

INVESTIGATION INTO GEOGRAPHICAL UNITS BELOW WARDS

1. Background

- 1.1 The Parliamentary Constituencies Act 1986 (as amended by the Parliamentary Voting System and Constituencies Act 2011) does not specify the units of geography that the Boundary Commission for England is required to use in the setting of constituency boundaries.
- 1.2 The legislation says that the Commission may have regard to “local government boundaries” in developing its proposals and identifies such boundaries in England as the boundaries of: counties and their electoral divisions; districts and their wards; London boroughs and their wards; and the City of London.
- 1.3 Since the 3rd general review of constituencies, which reported in February 1983, the Commission has used local government wards as the fundamental building blocks for the construction of constituencies. Wards are well-defined entities backed by statute. They are also well-understood units which are generally indicative of areas which have a broad community of interest. It has always been considered that any division of wards between constituencies would be likely to break local ties, disrupt party political organisations and cause difficulties for Electoral Registration Officers (EROs) and Returning Officers. Until the cancelled 2013 review, the Commission had never considered it necessary to divide a local government ward between constituencies.
- 1.4 Following the completion of the fifth general review of constituencies in 2006, in anticipation of what a future review might look like and what the expectations of such a review would be, a substantial piece of work was carried out in 2009 by the Secretariat to consider the options and feasibility of using a level of geography below ward level to assist with difficulties associated with the construction of constituencies in some areas (primarily the Metropolitan counties and the London boroughs). No minimum or maximum had previously been prescribed for constituency electorates. It was, however, thought that there would be considerable pressure in future to create constituencies with more equal electorates. An assumption was therefore made that any future legislation might require constituencies to be constructed with electorates within 5% of a UK electoral quota.
- 1.5 The study sought advice from EROs and colleagues in the Office for National Statistics (ONS), the Boundary Commissions for Scotland and Wales (BCS and BCW, respectively), ESRI UK (the supplier of the Commission’s Geographic Information System [GIS]) and in particular, colleagues from Ordnance Survey (OS). A paper,

BCE/2009/Paper 9 (attached as Appendix A), was produced for consideration at the Commission meeting of 9 November 2009.

2. Consideration of Options for sub-ward geography - BCE/2009/Paper 9

- 2.1 In 2009, Members considered that none of the options investigated provided anything approaching a satisfactory solution for creating a unit of geography below ward level for which electorates could be supplied and created, and for which digital mapping could also be created. Each option had substantial problems that might be irreconcilable or would involve lengthy and costly solutions. Neither the Scottish solution of using postcodes, which would result in an unacceptable level of address mismatches (estimated to be 1.5% based on the Scottish experience), nor the Welsh solution of using Communities, which do not exist throughout England, was considered suitable for England.
- 2.2 Members considered that Census Output Areas (COAs) used in respect of the decennial Census, which were created by the ONS, were not a viable option as they would, in all likelihood, be out-of-date by the time a review commenced, although it was noted that the ONS could provide statistics relating to the population for each COA or could provide a population projection based on age profile (for those over 18 years of age). However, and most importantly, it was noted that this dataset was based on population statistics and projections, whereas the Commission is required to use electors who appear on the electoral register at the date a review commences. This data is not available for COAs and would be difficult to create.
- 2.3 Whilst OS considered it was possible to use OS grid squares to create polygons at sub-ward level, there were concerns about the robustness of this method. It was also understood that it would not be possible for OS to undertake this exercise for the whole of England at one time due to the size of the task and there would still be a need to create the electoral statistics for each polygon, as it would inevitably produce a similar degree of address mismatch as a postcode based solution.
- 2.4 In 2009, Members noted that it should be possible to create a digital dataset for polling districts (PDs) for the whole of England, and to match them with electorates that could be created, although it was recognised that such an approach would not be without considerable difficulties. This solution would probably require a large level of resource (both time and finance, but unquantifiable), as well as the procurement of a completely new GIS software solution, which would be required to handle any unit of geography below ward level. Additionally, it would require a very high level of co-operation from each of the local authorities in England, which might not be fully achieved. Members therefore considered that a statutory requirement might need to be placed on EROs which would have to be backed up with rigorous enforcement to ensure the supply of both PD mapping and electoral data if and when it was required. Even if the highest

level of co-operation was achieved, it would still be most likely that the data would be subject to a considerable degree of inaccuracy that OS would be required to resolve.

