

# DERRY CITY AND STRABANE DISTRICT COUNCIL

## LOCAL DEVELOPMENT PLAN (LDP) 2032



### EVIDENCE BASE EVB 19

#### MINERALS (Updated May 2017)

This Document is one in a series, which builds up to form the 'evidence base' that informs the preparation of the Local Development Plan (LDP).

It comprises initial Workshop Paper(s) on this Planning topic that were presented to Council Members during 2016 / 2017, which have been subject to Member discussion and input, before further discussion at the Planning Committee (LDP) and in turn feeding into the LDP Preferred Options Paper (POP) and then the Plan Strategy (PS) and eventually the Local Policies Plan (LPP) which together form the LDP.

Therefore, the afore-mentioned evidence base will be continually updated, to additionally include the latest information, input from public engagement, statutory consultees, stakeholder groups, Sustainability Appraisal and from other Departments within the Council, including Community Planning.

The Evidence Base is published as a 'supporting document' in accordance with Article 10(a) and 15(a) of the Planning (LDP) Regulations (NI) 2015



## **CONTENTS**

- 1) Introduction to Paper**
- 2) Legislation**
- 3) Economic Role of Minerals in Northern Ireland**
- 4) Availability of Minerals in Derry City and Strabane District**
- 5) Implications of Mineral Development on the LDP**
- 6) Conclusions and Feedback**

## **APPENDICES**

**Paper 1: Minerals – Legislation, Policy and Local Context**

**Purpose of Paper:** The purpose of this report is to advise Members on the following: an overview of the legislation / policy; a summary of the important economic role of minerals and the extent of minerals availability within the District; and how minerals should be considered in the LDP. Members' input is invited.

**Content:** The paper provides information on:-  
(i) The legislative hierarchy in place in relation to minerals;  
(ii) The economic role of minerals within Northern Ireland;  
(iii) The availability of minerals within our District; and  
(iv) How mineral development should be addressed in the LDP

**Conclusion:** Councillors should note the contents of this paper in relation to mineral development and provide input / feedback on how this aspect should contribute to our LDP.

## **1.0 Introduction to Paper**

- 1.1 This Paper is one in a series, building up the evidence base that will inform the preparation of the Local Development Plan (LDP). The LDP will have a new approach to protecting our environment and promoting appropriate development in line with the Community Plan, moving away from the reactive planning of the past, towards a more proactive approach.
- 1.2 The discussion and input from Council Members at Workshop 9 will then feed into a forthcoming ‘options’ Paper on these matters to the Planning Committee (LDP) - for decision, which will in turn feed into the LDP Preferred Options Paper (POP) which is due out in Spring 2017.
- 1.3 Therefore, this Paper mainly provides Members with an overview of the planning legislation and current policy relating to minerals and considers how this can be addressed into the new LDP for our District, including when considering designations, zonings, proposals and policies.
- 1.4 Minerals include all substances in or under the land, which are ordinarily worked for removal by underground or surface working. Raw materials obtained from mineral extraction are vital to many aspects of construction including, roads, bridges, buildings, etc. and therefore has an important role in the growth and economy of the District and region generally. However, the extraction of minerals can have a significant impact on the landscape and surrounding locality, depending on the size, scale and method used. Extraction may also have an impact on nature conservation sites and structures and remains of historic and archaeological importance.
- 1.5 It is the purpose of the planning system to secure the orderly and consistent development of land with the objective of furthering sustainable development and improving well-being. In essence, the statutory framework seeks to ensure that when preparing its Local Development Plan (LDP), the Council will take full account of the implications of mineral development in relation to proposed land use zonings, locations for development, linkages and settlement limits.

## 2.0 Legislative and Regional Policy Context

### Legislative Background

#### Planning Act (Northern Ireland) 2011

2.1 The Planning Act (Northern Ireland) 2011 describes minerals as “substances which are in or under land of a kind ordinarily worked for removal by underground or surface working except that it does not include turf cut for purposes other than sale.”

2.2 Therefore, any substance which can be extracted from the ground can be classed as a mineral, other than turf which is extracted for personal use.

#### Planning (Interim Development) Act (Northern Ireland) 1944

2.3 The Planning (Interim Development) Act (Northern Ireland) 1944 granted permitted development rights to quarries, under which they operated without planning permission until 1973 when the Planning (General Development) Order (Northern Ireland) 1973 stated that permitted development rights for quarries would only last for one year, effectively meaning that existing quarries had one year to apply for planning permission.

#### Mining Waste Directive

2.4 *The Mining Waste Directive 2006/21/EC* (MWD) was adopted by the European Union in March 2006. It introduced measures to prevent or minimise adverse effects on the environment and risks to health from the management of waste from the extractive industries.

#### Planning Regulations 2015

2.5 The 2010 regulations were replaced by the *Planning (Management of Waste from Extractive Industries) Regulations (Northern Ireland) 2015* from 1st April 2015. Regulation 4 of this legislation states that planning permission will not be granted unless a waste management plan (WMP) has been submitted and approved by the Council.

#### Mineral Development Act 1969

2.6 The Mineral Development Act (Northern Ireland) 1969 vested most minerals in the former Department of Commerce (which became the Department of Enterprise, Trade and Investment (DETI) and is now the Department for the Economy (DfE)). This enabled the Department to grant prospecting licenses and mining licenses for the exploration and development of minerals. This licensing system is based on the provisions of the 1969 Act and on subsequent subordinate legislation. The provisions relating to prospecting for minerals are quite separate and distinct from those relating to the development of minerals. There is no automatic continuity between exploration and development work.

Exceptions to 1969 Act:

The legislation covers all minerals with three main exceptions (the scheduled substances):

1. Gold and Silver belong to the Crown Estate and were not vested in the Department,
2. The few mineral deposits (mainly salt) which were being worked at the time of the 1969 Act were not vested in the Department, and,
3. 'Common' substances including crushed rock, sand and gravel and brick clays are excluded.

