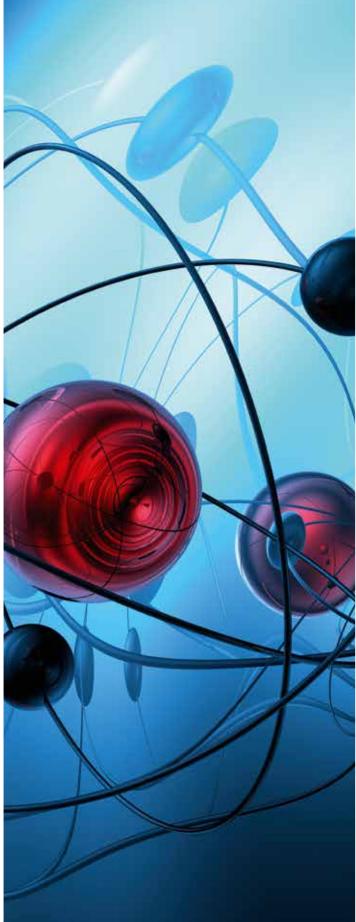


# Review of the implementation of the RCUK Policy on Open Access



March 2015



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## 1 Foreword

Open access is an area that is quickly transforming the scholarly dissemination of research. Chairing this review has been an opportunity for me to gain in-depth knowledge from the intellectual debates and from the impact that the revised *RCUK Policy on Open Access* is having in practice. It was the latter element that was the focus of the review and has meant that we have not addressed some of the more fundamental issues underpinning the debates around open access. We have taken, as our starting position, the view that we need to explore different aspects of the open access policy and its implementation in a wide range of different communities.

In carrying out the review, the panel has tried to collect information from a variety of sources, across the plethora of stakeholders with an interest in the policy. We have tried to do this in a number of ways: a written call for evidence; oral evidence sessions; and institutional visits, in order to allow the different voices and experiences of the policies to be heard. I have not been surprised that there was a commonality in the themes that were derived, which are explored in this report.

This is the first review of the implementation of RCUK's policy being held at an early stage, just 16 months after the introduction of the policy. It needs to be recognised that conducting a review so early has thrown up challenges. There have been difficulties in collecting data which has meant that we have been more reliant on opinion than perhaps we might have liked to at the outset of the review. Even so, it is important to take the time now to look at emerging evidence and get a view of where further work needs to be done. As will be noted from the recommendations the panel makes, this will mean that there is further work to be done, across all stakeholders, to ensure that this evidence base is more fully formed before the next review, scheduled for 2016.

Finally, I would like to thank Alex Saxon for her many excellent contributions to this review. I am also very grateful to the panel members for the considerable investment of time that they have made on this review. There have been some very frank discussions which have been crucial to scrutinising the implementation of the policy across the breadth of stakeholders and disciplines it covers. I look forward to the response to and implementation of the recommendations by the RCUK Executive Group.



Professor Sir Robert Burgess Chair of the review panel

## 2 Introduction

RCUK introduced its revised policy on open access in April 2013<sup>1</sup>. Although the Research Councils first introduced their joint *RCUK Position Statement on Access to Research Outputs* in 2005, it only set out principles for open access and individual Research Councils subsequently developed their own policies. The revised policy, introduced in April 2013 and developed in parallel with the thinking of the 'Finch group'<sup>2</sup>, therefore marked the first time that there has been a unified policy on open access all the Research Councils.

Following dialogue with the sector prior to the policy coming into effect, it was apparent that there were some concerns about the policy. Open access was, and still is, a transformative and fast-moving policy area. Particular areas of concern in the academic community included the impact of embargo periods and the use of particular licences as well as the amount of effort and education there would need to be to support the implementation of the policy.

In dialogue with the research communities, RCUK acknowledged that the implementation would need to involve a transition period to open access publishing. In order to monitor the implementation of the revised policy and any unintended consequences, RCUK committed to reviewing its policy in regular stages during the transition period with the first review taking place in 2014. However, it is worth noting that many respondents to the review have indicated that the present review may be too early, only being just over a year after the introduction, to review implementation of the policy. Indeed, this is reflected in some of the data that are far from complete (see especially the section 3.2 on compliance data).

This report sets out the findings of the review panel at this early stage of implementation of the policy. Case studies are drawn from written and oral evidence as well as from institutional visits. The report makes recommendations on how the panel believes that implementation of the RCUK policy can be improved or better supported. As the methodology highlights, the remit of the review is distinctly to look at the implementation of the RCUK policy and therefore keeps to those boundaries, trying not to go beyond them into the much broader and more general intellectual debate surrounding open access publishing as a whole. The recommendations, as set out, are not just for RCUK although many will be within their remit to lead, but are aimed at all parties with an interest in open access, whether a higher education institution (HEI), a learned society or a publisher who may work together to resolve many of the issues.



I The RCUK Policy on Open Access is available at: www.rcuk.ac.uk/research/openaccess/policy

2 More information about the Finch Group on open access is available at: www.researchinfonet.org/publish/finch

## 3 Methodology

The terms of reference for the review (Annex B) were developed in dialogue with interested parties as the policy was being introduced. This included those in the higher education and publishing communities as well as input from the House of Lords Science and Technology Select Committee and the House of Commons Business, Innovation and Skills Select Committee, which each held inquiries into the policy.

Covering the period from April 2013 to July 2014, the aim of this review was to examine the implementation of the policy and its effectiveness. It also looked at the associated mechanisms, such as the block grant introduced to support the policy, to ensure that they are working as intended.

In order to ensure that the review was impartial, it was agreed by RCUK Executive Group that there would be an independent chair, Professor Sir Robert Burgess, and a review panel made up of knowledgeable members of the various communities and sectors with an interest in the policy and open access. Details of the panel membership can be found in Annex C. Panel members served as experienced individuals in their field rather than as representatives of their organisations.

It has been specifically noted that the review is not looking at the entirety of the open access landscape nor is it reopening questions around the desirability of open access publishing, nor the government's policy position on open access. Whilst there is still much debate on-going around open access, the review panel has strictly limited its remit to the implementation of the RCUK policy.

#### 3.1 Gathering written and oral evidence

The review has gathered evidence from the higher education sector, from publishers and librarians, learned societies as well as from researchers and funders. The call for written evidence requested information in the following terms.

- 3.1.1 The panel would welcome evidence on the effectiveness and impact of the RCUK policy on the transition of RCUK funded outputs (both within HEIs, independent research organisations (IROs) and Research Council-funded institutes, centres, units and facilities) to open access. In particular:
  - a. higher education institutions and independent research organisations
  - b. different disciplines
  - c. learned societies
  - d. academic publishers

- e. collaborations between researchers both within the UK and internationally
- f. internal processes within HEIs and IROs and the practicalities of administering the RCUK block grant to support open access
- g. the wider open access landscape in the UK and internationally
- h. the cost of open access publishing.
- 3.1.2 Compliance with the 'green' open access embargo periods mandated by the policy.
- 3.1.3 The impact on particular discipline areas of the RCUK requirement for Creative Commons licensing, in particular CC-BY licences for 'gold' open access.
- 3.1.4 How effectively the policy has been communicated, including evidence or views to suggest any further engagement needed.

The review panel recognised that owing to the early stage of implementation, there were limits to the volume and robustness of available evidence and, although encouraging respondents to highlight where this was the case, asked for submissions to be based on evidence rather than opinion as far as practicable.

The call for written evidence generated over 80 submissions from across interested groups. A full list of those who submitted evidence can be found in Annex C with full copies of the evidence available on the RCUK website at: www.rcuk.ac.uk/research/openaccess/2014review/evidence.

In order to supplement the written evidence in a targeted way, the panel also invited learned societies and publishers to give oral evidence. These sessions aimed to allow organisations the opportunity to provide further information on the implementation of the policy in particular areas such as the impact of embargoes; use of licences; use and distribution of the block grant; impact of the policy on their publishing model; and the impact of the policy on particular disciplines. Details of those invited to give oral evidence can be found at Annex D, with transcripts of the sessions available on the RCUK website at: www.rcuk.ac.uk/research/openaccess/2014review/evidence.

There were also a small number of visits to institutions to talk informally about their experiences of implementation of the policy. The visits included discussions with researchers about their perception of the policy and how they are interacting with it in practice, as well as discussions with librarians and institutional administrative staff involved with the practicalities of implementing the policy.

#### 3.2 Call for compliance data

In parallel to the written call for evidence, RCUK collected compliance data from all UK institutions in receipt of Research Council funding. The aim was not to rank institutions against each other or to introduce any sanctions for non-compliance, but to understand, at the most basic level, the level of culture change achieved so far by institutions.

In the 2013/14 year, compliance expectations had been set by RCUK at 45% of papers, at an institution level, following the gold or green route to open access. To monitor compliance, RCUK requested the following information from institutions:

- the number of peer-reviewed journal articles arising from Research Council-funded research that have been published by researchers within that institution.
- of these Research Council-funded papers, the number that are compliant with the *RCUK Policy on Open Access by*:
  - a. the gold route
- b. the green route.
- the number of articles which have been published in journals which were not compliant with the *RCUK Policy on Open Access.*

RCUK provided 107 institutions (HEIs, Research Council institutes and other eligible research organisations) block grants from the RCUK Open Access Fund<sup>3</sup>. A total of £16.9million was distributed for FY 2013/14 and £19.8million for FY 2014/15. Institutions were given flexibility on how this funding could be spent, though the primary purpose was for payment of article processing charges (APCs). It should be noted that currently the block grant is provided for a financial year (running April to March), whereas institutions are reporting on publications arising and funding spent during the period April 2013 to July 2014. At the end of the first financial year, the institutions in receipt of the block grant were asked for a short financial report outlining how they had used the funding. Information on the financial accountability data to be provided had been detailed in Annex A of the RCUK Policy on Open Access Policy and guidance notes and it was expected that institutions would follow this template.

The distribution of the block grant to institutions was based on the amount of direct labour funding they had received

## Definitions of 'gold' and 'green' Open Access

The RCUK policy uses the following definitions, which have also been used by the review, for describing the 'gold' and 'green' routes for open access.

**Gold** open access is the immediate, unrestricted, online access to peer-reviewed and published research papers, free of any access charge and with maximum opportunities for re-use.

**Green** open access is online access to peer-reviewed and published research papers, usually via a repository, after a period of delay known as an embargo.

during the three years from 2010 to 2012. The funding is unevenly distributed, with relatively few institutions receiving the bulk of the funding, and a larger number of institutions receiving relatively little funding: 30 institutions account for 80% of the funding, 45 account for 90%, with 62 institutions sharing the remaining 10% of the available funding.

In order to provide a consistent analysis of the varying compliance data submitted, a sub-set of the data was collated for analysis. This was based on 55 institutions, which together account for 93.5% of the block grant made available ( $\pounds$ 15.76million in 2013/14,  $\pounds$ 18.54million in 2014/15), and comprise the top 51 institutions as ranked by the allocation of the RCUK block grant. It also includes institutions ranked at positions 57, 82, 99 and 100 in the allocation of the block grant as the intention was to include institutions which had more reliance on funds from the Arts and Humanities Research Council (AHRC) and the Economic and Social Sciences Research Council (ESRC), as well as those with relatively small block grants. This data set is made available at Annex F.

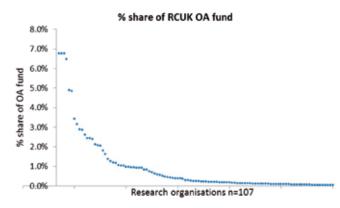


Figure 1: Distribution of RCUK Open Access Fund between research organisations.

3 Further information on the RCUK block grant, its distribution and the algorithm used to allocate it is available at: www.rcuk.ac.uk/media/news/121108/ and www.rcuk.ac.uk/RCUK-prod/assets/documents/documents/RCUK\_APCfundDistribution.pdf

## 4 International context of the RCUK policy

The development of open access policies in the UK has not happened in isolation, and indeed many countries and funders have made policy announcements since 2013. In Europe, the pace of change accelerated with the European Commission mandate under the Horizon 2020 programme, but also the 2012 Recommendation, which encouraged all EU Member States to put publicly-funded research results in the public sphere in order to strengthen science and the knowledge-based economy<sup>4</sup>. As well as a number of projects funded by the European Commission to help harmonise approaches across Europe, a number of research funding and performing organisations, including RCUK, are also collaborating within the organisation Science Europe, and signed a common statement<sup>5</sup> in 2013.

