



Fermanagh & Omagh
District Council
Comhairle Ceantair
Fhear Manach agus na hÓmaí

FERMANAGH AND OMAGH DISTRICT COUNCIL

Position Paper Nine

Minerals

October 2015

Minerals in Fermanagh and Omagh

Purpose: To provide the Council with an overview of matters relating to minerals and implications for land use in the Fermanagh and Omagh District Council Area.

Content: The paper provides:

- (i) the regional policy context for mineral development;**
- (ii) an overview of the economic importance of minerals to the NI economy;**
- (iii) an overview of mineral production, mineral activity in the Plan area, and existing areas of mineral constraint in the Fermanagh and Omagh District; and**
- (iv) how mineral development should be addressed in the Plan.**

Recommendation: That the Council notes the findings and the overall approach to mineral development in the Local Development Plan.

1.0 Introduction

- 1.1** This paper is one in a series of papers that will inform the Fermanagh and Omagh Council in the preparation of the new local development plan. Its purpose is to inform Council of the regional planning context for mineral development, the importance of minerals to the economy and how mineral development should be addressed in the Plan.
- 1.2** Minerals are a basic element of so much development in the world, they are used in the construction of roads, buildings, bridges, airports, harbours and many other related and unrelated uses ranging from dimension stone to powders.
- 1.3** Because of their nature, scale, location and duration of operation, mineral developments often impact more severely on the environment than other forms of development. They may damage or destroy nature conservation sites and structures and remains of historic and archaeological interest that are of importance. They can also have a significant visual effect on the landscape and on peoples living conditions.
- 1.4** The planning system has a key role in controlling the location and operation of mineral workings in the public interest. It seeks to secure a continuous and ongoing supply of construction materials to meet society's needs while

protecting the environment and safeguarding the amenity of those living close to mineral extraction sites.

2.0 Regional Policy Context

2.1 The Regional Policy Context is provided by the Regional Development Strategy (RDS) 2035, regional planning policy statements, A Planning Strategy for Rural Northern Ireland (PSRNI) and the draft Strategic Planning Policy Statement (SPPS). The RDS does not provide specific policy aims and objectives for minerals but 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 (SFG13).

Planning Strategy for Rural Northern Ireland

2.2 Current planning policies for minerals are set out in A Planning Strategy for Rural Northern Ireland and recognise the importance of minerals as a natural resource and the contribution that their exploitation makes to the economy. The concept of sustainability underpins the strategy, however it recognises that in the context of minerals, this can pose particular difficulties. The strategy recommends that the rate of consumption of finite minerals should be reduced by encouraging the use of renewable and recycled alternatives where ever this is practical and economically viable. The minerals industry should aim for the best use of the total aggregate resources by minimising wastage and avoiding the use of higher quality materials where lower grade materials would suffice.

2.3 In considering an application for extraction, account will be taken of the value of the mineral to the economy, the environmental implications and the degree to which adverse effects can be mitigated in relation to the character of the local area.

2.4 The Planning Strategy for Rural Northern Ireland requires that the development of mineral workings have regard to the following policies:-

- **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 development.
- **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.

Strategic Planning Policy Statement (SPPS)

- 2.5** The Strategic Planning Policy Statement (SPPS) was published in final form on 28th September 2015. In facilitating a sustainable approach to mineral development, the SPPS recognises not only the essential contribution that the minerals industry makes to the economy but also the importance of respecting the limits of our natural resources and ensuring a high level of protection and improvement of the quality of our environment.
- 2.6** Thus the regional strategic objectives for minerals 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 re-use of mineral sites, at the earliest opportunity.
- 2.7** 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. In particular, Local Development Plans (LDPS) should:
- 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 areas¹ 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

¹ Normally referred to in Development Plans as ‘Areas of Constraint on Minerals Development’.

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.

- 2.8** In preparing their LDP, councils may also identify areas 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.
- 2.9** The process of unconventional hydrocarbon extraction, otherwise known as 'fracking', was discussed in a previous paper, Employment and Economic Development. The SPPS states that there should be a presumption against their exploitation until the Department of the Environment (DOE) is satisfied that there is sufficient and robust evidence on all environmental impacts.

Planning (Interim Development) Act (Northern Ireland) 1944

- 2.10** The 1944 Planning (Interim Development) Act (Northern Ireland) gave development a large degree of exemption from the regulations imposed under Planning Legislation on other development. Where land was comprised in a mineral undertaking it was permitted development.

