POST EVALUATION REPORT 2009

3 January 2010

First draft of a report summarising a series of 52 interviews with UK parliamentarians exploring their views on the importance of science and technology to parliamentarians and investigating their use of POST services.

1. Background to the Evaluation

Background on POST

The Parliamentary Office of Science and Technology is the UK Parliament's in-house source of independent, balanced and accessible analysis of public policy issues related to science and technology. Its aim is to inform parliamentary debate, and to keep parliamentarians informed about emerging and current science and technology issues and their policy implications. It does this through a series of written briefings ("POSTnotes") as well as longer reports, meetings and seminars, podcasts, and by providing direct support to parliamentary select committees and to individual parliamentarians.

POST is staffed by a small team consisting of a Director, six advisers and two administrative staff. It also makes extensive use of short term doctoral and post-doctoral fellowships supported by external organisations such as research councils and learned societies. POST's objectives, outputs and future work programme are overseen by a Board of 14 parliamentarians, (10 from the Commons and four from the Lords) and also four leading external representatives from the science and technology community. Officials from both Houses, also attend Board meetings.

Rationale for the Study

POST was established in 1989, initially with charitable funding as a three year experiment. This was judged successful after examination by committees in the two Houses and the Office was formally established as an institution of both Houses in 1992, initially on a five year renewable basis. After a further committee review and a debate in the House of Commons, it was made a permanent Office of both Houses in 2001. Since this time, continual feedback from parliamentarians and the wider world has provided evidence that POST is seen to provide an invaluable service. However, to ensure that its products continue to meet the needs of parliamentarians, POST has on occasions conducted more systematic evaluations of aspects of its work, such as a 2005 review organised by the ESRC Centre for Evidence-based Policy. Most recently, POST decided to undertake a series of interviews with parliamentarians throughout the spring and summer of 2009. This is the report of that review.

Evaluation Method

The study was carried out by an intern with a background in social sciences, supervised by a POST staff member, with strategic input from an evaluation consultant. It took approximately 9 months from its inception to completion.

Parliamentarians were selected randomly for face to face interviews, by listing them alphabetically and approaching every seventh person. The sample was then increased by moving up or down the alphabetical list. In total 271 MPs and 186 Peers were contacted. This resulted in 29 interviews with MPs and 23 interviews with Peers. The randomised selection guaranteed a representative selection process. Any remaining distortion in the interview sample is due to the fact that parliamentarians with an interest in science were more likely to agree to take part, than those with no interest.

The data were stored in an Excel spreadsheet. Quantitative data is displayed in histograms later in this report. The qualitative data were analysed by drawing up a series of codes to reflect the range of responses to each question. These codes were then used to classify and organise responses. Due to the relatively small numbers in the sample, the qualitative data is of more value to POST than the quantitative data. However, both provide some useful insights. It was not possible to obtain a larger sample due to the time required to secure interviews (10 parliamentarians were approached for each interview secured).

POST will use the data to inform decisions on how to increase parliamentarians' uptake of its work, and on potential modifications and improvements to its products, as discussed in the main report.

2. Summary of Findings

Findings have been broken down into 12 key points, classed under the following headings:

A. The importance of scientific information for parliamentarians

B. Parliamentarians' usage of available sources of scientific information

C. The role of POST

D. Detailed feedback on POST services

Section A. The importance of scientific information to parliamentarians

1) 100% of interviewees thought that it was "definitely important" for parliamentarians to have access to an impartial analysis of scientific information. They argued that science pervades all areas, affects the lives of MPs' constituents and is increasingly relevant to public policy.

> *Scientific information is an important part of the knowledge base of anybody who is going to be involved in public policy or legislation…there are very large number of domains we are called upon to vote on where scientific knowledge is a key element in decision we are going to be taking. (P 18)*

> *Science impinges on a great many of our debates and decisions and we need something objective to explain some of the issues. (P 8)*

Parliamentarians emphasised the need for impartial information, in order to separate facts from values and avoid ideology-led or interest-led decision making.

> *Politicians arrive in politics because of their prejudices in a positive way and their ideologies, and yet we learn from Archimedes that when you have an idea about something the important thing is to test it, so a hypothesis needs to be tested and basic scientific, evidence checked approach to policymaking that actually works rather than ideologies that just pretend to work. (MP 11)*

> *[Parliament] relies very much on outside bodies which have a vested interest in one aspect of a bill … just follow the money and you can see where the information is coming from. We do need information that isn't dependent upon whomever the backers are sourcing the information. (MP 22)*

Parliamentarians they felt that information from the media was often biased, and that an independent source was therefore crucial. However, the media remain key sources of information, with over 70% of parliamentarians saying they would be "likely" or "very likely" to use the media as a source of information on science.

> *The press carries a lot of scientific information and some of it is very good…but there are irresponsible articles that catch the headlines and I think it is very important to have information that is sort of sober and not intended to capture the headlines. (P 10)*

> *Very often science is misrepresented in the media. The media often get the balance wrong. (P 5)*

2) 90% of interviewees think it is important to have a source of information on science *especially written for parliamentarians.*

Parliamentarians said they needed an accessible source of information written in a language that they can understand and also use (e.g. in debate). The majority felt that the people producing such information needed to understand the context in which parliamentarians work, and to speak their "language". POST was cited in this

context. Responses indicated a high level of trust in "in-house" sources of information, which is backed up by quantitative data on the sources of scientific information that parliamentarians use (see Figures 11 and 12).

> *I think some of the most trusted information that I get is from the House authorities…we do have this feeling that the House gives you the best advice that is available and not party political. (MP 19)*

> *I think [POST] is helpful because it is written by people who know the environment in which politicians operate and about parliamentary procedure. (MP 22)*

> *We have a language of our own … We are a busy lot and so the more that we can get information which is easily digestible in a language we understand and usable in a language we can present, then yes. (P 6)*

Among the 10% who answered that a source of information on science especially written for parliamentarians was *not* needed, the message was that information need not be specially written for parliamentarians, providing that it was written in laypersons' terms and presented in an accessible form.

Section B. Parliamentarians' usage of available sources of scientific information

3) High quality information on science is available, but is not being made best use of. This is largely because parliamentarians are inundated and cannot separate out good information from bad. They need help in navigating through the information.

Parliamentarians, in particular MPs, complained about being bombarded with information to the extent that it prevented them from actively seeking it from more credible sources.

> *I don't think we are short of information ... the quality of information is obviously an issue. The trouble is whenever anybody answers yes to that sort of question, what they finish up with is about ten times as much information, but not necessarily ten times as much understanding, so I don't want to trigger a great flood of scientific stuff. (MP 27)*

The overall message is that parliamentarians do not need a greater *quantity* of scientific information, but that they need help in navigating through it. POST is seen as having a role to play in this, as discussed in the next section. One MP commented:

> *I think we need to have some route maps, and I do think the brief POST reports give quite a good route map, at about the volume per issue {that} a MP can take in… (MP 27)*

4) POST and the Libraries are popular sources of information for members of both Houses when seeking information on science issues, as are government reports. Peers and MPs seek scientific information in different ways, reflecting the different contexts in which they operate.

Over 70% of all parliamentarians would be likely to use POST when seeking information on science issues. The Libraries and government reports were the most popular sources. Reasons cited by some parliamentarians for *not* using POST are explored in the next section. Overall, Peers appear to make more use of a wider range of information sources on science than MPs. They are more likely than MPs to turn to individual scientists and learned societies, and less likely to use the internet or mainstream press sources. Peers attributed this to the fact that they have more time to cultivate their interests, whereas MPs tend to have far busier schedules. In addition many of the Peers in the sample have strong links with the scientific community.

5) Parliamentarians prefer to receive information on science in hard copy. The internet is seen as a useful source of scientific information, but electronic information is regarded as less portable and many parliamentarians (Peers in particular) say they find it hard to read from the screen.

> *I find it much easier to read hard copy, especially on the train, you can read it better. (MP 24)*

Theoretically, one should prefer an electronic copy, but if you are moving around all the time it is not as easy to get access to. (MP 19)

I am of a generation where I can't easily read off screen. (P 3)

Parliamentarians saw oral presentations as highly informative and engaging, particularly because they could ask questions, but finding the time to attend them is a key problem.

I have just been to a session on geo-engineering which was very interesting ……I probably had seven or eight different invitations which would have been interesting to go to but weren't on the radar for spending any time on. (MP 27)

Section C. The role of POST

6) Parliamentarians say that POST performs a crucial role in providing them with impartial, clear, concise, balanced and timely information as well as highlighting for them what scientific issues were important. However, POST could be more visible and there is room to expand its target audience.

The majority of parliamentarians interviewed were already aware of POST. Only a small fraction, (3 MPs and 1 Peer), had no prior knowledge of POST. Those who had heard of POST were highly supportive of its work.

The argument for getting POST going is the same as the argument which was advanced for why it still exists: it is essential to have a briefing system for parliamentarians interested in science and technology. (P 13)

[POST] recognises that we've all got a short attention span and it is written in a readable form. (P 2)

It is important to have something which I think on the whole the POSTnotes do, which is not assume too much prior knowledge. (P 4)

Many comments related to impartiality:

There is so much depending on scientific judgements and scientific information and often it appears in the media as a particular slant, the key thing is that POST is independent and I have to say that I read their publications and I think they are excellent, just the right length and they are impartial and they are clear and I think it is excellent to have that. (MP 18)

MPs get bombarded with lobbying material from all sorts of people particularly when there is a bill coming before parliament, some people are never very sure of how to evaluate …scientific information and it is very important when that happens that there is an impartial, factual service available to advise people about science and what is known and what isn't and of course POST doesn't always get it right, but it gets it nearly right in terms of being impartial and that is why it is so valuable. (MP 20)

One Peer said POST played a role in flagging up issues he should be aware of, although he pointed out that there was a danger in receiving too much information from POST because this made it harder for him to identify priority issues.

I read [POSTnotes] because I have been sent it from POST and [therefore] it must be important. (P 3)

Also, as mentioned in the previous section, POST (and particularly POSTnotes) is also seen as playing a role in helping parliamentarians to navigate through the multitude of different information sources available to them.

The data suggest that POST could be more visible and could find better ways of disseminating its work to parliamentarians and making it more eye catching. For example one Member commented:

… I wonder if there is some way to make MPs aware that there is something available…. When I go downstairs and look at the library to see what briefings there are from debates, I have never seen anything from the POST group that has caught my eye. (MP 7)

Comments from the 4 interviewees that had not heard of POST, as well comments from other studies[1], indicate that there are still those who need to access information on science issues and do not know that POST's output is available. This merits further investigation.

One Member argued that POST should expand its role in providing analysis of research information:

> *I would expand POST's role, in terms of science and technology and engineering, those sort of key disciplines, it does have a key role in being able to pick up policy initiatives and to be able to look at the science behind them and to explain that to Members. I think the library does a good job in terms of legislation and what we don't get of course is a back up analysis of research that helps Members make a decision, and if you take for instance the scientific developments in terms of abortion that we did two years ago as a report and again it would have been really helpful for POST to have done a note on that ... (MP 26)*

Section D. Detailed feedback on POST's services

7) POSTnotes are the most popular and well known of POST's products. The vast majority of interviewees had referred to them more than once over the past year. There is good awareness of POST's seminars and work for select committees. However, take up of electronic information such as podcasts and from the POST website, is much more limited.

When asked what POST services they had used in the last year, over 80% of parliamentarians said they had referred to the POSTnotes more than once (see Figures 9 and 10). 30% of MPs and 42% of Peers had also consulted POST briefings to select committees. While they had heard of other services like the website, seminars and podcasts, few said they had used them, often stating that they were too busy to attend seminars and were not technically proficient enough to navigate the website and download podcasts. This latter reason applied to Peers in particular, who as shown above, felt more comfortable using hard copy.

8) Parliamentarians use POSTnotes in many different ways. The most common use is to "kick-start" their research into a given issue. However, 22% of MPs and 28% of Peers would not use POSTnotes as part of their research. Their reasons for this range from wanting to "get closer to the horse's mouth", to preferring to use POSTnotes for general interest or to leave their researchers to read them.

