

LIBRARY REVIEW 2010

REPORT TO COUNCIL, NOVEMBER 2010

A. Introduction

- i. The Library Review was instigated by Council at the end of 2009, initially as a Library Acquisitions Review, to help ensure that the Geological Society's library collections and services continue to be developed over the coming years in a sustainable way. The commitment of Council to the future of the library, shared by the Review Group, is predicated on the belief that the library collections – enhanced by the information services which depend on them, the expertise of the staff, and sets of rich supporting metadata – constitute a unique, nationally and internationally important resource, which is one of the jewels in the crown of the Society.
- ii. To make the best use of this major asset, development of the library must be sustainable both strategically and financially.
- iii. Strategic drivers for long term development of services and collections include the evolving needs of the Fellowship, and rapid and fundamental changes in the wider library and information services environment. In conducting this review, we have been guided by the Society's overall strategic objectives, in particular:
 - maintaining and building a world class geoscience library and map collection;
 - pursuing excellence of content and accessibility of the Society's website and other online resources;
 - developing and supporting new and existing Specialist Groups;
 - collaborating with other specialist bodies in the UK to pursue common aims;
 - diversifying income streams;
 - protecting and developing existing income streams;
 - maintaining and developing an expert and professional staff;
 - growing Fellowship and promoting the Society throughout academia and industry.
- iv. The decision to carry out a Library Review was also driven in part by financial considerations, as made clear in the Terms of Reference set for the Review Group by Council (see Appendix 1 for Terms of Reference and membership). Consideration of the Society's broader financial position and priorities is outside the remit of the Review Group. However, as a result of the transparent way in which we have chosen to conduct our review, we are conscious that this report to Council will also be read by a wider audience. With this in mind, it may be helpful to provide some context and briefly to review the library's finances in recent years.
- v. In seeking to deliver against its strategy, the Society is undertaking new activities, and has ambitions to do more. The Society is also obliged to meet significant recurrent building costs associated with our leasehold. Furthermore, while some major income lines have been relatively robust during the recession, others have suffered, and there is

increased recognition that the Society must do more to ensure its continuing financial security. These and other considerations have led to close examination of income and expenditure across all areas of activity, to ensure that income potential is maximised and that resources are deployed as efficiently as possible.

- vi. Library expenditure has risen considerably in recent years. In setting the budget for 2010, Council and its reporting committees were faced with some difficult choices, and agreed a number of savings which it recognised could not be achieved painlessly. Among the options considered was to keep the library acquisitions budget at the actual 2009 expenditure level, rather than to agree the proposed increase. Council recognised that to do this without first investigating in detail how it would be achieved, and what would be the long term effect on the collections, could cause lasting damage to the library collection and services, and endanger delivery of longer term objectives. Instead, it decided to approve the increased expenditure, and to establish a working group to look at acquisitions policy, to assist with strategic decision making about the library and to inform future years' budgets. In starting this work, the Review Group concluded that it was not meaningful to submit a report considering acquisitions in isolation from other aspects of the library. It sought new, broader terms of reference, and these were agreed by Council in June 2010.
- vii. Outturn figures for core direct library expenditure and income in 2005-2009 (and budget figures for 2010) are as follows:

| Year | Expenditure (£k) | | | Income (£k) |
|---------------|---------------------------|-------|-----------------|-------------|
| | Acquisitions ¹ | Staff | Other | |
| 2005 | 100 | 165 | 47 ² | 29 |
| 2006 | 98 | 163 | 34 | 30 |
| 2007 | 95 | 180 | 37 | 31 |
| 2008 | 127 | 199 | 60 ³ | 30 |
| 2009 | 138 | 202 | 35 | 24 |
| 2010 (budget) | 157 | 224 | 40 | 27 |

Notes:

1. *Acquisitions include capital expenditure on hard copy journals, books, maps and binding, plus licence costs for electronic journals.*
2. *Includes £19k for electronic cataloguing work. In subsequent years, these were considered special project costs, and are not included here.*
3. *Includes exceptional costs of scanning the Murchison notebooks.*

- viii. Beyond noting that direct costs have risen considerably, while direct income (from library services) has remained relatively static, the Review Group did not conduct any

detailed analysis of the library's finances. In particular, we did not attempt to attribute to the library any proportion either of income from Fellowship and Corporate Affiliate subscriptions, or of indirect costs such as overheads and support staff; and we did not review the use of restricted funds for library expenditure, though our understanding is that this is limited in scope. We assume that Council, with the support of Management and Finance Committee (MFC), has these matters under effective control.

- ix. We note that there have been two reviews of aspects of the library in the past decade. In 2005, a working group chaired by Bernard Leake focused both on governance and on the scope for digitisation and electronic access projects (leading to completion of the electronic library catalogue and map index, and informing the establishment of the Lyell Collection). In 2000, Magda Czigany, a former Chief Librarian at Imperial College carried out an independent review, which focused on staffing and services. The last comprehensive library review was undertaken in 1985/6.

B. The external environment

- i. All libraries are different, but there are some common trends and drivers. There is some high quality research providing intelligence on these issues, particularly reports from RIN (Research Information Network). (Michael Jubb, Director of RIN, was interviewed as part of the review process.)
- ii. Technology and its uses are rapidly evolving, and so are the ways people use information and data – even the times of day at which people access content are changing. But these changes in behaviour will not be uniform. They will vary considerably with age (though of course this is not to suggest that all people of similar age will behave similarly), with employment sector and industry, and with many other factors.
- iii. Across universities and other institutions, scholarly and specialist libraries are reassessing their roles, and how they can most effectively add value. Increasingly, in-house catalogues which are made available over the internet are being indexed by Google. As a result, users are more likely to use Google as a catch-all search tool, rather than to use library-specific search facilities in their own right. Some libraries have no hard copy content, and others are moving in that direction. Collaboration across libraries is no longer a luxury – it is essential.
- iv. GSL is one of a very small number of world class geoscience libraries. In the UK, BGS and NHM are the most significant other ones. There are fundamental library reviews going on in both, and BGS's library service has recently been restructured as part of a wider NERC initiative. (Internationally, USGS is also considering a fundamental review of library service provision.) Other significant Earth science libraries are at Oxford and Cambridge universities (and possibly others such as Manchester), and at the National Museum of Wales (for maps). The Review Group did not make as much progress as it hoped in identifying such libraries and finding out about their collections. The Society might consider continuing this line of inquiry in taking matters forward.

C. What we did

- i. The Library Acquisitions Review Group (known from June 2010 as the Library Review Group) first met in February 2010. Four more meetings were held, and there was further discussion by email throughout the process.
- ii. Much of the work of Review Group has related to the gathering and analysis of information. In February and March, Fellows were invited to complete a questionnaire about the Society's library collections and services, and their own use of library and information services, and around 100 responses were received, mostly from active users of the library. Forms were provided in the library and users were encouraged to record the books and journals they used, so that (necessarily partial) data could be gathered on the use of hard copy materials on site, and these were considered alongside more reliable sets of data relating to electronic usage, physical loans and photocopy requests. The staff were consulted, and several interviews were conducted with individuals from other institutions. (The Review Group identified other potential interviewees, but did not manage to speak with all of them.) Comment from Fellows and other library users was welcomed throughout the process. A Town Hall meeting was convened in October, to allow Fellows to review and comment on emerging conclusions, and an early draft of this report was made available for comment online.
- iii. Selected information gathered during the review is attached:
 - Questionnaire (Appendix 2)
 - Analysis of questionnaire results (Appendix 3)
 - Analysis of 'quick sheets' recording on site book and journal use (note that these data are very partial, capturing perhaps 20% of total usage) (Appendix 4)
 - Analysis of photocopy requests (Appendix 5)
 - Analysis of current library staff time deployment (Appendix 6)
 - Informal note of interview with Michael Jubb (Director, RIN) (Appendix 7)
 - Informal note of discussion with NHM staff (Appendix 8)
 - Informal note of discussion with Helen Pain (Director, Membership Services, Royal Society of Chemistry) (Appendix 9)
 - Specific suggestions arising from consultation during the review process (Appendix 10)

Further data are available on request.

D. What we learned

- i. The services offered, the breadth and depth of the collections, and the expertise and helpfulness of the staff are all highly valued by those who use the library. It is used in very different ways by different users – as library of first choice, as library of last resort,

and in many other ways (notably as library of 'second resort' – users will come to the Geological Society if their home library does not have what they want).

- ii. A number of misconceptions about the review process came to light during the later stages of consultation – for example, that it was intended to introduce charges for Fellows' access to the library, or that there was a wish to reduce the total library budget by 20% through cutting journal subscriptions. This report should lay these fears to rest. The Review Group is committed to the continued development of the library, and is confident that Council shares this view.
- iii. It is vital that Council works to carry the confidence of the Fellowship as the recommendations are implemented, is transparent in its decision making, and continues to keep Fellows informed.
- iv. The review process was valuable in developing discussions with NHM and BGS, which are ongoing, building on existing inter-library contact and informal cooperation.
- v. This is a period of transition – but the Society cannot afford to wait and see what is the outcome. Doing nothing is not an option.

E. Principles

- i. The work of the Review Group has been founded on the Society's strategic aims and objectives, rather than simply following what is happening in other libraries. In particular, the varied and changing needs of the Fellowship have driven our discussions and recommendations.
- ii. Fairness has been a guiding principle – but agreeing criteria for fairness is not a straightforward matter. For example, should charges be made for a service which is used by a minority, but which is particularly valuable to those who are physically distant from the Society? It could be considered unfair on those individuals to make such a charge – or unfair on the majority who do not use the service to spread the cost evenly among all Fellows.
- iii. We have also kept in mind the charitable status of the Society, and the need therefore to provide and demonstrate public benefit. The library does this in many ways, both by supporting the work of Earth scientists who deliver such benefits, and through its custodianship of a nationally important collection.
- iv. The Review Group has drawn a distinction between rare or unique material, which is often old and only exists in hard copy, especially the map collection (a valuable resource for the Society, which we have a duty to safeguard for use by future generations) and new journal material (which is useful and important but can often be obtained through other means). A key question is how we can generate more value from our unique assets – rare content, and the skilled library staff. There is a stand-out case for a significant map scanning project (discussed below), which has already attracted considerable support from Council.

- v. A distinction has also been drawn between commercial work (where more value might be generated) and academic or private research. However, there is no proposal to charge for usage by any Fellows (with the exception of offsite access to third party online journals – see below). They can quite legitimately use the library for their own commercial work.
- vi. The Review Group’s presumption has been that the range and availability of services should be grown, and that the disadvantage to those who cannot easily visit in person should be minimised. The Society should continue to invest in the library, while recognising that this must be done in a financially sustainable way.

F. Recommendations of the Library Review Group

1. Finance

The library should not be expected fully to ‘pay its way’. It will remain a cost centre, and is worthy of continuing sustainable investment by the Society. It is the source of key membership services, and is a benefit both to the Fellowship and to society at large. The costs of the library are partially offset by income which it generates, and the Review Group believes that there is considerable scope to develop existing and new income streams.

- a. The Society should aim to grow the net amount by which income offsets library expenditure (and therefore the ‘bottom line’ of the library) relative to the 2011 library budget by at least £35k in 2012, £70k in 2013, and £105k in 2014, through a combination of growing existing and new income lines, and cost savings. The Review Group hopes very much that as much of this as possible can be achieved through income generation, so that difficult cost savings can be minimised, and so that the range and scope of services offered can be grown rather than reduced. It urges Council to develop its strategy accordingly. If savings must be made, every effort should be made to minimise the impact on services and availability of content to Fellows and other users.
- b. Some specific recommendations and suggestions for income generation and cost savings are identified here. The list is not intended to be prescriptive, nor is it exhaustive, but is offered to provide some options for Council, and to stimulate further thinking. Most of these are addressed in more detail in other sections of the report:
 - Identify and sell duplicate books and journals (one-off income – an exercise which is already underway).
 - Charge Fellows for off-site online access to third party journals (see 2.b).
 - Charge Corporate Affiliates for library usage over an agreed threshold (see 2.e).

- Actively market chargeable use of the library to commercial users who are neither Fellows nor Corporate Affiliates (see 2.f).
 - Capture and sell online scanned electronic map data – initially GSL content, and later perhaps others’ material. This could be a significant new income source (see section 7).
 - If any journal subscriptions are to be cancelled, the Society should focus on those with a high ‘cost per usage’, i.e. those with a high cost but which are rarely used. Analysis carried out during the review suggests that it would be possible to continue to provide users with pay-per-view (or inter-library loan) access to many of these journals in place of continuing subscriptions, while still saving most of the cost of subscription, minimising the impact on users (see section 4).
- c. The Review Group encourages Council to continue to develop new ideas for novel ways to generate financial value from the library content and services, and the expertise and knowledge of its staff, further to those identified above. Innovative thinking regarding library finances should remain at the heart of the library strategy.
- d. The Society’s library and information services should be actively and creatively promoted to new potential markets, outside the existing Fellowship and Corporate Affiliate base, across academia, industry and government. For example, it may be that searches of the Society’s own library holdings, or of wider metadata sets, can be marketed to local government in support of searches associated with planning applications. Such novel projects may best be explored in partnership with other organisations more used to these audiences, such as BGS (see section 6, below).
- e. There may be potential for attracting grants to the library as an important national archive, particularly with regard to capital investment in major projects. However, applying for such grants usually involves considerable work, and does not guarantee success. Care should be taken that constraints on income which might otherwise be generated do not outweigh the value of any grants received.
- f. Prices, pricing models and business models for new and existing library products and services should be set by Management and Finance Committee (MFC), the reporting committee of Council responsible for these matters across all areas of GSL activity. In doing so, MFC should seek the advice of the Library Advisory Committee (LAC) and Information Management Committee (IMC).