The Mineral Development Act 1969

- 2.11** After World War II these exemptions were addressed and new legislation formed in the UK, however new legislation was not introduced in Northern Ireland until The Mineral Development Act of 1969. This simplified exploration for non-aggregate minerals by vesting rights in one authority, the Department of Economic Development (DED). The DED now known as The Department of Enterprise, Trade and Investment (DETI) administer all oil and gas reserves and licenses oil and gas exploration and extraction. However, before extraction commences, planning permission must be obtained from the Department of the Environment (DOE).

This Act also gave DETI responsibility for most other minerals. There are three main exceptions:

- gold and silver, which belong to the Crown
- minerals which were being worked when the 1969 Act became law
- "Common" substances, including aggregates, sand and gravel.

Under Article 18(1) of the Quarries (Northern Ireland) Order 1983, DETI were also given the responsibility to gather information on all quarries in order to collate an Annual Minerals Statement.

Mining Waste Directive

- 2.12** Directive 2006/21/EC on the management of waste from the extractive industries, the Mining Waste Directive (MWD) was adopted on 15th March 2006. It introduces measures to prevent or minimise adverse effects on the environment and risks to health from the management of waste from the extractive industries. It applies to waste resulting from the extraction, treatment and storage of mineral resources and the working of quarries.
- 2.13** The MWD recognises that the vast majority of mining operations do not present similar risks and sets out a proportionate and risk-based approach to dealing with extractive waste. This is particularly relevant to Northern Ireland where most extractive waste is inert and therefore benefits from lighter controls. In addition, current good practice in the industry already addresses many of the WMDs requirements and in conjunction with existing regulatory requirements, will limit the effect of any new obligations placed upon operators.
- 2.14** The MWD is transposed to Northern Ireland through the provisions of the Planning (Management of Waste from Extractive Industries) Regulations (Northern Ireland) 2015. Under its provisions, a waste management plan for the minimisation, treatment, recovery and disposal of extractive waste must be submitted to the council for approval.
- 2.15** Up until 31st March 2015, planning applications for minerals development were processed on a province wide basis by a small team of specialists in DOE Planning HQ. From 1st April 2015 the responsibility for the processing, managing and controlling of mineral applications was transferred to the new councils.

Review of Mineral Permissions

- 2.16** In line with the rest of the UK 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.

Mineral Licensing

- 2.17** Mineral Prospecting licences are issued by DETI under Section 11 of the Mineral Development Act (Northern Ireland) 1969. Companies prospect for base metals and precious metals under concurrent licences for the Department and the Crown Estates Commissioners.
- 2.18** In the period from 2007 to 2015, a total of 52 mineral prospecting licences were issued by the Department of Enterprise Trade and Investment (DETI), as the appropriate licensing authority, over the whole of Northern Ireland. Of these licences, 13 were located wholly or partly within the boundary of the Fermanagh and Omagh 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. Currently there are 5 active mineral prospecting licences within the council area.

The Mineral Resources Map for Northern Ireland

- 2.19** The Mineral Resources Map 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> Hard copies of Fermanagh and Tyrone GSNI maps will be made available at Planning Committee. 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.

3.0 Existing Omagh and Fermanagh Area Plans

- 3.1** The Omagh Area Plan 2002 (OAP 2002) acknowledged that mineral reserves in the district includes sand, gravel, hard rock, gold and peat deposits. Sand and gravel is the most actively worked resource concentrated within the Sperrins Area of Outstanding Natural Beauty (AONB) in the Mountfield-Greencastle-Loughmacrory area, and around Carrickmore and Sixmilecross.
- 3.2** The Plan recognised the important role of minerals in both the physical and economic development of the area, while also aiming to protect the quality of the landscape. The exploitation of minerals provides employment and materials for construction. However it is also destructive, causes a loss of visual amenity and is a disruptive influence. Therefore the Plan also sought to protect landscape quality and ensure that where planning permission was granted, it would include conditions to mitigate or avoid visual disturbance. In addition, all new mineral developments would be conditional upon the ultimate rehabilitation of sites to a safe and tidy condition. There are no Areas of Constraint on Mineral Developments defined in the OAP 2002.
- 3.3** The Fermanagh Area Plan 2007(FAP 2007) identified limestone as the most commonly extracted raw material taken from hard rock quarries in the district. Sandstone, dolerite and shale were also produced from several quarries. The limestone and shale were recognised as an integral part of Fermanagh's cement industry. Specific magnesia limestone was identified at Belcoo which has beneficial properties for cattle when milled for use in feed products. Derrylin and Tempo were shown to have sand and gravel deposits which are utilised mainly by the construction industry. However concerns as to finding suitable future reserves within the district was highlighted.
- 3.4** The FAP 2007 referred to the need to protect the intrinsic value of Fermanagh's natural beauty with the aim of preserving the potential to develop tourism in the area. Thus a careful balance between extraction of minerals and preservation of this special environment was laid out in policy. Areas of Constraint on Mineral Developments are identified on areas of nature

conservation interest, Areas of Significant Archaeological Potential (ASAs) and areas of high scenic value including Lough Erne and Cuilcagh Mountain.