POSTnotes were considered an authoritative source of information that helped to "kick start" the research process, and 40% of MPs and 52% of Peers would use them in this way:

> *I would go first to the library to see whether there was a POSTnote on that subject or not and if there wasn't I would either directly call them or ask the library to phone to ask if there was a historical POSTnote and if there wasn't that and I would say why wasn't there that. (P 20)*

> *Very early, day one. I would say it would kick start but it would be one of three sources that kick start, Library note, POSTnote and then alongside, I will always work out what my own prejudice or view is first and then I'll test it against all these bits. (MP 11)*

> *Before looking at nanotechnology or something like that I would look at the POSTnote because that would give me a very good, intelligent, factual summary in a short format which is useful to me. I might also use it to get some stats if I am doing something I know something about like a Bill or something then you either want a couple of extra statistics and I would look to them for that. (MP 24)*

> *Well on the whole I have a box full of POSTnotes that go back about five years and what I would tend to do is flick through to see if there is anything relevant and that would probably be at the start (P 15).*

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[1] House of Commons Survey of Services, 2009

Those who never relied on POSTnotes to support their research (over 20% of MPs and 30% of Peers) had various reasons. MPs preferred to leave such work to their researchers or to use them for general interest only. Peers felt that their role gave them access to key people and information and therefore they did not necessarily need to consult POST.

> *I used them for background. I don't use them for specific issues and when something comes up in a bill that I focus on I think I have to get closer to the horse's mouth. (P 17)*

> *I've never been particularly aware that I have sought out a POSTnote on anything ever. I would generally have my researcher do the initial shift… (MP 10)*

Two of the interviewed MPs (none of the Peers) said they found POSTnotes too complicated:

> *I do some health stuff on genetics and things but even then they've lost me, so they tend to go in the bin. So I wouldn't necessarily think of going to a POSTnote. (MP 3)*

> *They are not usually written in a language that we can understand because we are not all scientists. (MP5)*

9) The majority of parliamentarians find the level of detail in POSTnotes "about right" and think that 4 pages is the right length. A minority of MPs were in favour of a shorter note and thought they were too detailed.

Parliamentarians were shown a randomly-selected POSTnote and asked to comment on the ideal length of a scientific briefing, the level of detail and its overall style.

Almost all Peers and around two thirds of MPs, stated that at four pages the POSTnote represented the ideal length of a scientific briefing and that the level of detail was about right. 5 MPs (18% of the sample) thought that the notes should be only one or two pages, and that they had too much detail.

10) Parliamentarians were asked their opinion about the style of POSTnotes. Most comments related to formatting. Many MPs suggested some "revamping" of POSTnotes to make them more eye-catching and easier to read.

When asked if the style of the note made them want to read it, Peers were very positive about the readability of POSTnotes, 90% answered "yes". MPs were slightly less enthusiastic. 52% said "yes" and 37% said "no", whilst 8% were undecided.

Parliamentarians were asked for their suggestions on how to improve the style of the notes. Comments on style fall into four key areas:

   i.   improve the summary

The front page should contain a better summary of the overall POSTnote, taking the reader through to conclusions and pointing out further sources of information. This way, parliamentarians could immediately grasp the relevance and importance of the subject under discussion.

   ii.   break up the text more

Parliamentarians said they preferred graphical representations that break up the text and preferred statistical data presented in tabular or graphical form.

> *There is lack of summary and lack of bolding, you can't scan down it and find anything. It looks dull. I can't bring myself to read it. Bolding, headlines, key boxes. You need to be able to scan. (MP 23)*

   iii. better headings

Some mentioned that the "POSTnote" banner heading took up too much space and conveyed little information.

> *This and the title, the whole emphasis when you look at this is that is a POSTnote, instead of the emphasis being cervical cancer. (MP 7)*

> *I would probably make it clear on the top what it was about because POSTnote doesn't mean anything, doesn't say anything, so I would make it clear that it was information based on science and technology in bigger letters so somebody would read it and it was relevant to a particular bill. (MP 17)*

> *I think this is too big, the heading banner is too big, you've wasted space and you could use that space not to put in more words but to have a slightly larger font. (P 2)*

iv.   Make the notes more striking

While most Peers endorsed the style of the POSTnote, many of the MPs stated that it didn't "grab their attention" and draw them into the issue. Their recommendations included seeking external advice from professional designers and imitating promotional material designed to catch the attention of readers.

> *In the nicest possible way, this is plan A of desk top publishing from about the late 80s and it could do with a bit of jigging up. (MP 27)*

A couple of parliamentarians made comments on content and indicated that there may be some variation in standard between POSTnotes. The importance of strategic thinking, and highlighting which issues were settled and which still under debate, was stressed by one Member:

> *I feel occasionally they have slightly lost the strategic overview and objective and there are too many boxes that don't connect very well to the central line of argument…. I think it is just that there is better strategic thinking in some of them than in others or the topic is riper or at the right stage of ripeness and occasionally you get one where you think, that really hasn't sharpened my grasp of what the key issues are and that is what I really look for. A good POSTnote leaves you having a sense of which are the settled and which are the debatable points. (P 17)*

11) Parliamentarians use information from POST in a wide variety of ways. The most popular of these is to "inform parliamentary debate".

When asked how they used or would use POST in Parliamentary business, over 90% of respondents stated that they used POST to "inform Parliamentary debate". Around 70% of MPs and Peers said that they read POSTnotes for general interest and half used POST in their select committee work. Around one in three MPs and one in two Peers used POST to table parliamentary questions. Only a small percentage, 4% MPs and 13% Peers said they would not use POST at all.

12) A wide variety of suggestions was made as to how to improve POST's services. The most common suggestion was improvement in online resources.

When asked how POST could improve its services (beyond the improvements in the POSTnote style mentioned previously), the most popular suggestions were a quarterly newsletter (delivered electronically) and improved online resources. Drop-in sessions and visits from staff were less popular on the grounds of time already being overstretched. Podcasts were also less popular, partly because awareness of them was low.

MPs said they would use online resources if they were better developed and easier to navigate, in particular if online content included a search facility and links. Suggestions included **better indexing of POSTnotes –** for example having an index of POSTnotes under subject headings and subheading with links to other POSTnotes and sources of information. Parliamentarians said they would like to see a history of POSTnotes on particular issues so that they could trace the parliamentary history of any given subject.

Some parliamentarians called specifically for POST to provide suggestions for reputable sources of information on the web:

> *The POST briefings are extremely helpful…that is a format that works because it is straight forward, it has a lot of source material and it is easy to digest. … It is very easy if you google a particular topic of the day to get misled by bad science on the web and one thing that POST could strengthen is how it establishes link into subjects on the web by making sure that the sites that are linked into are properly peer reviewed. (MP 13)*

Parliamentarians also asked if POST had thought about publishing a series of POSTnotes on a particular theme, like climate change.

They commented that unlike other Parliamentary services there is no **induction** to POST for new MPs and Peers, and their researchers. With no induction, many parliamentarians fall into habits of researching that exclude POST services. POST would benefit from inducting new parliamentarians and their researchers.

3. Methods

3.1 Selection Process

MPs and Lords were listed alphabetically and every seventh person on the list was approached for interview. This resulted in 88 randomly selected MPs and 105 Peers. Of this sample, 3 MPs and 14 Peers responded positively and agreed to be interviewed. The majority, 72 MPs and 89 Peers, did not respond, and 13 MPs and 2 Peers declined. The sample was then increased, by moving up or down the alphabetical list.

In total, 271 MPs and 186 Peers were contacted, sometimes repeatedly by email and telephone, resulting in 28 interviews with MPs and 23 interviews with Peers, including 3 pilot interviews. Peers were checked against their activities in House of Lords prior to being contacted. This ensured that they had been active in House debate over the last twelve months.

The randomised method guaranteed a representative selection *process*. Any distortion in the interview sample is due to a multitude of factors which influence decisions on whether to respond (for example, level of interest in science).
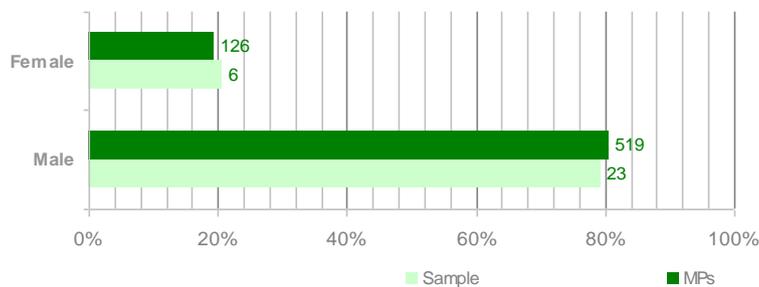
3.2 Final Sample

The final sample comprised 29 MPs and 23 Peers including 3 "pilot" interviews conducted at the start to test the questionnaire.
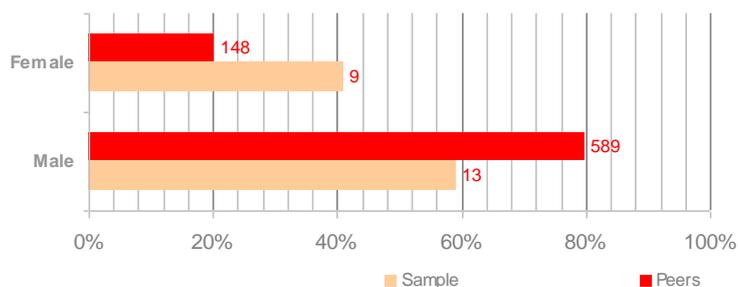
Sex balance

The ratio of men to women in the House of Commons is 4:1 (519 men and 126 women). This was represented in the sample as indicated below.

Figure 1: Sex balance in the sample of MPs

The ratio of men to women in the House of Lords is also 4:1. However, more female peers agreed to be interviewed.

Figure 2: Sex balance in the sample of Peers

Region (MPs)

Slightly more MPs were interviewed from constituencies in London, North West and Wales. No MPs from the North East or Northern Ireland agreed to be interviewed.
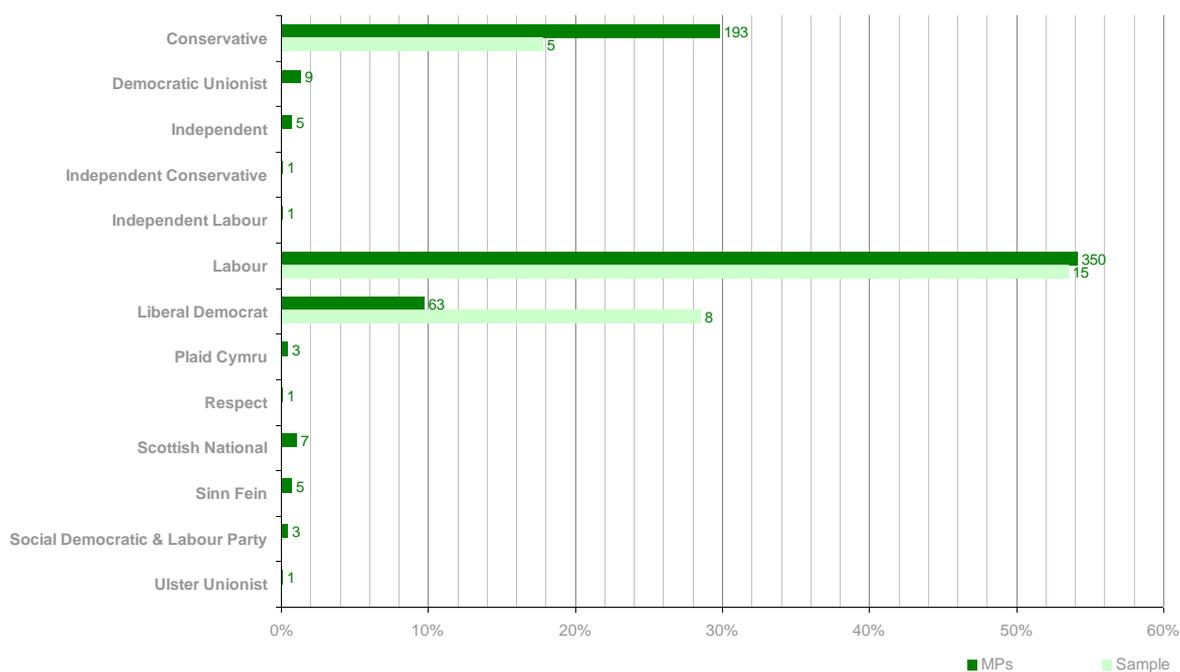
Figure 3: Regional distribution of MPs in the sample
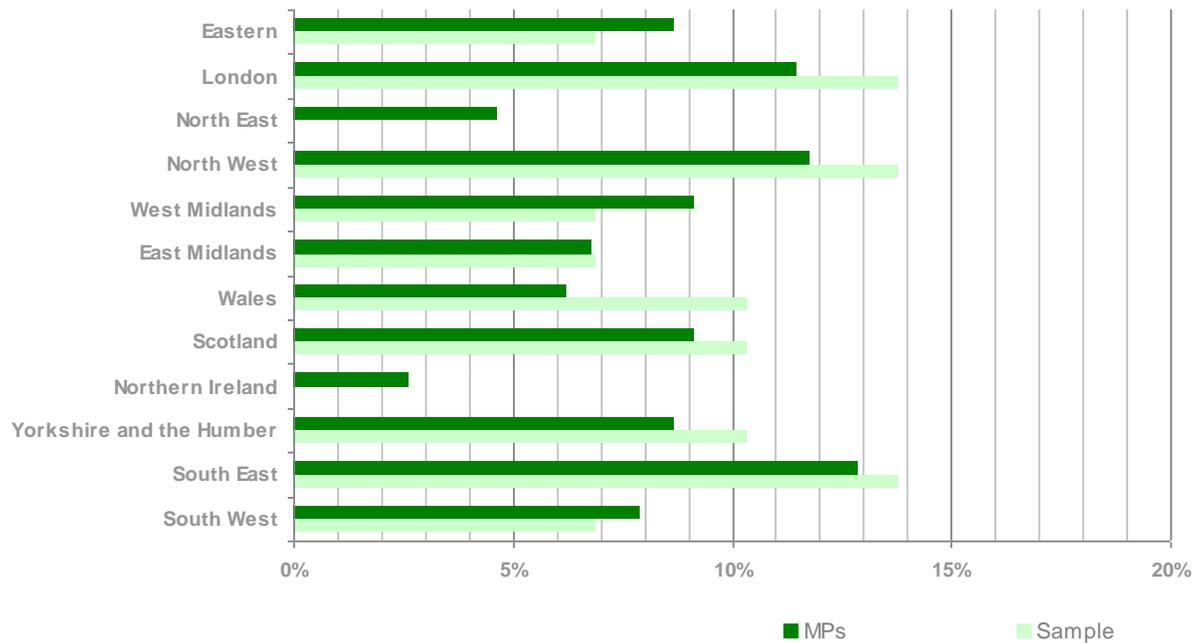