2. *Fellowship/Corporate Affiliate access*

Some Fellows use the library space, collections and services frequently. Others use it less often, while many do not use it at all. Similarly a few Corporate Affiliates make heavy use of library services, while others use it rarely, if ever. Consequently the cost to the Society, both in staff time and in content costs, primarily reflects the activities of a community of frequent library users which is numerically relatively small, but which is active and valued. The Review Group discussed at length options for different

entitlement and pricing models. In general, the Society has adopted the principle that Fellows are entitled to a standard package of benefits, irrespective of whether they make use of these, rather than charge a reduced fee for a core set of benefits, with a menu of additional chargeable options – though there are exceptions such as additional GSL journals and the Full Book Collection in the Lyell Collection.

- a. Fellows should continue to receive unrestricted access to library services as part of their standard entitlements, with the exception of off-site online access to third party journals (currently made available free of charge).
- b. A modest charge for Fellows' off-site access to third party online journals via the Athens system should be introduced in 2012, increasing to achieve full cost recovery by 2014. At current usage levels and prices, and assuming no further journals are made available in this way, this would work out at less than £50 per subscriber in 2014. Some Fellows are keen for the range of journals available off-site to be increased – this should be conditional on growing the number of paying subscribers, so that the service can be kept cost neutral. (For the avoidance of doubt, there is no suggestion that Fellows' entitlement to free online access to a GSL journal of their choice, through the Lyell Collection, be withdrawn.)
- c. Analysis should be done to establish how many students currently use off-site Athens access, with a view to offering it to students free or at low cost if the financial impact is not too great. This would be a significant benefit and a powerful attractor to membership, particularly to those at institutions whose libraries lack key material. Exposure to this valuable service would also encourage them to subscribe to it after graduation. (In connection with this proposal, work is also underway to offer the Full Book Collection within the Lyell Collection free to students, assuming the financial impact is affordable – though of course this matter is outside the remit of the Review Group.)
- d. The Review Group considered and rejected the idea that a 'library plus' subscription option should be introduced, which would allow Fellows unrestricted access to the library, with more limited entitlements for those paying only the standard subscription fees. In order to recover a significant proportion of the costs due to Fellows' use of the library, this supplementary fee would have to be set at a level which would be considered unacceptably high by most active users – in practice, it is more likely to drive down usage levels than to raise income. Any future proposal to introduce such a charge should be considered only as a last resort, and tested very thoroughly, with extensive consultation of the Fellowship.
- e. Corporate Affiliates should be entitled to use the library up to a defined level, as part of their standard subscription payment. Further use over and above this level should be charged, with a view to full cost recovery for this usage (possibly phased in over three years). The level at which charges are introduced may depend on the size (and therefore affiliateship subscription level) of the company. It might be decided to waive such charges for those companies which already provide a very high level of financial support to the Society through the Corporate Affiliate scheme and in other ways. Similarly, Corporate Affiliates could be encouraged to sponsor

new projects (such as map scanning – see section 7 below), and their library usage costs might then be waived for the period of the project. Evidence gathered during the review suggests that active users of the library from this group recognise the great value they derive for relatively little cost, and the aim should be to establish a pricing model which remains good value for the users while allowing the Society to make the provision of these services financially sustainable. The Development and Fundraising Committee must be involved in agreeing the detail of this proposal. Additional income generated as a result of any changes to the entitlements/charging structure for Corporate Affiliates should be counted as library income.

- f. The Review Group suggests that simple enquiries for commercial use might reasonably be charged to non-Fellows at a minimum price of £10, say, for queries which can be resolved within five minutes, with further charges for additional work. It should be possible to price GSL services, drawing on our valuable content, metadata and staff expertise, at rates highly competitive with commercial consultancy services. Further work is required to establish a charging structure which will be supported by the market while generating appropriate levels of income to the Society. As well as applying these charges to Corporate Affiliates whose use of the library passes some threshold, the service could be actively marketed to companies without affiliate status. An enquiry sold in this way might be as simple as a catalogue search, leading to opportunities for further selling. It would also incentivise those who come into contact with the service to join as Fellows or Corporate Affiliates.

3. *Data gathering*

Considerable work was done early in the review process to gather data regarding usage and holdings, and to collate or capture electronically records which were held only on paper, as the Review Group believed it was important for its recommendations to be informed by these data so far as possible (and recognising that they were necessarily partial and not completely accurate – see notes on data files attached as appendices).

- a. Careful attention should be given to continuing collection and analysis of data, especially regarding usage, and this should be reviewed regularly. The ‘cost per usage’ grid (see Appendix 11) has been developed into a valuable analysis tool, and should be maintained to assist with decision making (see section 4, below, regarding acquisitions).
- b. Monitor as closely as possible in-house usage of journals which have been identified as vulnerable to cancellation, or which have recently been cancelled (it is not considered feasible to do this for all journals).
- c. Develop metrics for usage, cost and value of maps.
- d. Continue discussions with external organisations (other Earth science library holders, scientific societies, and other kindred organisations), building on the useful

work done during the review process (see notes at Appendices 8 and 9), to gather information relevant to context setting or collaborative work.

- e. It emerged late in the review process that the number of requests for literature searches to be carried out by staff has fallen considerably in recent years, from 76 in 2006 to 18 so far this year. This should be kept under review, and data gathered on the number of searches run by users themselves in the library, which is currently unknown.

4. *Acquisitions*

- a. The 'cost-per-usage' grid should be used as a 'first pass' to identify journals to which our subscription might be discontinued, though it should not be the only factor. A journal might be added to the 'watch list' of titles under active consideration in this regard if its cost-per-usage exceeds the pay-per-view cost (or the Inter-Library Loan cost) by some agreed factor. As noted at 3.b, above, titles on this 'watch list' should be subject to careful monitoring of in-house usage, to ensure that assumptions about overall levels of usage based on electronic data can be challenged.
- b. Other factors when considering whether to discontinue a journal subscription could include:
 - Is it taken by another UK Earth science library?
 - Is it an important title to a particular group of the Fellowship, even if they are numerically small?
 - Is it in an emerging area, or one which is likely to become significant (scientifically, economically, policy)?
- c. To minimise the impact of cancelling journal subscriptions on Fellows and Corporate Affiliates, the Society should consider paying the cost of pay-per-view or Inter-Library Loan access for these users to journals which are judged important but expensive (in terms of cost-per-usage). As noted above, detailed monitoring of usage of these titles should continue for some time after cancellation, and the subscription should be renewed if usage rises to a level to justify this. If this option is pursued, the detail will need to be developed and its feasibility assessed. Some members of the Review Group expressed a preference for simply cancelling journals, without seeking to 'backfill' availability of content.
- d. Policy and practice regarding exchange of GSL journals for others' should be kept under review, but is not seen by the group as a priority area at present. Publications Management Committee (PMC) may wish from time to time to consider whether there are cases in which GSL journals are being disadvantageously swapped for publications of lower value, where a Lyell Collection subscription might otherwise be sold to the organisation in question.

- e. A mechanism should be established for soliciting from Fellows proposals for new titles, and for taking forward any such new subscriptions, in light of the changing needs of the Fellowship (see below). This might involve the Specialist Groups, among others.

5. *The changing needs of the Fellowship*

- a. Some of the wider changes in library and information usage are outlined in the introduction to this report. In developing its plans for the Society library, the Review Group urges Council to continue actively thinking about what niche roles can be played by this internationally important collection, and the value which its staff, services and metadata can add to it, in a 'Google world'. It may be necessary, but will not be sufficient, to follow what other libraries are doing.
- b. The consultation undertaken during the review process revealed a wider range of perspectives among Fellows who actively use the library than the Review Group anticipated. In order to continue to meet the needs of the Fellowship, we must bear in mind those for whom ours is the library of first choice, or that of last resort, and others who do not fit this simple characterisation. (We are the library of 'second resort' to many users – if they do not find what they want at their home institution, they will come to us next.) Not all Fellows will react in the same way to the changing library and information environment, and we should seek to cater to a wide range of forms of interaction with data – as well as to help users adapt to new ways.
- c. Another key driver for development of the library collection, and of information service provision, should be the changing scientific and professional profile of the Fellowship, and the changing nature of Earth science itself. Council already considers such matters in a broader strategic context, and this should be extended to long term planning of library acquisitions and service development. It is not possible reliably to anticipate future needs, but it is not sufficient merely to react to established (and therefore old) information. The Society holds considerable demographic data, results of previous Fellowship questionnaires, and other information, (some of it examined during the review process) which can help to identify trends.
- d. The questionnaire data gathered as part of the review process themselves represent a valuable information source, which should be explored further as detailed plans for the library are developed. While the respondents were primarily active library users, and are therefore not likely to be representative of the Fellowship as a whole, they may be particularly useful in identifying why users come to our library, and what 'market failure' we are satisfying.
- e. The Specialist Groups should be involved in canvassing the views of different sections of the Fellowship, particularly if changes are planned to acquisitions

policies. In doing this, Council should be cognisant of the differing nature and structure of these groups, and the communities they represent.

- f. Building on current marketing activities, further efforts should be made to inform the Fellowship about current library holdings and services, and to encourage their use.
- g. Any temptation to make small savings on support services such as literature search subscriptions, as a result of changing user behaviour, should be resisted (bearing in mind the relatively modest costs involved). Instead, thought should be given to whether the support services which we purchase need to evolve, and how this can be done to maximise benefit and minimise cost.

6. *Working with others*

The review process has been valuable in building on existing contact between the librarians at the Society, the BGS and the NHM. (It has also stimulated greater interaction between the BGS and NHM librarians.) Both these organisations generously shared what data they have on their library holdings and on usage, and were candid in discussing their own review processes and future library and information service plans. They are keen to work together where appropriate – there appears to be considerable scope to do so in some areas, particularly with regard to scanning library content and making it available electronically, and there is some excitement over the potential to make more of GSL (and possibly NHM) map holdings. Cooperation over retention of hard copy material and continuing journal subscriptions is worth exploring, but this raises considerable difficulties. The Review Group also discussed the possibility of establishing a consortium of specialist Earth science libraries for the purpose of electronic journal subscriptions, and quickly concluded that this would not be viable.

- a. Discussions should continue with the British Geological Survey (BGS) and Natural History Museum (NHM), among senior librarians and at a broader strategic level, to ensure effective decision making and to explore further opportunities for cooperation.
- b. The Society should continue to exchange relevant data with BGS and NHM, particularly regarding disposals and decisions to discontinue journal subscriptions, to minimise the likelihood of material becoming unavailable through any of these libraries. However, it should be recognised that it will not be practical to tie another organisation to continuing a subscription in perpetuity. Any decision made on the basis of such considerations should also take into account what access GSL Fellows would have to BGS or NHM owned content, and any expectations of reciprocal access to our unique holdings. In practice, any arrangement reached will not guarantee continuity of access for Fellows to material not owned by the Society.
- c. We should explore scope for formal collaboration regarding particular projects and services with BGS and NHM. The highest priority should be a map scanning and electronic delivery project (see section 7, below). There may be further possible

areas of content capture and information service delivery where there is a good fit between the respective organisations' content and capabilities. In general, the Society should not seek to be at the 'cutting edge' regarding information service delivery technologies, for example, but should work with others where appropriate, and capitalise on its own strengths regarding content, metadata and expertise.

- d. Memoranda of Understanding (MOUs) with BGS and NHM should be established (or updated) to formalise contact between librarians and others, data exchange, and any further collaboration. Council should aim to establish initial or amended MOUs with both organisations by the end of June 2011. These should be reviewed periodically thereafter, and developed as collaborative projects are taken forward.
- e. We should continue to learn from other organisations with significant Earth science libraries (such as some universities), or with comparable library and publishing functions (RSC, IOM3, etc), some of which have been consulted during this review.

7. *Maps*

Scanning selected maps from the Society's collection is a high priority, for two main reasons:

- It will secure unique and rare content, which is highly vulnerable while it remains in hard copy only.
 - It may result in an additional income stream – possibly a significant one.
- a. The Society should build on pilot scale work already underway, auditing and scanning its own important, unique and rare material as a priority (where this is not prevented by copyright restrictions). This is sufficiently important that Council should consider funding the project from reserves, if sponsorship cannot quickly be secured.
 - b. We should explore means by which scanned GSL content might be sold, and establish a business and pricing model.
 - c. Work should be done to explore whether there is a business opportunity in scanning, cataloguing and making available maps belonging to others (particularly the NHM).
 - d. It may be possible to partner with BGS (regarding scanning work and sale of electronic map content) and/or NHM (regarding scanning work, cataloguing and capture/sale of their map collection). Both organisations are keen to explore what scope there is to work together, and there appears to be a good fit between the strengths of all three organisations, bringing the potential to do more together than we can independently, to the benefit of all. (See informal notes of a discussion with NHM staff at Appendix 8 for more about possible models for collaborative working.)

- e. It is important to ensure that all digitised library content is effectively secured in the long term, and will not be lost due to software or media obsolescence, or data loss. This is already actively and effectively managed by the Publishing House with regard to our own published content, which might provide a model for practices regarding library content.

