British Geological Survey
NATURAL ENVIRONMENT RESEARCH COUNCIL

DiGMapGB
Digital Geological Map of Great Britain

User Guide for the BGS DiGMapGB-50 data (V7)

Geoscience Products and Services Directorate

Open Report OR/13/008

BRITISH GEOLOGICAL SURVEY

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User Guide for the BGS DiGMapGB-50 data (V7)

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BRITISH GEOLOGICAL SURVEY

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We publish an annual catalogue of our maps and other publications; this catalogue is available online or from any of the BGS shops.

The British Geological Survey carries out the geological survey of Great Britain and Northern Ireland (the latter as an agency service for the government of Northern Ireland), and of the surrounding continental shelf, as well as basic research projects. It also undertakes programmes of technical aid in geology in developing countries.

The British Geological Survey is a component body of the Natural Environment Research Council.

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Foreword

The British Geological Survey provides nationwide digital geological maps as DiGMapGB (**Di**gital **G**eological **Map** of **G**reat **B**ritain) datasets at a range of scales. This guide is written for users of the 1:50 000 scale digital geological map data (DiGMapGB-50) version 7 release. A basic appreciation of geological terminology is needed to understand some of the principles outlined here and more detailed information available on the BGS website at:
http://www.bgs.ac.uk/products/digitalmaps/digmapgb.html

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Contents

1 Introduction

1.1 INTRODUCTION

Founded in 1835, the British Geological Survey (BGS) is the world's oldest national geological survey and the United Kingdom's premier centre for earth science information and expertise. The BGS provides expert services and impartial advice in all areas of geoscience. Our client base is drawn from the public and private sectors both in the UK and internationally.

Our innovative digital data products aim to help describe the ground surface and what's beneath across the whole of Great Britain. These digital products are based on the outputs of the BGS survey and research programmes and our substantial national data holdings. These data coupled with our in-house Geoscientific knowledge are combined to provide products relevant to a wide range of users in central and local government, insurance and housing industry, engineering and environmental business, and the British public.

Further information on all the digital data provided by the BGS can be found on our website at: http://www.bgs.ac.uk/products/home.html or by contacting:

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2 About the DiGMapGB-50 V7 dataset

2.1 BACKGROUND

The British Geological Survey provides digital geological maps as DiGMapGB (Digital Geological Map of Great Britain) data. Since its start in 1998, DiGMapGB has produced several versions of the 1:50 000 scale (DiGMapGB-50) data and this guide relates to Version 7.22 released in 2013. Each version has included new and replacement tiles that reflect the ongoing work of the Survey to extend and improve its geological map coverage.

2.2 WHO MIGHT REQUIRE THIS DATA

Geological maps are the foundation for many types of work. They are of potential use to a wide range of customers with economic interests in planning and development, oil and gas reserves, water and mineral resources, waste disposal sites, utilities, transport, geohazards and property insurance; as well as more academic aspects such as the Earth's geological history, its fossils, and its landscape development.

These datasets are available as vector data in a variety of formats in which they are structured into themes primarily for use in geographical information systems (GIS), where they can be integrated with other types of spatial data for analysis and problem solving in many earth-science-related issues.

2.3 WHAT THE DATA SHOWS

The DiGMapGB-50 data typically provide a digital version of the geology as shown on the map face of the published 1:50 000 scale paper map. No topography is shown.

Most geological units are represented by polygons in the data and are arranged in up to four themes, as available: Bedrock (formerly 'solid' geology); Superficial (formerly 'drift' deposits or Quaternary); Mass Movement (mostly landslide); and Artificial (or artificially modified or man-made ground). Geological units such as thin coal seams and fossil bands and other features such as faults, mineral veins and some landforms, which are all shown as lines on the published maps, are held in the Linear theme.

When a feature is queried in a GIS each geological unit is identified and its composition given. Additional information is provided in a range of information fields, as shown in Table 1. These give for example, the rank of each unit, their parentage, age, a range of colours for display and plotting purposes and the published date of the source geological map.

