BGS INFORMATICS

User Guide: BGS BritPits v4

Open report OR/25/086

British Geological Survey

BRITISH GEOLOGICAL SURVEY

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Keywords

BritPits, mineral, surface, underground, commodity.

Front cover

View over Chainbridge Scrape, Notts Wildlife Trust Idle Valley Nature Reserve, formerly part of the workings at Lound Quarry, worked for sand and gravel by Tarmac – Central. BritPits record 238936. Photo: Don Cameron

Bibliographical reference

BRITISH GEOLOGICAL SURVEY (BGS). 2025. User Guide: BGS BritPits v4. *British Geological Survey Open Report*, OR/25/086. 46pp.

Keyworth, Nottingham British Geological Survey 2025

BRITISH GEOLOGICAL SURVEY

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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 UK Research and Innovation.

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Foreword

The British Geological Survey (BGS) is a world-leading geological survey, focusing on public-good science for Government and research to understand earth and environmental processes.

We are the UK's premier provider of objective and authoritative geoscientific data, information and knowledge to help society to:

- use its natural resources responsibly
- manage environmental change
- be resilient to environmental hazards

We provide expert services and impartial advice in all areas of geoscience. As a public sector organisation, we are responsible for advising the UK Government on all aspects of geoscience as well as providing impartial geological advice to industry, academia and the public. Our client base is drawn from the public and private sectors both in the UK and internationally.

The BGS is a component body of the Natural Environment Research Council (NERC), part of UK Research and Innovation (UKRI).

DATA PRODUCTS

BGS produces a wide range of data products that align to Government policy and stakeholder needs. These include baseline geological data, mineral resources, engineering properties and geohazards datasets. These products are developed using in-house scientific and digital expertise and are based on the outputs of our research programmes and substantial national data holdings.

Our products are supported by stakeholder focus groups, identification of gaps in current knowledge and policy assessments. They help to improve understanding and communication of the impact of geoenvironmental properties and hazards in Great Britain, thereby improving society's resilience and enabling people, businesses, and the government to make better-informed decisions.

Acknowledgements

This report is the published product of a study by the British Geological Survey (BGS) to produce a digital dataset identifying known surface and underground mineral workings in the United Kingdom (UK). The methods used to derive the data were determined by a team of specialists with a broad range of expertise from satellite analysis, engineering geology to landform analysts and statistical modellers. The team includes the following BGS staff (in alphabetical order): Don Cameron, Antonio Ferreira, Edward Lewis, Joseph Mankelow, Emma Raycraft and Roman Roth.

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Summary

The British Geological Survey (BGS) British Pits (BritPits) dataset is derived from the BGS database of mines, quarries and other mineral workings. The database which holds point source records of over 264,000 surface and underground mineral workings in Great Britain (GB), Northern Ireland, the Isle of Man and the Channel Islands. Each record describes an onshore mineral working in terms of its name, operational status, geographic location, Mineral Planning Authority (MPA), operator, geology worked and mineral commodity produced. The workings include quarries, underground mines, oil and gas wells, rail depots for handling bulk minerals and wharfs for landing of marine-dredged sand and gravel and crushed rock aggregates. The information has been derived from the Lists of Mines and Quarries produced for the Home Office since 1897, together with the British Geological Survey (BGS) and Ordnance Survey (OS) mapping and assistance from local authorities and mineral companies (BGS 2023a).

The information provided in this User Guide is intended to provide a quick-start guide to using and understanding the BGS BritPits data product.

1 Introduction

1.1 WHAT THE DATA SHOW

The BGS BritPits dataset contains more than 264,000 records of onshore mineral workings located in Great Britain (GB), Northern Ireland (NIR), the Isle of Man (IOM) and the Channel Islands (CHA). The data include active, inactive, dormant and ceased sites and a range of mineral operations, including mines, quarries, onshore oil and gas fields, together with wharfs and rail depots handling mineral products and industrial processes. Each record describes an onshore mineral working in terms of its name, operational status, geographic location, Mineral Planning Authority (MPA), operator, geology worked and mineral commodity produced.

1.2 WHO MIGHT REQUIRE THE DATA

The data will be of use to bodies in the public and private sector who have an interest in the location of mineral extraction sites and their possible after-use. For example, the data has been supplied to national and local governments for use in planning and statistical studies, to non-governmental organisations (NGO's) for environmental and conservation planning, and commercial organisations for analysis of resource potential and legacy operations.
The BGS carries out updates and amendments to the underlying database using historic and current Ordnance Survey (OS) mapping (e.g. 1:10 000 scale vector mapping), BGS publications, BGS field mapping and other historical documents to locate and check the information on mineral workings. The records of currently active sites are updated with the cooperation of both local authorities and the minerals industry. Until 2010, an annual survey of Minerals Planning Authorities, on behalf of the Ministry of Housing, Communities and Local Government and the Scottish and Welsh Governments, was supplemented with a three-yearly survey of the minerals' operators. Data on ceased workings has been collected partly through projects with Historic England on sources of building stone for conservation.

2 Case study

2.1 BRITPITS CASE STUDY

The provision of active, inactive and dormant minerals workings in the UK to support the Annual Mineral Raised Inquiry (AMRI).

2.1.1 The Problem

The Office for National Statistics (ONS) and the then Department for Communities and Local Government (DCLG), now the Department for Levelling Up, Housing and Communities (DLUHC), required an annual up-to-date list of active, inactive (mothballed) and dormant mineral workings in Great Britain for the purposes of contacting the sites assessed for the statutory Annual Mineral Raised Inquiry (AMRI) (e.g. MHCLG 2014). This was to include Site Names and Location, Commodity worked and details of the Operator and their contact address.

2.1.2 The Challenge

BGS surveyed each Mineral Planning Authority (MPA) in England, Scotland and Wales with the assistance of the DCLG and the Scottish and Welsh Governments; the survey was termed the pre-AMRI Survey. BGS sent a list of what were considered to be the active, inactive and dormant sites from BGS BritPits to each MPA to allow them to check the data and return the amended listing to BGS. This enabled the BGS BritPits database to be updated in regard to the current operational status of the site, the addition of newly started or recommenced sites together with details of commodities worked and of the operators and their addresses.

2.1.3 The Solution

BGS was able to supply an annual dataset of active, inactive (mothballed) and dormant mineral workings, derived from BGS BritPits to the organisations concerned i.e. the ONS and DCLG (now DLUHC). This allowed them to fulfil their statutory obligations and ensure a maximum inclusion of operators and sites in the AMRI survey.

3 Methodology

3.1 OVERVIEW

The BGS BritPits database holds information on mineral workings, their geographic location, address, Mineral Planning Authority, Operator, site geology, mineral commodities produced and their subsequent end-uses. The data are held in an ORACLE relational database; a Microsoft Access interface allows staff to manage the database content. There are currently over 264,000 records in the database and this number continues to rise in response to an on-going survey of former mineral sites in Great Britain, Northern Ireland, the Isle of Man, and the Channel Islands.

The geological attributes in the dataset (e.g. LITHOSTRAT) have mainly been based on BGS 1:50 000 scale mapping, originally from paper maps and then using BGS Geology 50k digital mapping (previously known as DiGMapGB-50). In some cases, BGS 1:250 000 scale mapping has had to be used where no 1:50 000 scale map existed. The BGS 1:10 000 scale mapping has also been used when it was clear that the 1:50 000 was inaccurate, oversimplified, or the correct geology was not shown in the mapped area of working at the 1:50 000 scale. The same procedures were followed for Northern Ireland, the Isle of Man, and the Channel Islands as much as possible.

Work is continually undertaken to update older records in line with the current expected standard of attribution for new entries into the database. There is also on-going monitoring of the minerals industry in order to add any newly commenced workings, but also to update the operational status of existing workings, and changes in operators. Changes in BGS digital geological mapping are also filtered through to the database and incorporated in the table of “worked body” (the source geology of the commodity being worked).

The BGS BritPits dataset is updated every year, in October, using the most up-to-date version of the BGS BritPits database. ESRI ArcGIS is used to convert the database export into a shapefile, define the data projection (British National Grid, Irish National Grid TM65, UTM Zone 30N and WGS 84), create the regional files, extract only the active, inactive and dormant sites and create an index file with only a limited number of fields together with basic level information for each mineral working.

3.2 SOURCE DATASETS

A variety of source datasets have been used to inform and incorporate into the development of BritPits. The original source of the dataset is that presented in the Directory of Mines and Quarries (DMQ) series produced by BGS in the 1980’s (e.g. Cameron et al., 2020). From this initial dataset, further attributes, such as a source identification and the end use of the mineral product, were added as their usefulness to users became apparent. Where possible, older records have been updated in the database, although it has not yet been possible to update all fields. Records of currently active and new workings are constantly updated through surveys of industry and MPAs and these, and other records, are also amended in response to enquiries or reported errors in the data. The date a record has most recently been updated is contained in the attribution table.

4 Technical Information

The BGS BritPits dataset contains point source locational information for past and present mineral working sites in Great Britain, Northern Ireland, the Isle of Man and the Channel

Islands. These include both mines and quarries as well as brine, oil and gas wells, mineral by-product producers (such as power stations), and major rail depots and wharfs where minerals are handled. The dataset contains information on the operational status of the working, the worked geological body, the commodity produced and the end use for this commodity where known. Location information also includes the current Mineral Planning Authority (MPA) where the working is found. Details of the operator of the workings as supplied either by the operator, the relevant MPA or abstracted from historical documents are included. Information on Location and Commodity, where not given by the operator or MPA, is derived from study of published OS maps and BGS published and unpublished maps as well as BGS memoirs (2023a).

The database is constantly updated with information gathered via contact with MPAs, the minerals industry and the trade media, where possible. Amendments and corrections are also made by further interrogation of BGS records when responding to enquiries from stakeholders or BGS staff.

The lithological information for surface workings is based on the current version of the BGS Digital Geological Map of Great Britain at 1:50 000 (BGS Geology 50k). Information regarding underground workings is taken from the relevant BGS 1:10 560 and 1:10 000 scale mapping. Reservoir rocks for oil and gas are identified by BGS scientists from various national and regional studies.

Note that lithologies identified as being worked to produce the relevant commodity shown may not match the current version of BGS Geology 50k digital mapping. This is a result of areas of resource being worked out before the area has been remapped and hence are no longer shown in the geological datasets. This can be seen in areas of sand and gravel workings where for example, in the Thames valley around London, BGS Geology 50k may show London Clay as the surface lithology at the centroid of the working which has had the overlying Lynch Hill Gravel Member worked away before the revision took place. The commodity listed as being extracted is thus Sand & Gravel, not Clay & Shale.