8. *Archives*

Much archival content is being kept in sub-optimal conditions in Burlington House. The historical and corporate significance of this material is likely to vary. The Archivist has only been in post for a few months, following a period during which the Society did not have a dedicated staff member in this role, and she needs some time to audit what we have and identify options for action.

- a. Cataloguing this material is a high priority. (The 2011 budget includes provision for the purchase of a suitable cataloguing system.)
- b. Options for various classes of material include:
 - Disposal
 - Digital capture
 - Microfiche capture
 - Physical storage in appropriate locations in Burlington House
 - Offsite storage

An archive plan should be drawn up once the material has been catalogued, options priced, and costs and benefits assessed.

9. *Physical storage space in Burlington House*

The constraints on space in Burlington House mean that the current rate of acquisition of hard copy material is not sustainable in the long term (over 10 years, say). Options for addressing this situation include:

- Disposal of significant quantities of existing hard copy material
 - Drastically reducing the level of hard copy acquisitions
 - Offsite storage
- a. An audit of storage space and likely future requirements should be carried out. This should be reviewed regularly in light of changing acquisitions and retentions practices.

10. *Library services and publishing*

The Review Group identified connections between library services and academic publishing as increasingly important. There are common trends and synergies between the two sectors. Both are undergoing significant changes in the face of rapidly evolving information technologies, which threaten existing business models and old roles in the complex patterns of mediation between information producers and users. As electronic content becomes available through multiple sources (and particularly if the open access trend continues), both sectors are recognising that they cannot corner the market in terms of content, and are developing new ways in which they can 'add value' – through search technologies, aggregation, metadata, expert knowledge and human capital.

However, there are also significant possible tensions. Libraries will seek to build highly organised repositories, which may become a competitive threat to publishers, and will seek other ways to maximise their leverage over publishers, for example by forming consortia, or by purchasing blocks of pay per view access (while publishers work to protect their journal brands). Conversely, publishers will invest in semantic enrichment of content, potentially undermining the value which libraries deliver to users. These commonalities and potential conflicts of interest present particular opportunities and threats to organisations such as GSL which are both a publisher and a provider of library and information services.

An informal note on the present and future of scientific scholarly publishing, prepared for the Review Group by Neal Marriott (Director of Publishing) is at Appendix 12.

- a. More work needs to be done to understand the implications of this for the Society. The Review Group did not see this as an urgent priority given the limited time available to it, but regards it as an issue of primary importance in the longer run. It recommends that Council keeps a watching brief, and asks IMC to work with PMC and relevant staff to explore possible opportunities, threats and dependencies.
- b. IMC was established with a view to maintaining a close working relationship with PMC. Council may wish in the longer term to consider bringing staff and/or committee management of its library, information services and publishing operation closer together.

11. *Staffing and skills*

- a. The service currently provided by the staff to library users is of very high quality, and as borne out by the questionnaire and other elements of the consultation undertaken during the year, it is greatly appreciated. As for all areas of Society activity, the staffing and skills required to address the changing library and information needs of the Fellowship should be reviewed regularly. A basic analysis of current staff time deployment was carried out as part of the review process, to inform discussion of current and future staffing and skills needs, and this is attached at Appendix 6.

- b. There is likely to be scope for continuing to update staff's skills in light of changing needs of the Fellowship and other users, new developments such as some of those recommended here, and the rapidly evolving technological landscape. Appropriate training should be provided to develop and refresh these skills.
- c. Staff members have indicated that they are keen to develop their roles, and they should be supported in doing this, in line with the strategic and business objectives of the Society.
- d. The Review Group has undertaken limited work looking at staffing models in other libraries. In considering future structures and skills needs, further work should be done to examine what arrangements there are in other organisations, particularly scientific societies with comparable libraries such as the Royal Society of Chemistry (who are happy to continue the conversation started during the current process – see informal meeting note at Appendix 9), to see what can be learned from their experience.
- e. During the consultation process, it was suggested that volunteers might play a significant role in running the library. It may be possible to use volunteer effort for particular limited purposes, probably for specific projects, but this would need careful consideration within case-by-case project plans. It would not be an effective substitute for any of the work currently undertaken by the professional staff.

12. *Next steps*

- a. Council should develop a library strategy, based on the recommendations of this review.
- b. It should charge IMC with developing a Library Plan to implement this strategy.
- c. In this process LAC should act as the 'voice of the user', providing valuable feedback from the user base to IMC as particular measures are proposed and introduced, and advising on specific decisions regarding acquisitions and disposals.
- d. The Review Group discussed the relationship between the IMC and the LAC more broadly, and considered some of the roles which will fall collectively to these committees in taking forward a Library Plan. The Group was not able to reach any firm conclusion regarding remits and reporting lines for these committees, and suggests that Council review the committee structure in this area. In considering governance of library and information services, the relationship with publishing should not be forgotten (see 10.b above).
- e. Council should continue to keep the Fellowship informed about development plans for the library, to invite comment, and to consult more actively with them when appropriate.

LIBRARY REVIEW 2010

Terms of reference

The review will be carried out by a working group (formerly the Library Acquisitions Review Group), which is to report emerging findings and recommendations to Council at its meeting in November 2010. The working group is asked to develop and recommend to Council policy proposals regarding any aspect of the library, its management, collections and services, including the following:

- Acquisitions and retention of library content (books, journals, maps and any other types of material), both in electronic form and hard copy, including exchange arrangements
- Storage of materials, preservation of content, and physical space constraints
- Use of the library space
- Relationships with other libraries
- Affordability to the Society of all aspects of library content and services
- Pricing and business models
- Opportunities to develop new library services, or to reconfigure existing ones
- Governance
- Staffing

In considering these matters, the Group should have regard to:

- The changing needs of the Fellowship and others in the Earth science community, with regard to specialism, type of content, delivery media, on-site/off-site access, etc
- The Society's role as custodian of a nationally and internationally important collection

Membership

Chair: Peter Styles

Others: Richard Hughes (Chair, IMC)
Tom Sharpe (Chair, LAC)
Andy Fleet (Treasurer)
Jonathan Turner (Publications Secretary)
Peter Dolan
Hugh Torrens
Alex Whittaker

Staff: Nic Bilham (Secretary to the working group)
Edmund Nickless (Executive Secretary)
Sheila Meredith (Chief Librarian, secretary to LAC)
Kholilur Rahman (Secretary to IMC)
Neal Marriott (Director of Publishing)

Library Acquisitions Review 2010: Questionnaire

The Geological Society is carrying out a review of its library acquisitions policy. To help inform this review, we want to find out about the views of our Fellows, Corporate Affiliates and others on our library holdings and services. Whether or not you are a user of the library, we would be grateful if you would help us by completing this questionnaire. An electronic version of the questionnaire is available to fill in online at www.geolsoc.org.uk/libraryreview, along with further information about the review we are undertaking. Alternatively, let us know your views by writing to Nic Bilham (nic.bilham@geolsoc.org.uk).

We are also currently asking those visiting the library to complete a simple slip indicating books and journals they have used during their visit, to help us gauge use of particular titles.

If you let us know who you are (either by filling in your name and contact details below, or by attaching your business card to the completed questionnaire), we will enter you in a prize draw to be held at the end of March 2010. The winner will be sent a Geological Society Special Publication of his or her choice. (If you prefer to keep your responses anonymous, we will still be pleased to hear your views.)

1. About membership of the Geological Society (tick one):

- I am a Fellow (member) of the Geological Society
- I am a Candidate Fellow (student member) of the Geological Society
- I am not a member of the Geological Society

2. About your work (tick all that apply):

- I work for a Corporate Affiliate of the Society
- I work for a commercial company
- I work in academia
- I work for a research institute/government agency (e.g. BGS, Environment Agency)
- I am self-employed/work as a contractor
- I am a student
- I am retired
- Other

3. How frequently do you use the Geological Society's library overall (including telephone and online services)? (tick the option which best describes your usage)

- Never
- Occasionally
- A few times a year
- Once or twice a month
- Several times a month or more

4. About your overall impression of the Geological Society's library, including the physical library, onsite services, and online and other remote services:
- a. How important is access to Geological Society library facilities and services to you? (tick one)
- Very important Fairly important
 Not very important Not at all important
- b. How satisfied are you with the facilities and services you get from the library overall? (tick one)
- Very satisfied Fairly satisfied Not very satisfied
 Not at all satisfied Not applicable
- c. If you use the library, what are the main reasons? If not, why not?
5. Please tell us about your visits to the physical library at Burlington House:
- a. Frequency of visits (tick one)
- Never Occasionally A few times a year
 Once or twice a month Several times a month or more
- b. When visiting the library in person, do you find what you are looking for? (tick one)
- Always Usually Rarely
 Never Not applicable
- c. When visiting the library in person, do you ask library staff to assist you? (tick one)
- Always Usually Rarely
 Never Not applicable
- d. Are you satisfied with the support provided by library staff? (tick one)
- Very satisfied Fairly satisfied Not very satisfied
 Not at all satisfied Not applicable
- e. Which of the following facilities do you use when visiting the library? (tick all that apply)
- Library desktop computers
 Literature search facilities
 Wi-fi (wireless access for your own laptop computer)
 The Fellows Lounge
 The Lyell Room

6. Please tell us about your use of the following library collections and services:

a. Books

i. How frequently do you use the book collection? (tick one)

- | | |
|--|---|
| <input type="checkbox"/> Very frequently | <input type="checkbox"/> Quite frequently |
| <input type="checkbox"/> Occasionally | <input type="checkbox"/> Never |

ii. How important is the book collection to you? (tick one)

- | | |
|---|---|
| <input type="checkbox"/> Very important | <input type="checkbox"/> Quite important |
| <input type="checkbox"/> Not very important | <input type="checkbox"/> Not at all important |

b. Printed journals

i. How frequently do you use the library's printed journals? (tick one)

- | | |
|--|---|
| <input type="checkbox"/> Very frequently | <input type="checkbox"/> Quite frequently |
| <input type="checkbox"/> Occasionally | <input type="checkbox"/> Never |

ii. How important is the printed journal collection to you? (tick one)

- | | |
|---|---|
| <input type="checkbox"/> Very important | <input type="checkbox"/> Quite important |
| <input type="checkbox"/> Not very important | <input type="checkbox"/> Not at all important |

c. Electronic journals (onsite access)

i. How frequently do you use electronic journals at the Geological Society library? (tick one)

- | | |
|--|---|
| <input type="checkbox"/> Very frequently | <input type="checkbox"/> Quite frequently |
| <input type="checkbox"/> Occasionally | <input type="checkbox"/> Never |

ii. How important is the electronic journal collection to you? (tick one)

- | | |
|---|---|
| <input type="checkbox"/> Very important | <input type="checkbox"/> Quite important |
| <input type="checkbox"/> Not very important | <input type="checkbox"/> Not at all important |

d. Electronic journals (remote access for Fellows)

i. An increasing number of the journals to which the Society subscribes can be accessed remotely by Fellows – that is, from their work or home (via 'Athens login'). How frequently do you access electronic journals remotely in this way? (tick one)

- | | |
|--|---|
| <input type="checkbox"/> Very frequently | <input type="checkbox"/> Quite frequently |
| <input type="checkbox"/> Occasionally | <input type="checkbox"/> Never |

ii. How important is the remote access facility to you? (tick one)

- | | |
|---|---|
| <input type="checkbox"/> Very important | <input type="checkbox"/> Quite important |
| <input type="checkbox"/> Not very important | <input type="checkbox"/> Not at all important |

e. Maps

- i. How frequently do you use the maps? (tick one)
- | | |
|--|---|
| <input type="checkbox"/> Very frequently | <input type="checkbox"/> Quite frequently |
| <input type="checkbox"/> Occasionally | <input type="checkbox"/> Never |
- ii. How important is the map collection to you? (tick one)
- | | |
|---|---|
| <input type="checkbox"/> Very important | <input type="checkbox"/> Quite important |
| <input type="checkbox"/> Not very important | <input type="checkbox"/> Not at all important |

f. Archive materials

- i. How frequently do you use the Society's Archive materials? (tick one)
- | | |
|--|---|
| <input type="checkbox"/> Very frequently | <input type="checkbox"/> Quite frequently |
| <input type="checkbox"/> Occasionally | <input type="checkbox"/> Never |
- ii. How important is the Society's Archive to you? (tick one)
- | | |
|---|---|
| <input type="checkbox"/> Very important | <input type="checkbox"/> Quite important |
| <input type="checkbox"/> Not very important | <input type="checkbox"/> Not at all important |

g. Online library catalogue (on-site or remotely)

- i. How frequently do you use the online library catalogue? (tick one)
- | | |
|--|---|
| <input type="checkbox"/> Very frequently | <input type="checkbox"/> Quite frequently |
| <input type="checkbox"/> Occasionally | <input type="checkbox"/> Never |
- ii. How important is the online library catalogue to you? (tick one)
- | | |
|---|---|
| <input type="checkbox"/> Very important | <input type="checkbox"/> Quite important |
| <input type="checkbox"/> Not very important | <input type="checkbox"/> Not at all important |

h. Online Map GIS (visually browsable online interface to map catalogue and index data)

- i. How frequently do you use the Map GIS? (tick one)
- | | |
|--|---|
| <input type="checkbox"/> Very frequently | <input type="checkbox"/> Quite frequently |
| <input type="checkbox"/> Occasionally | <input type="checkbox"/> Never |
- ii. How important is the Map GIS to you? (tick one)
- | | |
|---|---|
| <input type="checkbox"/> Very important | <input type="checkbox"/> Quite important |
| <input type="checkbox"/> Not very important | <input type="checkbox"/> Not at all important |

i. Printed book / journal / map loans from the library

i. How frequently do you borrow material from the library? (tick one)