Political parties

Interviewees came from the three main political parties only. It was extremely difficult to recruit MPs from other parties given the small numbers. While Labour MPs were represented in proportion to their numbers in the House (i.e. the proportion of Labour MPs in the sample reflected numbers in the House of Commons) Conservative MPs were under-represented and Liberal Democrats over-represented.

Figure 4: Political parties represented in the sample of MPs

Party	MPs	Sample
Conservative	193	5
Democratic Unionist	9	
Independent	5	
Independent Conservative	1	
Independent Labour	1	
Labour	350	15
Liberal Democrat	63	8
Plaid Cymru	3	
Respect	1	
Scottish National	7	
Sinn Fein	5	
Social Democratic & Labour Party	3	
Ulster Unionist	1	

With the House of Lords, Conservatives and Liberal Democrats were over represented and Labour under represented. Crossbench Peers were represented in proportion to their numbers in the House. No bishops were recruited to the study.

Figure 5: Political parties represented in the sample of Peers

Party	Peers	Sample
Conservative	196	10
Labour	214	2
Liberal democrat	72	4
Crossbench	202	6
Bishop	25	
Other	17	
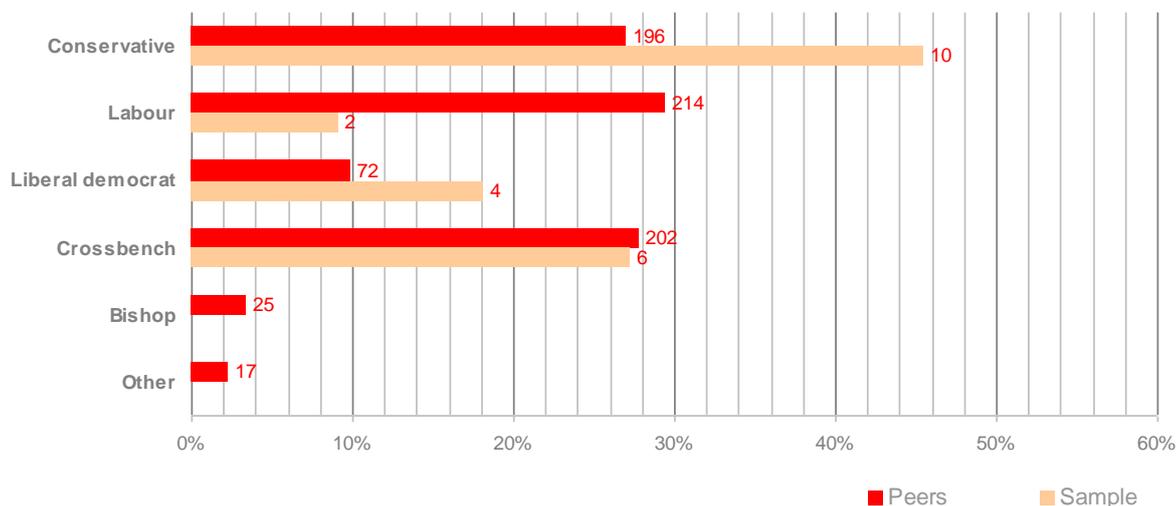
3.3 Interview and analysis

The interview was based on questionnaire survey made up of 17 questions (see appendix A for a copy of the questionnaire) and lasted an average fifteen minutes. Some interviews lasted longer depending on what the respondent wanted to say and how much time was available. All interviews were recorded and partially transcribed in order to extract qualitative data. Qualitative data have been used extensively in this study and have significantly furthered understanding of POST's contribution to the use of scientific information in Parliament.

4. MAIN FINDINGS IN DETAIL

Knowledge of POST
Question 1: Had you heard of the Parliamentary Office of Science and Technology (POST) before we contacted you for an interview?

The majority of parliamentarians had heard about POST prior to being interviewed. Only a small fraction, 3 MPs and 1 Peer, had no prior knowledge of POST.

Figure 6: Interviewees' prior knowledge of POST
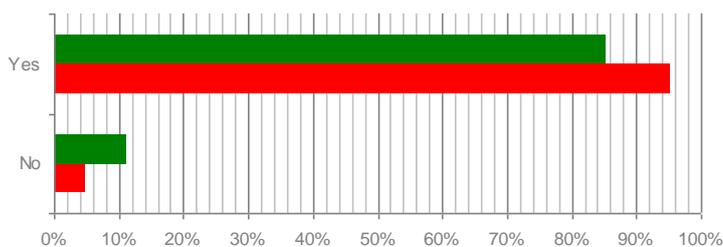
The importance of scientific information in a Parliamentary context
Questions 2 and 3: Do you think it is important for parliamentarians to have an *impartial analysis* of information on science? Please explain?

All parliamentarians emphasised the importance of impartial information on science and answered "definitely yes" to the above question. The qualitative responses fell into four broad categories of statement, each of which is discussed below.

- science pervades all areas
- parliamentarians cannot be experts in everything
- decisions should be based on evidence and not ideology
- POST plays a key role in providing impartial information on science

 i. *It is important for parliamentarians to have an impartial analysis of scientific information because science pervades all areas*

MPs argued that science affects the lives of constituents and Peers noted that it plays an ever more important role in parliamentary business and therefore they should have some understanding of it.

> *Science affects all our lives, our technology, our health and everything else and it is only right that parliamentarians have a proper understanding of what the science behind it all is. (P 12)*

> *Science and technology is determining the way we live today. It is important to everything. (P 5)*

> *Science affects our constituents' lives in many respects that may not at first seem obvious: climate change, pollution, and house building…we should be aware of it. (MP 9)*

> *So much legislation bears on science or science regulation or innovation, or downstream work so of course you need to have some grasp of what is going on in the research and you need authoritative summaries. (P 7)*

Parliamentarians said they are increasingly required to debate and make decisions on issues either emerging from scientific and technological innovation or with a scientific content. This means absorbing and communicating

complex and contested information. They placed a high value on impartial and independent information, which was necessary for them to contribute effectively to debate and decision making.

> *There are a whole lot of issues that arise from scientific side, from nuclear power to climate change and the more ethical questions in relation to stem cell research. If we are to make a decision, we need background to it without any bias. (P 15)*

Scientific and technological issues are pervading a greater part of legislation than ever before.

> *Scientific information is an important part of the knowledge base of anybody who is going to be involved in public policy or legislation…there are very large number of domains we are called upon to vote on where scientific knowledge is a key element in decisions we are going to be taking. (P 18)*

> *Science impinges on a great many of our debates and decisions and we need something objective to explain some of the issues. (P 8)*

ii. *It is important for parliamentarians to have an impartial analysis of scientific information because they cannot be experts in everything*

Parliamentarians reflected on the importance of impartial information for developing a robust knowledge base within Parliament, particularly for those without a scientific background who were not used to dealing with scientific information.

> *Impartial evidence is always good, particularly on issues where parliamentarians don't come with their own expertise or knowledge and especially where they may be intimidated by the subject matter. (MP 2)*

> *A lot of parliamentarians are non-scientists and so we need that clear guidance in highlighting what is important and what is not. I think science is really important in terms of how we decide our policies. Very often an MP like me will need to know the science behind climate change, global warming and hydrocarbons because it is very important to my own constituency. (MP 3)*

Parliamentarians with a scientific background also recognised the need to have a diversity of views represented as well as some insight into the scientific process.

> *I am a scientist so I have a slight advantage over most of my colleagues but you can only be a specialist in one thing and so you need to be able to make judgements and you need to have an impartial source. (MP 15)*

iii. *It is important for parliamentarians to have an impartial analysis of scientific information because this enables decisions to be based on evidence and not ideology/sensationalism, and enables policymakers not to be swayed by misrepresentation: getting the facts straight*

Parliamentarians emphasised the need to separate facts from values to avoid ideologically or interest led decision making.

> *Politicians arrive in politics because of their prejudices in a positive way and their ideologies and yet we learn from Archimedes is that when you have an idea about something the important thing is to test it, so a hypothesis needs to be tested and basic scientific, evidence checked approach to policymaking that actually works rather than ideologies that just pretend to work. (MP 11)*

Parliamentarians pointed to the media and campaign groups as providers of biased information. They also criticised those who relied solely upon media reports and promotional material for information and stressed the need to have an independent source that could help them distinguish facts from values and set the bar on quality.

> *A lot of Peers pick up what is in a newspaper and that skews their interpretation when they [go] back to read another paper, if they do that. The difficulty is that often articles in the newspaper are biased and particularly on subjects that are complex. (P 2)*

The press carries a lot of scientific information and some of it is very good...but there are irresponsible articles that catch the headlines and I think it is very important to have information that is sort of sober and not intended to capture the headlines. (P 10)

Very often science is misrepresented in the media. The media often get the balance wrong. (MP 3)

Some parliamentarians highlighted the importance of receiving information that did not come from lobby groups:

[Parliament] relies very much on outside bodies which have a vested interest in one aspect of a bill ... just follow the money and you can see where the information is coming from. We do need information that isn't dependent upon whomever the backers are sourcing the information. (MP 22)

One of the difficulties I find is distinguishing information from lobbying and knowing that something is impartial means that you don't have to worry about that. (P 4)

A few MPs questioned whether it was ever possible to obtain truly "impartial" information, stating that no information is value free.

I would always slightly qualify the word impartial because to be honest objectivity is a goal not necessarily something you reach. (MP 12)

We have to legislate on issues that science has a bearing on, sometimes they are directly about scientific aspects of public policy...I think it is important you have a variety of different sources and I am not sure I believe the concept of independence, wholly independent advice. I think you need multiple sources of which POST is one. (MP 24)

Parliamentarians recognised that they will be in receipt of biased information, but also thought it essential to have access to a trusted source they could consult so that they can counter, and weigh up, some of the bias.