The transition towards an open access model of publishing is being addressed differently in each country, reflecting the various research funding models and 'money flows', as well as cultural and political differences. It is difficult to identify a clear chronology in the various policy developments, and therefore whether the RCUK policy had a clear influence. *The Report of the Working Group on Expanding Access to Published Research Findings* (the *Finch report*), and then the implementation of the recommendations within the RCUK policy, have provided a clear signal on the direction of travel within the UK, which in turn gave an impetus for other national funders to accelerate their own policy reforms.

The maximum embargo periods of six and 12 months adopted in the RCUK policy have now been adopted in most policies across Europe. In the US and India, for example, there are still concerns around the cost of a transition to open access, and funders are willing to allow for longer embargoes (12 months) in order to not put additional barriers where funding for gold open access might not be available. However, other funders, such as the Bill and Melinda Gates Foundation, have taken an even more ambitious position, and have set policies which require immediate open access to research publications and data. It is indeed a very varied landscape. Since the RCUK policy came into force, the payment of open access article fees, or APCs, by the mechanism of a separate grant, has been adopted, or further developed, by a number of funders, including DFG<sup>6</sup>, the Dutch NWO<sup>7</sup> and the Norwegian Research Council<sup>8</sup>. Other funders have made it clearer that research grant funding could be used to pay for APCs, such as the Swiss National Science Foundation<sup>9</sup> and the Swedish Research Council<sup>10</sup> Some funders (such as the Norwegian Research Council) have made grant money available for APCs only for purely open access journals and do not allow for open access funding to be used for hybrid open access. Others, like the Austria FWF, have recently introduced a cap on how much of an APC they will fund for each paper<sup>11</sup>.

Coordination with other areas of the world has been more of a challenge, and the Global Research Council has developed a roadmap<sup>12</sup> to ensure that open access remains a priority for funders and the transition momentum is maintained. The costs of transitions to a fully open access publishing model is of concern in many countries, which have therefore adopted a more cautious approach supporting green open access. India's two major science funders have announced open access policies in 2014, but those rely mainly on depositing papers in repositories within 12 months of publication<sup>13</sup>. In China, the main research funders have also adopted similar policies requiring deposition within 12 months<sup>14</sup>.

Open access to publicly funded research outcomes is now acknowledged as a key objective to reach by all funders across the world, and an increasing number of researchers, but the mechanisms in which this can be achieved reflect local circumstances, and there is no 'one size fits all'. However, one of the key changes in the last two years, on which RCUK has had a significant influence, is that the conversation on the need for an accelerated transition to open access is no longer one reserved to librarians and open science advocates, but has matured into an international collaboration, with the support of research funders, national governments, and all the relevant stakeholders.

- 5 www.scienceeurope.org/uploads/PublicDocumentsAndSpeeches/SE\_OA\_Pos\_Statement.pdf
- 6 www.dfg.de/en/research\_funding/programmes/infrastructure/lis/funding\_opportunities/open\_ access\_publishing/index.html
- 7 www.nwo.nl/en/funding/our-funding-instruments/nwo/incentive-fund-open-access/--publications/incentive-fund-open-access---publications.html
- 8 www.forskningsradet.no/en/Newsarticle/A\_boost\_for\_open\_access\_to\_ research/1253997204282
- 9 www.snf.ch/en/theSNSF/research-policies/open-access/Pages/default.aspx
- 10 www.vr:se/inenglish/researchfunding/applyforgrants/generalconditionsforgrantapplications/ openaccess/faqopenaccess/haqopenaccess/howcanresearchersaffordtopaythefeesinvolved inparallelpublicationorpublicationinopenaccessjournals.5.37eca2ee12a87a8202180001961.html
- www.fwf.ac.at/en/news-and-media-relations/news/detail/nid/20141219-2097/
  www.globalresearch.council.org/sites/default/files/odfs/grc\_action\_plan\_open\_access%20FINAL
- 12 www.globalresearch.council.org/sites/default/files/pdfs/grc\_action\_plan\_open\_access%20FINAL.pdf 13 http://infojustice.org/wp-content/uploads/2014/12/APPROVED-OPEN-ACCESS-POLICY.pdf
- 14 www.nature.com/news/chinese-agencies-announce-open-access-policies-1.15255

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<sup>4</sup> http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32012H0417&rid=1

## 5 Compliance with the RCUK policy

Overall, the data received suggests that the majority of institutions have made a substantial start in implementing the RCUK policy. However, the evidence from the compliance returns provided by institutions is that, at such an early stage in the implementation of a transformative policy, many did not have the systems in place to either track publications produced by their own research staff or to associate publications with specific grants. This was especially the case for larger, distributed institutions (such as the research intensive universities) and distinct from smaller, more centralised institutions (such as specialised research institutes). However, many institutions reported that they were developing systems to support the policy and the tracking and linkage, as this functionality would be required to enable demonstration of compliance with the open access requirements of the UK funding bodies for future Research Excellence Frameworks (REF) assessments.

Uncertainty surrounding the data collection that institutions would be required by RCUK to carry out has also not helped to put in place the systems to do so. Although RCUK provided a basic template for reporting block grant spending, and requested basic numbers for compliance returns because of the lack of guidance surrounding what was needed and the way in which the data would be used, the template was, understandably, interpreted in a variety of ways. This has made the collation of the data a difficult task. For future reviews, it is recommended that a more clear template and guidance should be developed in order to help and support institutions in their data collection. The panel recommends that this is developed by the proposed practitioners group recommended to be set up by the panel to look more closely at operational issues around implementation (see section 8). Developing the template with those representatives of HEIs responsible for collecting the data, and other interested parties working in this area such as JISC, should ensure that the data collected is more consistent.

Institutions have been able to track spend on APCs for gold publications paid from the RCUK block grant, but again, due to the early stage of implementation and transformative nature of the policy agenda, they did not necessarily have systems in place to track spend on APCs from departmental funds or from funds held directly within grants. This will be significant for the first three to four years of the transition as, until the policy came into force in April 2013, researchers were allowed to include publication costs within grant applications. There is therefore a cohort of grants funded before April 2013 paying APCs from grant funds which institutions would not necessarily have had knowledge of.

#### **Demonstrating compliance**

Many institutions report that gathering data on compliance has been a difficult, resource-intensive task, highlighting the need for further support for this process. The London School of Economics has had challenges with identifying papers resulting from RCUK funding. Currently, they don't have a single point of reference for locating this information. Considerable time is required to manually cross-check external databases and internal publication lists to identify all RCUK-funded papers, and linking data from these various sources is largely manual.

Many institutions are now putting internal processes in place to ease the burden of compliance data gathering. St Georges University of London, for example, is implementing the grants module in its CRIS (Symplectic Elements), which will draw upon grants data generated from its finance system. They are also looking into making their APC data available via figshare as well as making enquiries about subscribing to ResearchFish.

Although considerable effort has been made, it is apparent that larger, more distributed organisations have been unable to fully track publications that have been made open access through deposit of author final manuscripts in repositories. It was easier for institutions to have visibility of the publications made open access through their own institutional repositories but, understandably, they did not always have sight of publications made available through other subject-specific repositories, or through the repository of a co-author of a paper at another institution.

For these reasons, many institutions have only been able to provide estimates for the compliance data requested, with the only certain number they know being the number of papers for which APCs were paid for from the block grant. The methodologies used to estimate numbers were all in part based on using systems such as Web of Science or SCOPUS to identify papers produced from an institution. These systems do not list all journals used by Research Council-funded authors, and substantially under-represent arts, humanities and social science journals. Therefore, it is likely that estimates of total numbers of publications will be lower than the true value.

Many research papers are produced by multiple authors across many institutions and this is an increasing trend. Analysis conducted internally by the Higher Education Funding Council for England (HEFCE) suggests that at least 25% of papers submitted to the REF have authors from two or more UK institutions. As the compliance returns are on an institutional basis, the figures from across institutions therefore reflect a level of duplication in reporting. It is not possible to estimate the level of duplication from the current data set. However, it is possible to compare the number of gold papers an institution estimates its authors produced against the number it paid for out of the block grant.

What is clear is that for many institutions, the compliance information reported was an estimated sub-set of the total publications attributing funding to the Research Councils within that institution. However, it is not yet possible to estimate what proportion of the whole this sub-set represents.

Although compliance with the policy is critical information to gather during the transition period, once the policy is fully embedded within institutions, the balance between the administrative cost of producing such data and its use may need to be considered. Given the administrative overhead for institutions to collate such data, a more light-touch audit process may be more appropriate at a later stage in the implementation of the policy. It may also be that there are other sources of data, such as those held by publishers, that it would be administratively simpler to collect. However, such sources are unlikely to be fully comprehensive. It is recommended that such options are explored in future reviews of the implementation of the policy.

But there are other process improvements that could be more quickly and easily accommodated that could greatly improve the collection of open access compliance data. The panel recommends that RCUK mandates is the use of ORCID<sup>15</sup> in grant applications in order to make it easier to track the journal articles published by researchers in receipt of Research Council funding. Requiring the use of an ORCID identifier in grant applications, journal articles and other relevant activities, and learning from established methods such as lookup services to enable authors/grant applicants to select their ORCID, will ease the burden on institutions in tracking those articles that should be compliant with the policy. In parallel, the panel recommends that publishers develop, as many already are, their manuscript submission systems to accommodate ORCIDS and FundRef data and ensure that such data are passed effectively to CrossRef. Additionally, institutions will need to develop their internal system to make use of these IDs. There are also other initiatives that the Research Councils are involved with such as CASRAI, RIOXX and JISC Monitor, which it would be worth exploring in the context of increasing the quality and consistency of the data collected.

Given the fact that institutions are working hard to put in place systems to collate data on compliance with other funders of research, it is imperative that there is a joined up approach for data collection. This will help to minimise the administrative burden on institutions. The review panel therefore recommends that there are further discussions between those with an interest in collecting such data to avoid multiple requests for similar information.

#### 5.1 Analysis of compliance data

Of those institutions that provided compliance data, 94% reported that they had exceeded the 45% open access target set by RCUK for the first year of implementation. For 39 of the 46 institutions, the proportion of open access delivered by gold was greater than that by green. However, as many institutions reported that they were likely to be under-estimating the total number of papers arising from Research Council funding, it may be that actual compliance

Open access funding provided to research organisations	Financial year 2013/14	Financial year 2014/15
Total value of RCUK OA fund	£16.85M	£19.83M
Number of RCUK supported research organisations in receipt of block grants	107	107
Number of RCUK supported research organisations without block grants	89	89
Largest block grant provided	£1,151,812	£1,355,073
Smallest block grant provided	£6,220	£7,317
Median value of block grant	£41,184	£48,451
Initially estimated number of APCs that block grant could support	10,165	11,959

#### Table 1: Compliance data – key facts

<sup>15</sup> Further information about ORCID is available: http://orcid.org/about/what-is-orcid

levels were different and potentially may have been higher. It is unclear if the proportions of open access reported through the green route were a true reflection of the actual levels. It is also unclear if institutions reported all green papers, or excluded those not currently accessible because they are under an embargo period. Anecdotal evidence suggests that institutions may be under-reporting in this area as they are struggling to identify which of their outputs are linked to Research Council funding. A visit to one institution suggested that they were reliant on trawling through their department websites to collate the papers that had been published.

As the RCUK policy is at an early stage of implementation, a comparison of compliance levels with that of a more established open access policy is beneficial to provide a benchmark. Data on compliance with the Wellcome Trust policy from October 2011 to September 2014 showed an average compliance rate of around 60% across the disciplines they fund. However, for medical humanities articles over the same period, the average compliance rate with the Wellcome Trust policy was around 43%, which suggests that there was some disciplinary variation in compliance.

In looking at compliance with the RCUK policy, there was also some interest from the review panel as to how the publishers had helped institutions and researchers to comply with the policy by ensuring that their journals were 'compliant'. As the mandate for compliance with the RCUK policy is with institutions, rather than with the publishing industry, this has been looked at within the review as part of the response by the publishers to the implementation of the policy (section 6.3).

#### 5.2 Analysis of APC spend data

The subset of 55 institutions reported spending a total of  $\pounds$ 10.4million on APC payments during the first year, resulting in 6,504 gold papers. This implies an average APC (including VAT) of £1,600.