- | | |
|--|---|
| <input type="checkbox"/> Very frequently | <input type="checkbox"/> Quite frequently |
| <input type="checkbox"/> Occasionally | <input type="checkbox"/> Never |

ii. How important is the loans service to you? (tick one)

- | | |
|---|---|
| <input type="checkbox"/> Very important | <input type="checkbox"/> Quite important |
| <input type="checkbox"/> Not very important | <input type="checkbox"/> Not at all important |

j. Document delivery / photocopying

i. How frequently do you use document delivery or photocopying via the Geological Society? (tick one)

- | | |
|--|---|
| <input type="checkbox"/> Very frequently | <input type="checkbox"/> Quite frequently |
| <input type="checkbox"/> Occasionally | <input type="checkbox"/> Never |

ii. How important are these services to you? (tick one)

- | | |
|---|---|
| <input type="checkbox"/> Very important | <input type="checkbox"/> Quite important |
| <input type="checkbox"/> Not very important | <input type="checkbox"/> Not at all important |

k. Inter-library loans

i. How frequently do you use inter-library loans via the Geological Society? (tick one)

- | | |
|--|---|
| <input type="checkbox"/> Very frequently | <input type="checkbox"/> Quite frequently |
| <input type="checkbox"/> Occasionally | <input type="checkbox"/> Never |

ii. How important is the inter-library loan service to you? (tick one)

- | | |
|---|---|
| <input type="checkbox"/> Very important | <input type="checkbox"/> Quite important |
| <input type="checkbox"/> Not very important | <input type="checkbox"/> Not at all important |

7. What other library and information sources do you use? (tick all that apply)

- University
- Other learned society/professional body
- Research centre/government agency (e.g. BGS, Environment Agency)
- Other (please state)

8. How does your use of the Geological Society library relate to your use of other libraries and information sources? (tick the option which best describes your usage)

- The Geological Society is my main source of library services and research information
- I routinely expect to access information through more than one library/information source, including the Geological Society library
- I usually use other sources, but use the Geological Society library in areas where I think its coverage will be better
- I come to the Geological Society library as a last resort, when I cannot find material I want elsewhere
- Other (please comment further below if you wish)

9. Which journals do you primarily use through the Society's library? (tick all that apply)

- Geological Society of London
- Commercial publishers (e.g. Elsevier)
- Other learned societies
- Other / not applicable

10. In general, how do you prefer to access book and journal content? (tick one)

- Electronically
- In print
- No preference

11. If you are dissatisfied with any library services, or with any aspects of the collection, what improvements would you like to see? Are there additional library services which you think the Society should provide? Would such changes make you more likely to use the Society's library?

12. Recognising that resources cannot be limitless, what should the Society's priorities be with regard to development of the library collection and services? (For example, should it attempt to maintain a reasonable level of coverage across the field, or should it focus on areas which are not well served by other libraries? What responsibilities does the Society have for maintaining a nationally important collection, or for meeting the information needs of its Fellows?)

13. Please identify any particular journals, collections of historical content, etc, which you think are particularly useful and/or which it is critical for the Society to acquire/retain (for example, because of inadequate coverage by other libraries).

14. Do you have any further comments about the Society's library collections and services?

15. We would be grateful if you would indicate your contact details below – this will help us to analyse responses to this questionnaire effectively. (However, we are also happy to take on board your views anonymously if you prefer.) If you provide contact details, we will enter you in the prize draw (unless you indicate otherwise).

Name:

Fellowship number (if applicable):

Organisation (if applicable):

Address:

Postcode:

Country:

Email address:

- Please tick if you are willing to be contacted to discuss your responses to this questionnaire, and other aspects of the Library Acquisitions Review.
- Please tick if you do **NOT** want to be entered in the prize draw.

Questionnaire results analysis

Appendix 3

| | Total responses | 97 |
|-------------------|-----------------------------|-----------|
| Membership | Candidate Fellows | 1 |
| | Fellows (CA) | 9 |
| | Fellows (non-CA) | 81 |
| | Non Fellows (CA) | 5 |
| | Unknown | 1 |
| Work | Academia (exc retired) | 12 |
| | Commercial (exc academics) | 41 |
| | Self-employed (exc retired) | 14 |
| | Retired | 24 |
| | Student | 3 |
| | Other/unknown | 3 |

(Note: Many respondents picked multiple categories - retired academics are counted here as 'retired'. Similarly, academics who also do commercial/self-employed work are counted in 'academia'.)

| | | |
|--------------------------|-----------------------|----|
| Overall frequency | Several times a month | 20 |
| | Once or twice a month | 25 |
| | Few times a year | 29 |
| | Occasionally | 21 |
| | Never | 2 |
| Importance | Very important | 73 |
| | Fairly important | 19 |
| | Not very important | 3 |
| | Not at all important | 2 |
| Satisfaction | Very satisfied | 76 |
| | Fairly satisfied | 17 |
| | Not very satisfied | 1 |
| | Not at all satisfied | 1 |
| | Not applicable | 2 |
| BH visits... | Frequency | |
| | Several times a month | 5 |
| | Once or twice a month | 23 |
| | Few times a year | 28 |
| | Occasionally | 34 |
| Never | 7 | |
| Find what you want? | Always | 14 |
| | Usually | 75 |
| | Rarely | 0 |
| | Never | 0 |
| | Not applicable/blank | 8 |
| Do you ask staff? | Always | 11 |
| | Usually | 55 |
| | Rarely | 22 |
| | Never | 0 |
| | Not applicable/blank | 9 |
| Satisfied with staff? | Very satisfied | 82 |

| | | |
|-----------------------------------|----------------------|----|
| | Fairly satisfied | 7 |
| | Not very satisfied | 0 |
| | Not at all satisfied | 0 |
| | Not applicable/blank | 8 |
| Facilities used | PCs | 36 |
| | Literature search | 65 |
| | Wifi | 19 |
| | Fellows Lounge | 57 |
| | Lyell Room | 28 |
| Books | | |
| Frequency | Very frequently | 22 |
| | Quite frequently | 18 |
| | Occasionally | 47 |
| | Never | 8 |
| Importance | Very important | 58 |
| | Fairly important | 29 |
| | Not very important | 7 |
| | Not at all important | 1 |
| Printed journals | | |
| Frequency | Very frequently | 28 |
| | Quite frequently | 23 |
| | Occasionally | 34 |
| | Never | 10 |
| Importance | Very important | 62 |
| | Fairly important | 23 |
| | Not very important | 6 |
| | Not at all important | 4 |
| Onsite electronic journals | | |
| Frequency | Very frequently | 7 |
| | Quite frequently | 13 |
| | Occasionally | 33 |
| | Never | 41 |
| Importance | Very important | 31 |
| | Fairly important | 22 |
| | Not very important | 23 |
| | Not at all important | 15 |
| Remote electronic journals | | |
| Frequency | Very frequently | 17 |
| | Quite frequently | 16 |
| | Occasionally | 32 |
| | Never | 30 |
| Importance | Very important | 42 |
| | Fairly important | 22 |
| | Not very important | 13 |
| | Not at all important | 14 |
| Maps | | |
| Frequency | Very frequently | 11 |

| | | |
|---------------------------------------|----------------------|----|
| | Quite frequently | 14 |
| | Occasionally | 35 |
| | Never | 35 |
| Importance | Very important | 52 |
| | Fairly important | 14 |
| | Not very important | 18 |
| | Not at all important | 9 |
| Archives | | |
| Frequency | Very frequently | 5 |
| | Quite frequently | 3 |
| | Occasionally | 36 |
| | Never | 51 |
| Importance | Very important | 27 |
| | Fairly important | 29 |
| | Not very important | 26 |
| | Not at all important | 12 |
| Online catalogue | | |
| Frequency | Very frequently | 15 |
| | Quite frequently | 21 |
| | Occasionally | 45 |
| | Never | 16 |
| Importance | Very important | 45 |
| | Fairly important | 29 |
| | Not very important | 12 |
| | Not at all important | 8 |
| Map GIS | | |
| Frequency | Very frequently | 3 |
| | Quite frequently | 2 |
| | Occasionally | 24 |
| | Never | 65 |
| Importance | Very important | 18 |
| | Fairly important | 21 |
| | Not very important | 21 |
| | Not at all important | 32 |
| Loans | | |
| Frequency | Very frequently | 12 |
| | Quite frequently | 21 |
| | Occasionally | 37 |
| | Never | 26 |
| Importance | Very important | 48 |
| | Fairly important | 30 |
| | Not very important | 12 |
| | Not at all important | 4 |
| Document delivery/photocopying | | |
| Frequency | Very frequently | 11 |
| | Quite frequently | 21 |
| | Occasionally | 40 |

| | | |
|-------------------------------------|--------------------------|----|
| | Never | 25 |
| Importance | Very important | 47 |
| | Fairly important | 26 |
| | Not very important | 10 |
| | Not at all important | 12 |
| <i>Inter-library loans</i> | | |
| Frequency | Very frequently | 1 |
| | Quite frequently | 4 |
| | Occasionally | 31 |
| | Never | 60 |
| Importance | Very important | 21 |
| | Fairly important | 24 |
| | Not very important | 20 |
| | Not at all important | 28 |
| <i>Other sources</i> | | |
| | University | 45 |
| | Learned Society | 46 |
| | Research Centre/Agency | 34 |
| | Other | 38 |
| <i>Relative importance</i> | | |
| | GSL as main source | 43 |
| | GSL as one among several | 31 |
| | GSL for selected areas | 13 |
| | GSL as last resort | 5 |
| | Other | 5 |
| <i>Journals used at GSL</i> | | |
| | GSL | 54 |
| | Other Societies | 68 |
| | Commercial | 66 |
| | Other | 18 |
| <i>Elec/print preference</i> | | |
| | Electronic | 31 |
| | Print | 47 |
| | No preference | 19 |
| <i>Willing to discuss...</i> | | |
| | Yes | 68 |
| | No | 29 |

| | |
|---------|-----|
| Paper | 327 |
| Online | 1 |
| Unknown | 70 |

| | Books | Journals | Total |
|-------------------|------------|------------|--------------|
| Fellows | 105 | 178 | 283 |
| Candidate Fellows | 4 | 5 | 9 |
| Corporate Fellows | 6 | 23 | 29 |
| None of the above | 1 | 13 | 14 |
| Unknown | 9 | 54 | 63 |
| Total | 125 | 273 | 398 |

Frequently requested titles (>2)

| | |
|---|----|
| GSL SPs | 16 |
| BGS Memoirs | 11 |
| AAPG Memoirs | 9 |
| Journal of Sedimentary Research | 8 |
| Comptes Rendus Geoscience | 7 |
| Economic Geology | 7 |
| GSA Bulletin | 7 |
| Geological Magazine | 6 |
| Geology | 5 |
| Journal of Petroleum Geology | 5 |
| Nature | 5 |
| Ore Geology Reviews | 5 |
| Organic Geochemistry | 5 |
| Pal Soc Monographs | 5 |
| Proceedings of the Geologists Association | 5 |
| QJEG | 5 |
| Terra Nova | 4 |
| APPEA Journal | 3 |
| Bulletin of Canadian Petroleum Geology | 3 |
| Cretaceous Research | 3 |
| Geophysical Prospecting | 3 |
| Geophysics | 3 |
| JGS | 3 |
| Mineralium Deposita | 3 |
| Petrophysics | 3 |
| Santorini | 3 |
| Tectonophysics | 3 |

Note that in some cases, multiple uses of the title in question were by a single user.

| | |
|-----------------------------|----------|
| Mean age of journals used | 30 years |
| Median age of journals used | 11 years |

Analysis of commercial photocopy request forms/emails

Appendix 5

Item count by company

| | Corp Affiliate? |
|--------------------------|-----------------|
| Getech Group | 66 Y |
| Senergy Ltd | 53 Y |
| BG Group | 50 Y |
| IHS | 46 N |
| Cambridge Carbonates Ltd | 26 N |
| Northern Petroleum | 16 N |
| Neftex | 15 Y |
| Serica Energy | 13 N |
| Tullow Oil | 12 Y |
| PA Resources | 11 N |
| ENI | 9 Y |
| C&C Reservoirs | 6 Y |
| Fugro-Robertson | 5 Y |
| Geoscience Ltd | 5 N |
| Talisman Energy | 5 N |
| Geo-Design | 4 N |
| PGA Ltd | 4 N |
| RPS Energy | 4 Y |
| Silverstone Energy Ltd | 4 N |
| Statoil | 4 Y |
| RDS Ltd | 3 N |
| others | 20 |
| Total | 381 |

Item count by year

| | |
|------|----|
| 1918 | 1 |
| 1933 | 2 |
| 1952 | 1 |
| 1955 | 2 |
| 1956 | 1 |
| 1957 | 1 |
| 1958 | 4 |
| 1960 | 2 |
| 1964 | 1 |
| 1965 | 1 |
| 1966 | 1 |
| 1968 | 1 |
| 1969 | 1 |
| 1970 | 1 |
| 1971 | 2 |
| 1972 | 4 |
| 1973 | 2 |
| 1974 | 3 |
| 1975 | 2 |
| 1976 | 1 |
| 1977 | 3 |
| 1978 | 3 |
| 1979 | 1 |
| 1980 | 4 |
| 1981 | 6 |
| 1982 | 7 |
| 1983 | 4 |
| 1984 | 4 |
| 1985 | 5 |
| 1986 | 4 |
| 1987 | 4 |
| 1988 | 12 |
| 1989 | 7 |
| 1990 | 8 |
| 1991 | 12 |