- 2.5 It was also understood that PDs were frequently altered by local authorities. Members were not convinced that the frequency of changes to PDs would be a problem since it would be the PD data for a particular moment in time that would be used. If the Commission were to use PD data, subsequent changes to PD boundaries should have no impact upon the recommendations for a particular area. However, Members recognised that this could mean that the PDs, in any divided wards, they used might bear little resemblance to the PDs in force in a particular area when a review of constituencies was completed.

3. Members' Decision in 2009

- 3.1 Members considered that, of the various options of sub-ward geography that could potentially be used, PDs clearly stood out as the most appropriate unit to use in those areas where electoral equality was difficult to achieve, despite their acknowledged difficulties. The preferred solution of Members in 2009 was that it might be appropriate to adopt the more “fine-grained” approach of using PDs only in those areas (most likely urban areas) where difficulty was experienced in achieving the 5% figure and that this would, in all probability, be the best solution in a situation where time would be of the essence: using PDs only in certain areas would be less likely to put the required delivery date for the report in jeopardy in view of the period of time required to obtain a new GIS software solution that could work with sub-ward data, and the availability of the data to populate it. Members considered that an approach to achieving a more “fine-grained” method for the whole country would need to be the goal in the longer term of a future review where more time would be available to acquire, install and test the required GIS solution and create the required mapping and datasets beforehand.

4. The use of sub-ward geography at the 2013 review of constituencies

- 4.1 At the start of the 2013 review, and now working to the new legislative requirements of the Parliamentary Voting System and Constituencies Act 2011, the Commission announced that it would continue to use local government wards as the building blocks of constituencies and that “in the absence of exceptional and compelling circumstances – having regard to the specific factors identified in Rule 5 – it would not be appropriate to divide wards in cases where it is possible to construct constituencies that meet the statutory electorate range without dividing them”. This policy was endorsed by the representatives of the three, main, Parliamentary political parties at their meeting with the Commission ahead of the commencement of the 2013 review.

- 4.2 However, it was recognised that there could be some pressure to divide wards as a result of Rule 2, which requires each constituency – apart from four specified exceptions – to have an electorate at the review date that is no less than 95% and no more than 105% of the UK electoral quota. For the 2013 review, the UK electoral quota was 76,641 (with a range of 72,810 - 80,473). Whilst it was considered that it would be easier to create constituencies in rural areas where ward electorates are relatively small, the situation in the London boroughs and the Metropolitan counties might be more problematic as the ward sizes are often much larger. For example, on the 2011 electoral register the ward sizes in Birmingham ranged from 16,075 to 18,861 electors. It was recognised that whether four or five wards were allocated to a constituency in this area it was possible, if not probable, that a constituency electorate significantly outside the 5% tolerance would be produced.
- 4.3 In the event, when the initial proposals of the 2013 review were published, no wards were divided in the Commission’s proposals. However, following the representations that were received during the initial proposals consultation, the Commission did decide to divide two wards in Gloucestershire in their revised proposals. There had been very strong local opposition to the initial proposals which included the Gloucester City ward of Westgate in the proposed Forest of Dean constituency, as many considered that this ward formed the core of Gloucester city centre. The Commission was persuaded by the evidence and reasoning that there were exceptional and compelling circumstances that justified the splitting of one ward in the City of Gloucester and one ward in the Borough of Tewkesbury (Westgate and Coombe Hill, respectively), in order to produce a solution that provided adequate recognition for very strong local ties within Gloucester. The revised proposals, which included the two divided Gloucestershire wards, were published in October 2012.
- 4.4 It is the view of the Secretariat that the decision to divide wards in Gloucestershire has effectively “let the genie out of the bottle”. During the consultation on the revised proposals some of the representations in other regions picked up that the Commission had divided these wards and considered that there were equally good reasons for dividing wards elsewhere. Some of the counter-proposals by the Parliamentary political parties also picked up on the theme that if wards could be divided in one place, they could, and should, be divided elsewhere.

5. The division of wards at future reviews

- 5.1 Assuming that the legislation that governed the 2013 review is still in place for the next review of constituencies, there have been no suggestions by Members or the Secretariat that there should be any change to the default position of the Commission in that local government wards should still be used as the basic building blocks for constituencies, as in the past, and for the reasons mentioned above. However, the Secretariat considers that it is highly likely that there will be a much greater demand for wards to be divided

than in the past – a consequence of which is that there should be less likelihood of the division of boroughs or districts between constituencies. This would require that the bar for determining whether a request to divide a ward should be accepted might subsequently have to be lowered.