### **Mineral Licensing**

- 2.7 Mineral Prospecting licenses are issued by DfE, (formerly DETI) under Section 11 of the Mineral Development Act (Northern Ireland) 1969. Companies prospect for base metals and precious metals under concurrent Licenses for the Department and the Crown Estates Commissioners.
- 2.8 In the period from 2007 to 2016, a total of 14 mineral prospecting Licenses (see Table 1 Appendix 1) were issued by the DfE, as the appropriate licensing authority, located wholly or partly within the boundary of Derry City and Strabane District Council area. It should be noted that a number of these licences were re-applications for licences which were in place prior to 2007 and also re-applications for licences which ran the full 6 year term within the 2007-2015 time frame. There are also several areas under application.
- 2.9 The DfE administer all oil and gas reserves and it licenses oil and gas exploration and extraction. However, before extraction commences, planning permission must be obtained.
- 2.10 Under Article 18(1) of the Quarries (Northern Ireland) Order 1983, DfE were also given the responsibility to gather information on all quarries in order to collate an Annual Minerals Statement.

### **Review of Old Mineral Permissions (ROMPS)**

- 2.11 In line with GB and the ROI, The Planning Act (Northern Ireland) 2011 enables councils to start a process of an initial review of all mineral permissions granted in Northern Ireland thereby ensuring that their conditions meet modern expectations and current environmental standards.
- 2.12 The Environmental Impact Assessment (EIA) Directive has been in force throughout the EU since 1985. It was implemented in Northern Ireland by the Planning (Assessment of Environmental Effects) Regulations (Northern Ireland) 1989 and later by the Planning (Environmental Impact Assessment) Regulations (Northern Ireland) 1999 (revoked and re-enacted in a 2015 version). These pieces of legislation mean that when assessing applications for mineral development, there is a more stringent level of consideration given to the environmental impacts than was previously the case.
- 2.13 Because of the introduction of the 1989 regulations, along with the formation of a specialised minerals planning unit within Planning Service, it is accepted that planning permissions granted for quarrying development since the early 1990's have adequate environmental conditions attached. Permissions granted during the 70's and 80's, following the implementation of the 1973

Order may not have adequate conditions attached and subsequently will need to be reviewed via the Review of Old Mineral Permissions (ROMPS). For instance, it is accepted that very few conditions granted in the 1970's have adequate conditions relating to noise impacts attached.

- 2.14 The Planning Act (Northern Ireland) 2011 makes provision for these reviews of old permissions to be undertaken. This legislation allows mineral sites to be classed as 'phase 1 sites' if they had been granted approval before 31st December 1980 and 'phase 2 sites' if they have been granted approval after 31st December 1980 but before 31st December 1993. The legislation states that all owners of phase 1 and phase 2 sites must apply to the planning authority to have the conditions to which their permission relates reviewed.
- 2.15 However, the Act requires further legislation in the form of an Order, before ROMPS can be undertaken. The Environment Minister has stated that whilst this legislation is not currently being implemented, no decision has been taken NOT to implement the legislation at some point in the future and has instructed Departmental officials to examine how best to implement ROMPS in the new two tier planning system.
- 2.16 Approximately 371 mineral permissions were granted in NI between the 1960's and the early 1990's, with Derry City and Strabane District having 40 of these which equates to approximately 11% of all the mineral permissions which are to be subjected to ROMPS (<http://www.planningni.gov.uk/downloads/news-legislation-planreform-romp.pdf>).

### **Regional Policies on Minerals**

- 2.17 The Regional Policy Context is provided by the Regional Development Strategy (RDS) 2035, A Planning Strategy for Rural Northern Ireland (PSRNI), planning policy statements, and the Strategic Planning Policy Statement (SPPS).
- 2.18 **Regional Development Strategy 2035 (RDS):** The RDS does not provide specific policy for minerals, though one of the eight aims of the RDS is to 'Support our towns, villages and rural communities to maximise their potential'. The RDS recognises the importance of the rural area, including towns and villages, which offers opportunities in terms of their potential growth in new sectors, are attractive places to invest, live and work, and have a role as a reservoir of natural resources and highly valued landscapes.
- 2.19 **A Planning Strategy for Rural Northern Ireland (PSRNI) (1993):** The PSRNI recognises that Minerals are an important natural resource and their exploitation makes an essential contribution to the nation's prosperity and quality of life. The mineral extraction industry provides employment often in rural areas and produces a wide range of products for a variety of purposes in construction, agriculture and industry.



- 2.20 The Minerals section of the PSRNI still constitutes the main current regional planning policies, as follows:
- Policy MIN 1: Environmental Protection - to assess the need for the mineral resource against the need to protect and conserve the environment.
  - Policy MIN 2: Visual Implications - to have regard to the visual implications of mineral extraction.
  - Policy MIN 3: Areas of Constraint - to identify Areas of Constraint on Mineral Developments.
  - Policy MIN 4: Valuable Minerals - applications to exploit minerals, limited in occurrence or with some uncommon or valuable property, will be considered on their merits.
  - Policy MIN 5: Mineral Reserves - surface development, which would prejudice future exploitation of valuable mineral reserves will not be permitted.
  - Policy MIN 6: Safety and Amenity - to have particular regard to the safety and amenity of the occupants of developments in close proximity to mineral workings.
  - Policy MIN 7: Traffic - to take account of the safety and convenience of road users and the amenity of persons living on roads close to the site of proposed operations.
  - Policy MIN 8: Restoration - to require mineral workings to be restored at the earliest opportunity.
- 2.21 **Strategic Planning Policy Statement (SPPS)** was published in September 2015. The recent SPPS is the single most important document in guiding the requirements/content of the LDP.
- 2.22 Minerals, including valuable minerals, are an important natural resource and their responsible exploitation is supported by Government. The minerals industry makes an essential contribution to the economy and to our quality of life, providing primary minerals for construction, such as sand, gravel and crushed rock, and other uses, and is also a valued provider of jobs and employment, particularly in rural areas.
- 2.23 While minerals development delivers significant economic benefits, there are also a number of challenges arising from this form of development which fall to be addressed through the planning system. The effects of specific proposals can have significant adverse impacts on the environment and on the amenity and well-being of people living in proximity to operational sites. This presents a challenge because minerals can only be extracted from sites where they occur, and there may be limited opportunities for consideration of alternative sites. A further challenge is related to the restoration of sites upon completion of work associated with the extraction and processing of materials.
- 2.24 The planning system has a key role to play in facilitating a sustainable approach to minerals development, and ensuring the appropriate restoration



of sites after working has ceased. However, as the impact of mineral working on the environment can never be entirely reversed, the broader role and responsibilities of government, the industry, customers and key stakeholders also need to be recognised. For example, the Sustainable Development Strategy advocates the greater use of recycled building rubble in construction so as to reduce the depletion of natural resources and to limit transportation of such materials.