2.4 HOW TO SEE THE DATA

Simplified views of the DiGMapGB-50 Bedrock and Superficial themes may be seen for free via the BGS OpenGeoscience page at: http://www.bgs.ac.uk/opengeoscience/home.html

These can also be viewed using the 'iGeology' app for iPhone/iPad and Android available via http://www.bgs.ac.uk/data/mobileApps.html

3 Technical information

3.1 DEFINITIONS

The British Geological Survey's DiGMapGB (Digital Geological Map of Great Britain) datasets provide nationwide geological maps as digital data at a range of scales from 1:10 000 to 1:625 000.

3.2 SCALE

DiGMapGB-50 is the Digital Geological Map of Great Britain dataset at 1:50 000 scale.

3.3 DATA DESCRIPTION

The DiGMapGB-50 V7 dataset is BGS's primary national geological reference map. It is sourced from individual digital tiles of data which are based on the traditional 'one-inch to one-mile' and 1:50 000 scale published maps, with each one typically about 20 x 29 km and their borders inclined relative to the Ordnance Survey's National Grid.

The geology is generalised from detailed 1:10 000 scale maps by cartographic selection, modification, simplification or exaggeration, and it is the most extensive, moderately detailed, geological interpretation available from BGS. It is widely used to create derived geohazard products.

Topographical base maps are not included with DiGMapGB data.

3.4 FIELD DESCRIPTIONS

3.4.1 Polygon information fields

The information fields attached to DiGMapGB-50 Version 7 polygons at attribute level 22 are explained in Table 1 below.

Table 1 Information fields attached to polygons in DiGMapGB-50 data**.**

DATA FIELD	EXPLANATION OF DATA FIELD	*COMMENT*
LEX_WEB	Direct hyperlink to the definition of the particular geological unit in the BGS Lexicon of Named Rock Units accessible via the BGS website: e.g. http://www.bgs.ac.uk/Lexicon/lexicon.cfm?pub=GOG	*Note 19*
RCS_WEB	Direct hyperlink to the description of the lithology in the BGS Rock Classification Scheme accessible via the BGS website: e.g. http://www.bgs.ac.uk/bgsrcs/rcs_details.cfm?code=LMST	*Note 20*
LEX	A single Lexicon (or LEX) code of up to 5 characters (mostly letters) forming the first part of the primary LEX_RCS attribute. An abbreviation of the name used to identify the rock unit(s) or deposit(s) as listed in the BGS Lexicon of Named Rock Units: e.g. GOG	*Note 2*
LEX_D	Description of the Lexicon code above giving the name of the unit(s): e.g. GREAT OOLITE GROUP is the full name of the unit coded as GOG	
LEX_RCS	The primary two-part, LEX & RCS, code used to label the geological units in DiGMapGB data: e.g. GOG-LMST	*Notes 3 and 17*
RCS	A single rock-classification code of up to 6 characters (mostly letters) forming the second part of the primary LEX_RCS attribute. A single RCS code or a single abbreviation of two or more RCS lithologies as listed in RCS_X: e.g. MDCO	*Note 4*