- 5.2 If the Commission decided that it would be appropriate to split a ward or wards in a particular constituency or part of the country where it would otherwise be difficult to create a viable constituency, the Secretariat considers that there would be a strong requirement for there to be the mapping and electoral data at a sub-ward level in place for the whole of England at the commencement of the review. The Secretariat does not consider it feasible that data sets could be created as and when they are required as the review progressed.
- 5.3 An important consideration is that it is almost certain that in order to facilitate a greater number of options for those wishing to make a representation, for future consultations the Commission's website will need to be interactive, allowing the construction of constituencies using the GIS and electoral data resources that will be available on-line. The ability of interested parties to make alternative proposals to construct viable constituencies which gave full effect to local ties could, it is considered, only be fully achieved if access to a geography at sub-ward level was freely and easily available to everyone.
- 5.4 Furthermore, if a full set of electoral and mapping data at a sub-ward level is not provided for the whole of England, it could be argued that this would prevent the submission of viable and valid counter-proposals which gave effect to local ties better than the Commission's initial proposals, and it is quite possible that a legal challenge could be raised. If this were to happen, there would almost inevitably be a delay and it might not be possible for the Commission to complete the review of England within the statutory timeframe. However, whether the provision of mapping and datasets at a sub-ward level for the whole of England is achievable is considered later in this paper.
- 5.5 In view of the Commission's previous decision in 2009, and following the developments during the 2013 review, the Secretariat consider that it is now apparent that the Commission will have little option but to revisit its policy regarding the use of sub-ward geography. This raises the question again as to what data set should the Commission use.

6. A consideration of options since 2009

- 6.1 In considering some of the lessons learnt during the 2013 Review, the Secretariat have looked again at the use of a dataset below ward level to be used in the 2018 Review. The options and difficulties that were identified and considered previously in BCE/2009/Paper 9 are substantially the same and, based on that investigation and the

subsequent decision by Members that PDs appeared to be the only realistic unit at a sub-ward level that could be used, the Secretariat have further explored the use of PD data as the preferred solution.

- 6.2 This research had confirmed that, although in many of the larger towns and metropolitan areas such as London and Birmingham, civil parishes do not exist, in the shire counties and in rural areas civil parishes do exist. In these areas PDs usually represent civil parishes, which are a level of administrative geography that had already been mapped in Boundary Line. This is an important factor as it means that much of the work in mapping PDs in England has already been done.
- 6.3 In Spring 2013, in order to obtain more understanding of the PD information that might be available from local authorities, the Secretariat contacted the nine local authorities in Derbyshire (including the City of Derby) asking five questions:
- Could they supply a list of the current PDs within their local authority? The list should show, where applicable, parish names and parish ward names.
 - Were they able to supply a shape file (digital data) that contained all of the PD boundaries?
 - If unable to supply any PD boundary information in the form of a shape file, were they able to supply it in any other format? This could be available on the Council's website, or as paper mapping.
 - Could they state how easy it would be for their Council to supply electorate data relating to the number of parliamentary electors registered in each PD, to correspond with the data supplied to ONS at the time the electoral register is published each year?
 - Were they aware of any plans to review the PDs used by their local authority before the next General Election?
- 6.4 Nearly all local authorities said that there should be no problem in providing the correct electorate data at PD level, which is an important consideration in determining whether to use PDs.
- 6.5 In answer to question 2, four local authorities provided shape files and one more promised them. One local authority said that it could not and two more might be doing the work in the next year. One of the local authorities said that it could provide copies of their PDs as paper maps (Q3).

6.6 Several local authorities identified that there were plans to review ward boundaries (Q5).

7. Ward Boundary Reviews

7.1 The next major date for whole Council elections for Non-Metropolitan (two-tier) districts is May 2015, so where there is a need to review ward boundaries, the Local Government Boundary Commission for England (LGBCE) will aim to get these reviews completed before then. This will be before the December 2015 register, which will be used as the basis for the 2018 review. This is an inconvenience that the Commission always has in relation to the ever changing back-drop of local authority boundaries. Three London boroughs are due to have new wards in May 2014, and it is currently unknown whether there will be any more in May 2018. Whilst only one of the 36 Metropolitan Councils has a planned LGBCE review at present, as far as the Secretariat is aware, the next major election in the 4 year cycle is May 2016, so if changes do happen, these will fall outside of the scope for the 2018 review.

