



DUMFRIES AND  
GALLOWAY COUNCIL

# Local Development Plan

Technical Paper

SEPTEMBER 2014



*Mineral  
Assessment*



# **Mineral Assessment Technical paper**

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## **1.0 Introduction**

The minerals industry provides raw materials for construction, manufacturing, agriculture and other sectors. An adequate and steady supply of minerals is seen as essential to the economy. Scottish Planning Policy (SPP) places a duty on local authorities to have regard to the availability, quality, accessibility and requirement for mineral resources when preparing the Local Development Plan (LDP). This technical paper looks at availability of resources and time remaining on permission to extract these reserves to determine whether there is a need for the LDP to identify search areas.

Dumfries and Galloway possesses a variety of important mineral resources which can mainly be categorised into two groups: aggregate and non-aggregate.

Sand and gravel, sandstone and crushed rock are collectively known as aggregate minerals. They are worked by surface extraction and are mainly used in the construction and repair of roads and buildings.

Non-aggregate minerals such as dimension sandstone, granite, limestone and greywacke are worked in a similar fashion, but are of specific use such as in the construction of natural stone buildings and in the repair and maintenance of historic buildings and structures.

Coal used in the production of electricity, plays an important role in the national economy. Upper Nithsdale and the lower Canonbie area contain the region's coal deposits, with upper Nithsdale being the main coal bearing area. Working at this location is by means of surface coal extraction (mining).

With an increased pressure for land for all development there is a need to ensure that local mineral resources are not sterilised by non-mineral development, which may result in insufficient supplies for future generations.

## **2.0 Mineral Assessment**

SPP outlines the need for local authorities to have regard to availability, quality, accessibility and requirement for mineral resources in the region when preparing the plan. It also requires the planning authority to ensure that there is a minimum 10 year landbank for mineral reserves.

In order to do this an analysis of mineral reserves, the market area and the availability of each mineral worked was assessed. A 15 year landbank was identified for the market areas supplied by each reserve. This analysis determined that there was adequate supply of each mineral without any deficiencies and therefore it was not necessary to identify search areas in the LDP. The mineral assessment technical paper provides more detail of this assessment.

The assessment looks at the data collected from operators throughout the region in April 2011. Before this analysis can be outlined it is first necessary to discuss the terminology used in the assessment.

The terms '**reserves**', 'mineral reserves' or 'permitted reserves' refer to the remaining resource which has a valid planning permission for working that mineral. Without a valid planning permission no mineral working can legally take place and the inherent value of a resource cannot be released<sup>1</sup>. These reserve areas have undergone appropriate assessments by the operators to demonstrate that the quality and quantity of the mineral can be estimated to a level of confidence which could reasonably justify planning permission being granted<sup>2</sup>.

A Mineral **landbank** should ensure that a stock of reserves, with planning permission, is maintained to provide an adequate supply of minerals over a 10 year period based on current production levels. The 10 year period recognises the likely time scale between the operator deciding that there is a need for a new site and bringing that site into full production.

If a quarry has a remaining period of planning permission of more than ten years then it is considered to be sufficient and is not of concern for analysis purposes. Conversely, if a mineral extraction site/quarry has less than ten years remaining of planning permission then the quarry itself would fall into a category for consideration. The decision to safeguard that quarry would be then dependent on the supply and demand for that mineral in the market area.

In order to assess the supply of minerals, **market areas** were defined. Due to the linear nature of Dumfries and Galloway two locations at opposite ends of the region were selected, thus dividing the market into two areas (see map in appendix A). Market area A was centred on Dumfries, the regional capital and market area B was centred on Stranraer, as it is the largest centre for that region. A 50km boundary was drawn around each centre as this is the BGS acknowledged distance from within which an operator can economically supply/transport minerals to its respective market. The existing quarry locations were then plotted which identified which market area that operation (in theory) supplied.

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<sup>1</sup> [BGS/SE Geology and Mineral Planning Factsheets for Scotland 2007]

<sup>2</sup> [Fiona McEvoy, BGS 2009]

## 2.1 Assessments

In order to make an assessment of market supply the following tables examine extraction rates, permitted reserves and remaining physical reserves for each mineral worked. They reveal that nearly all the mineral workings analysed, have been found to be sufficiently supplying their markets and have a landbank of 15 years or more.