Mean age of items requested 16 years
 Median age of items requested 14 years

Frequently requested titles (>2)

| | |
|---------------------------------------|----|
| International Journal of Coal Geology | 14 |
| Journal of Petroleum Geology | 12 |
| Sedimentary Geology | 12 |
| GSL Special Publication | 11 |
| Marine and Petroleum Geology | 11 |
| AAPG Bulletin | 10 |
| Geophys Prosp, EAGE | 10 |
| Journal of Sedimentary Research | 8 |

| | | | |
|--|---|------------|-----|
| Tectonophysics | 8 | 1992 | 11 |
| AAPG Memoir | 7 | 1993 | 12 |
| Canadian Society of Petroleum Geologists Memoir | 7 | 1994 | 22 |
| Organic Geochemistry | 7 | 1995 | 14 |
| APPEA Journal | 6 | 1996 | 8 |
| Bulletin de la Societe Geologique de France | 6 | 1997 | 9 |
| Geological Journal | 6 | 1998 | 9 |
| Geology | 6 | 1999 | 14 |
| GSA Bulletin | 6 | 2000 | 16 |
| Petroleum Geoscience | 6 | 2001 | 10 |
| PGC proceedings | 6 | 2002 | 10 |
| Sedimentology | 6 | 2003 | 10 |
| Tectonics | 6 | 2004 | 10 |
| Journal of Geology | 5 | 2005 | 17 |
| Terra Nova | 5 | 2006 | 16 |
| Bulletin of Canadian Petroleum Geology | 4 | 2007 | 17 |
| Cretaceous Research | 4 | 2008 | 18 |
| Geochimica et Cosmochimica Acta | 4 | 2009 | 13 |
| International Journal of Rock Mechanics and Mining Sciences | 4 | 2010 | 1 |
| SEPM Special Publication | 4 | unknown/NA | 26 |
| Basin Research | 3 | | |
| Earth and Planetary Science Letters | 3 | Total | 381 |
| Facies | 3 | | |
| First Break | 3 | | |
| Generation, Accumulation and Production of Europe's Hydrocarbons | 3 | | |
| GSL Memoir | 3 | | |
| Journal of Structural Geology | 3 | | |
| Journal of the Geological Society | 3 | | |
| Marine Geophysical Researches | 3 | | |
| South African Journal of Geology | 3 | | |
| Thrust Belts and Foreland Basins: From Fold Kinematics to Hydrocarbon Accumulation | 3 | | |

Note that some requests include multiple items from the same journal - so for example, the 14 items requested from the International Journal of Coal Geology are from only 2 requests (one each from BG Group and IHS).

Analysis of private research photocopy request forms

Frequently requested titles (>2)

| | |
|--|---|
| Nature | 8 |
| Proceedings of Geologists Association | 6 |
| Geological Magazine | 5 |
| Earth & Planetary Science | 4 |
| Proceedings of the Yorkshire Geol Soc | 4 |
| AAPG Bull | 3 |
| Bull Acad Serbe Sci et Arts | 3 |
| Cretaceous Research | 3 |
| Geology | 3 |
| Micropaleontology | 3 |
| SEPM Special Publication | 3 |
| Terra Nova | 3 |
| Transactions of Royal Society of Edinburgh | 3 |

Item count by year

| | |
|------|---|
| 1794 | 1 |
| 1815 | 1 |
| 1902 | 1 |
| 1905 | 1 |
| 1906 | 1 |
| 1907 | 1 |
| 1910 | 1 |
| 1915 | 1 |
| 1921 | 1 |
| 1926 | 1 |
| 1927 | 1 |
| 1931 | 1 |
| 1932 | 1 |
| 1933 | 1 |
| 1934 | 1 |
| 1937 | 1 |
| 1941 | 1 |
| 1945 | 2 |
| 1947 | 1 |
| 1953 | 1 |
| 1955 | 2 |
| 1956 | 2 |
| 1957 | 1 |
| 1958 | 1 |
| 1959 | 1 |
| 1962 | 1 |
| 1963 | 3 |
| 1965 | 2 |
| 1967 | 2 |
| 1968 | 1 |
| 1969 | 1 |
| 1970 | 0 |
| 1971 | 3 |
| 1972 | 3 |
| 1973 | 3 |

| | |
|-------------------------------|----------|
| Mean age of items requested | 27 years |
| Median age of items requested | 17 years |

| | |
|------------|-----|
| 1974 | 1 |
| 1975 | 1 |
| 1976 | 3 |
| 1977 | 4 |
| 1978 | 4 |
| 1979 | 1 |
| 1980 | 0 |
| 1981 | 3 |
| 1982 | 2 |
| 1983 | 2 |
| 1984 | 2 |
| 1985 | 3 |
| 1986 | 2 |
| 1987 | 1 |
| 1988 | 3 |
| 1989 | 3 |
| 1990 | 4 |
| 1991 | 2 |
| 1992 | 4 |
| 1993 | 5 |
| 1994 | 9 |
| 1995 | 2 |
| 1996 | 2 |
| 1997 | 4 |
| 1998 | 4 |
| 1999 | 6 |
| 2000 | 7 |
| 2001 | 4 |
| 2002 | 7 |
| 2003 | 5 |
| 2004 | 4 |
| 2005 | 3 |
| 2006 | 4 |
| 2007 | 7 |
| 2008 | 14 |
| 2009 | 9 |
| unknown/NA | 6 |
| Total | 194 |

Appendix 6

| ACTIVITIES | Chief Librarian | Assistant Librarian | Serials & Info. Librarian | Map Librarian | Library Assistant | Library Assistant (P/T) | Archivist (P/T) | Total FTE |
|---|-----------------|---------------------|---------------------------|---------------|-------------------|-------------------------|-----------------|-----------|
| Library administration/management | 30% | | | | | | | 0.30 |
| Staff management | 10% | | | | | | | 0.10 |
| Staff training | 5% | 5% | | | | | | 0.10 |
| Cataloguing | 30% | 25% | 1% | 15% | | | | 0.71 |
| Enquiries (inc. loans) | 5% | 20% | 21% | 30% | 30% | | 4% | 1.10 |
| Research (inc. literature searches) | 5% | 30% | 5% | 5% | | | 12% | 0.57 |
| Loans system maintenance (filing, overdues, etc.) | | | | 5% | 15% | | | 0.20 |
| Inter Library Loans | | 10% | | | | | | 0.10 |
| Archives management | | | | | | | 24% | 0.24 |
| Serials collection management | | | 35% | | | | | 0.35 |
| Electronic journals administration | | | 30% | | | | | 0.30 |
| Management of exchange agreements | | | 1% | | | | | 0.01 |
| Maintenance of map collection | | | | 12% | | | | 0.12 |
| Maintaining map indexes | | | | 15% | | | | 0.15 |
| Map scanning | | | | 10% | | | | 0.10 |
| Managing library accounts | | | | | 15% | | | 0.15 |
| Binding | | | | | 8% | | | 0.08 |
| Photocopying/document delivery & related duties | | | | | | 30% | | 0.30 |
| General administrative duties | | 3% | | 3% | 5% | 5% | | 0.16 |
| Processing & repairing books | | | | | | 10% | | 0.10 |
| Shelving & shelf tidying | | | | 5% | 1% | 5% | | 0.11 |
| Library Management System maintenance (C2) | 5% | | | | | | | 0.05 |
| Marketing | 5% | 5% | 5% | | 12% | | | 0.27 |
| Special projects | 5% | 2% | 1% | | 12% | | | 0.20 |
| Book/periodical sales | | | 1% | | 2% | | | 0.03 |
| | 100% | 100% | 100% | 100% | 100% | 50% | 40% | 5.90 |

Explanatory Notes:

Cataloguing involves cataloguing books, maps, serials and thematic issues of journals, subject indexing, classification, checking retrospectively catalogued books from the Bicentenary Project as well as maintaining the subject thesaurus and authority files.

Managing Library Accounts includes maintaining daily accounts, recording cash, cheques, BACS payments, paying into the Accounts department and chasing unpaid invoices.

Marketing includes production of the Recent Additions list, maintaining currency of library information leaflets, updating Library webpages, promoting e-journals, arranging displays of archives & rare books, providing copy for Geoscientist and the e-newsletter, and attending external meetings to raise the Society's profile.

Special projects include Sponsor a book scheme, transferring manual serial records into spreadsheet format, Murchison notebooks scanning project, organising the Society's open day for Open House London and compiling statistical information for the Library Review.

General administrative duties include maintaining daily library statistics, sorting post, franking outgoing library mail, barcoding (books, maps & series), enquiry desk routines (exc. enquiries & loans), loading copycards, etc.

Photocopying/document delivery and shelving/shelf tidying duties are covered by all Library staff during staff absences.

MEETING WITH MICHAEL JUBB: 18 MAY 2010

Present: Michael Jubb (Director, RIN)
Nic Bilham (Head of Strategy and External Relations, GSL)
Sheila Meredith (Chief Librarian, GSL)

- GSL should consider what is its niche role in a 'Google world'.
- What is the value of Fellowship? 50 years ago, the library was probably a big part of the answer for very many, but what about now?
- RIN focus is on university, higher education and Research Council libraries. Have had some contacts with learned societies, mostly regarding publishing, but also to some extent regarding libraries and 'core learned society activities', because they are interested in information services learned society members want. Learned societies are interesting gateways to communities.
- Michael is not aware of any comparable exercises at a learned society, other than at the RSC, which does not appear to have been a happy experience.
- Academic libraries are thinking hard about library futures. RIN is currently doing a 20 to 40 year view of what the academic library might look like. Relationships between universities and their libraries will have some parallels with learned societies', but won't be the same. But it is important to think about potential complementary roles of these institutions.
- The shift to electronic usage/access: for journals, this is almost complete as far as researchers are concerned. The changes in publishers' practices, and the 'big deals' offered by the likes of Elsevier, have changed expectations. Journal papers are most frequently used and most important to researchers by far, though with some sectoral differences. Visits to the library among academics are very much reduced – physically, they are offering work space to students (for individual and group work).
- Issues around this – sustainability of big deals under budgetary constraint. Some may get cancelled (because they are taking up more and more – too much – of the budget). But big deals have reduced cost per title (assuming you want them all), and when you make it available, people will generally use it. Cost per download has also gone down hugely. However, there has been an inexorable rise in costs, associated with an inexorable rise in volume of published content, with the number of journals rising by 3-5% a year. Publishers claim that this is behind the rise in costs – that you get more for your money (though there may be costs publishers have borne which they no longer need to).
- Many libraries and publishers are looking at electronic-only. Sheila pointed out that this is a problem for us because of document delivery. In providing our photocopying service, we are 'undercutting' document delivery by the likes of the British Library – thus, it is a paying proposition. Limitations on our licence agreement with the CLA – we

have a limited choice of options, and the electronic one is prohibitively expensive. Can provide electronic copies if specifically needed, from the BL, under Inter-Library Loans.

- Big deals – implication of the squeeze on budgets is that there is less left for other stuff (books, journals from smaller publishers). Tough decisions for librarians.
- Access to data as a library service, in the context of open data, linked data, etc – some business models currently being mooted may not be sustainable.
- Ratio of staff costs to acquisitions – university libraries are under pressure to reduce the proportion spent on staff. Ours (roughly 60:40 staff:acquisitions) may not be unusual at present, but 50:50 or lower is becoming more common, at least as an aspiration. SCONEL (university libraries trade association) publish relevant data. Small specialist organisations/libraries tend to spend more on staff.
- What is the role of the specialist librarian, going forward? All sorts of concerns about disintermediation. Librarians used to be the intermediaries between users and the material. In a ‘Google world’, people can get direct access. It can appear as though the library doesn’t have to ‘do anything’. So what is the ongoing need? Part of the answer for many is re development of information skills – education and training as to how this world works, at both a technical and conceptual level. QA issues etc.
- Another part of the answer for some – a role dealing with non-published stuff, especially research data. As much of a challenge for librarians as for anyone else – few have the skills for curation of data. There is a need for reskilling of staff. An opportunity for us to complement what others (e.g. university libraries) are doing? But there are risks too.
- ‘Resource discovery’ – ‘portals’ now an old-fashioned concept. What is the role of the library? What are OPAC (online library catalogues) for, in the world of Web of Science, Google, etc? How are people actually using the Geological Society’s online catalogue? This is a big issue in the academic world – aggregation of meta-data, etc. Opportunities for collaboration in this context with NHM, BGS, etc?
- Huge interest across universities in shared services. A big challenge – and different challenges for GSL, e.g. with different business models.
- There is no magic bullet. We all know we need to rethink fundamentally, but there is not a clear emerging formula.
- Talk to Debbie Shorley (Imperial College library) who was involved in NHM review.

