

DATASET SUB-LICENCE AGREEMENT FOR

GEOSPATIAL DATA SERVICE:

BRITISH GEOLOGICAL SURVEY DATA SUB-LICENCE AGREEMENT

JISC SERVICES LIMITED (OPERATING AS JISC COLLECTIONS), a company incorporated in England and Wales and limited by guarantee whose registered office is at One Castlepark, Tower Hill, Bristol BS2 0JA ("Jisc Collections")

OFFERS to you, the Sub-Licensee the permission to access and use the Licensed Material and digital maps on the terms and conditions as set out in this Sub-Licence. Upon completion of the Order Confirmation and Acceptance Form, as part of the Jisc Collections online ordering service your institution will become a non-exclusive Sub-Licensee of Jisc Collections.

Acceptance shall be by receipt of the Subscription Order and Acceptance Form as part of the Jisc Collections online ordering service by Jisc Collections or a Jisc Collections' authorised agent who will accept delivery on behalf of Jisc Collections. Acceptance shall be acceptance of all terms of this Sub-Licence and no variation or counter offer will be accepted by Jisc Collections. In the event that no or partial compliance is made as to the manner or form described for acceptance, no sub-licence will be granted and this offer is deemed withdrawn

RECITALS

WHEREAS the British Geological Survey digital data (as hereinafter defined) is described in Appendix 2;

AND WHEREAS the Licensed Materials (as hereinafter defined) and all Intellectual Property Rights (as hereinafter defined) therein are owned by or licensed to the Natural Environment Research Council (represented by its component body British Geological Survey) ("British Geological Survey");

AND WHEREAS by an agreement between British Geological Survey and Jisc Collections (the "British Geological Survey Data Supply and Licence Agreement"), Jisc Collections is permitted to sub-licence the access and use of the Licensed Materials to the Authorised Institutions in accordance with the terms of this Sub-Licence;

JISC COLLECTIONS AND THE SUB-LICENSEE AGREE AS FOLLOWS:

1. DEFINITIONS

1.1 In this Sub-Licence, the following expressions shall have the following meanings:

"Authorised Users"	means individuals who are authorised by the Sub-Licensee to access the Sub-Licensee's information services whether on-site or off-site via Secure Authentication and who are affiliated to the Sub-Licensee as a current student (including but not limited to undergraduates and postgraduates), member of staff (whether on a permanent or temporary basis including retired members of staff and any teacher who teaches Authorised Users in the United Kingdom) or contractor of the Sub-Licensee. Persons who are not a current student, member of staff or a contractor of the Sub-Licensee, but who are permitted to access the Sub-Licensee's information services from computer terminals or otherwise within the physical premises of the Sub-Licensee ["Walk-In Users"] are also deemed to be Authorised Users, only for the time they are within the physical premises of the Sub-
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	Licensee. Walk-In Users may not be given means to access the Licensed Material when they are not within the physical premises of the Sub-Licensee. For the avoidance of doubt, Walk-In Users may not be given access to the Licensed Material by any wireless network provided by the Sub-Licensee unless such network is a Secure Network.
"Charges"	means any or all the charges as set out in Schedule 1.
"Commercial Use"	means use of the Licensed Material or digital maps other than for "Educational Purposes" (as hereinafter defined). For the avoidance of doubt, neither the recovery of direct cost by the Sub-Licensee from Authorised Users, nor use by the Sub-Licensee or Authorised Users of the Licensed Material in the course of research funded by a commercial organisation is deemed to constitute Commercial Use.
"Datacentre"	means a datacentre appointed from time to time by Jisc Collections.
"Educational Usage"	means for the purpose of education, teaching, distance learning, private or non-commercial study and/or private or non-commercial research.
"Intellectual Property Rights"	means patents, trademarks, trade names, design rights, copyright (including rights in computer software and moral rights), database rights, rights in know-how and other intellectual property rights, in each case whether registered or unregistered and including applications for the grant of any of the foregoing and all rights or forms of protection having equivalent or similar effect to any of the foregoing which may subsist anywhere in the world.
"Licensed Materials"	means the British Geological Survey digital data and digital maps
"Service"	means a service provided by Jisc Collections or any Datacentre acting on its behalf such, relating to the collection of British Geological Survey's digital data known to the parties as "British Geological Survey Data" comprising the datasets as listed in Appendix 2 and such other British Geological Survey data products as Jisc Collections and British Geological Survey may agree from time to time.
"Secure Authentication"	means access by Athens authentication, Internet Protocol ("IP") ranges or by a username and password or by another means of authentication agreed between British Geological Survey and Jisc Collections from time to time.
"Secure Network"	means a network which is only accessible by Secure Authentication
"Transaction Charge"	means the charge payable to Jisc Collections to cover the cost of the bank charges for organising the payments as further set out in Schedule 1.
"Use"	means viewing, copying, adaptation, reproduction, manipulation or modification of the digital data to create customised maps and models and any further use of such customised maps and models by Authorised Users in accordance with Clauses 3 and 4 of this Sub-Licence Agreement.