4.1 SCALE

The data are provided as X-Y point data representing the centre of the working, or any subsequent extensions. Location information of the approximate centre of a surface mineral working is normally presented with an estimated accuracy of ±10 meters. Where the location is uncertain and for mine entrances, accuracy may be given as ± 50 or ±100 meters. Data should, therefore, preferably be used at scales ranging from 1:50 000 to 1:10 000.

4.2 COVERAGE

The dataset covers primarily onshore surface mineral workings and the surface expression of underground mineral workings in Great Britain (that is, England, Scotland, Wales), Northern Ireland, the Isle of Man and the Channel Islands (Figure 1). Data are supplied with the horizontal position on the ellipsoid represented by the WGS 84 geographic coordinate system (Greenwich as prime meridian, Longitude and Latitude in decimal degrees, EPSG: 4326) and further projected to the British National Grid (EPSG: 27700) for Great Britain and Isle of Man, Irish National Grid TM65 (EPSG: 29902) for Northern Ireland and ED50 UTM Zone 30N (EPSG: 23030) for the Channel Islands. For the last three planar projections (Easting and Northing) the coordinates are provided in metres.

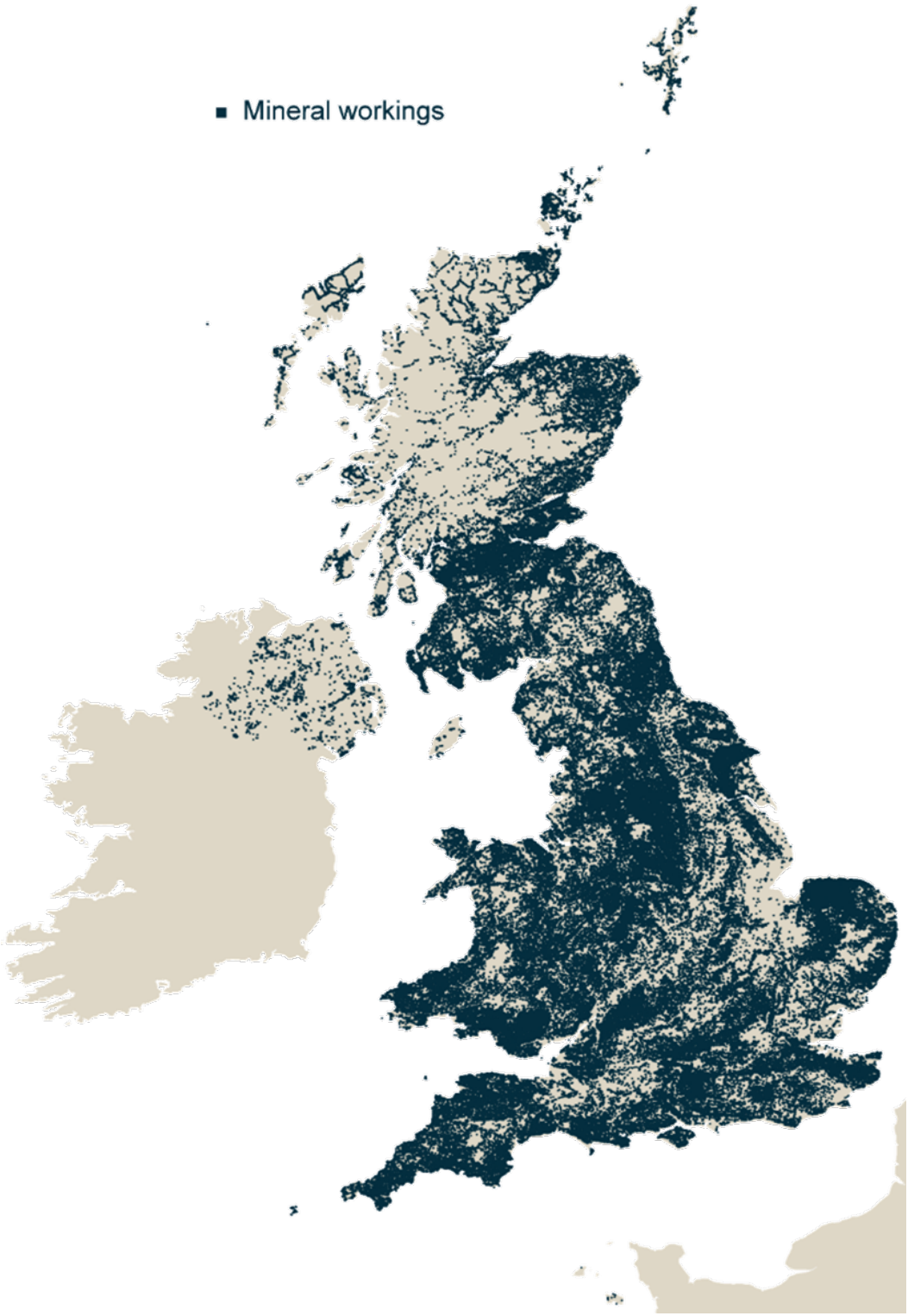

Figure 1 BGS BritPits coverage. Coastline: Contains OS data © Crown copyright and database right 2025

4.3 ATTRIBUTE DESCRIPTION

Table 1 shows the attributes included in the BGS BritPits_v4 dataset. Both full name (1st column) and truncated name (2nd column) are shown in Table 1 as some field names are truncated to 10 characters during the processing in the GIS application. Full dictionary tables for abbreviations and acronyms are included in the Appendices of this user guide. Note that BritPitsV3 includes new and modified field names to assist in future publication of the dataset

and to accommodate the incorporation of the verbose description of the codes and abbreviations given in the appendices Further details are given in section 4.5).

Table 1 The attribute fields in the BGS BritPits v4 dataset.

Field name as shown in CSV/GPKG etc.	Field name as shown in ESRI	Field description
* A new field created for v3 onwards † A modified field name since v3 onwards		
BGS_REFERENCE_NO	BGS_REF_NO†	BGS Identifier of a record (mineral working site or mineral handling facility).
PIT_NAME	PIT_NAME	Name of the mineral operation at the site in common use or applied by BGS site recording.
ALTERNATIVE_NAME	ALT_NAME†	Any alternative or subsidiary names applied to the site or names of pits subsumed into the current area of the site.
PARENT_REF*	PARENT_REF*	BGS Reference number of the ***main site*** in the BritPits database, applied to a record if part of a site is, or has been worked, in a complex, or is a satellite site.
PARENT_PIT_NAME†	PARENT_PIT	Pit Name of the ***main site*** in the BritPits database, applied to a record if part of a site is or has been worked in a complex, or is a satellite site.
PIT_STATUS _CODE	PIT_STATUS	Coded Operational status of the site (See User Guide Appendix 1).
PIT_STATUS _TRANS	STAT_TRANS*	Operational status of the site (See User Guide Appendix 1).
TYPE_OF_MINERAL_ WORKING_SITE_CODE	TYPE_CODE†	Coded type of mineral working at the site (See User Guide Appendix 2).
TYPE_OF_MINERAL_ WORKING_SITE_TRANS*	TYPE_TRANS*	Name of mineral working at the site (See User Guide Appendix 2).
COMMODITY_CODE	COMM_CODE†	Code relating to the type of Mineral Commodities worked at site (See User Guide Appendix 3).
COMMODITY_TRANS†	COMM_TRANS†	Name of mineral commodities worked at site.
OPERATOR_NAME	OPERATOR†	Full name and title of operator. This may be a branch or division of a major group of companies.
PIT_ADDRESS	PIT_ADDRES	Full postal address for the pit (may not reflect actual location).
CHRONOSTRAT_AGE†	CHRONO_AGE†	The geochronological term indicative of the age of the material extracted. It generally refers to a Period e.g. 'Jurassic' (No_data denotes that age is yet to be assigned)
BRITPITS_LITHOSTRAT_ AGE†	LITHO_DESC†	Geological body worked at the site. Attributed by examination of the BGS digital mapping, the BGS LEXICON or former names used in the site description for production of the Directory of Mines and Quarries where this is helpful to the non-technical geological user e.g. White Chalk Subgroup (Upper Chalk). No_data denotes that age is yet to be assigned.
ECONOMIC_PLANNING_ REGION_CODE†	EPR_CODE	Code of Economic Planning Region (EPR) of the United Kingdom; the Isle of Man and the Channel Islands are included here for convenience (See User Guide Appendix 4).

ECONOMIC_PLANNING_REGION_TRANS†	EPR_TRANS†	Name of EPR of the United Kingdom; the Isle of Man and the Channel Islands are included here for convenience (See User Guide Appendix 4).
MPA_CODE	MPA_CODE	Code for the Mineral Planning Authority (MPA) within which the mineral working is primarily situated (See User Guide Appendix 5).
MPA_TRANSLATION*	MPA_TRANS*	Name of the MPA (See User Guide Appendix 5).
SPONSOR_ORG_CODE	SPONSR_ORG†	Sponsor organisation of data collection (e.g., where BGS is the British Geological Survey, and EH is English Heritage [now Historic England]).
LON_WGS84	LON_WGS84†	The East – West coordinate (in decimal degrees) on the WGS84 geographic coordinate system with Greenwich as prime meridian (EPSG: 4326), of the working void or mine entrance.
LAT_WGS84	LAT_WGS84†	The North - South coordinate (in decimal degrees) on the WGS84 geographic coordinate system with Greenwich as prime meridian (EPSG: 4326), of the working void or mine entrance.
WKT_LOCATION*	WKT_LOC*	Well known text description of location (e.g. “POINT (-6.1596 57.4975)”).
EPSG_CODE†	EPSG_CODE†	The EPSG code of the projected coordinate system for the provided EASTING and NORTHING. It is a standard, 4 to 6 digits number that identifies and characterises a coordinate system listed in the EPSG Geodetic Parameter Dataset.
EASTING	EASTING	Easting coordinate (in metres) of the working void or mine entrance on the projected local/national coordinate system, namely the British National Grid (EPSG: 27700) for GB and Isle of Man, Irish Grid TM65 (EPSG: 29902) for Norther Ireland, and ED50 UTM Zone 30N (EPSG: 23030) for the Channel Islands.
NORTHING	NORTHING	Northing coordinate (in metres) of the working void or mine entrance on the projected local/national coordinate system, namely the British National Grid (EPSG: 27700) for GB and Isle of Man, Irish Grid TM65 (EPSG: 29902) for Norther Ireland and ED50 UTM Zone 30N (EPSG: 23030) for the Channel Islands.
DATE_LATEST_UPDATE†	UPDAT_DATE†	Date of last update of any part of the information of the record in the database, or else of the first data entry.
VERSION_NAME	VERSION	The BritPits dataset version (e.g. BritPits_v4). In this case now including all updates to the database since v3.
CREATION_DATE	CREAT_DATE†	The release date of the BritPits dataset output referred in the VERSION (e.g. the release date of BritPits version 4 - was October 2025).

