophysical Survey Aims, Benefits & Call Process

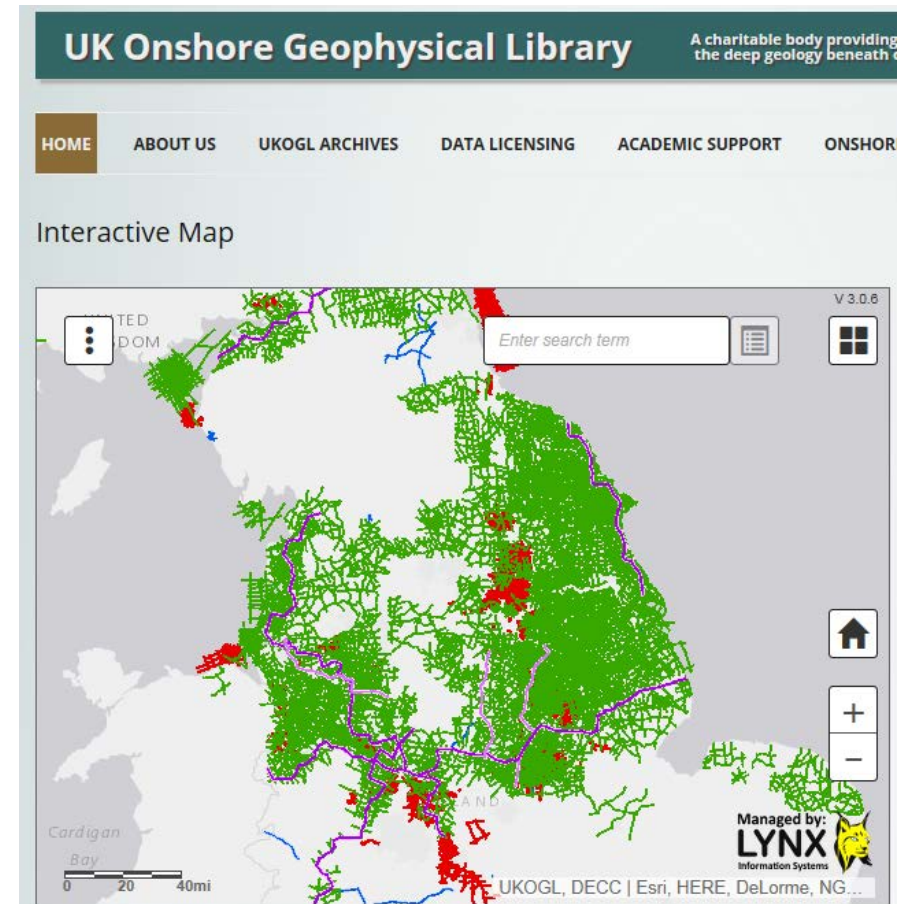
Robert W Gatliff

Director Energy & Marine Geoscience

NGS Seminar 4th April 2016

BGS and the National Geophysical Survey: a new onshore initiative

- Parts of the UK are covered by old 2D seismic reflection data - much of this is poor quality,
 - Very few 3D seismic surveys (compared with offshore)
 - Data held in confidence
 - Released via UKOGL
 - Later reprocessed data not released
-
- Can we look at a new way to collect more 3D data?



The National Geophysical Survey: Aims

Why do the BGS want a National Geophysical Survey?

- *Public National Good Science*
- A step change in the resolution of the subsurface replacing current maps & models based on old, poor and/or sparse data
- *A public database available to industry and academic research*
- This new approach will provide regulators, different industries and academia with equal access
- *Reassurance and better understanding for the public*
 - Monitor the subsurface
 - Develop understanding of the geology
 - Fault risk Aquifer locations
 - Resources Storage sites
 - Reduce and understand geological risk and uncertainty

The National Geophysical Survey: Aims

- A proposal to acquire high quality geophysical data to develop the scientific understanding of the subsurface of the UK
- *New collaborative, open and transparent approach to collection of geophysical data onshore*
- Multidisciplinary applications - provide the baseline to underpin environmental monitoring of subsurface activities and assess resources Right to use by BGS, Government, industry and academia. Basic charges for copies etc.
- *Schedule- the first surveys could begin late Summer 2016, and the programme of work may continue for 10s of years*

Benefits Of National Geophysical Survey

- Collaboration and data sharing
- *Cheaper surveys and wider areas of survey through collaboration*
- Opportunities to use new techniques
- *Better access to land through collaboration with BGS*
- New approach to underpin subsurface planning
- *Underpin resource exploration & development (conventional & unconventional hydrocarbons, minerals, groundwater, geothermal energy)*
- Underpin underground storage (compressed air, H₂, CO₂, nuclear waste)
- *Better environmental monitoring (fluid leakage, containment management)*
- Support for infrastructure development (tunnels, shafts etc) and assessment of geohazards (landslides, sinkholes, flooding)