MEETING WITH NATURAL HISTORY MUSEUM STAFF: 10 AUGUST 2010

Present: Graham Higley (Head of Library and Information Services, NHM)
 Jane Smith (Head of Library Collections and Services, NHM)
 Andy Fleet (Keeper and Head of Mineralogy, NHM; Treasurer, GSL)
 Sheila Meredith (Chief Librarian, GSL)
 Nic Bilham (Head of Strategy and External Relations, GSL)

- NHM has an offsite storage facility at Wandsworth – material can be retrieved at 24 hours notice, and they can track what material is retrieved. There is a photocopy facility there, and maybe soon a scanner too. Not permanently staffed, but NHM staff visit daily. Facility is not ideal, and probably won't last – they are looking at possibility of collaboration with Science Museum (and possibly others) about collaboration, possibly expanding Science Museum facility at Swindon.
- Collecting usage data – starting from a low base, with actions underway to improve it. Not really able to assess overall usage figures yet. Bar coding being introduced for monographs (not suitable for journals), allowing self-checkout and tracking of usage. Looking at moving materials in/out of storage facility based on frequency of use.
- Have acquired many mixed collections from individuals (e.g. Darwin, Wallace), including specimens, correspondence, books and maps, etc. To a great extent, these are physically stored together.
- Digital asset management system being introduced in next few months – but not yet far into librarianship of data/digital objects. Digital objects will be managed by NHM as an element of Biodiversity Heritage Library (BHL).
- Electronic catalogue of almost all the books and journals, except some special collections (described only at the collection level). Electronic records for only c10m of 70m specimens in the main museum collection, using an archive-type system, so all metadata are attached to the object. Tools for manipulating metadata too.
- Scanning station, run by the Internet Archive (associated with BHL) – non-destructive and gentle. One person scans 2000+ pages per day. There are other scanning facilities, some quite sophisticated. **NHM is happy to explore how GSL might share in the use of this technology.**
- Looking to join up collections (specimens and library material) across silos. Strategy is to move to a holistic service approach.
- Thinking lots about partnerships. Currently talking a lot with Kew (from coordination of buying, through to managing as a single collection), Science Museum and others in the UK (sharing systems, bases, interoperability), and overseas institutions (e.g. Smithsonian). **Keen to talk to GSL, as a possible leading partner in the Earth science sector, about various issues and opportunities.**
- Move to electronic content provision in long term, with hard copy in longer term storage and accessed much less often. Most access will be self-service for scientists (though not necessarily for growing secondary market of artists, historians, etc). Seek to unify collections electronically.

- **Maps – open for almost any level of discussion, with GSL and/or others** – from giving it to someone else to manage, through to taking on someone else’s collection, and all stops in between (joint projects/services, etc). Recognise they have a significant collection/resource, but that it is underused, partly because of lack of cataloguing. It is a good collection, but have no idea what it is ‘worth’ (in sense of usefulness, more than financially). Collection is almost invisible, so nobody uses it, but hard to justify investment in a resource which is so little used – difficult to see how to get out of that. A partner with greater footfall, whose maps are already well used, to act as a more visible ‘front of house’ for the NHM collection could be an attractive option to break the Catch 22. Some discussion of the popular secondary market in cartography.
- Discussion of copyright issues/restrictions. Don’t know how many of their (useful) maps are out of copyright (do we?). May be possible to scan and deliver some maps still in copyright, under the right conditions – BHL asked lots of publishers who agreed, with certain provisos. Moving towards the presumption of putting material online, with notice, in good faith, on a ‘take down on request’ basis. Managing a risk – be flexible, exercise due diligence. Might be different if you are seeking to make money from it – but could offer to share a proportion of income with publishers, who otherwise would make nothing from this material. NHM has an IPR officer in-house, who could help with any joint project.
- **‘Images of Nature’ exhibition (includes facsimile of William Smith map) will include print-on-demand kiosk. Happy to look at opportunities to partner with GSL re this facility.**
- Library strategy due in November, following an earlier outline document to trustees. In parallel with this (for February), a feasibility project for further development (implementation of strategy). Will include estimates of costings, looking at a 5-year programme (in line with post-CSR settlement).
- Staffing – restructuring from disciplinary silo teams to functional teams (acquisitions, services, digitisation, etc), while retaining disciplinary specialisms (now to be the secondary dimension of the matrix, rather than the primary one). Full skills audit will be the first step in thinking about future staffing and services needs – this may later be extended to collections staff. Staff development is important – see to get all involved in taking forward new projects.
- **Keen to continue conversation with GSL.** Happy to share draft reports. Return library visit in late October/early November? Brainstorming to identify opportunities to work better together operationally, and even to explore options for a map project? **Keen to work together at a more strategic level than hitherto.**

MEETING WITH HELEN PAIN (ROYAL SOCIETY OF CHEMISTRY): 20 AUGUST 2010

Present: Helen Pain (Director, Membership Services, RSC)
Nic Bilham (Head of Strategy and External Relations, GSL)

- 2005 – start of the ‘virtual library’ initiative. Recognised changing patterns of use. In line with publications strategy, which was moving towards electronic. RSC (and its library) seen as London-centric.
- Realised some time ago that they were being ‘overgenerous’. High costs of acquisitions (c50% of total membership services costs?) but a narrow group of heavy users. Still looking at how to recover some of the costs from this group.
- Context for the 5-year programme of change – use the space better, given RSC’s new outward facing agenda (public, government, etc), in pursuit of charter objective. Divorced development of the physical space from that of ‘the library’ (which is now largely virtual). Use of this space drove reconsideration of use of space at BH overall, and the move of many functions/staff to Cambridge. Also needed to improve synergies between staff at the two locations.
- At the outset – 6 library staff. Now – 3 dedicated library staff (one a temporary cataloguing post), and two ‘information scientist’ posts based in Cambridge, explicitly bridging library and publishing functions (they have publishing experience/expertise). Have not replaced Nigel Lees.
- Reduced cost base – achieved through staff reorganisation, but also cutting journal subscriptions. RSC does not view itself as a comprehensive ‘repository’ of chemistry – but always checked that titles being cut were available elsewhere.
- A review group started the process off. Consulted widely with members – they wanted a working library, even though few used it, wanted archives maintained, and supported the virtual library concept. But also wanted somewhere to have tea and coffee, internet access (wifi and their own laptops).
- A few complaints about the changed use of space from some regular users, but even this group appreciates the improved lighting and ambience in the library and throughout the building. Some IT complaints, and some objections to disruption due to meetings in the Chemistry Centre (i.e. the library space). Not aware of any complaints re library acquisitions/holdings.
- A better space for members visiting BH for meetings, etc. More informal meetings and interaction going on. Accessibility is the key – just drop in. But not a ‘members club’. The project ended up far less about the library and more about the direction of the Society – to their surprise.
- Create a vision, be up front about it, stick to it. Some doubted they could do it, but the great majority are positive about the outcome.
- Phase 2 of development of the building just getting underway. More development of virtual library to be done.
- Looking for more library cost savings, but driven by genuine development and rationalisation, not cutting for its own sake. Want to drive usage up, particularly in

areas where costs are fixed (so cost-per-usage falls). Look to make changes regarding services where costs are variable (e.g. online access 'tokens' from Elsevier). Fixed a budget, then prioritised to make best use of it - this drove the dropping of underused material. Publishing staff negotiate with the publishers on behalf of the library. Moving towards exchange agreements for some significant electronic content. (Did exchanges for hard copy content previously - not an efficient swap.)

- Members wouldn't know where the costs have been cut - maintained services. Great staff who present a positive face.
- Using material, putting it online, etc as 'the RSC', rather than as 'the library'.
- Have cut £200k from a £1m budget, without any noticeable pain. It was unworkable to maintain in its previous form - this was a key message to members.
- Happy to continue the conversation, develop interaction between our library staff and theirs, put us in touch with members of their review group, members who were 'concerned' in the early stages of the process, etc.

LIBRARY REVIEW 2010

SPECIFIC SUGGESTIONS ARISING FROM CONSULTATION DURING THE REVIEW PROCESS

- Stuart Baldwin offered to provide training to GSL staff in repairing books – but it was recognised that taking on such repairs ourselves would have a staffing implication.
- Look again at display of current journals in the Fellows Room – the racks are cramped and impossible to browse comfortably. (The racks are quite bulky – an alternative display solution could free up considerable space.)
- Look at low level of utilisation of the Lyell Room.
- Subscribe to new Springer journal, 'GeoHeritage' – this was suggested as being of value to the Geoconservation Commission.
- Contact the London Library to share experience.
- Provide access to the Web of Science and similar services.
- Improve coverage of hydrogeology and contaminated land.
- Provide facilities to electronically 'pre-order' less accessible material for a specific in-person visit.
- Provide literature search facilities on the GSL website.
- Develop links with IOM3 and ICE libraries, to improve access to those subject areas.

COST-PER-USAGE GRID

The cost-per-usage grid has been developed on the basis of various categories of journal usage data gathered as part of the library review process. Based on these data, it estimates the total number of usages of each journal/serial title in each year, and hence a (conservative) cost-per-usage. The current version of the grid includes all current journals, and all historic ones for which an instance of usage has been recorded during the relevant sampling period. It compares cost-per-usage under existing arrangements (purchase, gift, exchange, or whatever) with the pay-per-view cost.

Notes:

- The calculated total annual usage extrapolates the partial data available for each type of usage, sums these, and adds two, to allow for occasional usage and fluctuations between years for rarely used titles (so that the estimate is conservative).
- Acquisition method is shown by the following codes: G=gift; E=exchange; S=subscription or standing order; P=purchase of selective issues only.
- Records have been combined where a journal has changed titles.
- Titles which are no longer taken (historic holdings only) are highlighted in grey, and those for which we have an electronic subscription in blue.
- Pay-per-view prices have been estimated in sterling (at an assumed exchange rate of £1:\$1.50:€1.15).
- The last five columns show the theoretical savings which would be made if subscriptions were cancelled for those titles whose cost-per-usage exceeds the pay-per-view price by a factor of one, two, three, four and five, respectively, with the Society covering the cost of the pay-per-view accesses.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | |
|--|-----------------------|--------------------|---|------------------|----------------|-------------------------------|-----------------------------|--|-----------------------|------------------------|--------------------------|----------------------|-----------------------------------|----------------------------------|------------------------|-------------------|-------------------------|----------------|----------------|----------------|----------------|----------------|
| Title | Publisher | Acquisition method | Electronic access (1 year : Jul 09-Jun10) | Loans (3 months) | Loans (1 year) | Photocopy requests (6 months) | Photocopy requests (1 year) | Onsite usage (2 months @ 20% capture rate) | Onsite usage (1 year) | Total usage (recorded) | Total usage (calculated) | Journal cost (total) | Cost of offsite electronic access | Cost per usage (electronic only) | Cost per usage (total) | Pay-per-view cost | PPV sterling equivalent | Savings at 1:1 | Savings at 2:1 | Savings at 3:1 | Savings at 4:1 | Savings at 5:1 |
| Memoirs of the Geological Survey of Great Britain. Special reports on the mineral resources of Great Britain | | no longer taken | | 2 | 8 | | 0 | | 0 | 8 | 10 | | | | | | | | | | | |
| Memoir. Canadian Society of Petroleum Geologists | Society | S | | | 0 | 7 | 14 | | 0 | 14 | 16 | | | | | n/a | | | | | | |
| Memoir. Council for Geoscience (South Africa) | Society | E | | | | | | | | | 2 | | | | | | | | | | | |
| Memoir. Geological Society of America | Society | G | | 1 | 4 | 1 | 2 | | 0 | 6 | 8 | | | | | | | | | | | |
| Memoir. Geological Society of India | Society | S | | | | | | | | | 2 | | | | | | | | | | | |
| Memoir. Geological Survey Department, Cyprus | survey | G | | | | | | | | | 2 | | | | | | | | | | | |
| Memoir. Geological Survey of Ireland | survey | no longer taken | | 1 | 4 | | 0 | | 0 | 4 | 6 | | | | | | | | | | | |
| Memoir. Geological Survey of Kenya | survey | no longer taken | | 1 | 4 | | 0 | | 0 | 4 | 6 | | | | | | | | | | | |
| Memoir. Geological Survey of Namibia | survey | G | | | | | | | | | 2 | | | | | | | | | | | |
| Memoir. Geological Survey of Uganda | survey | no longer taken | | 1 | 4 | | 0 | | 0 | 4 | 6 | | | | | | | | | | | |
| Memoir. Geological Survey of Western Australia | survey | E | | | | | | | | | 2 | | | | | | | | | | | |
| Memoires de geosciences Rennes | academic | G | | | | | | | | | 2 | | | | | | | | | | | |
| Memoires de la Societe geologique de France. Nouvelle serie | Society | S | | 1 | 4 | | 0 | | 0 | 4 | 6 | | | | | n/a | | | | | | |
| Memoires du service geologique national (Algerie) | survey | G | | | | | | | | | 2 | | | | | | | | | | | |
| Memoirs of the Faculty of Science, Kyoto University. Series of geology and mineralogy | academic | G | | | | | | | | | 2 | | | | | | | | | | | |
| Memoirs of the Geological Survey of Belgium | survey | G | | | | | | | | | 2 | | | | | | | | | | | |
| Memoirs. Geological Survey of India | survey | E | | | | | | | | | 2 | | | | | | | | | | | |
| Memorials. Geological Society of America | Society | G | | | | | | | | | 2 | | | | | | | | | | | |
| Memorias e noticias. Publicacoes do Departamento de Ciencias da Terra e do Museu Mineralogico e Geologico da Universidade de Coimbra. Nova serie | museum | G | | | | | | | | | 2 | | | | | | | | | | | |
| Memorie della Societa geologica italiana | Society | E | | | | | | | | | 2 | | | | | | | | | | | |
| Memorie descrittive della carta geologica d' Italia | survey | E | | | | | | | | | 2 | | | | | | | | | | | |
| Memorie di Scienze Geologie [possibly Memorie di scienze geologiche (Padova)] | | no longer taken | | 1 | 4 | | 0 | | 0 | 4 | 6 | | | | | | | | | | | |
| Memorie per servire alla descrizione della carta geologica d' Italia | survey | E | | | | | | | | | 2 | | | | | | | | | | | |
| Mercian geologist | Society | S | | | | | | | | | 2 | £ 17.00 | | £ 8.50 | | | | | | | | |
| MESA journal | Society | G | | | | | | | | | 2 | | | | | | | | | | | |
| Metric Well Inventory | | no longer taken | | 1 | 4 | | 0 | | 0 | 4 | 6 | | | | | | | | | | | |
| Micropalaeontology | other commercial | S | | | 0 | 4 | 8 | | 0 | 8 | 10 | £ 330.00 | | £ 33.00 | | | | | | | | |
| Mineral Assessment Report | | no longer taken | | 1 | 4 | | 0 | | 0 | 4 | 6 | | | | | | | | | | | |
| Mineral processing and extractive metallurgy | Maney | E | | | | | | | | | 2 | | | | | | | | | | | |
| Mineral resources bulletin. Directorate General of Mineral Resources (Saudi Arabia) | | no longer taken | | 1 | 4 | | 0 | | 0 | 4 | 6 | | | | | | | | | | | |
| Mineral resources bulletin. Geological Survey of Western Australia | survey | G | | | | | | | | | 2 | | | | | | | | | | | |
| Mineral resources report. Geological Survey Department, Republic of Botswana | survey | G | | | | | | | | | 2 | | | | | | | | | | | |
| Mineral resources series. Zimbabwe Geological Survey | survey | G | | | | | | | | | 2 | | | | | | | | | | | |
| Mineralia Slovaca | survey | E | | | | | | | | | 2 | | | | | | | | | | | |
| Mineralium Deposita | Springer | S | 82 | | 0 | | 0 | 3 | 90 | 172 | 174 | £ 1,893.43 | £ 365.56 | £4.46 | £ 10.88 | €34.00 | £ 29.57 | | | | | |
| Mineralogical magazine | society | S | | | | | | | | | 2 | £ 410.00 | | £ 205.00 | | | | | | | | |
| Mineralogical Society bulletin | society | E | | | | | | | | | 2 | | | | | | | | | | | |
| Mineralogy and petrology | Springer | S | 5 | | 0 | | 0 | | 0 | 5 | 7 | £ 1,671.12 | £ 315.96 | £63.19 | £ 238.73 | €34.00 | £ 29.57 | £ 1,464.16 | £ 1,464.16 | £ 1,464.16 | £ 1,464.16 | £ 1,464.16 |
| Mining annual review | other commercial | E | | | | | | | | | 2 | | | | | | | | | | | |
| Mining environmental management | other commercial | E | | | | | | | | | 2 | | | | | | | | | | | |
| Mining Journal | other commercial | E | | 1 | 4 | | 0 | | 0 | 4 | 6 | | | | | | | | | | | |
| Mining magazine | other commercial | E | | | | | | | | | 2 | | | | | | | | | | | |
| Miscellaneous publication. Geological Survey of India | survey | E | | 1 | 4 | | 0 | | 0 | 4 | 6 | | | | | | | | | | | |
| Mitteilungen aus dem Geologisch-Palaontologischen Institut der Universität Hamburg | academic | S | | | | | | | | | 2 | | | | | | | | | | | |
| Mitteilungen der Naturforschenden Gesellschaften beider Basel | Society | G | | | | | | | | | 2 | | | | | | | | | | | |
| Monograph of the Palaeontographical Society | society | | | 2 | 8 | | | 5 | 150 | 158 | 160 | £ 120.00 | | £ 0.75 | n/a | | | | | | | |
| Nature | other commercial | E | | 1 | 4 | 9 | 18 | 5 | 150 | 172 | 174 | | | | \$ 32.00 | £ 21.33 | | | | | | |
| Nature geoscience | other commercial | E | | | | | | | | | 2 | | | | | | | | | | | |
| Near surface geophysics | society | S | | | | | | | | | 2 | £ 799.00 | | £ 399.50 | | | | | | | | |
| Netherlands journal of geosciences | Society | G | | 1 | 4 | 1 | 2 | | 0 | 6 | 8 | | | | | €34.00 | £ 29.57 | | | | | |
| Neues Jahrbuch für Geologie und Palaontologie. Abhandlungen | E. Schweizerbart'sche | S | | | 0 | 1 | 2 | | 0 | 2 | 4 | £ 1,260.00 | | £ 315.00 | £28.84 | £28.84 | £ 1,144.64 | £ 1,144.64 | £ 1,144.64 | £ 1,144.64 | £ 1,144.64 | £ 1,144.64 |
| Neues Jahrbuch für Mineralogie. Abhandlungen | E. Schweizerbart'sche | S | | | | | | | | | 2 | £ 464.00 | | £ 232.00 | | | | | | | | |
| New Scientist | other commercial | G | | 1 | 4 | | 0 | | 0 | 4 | 6 | | | | | | | | | | | |
| New Zealand Geological Survey paleontological bulletin | survey | no longer taken | | 1 | 4 | | 0 | | 0 | 4 | 6 | | | | | | | | | | | |
| New Zealand Geological Survey record | survey | P | | | | | | | | | 2 | | | | | | | | | | | |
| New Zealand journal of geology and geophysics | Taylor & Francis | S | | | | | | | | | 2 | £ 268.79 | | £ 134.40 | | | | | | | | |
| News. Geological Survey of India | survey | E | | | | | | | | | 2 | | | | | | | | | | | |
| Newsletter. Engineering Group of the Geological Society | Society | G | | | | | | | | | 2 | | | | | | | | | | | |
| Newsletter. Geoscience Information Society | Society | S | | | | | | | | | 2 | | | | | | | | | | | |
| Newsletter. International Commission on the History of Geological Sciences (INHIGEO) | Society | G | | | | | | | | | 2 | | | | | | | | | | | |
| Newsletter. International Geological Correlation Programme | society | no longer taken | | 1 | 4 | | 0 | | 0 | 4 | 6 | | | | | | | | | | | |
| Newsletter of micropalaeontology | Society | G | | | | | | | | | 2 | | | | | | | | | | | |
| Newsletters on stratigraphy | E. Schweizerbart'sche | S | | | | | | | | | 2 | | | | | | | | | | | |
| North West geologist (Liverpool) | Society | G | | | | | | | | | 2 | | | | | | | | | | | |
| Norwegian Journal of Geology | Society | no longer taken | | 1 | 4 | | 0 | | 0 | 4 | 6 | | | | | | | | | | | |
| Notes du Service geologique de Tunisie | survey | G | | | | | | | | | 2 | | | | | | | | | | | |
| NPD-bulletin | Society | S | | | | | | | | | 2 | | | | | | | | | | | |
| Occasional publication. Yorkshire Geological Society | Society | S | | | | | | | | | 2 | | | | | | | | | | | |
| Oceanology [not held] | | | | | 0 | 1 | 2 | | 0 | 2 | 4 | | | | | | | | | | | |
| Ofioliti | other commercial | S | | | | | | | | | 2 | £ 153.96 | | £ 76.98 | | | | | | | | |
| Oil and Gas Journal | other commercial | S | | | 0 | 1 | 2 | | 0 | 2 | 4 | £ 108.35 | | £ 27.09 | | | | | | | | |
| Oil and Gas Science and Technology | other commercial | S | | | 0 | 1 | 2 | | 0 | 2 | 4 | £ 528.00 | | £ 132.00 | | | | | | | | |
| ONGC Bulletin | other commercial | S | | | 0 | 1 | 2 | | 0 | 2 | 4 | £ 127.31 | | £ 31.83 | | | | | | | | |
| Open University Geological Society journal | Society | G | | | | | | | | | 2 | | | | | | | | | | | |
| Open-file report. United States Geological Survey | survey | G | | | | | | | | | 2 | | | | | | | | | | | |
| Ore Geology Reviews | Elsevier | S | 182 | | 0 | | 0 | 5 | 150 | 332 | 334 | £ 1,077.60 | £ 112.54 | £0.62 | £ 3.23 | \$ 31.50 | £ 21.00 | | | | | |
| Organic Geochemistry | Elsevier | S | 339 | 2 | 8 | 7 | 14 | 5 | 150 | 511 | 513 | £ 3,473.11 | £ 386.98 | £1.14 | £ 6.77 | \$ 31.50 | £ 21.00 | | | | | |
| Outcrop | society | G | | | | | | | | | 2 | | | | | | | | | | | |
| Overseas Geology and Mineral Resources | | no longer taken | | 1 | 4 | | 0 | | 0 | 4 | 6 | | | | | | | | | | | |
| Overseas Memoir. British Geological Survey | | no longer taken | | 1 | 4 | | 0 | | 0 | 4 | 6 | | | | | | | | | | | |
| Palaeobiodiversity and palaeoenvironments | Springer | E | | | | | | | | | | | | | | | | | | | | |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | |
|---|-----------------------|--------------------|---|------------------|----------------|-------------------------------|-----------------------------|--|-----------------------|------------------------|--------------------------|----------------------|-----------------------------------|----------------------------------|------------------------|-------------------|-------------------------|--------------------|--------------------|--------------------|--------------------|-------------------|
| Title | Publisher | Acquisition method | Electronic access (1 year : Jul 09-Jun10) | Loans (3 months) | Loans (1 year) | Photocopy requests (6 months) | Photocopy requests (1 year) | Onsite usage (2 months @ 20% capture rate) | Onsite usage (1 year) | Total usage (recorded) | Total usage (calculated) | Journal cost (total) | Cost of offsite electronic access | Cost per usage (electronic only) | Cost per usage (total) | Pay-per-view cost | PPV sterling equivalent | Savings at 1:1 | Savings at 2:1 | Savings at 3:1 | Savings at 4:1 | Savings at 5:1 |
| Sveriges geologiska undersokning. Serie Ba, Oversiktsskator med beskrivningar | survey | E | | | | | | | | | 2 | | | | | | | | | | | |
| Swiss Journal of Geoscience | Springer | S | 37 | | 0 | | 0 | | 0 | 37 | 39 | £ 1,036.78 | £ 194.95 | £5.27 | £ 26.58 | € 34.00 | £ 29.57 | | | | | |
| Teaching earth sciences | society | G | | | | | | | | | 2 | | | | | | | | | | | |
| Technical bulletin. Coordinating Committee for Coastal and Offshore Geoscience Programmes in East and Southeast Asia (CCOP) | Society | G | | 2 | 8 | 1 | 2 | | 0 | 10 | 12 | | | | | | | | | | | |
| Technical bulletin. South Pacific Applied Geoscience Commission (SOPAC) | society | G | | | | | | | | | 2 | | | | | | | | | | | |
| Technical papers. Minerals and Geoscience Department Malaysia | survey | E | | | | | | | | | 2 | | | | | | | | | | | |
| Techniques of water-resources investigations of the United States Geological Survey | survey | G | | | | | | | | | 2 | | | | | | | | | | | |
| Tectonics | | no longer taken | | | 0 | 6 | 12 | | 0 | 12 | 14 | | | | | | | | | | | |
| Tectonophysics | Elsevier | S | 1342 | | 0 | 8 | 16 | 3 | 90 | 1448 | 1450 | £ 5,535.24 | £ 630.73 | £0.47 | £ 3.82 | \$ 31.50 | £ 21.00 | | | | | |
| Terra abstracts | Wiley | S | | | | | | | | | 2 | | | | | | | | | | | |
| Terra Nova | Wiley | S | | 1 | 4 | 8 | 16 | 4 | 120 | 140 | 142 | £ 706.84 | | | £ 4.98 | | | | | | | |
| Tervuren African geoscience collection | museum | P | | 1 | 4 | | 0 | | 0 | 4 | 6 | | | | | | | | | | | |
| TPJD bulletin | | no longer taken | | 2 | 8 | | 0 | | 0 | 8 | 10 | | | | | | | | | | | |
| Transactions of the Institution of Mining and Metallurgy. Section A, Mining technology | society | E | | | | | | | | | 2 | | | | | | | | | | | |
| Transactions. Gulf Coast Association of Geological Societies | Society | S | | | | | | | | | 2 | | | | | | | | | | | |
| Transactions and proceedings of the New Zealand Institute | | no longer taken | | | 0 | 1 | 2 | | 0 | 2 | 4 | | | | | | | | | | | |
| Travaux de l'Institut scientifique. Serie geologie et geographie physique (Rabat) | academic | G | | | | | | | | | 2 | | | | | | | | | | | |
| Travaux du Comite francais d'histoire de la geologie | Society | S | | | | | | | | | 2 | | | | | | | | | | | |
| Treatise on Invertebrate Paleontology | society | S | | 2 | 8 | | 0 | | 0 | 8 | 10 | | | | | | n/a | | | | | |
| UK journal of mines & minerals | other commercial | S | | | | | | | | | 2 | £ 16.00 | | | £ 8.00 | | | | | | | |
| UKRIGS newsletter | Society | G | | | | | | | | | 2 | | | | | | | | | | | |
| Undercurrent | society | G | | | | | | | | | 2 | | | | | | | | | | | |
| United Kingdom minerals yearbook | survey | E | | | | | | | | | 2 | | | | | | | | | | | |
| United Kingdom offshore regional report | survey | E | | 4 | 16 | | 0 | | 0 | 16 | 18 | | | | | | | | | | | |
| U.S. Geological Survey bulletin | survey | G | | | | | | | | | 2 | | | | | | | | | | | |
| U.S. Geological Survey circular | survey | G | | | | | | | | | 2 | | | | | | | | | | | |
| U.S. Geological Survey professional paper | survey | G | | 3 | 12 | | 0 | | 0 | 12 | 14 | | | | | | | | | | | |
| USGS Memoir [unidentified] | | Q | | 1 | 4 | | 0 | | 0 | 4 | 6 | | | | | | | | | | | |
| Vibroseis (SEG) [unidentified] | | Q | | | 0 | 2 | 4 | | 0 | 4 | 6 | | | | | | | | | | | |
| Warta Geologi | society | | | | 0 | 1 | 2 | | 0 | 2 | 4 | | | | | | n/a | | | | | |
| Water supply paper. Geological Survey of Uganda | | no longer taken | | 1 | 4 | | 0 | | 0 | 4 | 6 | | | | | | | | | | | |
| Water Supply Papers of the Institute of Geological Sciences | | no longer taken | | 1 | 4 | | 0 | | 0 | 4 | 6 | | | | | | | | | | | |
| World coal (Surrey) | other commercial | S | | | | | | | | | 2 | £ 125.64 | | | £ 62.82 | | | | | | | |
| World mineral production | survey | E | | | | | | | | | 2 | | | | | | | | | | | |
| Year book. Carnegie Institution of Washington | academic | G | | | | | | | | | 2 | | | | | | | | | | | |
| Yerbillimlen | academic | G | | | | | | | | | 2 | | | | | | | | | | | |
| Zeitschrift der Deutschen Gesellschaft fur Geowissenschaften | E. Schweizerbart'sche | E | | | 0 | 1 | 2 | | 0 | 2 | 4 | | | | | £28.84 | £28.84 | | | | | |
| Zeitschrift Deutsch. Geol. Res. | | Q | | 1 | 4 | | 0 | | 0 | 4 | 6 | | | | | | | | | | | |
| Zeitschrift fur Angewandte Geologie | E. Schweizerbart'sche | S | | 1 | 4 | | 0 | | 0 | 4 | 6 | | | | | | | | | | | |
| Zentralblatt fur Geologie und Palaontologie. Teil 1, Allgemeine, Angewandte, Regionale und Historische Geologie | E. Schweizerbart'sche | S | | | | | | | | | 2 | £ 83.00 | | | £ 41.50 | | | | | | | |
| Zentralblatt fur Geologie und Palaontologie. Teil 2, Palaontologie | E. Schweizerbart'sche | S | | | | | | | | | 2 | £ 619.00 | | | £ 309.50 | | | | | | | |
| Zitteliana. Reihe A, Mitteilungen der Bayerischen Staatssammlung fur Palaontologie und Geologie | Society | S | | | | | | | | | 2 | £ 36.76 | | | £ 18.38 | | | | | | | |
| Zitteliana. Reihe B, Abhandlungen der Bayerischen Staatssammlung fur Palaontologie und Geologie | Society | S | | | | | | | | | 2 | £ 43.85 | | | £ 21.93 | | | | | | | |
| Total | | | 20930 | 321 | 1284 | 374 | 748 | 146 | 4380 | 27342 | 28726 | £ 127,967.38 | £ 16,750.76 | | | | | £ 14,997.15 | £ 12,633.62 | £ 12,633.62 | £ 10,087.90 | £ 6,193.68 |