1.2 Headings contained in this Sub-Licence are for reference purposes only and shall not be deemed to be an indication of the meaning of the clause to which they relate.

1.3 Where the context so implies, words importing the singular number shall include the plural and vice versa and words importing the masculine shall include the feminine and vice versa.

2. GRANT OF SUB-LICENCE

2.1 The Sub-Licensee agrees to pay the Charges as set out in Schedule 1, in consideration of which Jisc Collections agrees to grant to the Sub-Licensee a non-exclusive sub-licence to access and use the Licensed Material and to allow Authorised Users to access and use the Licensed Material throughout the term of this Sub-Licence by Secure Authentication for Educational Purposes only.

3. USE OF THE LICENSED MATERIAL

3.1 Subject to the provisions of Appendices 3 and 4, throughout the term of this Sub-Licence the Sub-Licensee may for Educational Purposes only:

3.1.1 make such temporary local electronic copies of all or part of the Licensed Material and digital maps as are necessary to ensure efficient use by Authorised Users, provided that such use is subject to all the terms and conditions of this Sub-Licence;

3.1.2 allow Authorised Users to access the Licensed Material and digital maps by Secure Authentication in order to search, retrieve, view, display and otherwise use parts thereof including but not limited to Use of the digital data in accordance with the terms of this Sub-Licence;

3.1.3 allow Authorised Users to electronically save parts of the Licensed Material and digital maps;

3.1.4 allow Authorised Users to print out copies of parts of the Licensed Material and digital maps;

3.1.5 allow Authorised Users to incorporate parts of the Licensed Material and digital maps in printed and non-manipulable (e.g. Jocked .PDF file) electronic course packs, study packs and course notes hosted on a Secure Network, virtual learning environments, managed learning environments and multi-media works. Each item shall carry the following copyright notice "Geological Map Data BGS © NERC 20(yy)" Course packs in non-electronic non-print perceptible form, such as Braille, may also be offered to Authorised Users;

3.1.6 allow Authorised Users to incorporate parts of the Licensed Material and digital maps in printed or non-manipulable (e.g. locked .PDF file) electronic form in assignments and portfolios, theses and in dissertations ("the Academic Materials"), including reproductions of the Academic Materials for personal use and library deposit, if such use conforms to the customary and usual practice of the Sub-Licensee. Reproductions in printed or electronic form of Academic Materials containing digital maps may only be provided to sponsors of such Academic Materials. Reproductions in electronic form of Academic Materials containing digital data may only be provided to sponsors of such Academic Materials where such sponsor holds a licence from the Licensor to use digital data. Reproductions in printed form of Academic Materials containing digital data may be provided to sponsors of such Academic Materials. In each case, each item shall carry the following copyright notice "Geological Map Data BGS © NERC 20(yy)". (For the avoidance of doubt, sponsors of Academic Materials may not use any Reproductions provided to them under the provisions of this Clause 3.1.6 for any Commercial Use); and (b) incorporate parts of the digital maps in printed and non-manipulable (e.g. locked .PDF file) electronic conference papers, articles, articles published in a journal publication and poster sessions;