The data collation exercise tried to take account of the payments made for retrospective open access, institutional memberships and other block payment schemes, and where possible page and colour charges. The institutional average APC figures should therefore represent a good estimate of actual APC values.

From the data provided, the minimum average institutional APC is £1,233 and the maximum is £2,392. The average APC paid during year-1 (£1,600 inc VAT) was £472 less than the average APC assumed by the Finch Group, which was used as a proxy when calculating the size of the RCUK block grant (£1,727 + VAT = £2,072).

Although beyond the scope of this review, the panel noted that further transparency on what is being paid in APCs by institutions to publishers will be crucial in helping to change behaviours and ease the transition towards open access. There are several ways in which this could be achieved such as greater price transparency on behalf of the publishers or by RCUK mandating that everything including funds used to support green open access; staff costs etc, and not just APCs, spent via the block grant is reported in an open and transparent way. Although some institutions are already reporting clearly what they have paid and to whom, it is recommended that future data collection exercises look at how this could be done in a consistent and administratively light-touch way.

Publisher spend data from analysis subset of 55 research organisations	First reporting year April 2013 to July 2014
Number of publishers in receipt of APC funding	157
Number of publishers accounting for 80% of papers	4
Number of publishers accounting for 90% of papers	24
Largest number of 'Gold' papers produced by an individual publisher	I,474
Smallest number of 'Gold' papers produced by an individual publisher	
Median number of 'Gold' papers produced by an individual publisher	3
Maximum average publisher APC	£3,710
Minimum average publisher APC	£72
Median average publisher APC	£1,393

Table 2: Summary of spend data by publisher from analysis subset of 55 research organisations

	First reporting year April 2013 to July 2014
Number of research organisations reporting data on total research council funded publications	81
Number of research organisations reporting data on 'Gold' publications	88
Number of research organisations reporting data on 'Green' publications	82
Number of research organisations reporting publisher spend data	71
Basic compliance data reported Often incomplete and based on estimates	
Total reported publications arising from RCUK funding	23250
Total reported 'Gold' publications	10066
Total reported 'Green' publications	4410
Total reported 'non-compliant' publications	5728
Compliance analysis returns from analysis subset of 55 research organisations	
Value of block grant fund accounted for by analysis subset	93.5%
Number of research organisations with comparable compliance data	46
Number of research organisations with comparable compliance data reporting compliance greater than or equal to the 45% target level for the first reporting year	43
Basic compliance data reported Often incomplete and based on estimates	
Total reported publications arising from RCUK funding	20580
Total reported 'Gold' publications	9297
Total reported 'Green' publications	3355
Total reported 'non-compliant' publications	5121
'Gold' publication and APC data reported by the analysis subset	
Total publisher spend	£10.4M
Number of 'Gold' papers arising from this spend	6504
Estimated average APC including VAT	£1,600
Maximum average institutional APC	£2,392
Minimum average institutional APC	£1,233
Median average institutional APC	£1,614
Maximum reported number of APCs paid by a research organisation	1014
Minimum reported number of APCs paid by a research organisation	0
Median reported number of APCs paid by a research organisation	72

#### Table 3: Compliance analysis returns from 107 funded research organisations

Top 24 publishers accounting for 90% of 'gold' papers	Total no. of papers	Total cost	Average APC	% total no. of papers
Elsevier	1474	£2,138,925	£1,451	22.9%
Wiley	1150	£1,862,993	£1,620	17.9%
Public Library of Science (PLOS)	452	£465,085	£1,029	7.0%
American Chemical Society (ACS)	295	£512,382	£1,737	4.6%
Springer	288	£565,624	£1,964	4.5%
Oxford University Press	288	£544,725	£1,891	4.5%
Biomed Central	266	£443,092	£1,666	4.1%
Royal Society of Chemistry	195	£269,317	£1,381	3.0%
Taylor & Francis	174	£336,011	£1,931	2.7%
Nature Publishing Group	151	£404,509	£2,679	2.4%
Royal Society	120	£176,349	£1,470	1.9%
BMJ Group	104	£198,181	£1,906	1.6%
Frontiers	104	£93,799	£902	1.6%
Institute of Physics	100	£159,078	£1,591	1.6%
IEEE Publishing	96	£106,321	£1,108	1.5%
Sage	93	£48,686	£524	1.4%
Copernicus Publications	87	£80,145	£921	1.4%
American Institute of Physics	75	£112,898	£1,505	1.2%
American Physical Society	58	£75,552	£1,303	0.9%
Optical Society of America	44	£45,302	£1,030	0.7%
American Society for Biochemistry and Molecular Biology	41	£57,355	£1,399	0.6%
Company of Biologists	40	£81,930	£2,048	0.6%
Cambridge University Press	38	£73,055	£1,922	0.6%
American Society for Microbiology	35	£62,635	£1,790	0.5%

Table 4: Data of the number of papers and spend by publisher from analysis of subset of 55 research organisations

## 6 Implementation of the policy

At the heart of this review is an examination of the experiences of different groups in relation to the implementation of the policy and their responses to it. The open access landscape is complex and there are many interested parties who have experienced the RCUK policy and its implementation in different but sometimes overlapping ways. One common factor amongst all stakeholder groups was a general acceptance and welcome given to the concept of open access.

This section looks at the experiences of the different stakeholder groups in turn, and explores how they have responded to the challenges and opportunities of implementing the policy. There are some common themes, in particular the use of embargoes and licences, which have been addressed collectively within this section drawing on the experiences of the stakeholder groups.

The review panel has drawn on both written and oral evidence in order to present recommendations to help improve the implementation of the policy. As this review takes place only 16 months into the implementation, additional areas would benefit from attention in future reviews.

#### 6.1 HEIs

When describing the experience of HEIs, the panel is including the experiences of IROs and other research institutes under the same umbrella. Where appropriate it also includes the experiences of researchers, although wherever possible these experiences have been highlighted separately within this section.

In answer to the call for written evidence, the panel received 43 responses from HEIs representing the range of different institutions that make up the sector including research intensive universities of different sizes, smaller specialist institutions, as well as a good representation of the mix of research disciplines across sciences, arts, humanities and the social sciences. The general message from the sector was positive about the principle of open access and the impact that the RCUK policy was having within their institutions. Many reported a growth in open access publishing directly attributable to the RCUK policy. In addition many welcomed the policy for having raised awareness of open access and brought its discussion into the open. Some universities reported success stories at getting articles published under gold open access journals that had not previously published in this way.

One of the major issues reported in the written evidence was the administrative effort associated with both the policy and distribution of the RCUK block grant for open access. This is a fundamental issue on which hinges the effective implementation of the policy and is discussed more fully in section 7.

#### 6.2 Learned societies and subject associations

In the evidence from learned societies and subject associations, the panel were interested to see evidence of the impact not only on the individual organisations which represent particular disciplines but also on the disciplines themselves. The panel received 18 written submissions from learned societies. This was supplemented with a further 12 organisations invited to give oral evidence,

## Open access – a learned society's perspective

As a learned society with a significant publishing portfolio, the British Pharmacological Society (BPS) is largely dependent on journal revenues to deliver its charitable aims. However, BPS is now increasing its focus on generating revenue from non-publishing sources, developing business capability among staff and officers, and has recently reviewed its reserves policy to balance careful stewardship of charitable funds with the need to invest in its future.

BPS is concerned that its journals continue to publish high quality pharmacology. Of its three journals, two operate hybrid publishing models – *British Journal of Pharmacology* and *British Journal of Clinical Pharmacology*. These have a long history and strong reputations in the field. The third journal, *Pharmacology Research and Perspectives*, jointly owned with international partners, is a new fully open access journal, which aspires to the same high scientific standards as the other journals but will need to build this reputation over time.

BPS is seeing year-on-year increases in gold open access papers in its hybrid journals. In 2013, 3.7% of papers in *British Journal of Clinical Pharmacology* were published open access and 3.4% of *British Journal of Pharmacology* papers. BPS considers the hybrid model important to support its sustainability and deliver its charitable aims, as well as to enable an ordered transition to open access. including three which had not previously submitted written evidence (Institute of Physics; Modern Humanities Research Association; and University English).

Unsurprisingly, many of the issues raised were similar to those of the HEIs, although the evidence illuminated some of the differences between disciplines more keenly. Overall, the learned societies welcomed the transition towards open access. Many, mainly within the arts, humanities and social sciences, cautioned about making the move too hastily and encouraged further monitoring of the impact. However, some within STEM disciplines suggested that the transition should not be unduly drawn out so as to prolong uncertainty. Much of the evidence also drew attention to the early stage of the review in the policy's implementation, highlighting that it was really too soon to collate any meaningful empirical data together for the review.

Of concern to most learned societies, especially within the arts, humanities and social sciences but also visible within STEM disciplines, was the confusion surrounding the RCUK policy. Many described their members as 'confused' and 'disengaged', echoing evidence from the HEIs about researchers feeling overwhelmed. Some of the reasons cited for this were confusion over different approaches taken by publishers, who themselves suffer from the confusion caused by different approaches by HEIs; inaccessible terminology and 'obtuse' guidelines; the differing policies of the national funding bodies and RCUK; and the differing internal policies within institutions towards open access. The panel recommends that further attention to communications surrounding the RCUK policy, in dialogue with the research communities, publishers and HEIs, would help ease this confusion and generate better awareness of the expectations of the policy (see section 8).

There was also concern in some disciplines, notably the arts and humanities, that there could be a further extension of the policy to include monographs, as the Wellcome Trust has done. Learned societies in these disciplines thought any extension should be approached by RCUK cautiously. Within the oral evidence, Rupert Gatti, representing Open Book Publishing, stated that although the RCUK open access policy had been excellent at raising awareness of and encouraging open access, the current configuration of the policy had been slightly negative to its business model of publishing open access monographs. Previously, researchers had been using funds allocated for open access within their grant to fund open access publishing of monographs. As the RCUK mandate does not extend to monographs, researchers now feel unable to use the block grant to support publishing of open access monographs even though it would support the vision of the policy. However, it is worth noting that, for AHRC, the costs of publishing a monograph via open access is still an eligible cost which can be included within a grant application.

The panel also noted with interest the excellent work done by Professor Geoffrey Crossick, commissioned by HEFCE, AHRC and ESRC, for the *Monographs and Open Access Project*<sup>16</sup>. The panel recommends that monographs may be an appropriate area of focus for a future review of RCUK policy implementation, in line with any future work the UK funding bodies may do on policy in this area.

#### 6.3 Publishers

The panel received written evidence submissions from the publishers' trade associations and three publishers. In order to supplement the written evidence, oral evidence was invited from eight publishers including four open access only publishers.

From the evidence submitted, the panel were impressed by the efforts made by the publishers to support researchers and institutions in the implementation of the RCUK policy and in particular the provision of new gold open access routes provided by publishers. In their oral evidence, Taylor and Francis highlighted how the RCUK policy had spurred them on to engage with open access and, as a global undertaking, had worked with their journals to ensure compliance prior to the launch of the policy. Elsevier similarly described how the policy had accelerated the pace of its open access activities quoting that they had now launched around 125 fully open access journals. The Publishers Association stated in its evidence that an average of 75% UK published journals now provided an open access option with 96% of journals offering an embargo of 24 months or less. The International Association of STM Publishers also agreed that they had seen an acceleration both in hybrid journals and in the launch of fully open access journals amongst their membership.

There is little evidence to suggest that the introduction of the RCUK policy had much of an impact on author behaviour, with publishers reporting that authors did not seem to be changing their choices on where to publish. Also highlighted was the worldwide influence of the policy with those countries developing policies, and those with policies more weighted towards green open access, watching developments in the UK with interest. The level of the block grant currently offered by RCUK was also questioned, with some publishers, although not those that are fully open access publishers, expressing the view that it was too low to properly fund the transition to gold. Publishers felt that the transition to full gold open access publishing would be successful only if it was fully funded. There were similar concerns raised by institutions which noted that, at current levels, the block grant would not be sufficient to supply demand for full open access publishing across all of their Research Council-funded researchers.

#### 6.4 Other funders of research

The panel received written evidence submissions from six other funders of research, mainly in the medical sciences. As the medical charities had recently launched their Charities Open Access Fund (COAF), the Association for Medical Research Charities and Cancer Research UK (CRUK) were also invited to give oral evidence. Research funders from the social sciences and humanities were also invited to give oral evidence but they were unavailable.