4.4 DATA FORMAT

The BGS BritPits dataset (BritPits_v4) is available in (ESRI) GIS point Shapefile format (*.shp*), that is, a vector map with points for geographic information system (GIS) software, and in Microsoft Excel file format (*.xlsx*). The dataset includes information on mines and quarries, as well as brine, oil and gas wells, mineral by-product producers such as power stations and major rail depots and wharfs where minerals are handled. A set of 24 attributes (listed in Table 1) is available for each data point.

The BGS BritPits_v4 is available in three different packages. These are described in the following sub sections.

4.4.1 Full dataset

The full BritPits_All_v4 dataset includes all the entries (over 264,000) of the BGS BritPits database, including historic sites, and all the 24 attributes listed in Table 1. This data is typically supplied as a GIS file with the WGS 84 coordinate reference system, and a Microsoft Excel file (BritPits_AID_v4.xlsx).

The full data is also provided as 17 mineral planning regions, namely 3 for Scotland, 9 for England, 2 for Wales, Northern Ireland, Isle of Man and Channel Islands (see Figure 2). Each region is supplied as a GIS point shapefile (example for the Northern Scotland Region: *BritPits_Northern_Scotland_v4.shp*) and/or a Microsoft Excel file (example for the Northern Scotland Region: *BritPits_Northern_Scotland_v4.xlsx*). The regional files are provided in the relevant coordinate projection for their geographic extent.

Figure 2 The 17 regions in BGS BritPits v4. Boundaries and coastline: Contains OS data © Crown copyright and database right 2025

4.4.2 Active, inactive and dormant (AID) site data

The AID data package (BritPits_AID_v4) is a subset of the full dataset and includes only the active, inactive and dormant mines/quarries which correspond to approximatively 5200+ entries. The AID subset is supplied with all the 23 attributes listed in Table 1, This data is typically supplied as a GIS file with the WGS 84 coordinate reference system, and also a Microsoft Excel file (BritPits_AID_v4.xlsx), (a transformed shape file using the British National Grid coordinate system is available on request).

4.4.3 Index data

The Index (BritPits_Index_v4) package is based on the full BritPits dataset but contains index level information only. This includes 11 key attributes (out of the 24 listed in Table 1), namely

the identifier of the record (BGS_REF_NO), pit name (PIT_NAME), Alternative name (ALT_NAME), pit status and translation (PIT_STATUS, STATUS_TRANS), sponsor organisation of data collection (SPONSR_ORG) location (LAT_WGS84, LON_WGS84, WKT_LOC), version of the dataset (VERSION) and date of database extraction (CREAT_DATE). Thus, the index lacks information such as the type of mine, commodities, geology, operator, economic planning region and Mineral Planning Authority. This is made freely available under an Open Government Licence (OGL) and can be accessed as a Web Map Service (WMS) layer (BGS 2023b) or via the BGS Onshore GeoIndex (BGS 2023c). This data is typically supplied as a GIS file with the WGS 84 coordinate reference system, and also a Microsoft Excel file (BritPits_AID_v4.xlsx).

4.5 DATASET HISTORY

The BGS BritPits database holds the majority of data generated from the compilation of the Directory of Mines and Quarries (Cameron et al., 2020). Storing the data in a digital format was deemed to be more useful rather than in a collection of hard copy publications. Originally, each record defined an active mineral site in the UK, listing a point source grid reference for the centre of the working and the geology worked, site operator and commodity produced. Any sites which had ceased operating since the publication of the original DMQ were added to this database.

Over the years, BGS has acquired and incorporated further data about active and historic mineral workings into the BGS BritPits database. These have included, for example, information gathered through the 1990's and 2000's production of mineral resource maps for England and South Wales as well as projects to identify building stone sources.

A large dataset of building stone sources was added and used to create a 1:1 000 000 scale map of building stones and quarries. A further large dataset of quarry and mine workings collated in Scotland from a variety of hard copy publications was added and any duplicate sites have been deleted.

In the 1990's and 2000's, more records were added to the database as BGS undertook work, commissioned by the Department of the Environment, Office of the Deputy Prime Minister, and DCLG to create a suite of Mineral Resource maps for England and South Wales. During this time, BGS was provided with a legacy set of 1:25 000 scale maps and a card index listing location, commodities produced and the details of the operators, together with production figures and in some cases the end use of the material and dates of working. This has enabled identification of some historical sites. As BGS was commissioned to compile statistics for national mineral surveys, other minerals handling sites such as wharfs for landing marine sand and gravel, and rail depots for shipment of minerals, were also added to the database.

A large data collection was also funded by Historic England (formerly English Heritage) in order to identify all the building stone quarries in England over and above those already recorded in the database by the BGS. This added some 34,350 new records to the database. Complementary studies have been undertaken by Historic England consultants to identify building stone sources. Historic England specified that this part of the database be freely available for users of the dataset.

At the same time, operators requested BGS to add the 'end-use' of the commodity produced into the DMQ. As such, tables and dictionaries were used to incorporate this data into the database. When the BGS BritPits data were first incorporated into a GIS, it was clear that the locations given for some workings listed were not necessarily the correct location for the actual workings but had been located to the 'site entrance' to the workings for the purpose of guiding users of the Directory to the site. These records have subsequently been amended in the database.

BritPits V4 contains the same fields and field names as Version 3. N.b. Field names were modified in version 3 to improve clarity over the field content, and to align with database changes to the dataset (e.g. AGE has been renamed to CHRONOSTRAT_AGE to explicitly refer to the geological age of the mineral deposit).

BritPits V4 contains information for 264,549 sites, compared with BritPits V3 (262,814).

The data was previously published as:

- BGS_BritPits_v2.0 (2023 October)
- BGS_BritPits_v2.1 (2024 February)
- BGS_BritPits_v3.0 (2025 March)

4.6 DISPLAYING THE DATA

The location data shows the geographic position of the mineral workings. These data are supplied as point data only and contain no information as to the size of the mineral workings or operations. As far as possible, in the case of quarries, the point represents the centre of the currently known working void, but for other types of workings it may be the general centre of any surface activity permission. The grid reference given for the surface expression (shaft, adit entrance, oil or gas well site) of underground workings does not represent any specific shaft location. Buffers of up to 50m should be applied to such sites. Some larger sites may be represented by a number of related records (Parent site and subsidiaries). The subsidiary sites represent the workings of a site over a number of years, where the working void can be seen to have occupied different locations on the source material, e.g.:

- Sites shown on OS or BGS maps ranging from 1864 to the present day.
- Modern sand and gravel quarries where each subsidiary site have been developed following the granting of subsequent planning permissions.

Records may have different worked lithologies from those shown on the BGS Geology 50k mapping. This may be due to several factors such as:

- The material being worked away leaving a ‘doughnut’ of unworked material around a ‘filling’ of another, unworked body. The attribution of the material worked at the site can be identified from the unworked material. This is a common feature in sand and gravel workings where the surface gravels have been worked off to expose underlying clay.
- Underground workings where another, often younger rock, as shown in the BGS Geology 50k overlies, and obscures, the underlying worked material.
- In some cases, the lithology details have been taken from the 1:10 560 or 1:10 000 scale BGS mapping where this data are not so simplified as the 1:50 000 scale BGS mapping and may show smaller features that have been lost at the smaller scale.

Users should take care to apply suitable coordinate transformations when utilising the supplied GIS files. The full coverage BritPits_All_v4, BritPits_AID_v4 and BritPits_Index_v4 files are typically supplied with a WGS 84 (EPSG4326) Coordinate system. The regional files are all supplied with the most suitable local coordinate reference system for their coverage. When viewing files of different projections users should be aware of the need to apply suitable transformations to the data within their GIS options (see the Limitations section below for further details).

4.6.1 How BritPits are represented

The BGS BritPits dataset will show X-Y points and can be presented by the user in several ways to suit their use of the data. Primary differentiation could be by operational status or type of site or commodity (Figure 3).

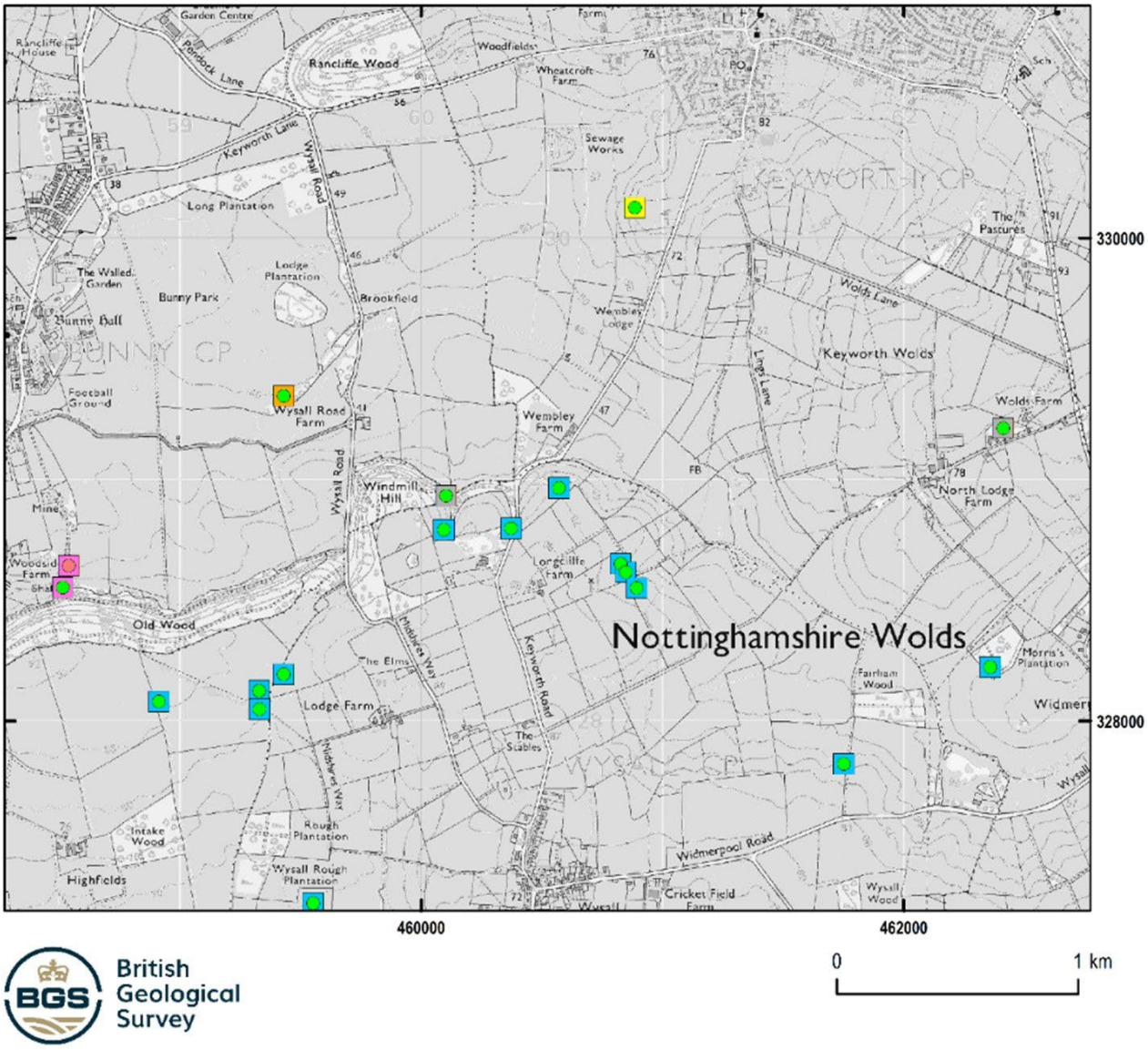

Figure 3 Example BGS BritPits data by operational status and commodity. Topographic backdrop: Contains OS data © Crown copyright and database rights 2025. OS AC0000824781 EUL