- 3.1.7 provide printed or electronic copies of the Licensed Material and digital maps at the request of individual Authorised Users;
 - 3.1.8 supply to an authorised user of another library (whether by post, fax or secure electronic transmission, using Ariel or its equivalent, whereby the electronic file is deleted immediately after printing) a single paper copy of parts of the Licensed Material. Each copy shall carry the following copyright notice "Geological Map Data © NERC 20(yy)";
 - 3.1.9 display, download and print parts of the Licensed Material and digital maps for the purpose of promotion of the Licensed Material, testing of the Licensed Material and digital maps, or for training Authorised Users;
 - 3.1.10 publicly display or publicly perform parts of the Licensed Material and digital maps as part of a presentation at a seminar, conference, or workshop, or other such similar activity;
 - 3.1.11 make such copies of training material and network on a Secure Network such training material as may be required for the purpose of using the Licensed Material and digital maps in accordance with this Sub-Licence; and
 - 3.1.12 use digital maps in brochures, leaflets and flyers for use by the Sub-Licensee;
 - 3.1.13 publish digital maps on the website of the Sub-Licensee or websites created by Authorised Users as part of a course or project;
 - 3.1.14 print and use copies of the Licensed Material and digital maps as part of a Post Graduate Certificate in Education course in schools.
 - 3.1.15 deposit in perpetuity the learning and teaching objects as referred to in Clause 3.1.11 in electronic repositories operated by the Sub-Licensee on a Secure Network. The access and use of such learning and teaching objects shall be governed by the terms and conditions of the applicable repository.
- 3.2 This Sub-Licence shall be deemed to complement and extend the rights of the Institution and Authorised Users under the Copyright, Designs and Patents Act 1988 and the Copyright (Visually Impaired Persons) Act 2002 and nothing in this Sub-Licence shall constitute a waiver of any statutory rights held by the Sub-Licensee and Authorised Users from time to time under these Acts or any amending legislation.

4. RESTRICTIONS

- 4.1 Save as provided herein, the Sub-Licensee and Authorised Users may not:
 - 4.1.1 sell or resell the Licensed Material, digital data and/or digital maps unless the Sub-Licensee or an Authorised User has been granted prior written consent by British Geological Survey to do so;
 - 4.1.2 redistribute, publish or otherwise make any information contained in any part of the Licensed Material, digital data and/or digital maps available in any manner or on any media other than that allowed under this Sub-Licence;
 - 4.1.3 remove, obscure or modify copyright notices, text acknowledgments or other means of identification or disclaimers as they appear;
 - 4.1.4 save as provided for under this sub-licence, display or distribute any part of the Licensed Material, digital data and/or digital maps on any electronic network, including without

limitation the Internet and the World Wide Web, and any other distribution medium now in existence or hereinafter created, other than on a Secure Network;

- 4.1.5 save in relation to Clauses 3.1.6, 3.1.9, 3.1.14, and 3.1.15, permit or allow anyone other than Authorised Users to access or use the Licensed Material, digital data and/or digital maps;
 - 4.1.6 use all or any part of the Licensed Material and digital maps for any Commercial Use or for any purpose other than Educational Purposes, the restriction to include any use of the Licensed Material and the digital maps (or subsequently derived works) where it is possible to reverse engineer back to or recompile the original Licensed Material and the digital maps.
 - 4.1.7 save in relation to Clause 3.1.9 and 3.1.15, permit any part of the Licensed Material, digital data and/or digital maps to be electronically transmitted to any other recipient except where the recipient is an Authorised User under the terms of a valid British Geological Survey Data Sub-Licence Agreement.
- 4.2 This Clause 4 shall survive termination of this Sub-Licence for any reason.