From both the written and oral submissions, research funders were generally supportive of the RCUK policy. In her oral evidence, Aoife Reagan, representing CRUK, outlined how as a charity they received their funding via public donations, so it was important for them to ensure that the research they funded was available to the public.

When the Research Councils introduced their first policies on open access, along with the Wellcome Trust, they were amongst the first research funders to do so. Since then, both nationally and internationally, there has been a significant movement by research funders to introduce policies on open access. Highlighted within many of the written evidence submissions from HEIs was confusion amongst both academic and administrative staff as to the differences or indeed similarities between the funders' policies. There is a perception within HEIs of being overwhelmed by differing policies which was leading to researchers ultimately not engaging with open access at all as it was perceived as being 'too difficult'. It was also highlighted by HEIs that a divergence of funder policies could lead to barriers to collaboration between researchers with different funding streams in the future. The written evidence submitted by HEIs calls for clarity amongst the different funders' policies especially around areas such as embargo length, licence usage and expectations of data collection for compliance monitoring. The international work to develop and encourage take-up of a standard, structured way for funders and institutions to express their policies was commended by the panel<sup>17</sup>.

#### HEFCE Post-2014 REF Guidelines for Open Access

The following exceptions deal with cases where deposit of the output is possible, but there are issues to do with meeting the access requirements. In the following cases, the output will still be required to meet the deposit and discovery requirements, but not the access requirements. A closed-access deposit will be required, and the open access requirements should be met as soon as possible.

- a. The output depends on the reproduction of third party content for which open access rights could not be granted (either within the specified timescales, or at all)
- b. The publication concerned requires an embargo period that exceeds the stated maxima, and was the most appropriate publication for the output.
- c. The publication concerned actively disallows openaccess deposit in a repository, and was the most appropriate publication for the output."

www.hefce.ac.uk/pubs/year/2014/201407/#d.en.86771

A number of HEIs highlighted the significance of the introduction of the UK funding bodies' policy on open access for the REF, and that they would prioritise it for compliance. When the REF policy was developed by the UK funding councils, it was done in a way so as not to conflict with the RCUK policy and to ensure that there were no incompatibilities. However, there is a perception amongst HEIs, publishers and researchers alike that they are two different policies requiring different measures. There are indeed journals, especially outside the UK, which are compliant with funding bodies' embargo periods but not those of RCUK, and journals inside the UK whose licensing policies comply with those of the funding bodies but not those of RCUK. This creates objective difficulties for researchers, which will not be resolved soon. The review panel therefore recommends that there is further communication with the higher education sector to ensure that there is full awareness of the complementarity of the two policies.

The review panel has considered this evidence and believes that there is closer alignment between policies than may be perceived by the sector although this may not be clear

<sup>17</sup> See: http://scholarlycommunications.jiscinvolve.org/wp/2014/12/01/a-schema-for-oa-policies/

within current communication of policies. Although the panel recognises that different funders will potentially need varying policies to support their aims, the panel recommends that there should be an exploration of the alignment of the policies to highlight the similarities and differences. This would ensure that it is more straightforward for HEIs to comply with the policies and put in place administrative structures which will avoid duplication for different policies. The panel recommends that where there are similarities, or indeed differences, these should be explicitly stated in documentation. The written submission from HEFCE highlighted the perceived mis-match of policies, and the panel welcomes HEFCE's proactive offer to work with RCUK to better explain the similarities and differences between their policies.

In ensuring that there is alignment between the RCUK and UK funding bodies' policies, the review panel further recommends that RCUK adopts the phraseology of the REF guidelines that there can be an exception to the policy where "the publication concerned actively disallows open-access deposit in a repository, and was the most appropriate publication for the output."<sup>18</sup>. The panel noted HEFCE's calculation that 96% of journal articles submitted to REF2014 could have been compliant with the REF policy, so the negative effect of this policy change would not be great. Allowing such exceptions during the transition period would help to increase 'buy-in' for the open access agenda as a whole amongst researchers.

#### 6.5 Embargoes

When the RCUK policy was introduced, there was a considerable amount of concern about embargo periods, especially in disciplines where open access publishing was less common. The written evidence, submitted from learned societies and publishers, suggests that embargoes are still an area of concern amongst researchers in certain disciplines especially within the arts, humanities and social sciences. It should be noted, however, that the concerns are not so much about embargoes per se, but rather about the introduction after the transition period of embargoes of 6/12 months for STM and the arts, humanities, social sciences disciplines respectively. For some, it is felt that such short embargoes do not match the way in which research is conducted within the arts, humanities and social sciences, and would thus have a detrimental impact. For example, in oral evidence, Professor Mandler from the Royal Historical Society suggested that within his field, public benefit would not be lost from having longer embargoes as most articles, unlike those in the biosciences, are more greatly accessed

## Short embargoes restricting academic freedom?

The consensus among the research community is that short embargo periods, particularly in the arts, humanities and social sciences, could restrict academic freedom for authors to choose the best journal for publishing their work. A number of international journals in particular do not conform with the *RCUK Policy on Open Access*. The Royal Historical Society reports that, owing to the embargo periods mandated by the policy, RCUK-funded historians are unable to publish in either the *William & Mary Quarterly*, the world-leading journal for 'Atlantic world' history, or the *American Historical Review*, the most widely-read history journal in the world.

The British Academy concurs, stating that there are significant niche areas, in both Europe and the USA where the non-UK journals - which dominate the discipline area - are unwilling to adopt UK Open Access protocols. The British Academy believes "that all academics should be able to publish in the journal which they think is the most appropriate location for their work". In addition, the Society for French Studies expressed concerns that a sharp difference would emerge between international and national norms, with the result that UK-funded research would no longer be published in the most prestigious outlets in international terms.

after the first years of publishing. Oral evidence from Helena Djurkovic, from the Political Studies Association, supported this, since their research showed that their most downloaded articles were those published over two years ago. In her view, in disciplines where journals are generally smaller, not run by a commercial publisher and potentially only covering their costs through subscriptions, shorter embargoes would endanger this income stream and the viability of the journal.

This was a particular concern to learned societies that rely on journal subscriptions as a substantial revenue stream to support their work. For example, in their written evidence, the Political Studies Association stated that around 60% of their income is generated in this way and this revenue is used for activities such as schools outreach, public engagement and supporting the development of professional skills of graduate students. Oral evidence from some learned societies, such as the British Ecological Society and British Pharmacological Society, however, indicated that there was early work on going to diversify their incomes stream away from reliance on publishing.

Looking at the evidence received, most learned societies reported that most of their journals are compliant with the embargoes required by the RCUK policy. The favoured embargo periods within the arts, humanities and social sciences are, however, the ones allowed during the transition period, of 24 months. There are, however, notable exceptions of major journals that do not comply even with a 24-month embargo. For example, in history, both the *William and Mary Quarterly* (the journal of choice for anyone publishing on the history of colonial America) and the *American Historical Review* are not compliant, which presents significant challenges to historians in publishing in compliance with the RCUK policy.

The panel feels that there is not enough information available at this early stage to come to an evidence-based conclusion on the issue of embargoes and, therefore, its recommendation is to ensure that continued attention is given to the matter in subsequent reviews. Both written and oral evidence suggest that discipline-specific embargoes should continue beyond the transition period. The review panel in particular noted that six-month embargoes currently have very little support from publishers and scholarly societies outside biomedical sciences. However, at this stage, the panel recommends that it would be beneficial to return to this discussion in future reviews when there might be more evidence.

In the short term, in order to dispel the confusion currently surrounding the embargo periods required by the RCUK policy, the panel recommends that this is one area where RCUK expresses its guidance more clearly, working with researchers and institutions to help to remove any confusion. It is also noted that guidance around what embargoes should apply when there are no funds available to pay an APC would also be welcomed by HEIs and researchers.

#### 6.6 Licences

The use of CC-BY licences (notably with respect to 'gold') was also an area of substantial concern when the RCUK policy was first introduced (see Annex F for an explanation of different licences). The written and oral evidence has shown that this is still an area of concern especially within the arts, humanities and social sciences. It has been noted by the panel that there is divergence of views between

STEM disciplines and the arts, humanities and social sciences, with more researchers within STEM disciplines being more willing to publish with a CC-BY licence. From the evidence, it seems that this is partly because those in STEM disciplines are more likely to have had more experience of publishing with a CC-BY licence. Within the arts, humanities and social sciences, and indeed some other disciplines, the written and oral evidence has often shown a distinct lack of understanding of the various licence types although it is also the case that, where the providers of oral evidence did show such understanding, there remained principled and practical objections to the use of CC-BY licences in many arts, humanities and social science disciplines.

There were some positives to the CC-BY licence highlighted through the evidence. For example, Aiofe Reagan, from CRUK, highlighted that an important driver of their push towards open access was the benefit to knowledge exchange and resulting innovations. This underpinned their decision to favour the CC-BY licence as they believed that research needed to be immediately discoverable and usable, and the CC-BY licence was the only effective way of ensuring that. Ms Reagan outlined that when the charity's own journal had moved to a CC-BY licence, she had detected some nervousness as people did not understand the licence. However, Cancer Research Technology, the charity's technology transfer arm, had no qualms as they understood that it would not have any impact on their intellectual property.

#### Making licensing and APCs easy

Publishers John Wiley & Sons (Wiley) have developed a licensing service to direct authors to the correct licence for publishing their research. The Wiley Author Licensing Service allows authors to identify their research funder, which then diverts them to the licence to sign, taking on average just three minutes.

The publishers have also recently announced the Wiley Open Access Dashboard, which is a way for universities to manage APC payments and to implement account management, making the process less cumbersome for institutions.

Sue Joshua, Legal Director for Global Research at Wiley, said:"These sorts of challenges have led to innovation and have led to publishers investing in an infrastructure which makes life easier, and makes open access licensing happen in real time." Also highlighted in evidence was an issue with third party copyright in that some rights owners (for example, image libraries) are reluctant to license material for digital reproduction, let alone for reproduction in an article that is published under a CC-BY licence. The Association of Art Historians highlighted how onerous the current processes for securing the rights to use images in journal articles were. Although some galleries and image owners are making content available for online use, this was at a very early stage and unlikely to improve the overall situation greatly

#### Licensing for the arts and humanities

Analysis by the University of Nottingham identifies the arts and humanities disciplines as facing some difficulty in achieving compliance with the RCUK requirement for Creative Commons licensing – a widespread perception among the research community in these fields. Ninety-six per cent (96%) of RCUK-funded articles at Nottingham offered a compliant route to open access via gold or green routes, and 90% offered a compliant gold option (a CC-BY licence was available). However, the proportion of articles where a compliant 'gold' option is available is noticeably lower for those funded by AHRC, at 77%. Similarly, of the 166 papers where APCs were paid by the University of Leeds, only one was funded by AHRC and eight by ESRC.

The British Academy notes the important role that open access publishing plays in opening up possibilities for data and text mining, as well as the value in being able to build on and exploit the data in STEM articles. However, "data-mining as a concept is also irrelevant to the great majority of papers in most humanities disciplines, which present interpretations of data, not the data themselves".

Another issue with the CC-BY licence is that it permits the exploitation of work for commercial purposes, for example, reproduction by another publisher of a journal article in a themed collection of papers. Much research, particularly in the humanities, involves the reproduction of material whose copyright is owned elsewhere, for which specific permission has been obtained. Journal articles may need to reproduce commercially valuable literary or artistic material in order to be able to critique it. In such an instance, academic authors obliged to comply with a CC-BY licence will be prevented from including essential material because they will not be able to reassure copyright owners about its subsequent reuse elsewhere. in the near future. There are ways to protect third party material even within a CC-BY-licensed article, but this is not well-understood by all rights-owners, and the issue will take some time to be resolved. These issues surrounding securing image rights and third party copyright also add to the confusion around the use of licences and what can and cannot be done under particular licences. Similarly, Taylor and Francis also highlighted evidence they had of not being able to secure third party copyrights for articles containing sheet music and images of art. This has meant that, as they could not secure the correct rights, they could not publish the article under a CC-BY licence so they did not proceed to publish the article. PLOS, who require CC-BY for all their content, have worked with publishers to make non-CC-BY content on other publisher platforms available under CC-BY licence<sup>19</sup>. The panel recommends that there may be an opportunity for RCUK to learn from this experience.