7.2 Below is a table, based on the Secretariat’s current understanding (as at October 2013), of the timetable for changes to local authority boundaries.

Timeline of Changes to Local Authority Boundaries	
May 2013	Unitary county council ward boundaries (3 councils) Areas transferred between local authorities (4 councils)
May 2014	London borough ward boundaries (3 councils) Non-Metropolitan district and Unitary council ward boundaries (2* councils) Changes to Non-Metropolitan district council wards as a result of civil parish boundary changes (2* councils)
May 2015	Non-Metropolitan district and Unitary council ward boundaries (59* councils) Changes to Non-Metropolitan district council wards as a result of civil parish boundary changes (2* councils) Changes to PD boundaries for General Election (? councils)
May 2016	Metropolitan district council ward boundaries (1* council)

* liable to alteration as further areas seek review.

8. Reviews of Polling Districts

8.1 After the 2010 General Election, there was criticism of some local authorities regarding problems encountered in voting at polling stations, principally due to the

size of the PDs – in some urban areas PDs in excess of 3,000 electors could be found. The coalition Government instituted a review of PDs; some local authorities, such as Sheffield, brought in amended polling districts in 2011.

- 8.2 Since then new legislation has been passed, with section 17 of the Electoral Registration and Administration Act 2013 (ERA) requiring local authorities to carry out reviews of polling places between 1 October 2013 and 31 January 2015 and every fifth year after 2013, so that the new PDs would be available for the following General Election. As there were a number of County councils that had new electoral divisions for the elections in May 2013, some District councils will be adjusting their PDs to reflect these new boundaries. This is a considerable inconvenience which means that, although the Secretariat can ask Councils to provide shape file data now, on which some work can be undertaken in conjunction with OS in the interim period ahead of the commencement of the 2018 review, there is no guarantee that it will not be necessary to ask Councils to provide new shape file data again, prior to the commencement of the 2018 review. This will have to be a major consideration in the creation of the mapping by OS (see paragraphs 12.2 – 12.5) because of the changes that might well have taken place.

9. Individual Elector Registration

- 9.1 Legislation has been passed to allow for Individual Elector Registration (IER) to start on the 2014 electoral register, which is due for publication in February 2014. This will bring about changes to the way an elector is added to the electoral register, or has their details changed, for example when moving home. This requires significant changes to the computer systems used by local authorities to create the electoral register. Although primarily aimed at facilitating IER for EROs, the Secretariat considers that this would also provide the Commission with a useful method and opportunity to collect electorates for PDs.
- 9.2 The Secretariat considers that the easiest way to collect PD electorate data would be for local authorities to supply it to the Commission, either as part of the RPF29 form, which summarises the number of electors on the electoral register that they are required to submit to ONS, or when the register is supplied, which is a statutory requirement for each local authority. This will require changes to the procedures of each local authority so that they can easily provide the required information. To this end, the Secretariat has made contact with the IER team in Constitution Group of the Cabinet Office to see if this change can be incorporated into all of the software developments that will have to be made in preparation for IER.

10. Software Patches

- 10.1 There are four main suppliers of software to local authorities for the compilation of the electoral register. Each year, these software companies consult with central Government about changes that are required to be made to their programs to meet changes in legislation, or changes in the way the data is captured or reported. To facilitate these changes, the software companies issue software patches. It is anticipated that one of the patches introduced in 2013 will allow local authorities to provide data at PD level as well as at ward level. Following the Secretariat's approach to them, the Constitution Group IER team have confirmed that these changes will be incorporated into future releases. The software would allow for each local authority to produce a report of the PD data and its provision to the Commission would be much less onerous for EROs.
- 10.2 The Secretariat understands that the software patch would allow for a separate report to be printed, not for it to be a replacement for Part 2 of the RPF29 form of electoral data that each ERO submits to ONS. As the Commission would require data for both wards and PDs, the Secretariat had therefore suggested to ONS that it might be easier for both organisations if the PD data was not included as part of the RPF29 form. It was considered that this could save ONS the extra work in having to check the data that the Secretariat would be requesting, thereby leaving Part 2 of the RPF29 as it is at the moment, apart from any minor tweaks ONS may wish to make.
- 10.3 However, ONS had contacted the Secretariat about one of the software companies which had asked for confirmation that ONS was only collecting PD data on part 2 of the RPF29 form and not ward data, as requested by the Cabinet Office. ONS had not been copied into any correspondence between the software companies and the Cabinet Office. Such issues will need to be clarified.
- 10.4 The provision of PD datasets would still require the co-operation of EROs as it is unlikely that legislation will be enacted to compel EROs to provide the Commission with PD data. The Secretariat has therefore written to the Association of Electoral Administrators (AEA) in order to explain why the data would be needed and to ask the AEA to encourage the participation of their members. The Secretariat are sufficiently confident that each local authority will be able to supply the PD electoral data that the Commission will require.
- 10.5 The Secretariat will take the ward and PD data supplied by the EROs and populate spread sheets that will link the electoral data to the map data relating to wards and PDs. Where the map data is already in the OS Boundary Line product (wards and civil parishes), it will be a straightforward matter of assigning the correct electorate to the corresponding code. Where the PDs are not defined in Boundary Line, it will be necessary for the Secretariat to create a new coding structure, before the electorate can