5. RESPONSIBILITIES OF THE SUB-LICENSEE

5.1 The Sub-Licensee will:

- 5.1.1 issue passwords or other access information only to Authorised Users and use all reasonable efforts to ensure that Authorised Users do not divulge their passwords or other access information to any third party ;
- 5.1.2 use all reasonable efforts, including without limitation by use of Secure Authentication, to ensure that only Authorised Users are permitted access to the Licensed Material and digital maps;
- 5.1.3 use all reasonable efforts to ensure that all Authorised Users are made aware of and undertake to abide by the terms of this Sub-Licence;
- 5.1.4 use all reasonable efforts to monitor compliance with the terms of this Sub-Licence and notify British Geological Survey and Jisc Collections (including any Datacentre acting on behalf of Jisc Collections in the provision of the Service) immediately and provide full particulars on becoming aware of any of the following (a) any unauthorised access to or use of the Licensed Material or unauthorised use of any of the Sub-Licensee's password(s); or (b) any breach by an Authorised User of the terms of this Sub-Licence. Upon becoming aware of any breach of the terms of this Sub-Licence the Sub-Licensee further agrees promptly to fully investigate and initiate disciplinary procedures in accordance with the Sub-Licensee's standard practice and use all reasonable effort to ensure that such activity ceases and to prevent any recurrence;
- 5.1.5 comply with all computer security procedures required by British Geological Survey, Jisc Collections and/or a third party duly appointed by Jisc Collections and take all reasonable steps to ensure the security of the Licensed Material, digital data and/or digital maps in accordance with the Security Requirements set out in Appendix 3 hereto;
- 5.1.6 where IP addresses are used as the method of Secure Authentication , provide lists of valid IP addresses to Jisc Collections and update those lists on a regular basis the frequency of which will be agreed by the parties from time to time.
- 5.1.7 make available to British Geological Survey on request such information as British Geological Survey may reasonably require to use to better understand the type and nature of the specific Educational Purposes carried out by the Sub-Licensee and the Authorised Users using the Licensed Material, digital data and/or digital maps. In particular but without prejudice to the generality of the

foregoing, British Geological Survey may use examples of such use for the preparation of case studies for marketing and developing the Licensed Material, digital data and/or digital maps.

6. RESPONSIBILITIES OF JISC COLLECTIONS

- 6.1 Jisc Collections shall use all reasonable efforts to ensure access and use of the Licensed Material in accordance with the provisions as laid down in this Sub-Licence.
- 6.2 Jisc Collections shall use all reasonable efforts to cause customer support services to be provided to the Sub-Licensee and to Authorised Users.

7. USAGE DATA

- 7.1 The parties shall co-operate in gathering any data on usage of the Licensed Material that is available to them during the term of this Sub-Licence, and shall provide such data to each other upon request. Notwithstanding the foregoing, the parties shall neither assemble nor provide data from which an individual user could be identified.

8. CHARGES

- 8.1 The Sub-Licensee will pay the Charges to Jisc Collections for the Sub-Licence in the amount and upon terms as set out in Schedule 1.
- 8.2 The Sub-Licensee will pay the Transaction Charge to Jisc Collections as set out in Schedule 1.

9. TERM AND TERMINATION

- 9.1 The term of this Sub-Licence will commence upon the date of acceptance of this Sub-Licence via the Subscription Order and Acceptance Form and will remain in full force and effect until 31st July 2021, unless terminated earlier as provided for in this Clause 9.
- 9.2 Either party may terminate this Sub-Licence at any time on the material breach or repeated other breaches by the other of any obligation on its part under this Sub-Licence by serving a written notice on the other identifying the nature of the breach. The termination will become effective thirty days after receipt of the written notice unless during the relevant period of thirty (30) days the defaulting party remedies the breach.
- 9.3 Notwithstanding anything to the contrary herein, this Sub-Licence will be treated as if terminated if the British Geological Survey Data Supply and Licence Agreement between British Geological Survey and Jisc Collections terminates for any reason. Jisc Collections shall make reasonable endeavours not to cause the British Geological Survey Data Supply and Licence Agreement between British Geological Survey and Jisc Collections to terminate.
- 9.4 Further, notwithstanding anything to the contrary herein, upon a breach by the Sub-Licensee, on-line access to the Licensed Material, digital data and/or digital maps shall be terminated.
- 9.5 Upon termination of this Sub-Licence, copies of any part of the Licensed Material made by the Sub-Licensee or Authorised Users may not be retained and used, other than as provided for under this clause. Print copies may be used after termination of this Agreement subject to the terms of Clauses 3 and 4 of this Sub-Licence, which terms shall survive any termination of this Sub-Licence. For the avoidance of doubt copies of parts of the Licensed Material incorporated in course packs, study packs, course notes, multi-media works and Academic Materials in accordance with Clauses 3.1.5 and 3.1.11 may be deposited by Sub-Licensee and Authorised Users in institutional repositories and archives or other repositories with the written consent of the Licensor.