Learned societies also highlighted the level of confusion amongst their members over the licences. Many publishers also reported the confusion amongst researchers as to which licence they needed to be compliant and that a significant number of researchers were signing licence agreements without understanding what they were signing. Many researchers remain unsure which one they should be choosing to be compliant with the policy and what that then means for the re-use of their work. This is then compounded by publishers, reflecting their global market and wide range of researchers funded via differing sources, offering a choice of licences. Elsevier stated that around 40% of the articles from RCUK funding that they had published gold were not under the CC-BY licence and are therefore not compliant with the policy. The American Society of Plant Biologists noted that its journal was not compliant as it did not offer the CC-BY licence and that was unlikely to change in the near future. In addition, the Royal Society of Chemistry noted that, owing to author preference, as well as CC-BY, it offered the non-compliant CC-BY-NC licence as an option. As the CC-BY requirement is part of the policy, it is therefore an ineligible use of RCUK funds if articles are published under a different licence and it is the panel's recommendation that this should be more clearly highlighted in RCUK's guidance. The panel also recommends that publishers should take account of these requirements and that if a funder has specified a particular licence (and the funder is identifiable through the FundRef metadata), then the author should be made aware of the requirement and default to that licence.

Some learned societies, especially within arts, humanities and social science communities, reported unease from their

19 http://blogs.plos.org/everyone/2014/11/19/rights-stuff-copyright-scientific-debate-reuse/



members that their work, under a CC-BY licence, could be both used commercially in ways of which the author does not approve and also might not be properly acknowledged as their work. Although it should be noted that inappropriate attribution is as unlawful under a CC-BY licence as it is under an all-rights reserved one.

Use of licences is an area where the panel recommends further exploration, working with particular disciplines, to uncover the concerns and promote understanding of the licence types needed for compliance with the policy. It is too early in the implementation of the policy to properly understand the implications of licence types on particular disciplines and whether they might have a detrimental effect. Therefore, as well as gaining a greater understanding of the concerns surrounding this issue, the panel recommends that further attention should continue to be given in future reviews of the implementation of RCUK policy to ensure that there is no detrimental impact from the policy as it stands.

## 7 Administrative effort and cost in implementation

One of the most consistently reported issues from HEIs in implementing the policy was the amount of administrative effort and cost taken to set up internal policies, processes and procedures. Many HEIs said that these were entirely new processes developed from scratch. Some HEIs described a need to centralise devolved processes previously managed by individual faculties, departments or schools. The development of these new processes had not been helped by the last minute changes that RCUK made to the policy after dialogue with the sector. The panel noted the comments in the written submissions that RCUK should strongly steer away from making any major changes at this stage, without exceptional reason, since that may create a further administrative burden to the sector. Anecdotal evidence also suggests that the open access agenda has been instrumental in institutions implementing CRIS systems which may, in time, help to ease some of the administrative burden of reporting felt by researchers and institutions alike.

A report commissioned by London Higher/SPARC, *Counting the Costs of Open Access*<sup>20</sup>, reported that in 2013/14 implementation of the various open access mandates from funders, including RCUK, had cost the sector around £9.2million. Although further work (as seen from the limitations of the data collected on compliance with the RCUK policy) needs to be done to interrogate the figures behind this study and broaden the sample size, it is a useful first look at the scale of the administrative effort needed to implement the various open access policies. The review panel recommends that RCUK, other research funders and other interested parties such as JISC and Research Libraries UK, collaborate in a further, more in-depth study of the administrative costs associated with open access policies.

Consistent with the London Higher/SPARC report, the submissions from HEIs highlighted how much internal resource has been needed to implement the policy. Many HEIs cited complexities in working with publishers as one of the areas that had generated considerable administrative effort. The written evidence highlights difficulties across the publishing cycle, from initial negotiations to ensuring that licences and invoicing were correct. This creates administrative effort and cost not only on authors but also on library and administrative staff, including those managing the block grant, providing advice, support and responding to queries; and the time to process the invoices by the finance team. As noted in section 6.6, there was clear evidence that some publishers were offering a choice of licences, even

#### Putting processes in place at Imperial

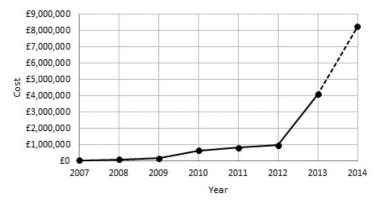
Imperial College London has set up a cross-College Open Access Project to support the transition and improve overall support for Open Access, which has been formally supported by a full-time project manager since September 2013.

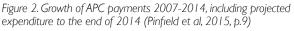
During the first year of the RCUK policy, the Open Access Project has focused efforts on enhancing systems and workflows in order to provide improved and more scalable support to the academic community. This has included a streamlined and partly automated APC application process supported by a management system integrated with the College grants database and the staff directory; an improved APC administration process with significantly reduced payment times; increased resources for training, support and communication; an updated scholarly communication web presence; improvements to the user interface of Spiral; changes to Symplectic Elements, Imperial's publication management system, that facilitate article deposit.

Identifying all eligible outputs arising from RCUK funding has been challenging, however. While the College has detailed information on the publishing activities of its academic community, this data is not currently associated with funder information. As Imperial academics publish, on average, over 10,000 articles per year; it is not feasible to manually check for funder acknowledgements. The College is about to roll out a solution that will allow academics to associate awards and publications, but until that is in place the exact number of outputs related to RCUK funding remains unknown.

The College also has no record of articles deposited in external repositories, and until solutions to disambiguate authors, such as ORCID, are more widely implemented, automatic monitoring will remain difficult. The College is actively working towards increasing uptake of ORCID and embedding it within institutional systems.

<sup>20</sup> See: www.researchconsulting.co.uk/wp-content/uploads/2014/11/Research-Consulting-Counting-the-Costs-of-OA-Final.pdf





when they knew that the author was RCUK-funded. This often resulted in authors choosing the wrong licence and subsequent time-consuming negotiations for the library, the author and the publisher in correcting the issue. Visits by the panel to institutions highlighted how long it takes for researchers to learn about open access including the requirements, expectations and processes they need to follow. One senior researcher commented that it had taken a full half a day to learn about open access. The inducting of new staff in this area was also highlighted as being timeconsuming and costly of administrative effort.

Both the written and oral evidence from publishers outlined many new initiatives in support of the implementation of

Institution	Total Subscription	Costs (%)	Total APC Cos	sts (%)	Total Cost
I	£578,708	(94%)	£34,186	(6%)	£612,894
2	£1,053,260	(93%)	£73,777	(7%)	£1,127,037
3	£2,274,060	(90%)	£242,601	(10%)	£2,5   6,66
4	£1,756,783	(89%)	£206,404	(  %)	£1,963,187
5	£2,816,456	(91%)	£275,148	(9%)	£3,091,604
7	£2,025,761	(86%)	£332,363	(14%)	£2,358,124
8	£2,781,917	(85%)	£473,557	(15%)	£3,255,474
9	£1,815,342	(91%)	£189,200	(9%)	£2,004,542
10	£934,655	(95%)	£54,165	(5%)	£988,820
	£1,403,884	(99%)	£10,209	( %)	£1,414,093
12	£1,821,589	(96%)	£68,078	(4%)	£1,889,667
13	£264,492	(61%)	£170,246	(39%)	£434,738
14	£2,194,903	(90%)	£239,940	(10%)	£2,434,843
15	£865,998	(93%)	£63,678	(7%)	£929,676
16	£139,168	(95%)	£6,69	(5%)	£145,859
17	£44,875	(72%)	£17,603	(28%)	£62,478
19	£887,186	(97%)	£23,421	(3%)	£910,607
21	£829,924	(98%)	£18,444	(2%)	£848,368
22	£3,271,535	(81%)	£763,602	(19%)	£4,035,137
23	£1,631,646	(97%)	£49,366	(3%)	£1,681,012
Totals	£29,392,142	(90%)	£3,312,679	(10%)	£32,704,821

Table 5: Total cost of publication, 2013 (excluding administrative costs) for institutions. (Pinfield et al, 2015, p.17)

policy. Publishing opportunities have expanded with the introduction of new gold open access journals and gold open access options offered in established subscription journals, now generally referred to as 'hybrid journals'. A study by Stephen Pinfield et al on *The total cost of publishing*<sup>21</sup> between 2007 and 2014 among 23 volunteer UK university libraries has demonstrated a sharp increase in APC spend since 2012 when the RCUK block grant was introduced.

Data for 2013 indicates that APCs now form approximately 10% of the total costs of publishing, i.e. subscriptions plus article processing charges in both fully gold and hybrid journals.

Over the period 2007-2014, 76% of APCs were paid to 10 publishers with the remaining 24% paid to 127 publishing houses.

Publisher	Fully-OA journals	Hybrid journals	Number of APC payments (%)
Elsevier	12	1019	03  (20.1)
Wiley	17	763	780 (15.2)
Public Library of Science	575	-	575 (11.2)
Oxford University Press	78	292	370 (7.2)
BioMed Central	231	-	231 (4.5)
Nature Publishing Group	120	110	230 (4.5)
Springer	-	224	224 (4.4)
BMJ	51	49	200 (3.9)
Taylor & Francis	-	139	139 (2.7)
American Chemical Society	-	130	130 (2.5)
Other	113	1119	1232 (24)
Total	1197	3945	5142 (100)

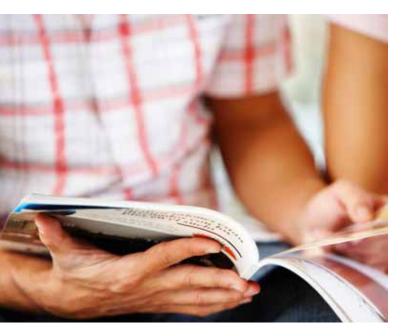
Table 6: Top 10 publishers based on number of APC payments (Pinfield et al, 2015, p.13)

APCs were very variable across publishers and within single publishers. In some cases the difference between the lowest and highest APC was over £3,000. The data also indicates that APCs in hybrid journals are higher than in fully gold journals. The panel noted that average APCs for articles published in hybrid journals were consistently more expensive than in fully open access journals (despite the fact that hybrid journals still enjoyed a revenue stream through subscriptions). The panel recommends that RCUK continues to monitor this and if these costs show no sign of being responsive to market forces, then a future review should explore what steps RCUK could take to make this market more effective.

	OA journals published by 'non-subscription' publishers (mean)	Full-OA journals published by 'subscription' publishers (mean)	Hybrid journals published by subscription publishers (mean)
2010	£1,141	£1,154	£1,842
2011	£1,281	£1,148	£1,905
2012	£1,227	£1,121	£1,873
2013	£1,106	£1,152	£1,857
2014	£1,068	£1,216	£1,799
5-year mea	n £1,136	£1,164	£1,849

## Table 7: Comparison of APCs charged by types ofjournals providing open access (Pinfield et al, 2015, p.12)

21 Pinfield, S., Salter, J., & Bath, P.A. (2015). The "total cost of publication" in a hybrid open-access environment: Institutional approaches to funding journal article-processing charges in combination with subscriptions. *Journal of the Association for Information Science and Technology*, (Early view). doi:10.1002/asi.23446. Retrieved from http://onlinelibrary.wiley.com/doi/10.1002/asi.23446/abstract



There is concern amongst Vice-Chancellors, and also highlighted in the visits to institutions carried out by the panel, about the transitional costs of supporting gold open access as well as subscriptions while UK take-up of gold open access remains ahead of other countries. In the current landscape, institutions pay both subscriptions and for gold APCs. JISC Collections have been collecting robust data in this area and are in discussion with a large number of publishers about options to investigate this issue and to develop new models which address the issues being identified in this new publishing paradigm. Annexes G and H, submitted to the panel by JISC, provide further information on APC's and subscriptions paid by institutions as well as 'offsetting' schemes with publishers that JISC is in the process of negotiating.