2.25 The regional strategic objectives for minerals development are to:

- facilitate sustainable minerals development through balancing the need for specific minerals development proposals against the need to safeguard the environment;
- minimise the impacts of minerals development on local communities, landscape quality, built and natural heritage, and the water environment; and
- secure the sustainable and safe restoration, including the appropriate reuse of mineral sites, at the earliest opportunity.

2.26 The policy approach for minerals development, including peat extraction from bog lands, must be to balance the need for mineral resources against the need to conserve and protect the environment.

2.27 Active peatland is of particular importance to Northern Ireland for its biodiversity, water and carbon storage qualities. Any renewable energy development on active peatland will not be permitted unless there are imperative reasons of overriding public interest as defined under The Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995 as amended. <http://www.legislation.gov.uk/nisr/1995/380/made>

2.28 In preparing their LDP, councils may also identify areas most suitable for minerals development within the plan area. Such areas will normally include areas of mineral reserves where exploitation is likely to have the least environmental and amenity impacts, as well as offering good accessibility to the strategic transport network.

2.29 From time to time, minerals may be discovered which are particularly valuable to the economy. Their exploitation may create environmental effects which are particular to the methods of extraction or treatment of that mineral. There will not be a presumption against their exploitation in any area; however in considering a proposal where the site is within a statutory policy area, due weight will be given to the reason for the statutory zoning. However, in relation to unconventional hydrocarbon extraction (fracking), there should be a presumption against their exploitation until there is sufficient and robust evidence on all environmental impacts.

2.30 Permission for the extraction of peat for sale will only be granted where the proposals are consistent with the protection of boglands valuable to nature

conservation interests, and with the protection of landscape quality particularly in AONBs.

- 2.31 Proposals for minerals development must also have particular regard to the safety and amenity of the occupants of developments in close proximity to the mineral workings. Minerals development likely to compromise safety or to significantly impair the amenity of people living or working in proximity to the site will not normally be acceptable. Such adverse impacts could result from noise, vibration and dust arising through excavation, processing or transporting of materials. Where such impacts are judged to be incompatible with standards of amenity acceptable to the planning authority, planning permission should be refused, unless the developer can demonstrate adequate means of mitigation.
- 2.32 Visual intrusion is often the most significant environmental impact associated with mineral workings and where permission is granted, landscape quality should be protected by attaching conditions designed to avoid or mitigate any adverse impacts. Particular regard should be paid to the preservation of skylines and to the proposed location of plant, stockpiles and overburden/waste within the development.
- 2.33 In line with the objective to secure the sustainable restoration, including the appropriate re-use of mineral sites, planning applications should be required to provide adequate details demonstrating the satisfactory restoration of sites subsequent to the completion of operations. Such provisions must be underpinned by appropriate conditions attached to any grant of planning permission.
- 2.34 **Planning Policy Statement: PPS 2 Planning and Nature Conservation:** Policy NH5: Habitats, Species or Features of Natural Heritage Importance is relevant to peat extraction. This policy states that planning permission will only be granted for a development proposal which is not likely to result in the unacceptable adverse impact on, or damage to known: priority habitats; priority species; active peatland; ancient and long-established woodland; features of earth science conservation importance; features of the landscape which are of major importance for wild flora and fauna; rare or threatened native species; wetlands (includes river corridors); or other natural heritage features worthy of protection.
- 2.35 A development proposal which is likely to result in an unacceptable adverse impact on, or damage to, habitats, species or features may only be permitted where the benefits of the proposed development outweigh the value of the habitat, species or feature. In such cases, appropriate mitigation and/or compensatory measures will be required.
- 2.36 **Call for Evidence - Permitted Development Rights for Mineral Exploration**  
The former Department of the Environment launched a 'Call for Evidence' to help inform the future approach to Permitted Development (PD) Rights for Mineral Exploration in March 2016 regarding the above and were particularly

keen to hear views on whether the existing development rights for onshore oil and gas exploration need to be addressed.

- 2.37 Council were satisfied with the DoE's stance on this matter and therefore a response indicating 'no changes to PD rights' was returned.

### **The Mineral Resources Map for Northern Ireland**

- 2.37 The Mineral Resources Map (MRM) for Northern Ireland, produced by the Geological Survey of Northern Ireland (GSNI) in 2012, comprises six sheets, one for each county  
<http://www.bgs.ac.uk/mineralsuk/planning/resource.html#NI>. A key aspect of sustainable development is the conservation and safeguarding of non-renewable resources, such as minerals, and the purpose of these maps is to show the broad distribution of those mineral resources which may be of current or potential economic interest. The maps are intended to assist strategic decision-making in respect of mineral extraction and the protection of important mineral resources against sterilisation.