Because we often deal with complex subjects which have to be absorbed very quickly often from a standing start in order to deal with debate or items that come up in the public arena and it is important to have a variety of points of view so we can assimilate, and what we do is assimilate information and some of that will be partisan and come from pressure groups, it will come from business of constituents or it will come from the public press and it is useful to be able to have a neutral, factually based analysis that you can trust. (MP 25)

From a parliamentarians' perspective, good decision making means assimilating complex and competing claims and taking a balanced and informed view.

I just want to see something coming from a body that hasn't got any need to give you an angle on something. It's the impartiality which is important. It is being a politician, but you are also slightly sceptical when somebody says here are the facts about this and you say, well I think I would like to check those facts out. (MP 17)

I think some of the most trusted information that I get is from the house authorities...we do have this feeling that the house gives you the best advice that is available and not party political. (MP 19)

It is important to have a variety of points of view so we can assimilate information and some of that will be partisan and come from pressure groups, business, constituents or the public press. It is useful to be able to have a neutral, factually based analysis that you can trust. (MP 25)

 iv. *POST plays a key role in providing impartial information on science*

For many parliamentarians, assimilating complex information is time consuming and they looked to POST to fulfil this function.

MPs get bombarded with lobbying material from all sorts of people particularly when there is a bill coming before parliament, some people are never very sure of how to evaluate information, scientific information and it is very important when that happens that there is an impartial, factual service available to advise people about science and

what is known and what isn't and of course POST doesn't always get it right, but it gets it nearly right in terms of being impartial and that is why it is so valuable. (MP 20)

Parliamentarians expressed satisfaction with POST services for providing independent advice to parliamentarians. They also commented on the accessibility of POSTnotes, which aided their comprehension.

The key thing is that POST is independent and I have to say that I read their publications and I think they are excellent, just the right length and they are impartial and they are clear and I think it is excellent to have that. (MP 18)

I think probably these subjects come up fairly regularly and a simple format like you do in the POSTnotes is actually quite straight forward and easy to read and you get the information quickly, without having to trail through lots of papers. (P 22)

One Member said POST played a role in flagging up issues he should be aware of:

I read [POSTnotes] because I have been sent it from POST and it must be important, so I need to read it otherwise this issue is going to come up and I will be uninformed, it is that important. (P 3)

Having access to a service like POST gave parliamentarians the confidence to debate complex subjects they might otherwise be intimidated by.

From my own point of view as a non- scientist – I am a history graduate and a lawyer – the details of science are beyond me and there is a huge ignorance about many matters of science and scientific importance. When I have to discuss BSE or the effects of pollution, I need scientific assistance in order to make me able to explain the public policy that may be a consequence of these scientific events. (M P8)

Impartial advice is always good on issues where parliamentarians don't come with their own expertise or knowledge and especially where they may be intimidated by the subject matter. (MP 2)

POST also met its original mandate of providing a briefing service to parliamentarians with an interest in science and technology.

The argument for getting POST going is the same as the argument which was advanced for why it still exists: it is essential to have a briefing system for parliamentarians interested in science and technology. (P 13)

Question 4: Do you think that it is important to have a source of information on science *especially written* for parliamentarians*?*

Over 90% of parliamentarians responded positively when asked if there should be a source of information on science especially written for them.

Figure 7: Interviewees' responses to Question 4
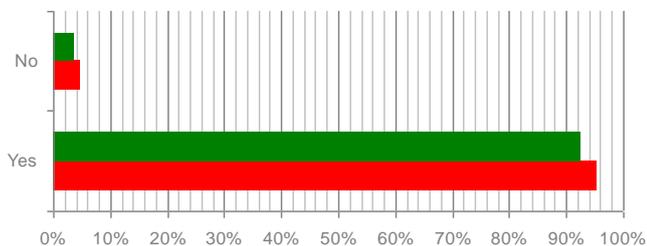
When asked why, parliamentarians framed their answer in relation to the volumes of information they receive and are expected to respond to on a daily basis. In the context of their daily activities, they valued accessibility and conciseness. They also described Parliament as having its own language which any briefing information should use if it is to enjoy a wide circulation.

Theme 1) yes – because parliamentarians need accessible information

Parliamentarians repeatedly referred to the hectic nature of their role and therefore preferred information briefings that were short, to the point and written in layperson's terms.

> *[POST] recognises that we've all got a short attention span and it is written in a readable form. (P 2)*

> *I think it that means that you get it at the right level, i.e. not too much technicality, but enough to form an intelligent view. (P 8)*

> *If you look at the volume of information that MPs get and their likelihood of retaining a great deal of it, other than what is in their immediate working knowledge, is low. I think that having something that is tangible has got more of a chance of being recalled when the time comes to apply that knowledge. (MP 28)*

Other parliamentarians commented that information need not be especially written for them providing that it was written in layperson's terms and presented in an accessible form.

> *Does that mean it is written in language that only idiots can understand. If you do mean that, then probably yes and certainly in my own case. But unquestionably knowledge is vital and explanation is vital and people can explain science in a way that non-scientists can understand whether they are parliamentarians of Parliament or not, that is a bonus. (MP 8)*

> *I've never been sure that it is as narrow as that, I think it is actually written for the intelligent lay person and that it could well be distributed beyond Parliament. [referring to the POSTnotes] (P 17)*

In light of their busy schedules, parliamentarians found it difficult to find time to sort good information from bad. They therefore appreciated help in ascertaining the relevance and quality of information.

> *You've got busy people who haven't got time to sort through what is relevant to them and so, to have somebody do that in the first instance is extraordinarily helpful and results in being taken seriously and factored into their own knowledge base and their own judgement. (P 18)*

Theme 2) yes – because the producers of information need to understand the context in which parliamentarians work and to speak parliamentarians "language"

Many parliamentarians stressed that they had unique needs and that it was important for them to receive information from a source which understood these needs and was geared towards legislators:

> *Scientists generally cannot write. They understand the issue but they cannot communicate it, so that is an important part because communication is our business. But, secondly, it is important for our business that people are able to understand the context in which information should be used and therefore the political small p arena in which we operate, and the objective parliamentarians will have, and the pressures upon us. (MP 25)*

> *I think our requirements in Parliament are different. We can make assumptions on which we base our views and influence legislation, which maybe based on incorrect information if we don't have good information geared towards just us. (P 12)*

> *We are essentially legislators or reforming legislation as it goes through the Commons and therefore we are not involved in primary science or the analysis of secondary science. We are looking at it from the point of view of legislators. (P 20)*

> *The vast majority of MPs are not scientists and I think if you have got a dedicated unit who know the capabilities of their audience….. (MP 16)*

Parliamentarians highlighted that it was not only important to receive information in a language they could understand, but also one they could use and present:

> *We have a language of our own and I think it is important that things are written in the language that parliamentarians are going to understand. We are a busy lot and so the more that we can get information which is easily digestible in a language we understand and usable in a language we can present, then yes. (P 6)*

> *I think [POST] is helpful because it is written by people who know the environment in which politicians operate and about parliamentary procedure. (P 20)*

> *The language that is chosen and the way that it is interwoven with the regulations and legislations going through, it is important that it is in the language that humanities graduates and LIBs can understand rather than from a scientific, rather than laden with scientific jargon. (MP 22)*

Theme 3) POST provides accessible information for parliamentarians

POST was commended, by Peers in particular, for its ability to write for a parliamentary audience by being both accessible and jargon free as well as knowledgeable of the political landscape.

> *It is important to have something which I think on the whole the POSTnotes do, which is not assume too much prior knowledge. (P 4)*

> *Parliamentarians need a concise, accurate and independent source of information. There are lots of other sources but they are difficult to seek out and probably with POST you can choose the topics that are most relevant at the time. (P 5)*

> *We need things set out in a clear way and as far as possible with all the technical terms explained and I think I very much like the layout of the POSTnotes. (P 10)*

MPs, however, reserved some criticism of the POSTnotes, stating that they found them too complex.

> *They are not usually written in a language that we can understand because we are not all scientists. (MP 5)*

Question 6: Do you think that Parliament needs to increase the *quality* of information it uses when making decisions on issues with a scientific content?

When asked about the quality of information used in Parliament, parliamentarians gave a mixed response. Just over 40% said that the quality of information needed to improve, whilst over 45% disagreed. Fewer than 15% said they "didn't know". Whether they answered yes or no, it was commonly acknowledged that there was good quality information available, but that they did not necessarily know how to access it, partly because they are so inundated.

Figure 8: Interviewees' responses to Question 6
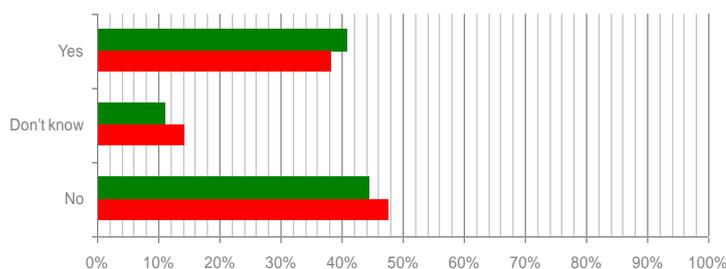
Those who thought the quality of information used by Parliament needed to improve (answering "yes") gave a number of suggested reasons for the current low quality of information used, that tie in with their responses to the previous two questions.

However those who answered "no" to the above, actually took the question to mean "does the quality of information *received* by parliament need to improve". Thus different interviewees have interpreted the question in different ways. However, some broad qualitative themes can be identified:

Theme a) quality of information used by parliamentarians is low

There was a general feeling that parliamentarians sometimes fail to deepen their understanding of topical issues because they do not have the background or inclination to develop their knowledge base. Consequently, the quality of information used in Parliament was judged to be low.

> *If you look for example at the debate that is going on about future energy there is a basic lack of understanding in parliament about simple arithmetic, the scale of some of the numbers that are being talked about. (MP 12)*

One MP talked about changes in Parliament and the loss of dedicated researchers, which affects the way MPs absorb and communicate information.

> *The other thing to bear in mind, relatively few MPs have dedicated researchers down here doing background work for them, a lot of MPs concentrate a lot of their resources on casework and you are really competing for MPs time. At one stage, I should think probably ten or fifteen years ago, you had a lot of people saying "I'll send my researcher along" who is a young bright person and they'll gut the basic subject and tell me the things I need to know, now, MPs don't have that kind of person down here, they might have an intern. (MP 12)*

Another MP criticised colleagues within Parliament who tended to speak on numerous topics and not just their specialty, which pointed to a larger issue about how to judge the quality of information used in Parliament (see point b of this section)..

> *I've just had a conversation with an MP who is a scientist, he is a chemist and as I said before MPs who have a small amount of knowledge tend to try and give the impression, not deliberately, but give the impression they know all about the subject because they have a small amount of information, more than the general MP or the public and that can be quite dangerous because there is a big political issue here, the question is have we been given genuine information, appropriate information, adequate information and how can we as politicians make informed decisions. (MP 6)*

Theme b) there is good quality information but parliamentarians are not using it, partly because they are inundated

Parliamentarians pointed out that there is good quality information available, but they are not always aware of it and it is easily for them to be uninformed. As highlighted earlier, parliamentarians, in particular MPs, complained about being bombarded with information to the extent that it prevented them from actively seeking it from other, more credible sources.

> *[Parliament] needs to do the job much better and a little bit differently using information that is available. If that could start here and now, it would be an improvement. … at the moment there is lots of information available, it is just that parliamentarians are often unaware of it. (MP 19)*

> *I think it is terribly easy for people to be uninformed. (P 19)*

> *I don't think we are short of information and the quality of information is obviously an issue. The trouble is whenever anybody answers yes to that sort of question, what they finish up with is about ten times as much information, but not necessarily ten times as much understanding, so I don't want to trigger a great flood of scientific stuff. (MP 27)*

Parliamentarians complained that whenever an issue rises to prominence in Parliament, they were targeted by campaign groups resulting in an overflow of information.