10. ACKNOWLEDGEMENT AND PROTECTION OF INTELLECTUAL PROPERTY RIGHTS

10.1 The Sub-Licensee acknowledges that the Intellectual Property Rights in the Licensed Material, digital data and/or Digital Maps (save for the Intellectual Property Rights in the software used by a Datacentre in the creation of digital maps and any Intellectual Property Rights in any Service or Open Access Service provided by a Datacentre other than the Licensed Material and digital maps themselves) are the sole and exclusive property of British Geological Survey (NERC) or are duly licensed to British Geological Survey (NERC) and that this Sub-Licence does not assign or transfer to the Sub-Licensee any right, title or interest therein except for the right to use the Licensed Material in accordance with the terms and conditions of this Sub-Licence.

11. REPRESENTATIONS, WARRANTIES AND INDEMNIFICATION

11.1 The Sub-Licensee represents and warrants that it has sufficient authority and rights to enter into and perform its obligations under this Sub-Licence.

11.2 Jisc Collections represents and warrants that it has the right to grant the Sub-Licence and that the use of the Licensed Material by the Sub-Licensee and Authorised Users in accordance with the terms of this Sub-Licence shall not infringe the copyright of any third party. The foregoing shall not apply to improper usage of the Licensed Material by the Sub-Licensee or Authorised Users.

11.3 Other than the express warranties stated in this Clause 11, the Licensed Material is provided on an "as is" basis, and Jisc Collections and the British Geological Survey hereby disclaim any and all warranties, conditions, or representations (express, implied, oral or written), relating to the Licensed Material or any part thereof, including, without limitation any and all warranties of quality, performance, merchantability or fitness for a particular purpose, that the Licensed Material is complete or error free or that (subject to clause 11.2) its use by the Sub-Licensee and Authorised Users will not constitute any libel, breach of confidence or infringement of the intellectual property rights of any third party.

11.4 The Sub-Licensee agrees to notify the British Geological Survey and Jisc Collections immediately and provide full particulars in the event that it becomes aware of any actual or threatened claims by any third party in connection with any works contained in the Licensed Material. It is expressly agreed that upon such notification, or if the British Geological Survey becomes aware of such a claim from other sources, the British Geological Survey may remove such work(s) from the Licensed Material. At the request of the British Geological Survey, the Sub-Licensee will make all reasonable efforts to remove such work(s) from any copies of the Licensed Material maintained by the Sub-Licensee. Failure to report knowledge of any actual or threatened claim by any third party shall be deemed a material breach of this Sub-Licence.

11.5 Nothing in this Sub-Licence shall make the Sub-Licensee liable for breach of the terms of this Sub-Licence by any Authorised User provided that the Sub-Licensee did not cause, knowingly assist or condone the continuation of such breach after becoming aware of an actual breach having occurred. For the avoidance of doubt, this clause does not limit or exclude any liability the Sub-Licensee may have for any breach of Clause 5.

11.6 Subject to the above and to the extent permitted by law, Jisc Collections and the British Geological Survey shall not be liable to the Sub-Licensee or any Authorised User for any indirect losses or damages (including loss or damage suffered by the Sub-Licensee or any Authorised User as a result of an action brought by a third party) or for any loss of profits, goodwill or contract (whether direct or indirect) arising as a result of any breach of this Agreement, any negligence or in any other way out of or in connection with this Sub-Licence or its subject matter. Jisc Collections and the British Geological Survey accept no liability for any loss suffered or incurred by the Sub-Licensee or Authorised Users as a result of their use of or reliance on the Licensed Material.