[http://nora.nerc.ac.uk/18980/1/Londonderry\\_Mineral\\_Final.pdf](http://nora.nerc.ac.uk/18980/1/Londonderry_Mineral_Final.pdf)

[http://nora.nerc.ac.uk/18973/1/Tyrone\\_Mineral\\_Final.pdf](http://nora.nerc.ac.uk/18973/1/Tyrone_Mineral_Final.pdf)

### **Current Area Plans**

- 2.38 *Derry Area Plan (DAP) 2011*: The DAP adopted in 2000 and now past its notional end date of 2011, has a chapter dedicated to Minerals. The DAP stated that building and roadstone aggregates are produced from 3 quarries in the District, shale/gritstone at Gorticross Upper, limestone at Lisbunny and sandstone at Claudy. The plan noted that sand and gravel for the construction industry was taken from pits in the Faughan valley south of Claudy and between Drumahoe and Maydown and in the past there were several workings in the Fawney area. Geological survey work carried out in the District to the north of Drumahoe had indicated the possibility that future exploration may reveal the presence of base and/or precious metals in the District. There are two proposals/policies:
- 2.39 Proposal MN 1 Areas of Constraint on Mineral Development: The Department defined Areas of Constraint on Mineral Development in (a) the Faughan Valley and (b) along the River Foyle within which there would be a presumption against the grant of planning permission for the extraction and/or processing of minerals.
- 2.40 Policy MN 1 Restoration of Despoiled Land: The Department would seek to restore despoiled land where development proposals provide appropriate opportunities.
- 2.41 *Strabane Area Plan (SAP) 2001* The SAP was adopted in 1991 and is now past its notional end date of 2001. It stated the mineral extraction industry in the District consisted primarily of sand and gravel workings with 12 pits

actively being worked in the valleys of the Mourne, Burndennett and Glenmornan Rivers. The largest concentration of pits and old sand workings was in the lower Burndennett valley. Only 3 hard rock quarries were active in the District.

- 2.42 The Department would support in principle the continued production of aggregates from areas which were already being exploited in order to facilitate the fullest use of those resources and to relieve pressure for development elsewhere. Nevertheless, permissions were to will carry conditions designed to minimise environmental disturbance.

### **The Community Plan**

- 2.43 The new duty of Community Planning introduced in April 2015 requires the Council to lead the process of creating a long term vision for the social, environmental and economic well-being of the area and its citizens. The District's Community Plan is expected in spring 2017, with higher level strategic policies, as well as incorporating existing strategies/proposals for the District.
- 2.44 In turn, the new style of LDP provides a unique opportunity for the Council to genuinely shape the District for local communities and will enable them to adopt a joined up approach, incorporating linkages to other functions such as regeneration, local economic development and community planning. The Local Government Act introduces a statutory link between the Community Plan (CP) and the LDP, in that the preparation of the LDP must 'take account of' the CP – which provides the higher-level strategic aspirations for economic development in the District. It is intended that the LDP will be the spatial reflection of the CP and that the two should work in tandem towards the same vision for the Council area and our communities and set the long term social, economic and environmental objectives for the District.

### **3.0 Role of Minerals for the Economy**

- 3.1 While recycled materials and renewable energy sources should be used to reduce waste and encourage sustainability, minerals will continue to be required. Adequate supplies of minerals are essential for manufacturing, construction, energy and agriculture.
- 3.2 Like other industrialised economies, the UK is a major consumer of minerals. Construction minerals, notably aggregates, and energy minerals are the dominant minerals consumed by society.
- 3.3 Indigenous mineral production contributes to the economy by providing:
- employment (directly and indirectly)
  - markets for other goods and services, which stimulate activity elsewhere in the economy, and
  - basic raw materials for other industries, e.g. construction.
- 3.4 Quarry Products Association Northern Ireland (QPANI), is the trade association for the aggregates and an affiliate of the MPA and quarry products industry. Their website currently states that in a typical year, Northern Ireland's quarry network supports:
- £160 million on school and university improvements
  - a £120 million hospital building programme
  - maintenance of our road and rail network
  - improvements to water services
  - the upgrading of our airports
  - supplies of special sands and aggregates for our gardens
  - the turnover of the Northern Ireland quarry industry is approximately £400 million, 1.75% of NI GDP
- 3.5 In addition it also states that:
- every year nearly 14 tonnes of aggregates are needed per head of the population in Northern Ireland
  - a typical family indirectly demands three lorry loads of aggregates each year
  - a new house requires some 50 tonnes of aggregates
  - the quarry products industry employs around 5,600 people in NI
- 3.6 According to QPANI's figures, there are around 160 quarries and sand pits in NI. It states that the construction industry, which contributes around 10% of the Province's gross domestic product, is completely reliant on quarrying. Annual demand for aggregates in Northern Ireland is approximately 24 million tonnes and the jobs that quarrying supports are often in rural areas where other employment opportunities can be scarce. In fact, 75% of the total number of quarries and pits in Northern Ireland are situated in areas designated by Government as Targeting Social Need.
- 3.7 According to Mineral Products Association (MPA), NI produced 18 million tonnes of aggregates in 2013, and at 2.6 million cubic metres and 2.8 million

tonnes, more ready mixed concrete and asphalt than both Scotland and Wales (see Fig 1 – 3 Appendix 1).