Other complexities in HEI and publisher communications were noted in written submissions, from difficulties around the author being the single point of contact through to variations in terminology used and information available from publishers. This can make it time-consuming to negotiate with the publishers or even to determine if a journal is compliant with the policy. Some of this complexity is to be expected in the transition from a subscription-based to an open access publishing model, and may not be solely related to the implementation of the RCUK policy, although it could be argued that the RCUK policy is hastening the change. The panel recommends that there would be benefit in publishers, both primarily subscription-based and born-open-access, to collaborate to help simplify and improve their interactions with HEIs by ensuring that there is standard terminology used and information available as far as this is practicable without conflicting with competition law. Research funders, such as RCUK, may be able to facilitate this process by clarifying and improving their own communications.

In launching the policy, RCUK had tried to keep the guidance light-touch in order to ensure that there was flexibility for HEls to introduce processes that would suit their individual organisation; but the written evidence makes it clear that this hands-off approach has led to a lack of guidance in areas where HEls would welcome it. For example, in the less-straightforward cases where there are multiple institutions or authors involved with a paper, it had been left to the institutions to negotiate which should pay the APC. However, in their written submissions, HEls called for RCUK to give clear guidance in such circumstances. The panel recommends that it would be timely to revisit the guidance, in dialogue with the sector, to ensure that it is clear and no confusion remains.

In addition, although the block grant was originally introduced solely to support APC payments, RCUK allowed flexibility for the funds to support either green or gold routes to recognise that institutions have differing views and policy stances on open access and are at different stages in their transition. Several of the written and oral evidence submissions, especially from the publishing sector, highlight the use of funds for green as not being a proper use of funds. Others highlight practices such as using administrative staff to change an accepted manuscript to make it look more like the final published version, which was not felt to be in the spirit of the policy. The panel recommends that there should be more robust guidance on what the block grant may and may not be used for, in order to dispel some of this confusion and to ensure that it is used to support the aims of the policy.

Clear communication with the sector would also help to address some of the common misperceptions as well as helping to raise awareness and understanding of open access within the academic communities. The submissions received suggested that many of the communications from RCUK on the policy had been at institutional level rather than with individual researchers, many of whom still need some convincing as to the benefits of open access. Many HEIs described the advocacy and educational work they had done, but felt that this was just the beginning and that more could be done in this area. Having researchertargeted communications from RCUK even through usual communications about a grant would, HEIs believe, carry more weight.

Collecting the compliance data was also seen to add to the administrative burden faced by HEIs. As noted in section 6.2, the use of identifiers such as ORCID and fuller adoption of FundREF would help to collate those papers that had received RCUK funding and thus help to reduce the administrative time in searching for them when preparing future compliance data.

The review panel also noted that a number of institutions had more experience with the implementation of open access. In addition, JISC is working with a number of institutions to develop good practice in this area. The panel recommends that it would be beneficial to share best practice with the sector in order to help the improvement of processes and reduction in the administration associated with open access across the sector.

#### 7.1. RCUK block grant

There are 107 institutions currently in receipt of an RCUK open access block grant. The block grant was allocated in proportion to the amount of direct labour costs awarded through grants institutions had received over the three years from April 2009 to March 2012. Direct labour costs were used as a proxy of research effort leading to the generation of publications. For administrative efficiency, for both HEIs and the Research Councils, a cut-off point was set so that only institutions that were eligible for a block grant of £10,000 or more in the fifth year of the grant being administered actually received a block grant.

The distribution is unevenly balanced, with relatively few institutions receiving the bulk of the funding, and a long-tail of institutions receiving relatively little: 30 institutions accounted for 80% of the funding, 45 accounted for 90%, with 62 institutions sharing the remaining 10%. RCUK expected that around 99% of papers arising from the research that they funded would be produced by researchers in institutions in receipt of a block grant.

From the written and oral evidence, it was clear that those institutions which did not receive any block grant felt that this was detrimental to their implementation of the policy. Some of the written submissions highlighted the emergence of a two-tier system. The evidence also highlighted that the allocation of the block grant internally within HEIs was an administrative challenge. This suggested that the decision on the grounds of efficiency not to allocate a block grant to those which would have received less than £10,000 in block grant in year 5, might have been correct. The panel does see benefit in there being exceptions to the current calculation for allocation and recommends that RCUK explores ways of incentivising and rewarding those less research-intensive institutions who are still publishing, via open access, high quality research. There had also been evidence, via the panel visits to institutions, that some institutions who have strategies looking to grow their amount of research income, are topping up the small amount of RCUK block grant that they receive with funds from other sources to ensure that there was four or even five times the amount of money available to support open access.

Additionally, there were concerns raised within both written and oral evidence that where institutions had distributed the block grant by department or faculty, it had a detrimental impact on some disciplines. For example, in its oral evidence, University English suggested that English departments were not being allocated sufficient funds from their institution's block grant to be able to pay for APCs and publish via the gold route. The panel notes that the majority of evidence provided on this issue was anecdotal and recommends that RCUK explore this issue further to ensure that there is no detrimental impact on particular disciplines.

It was also noted by the panel that research strategies of institutions evolve. The block grant allocation was currently based on research funding levels in the 2009-12 financial years, which may mean that its distribution does not match current research portfolios. In addition, the written evidence from those who receive the block grant suggested that, although early take-up of the block grant may have been low, this was now picking up and it was likely that demand might soon outstrip available funds. In reviewing the block grant, as RCUK prepares for the next government spending review, the panel recommends that RCUK looks at updating the data used to calculate the allocation. The panel also recommends that it would be beneficial, despite predicted financial constraints, for RCUK to look at the total amount available within the block grant fund to determine whether the levels projected for future years are sufficient.

## 8 Communication of the policy

When RCUK launched the policy in April 2013, there had already been much concern raised about its possible impact. RCUK, after dialogue with the sector, had amended parts of the policy in order to make it more flexible during the transition period, but these amendments had been announced just as the policy was launched. This meant that in some quarters there was even greater confusion surrounding the policy. From both written and oral evidence there were signs that much of this confusion had not been dispelled over the first year of the policy's implementation.

One area of communication where further clarity would be helpful is in the relationship between green and gold models of open access. Despite the mixed model approach that RCUK takes, allowing both green and gold routes to open access to count towards compliance with the policy, the fact that the policy states a clear preference towards the gold model has caused confusion in the implementation of the policy. Many of those submitting written evidence indicated that the policy's strong preference for gold is creating a two-tier system with those favouring the green route following a perceived inferior route. The preference towards gold, which reflects government policy, is at odds with the clear preference for green in some disciplines and institutions. RCUK's preference for gold has therefore been, at times, seen as a barrier to implementation and 'buy-in' from various communities across the disciplines. There is significant evidence, both written and oral, that within arts, humanities and social science as well as astrophysics, earth sciences and some other STEM subjects, there is currently minimal movement towards the gold model.

The panel is not suggesting that RCUK changes its preference from gold, as it supports the vision of moving to a fully open access publishing model. However, during the transition period, the panel can see the benefit of supporting a mixed model, as identified in RCUK's policy in order to ensure that there is a sustainable transition. The panel recommends that in communication during the transition period, the mixed model approach to open access is promoted to ensure that researchers are aware that they have a choice of how to publish.

The panel welcomes, from indications within the written evidence, the effort and resources that have been dedicated from within institutions to provide advocacy and support to researchers with open access. There are indications that this has been effective, although there are still improvements on awareness and understanding within communities that need to be made. It is felt that the benefits of open access, within some communities, are not properly understood which has left some researchers feeling that they are being burdened with further bureaucracy from their research funders.

The panel strongly recommends that the establishment of a joint practitioners working group to bring together representatives from the higher education sector, other research funders, learned societies and publishers in order to address this issue in relation to RCUK policy. Rather than duplicate existing groups in this space, the group should be comprised of representatives who are closely involved in the practicalities of implementation of the policy. It may be that such a sub-group could be convened by the Universities UK-led group looking at the implementation of open access. The practitioners' working group should look at developing consistent communications tools and materials that will aid institutions in helping to create awareness and understanding of the RCUK policy and the broader benefits of open access within the researcher communities. As part of this work, RCUK should revisit their guidelines to ensure that they are clear and helpful to the different audiences including researchers, other staff implementing the policy within HEIs and publishers. It would also be beneficial for the practitioners' working group to explore how institutions with more experience of open access and repositories could share best practice with other institutions that are still at an earlier stage of their transition.



## 9 Conclusions and recommendations

Given the early stage of the review, it is perhaps no surprise that the conclusions of the panel are that there is further evidence and data to gather over time. It was not the panel's intention to base its findings on anecdote or opinion but, where evidence or data has been hard to come by, it is difficult not to resort to the more subjective. Many of the recommendations point to returning to particular areas, such as the impact of embargoes and particular licences, in a future review. At this early stage of policy implementation, it is difficult to determine what the impact will be. By gathering further evidence and data it will allow a more robust picture of what is happening in the implementation of the RCUK policy. From the evidence given, it is likely that there are differing pictures across the disciplines and, sometimes, within disciplines. Evidence and data will allow for a more complete picture to emerge, including any unintended consequences of implementing the policy.

The current cost of administering and implementing the policy is one area worth pulling out which needs further monitoring and investigation. It is not clear whether these potentially high costs will be sustained or whether, once implementation of the policy is further embedded within institutions, these costs will reduce.

It was important to have a review at this early stage in order to gather baseline information and to ensure that processes put in place for future reviews, where there will be more evidence and data, are sufficient to capture what is needed. The processes used for this review for compliance monitoring did not capture the level of data needed to build robust conclusions, which also again reflects the early stage of the review. Further work is needed in order to ensure that a future review panel is fully equipped to look at the broad picture of policy implementation.

#### 9.1 Recommendations

#### 1 Compliance monitoring

- 1.1 A clear template and guidance should be developed by the proposed practitioner group in order to help and support institutions in their data collection.
- 1.2 The template for data collection should be further developed with those representatives of HEIs who have to collect the data, and other interested parties working in this area such as JISC, in order to make the data collected more consistent.
- 1.3 Options for other sources to collate data to track compliance are explored in future reviews of the implementation of the policy.
- 1.4 RCUK mandate the use of ORCID in grant applications in order to make it easier to track the journal articles published by researchers in receipt of Research Council funding.
- 1.5 Publishers develop, as many already are, their manuscript submission systems to accommodate ORCIDS and FundRef data and ensure that such data are passed effectively to CrossRef.
- 1.6 Institutions develop their internal system to make use of ORCID IDs and FundRef data.
- 1.7 There are further discussions between those with an interest in collecting such data to avoid multiple requests for slightly differing information.
- 1.8 Future data collection exercises look at how data on how the block grant is spent including costs of APCs could be done in a consistent and administratively light-touch way.
- 1.9 Monographs may be an appropriate area of focus for a future review of RCUK policy implementation, in line with any future work the UK funding bodies may do on policy.

#### 2 Communication

- 2.1 Further attention to communications surrounding the RCUK policy, in dialogue with the research communities, publishers and HEIs would help ease confusion and generate better awareness of the expectations of the policy.
- 2.2 Further communication with the HEI sector to ensure that there is full awareness of the complementarity of the RCUK, UK funding bodies and other funders of research open access policies. Where there are similarities, or indeed differences, these should be explicitly stated in documentation.

- 2.3 RCUK adopts the phraseology of the REF guidelines that there can be an exception to the policy where "the publication concerned actively disallows open-access deposit in a repository, and was the most appropriate publication for the output".
- 2.4 In communication during the transition period, the mixed model approach to open access is promoted to ensure that researchers are aware that they have a choice of how to publish.
- 2.5 The establishment of a joint practitioners working group to bring together representatives from the higher education sector, other research funders, learned societies and publishers in order to address this issue in relation to RCUK policy. Rather than duplicate existing groups in this space, the group should be comprised of representatives who are closely involved in the practicalities of implementation of the policy. It may be that such a group could be convened by the Universities UK-led group looking at the implementation of open access.

#### 3 Embargoes

- 3.1 It would be beneficial to return to the discussion of embargo periods in future reviews when there might be more evidence.
- 3.2 When RCUK revises its guidance, it should work with researchers and institutions to help to remove any confusion in relation to embargo periods.

#### 4 Licences

- 4.1 There may be an opportunity for RCUK to learn from the experience of PLOS, and other work in this area, in working with publishers to make non-CC-BY content on other publisher platforms available under CC-BY licence.
- 4.2 The RCUK policy guidance should more clearly state that the CC-BY requirement is part of the policy and it is therefore an ineligible use of RCUK funds if articles are published under a different licence.
- 4.3 Publishers should take account of these requirements and that if a funder has specified a particular licence (and the funder is identifiable through the FundRef metadata), then the author should be made aware of the requirement and default to that licence.
- 4.4 Further exploration, working with particular disciplines, should be done to uncover the concerns and promote understanding of the licence types needed for compliance with the policy.
- 4.5 Further attention should continue to be given in future reviews of the implementation of RCUK policy to ensure that there is no detrimental impact from the policy as it stands.