> *I get sent god knows how many annual reports and I never read them. It is about saying look this is relevant to this, here are the arguments. With something like the embryology bill for example, we got hit with tonnes {of} stuff. (MP 4)*

> *I don't think until you've been an MP you actually appreciate just how diverse the sources of information are and how keen possessors of that information are that you should have it. You just shut down because there is that much information. I now employ somebody whose main job is to open the envelop and drop it in the bin and so if you ask me if we need more scientific information, I am not sure I want to answer yes to that. (MP 27)*

Theme c) POST plays a role in helping parliamentarians distil all this information, but needs to be more visible

Parliamentarians advocated a service that distilled information and provided "route maps" to guide them through topical issues. While they thought POST provided this service, they thought it could be more visible:

> *I think we need to have some route maps, and I do think the brief POST reports give quite a good route map, at about the volume per issue [that] a MP can take in, unless they have to do some particular research on an issue, and obviously that MP would probably drill down further using other sources. (MP 27)*

> *… I wonder if there is some way to make MPs aware that there is something available…. When I go downstairs and look at the library to see what briefings there are from debates, I have never seen anything from the POST group that has caught my eye. (MP 7)*

As one Peer commented, the problem is not with the quality of information, but the quality of dissemination of that information.

> *Improving the quality of information provided is much too low an objective; it is improving the quality of communication. You have to look at reception as well as provision of information. The same reason that transparency is the wrong goal in public policy. You don't want transparency, which is easy. It is the antidote to secrecy, you actually want communication and that is why I would certainly like to see POST have a rather broader audience. (P 17)*

One parliamentarian recommended increasing the role of POST, making it the definitive information source on science and technology.

> *I would expand POST's role, in terms of science and technology and engineering, those sort of key disciplines, it does have a key role in being able to pick up policy initiatives and to be able to look at the science behind them and to explain that to members. I think the library does a good job in terms of legislation and what we don't get of course is a back up*

analysis of research that helps members make a decision, and if you take for instance the scientific developments in terms of abortion that we did two years ago as a report and again it would have been really helpful for POST to have done a note on that and it didn't at the time. (MP 26)

Question 8: How do you like briefing information on science presented to you?

Parliamentarians were asked if they preferred a particular format for scientific briefings. Most reasserted the need for information to be delivered in a brief and accessible form. In terms of format, they talked about the benefits of hard and electronic copy and oral presentations. They also endorsed the POSTnotes as a good example of a short and accessible briefing available in both hard and electronic copy.

i. Hard copy

Most parliamentarians still preferred to read hard copy. A prime reason was habit; another reason was the portability of hard copy. They could potentially read paper copies while travelling to and from Parliament. Peers, in particular, emphasised the portability of information.

> *Written, short. I still like hard copies of information that you can read. (MP 5)*

> *I think most MPs if they are honest about it would probably prefer a front sheet with subject, five bullet points, really short not even long sentences about the five points that are made in this paper then they can flick through and find five points from the data behind it. Or maybe the main argument of the paper, or very short on the front, so that you can have a quick scan and assimilate that you can disagree and go and check somewhere else. (MP 11)*

> *Theoretically, one should prefer an electronic copy, but if you are moving around all the time it is not as easy to get access to. (MP 19)*

> *I find it much easier to read hard copy, especially on the train, you can read it better. (MP 24)*

Peers asserted their preference for hard copy complaining that they found reading from the screen difficult and doubted their technical proficiency using and retrieving information for electronic resources.

> *The great thing about something written is that you can take it in your bag and read it on the train or on the tube in between stops. I can't stand stuff emailed, I loathe it. (P 2)*

> *The thing about the POSTnotes is that someone is making a judgement that this is so important that we all ought to know about it, so the POSTnotes are appropriate. I like it printed, I like to sit there and read it. I am of a generation where I can't easily read off screen. (P 3)*

> *I find it easier to read in a written hard copy form because if it is anything of any length then I am deterred from reading it on the screen because it is too much and too frightening. (P 4)*

> *I find it very difficult to take a piece of information and read it from the screen and absorb it and part from that I want to take it away with me and mark it up and do whatever I want to do with it. (P 6)*

> *If it were web based I would print it because it is quite useful to have and you can take it around and think about when you are drafting questions. I think sometimes an oral presentation is invaluable because then you can have question and answer. (P 12)*

ii. Electronic copy

Whilst parliamentarians said they used the internet as a source of information, few like to read from the screen. Electronic copy was recognised as easier to store and manage, and countered the accumulation of paper.

> *I like everything electronically...MPs get a lot of paper. (MP 6)*

> *Personally I prefer short sharp summaries that can be electronically sent to you. (MP 17)*

> *We tend to get overwhelmed electronically, but at least I never lose it electronically. (P 5)*

iii. Oral presentations

Oral presentations were seen as highly informative and engaging, particularly because parliamentarians could ask questions. However, given the time pressures parliamentarians are under, most found it problematic making time to attend presentations.

> *For most MPs it is like a 52 week freshers' week in which people are bombarding you with stuff they want you to read and I have just been to a session on geo-engineering which is very interesting and at one point and I've been my party's energy spokesman for six years, not for the last 3 years but I still have an interest in some of those very important issues and that is why I went and for today I probably had seven or eight different invitations which would have been interesting to go to but weren't on the radar for spending any time on. (MP 27)*

> *A face to face briefing is always a lot better than just sending people an annual report or emailing, email is the next level down as far as I am concerned. (MP 4)*

> *Clearly. I haven't got time for oral presentations, I need a brief document that I can understand which provides signposts to other places if I need to know more. (MP 8)*

> *I think sometimes an oral presentation is invaluable because then you can have question and answer. (P 12)*

The following Member sat on the Science and Technology Select Committee and found the committee's evidence sessions very useful. However he felt that most members do not have time to delve deeply into scientific issues and want their information so distilled that they do not get a full appreciation of subtleties e.g. scientific uncertainty

> *It is frightening how rarely I am presented with scientific information. It is just hard to get MPs to sit down and take the time to go through anything remotely challenging from a scientific point of view, they want it turned into an executive summary which will not necessarily do justice to the nuances and subtleties and uncertainties that any piece of research will still have. As select committees, we have experts in front of us so that's helpful and we can ask the questions and they can present to us and point to questions we may not have thought about and that's one way of making it accessible, at least you can sit there and listen and have some exposure to it and try to understand, but it is a shortcoming of parliament. I think we are weak on scientific issues and there are a limited numbers of members who take a continual interest in scientific matters in general and those of us with a particular policy area interest will try to engage in the science to varying levels of success. (MP 10)*

iv. POSTnotes

POSTnotes represented an excellent example of a scientific briefing by being well researched, detailed, and accessibly written.

> *The POST briefings are extremely helpful…that is a format that works because it is straight forward, it has a lot of source material and it is easy to digest. Part of the problem in science though and this is where the online element needs to be thought about. It is very easy if you google a particular topic of the day to get misled by bad science on the web and one thing that POST could strengthen is how it establishes link into subjects on the web by making sure that the sites that are linked into are properly peered reviewed. (MP 13)*

> *I like the POSTnotes, I think they are very good. It is not too much because that is one of things we get is an information overload here particularly from emails, on interweb. I been here 22 years and even in that time the information overload has become horrendous. (MP 15)*

> *I think the format that you got with boxes and blocked off bits with key facts is fine for me and I usually, they come in the mail so they are hard copy or you can pick them up in the library. I'll save that for the train journey home and I will read that. (MP 16)*

> *I mean that POSTnotes cover all my standards on this. Some better than others. Occasionally, I think, oh they rather ran out of steam on side three but generally I think they are very good. (P 17)*

What information do parliamentarians use?

Question 9: Have you used any of these POST services in the last year?

When asked what POST services they had used in the last year, most parliamentarians said they had referred to the POSTnotes more than once. 30% of MPs and 42% of Peers had also consulted POST briefings to select committees. Whilst they had heard of other services like the website, seminars and podcasts, few said they had used them, often stating that they were too busy to attend seminars and weren't technically proficient enough to navigate the website and download podcasts. This latter reason applied to Peers in particular, who as shown above felt more comfortable using hard copy.

Figures 9 and 10: Interviewees' use of POST services (MPs and Peers separately)
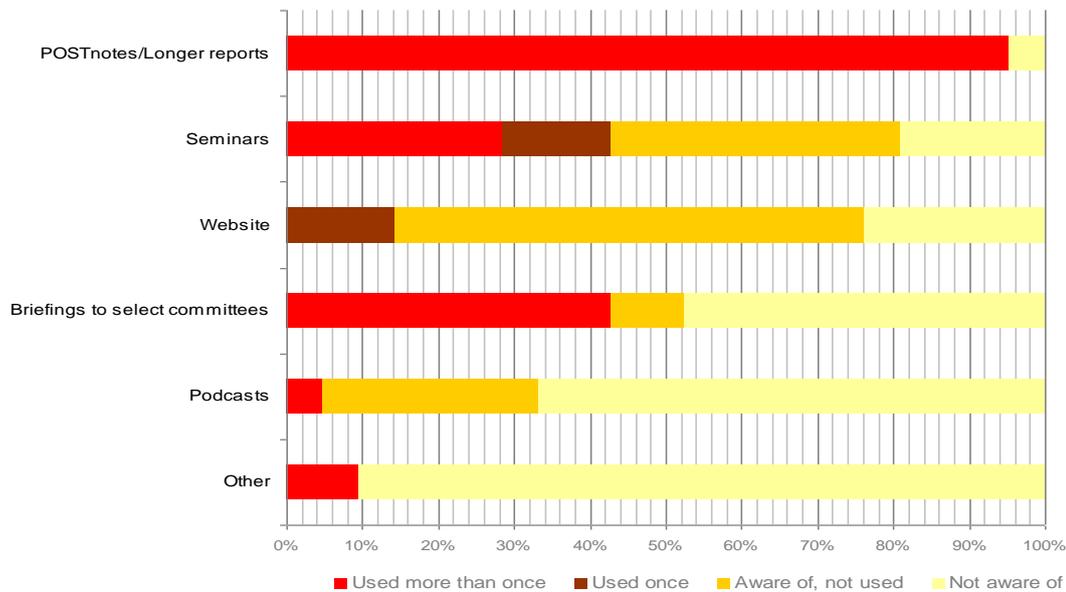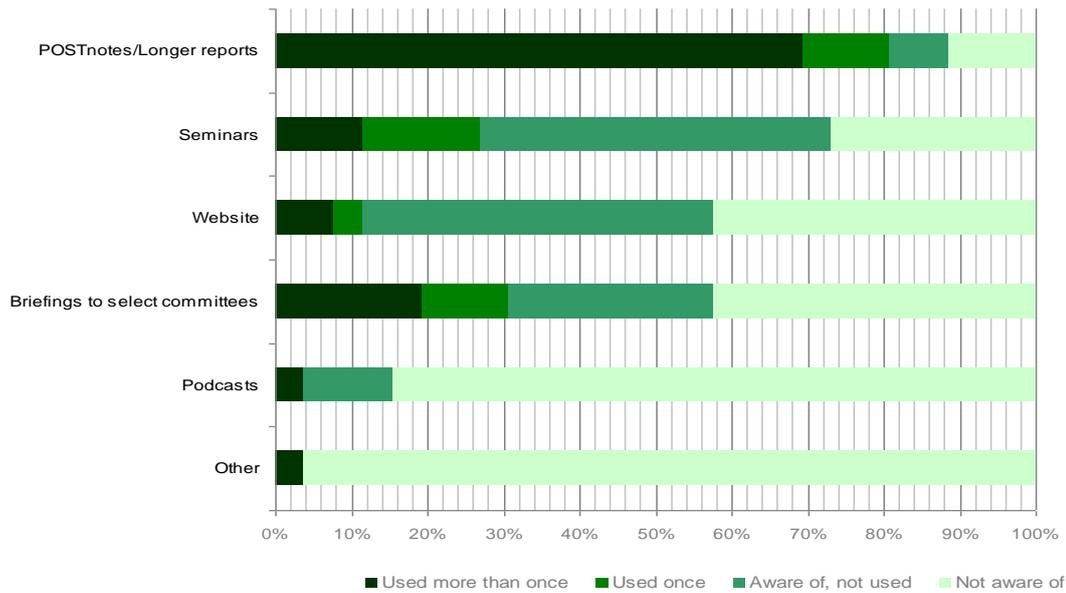
Question 10: At what stage in your research would you most likely use a POSTnote?

Parliamentarians were asked to describe their research process and the point at which they would draw upon a POSTnote for information. Over 50% of Peers and 40% of MPs said they would use it at the beginning of their research process as a point of entry into the field and to garner background knowledge. Cumulatively, over 70% of parliamentarians would refer to a POSTnote at some point in their research. They would also follow up references given in a POSTnote (see question 15). In the graph below, MPs are shown to make slightly greater use of POSTnotes in their research. It is worth bearing in mind that some MPs employ researchers and specialise in areas other than science, which may have affected their answer. Having stated that they are unlikely to include POSTnotes in their research does not given an indication of their usage of POST as many MPs said they read the POSTnotes out of general interest (see question 18).