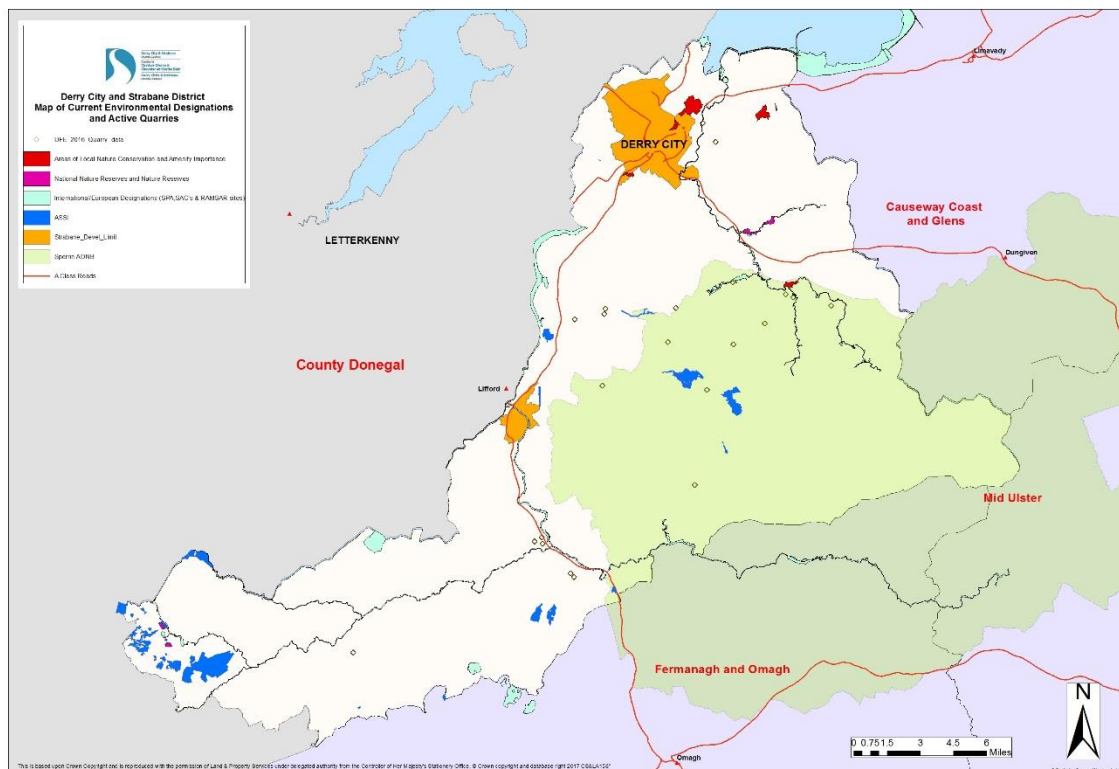
- 3.8 The NI Census of 2011 shows that of the 795,263 people in employment in NI, 1,988 work in Mining and Quarrying. In the Derry City and Strabane District, of the 55,612 residents in employment, 111 people work in Mining and Quarrying (see Table 2, Appendix 1). It should be noted however, that these figures relate to those directly employed at mines and quarries and not those employed in related activities, such as concrete works, etc.
- 3.9 According to DfE figures for June 2016, 1,880 people in NI work in Mining and Quarrying - a breakdown of these figures can be found at Table 3 Appendix 1.



#### 4.0 Availability of Minerals in Derry City and Strabane District

4.1 Figures obtained by QPANI suggest there are 17 quarrying companies and 22 quarry sites operating in the District (Map 1) and approximately 295,796 tonnes and a quarry value of £828,096 (Table 4 Appendix 1). Eight of the eleven councils in NI, produces more quarry tonnage than Derry and Strabane, and therefore quarry value. Quarry locations and names are shown at Table 5 Appendix 1 (please note this list is not exhaustive).

**Map 1: District Map of Current Environmental Designations and Quarry Locations**



- 4.2 As mentioned in paragraph 2.37, the principal source of information regarding the location, extent and nature of the minerals resource of each county is provided by the MRM for Northern Ireland. These also show the location of mineral workings (as at 23 March 2012) and environmental designations (ASSIs, SPAs, SACs, RAMSAR sites and NNRs).
- 4.3 The links to the MRM (paragraph 2.37) show the mineral resources underground in Counties Derry and Tyrone. The MRM is used to assist the strategic decision making in respect of mineral extraction and the protection of important mineral resources against sterilisation.
- 4.4 The geology of the Derry and Strabane area is rich in minerals ranging from peat, basalt, igneous rock, sandstone, psammites and quartzites, as well as sand and gravel. Sand and gravel is very common in the south and west of the District, found along the fringes of the Sperrins and within the river valleys



emanating from them. Psammites and quartzites are found across the District, occurring in a range of geological areas and environments. Sandstone is similarly found around the Eglinton and Douglas Bridge areas. The main local recipient of these resources is the building and construction trades, though demand has reduced over the last decade due to the recession and downturn in housing markets etc.

### **Sand and Gravel**

- 4.5 The counties of Tyrone and Derry are the main producers of sand and gravel in Northern Ireland. These two counties produce around 78% of the country's sand and gravel extracts (Tyrone – 55%, Derry – 23%).
- 4.6 Sand and gravel extraction is focussed around the Artigarvan, Ardmore, Claudy, Donemana, Spamount and Victoria Bridge areas.
- 4.7 The type of extraction is generally opencast quarrying. Material from these sand and gravel quarries is primarily used in the building industry and in the manufacturing of concrete products.
- 4.8 The variability of sand and gravel deposits together with their possible concealment within or beneath till (boulder clay), means that it is difficult to infer their location and the likely extent of potentially workable resources.
- 4.9 Many of the general principles and methods of working in relation to sand and gravel operations are generally applicable to hard rock quarries. One notable difference with sand and gravel workings, however, is that these generally require a higher rate of land use. Sand and gravel deposits tend to be shallow in nature and therefore, for an equivalent volume of production, greater areas of land require disturbance.

### **Psammites and quartzites**

- 4.10 Precambrian-age metamorphic rocks of the Sperrin Mountains have been widely worked for local building stone e.g. Letterbrat near Plumbridge.
- 4.11 Historically, large building stone quarries were opened in the psammites and semipelites in, and around, Derry City. On the south side of Derry City, pelitic units were formerly worked for roofing slates, although latterly these have been replaced by slates from overseas.

### **Hardrock**

- 4.12 Extraction of hardrock (basalt, limestone and sandstone) is opencast and its production is important to the local economy.

### **Limestone**

- 4.13 County Tyrone is the second largest producer of limestone in Northern Ireland accounting for 20% of total output, County Derry only produces around 1% (MRM). Limestones are commonly worked for construction aggregate and building stone. They are also valued for their chemical properties in applications such as cement manufacture, glass making, iron ore smelting,

flue gas desulphurisation, as a soil conditioner, food supplement and white filler.

- 4.14 Relatively thin limestones occur within Precambrian-age rocks in the Sperrin Mountains. The Bond's Glen Limestone is actively worked for aggregate and agricultural lime and was also formerly quarried near Donemana.

### **Sandstone**

- 4.15 Derry and Strabane produce virtually none of Northern Ireland's sandstone, despite containing some valuable resources. According to the 2010 mineral statement, none of Northern Ireland's sandstone is produced in Co Tyrone with Co Londonderry only producing 0.003%. There are deposits of sandstone in Derry and Strabane, according to MRM, with the main concentrations being located to the east of Derry City, around the Eglinton area. Sandstone is also located around the Plumbridge/Victoria Bridge area.