5 Licensing the data

5.1 BGS LICENCE TERMS

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 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).
- allow a specified number of internal users to access/use the data (the number of users will be agreed with the licensee and specified in the licence document) for the purposes of their day-to-day internal activities.
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- provide a bureau service for others or incorporate the data in the generation of products or services for commercial purposes.
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5.2 DATA ACKNOWLEDGMENTS

Please use the following acknowledgements when using the BGS BritPits_v4:

BritPits_v4 licenced data: ‘Derived from BGS Digital Data under Licence (cite your licence number) British Geological Survey © UKRI. All rights reserved.’

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5.3 CONTACT INFORMATION

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6 Limitations

6.1 DATA CONTENT

The BGS BritPits dataset has been constructed based on surveys of mineral workings, observations from Ordnance Survey (OS) and British Geological Survey (BGS) mapping, BGS Memoirs, together with information from the minerals industry and Mineral Planning Authorities (MPAs) and third-party sources.

The values within this dataset are limited by the components on which they are based. The data provided are to the best of our knowledge based upon the interpretations and evidence available at the time of survey, or at the time of re-evaluation for modifications/correction.

6.2 SCALE

The data are provided as X-Y point data representing the centre of the working, or any subsequent extensions.

Location information of the approximate centre of a surface mineral working is normally presented with an estimated accuracy of ±10 meters. Where the location is uncertain and for mine entrances, accuracy may be given as ± 50 or ±100 meters.

No indication of size or coverage of the working is provided.

Data should preferably be used at scales ranging from 1:50 000 to 1:10 000.

6.3 ACCURACY AND UNCERTAINTY

Due to the nature in which this dataset has been compiled, using different data sources and interpretations, we estimate the uncertainty of a given mineral working coordinate location to be +/- 50 m. Whilst most data is likely to have a 10 m accuracy, other data may be within 100 m of the exact location. This is a direct consequence of the variable scales of the data sources.

6.4 ARTEFACTS

The geological information given for any mineral working site may not be the same as that shown on the BGS Geology: 50k dataset. This may be the result of the following:

- The BGS Geology: 50k dataset being revised and consequently new descriptions do not match those given when the record was created.
- The material worked has been removed and therefore not present when the geological mapping survey was carried out.
- The material worked is underground and the BGS Geology: 50k dataset only refers to the geology at the surface.

6.5 PROJECTIONS AND TRANSFORMATIONS

Users should take care to apply suitable projection parameters and coordinate transformations when utilising the supplied GIS files or building the data from the supplied Microsoft Excel files. The full coverage BritPits_All_v4, BritPits_AID_v4 and BritPits_Index_v4 files are typically supplied with a WGS 84 Coordinate system, denoted by file names ending '_EPSG4326'. This is built using the Longitude and Latitude coordinates available in the attributes of the file. The projection is EPSG 4326.

Files supplied with a British National Grid coordinate system are denoted by file names ending '_EPSG27700' and utilise the Easting and Northing attribute fields. Their projection EPSG is 27700.

Files supplied with an Irish National Grid coordinate system are denoted by file names ending '_EPSG29902' utilise the Easting and Northing attribute fields and the projection EPSG is 29902.

Files supplied with a UTM coordinate system are denoted by file names ending '_EPSG23030' utilise the Easting and Northing attribute fields and the projection EPSG is 23030.

When using these files alongside each other, or datasets in other projections, users are advised to set appropriate transformations within their GIS. The BritPits data has been compiled with the following transformations set within the ESRI ArcMAP and ArcGIS Pro environments (similar transformation parameters are available for other GIS platforms.

WGS 84 (EPSG 4326) to BNG (EPSG 27700) utilises the ESRI transformation 'OSGB 36 to WGS 84 petroleum'

WGS 84 (EPSG 4326) to ING-TM65 (EPSG 29902) utilises the ESRI transformation 'TM65 to WGS 84 2'

WGS 84 (EPSG 4326) to UTM (EPSG 23030) utilises the ESRI transformation 'ED_1950_To_WGS_1984_18'

If transformations are not set (or not available), then the displayed points shown on the maps may deviate from the coordinates given in the attribution table by up to 136m (this is because GIS systems have to reproject the datapoints 'on the fly' and without transformers, will default to simplified parameters to enable the data to be displayed). Typical spatial displacement between differently projected datasets WITH set transformations, is typically only 1- 2m.

6.6 DISCLAIMER

The use of any information provided by the British Geological Survey ('BGS') is at your own risk. Neither BGS nor the Natural Environment Research Council (NERC) or UK Research and Innovation (UKRI) gives any warranty, condition or representation as to the quality, accuracy or completeness of the information or its suitability for any use or purpose. All implied conditions relating to the quality or suitability of the information, and all liabilities arising from the supply of the information (including any liability arising in negligence) are excluded to the fullest extent permitted by law. No advice or information given by BGS, NERC, UKRI 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.

7 Frequently asked questions

The questions and answers below have been provided to address potential issues relating to how the product can be used or how it can be interpreted. If you have any additional questions, please contact digitaldata@bgs.ac.uk

Q: What does this dataset show?

A: BGS BritPits holds point source records of over 264,000 onshore mineral workings located in Great Britain and Northern Ireland, the Isle of Man and the Channel Islands. The coverage includes active, inactive (mothballed), dormant and ceased sites and a range of mineral operations, including mines, quarries, onshore oil and gas fields, together with wharfs and rail depots handling mineral products or industrial processes which produce a mineral product.

Q: What scale are these data provided at?

A: Data were mostly captured at 1:10 000 scale but with scales varying depending on the resolution and accuracy of the baseline source datasets (surveys or maps). Therefore, we recommend using the data at scales ranging from 1:50 000 up to 1:10 000.

Q: How accurate is this dataset?

A: Location information of the approximate centre of a surface mineral working is normally presented with an estimated accuracy of ±10 meters. Where the location is uncertain and for mine entrances, accuracy may be given as ± 50 or ±100 meters.

Q: How often will this dataset be updated?

A: The background database is constantly amended and updated, while the dataset is issued on an annual basis, in October.

Q: Can I use this dataset as part of a commercial application?

A: Please refer to the licencing terms supplied alongside the dataset. For further queries regarding the licensing terms of our products, please contact digitaldata@bgs.ac.uk.

Q: Are the dataset values real world observations or predictions?

A: The data are based on real world observations.

Q: In what formats can the dataset be provided?

A: The dataset can be provided in ESRI Shapefile or Microsoft Excel format. More specialised formats may be available but may incur additional processing costs. Please email BGS Enquiries (enquiries@bgs.ac.uk) to request further information. An index level version of the dataset is openly available and supplied as a Web Map Service (WMS) layer (BGS 2023b) or via the BGS Onshore GeoIndex (BGS 2023c).

Q: Is the data supplied comprehensive?

A: The BritPits dataset is taken from a database. Records within this database have been added using historical Ordnance Survey and BGS mapping sources as well as other historical mapping and literature references. The majority of mapping has taken place since the 1850s so records of surface workings dating from those times are fairly comprehensive. Underground workings are less comprehensively recorded; however, the database is being constantly updated and these records are added and amended when found. Mineral workings prior to the mid-19th Century are not provided systematically.

Q: Why are Wharfs, Rail Depots, Recycling Depots and other artificial mineral production sites included?

A: The dataset is used for a variety of survey purposes by national and local government organisations, so the data needs to encompass a variety of mineral source and handling sites to allow rapid data interpretation.

Q: Why are pre-1850s Tithe Maps not used as a source?

A: Tithe maps are not readily available as digitally scanned documents and, in addition, are not particularly accurate in locating mineral working sites. A test made using information extracted from an English county's Tithe maps showed that descriptions of sites were too inaccurate and caused potential duplication of sites recorded on other reference maps.

Q: Why is there more than one record for some sites?

A: For very large sites, it may reflect the workings as shown on topographic maps, e.g. for large building stone quarries working different faces; see 'PARENT_PIT'. As sites are enlarged over the years, then the source mapping shows a different shape, the different ages of mapping are recorded; see 'PARENT_PIT'.

There may be an additional COMMODITY_PRODUCED being worked at the site, such as when a recycling operation is running beside the mineral extraction operation. These may not be both working at the same time and as a result, the Operational Status of each record may differ.

For instance, a pit with 3 commodities will have 3 entries with the same coordinates, while a single pit with one commodity may have multiple entries due to multiple LITHOSTRATIGRAPHY entries.

Q: What is a PARENT_PIT?

A: This is the record of either the first notification of a working or the original site noted on historic maps. Often in the case of large modern sites, this will become the plant area while the current working void may be several kilometres away.

In the case of modern underground workings, regulations insist on two means of access and egress, so the first entrance will be the PARENT_PIT.

The original record may have subsidiary or satellite sites which are related by the 'PARENT_PIT'.

Workings which have taken place between the original PARENT_PIT and the current working void will be noted and related to the original site by having a PARENT_PIT of the BGS_REFERNCE_NO of the original site.

Q: Why does the COMMODITY_PRODUCED not match BGS Geology 50k?

A: COMMODITY_PRODUCED is generally related to the geology on site. However, a bedrock Sandstone may produce SAND as well as SANDSTONE. Rocks recorded as MDST may have a COMMODITY recorded as CLAY & SHALE, SHALE or SLATE.

BGS Geology 50k is a medium-scale map and the site geology used in BritPits may have been entered using BGS Geology 10k mapping, created at 1:10 560 or 1:10 000 scale and may have a finer definition of the underlying geology.