THE PRESENT AND FUTURE OF SCIENTIFIC SCHOLARLY PUBLISHING

This brief note is intended as a skeletal overview only – given the volume of reading the Library Review Group is already doing I have deliberately chosen to select key points and present them using an informal style. If there are points of particular relevance or interest, or areas where members wish for a fuller description I can elaborate at the time.

HEADLINES – SOME THING TO WATCH OUT FOR:

- The explosion in information production and availability will continue unabated.
- The “emerging nations” will be major markets and a source of authored content in their own right.
- Publishers will continue to work hard to protect their journal brand.
- Discoverability of online content will continue to be of prime importance.
- Publishers will compete for the best authored content from all regions, and may adopt new role to do so.
- There will be experimentation with the peer review model in attempt to drive down cost and democratize science.
- There will be an increasing danger of plagiarism.
- Publication online ahead of print will become the norm.
- Internal production systems will link more closely with end-user behavior.
- Marketing will become predominantly electronic.
- Some libraries will purchase access by blocks of pay-per-view access – an opportunity and a threat...
- Delivery to mobile devices will become the norm within some disciplines.
- Usage statistics will become the key to subscription renewal or cancellation decisions.
- Self-publication models hosted by unconventional competitors are likely to emerge.
- National consortia will become important.
- Highly organized repositories may become a competitive threat to publishers.
- Libraries will prefer aggregated content holdings.
- Publishers will invest heavily in semantic enrichment of content.
- Web 2.0 has been slower than expected to find its place in the formal process of scientific publication.
- Ultimately, the role of publisher will be that of technology intermediary facilitating the relationship between the generator and consumer of scientific research.

OVERVIEW

A definition of publishing

The process by which value is added to raw authored content, primarily by:

- Confirming value and quality (peer review)
- Improving sense and enriching meaning (editing and associated processes)
- Standardization of presentation (typesetting, electronic tagging)
- Registration of the claim to authorship (formal acceptance in recognized literature)
- Addition of functionality and enhancement of value (web hosting)
- Promotion and dissemination to the reader community (publication, sales, marketing, print, online)
- Archiving and preservation.

Publishers can be:

- Commercial (the biggest four – Elsevier, Wiley-Blackwell, Springer, Taylor and Francis - account for 50% of the market...)
- Not-for-profit
 - Society
 - University Press

A historical perspective

Steady progress for 500 years:

- 17th century – initiation - the first journals
- 18th century – multiplication – the growth of journal titles
- 19th century – specialization – the compartmentalization of science
- 20th century – commercialization – the rise of the corporate publisher
- 21st century – the enrichment of content and the extraction of *meaning*.

Where do we stand now?

An explosion of information production and availability:

- 5 million+ researchers – and growing at 3% per year
- 1.4 million articles published each year – and growing at 3%
- 23 000 peer reviewed journal titles
- 2000 publishers
- 95% of journals available online
- Exponential growth of the volume of data available

Close links between national GDP, investment in education, research activity, authored output, international scientific collaboration – and economic growth. These factors are broadly synchronized, both within and between nation states. So, note: what were once “emerging nations” are now significant markets and sources of content in their own right.

CONTENT GENERATION

Authors and content generation

For research scientists engaged in the cycle of research and publication, the journal remains the primary vehicle for progress. Authors select the journals they submit to according to:

- Journal reputation
- Exposure to the relevant community
- Time to publication
- Impact Factor

These factors contribute to the journal brand and publisher work hard (and will continue to do so) to protect their brand value.

In the future they are increasingly likely to consider:

- Discoverability of their content and meaning inherent in it
- Alternative and complementary bibliometrics – the IF is unlikely to predominate indefinitely.

In the past “high quality” authored content was derived largely from North America and Europe. This is changing rapidly and commercial publishers are actively competing for high quality content from:

- Brazil
- Russia
- India
- China

Publishers traditionally competed for library spend. They now compete for authored content, to the extent that some publishers are now moving into scientific conference organization with intention of cornering the authored outputs.

Peer review

The process (generally publisher-administered) by which respected researchers vouch for the originality, reliability and quality of a paper prior to acceptance for publication. It may be:

- Double blind – where neither reviewer nor author knows which parties are involved
- Single blind – where the reviewer is told the author, but not vice-versa
- Open – where both parties know who the other is, and the reviewers report is sent to the author
- Public – where pre and post-publication comment is openly invited from all.

Peer review is regarded by most as a critical (if expensive) part of the publication process and is likely to endure. However, there is increased experimentation with the public peer-review. Nature Group tried (and dropped) a related system, but many open access advocates favour continued experimentation with new ways of assessing paper quality.

Production and processing

Articles accepted for publication undergo the processes of:

- Copy-editing
- Typesetting
- Tagging for online delivery
- Printing
- Upload to journal hosting system

These processes have remained essentially stable for many years, but there is a new and growing emphasis on all-electronic workflows and production team now interacts far more directly with content to ensure it is fit and suitable for purpose. Examples include:

- Checking for plagiarism (CrossCheck software) – increasingly important as the volume of authored content grows.
- Processing for publication ahead-of-print – with electronic content now the default, it is important not to organize entire workflows around the periodic process of issue compilation.
- online production management – where content being processed is stored remotely and is available to all parties to the production process.
- Integration of supplementary data sets

As new technologies develop it is likely that production staff will also have close involvement with semantic enrichment of content.

CONTENT DISSEMINATION

Sales and marketing

Has moved from a traditional print, telephone and face-to-face model, to new approaches relying on the harvesting and utilization of data held electronically:

- Email marketing
- Web marketing
- Harvesting of usage data from subscribers and non-subscribers alike.
- Consolidation of data from multiple sources

Dissemination and access

Content is available in many different ways:

- Print
- Online
 - Aggregated journals
 - Stand alone journals
 - Subject packages and subsets
 - Pay-per-view – individual article, whole volumes and PPV credits
 - Interlibrary loan
 - Via mobile devices – emerging as important in some disciplines

Standards have been developed to measure usage (COUNTER) and to manage multiple usage reports (SUSHI). As this data becomes easier to handle (and compare) usage will come to be one of the most important factors in determining renewal and cancellation.

Open access

For centuries, the model whereby the author received a full range of publication services without charge, and the subscriber paid for access to content has operated without interruption. Now, however, the open access movement is promoting a range of alternative models whereby there is no subscription fee and the costs of publication fall on the author or funding agency:

- Green OA – where authors may self-archive the post-acceptance, pre-production version of their article. There is usually no charge (GSL is a Green OA publisher).
- Gold – where an author or funder pays to include an article in an OA journal in its full and final form.
- Hybrid models – where Gold OA articles are included in a subscription-based journal, on payment of a fee (usually \$1500 - \$3000). Where this is offered by publishers, take up is usually very low (2-5%).

The Gold OA model has enjoyed some growth since 2003, but the future is far from clear and it will ultimately be the author who decides where their interests lie. Interestingly, the model has come almost full circle and some OA publishers waive publication fees if an institution becomes a “member” (for which read “subscriber”).

A more interesting the threatening model for the future is self publication. This will prove difficult until the peer review process can be accommodated, and the author is given sufficient tools to load content in a highly functional form, possibly to a free website. It will be worth monitoring Google etc on this front.

Library aggregation

While many academic libraries still operate individually, there is an increasing trend to come together to exercise greater purchasing power. There are now over 350 such consortia, taking several forms:

- Tight consortia – where procurement is for and on behalf of the whole consortia, and billing etc is done centrally
- Loose consortia – where consortia members opt-in, but billing is still centralised
- Procurement consortia – where the consortia negotiates reduced pricing, but inclusion is on an opt-in basis, and billing at an institutional level
- National consortia – where government negotiators deal directly with publishers to agree a price for country-wide access.

National consortia are likely to be of growing importance in the coming year, but may constitute a double-edged sword – the prize may be high, but once a deal is done the national government and small publisher are partners of unequal weight – and power.

Archives and repositories

In the past, print copies formed a durable and dispersed archive, ensuring long term preservation. In the digital world there have been challenges in ensuring the same degree of security, but various archive initiatives are in hand:

- LOCKSS
- CLOCKSS
- Portico

Libraries are increasingly insisting on inclusion in one or more of these archives before taking a subscription, and this will only become more important as libraries decline print in favour of online-only access.

In parallel to this there are growing numbers of increasingly well organized subject and institutional-based content repositories. Four or five years ago authors were posting their articles in these repositories under instruction from their employers, but they were sufficiently disorganized to prevent them competing with formal journal hosting arrangements. As they become more functional and better managed they may, in fact, form a significant competitive threat to publishers.

CONTENT ORGANISATION

Content aggregation

In the print world, libraries subscribed to the titles demanded by their faculty members, and built collections of separate titles. With journal available online, however, aggregated content is increasingly available:

- Single publishers aggregations – eg Science Direct, Lyell Collection
- Subject-based aggregations – eg GeoScienceWorld, BioOne
- Multi-publisher database aggregators – eg EbscoHost, SwetsWise
- E-book aggregators – eg Knovel, Gale, NetLibrary

Aggregated holdings are likely to become more important as online functionality starts to derive meaning from cross-article searching and content amalgamation.

Semantic enrichment

The problem for the researcher is, that with the published output of research and available datasets growing exponentially, it becomes harder and harder to find content that is of real value. There is, however, an advantage in that the aggregation of content published should contain great and greater *meaning*.

Semantic enrichment is the process whereby author, publisher and online host come together to developing taxonomies, tagging and contextual hierarchies which can then be used to produce search results which are greater than the sum of the individual articles searched. It is seen as an important development and various publishers have already developed their own systems:

- Elsevier – Illumin8
- Royal Society of Chemistry – Project Prospect
- Nature Group – Text Mining Interface

HighWire are working on this area at present.

Web 2.0

For several years the “social function” of online journal services has been trumpeted as the next big thing. Recent research, however, suggests that although scientists do use social media, it does not yet form a significant or serious element of the formal research publication process. Use is presently restricted to a level which does not contribute to the formal minutes of science.

This may change, and there are those who are active in encouraging the development of a more enabling online social infrastructure.

Neal Marriott
7th October 2010