be assigned to a code. At present, there is no convention on what such a new coding structure should look like. It will be necessary for the Secretariat to liaise with OS and ESRI UK to establish what is the simplest format to adopt.

- 10.6 Although the innovations brought about by IER and the availability of PD datasets will be of enormous assistance to the Commission, the Secretariat would add a note of caution: the software is still largely untested and the Secretariat cannot assume that the electorates it receives will always be accurate. A considerable amount of checking of the data by the Secretariat will therefore still be necessary, before “live” data from the 2016 electoral register is used in the 2018 Review.

11. Other considerations regarding PD datasets

- 11.1 In addition to providing the electorates of PDs, it is vital that the electorates can be matched to shape files of the PD. The Secretariat have been undertaking some initial scoping work on identifying PDs to see how much work would need to be undertaken to create a usable map of all the PDs in England. As previously mentioned, it is considered that it is vital to have coverage of the whole country, so that neither the Commission, nor any interested parties, would be limited to the use of whole wards in any part of England. This exercise has shown that the work should be nowhere near as intensive as thought back in 2009, because many of the PDs are already mapped to a satisfactory standard, both in the OS Boundary Line product (civil parishes) or by local authorities themselves. However, there are concerns as to whether this is achievable for the country as a whole. These issues are considered under the Secretariat’s recommendation (paragraph 14.2) and in the consideration of options in Appendix C.
- 11.2 The exercise has also thrown up a number of other issues relating to PD electorates, the division of civil parishes between PDs, and the effect of changes to PD boundaries between now and the next General Election.
- a) PD electorates. It will be necessary to check that the PD electorates supplied by each ERO match with the corresponding ward electorate;
 - b) Divided Civil Parishes. For a number of reasons, local authorities have divided civil parishes between PDs – for example where, because of its electoral size, the parish is divided into parish wards for parish election purposes. These divisions may not be mapped. It may be easier for the Secretariat not to try and create these boundaries, but to present data for the whole parish; and
 - c) Between now and May 2015, a large number of local authorities will have new wards following reviews of ward boundaries by the LGBCE. Currently, ten local authorities have had Orders made and at least 57 local authorities are being reviewed with a view for the new wards to be in place in either May 2014 or

May 2015. More local authorities may well be added to this list. These changes to ward boundaries will inevitably affect PD boundaries, as well as any internal reviews mentioned earlier. These changes will need to be included in any mapping data set in a very short period of time before the next constituency review is started.

12. The Ordnance Survey view

- 12.1 In early spring 2013 members of the Secretariat visited OS for a routine meeting. During the course of the meeting, the issue of using PD data was considered at some length. OS confirmed that their current product, Boundary Line, did not map at a level below wards (other than Parishes) and that if the Commission were to consider using PD mapping, a new product would have to be designed.
- 12.2 At that time it became clear that, in order to create a full set of PD data for England, it would not be feasible to obtain the data for the first time, just ahead of the commencement of the next review of constituencies in 2016. This work would have to be started well before the 2018 review got underway. By doing so, the Commission would avoid placing significant additional burdens on EROs, who would be preparing for the 2015 local and general elections. The Secretariat considers that any request for PD data, in early 2015, that was not required by statute would be likely to fall on unsympathetic ears.
- 12.3 OS had considered that it might take 12-18 months to complete a co-ordinated data set across England, and that if it was to be available for testing on a new GIS at some point during 2015, work would ideally have to commence on the dataset during the latter part of 2013 at the latest. Whilst OS officials could see the benefits of the creation of the new layer of administrative mapping, they considered such a project would need strong support and it was by no means certain that OS would have the resources or the time to embark upon such a project without a strong case.
- 12.4 However, the significant problem arose (as mentioned in paragraph 8.2) that although PD data and shape files could be requested from EROs in the interim, some may well be adjusting their PDs in 2015. The Secretariat considers that this is an imperfect situation, but an early start would allow OS to start work on creating the mapping, based on the existing PD data that could be supplied in the interim (and which could also be tested on a new GIS). When the latest PD data became available, it is possible that OS would only be required to adjust those areas that had been changed. The degree to which the PDs might change prior to the commencement of the 2018 review cannot be accurately assessed, but the Secretariat considers that very many will probably remain unchanged, thereby reducing the work that OS would have to do.