- 3.6** The basic strategy of both existing plans aimed at promoting mineral development while affording protection to the existing environment. This is still relevant and should provide the core elements of any mineral policies for the new Local Development Plan.

4.0 The Importance of Minerals to the NI Economy

- 4.1** Minerals includes all minerals and substances in or under land of a kind ordinarily worked for removal by underground or surface work. The bulk of mineral commodities, which are largely natural sand, gravel and crushed rock aggregate, are obtained through quarrying.
- 4.2** Minerals are essential for the sustainable development of an economy; they are basic raw materials for construction, energy generation, manufacturing and agriculture. Each of these industries in turn fuels other economies which illustrates how important minerals are in today's world. Whilst the use of renewable energy sources, recycled material and industrial by-products can be maximised to meet part of our requirements and to reduce waste, new mineral sources will continue to be required. Mineral exploration and extraction makes an essential contribution to Northern Ireland's prosperity and quality of life providing income for a large proportion of the population, often in rural areas. All minerals have one common characteristic in that they have to be extracted in the location in which they are found. They may be extracted and processed elsewhere but a key component to a successful extraction is their proximity to a suitable market.
- 4.3** The turnover of the NI quarry industry is approximately £400 million, 1.75% of Northern Ireland's GDP. In a typical year, Northern Ireland's quarry network supports:
- The building of 12,000 new homes;
 - £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 special sands and aggregates for our gardens.²
- 4.4** In addition, every year, nearly 14 tonnes of aggregates are needed per head of population in Northern Ireland. A typical family indirectly demands three lorry loads of aggregates each year; a new houses requires some 50 tonnes of aggregates and the quarry products industry employs around 5,600 people in NI.

² Quarry Products Association (NI) Ltd (QPA NI) 2014

- 4.5** The main source of information regarding minerals comes from Geological Survey Northern Ireland (GSNI) and DETI. Much of this information tends to be at the regional level and not broken down to district level for reasons of commercial confidence. Statistical information produced by DETI on mineral production is only available up to 2010. The figures indicate that total mineral production in Northern Ireland decreased from their 2007 level of 29.5 million tonnes to 16.2 million in 2010. Basalt and igneous rock (excluding granite) constituted the major volume of extracts, with 5.4 million tonnes produced in 2010. Approximately 2.2 million tonnes of sand and gravel were produced and 3.7 million tonnes of limestone were produced in the same year. The lower levels of productivity since 2007 most probably relates to the economic recession and subsequent cessation of the building boom period. The decline is particularly evident in the production of sand and gravel, both important components of the construction industry, with a fall in production from 8.1m ton in 2007 to 2.2m ton in 2010.
- 4.6** A total of 1780 persons were employed within mines and quarries in Northern Ireland in March 2015 (DETI) (Table 1). The predominant employment base was made up by basalt and igneous rock (excluding granite) extraction. As with other industries affected by the recession, employment levels have declined since 2007 when 1995 persons were employed in the sector.

Table 1: Employment Figures In the Quarrying Industry (NI)

	Full Time	Part Time	Total
Males	1490	60	1550
Females	170	60	230
Totals	1660	120	1780

Source DETI March 2015 Quarterly Employment Survey

- 4.7** With mining and quarrying an important industry within Northern Ireland, the need for specialist equipment has been a prerequisite for the processing and grading of materials. As Fermanagh and Tyrone have a greater concentration of quarries, a number of small engineering businesses were set up to service the local industry. As a result of the developing expertise, some of these businesses have expanded into a national/multinational exporting industry for quarry and screening equipment, therefore creating valuable employment opportunities within the Fermanagh and Omagh district.
- 4.8** Whilst minerals are essential to support economic growth, their working can have a significant effect on the landscape and on people's living conditions. Separation distances or buffer zones and the use of planning conditions designed to mitigate disturbance, can help reduce the impact on amenity of occupants of developments in close proximity to mineral workings. Mineral extraction may also affect the setting of heritage assets, be they buried remains, buildings, landscapes or places and extraction can cause change in the character of the landscape. However, although mineral extraction can destroy archaeological sites and features, where sites are properly investigated and recorded, it can provide major opportunities to understand the District's rich archaeological heritage.