Figure 11: Interviewees' responses to Question 10
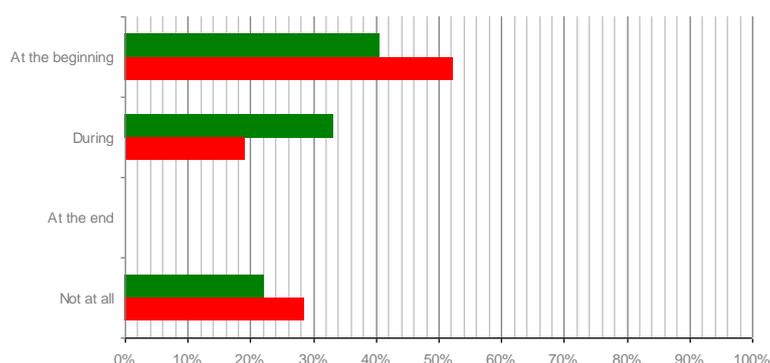
Parliamentarians were asked to qualify their answer. The themes below correspond to the chart above; starting with those who referred to a POSTnote at the beginning of their research, to those used it during, and those who never used one. Notably, Peers were more likely to keep a back catalogue of POSTnotes for their own research purposes and they would consult this back catalogue as issues emerged in Parliament. This led to Peers recommending that an index system was put in place so that they could easily trawl POSTnotes published over a twelve month period (see recommendations).

i. At the beginning

POSTnotes were considered an authoritative source of information that helped to "kick start" the research process.

> *Early on, for example I took part in the debate for systematic review and taxonomy for which a POSTnote came out when we began the report in the sub-committee and then I kept that and when I took part in the debate sometime later, obviously I referred to that, it had some useful statistics. It predated our report and so it provided the background information. (P 13)*

> *At the beginning, absolutely, you cannot start working about a research project of any nature unless you know what the background information is all about. (P 7)*

> *I would go first to the Library to see whether there was a POSTnote on that subject or not and if there wasn't I would either directly call them or ask the Library to phone to ask if there was a historical POSTnote and if there wasn't that and I would say why wasn't there that. (P 20)*

> *It depends how people research, I love research and therefore if it something that has come out that I know is of interest to me I will file it, then if I want to make a speech on something and I will think about all the pieces of paper I have got, and so I pull it all together right at the beginning and then as I am going through I will work on it. It depends on how people research, but for me it is part of the initial gathering of materials. (P 6)*

MPs that consulted POSTnotes early on in their research were eager to endorse their value.

> *Very early, day one. I would say it would kick start but it would be one of three sources that kick start, library note, POSTnote and then alongside, I will always work out what my own prejudice or view is first and then I'll test it against all these bits. (MP 11)*

> *Before looking at nanotechnology or something like that I would look at the POSTnote because that would give me a very good, intelligent, factual summary in a short format which is useful to me. I might also use it to get some stats if I am doing something I know something about like a Bill or something then you either want a couple of extra statistics and I would look to them for that. (M P24)*

> *At the beginning, always at the beginning. You get a letter, normally from constituents and you think well I know nothing about this and you do two things, you ring the library for a briefing or you ring up POST or you look at the POSTnotes that are there and that is the starting point, always (MP 25)*

> *For me it tends to be at the beginning, for some colleagues particularly someone with no scientific literacy it tends to be the end product, I mean, they are by definition pitched at a fairly simplistic level and they have to be…The norm would be at the beginning. (MP 13)*

> *Well on the whole I have a box full of POSTnotes that go back about five years and what I would tend to do is flick through to see if there is anything relevant and that would probably be at the start. I would start by gathering up a host of other information. So you would gather up all the white papers and you would do that and probably google and see what came up through google. (P 15)*

ii. During the research process

Parliamentarians who said they used POSTnotes during their research said it was one of many sources they would draw upon.

> *Well, what would kick start me would be the issue that was coming up, either one that I have initiated or by somebody else but it would be very specific to an occasion or the second reading of a bill or something, and then I go to POSTnotes straight away. (P 10)*

iii. Never used a POSTnote in research

Those who never relied on POSTnotes to support their research were honest about their reasons why. Of those, MPs admitted having never given POST much thought, either because science and technology was not in their portfolio of interests or because they sought information from elsewhere. Peers pointed out that their role gave them access to key people and information so therefore they didn't necessarily need to consult POST.

> *I do some health stuff on genetics and things but even then they've lost me, so they tend to go in the bin. So I wouldn't necessarily think of going to a POSTnote. (MP 3)*

> *I've never been particularly aware that I have sought out a POSTnote on anything ever. I would generally have my researcher do the initial shift and then I will engage with as much of that as I can. It rarely comes up really. I am vice-chair of the Coastal and Marine Issues Group which has got a lot of science in it going from water level rise to coastal erosion. (MP 10)*

> *To be honest I have not used the POSTnotes for research. I put down technical questions on sea pollution and on climate change and stuff like that but they haven't been spurred by POSTnotes but they were spurred by a Horizon documentary. The only reason I read them is because they look interesting. (MP 16)*

> *So I do a lot of road transport and engineering and stuff like that so if there is a particular issue. I have a pretty good idea anyway, and I know who to speak to, the expert, to get to the bottom of it fairly quickly. (P 3)*

I wouldn't. I suppose I might ask the Library if there was a POSTnote on something. I read them as they come and if I am interested in one I might file it. (P 8)

I used them for background. I don't use them for specific issues and when something comes up in a bill that I focus on I think I have to get closer to the horse's mouth. (P 17)

**When you are seeking information on a science based issue which sources are you most likely to use?**

POST was regularly consulted, with over 70% of MPs and Peers stating they would use POST.

The Libraries and government reports registered as the most likely sources of information for both MPs and Peers. Over 90% said they regularly used both. MPs were more likely to use other internet sources and the mainstream media, whereas Peers were more likely to consult individual scientists and POST. Whilst they were less likely to consult individual scientists, MPs were more likely to refer to the specialist scientific press. This might be a reflection of the kinds of access Peers have to the scientific community as a number of eminent scientists are part of the House of Lords.

Other sources included being part of a political community that likes to debate. One Peer said that gossip, or "knowledge by rumour" was an important source of information. Many of the Peers felt privileged because they had access to influential people in society and could draw upon a wide range of expertise. MPs also stated that they sometimes consulted family members and constituents.

Overall, Peers appear to make more use of a wider range of information sources than MPs and this was attributed to the way in which the working practices of MPs and Peers differ. Peers often commented that they had more time to cultivate their interest, whereas MPs have more responsibilities and busier schedules.

Figures 11 and 12: Interviewees' sources of information on science and technology (MPs and Peers separately)
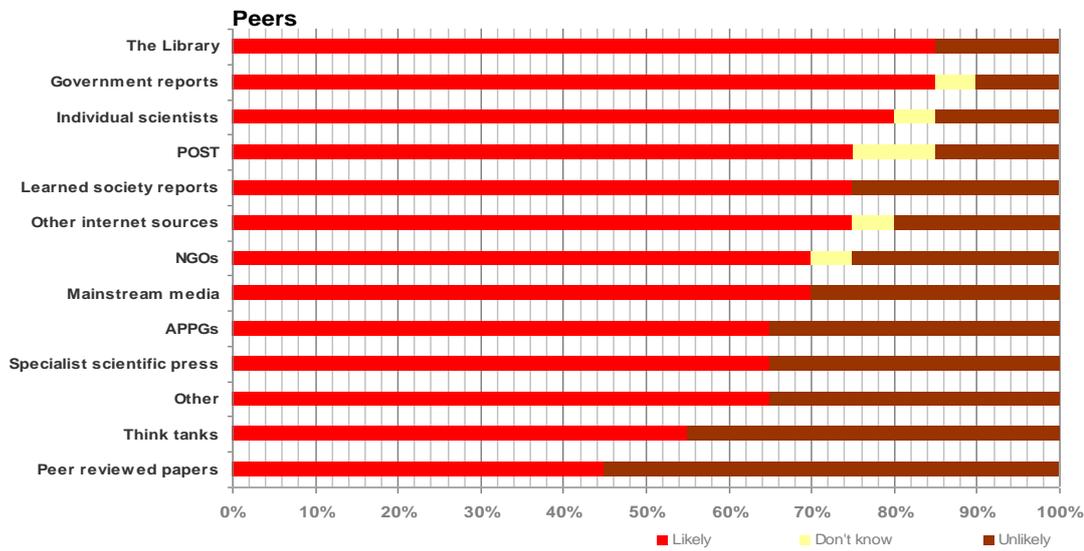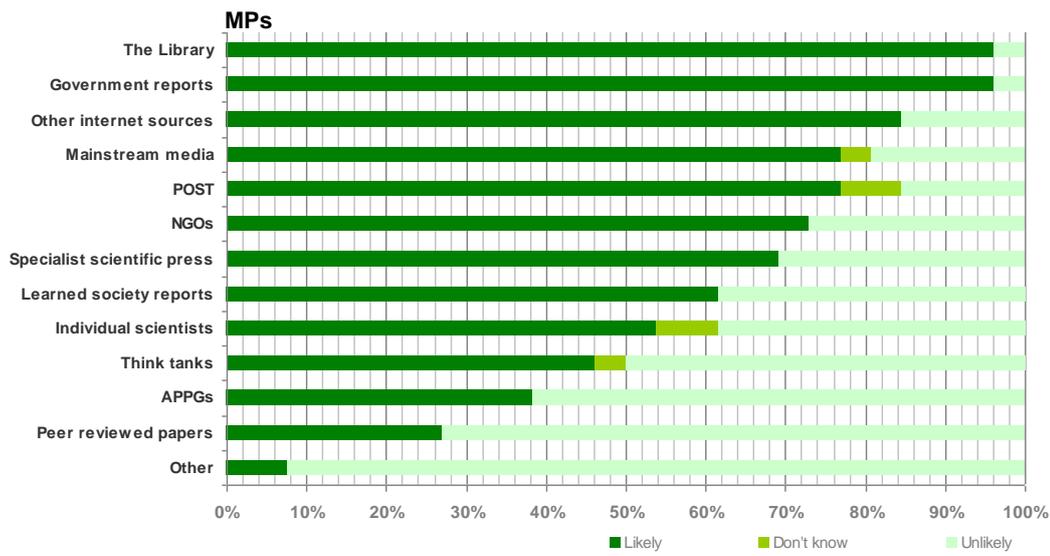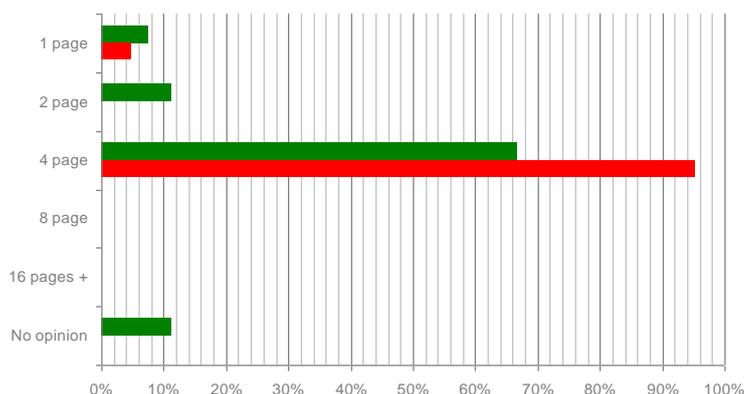
The POST Note

Parliamentarians were shown a randomly selected POSTnote and asked to comment on the ideal length of a scientific briefing, level of detail and its overall style.

Question 13: what do you think the maximum length should be for a scientific briefing?

The majority of parliamentarians, 95% Peers and 64% MPs, stated that at four pages the POSTnote represented the ideal length of a scientific briefing. All advocated conciseness, which is reflected more in MPs responses: 7% said that it should be no more than one page and 11% said 2 pages should be the maximum.

Figure 13: Interviewees' views on the ideal length of a scientific briefing

Question 14: What do you think about the level of detail in this POSTnote?