- 12.5 This difficulty will need to be discussed in detail with OS. The Secretariat have arranged a meeting with representatives from OS on 23 October 2013, which will be reported on orally at the Commission meeting. The Secretariat also suggest that the views of the three, main, Parliamentary political parties should be sought and that it would be very helpful if government, in the guise of the Cabinet Office Constitution Group could also be brought on board to bolster support and demand for OS to produce the necessary mapping.

Intellectual Property Rights

- 12.6 In 2009 a small number of EROs had previously raised issues relating to Intellectual Property Rights. Some were concerned as to whether the agreements they had with OS permitted them to supply the Commission with crown copyrighted material. Others were concerned that, whilst they had created the PDs for their own administrative purposes, if OS re-created them as a digitised dataset for the Commission, it might then adopt them as part of its own dataset and seek to supply that data back to their councils, thereby charging councils for data that they had originally created. However, it was the view of the Secretariat that if the PD layer was supplied and provided as a supplementary dataset to Boundary Line – as is the case with the Community Council layer in Wales – the EROS and Councils would not be charged as it would form part of the Open Data set which is supplied free to users by OS.
- 12.7 It was also the view of the OS representatives in 2009 that if a complete set of digitised PDs was created, it was most likely that the Commission, as the organisation commissioning the work and its main user, would, by default, become the custodian of the data. It was thought that this could impose a number of legal responsibilities on the Commission for the secure handling of the data, for providing requests for the data to be made available in the public domain, and in compliance. However, the Secretariat considered that this may not be quite the problem envisaged by OS since the data would only be used once and would be quickly superseded by later changes made to the PDs by the EROs. Also, the digital dataset which would be created as shape files would hold no data from which individuals could be identified and the dataset could be made freely available on request. However, the Secretariat accepted that matters concerning Intellectual Property Rights were complicated and that further investigation and expert advice would need to be obtained to ensure definitive guidance.
- 12.8 The OS position at the meeting in spring 2013 was now less cautious than in 2009, reflecting a shift of views. OS was now of the opinion that there was much to be gained if OS created a new product that sat below ward level in its current Boundary Line and for which OS, and not the Commission, would have ownership. However, as previously mentioned, it was acknowledged that PDs were not fixed in stone and some would be subject to alteration from one year to the next, which was an inconvenience at best. To assist OS in the project of creating mapping at PD level it was still

considered that some additional pressure would need to be brought to bear to demonstrate that there was a demand. Furthermore, the creation of mapping at this level is likely to have cost implications and it would be necessary to determine how these costs should be met. It was considered that such a product might be freely available among some of the other OS datasets for England, but confirmation of this would have to be sought.

13. A new GIS solution

- 13.1 There are a number of GIS software solutions available, with ArcGis and MapInfo being amongst the most commonly used. MapInfo is used, for example, by the BCW and accommodates the Community Council level of geography. It is also noted that the LGBCE uses MapInfo but that it may move to ArcGis in the near future. However, it was the clear view of OS that despite the widespread use of MapInfo, ArcGis is a much more powerful GIS tool. OS consider that ArcGis is definitely the way forward, it is a software with which OS is very familiar, and it would most effectively meet the Commission's requirements.
- 13.2 The GIS that the Commission currently uses is based on the ArcGis software (previously ArcInfo). The current GIS is a bespoke system that was designed for the Commission more than two decades ago. It has hitherto met the Commission's requirements very well and has been remarkably robust without any major failures during the past 20 years or so. However, it was designed to work with wards (and units of geography above wards) and it cannot work, due to its structural architecture, with any layer of geography below wards (such as PDs). A new GIS software solution is therefore unavoidable.
- 13.3 When the Secretariat moved as a Machinery of Government change from the Ministry of Justice to the Cabinet Office it was noted that the contract with ESRI UK (who supply GIS support to the Commission) was not fully compliant with Civil Service rules regarding the provision of services. At the start of the 2013 review at a meeting of, among others, the Secretariat, the Cabinet Office Financial Director and representatives from Cabinet Office procurement, it was agreed that the BCE could continue to use the services of ESRI UK throughout the 2013 review as it would not be possible to change systems midway through a review. A brand new procurement exercise for a GIS software solution would be required in order to appoint a company to supply a system before the start of the next review, and also allow for some exhaustive customer testing. The Secretariat is currently able to use the existing GIS package in order to keep under review the effect of the most recent electorates on existing constituencies, and to also model different scenarios for future potential constituencies with the current electorates, as the licences it has purchased in the past can be used in perpetuity. However, the Secretariat no longer has a maintenance contract with ESRI UK to support the licences, nor a Service Level Agreement. This