- 4.9** Minerals development has the potential to generate large volumes of HGV traffic which can have adverse impacts on local communities in terms of noise, air pollution, vibration and dust. All surface mineral workings also have the potential to affect the water environment in one way or another. Potential impacts can be reduced through mitigation measures.
- 4.10** In order to address the environmental costs associated with aggregate extraction, such as noise, dust, visual intrusion, loss of amenity and damage to biodiversity, the UK Government introduced the Aggregates Levy in 2002. It was also hoped that the levy would reduce the use of freshly won aggregates and encourage a greater use of recycled aggregates.

5.0 Mineral Extraction in Fermanagh and Omagh District

- 5.1** The principal source of information regarding the location, extent and nature of the minerals resource of each county is provided by the Mineral Resources Map for Northern Ireland (see paragraph 2.18). These also show the location of mineral workings (as at 23 March 2012) and environmental designations (ASSIs, SPAs, SACs, RAMSAR sites and NNRs).
- 5.2** The geology of the Fermanagh and Omagh area is rich in minerals. Mineral resources within the area range from peat, basalt, igneous rock, limestone and sand and gravel. Sand and gravel is very common in the north-east of the district, found along the fringes of the Sperrins and within the river valleys emanating from them. Limestone is mainly found in Fermanagh, occurring in a range of geological areas and environments. The main local recipient of these resources is the building and construction trades, though it is evident that demand has reduced over the last few years due to the recession and downturn in housing markets etc.
- 5.3** Numerous abandoned quarries are also visible throughout the districts where workings have long been abandoned. However most of these would have been closed in the 19th Century.

Sand and Gravel

- 5.4** County Tyrone is the main producer of sand and gravel in Northern Ireland accounting for over 55 per cent of the total output. Fermanagh's sand and gravel resource is more limited. Sand and gravel extraction is mainly found in the Mountfield-Greencastle-Loughmacrory area, and around Carrickmore and Sixmilecross. 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. The main demands come from the Belfast and Craigavon areas.
- 5.5** The variability of sand and gravel deposit together with their possible concealment within or beneath till (boulder clay) means that it is difficult to pinpoint their location and the likely extent of potentially workable resources. Many of the general principles and methods of working relating 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.

Hardrock

- 5.6** Extraction of hardrock (basalt, limestone and sandstone) is opencast and its production is important to the local economy. In total, there are 14 sites of hardrock extraction in the District, of which 12 sites are active in Fermanagh and 2 in Omagh.
- 5.7** County Fermanagh is the largest producer of limestone in Northern Ireland accounting for 68% of total output, followed by County Tyrone with about 20%. 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. Much of the limestone is produced as a building aggregate for use as coated stone or fill material but together with shale, high grade limestone is the principal raw material of Fermanagh's cement industry.
- 5.8** County Tyrone has abundant resources of igneous and meta-igneous rocks suitable for crushed rock aggregate which is a key component of construction materials such as concrete and asphalt. County Fermanagh is the smallest producer of basalt and other igneous rock in Northern Ireland currently accounting for less than one per cent compared to Co.Tyrone's 15 per cent. In the Fermanagh-Omagh district, igneous rock quarries can be found at Carrickmore, Mountfield and Lack.

Peat

- 5.9** 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.
- 5.10** There are extensive resources of peat in Tyrone and Fermanagh. Blanket peat is a feature in the upland areas of the former Omagh District 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), two of which are also RAMSAR sites and therefore of international importance. The majority of peat cutting operates to provide domestic fuel and without any application having been lodged. The main areas of mechanical peat extraction for horticultural purposes lie to the south west of Carrickmore at Drumlister Road and Mullaslin Road, to the south east of Omagh at Tattykeel, Beattie Villas and Arvalee, and at Tattenalee in Fermanagh. The process of extraction decimates extensive areas, leaving the landscape compacted and devoid of vegetation.

Valuable Minerals

- 5.11** Northern Ireland is arguably the most prospective area of the United Kingdom and Republic of Ireland 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.