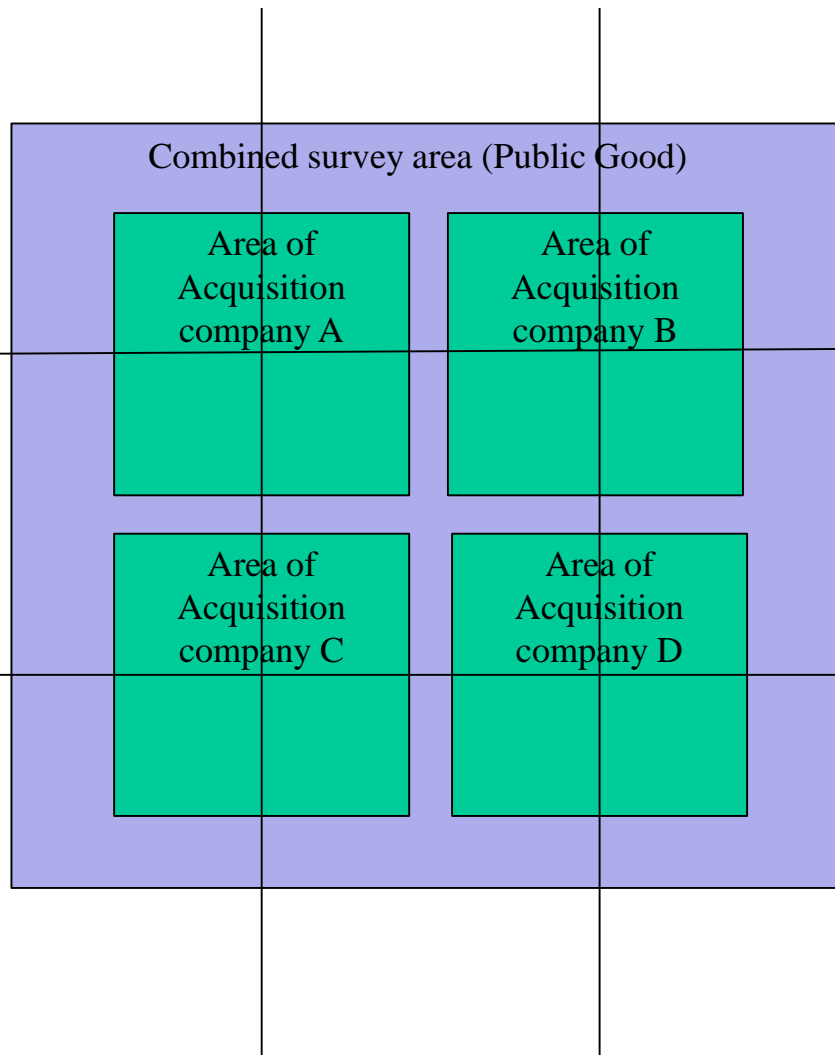
Benefits Of National Geophysical Survey

- Build public confidence in underground developments
- *Early release of data*
- Higher quality data
- *Peer review of proposals*
- Maximising use of results for all industries, environmental monitoring and academia
- *Utilise BGS role as national survey organisation*