was considered essential during the 2013 review should there be any problem with the GIS software. ESRI UK will be engaged again in the spring of 2014 in order merely to load the latest annual electorates into the system.

- 13.4 During a routine meeting with ESRI UK in March 2013, the Secretariat were informed that ESRI UK currently provides services to the Cabinet Office and has an “Enterprise Agreement” with them. ESRI UK has also been placed on G-Cloud. G-Cloud is changing the way the public sector procures and operates IT solutions, providing a “pay-as-you-go” service. Business units within the Cabinet Office can use it to procure services without having to go through the full procurement process as companies on G-Cloud are effectively considered preferred suppliers. Apart from making the procurement process quicker and less costly, the Secretariat understands that a further benefit of using G-Cloud is that business units can ask the companies on it to provide assistance in drafting full specifications for products. Whilst the whole process of procurement in the Cabinet Office, indeed wider government, is currently going through a phase of considerable flux and reorganisation, more needs to be understood about the procurement of goods and services before any definitive decisions can be made about how to go about the procurement of a new GIS software solution.
- 13.5 At the meeting with ESRI UK it also became apparent to the Secretariat that ESRI UK considers that an “off the peg” solution, irrespective of the eventual provider, would be the likely way forward. Although a bespoke system could be designed and purchased, ESRI UK itself now had little appetite to develop bespoke GIS solutions and, if they did, the costs would certainly be higher than standard packages.
- 13.6 In 2011 ESRI UK undertook, as part of its on-going support to the Commission, a review of the Commission’s potential future GIS requirement. The unsolicited report entitled “Boundary Commission for England – Proposed System Replacement” considered the functionality which would be required to produce a replacement GIS software solution for the BCE that would enable the Commission to use sub-ward datasets, as well as a system that would be suitable for both internal and external web-based functions. In effect, this document provides much of the specification that the Commission is likely to require of a new GIS. The Secretariat considers that although the specification for the provision of a new GIS is likely to require additional, highly technical details, this is a particularly helpful document that should assist in the procurement of a new GIS. The document is attached for information at Appendix B.

14. Secretariat Recommendation

- 14.1 The Commission had already determined, based on the evidence presented to it in 2009, that PD datasets were likely to be the most suitable dataset below ward level that the Commission could use in the construction of constituency boundaries. The Secretariat considers that developments since then have only reinforced that view. In

particular, the implications of the introduction of IER and the understanding that the Secretariat has about the Commission being able to receive accurate electoral data for each of the PDs in England, is a major development. The Secretariat considers that this makes the case for deciding to use PDs as a smaller unit of geography in the construction of constituencies almost unanswerable.

- 14.2 As a result of examining information supplied by local authorities, the Secretariat have looked at a range of options for PD datasets and will be discussing these with OS at the meeting of 23 October. A table detailing the alternatives is attached at Appendix C, showing the strengths and weaknesses of each of the options.
- 14.3 The Secretariat strongly recommends that a formal decision to obtain PD datasets across the whole of England is made as soon as possible, so that work can begin on the creation of a full PD dataset for the whole of England.