Underground workings may or may not be in the same geological body as shown by the surface geology provided by BGS Geology 50k. Coal and Mineral workings from deep mining operations will often be at variance with the surface BGS Geology 50k.

As the BGS BritPits record is a point source, the geological mapping may reflect the situation after the economic mineral has been extracted, and the underlying geology exposed. This is

often the case in Sand & Gravel workings where London Clay is exposed in a ‘ring doughnut’ of sand and gravel where the former working void was.

Q: Does the record of a mine represent the area worked?

A: BGS has not regularly recorded underground workings as part of its geological surveying. The points for mine workings represent the surface mine entrance, i.e., a shaft or adit. If underground workings have been noted on BGS field mapping, then this is recorded in the ‘NOTES’ field. Underground worked area maps for coal are available from the Coal Authority.

Q: Why does a site have several names recorded?

A: Some sites have names that have been changed by the operators during the life of the working. The relevant MPA may have yet another name relating to the original planning application.

Some mines may be renamed when a new operator restarts the working. If these are recorded on the OS mapping, then they are noted in the record details.

Q: Why do some sites appear to move or disappear?

A: BritPits is supplied as an annual snapshot of a live database of mineral workings. During the course of our annual updates to BritPits we may need to move or deprecate some sites to more accurately reflect current knowledge about them. Some sites may have been originally mislocated and subsequently moved to a new position, some sites have been moved to reflect the fact that the centre of operations has migrated since the site first became noted by us. Some sites may have been withdrawn on the basis that previous evidence has been found to be erroneous.

Q: Why are some operators’ details not given?

A: Most sites in the database have no operator details available to identify them. In some cases, these are added as they become known because such information enhances the usefulness of the data.

Operator details recorded for active sites are more comprehensive and kept under review to keep them as up to date as is possible. Under GDPR, information cannot be used to identify individuals, however the algorithm used to define the BGS BritPits dataset when it is extracted from the underlying corporate database currently does not take factors such as the fact company name may not have Ltd or & Co. in it, or the person named may be deceased. This is being looked at with a view to correcting the information presented in future versions of the dataset.

Q: Why have the publications List of Mines and List of Quarries not been used to systematically identify site?

A: These publications list Mine and Quarry workings, however, they were published before the Ordnance Survey National Grid system was established. Simple locations and names are often not enough to identify which site is being referred to, especially if there are several entries with the same names and locational information. Ordnance Survey mapping may have recorded the full name of the mine or quarry site, but more often merely shows ‘Quarry’ or ‘Quarry (Disused)’ at the site.

Q: Why are there some records falling offshore?

A: These points may record mineral workings, such as channel dredging or other coastal management works, etc. The data is usually input based on 1:10 000 scale maps and the commodity for those points are typically sand, gravel, clay or salt.

Glossary

Term	Description
Active	Currently operating site: see Technical Information (Part 4), Table 1 for full definition.
Adit	Horizontal or near-horizontal underground mine entrance: see also *Mine*
Age	Indicates the geological period as a division of geological time.
ArcGIS	Geographical Information System (GIS) - software for working with maps and geographical information maintained by the Environmental Systems Research Institute (ESRI).
Building stone	Natural stone, crude, riven or cut, for use in buildings and monuments.
Carbonate	A general term used for sedimentary rocks consisting of 50 per cent or more of either calcite (calcium carbonate) or dolomite (magnesium carbonate).
Ceased	Site that is no longer operational extracting or working minerals may be in restoration phase: see Technical Information (Part 4), Table 1 for full definition.
Coal	A combustible sedimentary rock made of lithified plant remains, used primarily as a fuel source; beds of coal often contain gases such as methane.
Colliery	Workings for coal, which may either refer to a single underground site, an area containing a number of workings or a group of such workings controlled by a single operator.
Dormant	Site currently not operating, legally defined: see Technical Information (Part 4), Table 1 for full definition.
End use	The ultimate use to which a mineral commodity is put, e.g. 'Roadstone' or 'Engineering clay'.
Formation	Part of the BGS rock-age ordering hierarchy. A formation is the fundamental rock unit for mapping purposes. Located within a defined hierarchical structure Supergroup > Group > FORMATION > Member > Bed.
Inactive	Site not currently operating but can be restarted without new planning conditions, commonly termed '*Mothballed'*: see Technical Information (Part 4), Table 1 for full definition.
Lithology	The description of a rock based on its mineralogical composition and grain-size e.g. sandstone, limestone, mudstone etc.
Lithostratigraphy	Age and lithology. Many rocks are deposited in layers or strata and the sequence of these strata can be correlated from place to place. These sequences of different rocks are used to establish the changing geological conditions or geological history of the area through time. The description, definition and naming of these layered or stratified rock sequences is termed lithostratigraphy (rock stratigraphy). Lithostratigraphy is fundamental to most geological studies. Rock units are described using their gross compositional or

	lithological characteristics and named according to their perceived rank (order) in a formal hierarchy. The main lithostratigraphic ranks in this hierarchy are: Bed (lowest) > Member > Formation > Subgroup > Group > Supergroup (highest). The units are usually named after a geographical locality, typically the place where exposures were first described.
Memoir	BGS publication giving geological information on a particular area, usually related to published 1:63 360 or 1:50 000 map sheets.
Mine	Underground mineral extraction site.
Mine entrance	Surface access point for underground mineral extraction site.
Mineral Commodity	Economic product of a mineral working.
Mineral Planning Authority	Acronym MPA. The local authority responsible for planning and monitoring of minerals development. This may typically be county councils, unitary authorities or national park authorities.
Mothballed	See - *Inactive*
Opencast Coal	A type of surface extraction of coal where the overlying uneconomic minerals are taken off to temporary soil mounds to be used for restoration by backfilling once the underlying coal has been worked out.
Planning permission	Formal approval sought from a council, often granted with conditions, allowing a proposed development to proceed.
Quarry	An open pit working where extraction of an economic mineral takes place.
Shaft	Vertical or near-vertical underground mine entrance: see *Mine.*
Shapefile	The shapefile format is a geospatial vector data format for Geographical Information System software. It is developed and regulated by ESRI as a mostly open specification for data interoperability among ESRI and other GIS software products.
Stratigraphic	Rocks are often deposited in layers or strata, and the sequence of these strata can be correlated from place to place. These sequences of different rocks are used to establish the changing geological conditions or geological history of the area through time.
Wharf	A level quayside area of a harbour, where ships may load or unload cargo.
Workings	The evidence of mineral extraction at a surface mineral site or the surface expression of underground mining shown on Ordnance Survey or BGS mapping; these include ‘Quarry’ ‘Shaft’ ‘Level’, ‘Mine’.
-	Not Applicable. Attributes including pits with ‘-‘ are ALTERNATIV.
!	Not Available. Attributes including pits with ‘!’ are AGE and LITHOSTRAT. Worked body (e.g. mineral veins or orebodies) has not yet been defined in the BGS Lexicon.
No Data	When a pit has no information for a given attribute for unspecified reasons, the cell is filled with the expression “No Data”. Attributes including pits with “No Data” are ALTERNATIV, PARENT_PIT, AGE, LITHOSTRAT.

References

British Geological Survey holds most of the references listed below, and copies may be obtained via the library service subject to copyright legislation (contact libuser@bgs.ac.uk for details). The library catalogue is available at: https://envirolib.apps.nerc.ac.uk/olibcgi

British Geological Survey (BGS). 2023a. UK mineral statistics, mines and quarries. Economic memoirs. [Online] available from https://webapps.bgs.ac.uk/data/publications/pubs.cfc?method=listResults&topic=EM&series=UM&pageSize=100 [Accessed 03 October 2023].

British Geological Survey (BGS). 2023b. GeoIndex WMS. [Online] available from: www.bgs.ac.uk/technologies/web-map-services-wms/geoindex-wms-services/ [Accessed 03 October 2023].

British Geological Survey (BGS). 2023c. GeoIndex Onshore. [Online] available from: www.mapapps2.bgs.ac.uk/geoindex/home.html [Accessed 03 October 2023].

Cameron, D G, Evans, E J, Idoine, N, Mankelow, J, Parry, S F, Patton, M A G, and A Hill. 2020. Directory of Mines and Quarries, 2020: 11th Edition. Keyworth, Nottingham, British Geological Survey. OR/20/036 https://www2.bgs.ac.uk/mineralsuk/download/dmq/Directory_of_Mines_and_Quarries_2020.pdf.

Ministry of Housing, Communities and Local Government (MHCLG). 2014. Annual Minerals Raised Inquiry Survey (AMRI). [Online] available from www.gov.uk/government/collections/minerals [Accessed 03 October 2023].

Appendix 1 Dictionary for pit operational status

PIT_STATUS	MEANING	DESCRIPTION
A	Active	Site which is actively extracting a mineral, or in the case of wharfs and rail depots, is actively handling minerals.
C	Ceased	Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.
D	Dormant	Site which is defined under the Environment Act 1995 as a mineral site where no mineral development has taken place to any substantial extent in, on, or under the site at any time in the period 22nd February 1982 and 6 June 1995.
H	Historic	Historic mineral workings, usually historic building stone sites, where not currently active and the location is not known for certain. These sites usually predate the Ordnance Survey mapping.
I	Inactive	A site which is not currently extracting minerals, but which still has a valid planning permission to do so and can restart at any time. May be considered 'Mothballed' by operator. May be considered to have 'Active' or 'Dormant' planning permission by the Mineral Planning Authority.
S	Special	Sites which are used for other purposes than extraction, but which are still covered by the Mines and Quarries Acts, e.g. tourist mines.
Y	Yet to Begin	Sites which are proposed but as yet not considered to be active. (n.b. these sites are NO LONGER supplied as part of the BritPits product since version 3)

Appendix 2 Dictionary for type of mineral working at the site

TYPE_OF_MINERAL_WORKING_SITE	MEANING	DESCRIPTION
A	Recycling Depot	Site processing recycled material: construction and demolition materials recovered for use as secondary aggregates.
C	Copper precipitation pit	Wooden troughs in which scrap iron was placed in order to precipitate copper metal from mine drainage water.
D	Construction and Demolition Waste (CDW)	Site where demolition of man-made structure leads to arisings of material for reuse as aggregate or stone, e.g., demolition of railway or road embankments.
F	Plant	Plant for production of a mineral product by chemical or physical means from waste.
I	Drainage level	Underground infrastructure, such as Drainage Levels, Soughs or Water Levels, usually worked in barren bedrock and used for drainage to allow the extraction of minerals.
L	Liquid or gas extraction	Wellsite, or other surface plant, extracting liquid or gas. Working may be for brine, oil, and various gas commodities.
O	Open-pit or surface workings	A surface mineral working. It may be termed Quarry, Delf, Delph, Gravel Pit, Sand Pit, Sand and Gravel Pit, Clay Pit, Pit, Opencast Coal Site or Surface Mine. It may be mapped as Worked Ground or Worked and Made Ground on BGS mapping.
OU	Open-pit and underground	The mineral working is partly on the surface and partly underground, working the same bodies for the same commodities. Usually where a dipping hard rock bed of Sandstone or Limestone is worked from the edge of a quarry site beneath overburden for a limited distance.
P	Power Station	Power station which produces Desulphogypsum and, or, Pulverised Fuel Ash or Furnace Bottom Ash.
R	Rail depot	A site where mineral commodities are loaded to, and, or, unloaded from, rail trucks and stored.
RL	Railhead	A site where mineral commodities are loaded to, and, or, unloaded from, rail trucks and stored.
S	Steel Works	Steel works which produce Slags as a by-product of blast furnace steel smelting.
T	Tip	Tip for waste, or unused commodity, at a mine, quarry or other location from which mineral is being extracted. Working may be termed Tip, Spoil Heap, Slate Waste Tip, Bing, Shale Bing, Coal Tip or Coal Bing, and may be mapped as Made Ground on BGS maps.