### **Peat**

- 4.16 Peat is an unconsolidated deposit formed by decaying organic matter which accumulates in a water saturated environment such as a bog or moss. Bogs occur in areas of high rainfall for supply of water or in sedimentary basins such as former lakes. Vegetation is characterised by acid tolerant plant communities of which the genus Sphagnum is dominant. The two main types of bog are (1) raised bogs, characteristic of flat underlying topography and found on plains and broad valley floors and (2) blanket bog, which occur mainly in upland areas where conditions are suitably cool and wet.
- 4.17 There are extensive resources of peat in Counties Derry and Tyrone. In Co. Derry, blanket bogs occur at lower altitudes than in the east and central parts of the country. Blanket peat is a feature in the upland areas of Co. Tyrone with a line of raised peat bogs running from the east to the west, some of which are commercially developed whilst some in the west are designated as Areas of Special Scientific Interest (ASSI's). The majority of peat cutting operates to provide domestic fuel and without any application having been lodged. The process of extraction can decimate extensive areas, leaving the landscape compacted and devoid of vegetation.

### **Metalliferous Minerals**

- 4.17 Principal metals found in County Derry are copper, lead, zinc and gold.
- 4.18 Gold – Northern Ireland is arguably the most prospective area of the British Isles for precious metal deposits. Alluvial gold has been recovered since Celtic times when it was used to produce ornate artefacts. Modern-day exploration commenced in the late 1970s. The Dalradian basement rocks of the Sperrin Mountains have been the main focus of exploration but recent work has identified additional prospective areas.
- 4.19 The North West part of County Derry is dominated by Precambrian metaphoric rock, which is highly prospective of gold. Areas in both Counties have been the focus of numerous mineral exploration programmes. At Lear, south of Claudy, values of up to 26 grams per tonne are recorded from a vein.

- 4.20 There are two significant gold mining operations ongoing in Fermanagh & Omagh District, though there are no similar operations ongoing in Derry City and Strabane District.
- 4.21 Alluvial gold occurrences are widespread across the north west of County Derry and the Sperrin Mountain Area. Although alluvial gold is unlikely to become an economic source of gold in NI, it does provide physical evidence of gold in bedrock.
- 4.22 Copper, Lead, Zinc and Barytes – disseminated zinc, lead and massive pyrite mineralisation have been recorded within rocks around Park. The Tyrone Igneous Complex, which straddles both counties is host to copper, lead, zinc and gold

### **Summary of Mineral Production in Derry and Strabane**

- 4.23 DfE Minerals and Petroleum Branch had responsibility for collecting the Annual Mineral Statement of Quarry Output for Northern Ireland. However, due to a change in legislation, the last available information on minerals by type and tonnage of material extracted and their cumulative value to the local economy is for 2010 (Table 6 Appendix 1).

### **Mineral Reserves**

- 4.24 There are no quantifiable details in relation to the amount of mineral reserves that lie within the District. There is also a lack of information on the amount of permitted mineral reserves i.e. existing permissions which are still being worked. Although the Mineral Resource Maps for Northern Ireland provide information regarding the location, extent and nature of the minerals resource in each county, the data as depicted on the maps show only the inferred extent of a mineral resource. Inferred resources are those defined from available geological information and assumed but not verified geological continuity. Thus the inferred boundaries shown are approximate and only indicate the areas within which potentially workable minerals may occur. The economic potential of specific sites can only be proved by a detailed evaluation programme. Such an investigation is an essential precursor to submitting a planning application for mineral workings.

### **Minerals-Related Consultation**

- 4.25 Further consultations are being held with Geological Survey Northern Ireland (GSNI), the Health and Safety Executive for Northern Ireland (HSENI), Historic Environment Division (HED), Northern Ireland Environment Agency (NIEA) and Environmental Health. Key players including construction bodies and business will be invited to take part in Stakeholder meetings. This will feed into the evidence base, together with member feedback, in support of the POP and Planning Strategy documents.

## 5.0 Implications for Mineral Development in the LDP

- 5.1 Current information set out in this paper, clearly shows that mineral extraction and production makes a significant contribution to the Northern Irish economy and also an important contribution to the local economy. While mineral extraction and production is relatively small in the District, in comparison with others in NI, it still has a significant value to the economy and development of the District.
- 5.2 The MRM maps indicate that there is potential for various minerals to be found throughout the District and therefore possible that they may be extracted in the future.
- 5.3 While there are certainly economic benefits to mineral extraction and production, this industry also provides a number of challenges, including impact on the environment, visual implications and impact on the amenity of local residents. The MRM maps also show the Environmental Designations and Scheduled Monuments, which the industry can also have an impact on.
- 5.4 This presents a challenge for the LDP because minerals can only be extracted from sites where they occur, and there may be limited opportunities for consideration of alternative sites.
- 5.5 In line with the Strategic Planning Policy Statement (SPPS), the LDP will be required to:
- ensure that sufficient local supplies of construction aggregates can be made available for use within the local, and where appropriate, the regional market area and beyond, to meet likely future development needs over the plan period;
  - safeguard mineral resources which are of economic or conservation value, and seek to ensure that workable mineral resources are not sterilised by other surface development which would prejudice future exploitation; and
  - identify areas (Areas of Constraint on Minerals Development) which should be protected from minerals development because of their intrinsic landscape, amenity, scientific or heritage value (including natural, built and archaeological heritage). There should be a general presumption against minerals development in such areas. However, where a designated area such as an Area of Outstanding Natural Beauty (AONB) covers expansive tracts of land, the LDP should carefully consider the scope for some minerals development that avoids key sites and that would not unduly compromise the integrity of the area as a whole or threaten to undermine the rationale for the designation.
- 5.6 In summary minerals are an important natural resource. The minerals industry makes an essential contribution to the economy and to our quality of life, providing primary minerals for construction, such as sand, gravel and crushed rock, and other uses, and is also a valued provider of jobs and employment, particularly in rural areas. Mineral production must therefore assess any potential gains and negative impacts such works might have.