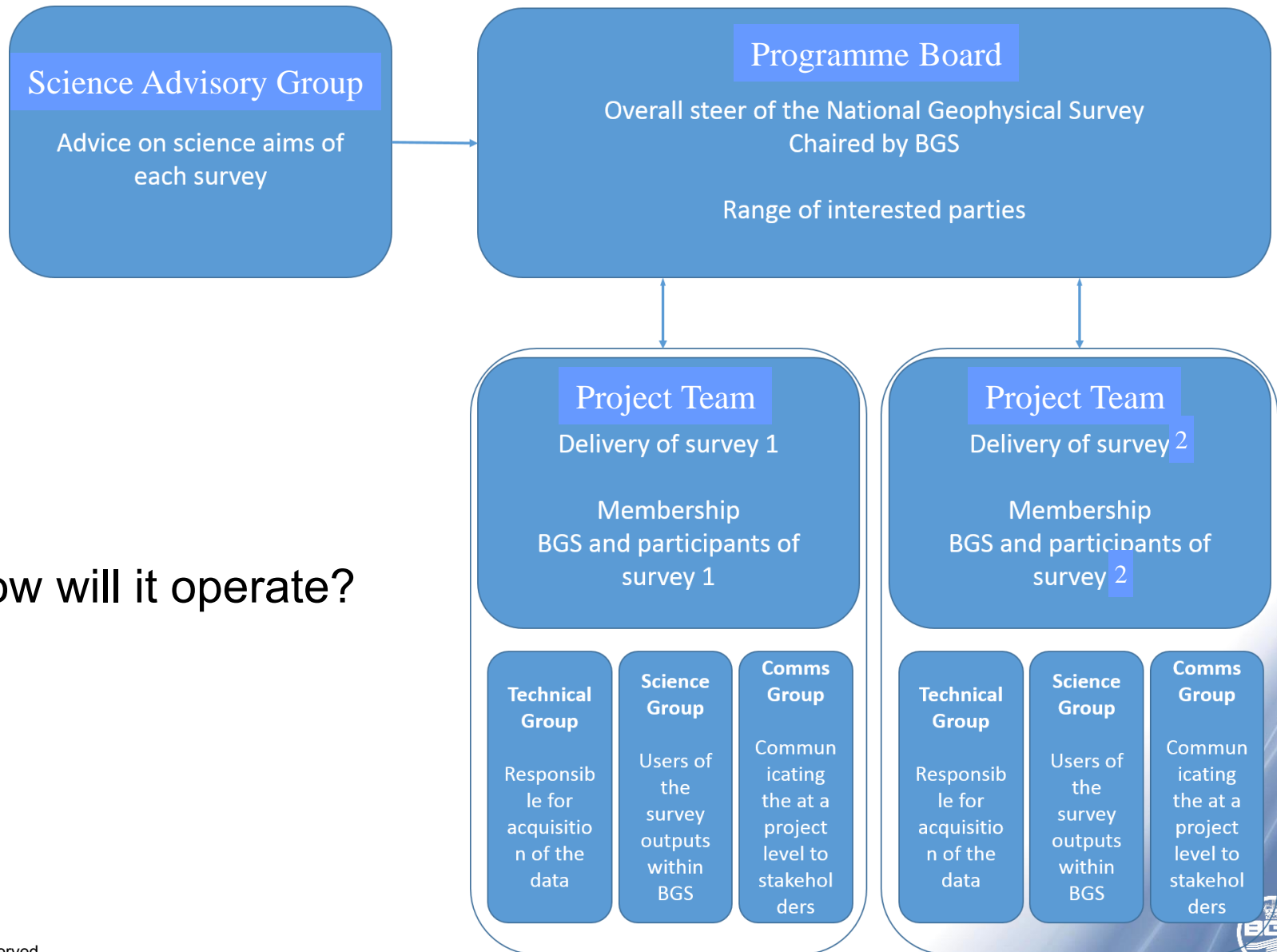
Vision – How it will work

Regional context lines



1. Seek applications (a call)
2. Select initial area (s)
3. Select lead operator for project (s)
4. Prepare communications plan – web, press releases – focus on new approach
5. Agree technical specification for data collection and processing
6. Agree line orientation & grid
7. Agree model for access/damages: Voluntary payment model and back up legal model
8. Tender for land agents
9. Tender for data acquisition & processing
10. Interpretation and publication

National Geophysical Survey: Oversight



- How will it operate?

Role and responsibilities – Science Advisory Group

- Science Advisory Group
 - *Invitations have been sent to members of the academic community*
 - The primary role will be to advise BGS and the Programme Board on the development of the BGS work programme to collect, use and interpret the data is the best way for the Public National Good.
 - *The group will also advise on:*
 - *Survey aims*
 - *Acquisition targets*
 - *Develop geological science questions*
 - The group will report to the Programme Board and the relevant advice will be actioned by the programme board to the project team

Roles and responsibilities – Programme Board

- Develop a model for funding for the delivery of each acquisition scheme
- *Agree operations costs, processing costs, interpretation costs*
- Define the process and protocols to identify the areas of data collection for individual schemes
- *To include scientific approaches and novel geophysical techniques.*
- *Community engagement plan/charter*
- *Communication strategy (media, press, announcements, timings, responsibilities)*
- *Scope confidentiality, IP agreements, release terms & data storage.*
- *Scope the liabilities and risks of the project*
- Approve the project plan for each scheme
- *Invitations for Programme Board underway*

For each project in the scheme the Programme Board will:

- Review progress against cost, time and budget
- Review project priorities
- Approve changes to the project plan
- Agree external communications

Roles and responsibilities – Project Team (acquisition and processing only)

- The Project Team will be responsible for the day to day running of the scheme
- *It will report to the Programme Board*
- The Project Team may have different members for each scheme
- *The major roles in the Project Team will be*
 - *Project Manager (overall responsibility for the project)*
 - *Technical Manager (seismic acquisition, survey design)*
 - *Communications Manager*

How will the survey work?

- Call for expressions of interest
- Expressions of interest will be collated
- Geographical areas for survey locations will be develop based on the expression of interest



Next Stage

How will it be funded?

- The organisations interested in each survey will pay for the data acquisition
- BGS will have overall management of the project and this will be paid for by the participants

The data

- The plan is the data will be owned by the survey participants and BGS
- BGS will use the data to answer science and public national good questions.
These will be driven by the Science Advisory Group
- BGS will use the data to:
 - Develop the national geological model
 - Map the subsurface
 - Understand the resources in the area
 - Evaluate environmental risks and assess geohazards
- The work BGS undertakes on the data will be published
- The data will be available to all stakeholders (public, landowners etc) after a short period, which will be less than the standard release mechanism for oil and gas licence data

The Call

BGS will announce a call in the next few weeks
Areas of interest to be proposed

Collate EOI and propose combined surveys
Agree detailed programme scope/budget

Draw up and sign contracts and partnership
agreements

Aim for completion by end May 2016 or June 2016

Questions

and Thank You