RCS_X	One or more RCS codes listed individually. Multiple codes are joined by + signs with square brackets for subordinate types: e.g. MDST + [CONG]	*Note 5*
RCS_D	Description of the RCS code(s) above giving the lithology of the unit: e.g. MUDSTONE AND [SUBEQUAL/SUBORDINATE] CONGLOMERATE is the description of the rock coded as MDST + [CONG]	
RANK	Rank of the unit in the lithostratigraphical or lithodemic hierarchy: e.g. GROUP or SUITE	
BED_EQ	Bed equivalent. Lexicon code for the unit at bed or equivalent level where applicable	*Note 6*
BED_EQ_D	Description of BED_EQ above; name of unit at bed level	
MB_EQ	Member equivalent. Lexicon code for the unit at member or equivalent level where applicable	
MB_EQ_D	Description of MB_EQ above; name at member level	
FM_EQ	Formation equivalent. Lexicon code for the unit at formation or equivalent level where applicable	
FM_EQ_D	Description of FM_EQ above; name at formation level	
SUBGP_EQ	Subgroup equivalent. Lexicon code for the unit at subgroup or equivalent level where applicable	
SUBGP_EQ_D	Description of SUBGP_EQ above; name at subgroup level	
GP_EQ	Group equivalent. Lexicon code for the unit at group or equivalent level where applicable	
GP_EQ_D	Description of GP_EQ above; name at group level	
SUPGP_EQ	Supergroup equivalent. Lexicon code for the unit at supergroup or equivalent level where applicable	
SUPGP_EQ_D	Description of SUPGP_EQ above; name at supergroup level	
MAX_TIME_Y	Maximum age, in years, of the oldest time division during which the geological unit was formed: e.g. 335000000	*Note 7*
MIN_TIME_Y	Minimum age, in years, of the youngest time division during which the geological unit was formed: e.g. 316000000	
MAX_INDEX	Maximum index. A number representing the maximum age (earliest or oldest time) of the unit: MAX_TIME_D field. Used for GIS querying and legend building: e.g. 13222120	*Note 8*
MIN_INDEX	Minimum index. A number representing the minimum age (latest or youngest time) of the unit: MIN_TIME_D field. Used for GIS querying and legend building: e.g. 13213140	
MAX_AGE	Maximum age. Name of the age of maximum geochronological time applicable: e.g. ASBIAN	*Same if unit spans only one Age. Note 9*
MIN_AGE	Minimum age. Name of the age of minimum geochronological time applicable: e.g. ALPORTIAN	
MAX_EPOCH	Maximum epoch. Name of the epoch of maximum geochronological time applicable: e.g. VISEAN	*Same if unit spans only one Epoch*
MIN_ EPOCH	Minimum epoch. Name of the epoch of minimum geochronological time applicable: e.g. NAMURIAN	
MAX_SUBPER	Maximum sub-period. Name of the sub-period of maximum geochronological time applicable: e.g. MISSISSIPPIAN	*Same if unit spans only one Sub-period*
MIN_SUBPER	Minimum sub-period. Name of the sub-period of minimum geochronological time applicable: e.g. PENNSYLVANIAN	
MAX_ PERIOD	Maximum period. Name of the period of maximum geochronological time applicable: e.g. CARBONIFEROUS	*Same if unit spans only one Period*
MIN_ PERIOD	Minimum period. Name of the period of minimum geochronological time applicable: e.g. PERMIAN	