## 6.0 Conclusions and Feedback

6.1 It is recommended that Members note the contents of this paper and we now seek feedback. Members may wish to consider the following:

- How do we best balance the gains with the impact on:
  - The environment?
  - The visual amenity?
  - Residential amenity?
- Should the LDP designate an Area of Constraint on Mineral Development, similar to that designated in the DAP 2011, if so where?
- How should we deal with applications within an environmental designation or near monuments?
  - Should such proposals be allowed?
  - Should such proposals have tighter restrictions/conditions?
- The LDP should identify and safeguard mineral resources that are of economic value – what impact will this have on other development or designations in those areas?
- How can the LDP be flexible so that minerals industry be flexible and react when required, such as an upturn in house building, without having a negative impact on the environment?
- Restoration of mineral workings should enhance the natural and historic environment. What potential have these sites to impact positively on the landscape, the community, tourism etc.
- How do we implement the strategic SPPS policy approach and review the existing minerals policies in PSRNI?

6.2 The research findings contained in this paper together with Members views and advice from the relevant parties/consultees have informed the following options which have been taken forward and subjected to Sustainability Appraisal (SA) (Incorporating Strategic Environment Assessment (SEA)) as part of the POP process.

6.3 In considering the options, **Option 1** proposes the maximising potential of our local aggregates sector, whereas **Options 2** places the emphasis on protecting the environment and constraining further development, while **Option 3** seeks a balanced approach which will promote mineral development in sustainable locations, protecting sensitive landscapes and reinstatement of workings.

	Option 1	Option 2	Option 3
<b>I - Minerals</b>	Pro-development, and maximise the potential growth of our local aggregates sector across the District	Emphasis on protecting environment, and consequently constrain further development and growth opportunities	Balanced approach, which seeks to promote mineral development in sustainable locations with a focus on the protection of sensitive landscapes and reinstatement of workings

- 6.4 In the absence of firm proposals from the relevant authorities, further feedback will be required to enable the LDP to be fully informed of future proposals which can subsequently be subjected to the SA/SEA.

## APPENDIX 1

**Table 1: Mineral Prospecting Licenses 2007 to 2016**

2016	DG 5/16 Dalradian Gold DG 6/16 Dalradian Gold
2014	DG 1/14 Dalradian Gold
2011	OM 4/11 Omagh Minerals DG 3/11 Dalradian Gold DG 4/11 Dalradian Gold
2010	OM 4/10 Omagh Minerals
2009	DG 3/09 Dalradian Gold DG 4/09 Dalradian Gold
2008	DG 1/08 Dalradian Gold MR 1/08 Metallum OM 2/08 Omagh Minerals OM 3/08 Omagh Minerals
2007	MR 11/07 Metallum and two License extensions for Dalradian Gold

Department for Economy (DfE)

**Table 2: Industry of Employment**

Area	All usual residents aged 16-74 in employment	Percentage of all usual residents aged 16-74 in employment who work in:							
		Agriculture, forestry and fishing	Mining and quarrying	Manufacturing	Electricity, gas, steam and air conditioning supply	Water supply; sewerage, waste management and remediation activities	Construction	Wholesale and retail trade; repair of motor vehicles and motor cycles	
Northern Ireland	795,263	2.24	0.25	9.69	0.44	0.73	8.18	17.53	
Derry and Strabane	55,612	2.38	0.20	8.86	0.40	0.76	7.89	18.13	

Source: NISRA – Census 2011 Key Statistics Summary Report

**Table 3: Northern Ireland Employee Jobs\* (UNADJUSTED) by Industry Section - June 2016**

Standard Industrial Classification (2007)	MALES			FEMALES			All persons
	Full time	Part time	Total	Full time	Part time	Total	
Mining and quarrying	1,600	80	1,680	160	40	200	1,880
<b>Total</b>	283,800	73,230	357,030	196,450	179,540	375,990	733,020

Source: DfE – June 2016



**Table 4: Quarry Value and Tonnage Extracted per Council District**

<u>Council</u>	<u>Quarry Value</u>	<u>Tonnage extracted</u>
Antrim and Newtownabbey	£240,184.00	95,311
Armagh Banbridge and Craigavon	£7,606,409.00	1,658,101
Belfast	No return	
Causeway Coast and Glens	£3,375,028.00	941,073
<b>Derry and Strabane</b>	<b>£828,096.00</b>	<b>295,796</b>
Down and Ards	£5,489,523.57	2,194,187
Fermanagh and Omagh	£6,242,208.00	1,627,131
Lisburn and Castlereagh	£4,432,005.00	1,535,151
Mid and East Antrim	£13,697,997.00	1,699,577
Mid Ulster	£5,348,772.26	1,680,251
Newry and Mourne	£3,109,281.00	834,818
	<b>£50,369,503.83</b>	<b>12,561,396</b>

Notes:

The details in this table is based on the last recorded mineral statement collected by DfE 2011.

The information does not represent the full value of aggregates to any of the council areas as not all operators completed a return for the year.

The operator information is believed to be correct for the time of the return – changes in ownership may have occurred in the intervening time.