15. Next steps

- 15.1 The Secretariat considers that time is now pressing and that firm decisions and actions will have to be taken and implemented quickly to establish a programme as soon as practicable.
- 15.2 As mentioned in paragraph 12.3, when the Secretariat first raised the possibility of the need to create shape files, OS suggested that it could take them anything between 12 and 18 months to undertake this task. Notwithstanding that an unspecified number of shape files will almost certainly need to be revised before the commencement of the 2018 Review, the Secretariat considers that OS should nevertheless start work on mapping PDs with the data that it can be provided with in the interim. If there is any further delay, it might not be possible to claw back lost time and the work required to be done, not just by the Secretariat, but other organisations, might not be achieved sufficiently prior to the commencement of the next review of constituencies.
- 15.3 The Commission would still be able to produce its recommendations using wards alone in accordance with the rules and the statutory timetable, as it has done in the past, but any failure or delay to bring together the separate parts of a project to utilise PD data could mean that there is a very real risk that it might not be possible to use PD data in every part of the country at the commencement of the review. Furthermore, if PD data were not available at the commencement of the first statutory consultation period, it might not be possible for interested parties to put forward their own proposals online that went below ward level. If this were to happen, it is considered that it would cause huge reputational damage to the Commission, as well as the potential for legal challenge.

- 15.4 In the spring of 2013, the Secretariat produced a table for internal use of what were considered to be the key actions against a completion date if the Commission were to use PDs. Such a project, apart from involving EROs would require OS to prepare a PD dataset for the whole of England and the procurement of a new GIS. This draft timetable has been updated and is attached as Appendix D.
- 15.5 As previously stated, the Secretariat considers that it is imperative that a decision about the use of PDs should be made quickly and that, in conjunction with this, a meeting should be arranged with the PPPs as soon as possible to seek their views and to explain the Commission's thinking, with other meetings scheduled for the AEA and OS over the coming weeks and months. The practicalities of using PD data at the commencement of the next review of constituencies will, to some extent, depend upon the willingness of the AEA and EROs to cooperate with the Commission.
- 15.6 Equally, if not more importantly, a further meeting will have to be arranged with OS to confirm that it will be possible to create mapping based on PDs. Assuming that they do wish to embark upon creating the PD mapping there will undoubtedly be cost considerations. It will be important to ascertain, and to what extent, whether the Commission would be expected to bear some of these costs. Following on from this meeting, the Secretariat considers it will probably be necessary for there to be a meeting between the other key groups, including the Commission's Cabinet Office sponsor, in order to identify and discuss the issues and any implications that cut across them.
- 15.7 The procurement of a new GIS solution has been considered this paper. Although the need to embark upon its procurement is perhaps not quite as pressing as the other issues, the Secretariat considers that it will have to commence work on the specification and procurement of a new GIS by the spring of 2014 if a system is to be in place and be thoroughly tested ahead of the commencement of the next review. It is possible that there need to be some involvement with OS as it will be their product that the GIS uses.

16. The resource in the Secretariat

- 16.1 An important potential risk is ensuring that the Secretariat has sufficient staff resource to undertake such a large and multi-faceted project, whilst still ensuring that day-to-day functions within the Secretariat (finance, queries from the public, Freedom of Information requests, data management, processing the annual electoral returns from EROs etc....) and other corporate requirements continue to be carried out. In autumn 2013, one highly experienced member of staff is retiring, to be followed a couple of months later by another. The Secretary to the Commission is now working on another project with just 20% of his time assigned to the Secretariat. Although one of the remaining B2s will no longer be joining the LGBCE on secondment, only two full-

time members of staff are currently allocated to the Secretariat for the remainder of this financial year, and the next.

- 16.2 Furthermore, although the current members of the Secretariat possess considerable experience of the work of the Commission, it is vital that staff are suitably qualified and remain sufficiently skilled to deliver what the Commission requires, particularly so on technical issues. For example, the current GIS package that the Secretariat uses provides only a fraction of the functionality that it could and, until now, this has been considered all that was required. A distinct advantage of this approach is that it has been relatively easy to understand how the system works and to train staff without any specialist technical skills to use the GIS to a satisfactory level.
- 16.3 However, GIS solutions can be extremely technical in nature. As considered earlier in this paper, it is likely that the Commission will procure a GIS solution that is “off the peg” and provides greater functionality, rather than seek the design of a bespoke system. This should be relatively straightforward to procure, but the Secretariat considers it likely that specialist technical skills, considerably beyond the expertise and skills of current members of the Secretariat, will be required to draw up a detailed technical specification, procure, test and utilise the GIS, as well as train others at a later stage. The Commission will therefore need to consider whether it would be appropriate to engage a GIS specialist from the industry at an early stage to ensure that an appropriate GIS solution is established in the Secretariat well before the actual work of constructing constituencies commences and that individuals know how to use it.