#### 5 Administrative effort and costs

- 5.1 RCUK, other research funders and other interested parties such as JISC, SPARC-Europe and Research Libraries UK, collaborate in a further, more in-depth study of the administrative costs associated with their open access policies.
- 5.2 There would be benefit in publishers, both primarily subscription-based and born-open-access, to collaborate to help simplify and improve their interactions with HEIs by ensuring that there is standard terminology used and information available as far as this is practicable without conflicting with competition law.
- 5.3 RCUK should revisit their policy guidance, in dialogue with the sector, to ensure that it is clear, especially around circumstances when the journal article is the result of a collaboration, and no confusion remains.
- 5.4 There should be more robust guidance on what the block grant may and may not be used for, in order to dispel some of this confusion and to ensure that it is used to support the aims of the policy.
- 5.5 Share best practice from HEIs on implementing the policy with the wider sector in order to help the improvement of processes and reduction in the administration associated with open access across the sector.

#### 6 Block grant

- 6.1 There may be benefit in there being exceptions to the current calculation for allocation and the panel recommends that RCUK explores ways of incentivising and rewarding those less research intensive institutions who are still publishing, via open access, high quality research.
- 6.2 RCUK explore the issue of some departments within HEIs not feeling that they are being allocated a fair share of the block grant further to ensure that there is no detrimental impact on particular disciplines.
- 6.3 RCUK looks at updating the data used to calculate the allocation of the block grant.
- 6.4 It would be beneficial, despite predicted financial constraints, for RCUK to look at the total amount available within the block grant fund to determine whether the levels projected for future years are sufficient.



### Annex A: Terms of reference for the review

The review will not review the desirability of open access publishing, nor review the Government's policy, except potentially to comment on whether changes to the policy might be beneficial.

The review will cover the period 1 April 2013 to 31 July 2014:

- I To undertake an interim review of the effectiveness of *RCUK Policy on Open Access*, as specified below;
- 2 To assess the impact of the RCUK policy on:
  - a. the transition of RCUK funded outputs (both extramural and intramural) to open access
  - b. different disciplines
  - c. learned societies
  - d. how academic publishers have responded to the policy
  - e. collaborations between researchers both within the UK and internationally
  - f. HEIs and how they administer OA funds
  - g. the wider OA landscape in the UK and internationally
  - h. the cost of OA publishing;
- 3 To review the amount of funding allocated by the Research Councils to support Open Access during 2013/14 to 2015/16 and the algorithm used to distribute this fund;
- 4 To advise on the size of the Open Access fund for 2016/17 and 2017/18, and on any changes to the algorithm for calculating the size of individual grants to HEIs and other eligible research institutions;
- 5 To review compliance with green OA embargo periods mandated by the policy, and to advise on whether the embargo periods should be modified;
- 6 To review the current expectation that there will be 100% compliance with the policy by March 2018, and that of this 75% will be via the 'gold' mechanism;
- 7 To assess the impact of the RCUK requirement for Creative Commons licensing, in particular CC-BY licences for 'gold' OA, on particular discipline areas;
- 8 To advise on the timings of future reviews (provisionally set for 2016 and 2018) and what those reviews might cover;
- 9 To review how effectively the policy has been communicated and identify any further engagement that is required (nationally and internationally);
- 10 To provide an interim report to the RCUK Executive Group by Christmas 2014, and a final report in the early part of 2015.

#### Modus Operandi/Timetable for the Review

The Review Committee will report to RCUK EG. The Committee itself will be independent; however it is suggested that EG should act as a Steering Committee and receive an interim report on which to comment.

The Committee should begin its business in June/July 2014 in order to i) agree its terms of reference, review and agree the data to be made available by HEIs on compliance with the RCUK policy and on how the RCUK block grants have been spent, and iii) agree the other evidence to be collected.

It is suggested it should then meet in early October and again in December, and then early in 2015 (to approve final report). Other meetings may be necessary, including possibly by teleconference.

#### Call for evidence - proposals

The review will not include a consultation, but rather a targeted/public call for evidence (not opinions), which will be structured according to a number of headings (to be determined by the committee). It will be for the Review Committee to decide exactly what evidence it would like to consider and what should therefore be invited to be submitted. Invitations (via email and the website) will be sent out no later than summer 2014 with an appropriate deadline.

Those specifically invited to respond will include:

- HEIs
  - o Russell Group
  - University Alliance
  - o Million+ Group
  - o UUK
  - Independent ROs (eg museums)
  - o RCUK (Research Libraries UK)
- Funding Councils
- Learned Societies
- Academies (Roy Soc, BA, AMS, AcSS, Roy Academy of Engineering)
- Publishers
- BIS
- Parliamentary Committees (Lords S&T, Commons BIS and S&T)

The Review Committee will then consider the evidence from the call for evidence and the material provided by HEIs to draw its conclusions, with a final report being considered by RCUK EG and issued in the early part of 2015.

## Annex B: Membership of the review panel

Note that members served in a personal capacity, not formally as representatives of the organisation listed.

Professor Sir Robert Burgess	Chair
Panel:	
Paul Ayris (UCL)	
Chris Hale (UUK)	University Sector (nominated by UUK)
	, , , , ,
Stuart Taylor	Royal Society
Professor Chris Wickham FBA (University of Oxford)	British Academy
Professor Susan Wray FMedSci (University of Liverpool)	Academy of Medical Sciences
Dr Rita Gardner CBE	Academy of Social Sciences
Dr Steven Hill (HEFCE)	Funding Councils
Robert Kiley	Wellcome Trust
,	
Richard Mollet	Publishers Association
Dr Catriona MacCallum (PLOS)	Open Access Publishers Association
Dr Stella Butler (University of Leeds)	Libraries (nominated by RLUK)
Dr Michael Jubb	Research Information Network
Neil Jacobs	JISC
Professor Douglas Kell (University of	Former RCUK
Manchester)	Tome Reor
Dr David Lipman (NIH)	International 'ex officio' advisor
Tony Peatfield (RCUK OA Policy Lead)	Observers / secretariat
Mark Thorley (Convenor, RCUK Research Outputs Network)	
Alexandra Saxon (Head, RCUK Strategy Unit)	
Total (excluding Observers)	14

## Annex C: List of organisations who submitted written evidence

Written evidence was received by the organisations and individuals listed below. The full submissions are available at: www.rcuk.ac.uk/research/openaccess/2014review/evidence

Aberystwyth University Academy of Social Sciences American Society of Plant Biologists Anglia Ruskin University Association of Art Historians Association of Learned and Professional Society Publishers Association of Medical Research Charities Association of Research Managers and Administrators Aston University **Bangor University** Bath Spa University Brill British Academy British Antarctic Survey British Ecological Society British Heart Foundation British Pharmacological Society British Sociological Association Cancer Research UK Dan Stowell Elsevier European Bioinformatics Institute Professor Michael Fitzpatrick Geological Society Glasgow Caledonian University Goldsmiths College HEFCE HEFCW Imperial College, London International Association of STM Publishers ISC Kings College London Higher and SPARC Europe London Mathematical Society London School of Economics Minister for Universities, Science and Cities, Greg Clark MP **Open University** Plymouth University Political Studies Association Queen Mary University Queen's University Belfast Research Libraries UK Royal Astronomical Society

Royal Historical Society Royal Society Royal Society of Chemistry Russell Group School of Advanced Study Sheffield Hallam University Society for French Studies Society for Libyan Studies Society of Biology Socio-Legal Studies Association St George's, University of London **Taylor & Francis** University Alliance University College London United Kingdom Council of Research Repositories University of Aberdeen University of Bath University of Birmingham University of Bristol University of Cambridge University of Cardiff University of Derby University of Durham University of East Anglia University of Hertfordshire University of Hull University of Kent University of Leeds University of Leicester University of Manchester University of Nottingham University of Oxford University of Reading University of Sheffield University of Southampton University of Stirling University of Strathclyde University of Surrey University of Warwick University of York Wellcome Trust Wiley

### Annex D: List of organisations who gave oral evidence

Oral evidence was given by the following individuals on behalf of their organisations. Transcripts of the sessions are available at: www.rcuk.ac.uk/research/openaccess/2014review/evidence

#### 15 October 2014

- Catherine Hill, Head of Publications at the British Ecological Society
- Martin Barstow, President of the Royal Astronomical Society
- Neil Marriot, Director of Publishing, Library and Information Services at the Geological Society of London.
- Jonathan Bruun, Chief Executive of the British Pharmacological Society.

#### 17 October 2014

#### Session 1

- Aoife Regan, Head of Research Evaluation at Cancer Research UK
- Liz Philpotts, Head of Research at the Association of Medical Research Charities

#### Session 2

- David Walker, Head of Policy at the Academy of Social Sciences.
- Helena Djurkovic, CEO of the Political Studies Association.
- Peter Mandler, President of the Royal Historical Society.

#### 13 November 2014

- Vicky Gardner, Open Access Publisher at Taylor & Francis
- Alicia Wise, Director of Access and Policy, Elsevier

#### 14 November 2014

#### Session 1

- Xenia van Edig, Copernicus Publications
- Rupert Gatti, Open Book Publishers

#### Session 2

- Brian Hole, Ubiquity Press
- Caroline Black, BioMed Central

#### Session 3

- Tim Smith, Publishing Manager at IOP Publishing
- Steven Hall, Managing Director of IOP Publishing
- John Hunton, Publications Officer of the London Mathematical Society

#### Session 4

- Alison Danforth, Publications Officer, British Sociological Association
- Alex Thomson, University English
- Gerard Lowe, Publishing Manager, Modern Humanities Research Association

#### Session 5

- Sue Joshua, Legal Director for Global Research, Wiley
- Wim van der Stelt, VP of Publishing Strategy, Springer