Gold

- 5.12** The results of the 1976 GSNI survey, over areas underlain by the Neoproterozoic Dalradian rocks (c. 590Ma) confirmed the potential for gold bearing rock in the Sperrin Mountain area of Counties Tyrone and Londonderry and in the early 1980s bedrock gold mineralisation in quartz veins (sometimes called lode gold deposits) was discovered in Curraghinalt Burn. Work has continued on the Curraghinalt prospect (currently licenced to Dalradian Resources) which has a combined 'measured and indicated' resource of 1,004,100 ounces of gold, contained in 3.00 million tonnes of ore, at a grade of 10.41 grams per tonne gold³ (Table 1). Furthermore, the development of the site has the potential to employ 200-300 people in the construction phase and, at least 220 in the mining phase with a resource at current gold price of somewhere in the region of £3.5 billion.⁴ Work on-site began in September 2014 for the underground exploration program, including additional underground development, removal of large sample for testing and underground drilling.

Table 1: Curraghinalt Mineral Resources (as at January 20, 2014)

Resource Category (Cut-off Grade of 5.0 g/t)	Curraghinalt Mineral Resources (as at January 20, 2014)		
	Million Tonnes	Grade (g/t Au)	Contained Gold (ounces)
Measured	0.02	20.15	15,100
Indicated	2.98	10.34	989,000
Measured + Indicated	3.00	10.41	1,004,100
Inferred	8.01	9.67	2,487,700

Source: Dalradian Gold Limited

- 5.13** Approximately 20km to the southwest is the Cavanacaw deposit. Developed by Omagh Minerals, a subsidiary of Galantas Gold, this is the first modern gold mine in the British Isles with an indicated resource in 2014 of 147,784 ounces of gold contained in 679,992 thousand tonnes of ore at a grading of 6.78 grams per tonne gold within the mine lease area.⁵ The mine also

³ Dalradian Gold Limited

⁴ Dalradian Gold Limited

⁵ www.galantas.com

produces by-product silver and lead. Across the rest of the Dalradian basement rocks in this area there are a number of showings and drill intersections suggesting that further economic resources remain to be identified. In July 2015, planning approval was granted for an underground extension to the open-cast mining operation.

Summary of Mineral Production in Fermanagh and Omagh

- 5.14 DETI 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 2).

Table 2 Mineral Extraction Rates in Fermanagh & Omagh District 2010

Fermanagh & Omagh Mineral Extraction	Total(£)	Total (tonnes)
Sand & Gravel	£580,935	156,839
Sandstone	£1,179,844	206,098
Limestone	£3,990,645	1,172,118
Basalt	£490,784	92,076
Total	£6,242,208.00	1,1627,131

Source DETI 2015

- 5.15 Appendix 2 lists the names of the quarries in the Fermanagh and Omagh district as supplied by DETI through their 2010 survey return form. Pit names and operators may vary as a number of pits are mined by the larger operators. The types of commodities produced within these pits were only completed in some instances.

Mineral Reserves

- 5.16 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.

6.0 Conclusion

6.1 Mineral extraction is an indigenous industry within the Fermanagh and Omagh district and makes an important contribution to the local economy. Although it is not possible to quantify the amount of minerals required over the Plan period up to 2030, there will be a need to ensure that supplies of raw materials are provided in pace with any economic growth that occurs. Thus, the LDP will need to accommodate any potential expansion of existing quarries as well as the opening of new workings. It is therefore important that the Plan achieves a balance between economic development and safeguarding the most valuable and vulnerable areas of the environment from the detrimental effects of mineral extraction. There is also a need to ensure that there is a degree of protection afforded to Fermanagh and Omagh's natural environment given its contribution to the development of tourism and recreation.

6.2 The LDP will also be required to 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. Geological Survey NI will provide advice in this regard along with discussions with the quarry industry in order to help inform the formulation of mineral policies tailored to the plan area. Given the distribution of existing quarries outside the Sperrin AONB and nature designations such as ASSIs and the general extent of potential resources as indicated in the Minerals Maps, it may be concluded that there is no need to permit mineral developments in these areas save in exceptional circumstances.