MAX_ERA	Maximum era. Name of the era of maximum geochronological time applicable: e.g. PALAEOZOIC	*Same if unit spans only one Era*
MIN_ERA	Minimum era. Name of the era of minimum geochronological time applicable: e.g. MESOZOIC	
MAX_EON	Maximum eon. Name of the eon of maximum geochronological time applicable: e.g. PROTEROZOIC	*Same if unit spans only one Eon*
MIN_EON	Minimum eon. Name of the eon of minimum geochronological time applicable: e.g. PHANEROZOIC	
PREV_NAME	Previous name(s) for the unit as listed in the BGS Lexicon of Named Rock Units	*Note 10*
BGSTYPE	The DiGMapGB theme: e.g. BEDROCK, SUPERFICIAL, MASS_MOVEMENT or ARTIFICIAL	*Note 11*
LEX_RCS_I	Concatenation of Lexicon and RCS codes, prefixed by the maximum index number: e.g. 12303999_MMG_MDGYAN	*Note 12*
LEX_RCS_D	Description of LEX_RCS above: e.g. MERCIA MUDSTONE GROUP - MUDSTONE WITH GYPSUM-STONE AND/OR ANHYDRITE-STONE	
BGSREF	BGS reference colour for the polygon based on the LEX_RCS code pair. The default printing colour defined as a 3-digit number: e.g. 626 (for Radcliffe Member–mudstone and sandstone). Used for legend building to give a similar appearance to the published map	
BGSREF_LEX	Alternative BGS reference colour at the Lexicon code level, LEX, as defined above: e.g. 626 (where no alternative needed as no clashes same colour used as above)	
BGSREF_FM	Alternative BGS reference colour at the formation level, FM_EQ, as defined above: e.g. 266 for Sidmouth Mudstone Formation which includes Radcliffe Member	
BGSREF_GP	Alternative BGS reference colour at the group level, GP_EQ, as defined above: e.g. 505 for Mercia Mudstone Group which includes Sidmouth Mudstone Formation	
BGSREF_RK	Alternative BGS reference colour for the lithology RCS code, as defined above: e.g. 365 for mudstone and sandstone lithology of Radcliffe Member	
SHEET	Digital geological tile (number and name based on published map sheet) that the polygon appears on: e.g. ew075_preston; sc084e_nairn where prefix 'ew' is for England & Wales and 'sc' for Scotland	
VERSION	Version number and attribute level of the digital data: e.g. 7.22 is version 7, with attribute level 22. The version number is changed when a new dataset is released following major changes or periodic update	*Notes1 & 13*
RELEASED	Date the DiGMapGB data files were created by BGS: e.g. 15-04-2013	
NOM_SCALE	Nominal scale of the published (or compiled) information used to prepare the digital data: e.g. 50000 for 1:50 000 [including 1:63 360 and 1:100 000 maps]. Also gives an indication of scale-dependant accuracy	*Note 14*
NOM_OS_YR	The latest year date of topographical information contained in the base map used for the original printed geological map (or the base used for DiGMapGB compilations). Where not known, field is null	*Note 15*
NOM_BGS_YR	The latest year date of the principal BGS geological information contained in the digital tile. This is usually the year of publication of the most up-to-date map sheet. Where no published map was available it is the year of compilation for DiGMapGB. Where not known or inappropriate, field is null	*Note 16*
UUID	Universally Unique Identification that can be used to identify individual features: e.g. bgsn_digmap1004081046355357_50k	*Note 18*

ADDITIONAL EXPLANATORY NOTES

Note 1	*The attribute level identifies the types of additional information supplied in DiGMapGB data. As information fields are added, renamed or removed so the attribute level is changed and a new number used*
Note 2	*The Lexicon is a BGS database of named rock units and definitions that can be viewed on the Internet at: http://www.bgs.ac.uk/lexicon/home.cfm. The Lexicon name may refer to a single identifiable unit or a package of units where the individual components cannot be differentiated. The majority of stratified rock units are given a lithostratigraphical name whilst non-stratified units, such as igneous intrusions*