U	Underground workings	Working is wholly underground, access by shaft, adit, drift or incline. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun' Ee' - Scots). May also be locally termed `Quarry' or `Underground Quarry' when referring to sites extracting building stone (e.g. in Dorset and Wiltshire). The location given is that of the mine entrance and may be approximate for older sites shown on contemporaneous mapping by the Geological Survey used as the source document.
W	Wharf	Sea, river or canal wharf where mineral commodities are unloaded and stored or loaded from.

Appendix 3 Dictionary for the type of commodity worked at the site

CMDTY_CODE	MEANING	DESCRIPTION
AG	Silver	Silver metal and ores, unspecified
AGA	Agate	Variety of quartz, chalcedony etc, obtained from amygdale in volcanic rock, used as decorative stone or jewellery; includes 'Pebble' or 'Scotch Pebble'
ALA	Alabaster	Gypsum used as a decorative stone
ALU	Alum	Aluminium sulphate, ammonium sulphate, potassium sulphate mixture; used to fix dyes
AMM	Abandoned Mine Methane	Gas derived from the voids of former coal mine workings, mainly methane
ANT	Anhydrite	Anhydrous calcium sulphate, $CaSO_4$; used as a source of sulphur for the manufacture of ammonium sulphate and sulphuric acid and in Portland Cement manufacture
AS	Arsenic	Arsenic ores, unspecified
AU	Gold	Gold metal and ores, unspecified
BA	Barium	Barium minerals, unspecified
BAL	Ball Clay	Fine grained, highly plastic, sedimentary clays which fire to a light or near white colour
BAR	Barytes	Barium sulphate, $BaSO_4$
BAS	Basalt (NI)	Northern Ireland Commodity Designation - Basalt and igneous rock (excluding granite)
BAU	Bauxite	A residual clay deposit, aluminous laterite, derived from the alteration of basalt lava, containing at least 50% $Al(OH)_3$; used as a source of aluminium and as feedstock for ferrous aluminium sulphate water purification material
BCA	Ball Clay Aggregate (sand)	Ball Clay Aggregate (sand) found in association with Ball Clay.
BFS	Blast Furnace Slag	By-product of iron making, resulting from the fusion of fluxing stone (fluorspar) with coke, ash and siliceous and aluminous residues remaining after the reduction and separation of iron from ore; general aggregate and fill uses
BI	Bismuth	Bismuth minerals, unspecified
BLA	Blaes	Burnt shale, usually red coloured and derived from oil shale or coal working tips or bings; used for paths and tracks and sports grounds as 'Red Blaes' (see RBLA)
BOG	Bog Ore	Iron ore associated with precipitation in wetlands.
BRI	Brickearth	Superficial clays and silts used in brick, pipe and tile manufacture in East and South East England
CAL	Calcite	Calcium carbonate, $CaCO_3$, in crystalline form, usually associated with metalliferous mineral veins; used as a decorative aggregate
CBM	Coalbed Methane	Methane abstracted from virgin or unworked coal seams using boreholes
CCA	China clay aggregate sand	China clay aggregate sand found in association with China clay

CCT	Stent	China clay residues used as sand/aggregate substitute.
CD	Coal, Deep	Coal extracted from underground workings, Deep mines, Levels, Drift mines or Bell Pits
CEL	Celestite	Strontium sulphate, $SrSO_4$; source of strontium chemicals for use in pyrotechnics, glass, ceramics and pharmaceuticals
CEM	Cement	Cement
CHA	Chalk	Fine-grained, usually white, sedimentary carbonate rock consisting of calcium carbonate $CaCO_3$
CHC	China Clay	Kaolin, a clay derived from the alteration products of granite, comprising principally of kaolinite; used in paper making, whiteware, sanitary ware and as fillers etc
CHS	China Stone	Partly altered (kaolinised), felspar-rich granite lacking iron-bearing minerals; crushed and used as a flux in the pottery industry
CHT	Chert	Chert or 'Chertstone', SiO_2, resulting from diagenetic processes in limestones; worked from superficial or bedrock deposits
CHW	China Clay Waste	Washed material produced as a by-product during the extraction of China Clay (kaolin) from kaolinitic granite, predominantly comprising quartz with some mica 'china clay sand'; used as aggregate
CHWS	China Clay Waste	See CCA
CLA	Clay & Shale	Clays and/or shales (mudstones) used in brick, pipe and tile manufacture, cement manufacture, a source of pottery clay and as construction fill
CMM	Mine Drainage Gas	Gas derived from the voids of working coal mines, mainly methane
CO	Coal, Surface Mined	Coal derived from surface extraction or from treatment of old colliery spoil tips, formerly known as 'Opencast Coal'
COA	Coal	Coal, unspecified source
COB	Cobalt	Cobalt ores, unspecified
COL	Colliery Spoil	'Minestone', coal and other materials extracted during coal working and tipped at site; used for secondary aggregates, and/or extraction of coal
COP	Coprolite	Phosphatic nodules; used as phosphate fertiliser.
CPS	Copperas	Copperas; iron pyrites and calcareous nodules formerly used for the production of sulphuric acid and other chemicals
CR	Chromite	Chromium ores, unspecified
CRA	Crushed Rock	Crushed hard rock used as aggregate; source not known
CU	Copper	Copper ores, unspecified
CUL	Culm	Soft, sooty coal
DES	Desulphogypsum	Calcium sulphate produced as a byproduct of flue gas desulphurisation (FGD) using limestone
DIT	Diatomite	'Diatomaceous Earth' or 'kieselguhr', fine grained siliceous sediment composed of remains of diatoms (microscopic plants) derived from lacustrine deposits; used as fillers, absorbents, abrasives, an insulator and filter medium in the food industry

DOL	Dolomite	'Dolostone', sedimentary carbonate rock composed mainly of the mineral dolomite $CaMg(CO_3)_2$ formed by replacement of pre-existing limestone by Mg-rich fluids. 'Dolomite' rock is usually a combination of dolomite, dolomitic limestone and limestone
DUN	Dun Earth	Dun Earth or 'Asbestos', fibrous tourmaline found in decomposed mineral veins used as polishing compound on Isle of Man
FBA	Furnace Bottom Ash	The coarser fraction of ash produced in coal burning power stations resulting from the fusion of pulverized-fuel ash particles which fall to the bottom of the furnace, size range - fine sand to coarse gravel; used as lightweight aggregate and fill
FEL	Feldspar	Pegmatitic feldspar is ground for industrial uses, e.g. in glass making and pottery
FEO	Iron ore	Unspecified iron ores
FIL	Fill Materials	Unspecified bulk aggregate
FIR	Fireclay	A non-marine sedimentary mudstone which can occur as 'seat earths' under coal seams, consisting of kaolinite with varying proportions of hydrous mica (illite) and quartz etc; used for refractory purposes and brick making
FLI	Flint	Siliceous concretions, commonly resulting from diagenetic processes in chalk, also worked in superficial deposits derived from the chalk outcrop; used as decorative building stone, or a component of gravel aggregates
FLU	Fluorspar	Calcium fluoride, CaF_2, derived from working mineral vein or replacement orebodies in limestones; used as chemical feedstock, a flux in the iron & steel industry and as mineral specimens or decorative stone 'Blue John'
FUL	Fullers Earth	Sedimentary clay containing a high proportion of a Smectite clay mineral, Montmorillonite, with a high cation exchange capacity; originally used for cleaning 'fulling' woollen cloth, now has a wide range of industrial applications
GAN	Ganister	Siliceous sandstones commonly found as 'seat earth' under coal seams, which formed as a palaeosol in sandy sediments; used in the manufacture of refractory products for high temperature uses such as furnace lining
GAS	Natural Gas	Gas abstracted from strata other than Coal measures
GNT	Granite (NI)	Northern Ireland Commodity Designation - Granite
GRA	Gravel	'Coarse Aggregate' size range 4 – 80 mm; includes flint, chert, other silicate rock or limestone fragments, derived from beach, river or glaciofluvial transport; 'Shingle' in e.g. N. Scotland
GRP	Graphite	Native carbon; used as pigment and for other industrial purposes
GST	Gritstone (NI)	Northern Ireland Commodity Designation - Hard coarse sandstone, psammite, greywacke or meta-greywacke
GYP	Gypsum	Hydrated calcium sulphate, $CaSO_4.2H2O$ formed from the hydration of Anhydrite ($CaSO_4$); used for the manufacture of plaster, plasterboard and as a component of cement
HON	Honestone	Hard, thermally metamorphosed, fine-grained sedimentary rock; used as abrasive stone for sharpening metal blades