6.3 In line with the policy approach in the SPPS, the Plan's overall approach to mineral development should be to balance the demands of the mining and extractive industry with the need to protect and conserve the environment. In light of this, the following key actions for minerals development at strategy level are proposed in the Council area:

- Protect the Sperrin AONB from minerals development except where proposed operations are short term (less than 15 years) and the environmental/amenity impacts are not significant;
- Protect important environmental assets from minerals development including Marble Arch Geo-Park, Areas of Special Scientific Interest (ASSI), Areas of Scientific Interest (ASI), Special Protection Areas (SPA), Special Areas of Conservation (SAC), Ramsar sites, Nature Reserves and Sites of Local Nature Conservation Interest (SLNCI);
- Identify areas suitable for minerals development within the plan area;

- Minimise the adverse impact of mineral workings on neighbouring communities and sensitive land uses, the historic environment, biodiversity and the water environment;
- Identify and safeguard mineral resources which are of economic or conservation value (in consultation with GSNI);
- Encourage and support recycling initiatives and proposals at existing aggregate sites;
- Ensure that restoration of mineral workings enhance and complement the natural and historic environment and contribute to biodiversity.

Appendix 2

List of Quarries in Fermanagh and Omagh

Pit Name	Operator	Commodity (2010)
Crieve Hill Quarry, Fivemiletown	Acheson & Glover Ltd	Limestone
Greenahoe Quarry, Belcoo	Acheson & Glover Ltd	Sand and Gravel
Greenahoe Quarry, Belcoo	Acheson & Glover Ltd	Diatomite
Greenahoe, Belcoo	Acheson & Glover Ltd	
Doonan, Tempo	James Balfour & Sons Ltd	
Drogan Quarry, Irvinestown	James Balfour & Sons Ltd	
Crocknafarbrague Gravel Pits, Trillick	B Barrett	
Kirk's, Mountfield	Bradley Construction	
Cairn Quarry, Mountfield	Michael Burke	
Kelly's Quarry, Sixmilecross	CEMEX (NI) Limited	
Kelly's Quarry, Sixmilecross	CEMEX (NI) Limited	
Kelly's Quarry, Sixmilecross	CEMEX (NI) Limited	
Kelly's Quarry, Sixmilecross	CEMEX (NI) Limited	
Wilson's Pit, Greencastle	CEMEX (NI) Limited	
Wilson's Pit, Greencastle	CEMEX (NI) Limited	
Kelly's Quarry, Sixmilecross	CEMEX (NI) Limited	
Letterbailey Quarry, Tempo	Campbell Contracts Ltd	Sand and Gravel
Letterbailey Quarry, Tempo	Campbell Contracts Ltd	Sandstone
Castle Quarries, Mountfield	Castle Quarries Ltd	
Slushill Quarry, Lisnaskea	P Clarke & Sons Ltd	Limestone
Colton, Lack	Colton Quarries Ltd	Basalt
Fallaghearn No. 2 Quarry, sixmilecross	Cootes (Concrete Products) Ltd	
Kiltierney, Ederney	Harold Graham	
Camlough Road School Pit, Carrickmore	W D Irwin & Sons Ltd	Sand and Gravel
Eskragh Quarry, Eskragh	Wm A Jordan	Sand and Gravel
Aghnanereagh Quarry, Carrickmore	Pat Loughran	

Pit Name	Operator	Commodity (2010)
Carn Quarry, Ederney	B McCaffrey & Sons Ltd	Limestone
Dunaree No.1 Quarry, Drumquin	B McCaffrey & Sons Ltd	Limestone
Knockninney Quarry,Derrylin	B McCaffrey & Sons Ltd	Limestone
Umera Quarry,Derrylin	McCaffrey (Concrete Products) Ltd	Chalk
Whitebridge Road, Sixmilecross	McGarrity Bros Ltd	Sand and Gravel
McGirr Bros, Eskragh	McGirr Bros Quarries	Sandstone Sand and Gravel Mudstone
Rockfield Quarry,Donagh	R J Mitten & Sons	Limestone
Magheradunbar Quarry,Enniskillen	R J Mitten & Sons	Sandstone
Mountfield No. 1 Quarry, Mountfield	Northstone Materials	Basalt
Carrickmore Quarry, Carrickmore	Northstone Materials	Basalt
Omagh Mine, Omagh	Omagh Minerals	
Tattinfree Peat Working, Tempo	Prunty Peat Ltd	
Coolrakelly Peat Working, Tempo	Prunty Peat Ltd	
Gortmullan No 2,Derrylin	Quinn Quarries	
Glassdrumman Quarry,Derrylin	Quinn Quarries	Sandstone
Coolbrack Quarry, Carrickmore	Sluggan Sand & Gravel Ltd	
Sluggan Quarry, Carrickmore	Sluggan Sand & Gravel Ltd	
Camlough Road Gravel Pit, Carrickmore	Unknown Operator	Sand and Gravel

Source: DETI 2015