	and some metamorphic bodies, have a lithodemic name. As these are mutually exclusive DiGMapGB uses the same information-field names for both types
Note 3	*The primary geological attribution is the LEX_RCS pair, which is then used to link to other BGS databases and thereby provide the information used to populate the other information fields*
Note 4	*The RCS codes are based on the hierarchical BGS Rock Classification Scheme (RCS) which is available in 4 Volumes that can be downloaded free at: http://www.bgs.ac.uk/bgsrcs/home.html. RCS was adopted as the field name at level 16 for the single or abbreviated lithology code. The field may include abbreviated codes for multiple lithologies*
Note 5	*The RCS_X field provides a searchable list of individual RCS lithology codes. This field is the same as the RCS field in DiGMapGB data at attribute levels 10 to 14. The suffix _X was added to distinguish this listing of the components from the single or abbreviated code now shown in the RCS field. Codes are listed alphabetically; major ones first, followed by [subordinate] ones*
Note 6	*The parentage of each rock unit is provided, in so far as it is available. Thus a named unit of bed rank may be part of a named member, which is itself part of a formation. Several formations may make up a group and several groups may form a supergroup. A formation is the prime mapping-unit and need not be divided up into named members or beds; nor does a formation have to belong to a group or supergroup. 'NotAp' is the abbreviation for 'Not Applicable' and is used to indicate that it is not appropriate to list child units of lower rank; NoPar is the abbreviation for No Parent and is used to indicate that no parental unit of higher rank has been identified*
Note 7	*These are ages, in years as shown on the BGS Geological Timechart available at: http://www.bgs.ac.uk/downloads/browse.cfm?sec=8&cat=39 where they are expressed as 'million years'. Some of these values are interpolations; the +/- error ranges are not provided here. The age range given is that for the time period ascribed to each geological unit in the BGS Lexicon. They do not give absolute age measurements made on the individual geological units. MAX_TIME_D and MIN_TIME_D fields, giving the names of the maximum and minimum time divisions applicable to the unit, were dropped for attribute level 22*
Note 8	*The index number is a hierarchical 8-digit number, based on the geochronological time. It allows rock units to be ordered approximately for legend building, or selected or queried by their age. The number ranges from 10000000 (the youngest) up to 39999999 (the oldest) with 0 used for units where the age is Not Available, and 99999999 where an age is Not Applicable.*
Note 9	*Sub-divisions of age called chrons are also shown in this field as a hyphenated name, for example Streffordian-Actonian is used for the Actonian Chron which is the early part of the Streffordian Age. New fields for maximum and minimum chrons have not been created as they are only used in the Caradoc at present*
Note 10	*Possible previous name(s) for the unit are given as listed in the BGS Lexicon of Named Rock Units. These names may have been used for all or part of particular polygons in particular areas as shown in DiGMapGB data e.g. Keuper Marl and Keuper Series are two of the possible previous names used for the Mercia Mudstone Group. Individual names are separated by a double space. The field length is limited and long lists are truncated to 250 characters due to the shapefile format*
Note 11	*There are four types of mapped unit in DiGMapGB: BEDROCK (formerly solid geology), SUPERFICIAL (formerly drift deposits), MASS MOVEMENT (mainly landslides) and ARTIFICIAL, (artificially modified ground) which are held as separate layers of geological data for use in GIS*
Note 12	*Used when generating legends automatically for maps or reports as it places units in approximately the correct stratigraphical order with youngest at top and oldest at base*
Note 13	*Different datasets with the same attribute level have the same structure so programming code used to query one dataset will operate on another at the same level. Users are advised to check the functionality of their GIS applications when the attribute level is changed*
Note 14	*Digital data should normally only be used at scales similar to the source data; for example 1:50 000 data are not suitable for use at 1:10 000 scale without great caution.* *This number can also be used as an indication of the cartographic accuracy of geological maps in mm. Lines are generally regarded as cartographically accurate to within 1 mm on the printed map: so they should be accurate to 50 m (50 000 mm) on the ground at 50k or 1:50 000 scale. This is not a measure of the accuracy of the geological surveying.* *These accuracy ranges may also be regarded as the sizes of the smallest deposits on the ground that can be shown on a map when depicted as 1 mm polygons (the smallest polygon that can take discernible colour infill)*
Note 15	*This is typically an Ordnance Survey topographical base map but other sources of base map may be used. Fuller details are available if required*
Note 16	*For 1:50 000 scale data at attribute level 22 the age information for the topographic base (NOM_OS_YR) and the geological map (NOM_BGS_YR) were improved so that where the Bedrock and Superficial (+Artificial and Mass Movement) themes come from different sources, the correct age for each is given. Fuller details are available if required*
Note 17	*LEX_ROCK code pairs were used in the preparation of DiGMapGB data up to 2007 before being replaced by the LEX_RCS code pairs that now carry the primary attribution and link to other BGS databases. The LEX_ROCK codes were retained up to attribute level 20, for compatibility with earlier data and applications written for them, before being dropped from the data at level 22*