The majority of Parliamentarians thought that the level of details in the POSTnote was "about right". However there was some difference between responses from Peers and MPs. While over 90% of Peers endorsed this viewpoint and the remainder had no opinion, 14% of MPs said there was too much detail.
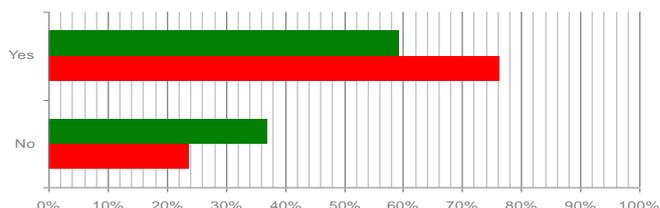
Figure 14: Interviewees' views on the level of detail in POSTnotes
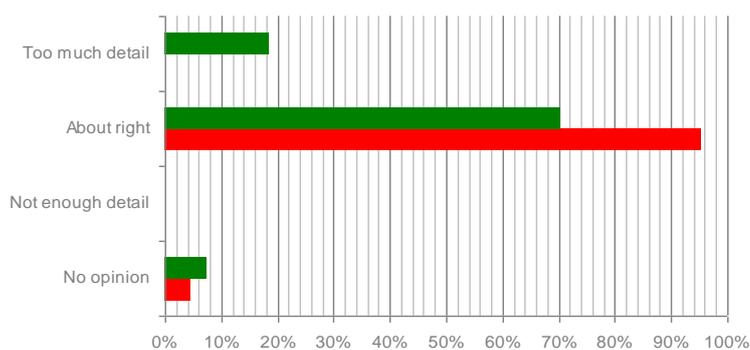
Question 15: Would you or your team likely to follow up the references?

59% of MPs and 76% of Peers answered "yes" – that they would follow up references found in a POSTnote.
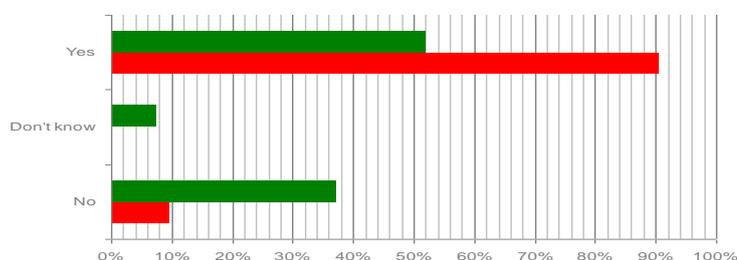
Figure 15: Do interviewees follow up the references in POSTnotes?

Question 16: Overall, does the style of the POSTnote make you want to read it?

Peers were very positive about the readability of POSTnotes, 90% answered "yes". MPs were slightly less enthusiastic. 52% said "yes" and 37% said "no", while 8% were undecided.

Figure 16: Interviewees' responses to Question 16

Question 17: How can we design this to make you want to read it?

Parliamentarians were asked to suggest any improvements to the design of the POSTnotes. Their responses were organised into the following themes: better summaries, more graphics, better headings, more striking presentation and better strategic thinking. Peers were largely supportive of the style of POSTnotes, whereas MPs were less satisfied and made more recommendations for improvement.

i. Better summary

Parliamentarians commented that the front page should contain a better summary of the overall POSTnote taking the reader through to conclusions and pointing out further sources of information. This way, Members could immediately grasp the relevance and importance of the subject under discussion.

> *The first page should have the conclusions on it. So if you look at box one, I would want to be able to grab before going into a chamber, have read the conclusions before I get to a debate, because sometimes a MP only has that amount of time. What it should always do is point you to other sources for more materials, if you wish to do that. (MP 6)*

> *I think it is quite well laid out. I would probably try to get a short summary at the start and go straight into it pretty much and I would do a short summary at the start, not just that first paragraph but something that said these are the key points in here. (MP 12)*

> *Instead of having smaller font size in the boxes I would make the boxes more readable because it is a bit counterintuitive that the sections that you are being directed to are actually harder to read. And I would say that bullets points at the start, giving the problem and then what the note is seeking to do would be very useful, that would lead me on. (P 4)*

Everything should be on page one with the amplification of the following pages. (P 14)

ii. More graphics

Parliamentarians said they preferred graphic representations that break up the text and preferred statistical data presented in tabular or graphic form.

I think it is helpful if there were another couple of graphs in it breaking up the text, but otherwise I think it is good. (MP 5)

It is just, I guess to keep it brief to four pages is fine. It is not very eye-catching, a few more pictures might work better. (MP 21)

Some have more diagrams in them than this particular one, and I always think diagrams and charts are useful. (P 12)

I would always favour putting information in a tabular form, either graphs or tabular particularly if you are pointing out long term trends. P L13)

iii. Better headings

The three MPs and one Peer who had never heard of POST and admitted that they did not identify POSTnotes with scientific information. They recommended making the issue under discussion more visible and appealing.

I think that phrase POSTnote means nothing to me, I don't think of somewhere called POST, whereas if it said science, House of Commons science briefing I might look at it, but the word POSTnote means absolutely nothing and I think of the postal service. This and the title, the whole emphasis when you look at this is that is a POSTnote, instead of the emphasis being cervical cancer, so if that was in the library and we were having, cervical cancer was topical and that was in the position where my eye could fall on it then I would undoubtedly grab a copy or in the various, you often see the most recent library briefings in these stands, there is one in Portcullis House and there is one over in Parliament or there must be in different buildings, so I actually walk past them and that is quite a catchy colour but if I saw the word POSTnote I probably wouldn't take a look at it because again, I think they assume that we all know what POST is and what a POSTnote is. (MP 7)

I would probably make it clear on the top what it was about because POSTnote doesn't mean anything, doesn't say anything, so I would make it clear that it was information based on science and technology in bigger letters so somebody would read it and it was relevant to a particular bill. (MP 7)

There is nothing particularly wrong with the style. It is a lot of words, isn't it? But at the end of the day I would read it because of the headline, so that if it were a subject I were interested in, the layout wouldn't be particularly important. It was 4 pages of stuff on a subject I needed to know about, so the style is fine. It is not a clinching issue from me. (MP 17)

There is lack of summary and lack of bolding, you can't scan down it and find anything. It looks dull. I can't bring myself to read it. Bolding, headlines, key boxes. You need to be able to scan. Lobby organisations get quite good at providing information in a format. You need headlines of what the most important thing is to know and you need to be able to scan it and find it and work out in the text where the relevant bit is for information, whereas I wouldn't know where to start with that. (MP 23)

I think this is too big, the heading banner is too big, you've wasted space and you could use that space not to put in more words but to have a slightly larger font…I think the summary bit at the top could be a little bit longer. And I like the fact that it is not justified, that makes it easier to read. But this font is quite small. Some simple diagrams might be quite useful. It is very wordy. I have always found the purple depressing. (P 2)

iv. More striking

Many parliamentarians, particularly MPs, were very forthright about the overall style of the POSTnote stating that it didn't "grab their attention" and draw them into the issue. Their recommendations included seeking external advice from professional designers and imitating promotional material designed to catch the attention of readers.

> *The thing I didn't like about this POSTnote [futures and forecasts] is that there was nothing to grab your attention, it was just a lot of words and I think many people will be interested in looking at this in detail, in reality, for most MPs they will look at futures and foresight and it will go straight in the bin. There is nothing to grab your attention and I always think with the POSTnote there needs to be something that actually draws you into that front page. First of all I would always have a graphic or a picture on it. We are very simple human beings, MPs, and we are just like Sun readers. The beauty of the Sun is that there is something on the front page that draws you in because it then says see page 5 and it is the only way you get inside it and we are no different. All our political literature which the experts tell us most voters don't get past taking it from the door to the bin unless they see something on the front page to say, "Oh, I need to look at that". We need to have something on the front page that draws us in. (MP 26)*

> *If the boxes are the bits that are extra interesting I do not understand why you do them in smaller print. I would stick with the concept of the boxes because actually people read the boxes first and if that seems to throw up something that makes you go back to the main text and that would be fine and I would make the boxes much easier to read and perhaps take some advice from somebody who does this stuff professionally as to make it more readable. In the nice possible way, this is plan A of desk top publishing from about the late 80s and it could do with a bit of jigging up. I know that research papers have got a certain style about them with the abstract at the front that has to be a in a different type. We are not in the business of reading small PhD theses; we actually want information presented just a little more legibly and racy. (MP 27)*

v. Better strategic thinking

While most Peers endorsed the style of the POSTnote, one talked about the "central line of argument" and strategic thinking on the topic represented in the organisation and content of outline boxes and the body text.

> *I feel occasionally they have slightly lost the strategic overview and objective and there are too many boxes that don't connect very well to the central line of argument. Sometimes the boxes are very good and of course I knew more about this than some people did and I thought this could as serve as a primer for very many people and so I liked this one a lot. Sometimes I find that they are a pleasure to read like this one and sometimes less so and I don't think on the whole that is a reflection of the topic, I think it is just there is better strategic thinking in some of them than in others or the topic is riper or at the right stage of ripeness and occasionally you get one where you think, that really hasn't sharpened my grasp of what the key issues are and that is what I really look for. A good POSTnote leaves you having a sense of which are the settled and which are the debatable points. (P 17)*

How can POST best meet your needs?

Question 18: How do you or would you use information from POST?

When asked how they used POST in parliamentary business, over 90% of respondents stated that they used POST to "inform Parliamentary debate". 69% of MPs and 70% of Peers said that POST fulfilled their general interest and half of MPs and Peers used POST in their select committee work. Only a small percentage, 4% of MPs and 13% of Peers said they would not use POST at all.

Figure 17 and 18: Interviewees' responses to Question 18: how do or would you use information from POST? (MPs and Peers separately)
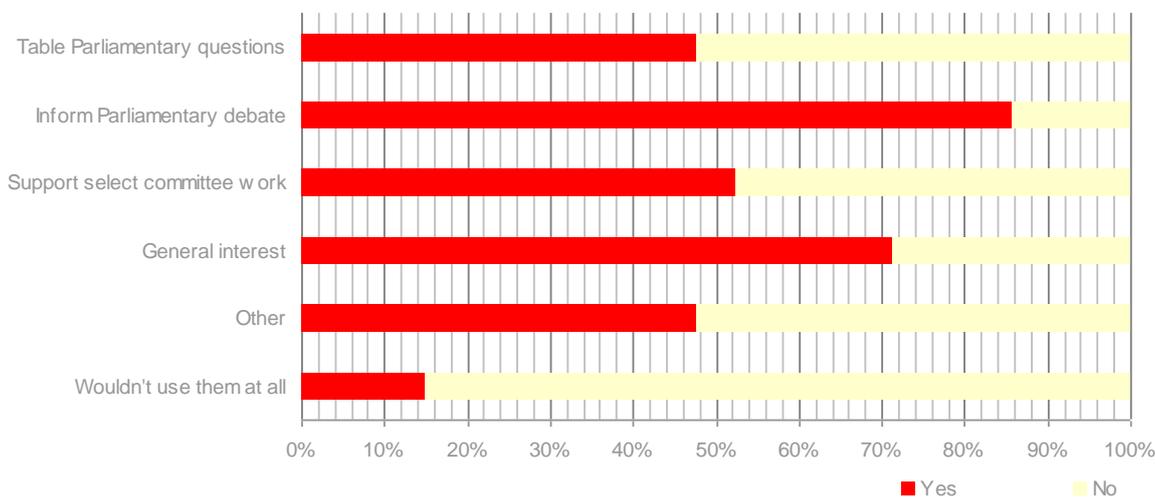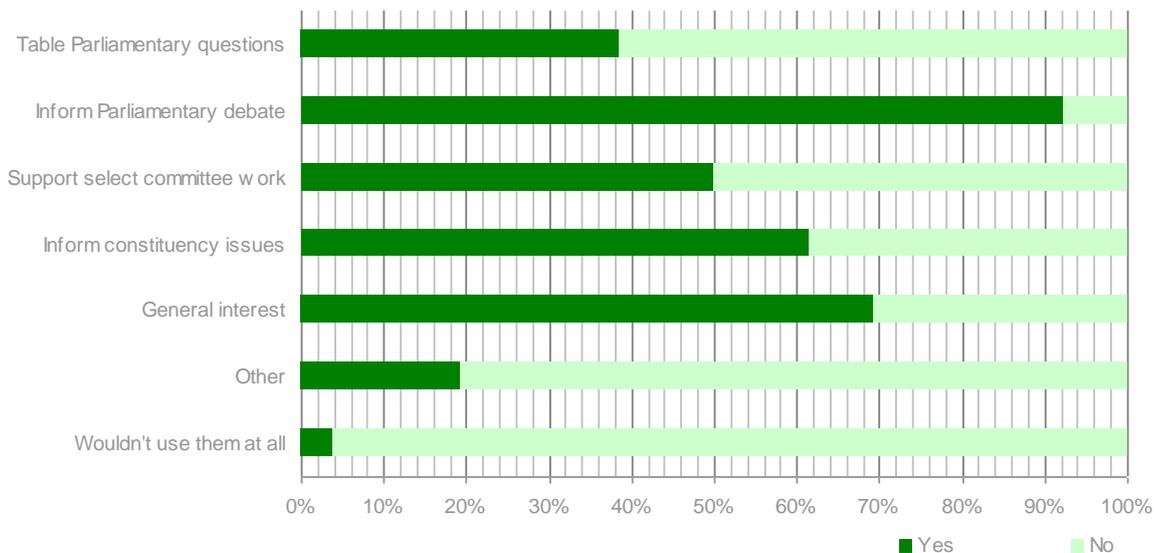
Question 19: What would make you use POST services more?