11.7 The Sub-Licensee represents to Jisc Collections that its computer system through which the Licensed Material will be used is configured, and procedures are in place, to prohibit access to the Licensed Material by any person other than an Authorised User; that it shall inform Authorised Users about the conditions of use of the Licensed Material; and that during the term of this Sub-Licence, the Sub-

Licensee will continue to make all reasonable efforts to bar non-permitted access and to convey appropriate use information to its Authorised Users.

- 11.8 Jisc Collections, the British Geological Survey and the Sub-Licensee do not seek to exclude liability under this Sub-Licence for fraud or for personal injury or death caused by its negligence and the negligence of its employees, authorised sub-contractors and agents.

12. FORCE MAJEURE

- 12.1 Either party's failure to perform any term or condition of this Sub-Licence as a result of circumstances beyond the control of the relevant party (including without limitation, war, strikes, flood, governmental restrictions, and power, telecommunication s or Internet failures or damages to or destruction of any network facilities) ("Force Majeure"] shall not be deemed to be, or to give rise to, a breach of this Sub-Licence.
- 12.2 If either party to this Sub-Licence is prevented or delayed in the performance of any of its obligations under this Sub-Licence by Force Majeure and if such party gives written notice thereof to the other party specifying the matters constituting Force Majeure together with such evidence as it reasonably can give and specifying the period for which it is estimated that such prevention or delay will continue, then the party in question shall be excused the performance or the punctual performance as the case may be as from the date of such notice for so long as such cause of prevention or delay shall continue.

13. ASSIGNMENT

- 13.1 Neither this Sub-Licence nor any of the rights and obligations under it may be assigned or sub-licensed by the Sub-Licensee without obtaining the prior written consent of Jisc Collections, , such consent not to be unreasonably withheld or delayed. In any permitted assignment, the assignor shall procure and ensure that the assignee shall assume all rights and obligations of the assignor under this Sub-Licence and agrees to be bound to all the terms of this Sub- Licence.
- 13.2 Notwithstanding the provisions of Clause 13.1, this Sub-Licence may not be assigned by the Sub-Licensee to any organisation that is not an Institution.

14. GOVERNING LAW AND DISPUTE RESOLUTION

- 14.1 This Sub-Licence shall be governed by and construed in accordance with English law and the parties irrevocably agree that any dispute arising out of or in connection with this Sub-Licence will be subject to and within the jurisdiction of the English courts.
- 14.2 The parties agree to use best efforts to resolve disputes in an informal manner, by decision of the Director of Jisc Collections and the current Vice Chancellor of the Sub-Licensee. Where the parties agree that a dispute arising out of or in connection with this Sub-Licence would best be resolved by the decision of an expert, they will agree upon the nature of the expert required and together appoint a suitable expert by agreement.
- 14.3 Any person to whom a reference is made under Clause 14.2 shall act as expert and not as an arbitrator and his decision (which shall be given by him in writing and shall state the reasons for his decision) shall be final and binding on the parties except in the case of manifest error or fraud.
- 14.4 Each party shall provide the expert with such information and documentation as he may reasonably require for the purposes of his decision.
- 14.5 The costs of the expert shall be borne by the parties in such proportions as the expert may determine to be fair and reasonable in all circumstances or, if no determination is made by the expert, by the parties in equal proportions.

- 16.6 The parties will comply with all applicable laws and regulations relating to anti-corruption and anti-bribery. The parties represent and affirm that no bribes or corrupt actions have or will be offered, given, received or performed in relation to the procurement or performance of this Sub-Licence. For the purposes of this clause, “bribes or corrupt actions” means any payment, gift, or gratuity, whether in cash or kind, intended to obtain or retain an advantage, or any other action deemed to be corrupt under the applicable country laws. The Sub-Licence will not, directly or indirectly, make any such payment while this Sub-Licence is in effect.

SCHEDULE 1 -CHARGES AND PAYMENT TERMS

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SCHEDULE 2: LICENSED MATERIAL

The Licensed Material consists of the following datasets:

1. 1:250,000 scale themes (GB coverage - vector data)

- bedrock geology
- superficial deposits (if BGS digitisation programme is complete)

2. 1:50,000 scale themes (GB coverage - vector data)

- bedrock geology
- superficial deposits
- mass movement deposits
- artificial ground

3. The BGS lexicon of named rock units

The BGS Lexicon of Named Rock Units is a relational database which holds definitive and readily accessible information about all geological units used in BGS maps and publications. Lexicon entries include rock unit name, map code, parent rock units, lower and upper boundaries, thickness, geographical extent and bibliographic references. The Lexicon adds value to the geological digital maps and support documentation.