There are a number of dormant quarries which would suggest that current market demand is less than that of the permitted reserves. Therefore, for these sites, there is no requirement for the mineral reserves to be safeguarded.

Dimension Sandstone on the other hand, which is a non aggregate construction material used mainly in natural stone facing. Have two sites in production and two others which have applied for planning permission to extend their operation. Based on the SPP guidance, it is these operations that require safeguarding. However, as there is no evidence to suggest a lack of supply in relation to this mineral and as there are also two sites in the process of applying for planning permission to extend their operations, it is considered unnecessary at this point to safeguard these sites within their respective Search Areas. Ongoing monitoring of the supply of dimension stone will identify whether the reserves will require safeguarding.

For the purpose of analysis, market areas inside the Dumfries and Galloway region were firstly considered. This was on the basis that should a particular mineral recourse require safeguarding, then markets outside the region's boundary would be considered.

The information contained in the following tables can be used to determine further applications when considering sustainable supply. Care is needed to ensure a particular mineral is not over supplied.

## 4.0 Analysis Tables

### 4.1 Greywacke (form of sandstone)

Site Name	(A) Operators anticipated yearly extraction rate, in tonnes.	(B) Expiry date of current planning permission	Estimated resource at Aug 2012 in tonnes	Market Area (see attached map)
Coatsgate Quarry, Beattock	100,000	Nov-2019 (<10yrs) 7yrs	5 million	A
Morrinton Quarry, Dumfries	215,000	Feb-2042 (>10 yrs) 20yrs	2.2 million	A
Beatockhill Quarry, Moffat	70,000	Jan-2022 (<10yrs) 10yrs	1 million	A
Tongland Quarry, Kirkcudbright	75,000	Aug – 2031 (>10yrs) 19yrs	1.3 million	A
Croach Quarry, Cairnryan	Dormant/supply on a contract basis	Jul -2044 (>10yrs) 22yrs	2.4 million	B
Barlochart Quarry, Glenluce	100,000	Feb-2042 (>10yrs) 20yrs	3.9 million	B
Dindinnie Quarry, Stranraer	26,000	Feb – 2020 (<10yrs) 8yrs	1 million	B
Old Hall, Drumflowers, Dunragit	21,000	Nov – 2019 (<10yrs) 7yrs	500,000	B

Market area A; has two quarries with an estimated landbank supply of 15yrs or more and two quarries which have an estimated landbank supply of less than 15yrs.  
 Market area B; has an equal split in terms of landbank supply to that of market area A, however there is a lesser quantity of minerals being produced, and one quarry is dormant.

## 4.2 Granite

Site Name	Operators anticipated yearly extraction rate, in tonnes.	Expiry date of current planning permission	Estimated resource at Aug 2012 in tonnes	Market Area (see attached map)
Dalbeattie Quarry, Craignair	75,000	Nov-2042 (>10yrs) 20yrs	6 million	A
Tongland, Kirkcudbright	75,000	Aug-2031 (>10yrs) 19yrs	500,000	A
Creetown Quarry, Carsluith	Dormant	Feb-2042 (>10yrs) 20yrs	1.7 million	B

Market area A; has two operational quarries which have an estimated mineral landbank of supply in excess of 15 yrs.

Market area B; has one dormant quarry which is has an estimated landbank in excess of 15 yrs landbank.

Overall supply of granite appears to be low, despite large quantities of estimated resources and landbank of supply; this may indicate a lack of market demand.