Source: QPANI

**Table 5: Quarries located within the Derry City and Strabane District**

Pit Name	Alternative	Parent Pit	Easting	Northing	Translation	Operator		
Letterbrat		4392	247180	392195	Active	W G Ballantine		
Gortree Quarry	Gorticross Upper, Gortacross	0	248605	417150	Active	A S Ballantine Ltd		
Aughafad Quarry		0	248000	399200	Active	A S Ballantine Ltd		
Moyagh Quarry	Moyagh Sand Pit	0	240500	404700	Active	W & J Chambers		
Montcastle Quarry		0	241273	405350	Active	W & J Chambers		
Lisbunny Quarry		0	252260	403990	Active	W & J Chambers		
Mobuoy Quarry		0	247600	417400	Active	City Industrial Waste Ltd		
Claudy		148728	254880	409190	Active	Claudy Building Stone Quarry		
Gorticrum Quarry		4433	240105	399660	Active	Devines Sand & Gravel		
Ballyheather Quarry		0	238410	404295	Active	Gregory Donnelly		
Ardstraw Quarries Extension	Urbalreagh, Ardstraw West	31698	235325	387860	Active	Tony Harley & Sons Ltd		
Ardstraw Quarries	Urbalreagh, Ardstraw West	0	235500	388190	Active	Tony Harley & Sons Ltd		
Old Deerpark Quarry	Woodhills	0	238115	385820	Active	Thomas Kane & Sons		
Donemana Quarry	Dunnamanagh	0	244985	405000	Active	Wm McLaughlin & Sons Ltd		
Gilky Hill Quarry		0	257040	405290	Active	T O'Connell		
Barton Woods Quarry	Woods No 1	0	240615	405055	Active	J O'Connor & Sons		
Riddles Bros Gravel Pit	Riddles Bros's Ltd	31696	245055	402425	Active	Riddles Brothers		
Riddles Bros	Riddles Bros's Ltd	0	245175	402650	Active	Riddles Brothers		
Alla No. 1 Quarry	Alla Sandpit	0	253800	406000	Active	Robert Robinson & Son		
Alla No. 2 Quarry	Alla Sandpit	0	253500	406100	Active	Matthew Robinson & Son		
Derg Road Gravel Pit Extension	Mulvin Road Pit	149204	235970	387975	Active	Unknown Operator		
Mulvin Road Gravel Pit		149202	236050	388475	Active	Unknown Operator		
							Value	Weight (tonnes)
							<b>£828,096.</b>	<b>295,796</b>

Source: QPANI 2015

**Table 6:**

**Mineral production in Northern Ireland 2009 and 2010**

(Mined under the Mines Act 1969 and Quarries (NI) Order 1983).

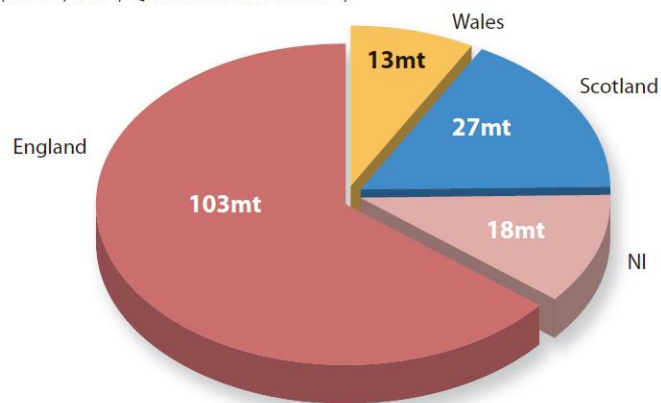
MINERAL	QUANTITY PRODUCED (TONNES)		SELLING VALUE (£)	
	2009	2010	2009	2010
	Basalt and Igneous Rock (excluding Granite)	5,757,907	5,437,815	24,247,283
Sandstone	3,793,283	2,767,667	16,582,071	11,564,166.00
Limestone	3,972,114	3,688,570	14,791,097	12,904,934.00
Sand and Gravel	4,856,075	2,178,220	23,305,454	7,361,336.00
Other	1,998,040	2,087,208	11,136,006	13,598,880.00
<b>TOTAL</b>	<b>20,377,419</b>	<b>16,159,480</b>	<b>90,061,911</b>	<b>66,849,354.00</b>

Source: DfE

**Fig 1**

**UK Primary Aggregates Production, 2013 (million tonnes)**

(DCLG, MPA, QPA Northern Ireland)



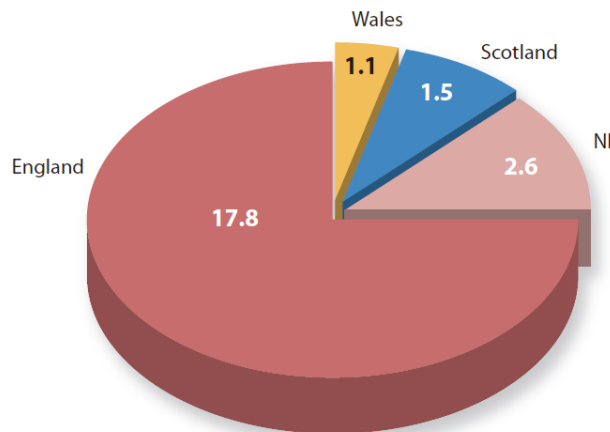
Source: Mineral Products Association

**Fig 2**

**UK Ready-mixed concrete production, 2013 (million cubic metres)**

(MPA, QPA Northern Ireland)

NB Estimates for England, Scotland & Wales based on the assumption that MPA sales represent 75% of the total GB market for ready-mixed concrete.



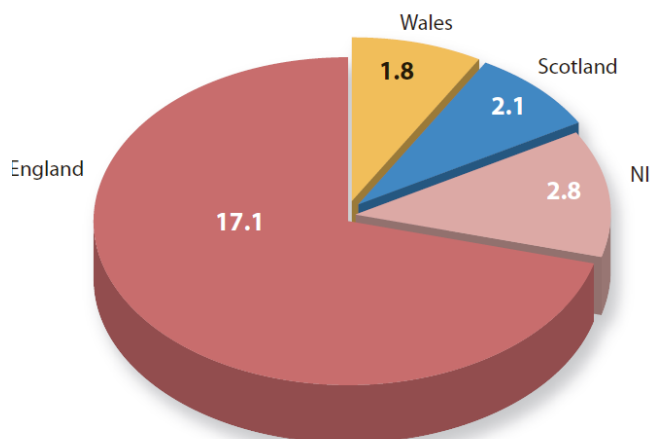
Source: Mineral Products Association

**Fig 3**

**UK Asphalt production, 2013 (million tonnes)**

(MPA, QPA Northern Ireland)

NB Estimates for England, Scotland & Wales based on the assumption that MPA sales represent 90% of the total GB market for asphalt.



Source: Mineral Products Association

**Map 1: District Map of Current Environmental Designations and Quarry Locations**