4. Lithoframe 3D model data

LithoFrame is a new concept to produce models of Britain's subsurface geology; the 3D equivalent of the geological map. The 3D model data shall be added to the Licensed Material from time to time as and when supplied by the Licensor to the Licensee.

Models are systematically developed at a range of resolutions. The following are supplied under the agreement:

- LithoFrame IM -nationwide for use at a scale of 1:1 000 000 for onshore Britain. It shows the most significant stratigraphic divisions (e.g. base Carboniferous, top of major intrusive bodies) and major faults in a single model, down from the ground surface to the base of the Earth's crust (40 km).
- LithoFrame 50 (area of London) will be modelled at the formation level (e.g. base London Clay Formation, base Harwich Formation) and will reach around 1 km in depth
- LithoFrame 10 (area of Glasgow) is the highest resolution, with a focus on well- characterised and relatively shallow superficial deposits including, where appropriate, the subdivision of artificial ground, flood plain, and river terrace deposits.

These data will be supplied as ESRI shapes and grids. The shapes will give the horizontal extent of each modelled unit, the grids will give elevations of top and base of each modelled unit.

5. Offshore data

- DigRock250 (1:250,000 scale offshore bedrock geology),
- DigSBS250 (offshore 1:250,000 scale seabed sediment data)

6. Access to the BGS GeoScenic Photo archive

The GeoScenic archive contains images from the vast collections of geological photographs held by the British Geological Survey. Download of 1000 x 1000 pixel images is free for all non-commercial use, provided BGS is acknowledged when using the images (see Terms and Conditions link below for information on acknowledgement text)

BGS will provide a metadata table listing all photos in the archive including information on the location of the photo

(longitude and latitude), the caption to be used and the link to access the photo from the BGS service.

7. Access to the Borehole Scans

BGS grants access to the National Geoscience Data Centre collection of onshore scanned boreholes, shafts and well records. Confidential scans will not be supplied.

BGS will provide a GIS file of the Single Onshore Borehole Index (SOBI) that shows the location and ID of every borehole BGS have records for (including confidential boreholes). BGS will provide the html string to parse to the start of the borehole ID which will enable access of the borehole scans from the BGS service. Scans of confidential boreholes will not open.

8. 1:10,000 scale themes (GB coverage - vector data)

- bedrock geology
- superficial deposits
- mass movement deposits
- artificial ground
- linear features

9. Soil Parent Material Model

A parent material is a soil-science name for a weathered rock or deposit from, and within which a soil has formed. The Parent Material Model details over 30 rock and sediment characteristics; it builds upon the standard DiGMapGB-50 geological dataset, adding simplified classifications of lithological properties.

The attribute content includes a range of texture information, colour, structure, mineralogy, lithology, carbonate content and genetic origin. Users can pick any or all of these parameters in bundles of data specific to their needs.

10. Geological Indicators of Flooding

Geological maps show where all the floodplains and coastal plains in Britain are located and therefore the main areas at greatest risk of flooding; from this information BGS has produced the Geological indicators of flooding dataset.

The map shows areas vulnerable to two main types of flooding -inland (river floodplains) and coastal/estuarine.

11. Permeability

The permeability indices are based on information from the 1:50 000 geological map and considers the following:

- the predominant flow mechanism, either intergranular flow, fracture flow, or a mixture of intergranular and fracture flow
- a maximum permeability index
- a minimum permeability index

12. Superficial Deposits Thickness Model

13. DiGMapGB-25

1:25,000 scale themes (GB coverage - vector data)

Delivery formats:

- ESRI Shapefile format

- MapInfo MIF/MID format
- Data delivered as tables will be supplied in Microsoft Excel format

ANNEX 1 - SUBSCRIPTION ORDER AND ACCEPTANCE FORM (EXAMPLE)

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