When asked how POST could improve its services, just over 60% of respondents endorsed a quarterly newsletter (but added that it should be delivered electronically). MPs said they would use online resources if they were better developed and easier to navigate, in particular if online content included a search facility and links. Over 80% of MPs and 67% of Peers said "no" to the suggestion of drop-in sessions in Parliament, 73% of MPs and 81% of Peers also said "no" to visits from POST staff. They complained that their time was already overstretched. Not many had heard of the podcasts and said they didn't use the service (see question 6).

Figure 19: Interviewees' responses to question 19: what would make you use POST services more? (MPs and Peers separately)
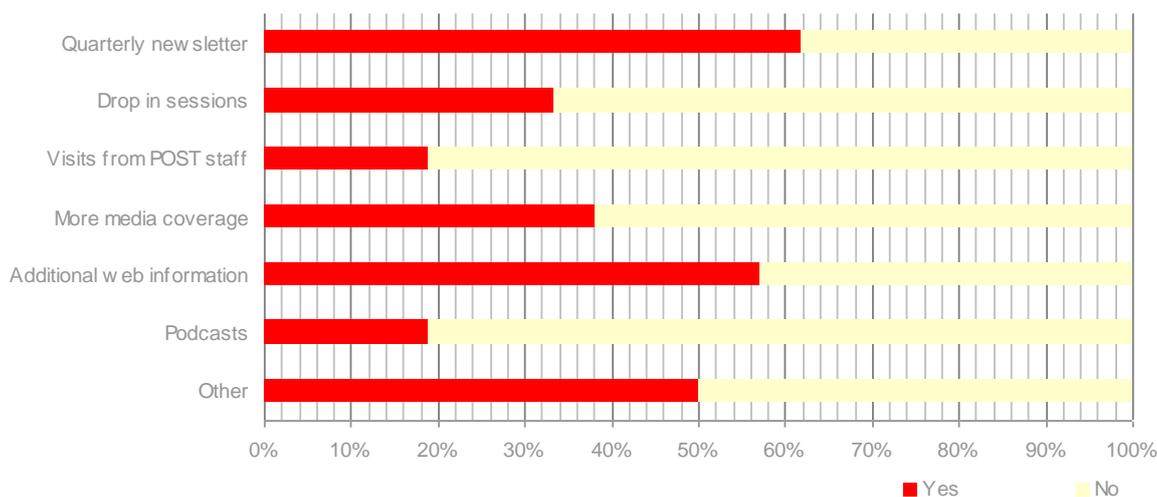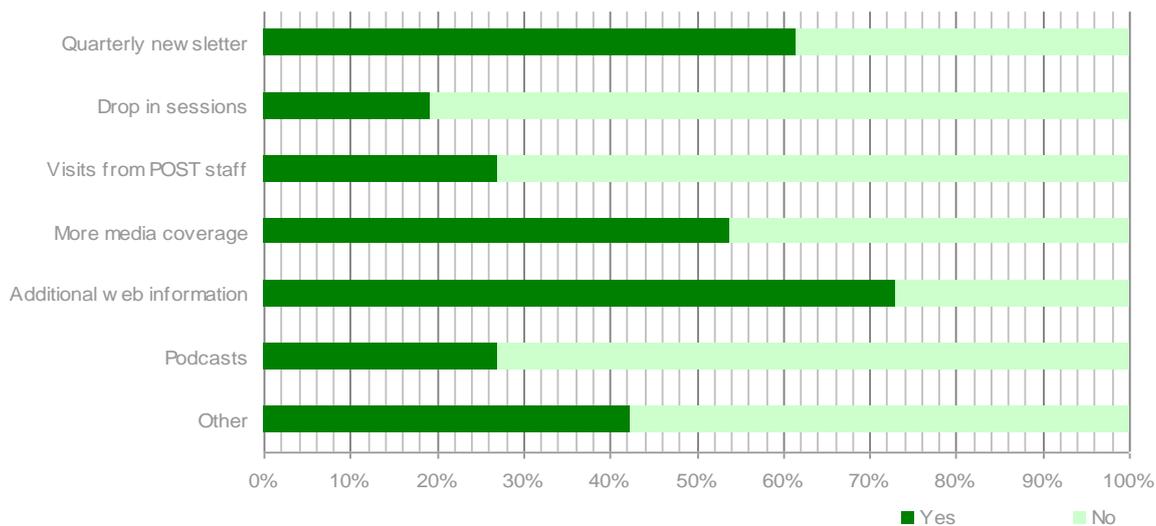
42% of MPs and 50% of Peers made other recommendations that included an index of POSTnotes under subject headings and subheading with links to other POSTnotes and sources of information. In addition, some Parliamentarians said they would like to see a history of POSTnotes on particular issues in order to trace its parliamentary history. They also asked if POST had thought about publishing a series of POSTnotes on a particular theme, like climate change.

Parliamentarians commented that unlike other Parliamentary services there is no induction to POST for new MPs and Peers, and their researchers. With no induction, it is easy to fall into habits of researching that exclude POST services. POST would benefit from inducting new parliamentarians and their researchers.

5. Conclusions

- Interviewees all place a high importance on evidence-based decision making and think it essential that parliamentarians have access to a source of impartial information on science and technology. Over 90% of interviewees think this source should be in-House.

- Interviewees show overwhelming support for POST, as well as acknowledgement of its growing importance as scientific issues on the political agenda becoming an increasing part of parliamentary business.

- Peers and MPs seek scientific information in different ways, reflecting the different contexts in which they operate. For example, Peers are more likely to turn to individual scientists and learned societies, and less likely to use the internet or mainstream media sources. In addition, many of the Peers in the sample have strong links with the scientific community.

- A common theme for both MPs and Peers is the feeling that parliamentarians are inundated with information and find it hard to separate good from bad. They say that high quality sources of information such as POST should be more visible.

- POSTnotes are the most widely used of POST services. Interviewees praised them for being concise, accessible and impartial. However, uptake of electronic information such as podcasts and the website itself, is much more limited.

- Comments on how to improve POSTnotes relate largely to their style. There is a feeling that the format and layout is outdated.

6. Ways forward

On the basis of the findings of this study, the POST team feel that the following steps could be taken to enhance POST services:

1. Development of the website and other electronic services: POST has always placed a strong emphasis on web-based dissemination. It had a web site before Parliament itself. POST could look into ways of indexing of POSTnotes (possibly organising them thematically), and may be able to make the website easier to navigate. The new parliamentary web content management system will present opportunities to do this, but options are limited by the need to co-ordinate the POST pages with the rest of the parliamentary web site.

2. Redesign of the POSTnote template: POST last redesigned its graphical format in 2000. This exercise could be repeated and extended to explore options for POSTnotes and other outputs that are easier to read and use, both in hard copy and online.

3. Measures to increase the visibility of POST: POST has already explored the targeting of parliamentarians' researchers (based on exploring how they use scientific information). This could be taken further, along with efforts to promote greater use of currently lesser-known services e.g. podcasts.

4. Piloting of new services: Suggestions from parliamentarians arising from the survey could be explored, including a quarterly newsletter and more information on further reading for POSTnotes, as well as recommended links to other sources of scientific information via the website.

APPENDIX A: QUESTIONNAIRE

A) What do you value in science information?

1. Had you heard of the Parliamentary Office of Science and Technology (POST) before we contacted you for an interview?	a. Yes, definitely b. ==Yes, probably== c. Don't know d. ==Probably not== e. Definitely not
Pre-amble on how POSTnotes are made **2. Do you think it is important for parliamentarians to have an <u>impartial</u> <u>analysis</u> of information on science? Note that throughout this questionnaire we include parliamentarians' researchers and teams as use for/by a parliamentarian.**	a. Yes, definitely b. Yes, probably c. No opinion d. Probably not e. Definitely not
3. Please explain.	
4. Do you think that it is important to have a source of information on science <u>specially written</u> for parliamentarians?	a. Yes, definitely b. Yes, probably c. No opinion d. Probably not e. Definitely not
5. Please explain.	
6. Do you think that Parliament needs to increase the <u>quality</u> of information it uses when making decisions on issues with a scientific content?	a. Yes, definitely b. Yes, probably c. No opinion d. Probably not e. Definitely not
7. If yes, what is the best way to do this? If no, why not?	
8. How do you like briefing information on science presented to you? *Interviewer should use prompts where necessary: ask if they prefer oral presentations to written reports and briefings, portability, internet based information…*	

B) What information do you use?

9. Have you used any of these POST services in the last year?	Not aware of	Aware of, not used	Used once	Used more than once
a. POSTnotes/longer reports				
b. Seminars				
c. Website				
d. Briefings to select committees				
e. Podcasts				
f. Other, please specify:				
g. I have not used any POST services				

10. At what stage in your research would you most likely use a POSTnote?	a. At the beginning
	b. During your information collection process
	c. At the end
	d. Would not use it at all

11. Please explain	

12. When you are seeking information on a science-based issue which sources are you most likely to use?

	Very likely to use	Likely to use	Don't know	Unlikely to use	Very unlikely to use
a. The Library (HoC, HoL) – Specialists, research papers and standards notes					
b. POST					
c. All Party Parliamentary Groups (including Associate Parliamentary Groups)					
d. Reports by government departments					
e. Specialist scientific press (Nature, Science, BMJ)					
f. Peer-reviewed publications					
g. Reports by learned societies					
h. Individual scientists					
i. Think tanks					

j. NGOs					
k. The mainstream media					
l. Other internet sources: Google and wikis					
m. Other, please specify:					

C) What do you think of this POSTnote?

13. What do you think the maximum length should be for a scientific briefing?	a. 1 page b. 2 pages c. 4 pages d. 8 pages e. 16+ pages f. No opinion
14. What do you think about the level of detail in this POSTnote?	a. Definitely too much detail b. Probably too much detail c. About right d. Probably, not enough detail e. Definitely not enough detail f. No opinion
15. Would you or your team be likely to follow up the references?	a. Yes, definitely would follow up the references b. Yes, probably would follow up the references c. No opinion d. No, probably wouldn't follow up the references e. No, definitely wouldn't follow up the references
16. Overall, does the style of the POSTnote make you want to read it?	a. Definitely yes b. Probably yes c. No opinion e. Probably not f. Definitely not
17. How can we design this to make you want to read it?	

D) How can POST best meet your needs?

18. How do or would you use information from POST?	a. To table parliamentary questions b. To inform parliamentary debates c. To support select committee work d. To inform constituency issues e. General interest f. Other, please specify: g. Wouldn't use them at all
19. What would make you use POST services more? List options.	a. A quarterly newsletter of recent and forthcoming events and publications b. Drop-in sessions in Parliament c. POST staff visiting parliamentarians to explain the services d. More media coverage e. Additional information for each POSTnote/report online f. Podcasts g. Other, please specify:
20. Are there live issues on which you might need scientific information soon?	a. Yes, please specify: b. No

Name of interviewee	
Role	a. MP
	b. Peer
	c. Researcher
Interviewer	