### 4.3 Sand & Gravel

Site Name	Operators anticipated yearly extraction rate, in tonnes.	Expiry date of current planning permission	Estimated resource at Aug 2012 in tonnes	Market Area (see attached map)
Jericho Bridge, Locharbriggs	205,000	Feb-2029 (>10yrs) 17yrs	4 million	A
Nether Murthat Farm, Beattock	22,000	Jul – 2020 (<10yrs) 8yrs	130,000	A
Barburgh Mill, Auldgirth	100,000	Jan-2027 (>10yrs) 15yrs	1,500,000 (subject to planning)	A
Mid Dargravel Farm, Collin	5,000	Jan – 2012 (<10yrs) 0yrs	unknown	A
Broom Estate, Powfoot	47,000	Nov-2013 (<10yrs) 1yr	460,000	A
Kilblane Quarry, Locharbriggs	250,000	Jun – 2003 (<10yrs) 0yrs	2-3 million	A
Clayshant Pit, Stoneykirk, Stranraer	60,000	Jun-2021 ( <10yrs) 9yrs	300,000	B
Whitcrook Pit (Asphalt), Glenluce	20,000	Jul-2026 (>10yrs) 14yrs	250,000	B
Linloskin Quarry, Newton Stewart	20	Dec -2029 (>10 yrs) 17yrs	250,000	B
Aird Quarry, Castle Kennedy	30,000	Apr –2029 (>10yrs) 17yrs	480,000	B
Balgracie Farm, Leswalt	18,000	Aug – 2010 (<10yrs) 0yrs	unknown	B
Bells Quarry, Sandhead	29,000	Nov – 2029 (>10yrs) 17yrs	250,000	B

Market area A has two quarries with an estimated 15yr landbank or more. The four remaining quarries have a landbank less than 15yrs.

Market area B has three quarries with an estimated landbank of 15yrs or more, whereas the three remaining quarries with less than a 15yr landbank.

Sand and Gravel has the greatest number of active workings throughout the region.

Supply is greatest in market area A, where large quantities of resources are available.

#### 4.4 Dimension Sandstone

Site Name	Operators anticipated yearly extraction rate, in tonnes.	Expiry date of current planning permission	Estimated resource at Aug 2012 in tonnes	Market Area (see attached map)
Locharbriggs Sandstone, Dumfries	12,000	Feb – 2042 (>10yrs) 20yrs	60,000	A
Corsehill Quarry, Annan	4,000	Application pending (<10yrs) 0yrs	500,000	A
Corncockle, Templand	750	Application pending (<10yrs) 0yrs	60,000	A
Cove Quarry	unknown	Nov 2029 (>10yrs) 17yrs	unknown	A

Market area A has two quarries with an estimated 15yr or above landbank. Two quarries are in the process of renewing their permission. Market B does not have an active or permitted quarry for this mineral.

Dimension sandstone is an important resource for the region, however on the basis of ratio of supply to the quantity of estimated resources; evidence would suggest this resource is not under pressure from either demand or supply.

#### 4.5 Limestone

<b>Site Name</b>	<b>Operators anticipated yearly extraction rate, in tonnes.</b>	<b>Expiry date of current planning permission</b>	<b>Estimated resource at Aug 2012 in tonnes</b>	<b>Market Area (see attached map)</b>
Kelhead Quarry	dormant	Nov 2013 (<10yrs) 1yr	unknown	A

Market area A has the only Limestone quarry for this region; the operation has remained dormant for the past number of years. The estimated landbank of supply is less than 15yrs. However at the publication time of this document, an operator is currently at pre-application stages of renewing the permission.

#### 4.6 Crushed Rock

<b>Site Name</b>	<b>Operators anticipated yearly extraction rate, in tonnes.</b>	<b>Expiry date of current planning permission</b>	<b>Estimated resource at Aug 2012 in tonnes</b>	<b>Market Area (see attached map)</b>
Grange Quarry, Tundergarth	250,000	Jan-2061 (>10yrs) 49yrs	5 million	A

Market area A has the only crushed rock quarry for the region; it has an estimated landbank well in excess of 15yrs supply.

## **5.0 Conclusion.**

SPP requires that development plans ensure that a landbank of reserves for construction aggregates, of a minimum 10 years extraction, is available at all times. The current estimated landbank from these reserves is sufficient to maintain a 15 year extraction for the lifetime of the LDP, and therefore no areas of search are proposed. Non mineral development in or adjacent to areas of known resources will be considered against the likelihood of that development sterilising extraction potential. Should this be the case then an opportunity may be permitted to extract that resource prior to that non mineral development taking place.

Ongoing monitoring of minerals will ensure that the above approach is appropriate, however should the need arise to identify mineral search areas, and then it will be accomplished by means of Supplementary Guidance.



# Appendix A