IBA	Incinerator Bottom Ash	Ash from waste incinerator, for aggregate uses
IGN	Igneous & Metamorphic Rock	Commodity term which includes intrusive and extrusive igneous rock and any metamorphic rock; used for construction aggregates, decorative and building stones
IOH	Hematite (Iron Ore)	Hematite ($Fe2O_3$); used for iron making and as a pigment
IOI	Ironstone	Fe-rich limestones; used as a source of iron and as building stone. Includes Blackband and Clayband Ironstones
IOL	Lateritic Iron Ore	Lateritic Iron Ore formed by hydrothermal alteration and chemical weathering of basalt lava of the Palaeogene Antrim Lava Group; used as a source of iron
IOO	Ochre (Iron Ore)	Iron ores, unspecified; used for pigment
JET	Jet	Stone comprising diagenetically silicified araucarian wood occurring as isolated masses in finely laminated shales; decorative and jewellery uses
LFG	Landfill Gas	Gas produced from landfill sites, not a natural product
LIG	Lignite	Brown Coal, coal in an early stage of coalification
LIM	Lime	Processed Lime
LST	Limestone	Sedimentary rock composed principally of calcium carbonate – $CaCO_3$; used for aggregates, decorative and building stone and, if pure, industrial applications
MAB	Marble	Metamorphosed limestone; used for decorative and building stone
MAN	Manganese	Manganese ores, unspecified, 'Wad' if black oxide or hydroxide of manganese
MBL	Mineral Black	Carbonaceous material; used for pigment
MIC	Mica	Mica books or flakes; for industrial use
MIN	Mineral	Unspecified mineral commodity
MSG	Marine Sand & Gravel	Sand and gravel aggregate dredged from the sea floor; size range: 0.063 mm - 80mm
NI	Nickel	Nickel ores, unspecified
No_Data	No_Data	Commodity not yet identified
OIL	Oil	Crude oil; liquid hydrocarbon; used as a feedstock for energy or industrial uses
OSH	Oil Shale	Fine-grained sedimentary rock, yielding significant quantities of oil upon decomposition by heating to high temperatures
PB	Lead	Lead ores, unspecified
PEA	Peat	Decomposed vegetable matter, typically moss; used for fuel or horticulture
PER	Perlite	'Perlite', the industrial name for volcanic glass with sufficient water content to cause it to expand, or froth up, when heated, forming a lightweight granular aggregate; used in construction, insulation, packaging and agriculture
PET	Peat Tar	Distillation product of dried peat
PFA	Pulverised Fuel Ash	Pulverized-fuel ash (PFA), also known as coal fly ash (FA) is extracted by electrostatic precipitation from the flue gases of modern coal-burning power stations and is

		similar in fineness to cement; cementitous uses, lightweight aggregates and fill
PHO	Phosphate	Phosphate for agricultural fertiliser
POL	Polyhalite	$K_2Ca_2MG(SO_4)_4$. 2H2O or Polysulphate, for agricultural fertiliser use
POR	Porcellanite	Northern Ireland Commodity Designation - product of the thermal metamorphism of a ferruginous bauxitic clay, derived from interbasaltic horizons
POT	Potash	Potassium-bearing minerals and products, primarily Sylvite, KCl; usually mined as Sylvinite, a mixture with Halite,NaCl , and processed to remove the NaCl
PYR	Iron Pyrites	FeS_2 Iron Pyrites; used in manufacture of Sulphuric acid
QTZ	Quartz	Quartz, SiO_2, derived from pegmatites
QUW	Quarry Waste	Material resulting from quarry processing procedures usually retained on site; used for fill or internal restoration purposes
RBLA	Red Blaes	Burnt shale, usually red coloured and derived from oil shale or coal working tips or bings; used for paths and tracks and sports grounds as 'Red Blaes' (see BLA)
ROT	Rottenstone	Fine, argillaceous silt, accumulated by rainwash, used as a polishing agent; also known as Rotten-Stone
RUM	Rums	Carbonaceous, slightly silty mudstones with fusainous debris, formerly used as a fuel for lime burning in East Fife. Stratigraphically beneath the Largoward Splint Coal in the Lower Limestone Formation (formerly Lower Limestone Group)
S	Sulphur	Sulphur, unspecified source mineral
SAG	Sand & Gravel	Accumulations of more durable rock fragments (silicates, flints, etc) derived from the weathering, erosion and transport of rocks by glaciofluvial and fluvial actions, size range: 0.063 mm - 80mm; used for aggregate purposes and construction fill
SAL	Salt	Halite, NaCl; either as rock salt from mining operations or precipitated from Brines
SAN	Sand	Fine aggregate; size range: 0.063 mm - 4mm; generally composed of silicate fragments, derived from wind, river or glaciofluvial transport
SB	Antimony	Antimony Ores, unspecified
SCH	Schist (NI)	Northern Ireland Commodity Designation - Schist, a coarse metamorphosed sandstone, psammite
SEC	Secondary	Unspecified materials which may be used as aggregates, includes recycled aggregates arising from construction and demolition, highway maintenance and rail ballast replacement as well as quarry or industrial by-products
SEL	Sea Salt	Halite, NaCl, precipitated from seawater
SGST	Sandstone/Gritstone (NI)	Northern Ireland Commodity Designation - Sandstone and, or, Gritstone, undifferentiated
SHL	Shale	Northern Ireland Commodity Designation - Shale, fine-grained sedimentary rocks: used for construction fill
SLA	Slag	By-products of the manufacture of steel from pig iron, includes basic oxygen furnace slag (BOF) and electric arc furnace (EAF) slag; aggregate uses, e.g. rail ballast

SLS	Synthetic Limestone	Limestone aggregate manufactured by the treatment of Air Pollution Control Residue utilising carbon dioxide as a stabilising reagent.
SLT	Slate	Fine-grained metamorphic rocks with well-developed cleavage; used for roofing, flooring, general building stone and aggregate
SLW	Slate Waste	Waste material from slate processing, usually in tips as a secondary aggregate: used as construction fill or decorative stone
SMU	Smudge	A pasty form of decomposed coal; used as a black pigment
SN	Tin	Tin ore, mainly cassiterite
SNA	Sienna	Pigment derived from Iron oxides
SOI	Soil	Soil or Topsoil removed from mineral working or construction project as a by-product
SOP	Soapstone	Soapstone or 'Steatite', an altered igneous rock; used as decorative stone
SPT	Serpentine	'Serpentinite', hydrothermally metamorphosed ultrabasic igneous rock composed of mineral Serpentine; used as decorative stone
SSA	Silica Sand	Sand, or loosely cemented sandstone, with a high silica content (>95% SiO_2) and low amounts of impurities; used in glassmaking and other industrial processes, horticulture and for foundry uses
SSR	Silica Rock	Sandstone or quartzite with a high silica content; used in industrial processes
SST	Sandstone	Sedimentary rock mainly composed of quartz particles; includes sandstones, quartzites, gritstones and conglomerates; aggregates and building stone
STR	Strontianite	Strontium carbonate, $SrCO_3$, source of strontium chemicals; used in pyrotechnics, glass, ceramics and pharmaceuticals
SYG	Synthetic gypsum	Calcium sulphate produced as a byproduct of flue gas desulphurisation (FGD) using limestone or Titanogypsum, neutralising acid byproducts of titanium dioxide processing with chalk
TAL	Talc	Soft metamorphic rock composed mainly of $Mg_3Si_4O_{10}(OH)_2$; used for powders and fillers
TIG	Titanogypsum	Calcium sulphate produced by neutralising acid effluent of titanium dioxide processing with chalk
TIL	Tilestone	Tilestone: flaggy siltstones, sandstones or limestones, unspecified; used as a roofing stone
TUF	Tufa	Sedimentary carbonate rock formed by precipitation of calcium carbonate $CaCO_3$, from streams; used for decorative and building stone
U	Uranium	Uranium minerals, unspecified
UMB	Umber	Manganese oxide ores used for pigment, also known as 'wad'
VMI	Vein Minerals	Unspecified vein minerals
W	Tungsten	Tungsten, also known as Wolfram, ores, primarily Wolframite
WIT	Witherite	Witherite, barium carbonate, $BaCO_3$; industrial uses

ZN	Zinc	Zinc ores, unspecified

Appendix 4 Dictionary for the Economic Planning Region (EPR)

EPR_CODE	PLANNING_REGION
CHA	Channel Islands
EEN	East of England
EMD	East Midlands
IOM	Isle of Man
LON	Greater London
NEA	North East
NIR	Northern Ireland
NWE	North West
SCT	Scotland
SEA	South East
SWE	South West
WLS	Wales
WMD	West Midlands
YHU	Yorkshire & the Humber

Appendix 5 Dictionary for the Mineral Planning Authority (MPA) codes

MPA_CODE	MPA_NAME	EPR_CODE
ABCBC	Armagh City, Banbridge and Craigavon Borough Council	NIR
ABD	Aberdeenshire Council	SCT
ABE	Aberdeen City Council	SCT
AGB	Argyll and Bute Council	SCT
AGY	Isle of Anglesey County Council, Cyngor Sir Ynys Mon	WLS
ANBC	Antrim and Newtownabbey Borough Council	NIR
ANDBC	Ards and North Down Borough Council	NIR
ANS	Angus Council	SCT
BAS	Bath and North East Somerset Council	SWE
BBD	Blackburn with Darwen Borough Council	NWE
BCP	Bournemouth, Christchurch and Poole Council	SWE
BDF2	Bedford Borough Council	EEN
BDF3	Central Bedfordshire Council	EEN
BDG	London Borough of Barking and Dagenham Council	LON
BEN	London Borough of Brent Council	LON
BEX	London Borough of Bexley Council	LON
BFS	Belfast City Council	NIR
BGE	Bridgend County Borough Council, Cyngor Bwrdeistref Sirol Pen-y-bont ar Ogwr	WLS
BGW	Blaenau Gwent County Borough Council, Cyngor Bwrdeisdref Sirol Blaenau Gwent	WLS
BIR	Birmingham City Council	WMD
BKM	Buckinghamshire County Council	SEA
BNE	London Borough of Barnet Council	LON
BNH	Brighton & Hove City Council	SEA
BNP	Bannau BrycheiniogNational Park Authority, Awdurdod Parc Cenedlaethol Bannau Brycheiniog	WLS
BNS	Barnsley Metropolitan Borough Council	YHU
BOL	Bolton Metropolitan Borough Council	NWE
BPL	Blackpool Borough Council	NWE
BRC	Bracknell Forest District Council	SEA
BRD	Bradford Metropolitan District Council	YHU
BRY	London Borough of Bromley	LON
BST	Bristol City Council	SWE
BUR	Bury Metropolitan Borough Council	NWE
CAM	Cambridgeshire County Council	EEN
CAY	Caerphilly County Borough Council, Cyngor Bwrdeistref Sirol Caerffili	WLS
CCGBC	Causeway Coast and Glens Borough Council	NIR
CGNE	Ceredigion County Council, Cyngor Sir Ceredigion	WLS
CHSE	Cheshire East Council	NWE
CHSW	Cheshire West and Chester Council	NWE
CLD	Calderdale Metropolitan Borough Council	YHU
CLK	Clackmannanshire Council	SCT
CMA	Cumbria County Council	NWE
CMD	London Borough of Camden Council	LON
CMN	Carmarthenshire County Council, Cyngor Sir Gar (Sir Gaerfyrddin)	WLS
CNP	Cairngorms National Park Authority	SCT