Note 18	*The Universal Unique Identifier (UUID) was first introduced to DiGMapGB-50 data at V6.20 in 2010. UUIDs are used for auditing, tracking changes to the data and for reporting errors. The prefix bgsn_ globally indicates the data originated at BGS and is fully compliant with the Digital National Framework (DNF) standards. Its inclusion coincided with the removal of the MSLINK number from the data*
Note 19	*The LEX_WEB link was first added to the DiGMapGB-50 data at V6.20 in 2010. It is created by appending the LEX code to the standard query: 'http://www.bgs.ac.uk/Lexicon?lexicon.cfm?pub='*
Note 20	*The RCS_WEB link was first added to the DiGMapGB-50 data at V6.20 in 2010. It is created by appending the RCS code to the standard query: 'http://www.bgs.ac.uk/bgsrcs/rcs_details.cfm?code=' Information is only directly available for single lithologies; information for composites can be accessed by appending the individual RCS code (as listed in RCS_X) to the query*

3.4.2 Linear feature information fields

Thin geological units such as coal seams and marine bands, all of which are shown as lines on maps, are attributed with LEX_RCS coding and carry the same related fields as polygons. All the various linear geological features are grouped into seven categories (Table 2A) which are published as one Linear theme.

Three fields identify the category and the specific geological feature attributed to each line (Table 2B).

When used separately, each linear feature in the digital data is attributed with a range of information fields that apply to the particular category, thus ROCK units such as coal seams have different information fields to FAULT lines.

Specific fields are included on particular types of feature such as faults and mineral veins (Table 2C) but not all fields are populated as they may be for use at different scales.

Table 2 Information fields attached to lines in DiGMapGB-50 data**.**

2A

CATEGORY	FEATURE
ROCK	Coal, gypsum, sandstone, ironstone, oil shale, limestone nodule or cementstone beds; inferred or observed
FOSSIL_HORIZON	Algal, brachiopod, coral, Euestheria, Lingula, marine, mussel, Planolites bands or fish bed fossil horizons; inferred or observed
FAULT	Undifferentiated, Normal, thrust, reverse, slide, oblique slip, strike slip, shear zone, scissor; inferred or observed. Some faults indicate the downthrow side.
MINERAL_VEIN	Inferred or observed
FOLD_AXIS	Anticline, syncline, anticline/syncline pair; antiform, synform, antiform/synform pair; monocline; reclined; recumbent; chevron; concentric; disharmonic; kink; pre-lithification, ptygmatic; similar; unknown
ALTERATION_AREA	Limit of dolomitisation, reddening, hydrothermal alteration, metamorphic aureole, migmatisation, granite vein, granite pegmatite vein, pegmatite, diorite-granodiorite. Alteration areas are within the limiting line
LANDFORM	Backfeature of former coast / lake margin / river terrace; buried channel centre / margin; drift-filled hollow; drumlin crestline / line at base; dune crestline / line at base; elongate margin crestline; esker crestline / line at base; glacial drainage channel centre / margin; linear feature crestline; marked break in slope; top of landslide back scar / lower (toe) or side limit of landslide deposit where concealed beneath superficial deposits / open tension cracks

2B

DATA FIELD	EXPLANATION OF LINEAR FIELD
CATEGORY	Geological unit category e.g. ROCK used for geological units that form thin beds too narrow to be shown as polygons carrying a colour on the traditional printed map face
FEATURE	Geological feature, in abbreviated form, e.g. Coal_seam_Obs; Ironstone_bed_Inf
FEATURE_D	Description of FEATURE above in full e.g. Coal seam, observed; Ironstone bed, inferred; fossil horizon, marine band

2C

EXAMPLE FEATURE	EXPLANATION OF FEATURE
FLTNAME_C	Fault name. A code abbreviation, up to 4 characters, giving the name of the fault: e.g. HIBO
FLTNAME_D	Description of the FLTNAME code above giving the name of the fault: e.g. Highland Boundary Fault is the full name of the linear feature coded as HIBO
MINERAL_C	Mineral type. A code abbreviation, up to 4 characters, giving the first mineral listed on the linear feature: e.g. ANDA
MINERAL_D	Description of the Mineral code above giving the name of the mineral in full: e.g. ANDALUSITE is the full name of the mineral coded as ANDA