Average institutional APC	£1,783	£1,837	£1,347	£1,903	£1,576	£1,548	£1,706	£1,569	£1,571	£1,506	£1,627	£1,773	£1,252	£1,776	£1,576	£1,781	£1,473	£1,754	£2,248		£1,888	£2,164	£1,527	£1,338	£1,365	£1,233	£1,443	£1,791	£1,454	£1,796	£1,494	£1,475	£1,639
Papers APC's paid for	548	163	1014	144	246	576	218	335	131	252	166	Ξ	215	230	113	177	136	114	125		92	73	51	87	73	48	40	4	70	83	Ξ	25	20
Total reported spend on APC's	£977,200	£299,492	£1,365,631	£274,037	£387,609	£891,574	£371,808	£525,662	£205,779	£379,570	£270,039	£196,800	£269,213	£408,510	£178,076	£315,258	£200,378	£199,957	£280,959	£-	£173,735	£157,941	<i>£7</i> 7,894	£116,430	£99,655	£59,173	£57,723	£78,789	£101,804	£149,092	£165,889	£36,883	£32,781
OA grant 2014-15	1,355,073	1,353,480	1,351,843	1,297,116	977,118	969,952	684,232	630,889	575,131	574,065	521,874	487,891	485,401	479,680	423,032	415,036	410,321	359,148	325,386	276,389	254,038	239,521	235,609	211,355	206,649	205,367	193,408	191,672	1 90,044	188,234	1 85,007	184,720	183,883
OA grant 2013-14	1,151,812	1,150,458	1,149,066	1,102,549	830,550	824,459	581,597	536,256	488,861	487,955	443,593	414,707	412,591	407,728	359,578	352,781	348,773	305,276	276,578	234,930	215,932	203,593	200,267	179,652	175,652	174,562	164,397	162,921	161,538	1 59,999	157,256	157,012	156,301
% non Compliant		44.2			35.7		53.4	49.6	54.7	52.9	38.3			22.1			36.3	50.4		64.0	10.9	28.8	51.3	40.9	46.5	22.2	51.0	22.7	33.5	29.2		26.9	24.0
% Compliant		55.8	0.001	28.2	64.3	52.3	46.6	50.4	45.3	47.1	59.7	60.2		77.9		54.9	63.7	49.6		36.0	89.1	71.2	48.7	59.1	53.5	77.8	49.0	77.3	66.5	70.8		73.1	76.0
% Green OA		2.3	16.7	6.2	28.1	4.3	8.8	1.7	21.7	8.6	15.8	4.8		13.8		15.5	28.6	22.7		12.7	23.9	45.6	22.3	18.8	20.4	36.1	8.4	31.1	4.0	9.6		5.7	36.0
% Gold OA		53.5	83.3	21.9	36.2	47.9	37.7	48.7	23.6	38.6	44.0	55.4		64.1	22.9	39.3	35.1	27.0		23.3	65.2	25.6	26.5	40.4	33.1	41.8	40.6	46.2	62.5	61.2		67.4	40.0
Reported or calculated not OA		586			243		351	342	822	370	238			80			160	213		181	01	82	122	161	121	43	73	30	75	61		75	9
Reported Green OA	112	31	203	207	161	52	58	12	327	60	98	24	001	50		167	126	96	217	36	22	130	53	74	53	70	12	4	6	20		16	6
Reported Gold OA	574	709	1014	731	246	575	248	336	355	270	273	277	215	232	165	423	155	114	102	99	60	73	63	159	86	8	58	61	140	128	Ξ	188	01
Total papers (RCUK funding)		1326	1217	3331	680	1200	657	069	1504	700	621	500		362	722	1075	441	423		283	92	285	238	394	260	194	143	132	224	209		279	25
% direct labour funding from AHRC and ESRC	œ	_	6	4	=	13	15	7	4	9	01	=	4	12	c	4	6	20	=	7	28	12	7	=	7	15	22	20	18	œ	16	7	85
% share of total OA fund	6.834	6.826	6.818	6.542	4.928	4.892	3.45	3.182	2.901	2.895	2.632	2.461	2.448	2.419	2.134	2.093	2.069	1.811	1.641	1.394	1.281	1.208	1.188	1.066	1.042	1.036	0.975	0.967	0.958	0.949	0.933	0.932	0.927
OA grant size ranking	_	2	c	4	5	9	7	8	6	01	Ξ	12	13	4	15	16	17	18	61	20	21	22	23	24	25	26	27	28	29	30	31	32	33
Institution	University of Cambridge	Imperial College London	University College London	University of Oxford	University of Edinburgh	The University of Manchester	University of Bristol	University of Nottingham	University of Southampton	University of Sheffield	University of Leeds	King's College London	University of Birmingham	University of Glasgow	University of Liverpool	University of Warwick	Newcastle University	Cardiff University	Durham University	Queen Mary, University of London	University of Exeter	University of St Andrews	University of Strathclyde	University of Aberdeen	Loughborough University	Queen's University of Belfast	University of York	University of Sussex	University of East Anglia	University of Leicester	University of Reading	University of Dundee	University of Essex

## Annex E: Data set for compliance

OA grant local 2014-15 reported spend on APC's	167,813 £141,964	164,457 £90,160	147,986 £42,557	138,368 <i>£</i> 76,116	124,484 £68,779	117,960 £25,820		113,489 £59,651	101,998 £21,323	91,150 £13,316	85,701 £73,400	82,041 £93,866	80,680 £103,102	76,663 £14,351	75,549 £68,233		73,955 £67,852	69,639 £38,650	59,997 £43,269	59,932 £12,253	45,051 £43,694		20,414 £778	10,186	9,451	18,539,530 £10,404,474	19,827,463 93.50
OA grant 2013-14	142,641	139,788	125,789	117,613	105,811	100,266		96,466	86,698	77,477	72,846	69,735	68,578	65,164	64,217		62,862	59,193	50,998	50,943	38,293		17,352	8,658	8,033	15,758,601	16,853,344 93.50
% non Compliant	39.3	45.5	25.3	0:0				12.5	32.4	30.8	8.1		49.3	4.	41.5		12.8	40.5	0:0	23.1	19.6		0:0		0.001		
% Compliant	60.7	54.5	7.4.7	31.1				87.5	67.6	69.2	6.16		50.7	98.6	58.5		87.2	59.5	0.001	76.9	80.4		0.001		0.0		
% Green	21.9	21.5	52.9	3.9				0:0	42.6	35.9	25.7		12.3	90.0	5.1		35.5	32.9	4.5	0:0	45.8		80.0		0.0		
AOD %	38.9	33.0	21.8	27.2				87.5	25.0	33.3	66.2		38.4	8.6	53.4		51.8	26.6	95.5	76.9	34.6		20.0		0.0		
neported or calculated not OA	76	061	44					9	22	12	9		108	_	49		18	32	0	m	84		0	0	4	5121	
Green OA	54	06	92	8				0	29	41	61	0	27	63	9		50	26	_	0	961		4	0	0	2926	
Gold OA	96	138	38	56	57	8		42	17	13	49	48	84	9	63		73	21	21	01	148		_	0	0	8172	
notal papers (RCUK funding)	247	418	174	206				48	68	39	74		219	70	118		4	79	22	13	428		ъ	0	4	20580	
% direct labour funding from AHRC and ESRC	Ŀ	17	12	_	9	13		18	_	22	30	53	0	87	0		94	27	33	25	0		66	43	49		
of total OA fund	0.846	0.829	0.746	0.698	0.628	0.595		0.572	0.514	0.460	0.432	0.414	0.407	0.387	0.381		0.373	0.351	0.303	0.302	0.227		0.103	0.051	0.048		
OA grant size ranking	34	35	36	37	38	39		40	4	42	43	44	45	46	47		48	49	50	51	57		82	66	001	(Ilnu	
nstrution Co g siz	University of Bath 34	Lancaster University 35	University of Surrey 36	Heriot-Watt University 37	Swansea University 38	Brunel University 39	London School of Hygiene and	Tropical Medicine 40	Cranfield University 41	Royal Holloway, Univ of London 42	Open University 43	Bangor University 44	John Innes Centre 45	Institute of Education 46	Rothamsted Research 47	London School of Economics	& Pol Science 48	University of Kent 49	Birkbeck College 50	Aberystwyth University 51	tic Survey	School of Oriental &	African Studies 82	Middlesex University 99	Northumbria University 100	Total (where total pubications not null)	Total block grant allocated % block grant in subSet

#### Annex F: Licences at a glance



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#### **Annex G: Aggregated APC and subscription** expenditure data for 20 UK HEIs

Publisher	Number of APC's 2013	Number of APC's 2014	APC spend 2013*	APC spend 2014**	% of total APC spend 2013	% of total APC spend 2014	APC spend from RCUK funds 2014***	Subscription spend 2013	Subscription spend 2014	APC spend as % of total (2013)****	APC spend as % of total (2014)
Elsevier	343	1048	£702,412	£1,453,615	21.6	16.1	£610,373	£13,095,834	£13,481,823	5	10
Wiley	320	987	£586,671	£1,602,814	18.0	17.7	£720,053	£4,741,023	£4,920,647	11	25
Springer	81	349	£154,231	£579,630	4.7	6.4	£158,573	£2,526,359	£4,939,831	6	П
PLOS	222	347	£241,739	£347,302	7.4	3.8	£124,919	n/a*****	n/a	n/a	n/a
BioMed Central	91	317	£122,981	£419,616	3.8	4.6	£102,621	n/a	n/a	n/a	n/a
Taylor & Francis	60	311	£117,481	£477,464	3.6	5.3	£85,169	£2,461,999	£2,763,814	5	15
OUP	117	283	£ 218,600	£567,471	6.7	6.3	£239,862	£758,177	£808,213	22	41
BMJ	92	280	£164,519	£498,703	5.1	5.5	£85,410				
Sage	20	232	£16,426	£89,298	0.5	1.0	£26,534	£1,470,689	£1,477,241	I.	6
Nature	63	157	£145,403	£465,071	4.5	5.1	£236,669				
RSC	48	146	£ 78,991	£116,951	2.4	1.3	£68,756				
ACS	40	135	£55,244	£245,501	1.7	2.7	£162,366				
CUP	16	43	£31,191	£84,984	1.0	0.9	£28,138	£491,736	£547,454	6	13
Total <sup>^</sup>	1963	6059	£3,253,127	£9.042.753			£3,560,141				

#### Notes:

\* Includes estimated prices for many APCs, so this figure is not 100% accurate.

\*\* Does not include any estimates. Real prices only so more accurate than 2013 figures. \*\*\*There may be additional RCUK-funded APCs which are not included in this figure. \*\*\*\* Total' refers to the combined expenditure on subscriptions and APCs with the publisher.

\*\*\*\*\* PLOS and BioMed Central are full open access publishers so institutions do not need to pay subscriptions to access their content.

<sup>^</sup>Total figure includes APCs for more than just these 13 publishers.

This table contains the aggregated expenditure on journal subscriptions and article processing charges (APCs) by 20 UK higher education institutions (HEIs). The HEIs include a variety of different types of institution but are skewed towards research-intensive institutions, with 10 being in the Russell Group.

An article-level dataset compiled by JISC which covers the APC expenditure of 22 UK HEIs for 2014 is available at: http://dx.doi.org/10.6084/m9.figshare.1305596

Subscription expenditure is not readily available for all publishers. Further data covering expenditure with the publishers listed above for most UK HEIs is available at: http://dx.doi.org/10.6084/ m9.figshare.1186832

## Annex H: List of publishers which have agreed to offsetting systems

Publishers of subscription journals are increasingly offering hybrid options, whereby articles can be open access on publication if an article processing charge (APC) is paid. Data collected by Jisc Collections in 2014 shows that APCs are now a significant part of the cost of scholarly communications for academic institutions in the UK. In 2013 APCs already constituted an average of 10% of the total cost (excluding administrative costs)<sup>1</sup>. Most APCs were paid to large 'traditional' publishers who also received considerable subscription income.

In January 2014, Rt Hon David Willetts MP published an open letter to Dame Janet Finch. In this letter he said:

The Government "....looks to the publishing industry to develop innovative and sustainable solutions":

"....a meaningful proportion of an institution's total [article processing charges] with a publisher to be offset against total subscription payments with that publisher."

"Government welcomes efforts by Jisc Collections to develop sustainable funding models that establish a relationship between the payment of APCs (and the costs of administering them) and subscription fees for an institution."

JISC Collections is pleased to announce that a number of publishers responded to this call and have worked with JISC Collections and the UK academic library community to develop offset systems to reduce the combined cost to institutions of maintaining subscriptions and APCs for articles in the same journals.

These publishers which have introduced offset systems are as follows:

#### Institute of Physics:

A three year pilot agreement running from May 2014 means that IOP Publishing will offset 90% of a university's expenditure in one year on APCs, or the total cost of their subscriptions, whichever is the greater.

#### Wiley:

Running from January 2015 to December 2017, the agreement provides credits for APCs to universities that subscribe to Wiley journal content under the terms of the *JISC journal agreement*. This means that universities that pay both subscription charges for publications and fees to make articles open access will receive APC credits based on the total prior year spend.

#### Taylor & Francis:

A three year pilot offsetting system running from January 2015 to December 2017. For articles published under Taylor & Francis' hybrid open access publishing model, Open Select, the offsetting agreement offers discounted article processing charges via a voucher system determined by expenditure. This decision recognises the continuing growth in open access research, and Taylor & Francis wishes to participate in pilots which explore the potential for transitioning business models.

#### **SAGE** Publications

UK institutions which subscribe to the SAGE Premier collection continue to receive a significant discount on Gold OA fees in hybrid titles. The discounted article processing charge is currently reduced to  $\pounds$ 200.

#### Royal Society of Chemistry (RSC)

RSC's Gold for Gold initiative is running from 2013-15. Subscribers to the RSC Gold collection of journals, databases, and magazines receive open access voucher codes to publish gold open access articles, free of charge, without paying the article processing charge. This successful pilot scheme has since been rolled out globally.

JISC Collections is committed to negotiating with publishers offset systems that will reduce the total cost of publication for UK higher education institutions and is in constructive discussions with one other publisher. JISC Collections looks forward to discussing the implementation of offset systems with all other publishers of hybrid journals.

Pinfield, S., Salter, J. and Bath, PA. (2015) The 'total cost of publication' in a hybrid open-access environment: Institutional approaches to funding journal article-processing charges in combination with subscriptions. Journal of the Association for Information Science and Technology. (In Press) http://eprints.whiterose.ac.uk/81227/

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