CON	Cornwall County Council	SWE
COV	Coventry City Council	WMD
CRF	Cardiff Council, Cyngor Caerdydd	WLS
CRY	London Borough of Croydon	LON
CUMB	Cumberland Council	NWE
CWY	Conwy County Borough Council, Cyngor Bwrseidtref Sirol Conwy	WLS
DAL	Darlington Borough Council	NEA
DBY	Derbyshire County Council	EMD
DEN	Denbighshire County Council, Cygnor Sir Ddinbych	WLS
DER	Derby City Council	EMD
DEV	Devon County Council	SWE
DGY	Dumfries and Galloway Council	SCT
DNC	Doncaster Metropolitan Borough Council	YHU
DND	Dundee City Council	SCT
DNP	Dartmoor National Park Authority	SWE
DOR	Dorset Council	SWE
DOW	County Down	NIR
DSDC	Derry City and Strabane District Council	NIR
DUD	Dudley Metropolitan Borough Council	WMD
DUR	Durham County Council	NEA
EAL	London Borough of Ealing Council	LON
EAY	East Ayrshire Council	SCT
EDH	City of Edinburgh Council	SCT
EDU	East Dunbartonshire Council	SCT
ELN	East Lothian Council	SCT
ENF	London Borough of Enfield	LON
ENP	Exmoor National Park Authority	SWE
ERW	East Renfrewshire Council	SCT
ERY	East Riding of Yorkshire Council	YHU
ESS	Essex County Council	EEN
ESX	East Sussex County Council	SEA
FAL	Falkirk Council	SCT
FIF	Fife Council	SCT
FLN	Flintshire County Council, Sir y Fflint	WLS
FODC	Fermanagh and Omagh District Council	NIR
GAT	Gateshead Metropolitan Borough Council	NEA
GLG	Glasgow City Council	SCT
GLS	Gloucestershire County Council	SWE
GRE	London Borough of Greenwich	LON
GSY	States of Guernsey	CHA
GWN	Gwynedd Council, Cyngor Gwynedd	WLS
HAL	Halton Borough Council	NWE
HAM	Hampshire County Council	SEA
HAV	London Borough of Havering Council	LON
HCK	London Borough of Hackney Council	LON
HEF	Herefordshire Council	WMD
HIL	London Borough of Hillingdon Council	LON
HLD	Highland Council	SCT
HMF	London Borough of Hammersmith & Fulham Council	LON
HNS	London Borough of Hounslow Council	LON
HPL	Hartlepool Borough Council	NEA
HRT	Hertfordshire County Council	EEN
HRW	London Borough of Harrow Council	LON
HRY	London Borough of Haringey Council	LON

IOM	Isle of Man Govevernment	IOM
IOS	Council of the Isles of Scilly	SWE
IOW	Isle of Wight Council	SEA
ISL	London Borough of Islington	LON
IVC	Inverclyde Council	SCT
JSY	States of Jersey	CHA
KEC	London Borough of Kensington and Chelsea Council	LON
KEN	Kent County Council	SEA
KHL	Kingston upon Hull City Council	YHU
KIR	Kirklees Metropolitan Borough Council	YHU
KTT	Royal Borough of Kingston upon Thames	LON
KWL	Knowsley Metropolitan Borough Council	NWE
LAN	Lancashire County Council	NWE
LBH	London Borough of Lambeth Council	LON
LCCC	Lisburn and Castlereagh City Council	NIR
LCE	Leicester City Council	EMD
LDP	Lake District National Park Authority	NWE
LDS	Leeds City Council	YHU
LEC	Leicestershire County Council	EMD
LEW	London Borough of Lewisham Council	LON
LIN	Lincolnshire County Council	EMD
LIV	Liverpool City Council	NWE
LLP	Loch Lomond & The Trossachs National Park Authority	SCT
LND	City of London	LON
LUT	Luton Borough Council	EEN
MAN	Manchester City Council	NWE
MDB	Middlesbrough Borough Council	NEA
MDW	Medway Council	SEA
MEABC	Mid and East Antrim Borough Council	NIR
MIK	Milton Keynes Council	SEA
MLN	Midlothian Council	SCT
MON	Monmouthshire County Council, Cyngor Sir Fynwy	WLS
MRT	London Borough of Merton Council	LON
MRY	Moray Council	SCT
MTY	Merthyr Tydfil County Borough Council, Cyngor Bwrdeistref Sirol Merthyr Tudful	WLS
MUDC	Mid Ulster District Council	NIR
NAY	North Ayrshire Council	SCT
NBL	Northumberland County Council	NEA
NBP	Broads Authority	EEN
NEL	North East Lincolnshire Council	YHU
NET	Newcastle City Council	NEA
NFK	Norfolk County Council	EEN
NFP	New Forest National Park Authority	SEA
NGM	Nottingham City Council	EMD
NLK	North Lanarkshire Council	SCT
NLN	North Lincolnshire Council	YHU
NMDC	Newry, Mourne and Down District Council	NIR
NNP	Northumberland National Park Authority	NEA
NSM	North Somerset Council	SWE
NTH	Northamptonshire County Council	EMD
NNTH	North Northamptonshire County Council	EMD
NTL	Neath Port Talbot County Borough Council, Cyngor Bwrdeistref Sirol Castell-nedd Port Talbot	WLS
NTT	Nottinghamshire County Council	EMD

NTY	North Tyneside Council	NEA
NWM	London Borough of Newham Council	LON
NWP	Newport City Council, Cyngor Dinas Casnewydd	WLS
NYK	North Yorkshire County Council	YHU
NYP	North York Moors National Park Authority	YHU
OLD	Oldham Metropolitan Borough Council	NWE
ORK	Orkney Islands Council	SCT
OXF	Oxfordshire County Council	SEA
PCP	Pembrokeshire Coast National Park Authority, Awdurdod Parc Cenedlaethol Arfordir Penfro	WLS
PDP	Peak District National Park Authority	EMD
PEM	Pembrokeshire County Council, Cyngor Sir Penfro (Sir Benfro)	WLS
PKN	Perth and Kinross Council	SCT
PLY	Plymouth City Council	SWE
POR	Portsmouth City Council	SEA
POW	Powys County Council, Cyngor Sir Powys	WLS
PTE	Peterborough City Council	EEN
RCC	Redcar and Cleveland Borough Council	NEA
RCH	Rochdale Metropolitan Borough Council	NWE
RCT	Rhondda Cynon Taf County Borough Council, Cyngor Bwrdeistref Sirol Rhondda Cynon Taf	WLS
RDB	London Borough of Redbridge Council	LON
RDG	Reading Borough Council	SEA
RFW	Renfrewshire Council	SCT
RIC	London Borough of Richmond Council	LON
ROT	Rotherham Metropolitan Borough Council	YHU
RUT	Rutland County Council	EMD
SAR	Chief Pleas of the Government of Sark	CHA
SAW	Sandwell Metropolitan Borough Council	WMD
SAY	South Ayrshire Council	SCT
SCB	Scottish Borders Council	SCT
SDP	South Downs National Park Authority	SEA
SET	Shetland Islands Council	SCT
SFK	Suffolk County Council	EEN
SFT	Sefton Metropolitan Borough Council	NWE
SGC	South Gloucestershire Council	SWE
SHF	Sheffield City Council	YHU
SHN	St. Helens Metropolitan Borough Council	NWE
SHR	Shropshire County Council	WMD
SKP	Stockport Metropolitan Borough Council	NWE
SLF	Salford City Council	NWE
SLG	Slough Borough Council	SEA
SLK	South Lanarkshire Council	SCT
SND	Sunderland City Council	NEA
SNP	Snowdonia National Park Authority, Awdurdod Parc Cenedlaethol Eryri	WLS
SOL	Solihull Metropolitan Borough Council	WMD
SOM	Somerset County Council	SWE
SOS	Southend-on-Sea Borough Council	EEN
SRY	Surrey County Council	SEA
STE	Stoke-on-Trent City Council	WMD
STG	Stirling Council	SCT
STH	Southampton City Council	SEA
STN	London Borough of Sutton Council	LON

STS	Staffordshire County Council	WMD
STT	Stockton-on-Tees Borough Council	NEA
STY	South Tyneside Metropolitan Borough Council	NEA
SWA	City and County of Swansea, Dinas a Sir Abertawe	WLS
SWD	Swindon Borough Council	SWE
SWK	London Borough of Southwark Council	LON
TAM	Tameside Metropolitan Borough Council	NWE
TFW	Telford and Wrekin Council	WMD
THR	Thurrock Borough Council	EEN
TOB	Torbay Council	SWE
TOR	Torfaen County Borough Council, Cyngor Bwrdeistref Sirol Torfaen	WLS
TRF	Trafford Council	NWE
TWH	London Borough of Tower Hamlets Council	LON
TYR	County Tyrone	NIR
VGL	Vale of Glamorgan Council, Gyngor Bro Morgannwg	WLS
WAR	Warwickshire County Council	WMD
WBK	West Berkshire Council	SEA
WDU	West Dunbartonshire Council	SCT
WFT	London Borough of Waltham Forest Council	LON
WFU	Westmorland and Furness Council	NWE
WGN	Wigan Metropolitan Borough Council	NWE
WIL	Wiltshire County Council	SWE
WIS	Comhairle nan Eilean Siar	SCT
WKF	Wakefield Metropolitan Borough Council	YHU
WLL	Walsall Metropolitan Borough Council	WMD
WLN	West Lothian Council	SCT
WLV	Wolverhampton City Council	WMD
WND	London Borough of Wandsworth Council	LON
WNM	Royal Borough of Windsor and Maidenhead	SEA
WNTH	West Northamptonshire Council	EMD
WOK	Wokingham Borough Council	SEA
WOR	Worcestershire County Council	WMD
WRL	Wirral Borough Council	NWE
WRT	Warrington Borough Council	NWE
WRX	Wrexham County Borough Council, Cyngor Bwrdeistref Sirol Wrecsam	WLS
WSM	The Borough of City of Westminster	LON
WSX	West Sussex County Council	SEA
YDP	Yorkshire Dales National Park Authority	YHU
YOR	City of York Council	YHU
CHA	Channel Islands	CHA
ENG	England	
EAW	England and Wales	
GBI	Great Britain and Ireland	
GBN	Great Britain	
GBNI	Great Britain and Northern Ireland (see United Kingdom)	
NIR	Northern Ireland Executive	NIR
SCT	Scotland, The Scottish Government, Riaghaltas na h-Alba	SCT
WLS	Wales, Cymru: Welsh Government, Llywodraeth Cymru	WLS
UKM	United Kingdom Government	
IRL	Ireland	
XXX	To be updated	
No_Data	No_data (awaiting assignment)	

Appendix 6 Dictionary for the Sponsor Organisation of data collection

SPONSOR_OR	Organisation
BGS	British Geological Survey
EH	Historic England (former English Heritage) Project
YHU	Yorkshire & the Humber contract, part of Historic England (former English Heritage) project