3.5 CREATION OF THE DIGMAPGB-50 DATA

Each DiGMapGB-50 digital tile is typically based on the most recent published geological map at 1:50 000 scale or 1:63 360 scale (one-inch to one-mile) for older pre-metric maps if the area has not been revised since about 1970. A few tiles of the Orkney Islands and the Western Isles (Outer Hebrides) in Scotland are based on 1:100 000 maps. In some areas where there are no suitable geological maps published, new geological lines were compiled for DiGMapGB-50 by fitting the best available old linework to modern topographical bases. The sources of information specific to each digital tile are available. For some maps, especially in areas of complicated geology, the Bedrock and Superficial (formerly ‘solid’ and ‘drift’) geology themes were published as separate map editions.

Those geological maps that were only available as paper copies were digitised retrospectively for DiGMapGB-50. All maps produced since about 1990 were compiled digitally and the data used for the digital map production processes were also used as the DiGMapGB-50 source material.

Regardless of source, the digital data were reprocessed to the same standard and each polygon attributed with a LEX_RCS label as explained in Table 1. This code pair is based on two codes: a LEX (or Lexicon) code giving the name of the unit; and a RCS (Rock Classification Scheme) code giving its lithology or composition.

The digital tiles may now differ from the original paper maps for a number of reasons, for example: digital data modified to improve the fit between tiles; nomenclature updated to current usage; errors on printed maps corrected; and additional geological interpretations made to fill gaps in information.

Some changes may have been made to the published lines to create the digital data but major revisions are generally avoided. In some cases, usually relating to older mapping where the published maps are seriously deficient and new mapping is available, geological lines were imported from recent 1:10 000 or 1:25 000 scale maps.

3.6 DATA HISTORY

This is Version 7 of the data and is at attribute level 22. The different versions are listed in Table 3 and it is expected that there will be future updates as new and replacement tiles are incorporated in to the dataset.

Table 3. DiGMapGB-50 data releases**.**

VERSION	ATTRIBUTE LEVEL	YEAR	*COMMENT*
V1	02	2001	*First version released*
	05	2002	*Attribution improved by adding: version, release date, full parentage, age ranges, hierarchical age number, additional printing colours, scale and source (year) information*
	10	2003	*RCS codes added*
V2	10	2003	*Rationalisation of the nomenclature and a major exercise to reduce the number of misfits between adjacent digital map tiles*
	11	2004	*Geochronology replaced chronostratigraphy in attribution*
V3	14	2006	*Re-tiling the whole dataset to avoid gaps and overlaps between tiles. Other revisions, including the correction of errors and further updates to nomenclature. Previous names and ages in million years added. Attribution of linear features improved*
V4	16	2007	*Incorporating new and revised tiles and miscellaneous corrections. LEX_RCS and LEX_RCS_I added to attribution to aid automatic key generation*
V5	18	2008	*Incorporating new and revised tiles and miscellaneous corrections*
V6	20	2010	*Master data converted to customised ESRI® ArcGIS format and released after incorporating new and revised tiles created during the previous year as well as miscellaneous corrections. UUIDs added*
V7	22	2013	*Incorporating new and revised tiles, refits and miscellaneous corrections*

3.7 COVERAGE

The DiGMapGB-50 dataset covers almost the whole of England, Wales and Scotland. In Version 7 there are now just two areas with no data on any theme: EW118_Nefyn and EW180_Knighton.

For availability see: http://www.bgs.ac.uk/products/digitalmaps/digmapgb_50.html.

In total there are about 350 possible nominal tiles for England and Wales and another 150 for Scotland. Not all themes are included for all areas; for instance EW019_Hexham has no Superficial theme. Where there is no cover at 50k, 250k (Bedrock) or 625k (Bedrock and Superficial) data are available.

3.8 DATA FORMAT

The data are routinely released in ESRI Arc® shape file formats. Other formats such as MapInfo TAB are available on request. The digital tiles are geologically attributed to the latest version of the BGS Digital Map Production System. This is an integrated system of geological attribution and map production which standardised the methodology of digital mapping and data structure, providing the framework for the DiGMapGB project.

The 1:50 000 scale digital geological data typically comprises four polygon themes: Bedrock, Superficial, Mass Movement and Artificial as well as a Linear theme for faults, thin rock beds such as coals, and landforms.

The master data from which the published ESRI or MapInfo files are derived are held in ESRI file geodatabase format.

3.9 LIMITATIONS

The 1:50 000 scale digital map data is generalised and the geological interpretation should be used only as a guide to the geology at a local level, not as a site-specific geological plan based on detailed site investigations. The scale of the data is indicated by the nominal scale attribute (NOM_SCALE: 50000) embedded in the data. Do not over-enlarge the data; for example, do not use 1:50 000 nominal scale data at 1:10 000 working scale. If more-detailed information is required then the 1:10 000 scale maps or digital data, which provide the most-detailed interpretations available, should be consulted.

The original geological map interpretations were fitted to Ordnance Survey topographical bases available at the time of survey, as indicated by the nominal topographic year attribute (NOM_OS_YR). The digital geological data do not necessarily fit other topographical bases, including more modern OS ones.

The cartographic accuracy is nominally 1 mm which equates to 50 m on the ground at 1:50 000 scale. This is a measure of how faithfully the lines are captured; it is not a measure of the accuracy of the geological interpretation.

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No advice or information given by BGS, NERC or their respective employees or authorised agents shall create a warranty, condition or representation as to the quality, accuracy or completeness of the information or its suitability for any use or purpose.

Feedback

Please report any errors to digital data quoting the UUID of the feature and the location as a national grid reference.

Any other feedback from users is always welcome.

4 Licensing Information

The British Geological Survey does not sell its digital mapping data to external parties. Instead, BGS grants external parties a licence to use this data, subject to certain standard terms and conditions. In general, a licence fee will be payable based on the type of data, the number of users, and the duration (years) of a licence.

All recipients of a licence (potential licensees) are required to return a signed digital data licence document to us before authorisation for release of BGS digital data is given.

In general terms, a BGS digital data licensee **will** be permitted to:

- make internal use of the dataset(s)
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- reproduce extracts from the data up to A3 for use in external analogue (paper/hard copy) or non-queryable electronic (e.g. secured .pdf) format: to meet a public task duty; fulfil a statutory requirement; and/or as part of academic or other non-commercial research

But **will not** be permitted to:

- provide a bureau service for others or incorporate the data in the generation of products or services for commercial purposes
- sell, assign, sublicense, rent, lend or otherwise transfer (any part of) the dataset(s) or the licence
- place (any part of) the dataset(s) on the Internet

The BGS is committed to ensuring that all the digital data it holds which is released to external parties under licence has been through a robust internal approval process, to ensure that geoscientific standards and corporate quality assurance standards are maintained. This approval process is intended to ensure that all data released: (i) is quality assured; (ii) meets agreed BGS data management standards; (iii) is not in breach of any 3rd party intellectual property rights, or other contractual issues (such as confidentiality issues), that would mean that release of the data is not appropriate.

When the BGS digital datasets are revised any upgrades will be automatically supplied to the licensee, at no additional cost. Geological map datasets are revised on a periodic rather than on an annual basis, licensees will therefore not automatically receive a new dataset each year unless changes have been made to the data.

These are general comments for guidance only. A licensee of BGS's digital data is provided with full details of the basis on which individual BGS datasets licensed to them are supplied.

If you have any doubts about whether your proposed use of the BGS data will be covered by a BGS digital licence, the BGS Intellectual Property Rights (IPR) section will be happy to discuss this with you and can be contacted through the following email address: iprdigital@bgs.ac.uk. BGS IPR will usually be able to provide reassurance that the licence will cover individual user requirements and/or to include additional 'special conditions' in the licence documentation, addressing specific requirements within BGS's permitted usage.