North Wales

Regional Aggregates Working Party

Annual Report - 2010

CYNGOR Sir y Fflint Flintshire COUNTY COUNCIL

Llywodraeth Cymru
Welsh Government

North Wales Regional Aggregates Working Party

Annual Report 2010

This Annual Report covers the calendar year 2010. During that period the North Wales Regional Aggregates Working Party (NWaRAWP) oficers were:

Chairman:	Andrew Farrow, Environment Directorate, Flintshire County Council, County Hall, Mold, CH7 6NF
Technical Secretary:	Roger Bennion (until October 2010) and Gary Nancarrow (from November 2010), Environment Directorate, Flintshire County Council, County Hall, Mold, CH7 6NF

Copies of the report are available electronically on the NWaRAWP web site http://www.nwrawp-wales.org.uk.

Acknowledgement

The NWaRAWP wishes to acknowledge the financial support of the Welsh Assembly Government, which has enabled this report to be coordinated and published by Flintshire County Council. The Working Party also wishes to record its' thanks to all those in the industry and the Mineral Planning Authorities in the North Wales region who have contributed to the production of the report.

The statistics and statements contained in this report are based on information from a large number of mainly third party sources and are compiled to an appropriate level of accuracy and verification. Users of this report should obtain corroborative data before making major decisions based on the information.

Terms of Reference for the NWaRAWP

1. To monitor regularly, the production and sales of aggregate minerals within the region.

2. To assess the total sand, gravel and hard rock reserves available in the region suitable for aggregate production (i.e. those with planning permission and other areas where there is some commitment in local authority statutory and non-statutory plans), making reference to areas where planning permission has been refused and to those in industry ownership; and taking into account the availability of marine dredged materials and the use of materials for non-aggregate purposes.

3. To assess the likely short term demand for aggregates in the region.

4. To indicate whether, in the short term, current permitted reserves are likely to be adequate.

5. To assess the extent of imports of aggregates from other regions.

6. To indicate to what extent the market area serviced by the region could and should be allowed to change in the medium and longer term (i.e. 10 and 20 years respectively).

7. To consider the extent and implications of the present and potential future use of synthetic and waste materials* as substitutes for natural aggregates.

8. To take adequate account for agricultural, amenity and other planning conditions, for example other land uses and transport.

In addition the NWaRAWP is charged with carrying out a number of specific duties set out in the Minerals Technical Advice Note 1 (MTAN1) and in particular those described in Annex A of MTAN 1, especially in respect of the preparation of Regional Technical Statements.

* Now normally referred to as secondary and recycled aggregates

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APPENDICES

1. INTRODUCTION

1.1. This report, by the North Wales Regional Aggregates Working Party, is intended for use by those involved with the supply and demand of aggregates for the construction industry. It provides statistics and information which:

- assist government in its aim of developing robust and relevant aggregate mineral policies,
- allows mineral planning authorities to carry out their statutory functions in respect of the preparation of development plans and effective development control in relation to mineral extraction,
- assists the industry with the planning of future development and investment.

1.2. The report may also be of use and interest to the general public and those bodies carrying out research into matters related to the supply and demand of aggregates.

1.3. It covers the calendar year 2010, and where appropriate (e.g. permitted reserves) relates the position at 31 December 2010. The survey carried out by the NWaRAWP was a “standard” survey which collected only information relating to sales of aggregate and not distribution. Reserve data in this report is generally as provided by quarry operators or is calculated by MPAs based on information provided in previous years with sales for subsequent years deducted.

1.4. There have been a number of changes in the administration of the North Wales RAWP over recent years which are not coincidental with the preparation of reports. These are set out in the 2006 Annual Report.

1.5 A high level of returns was again received for the 2010 survey and in the majority of cases a high level of detail was provided. Therefore the sales, reserve and distribution figures for those site included in the survey are all believed to be reasonably robust unless specifically indicated to the contrary. In some instances the provided data not does not detail for sales by product type. In these instances, the return is normally categorised as ‘other’ or ‘general fill’ or ‘unknown’. It is therefore possible that the constructional fill figures are an overestimate, with other areas being underestimates. The majority of the more significant operating quarries have provided detailed data, on the grades of product, and therefore held to be reliable, and a robust indicator of the types of products consumed by the construction industry

1.6 The decision to include the sales of all slate aggregate products in the aggregate sales analysis from 2008 is continued to give a better understanding of the total aggregate demand on the region. Slate is a significant contributor to the aggregate market in the region and may have the scope to replace, if not displace, other exhausted aggregate supplies.

2. NORTH WALES REGIONAL AGGREGATES WORKING PARTY (NWaRAWP)

2.1. The NWaRAWP is one of two such groups in Wales and is complemented by nine similar working parties in England. The NWaRAWP region covers six unitary authority areas: Anglesey; Gwynedd; Conwy; Denbighshire; Flintshire and Wrexham plus the Snowdonia National Park. Each authority is also the Mineral Planning Authority (MPA). The working parties are co-ordinated by the National Co-ordinating Group (NCG) which provides a forum for debate and discussion about matters relevant to the effective running of the working parties throughout Wales and England. The NCG did not meet in 2010, partly due to the continued uncertainty about the continuance and support for the managed aggregate supply system (MASS) and funding for the (R)AWPs in England by Department for Communities and Local Government.

Membership

2.2. The membership of the NWaRAWP is drawn from officers of the MPAs, the aggregates extraction industry via the Mineral Products Association (MPA) formerly the Quarry Products Association (QPA), British Aggregates Association (BAA) and independent companies; the Welsh Assembly Government (WAG), the Department for Communities and Local Government – (CLG), the British Geological Survey, the National Federation of Demolition Contractors (representing the recycling sector), the marine aggregates producers, the Environment Agency, the Countryside Council for Wales and the South Wales RAWP.

2.3. In 2010, Andrew Farrow of Flintshire County Council chaired the RAWP and Roger Bennion of Flintshire County provided the Secretariat Services until October 2010. Thereafter, Gary Nancarrow of Flintshire County Council has provided role of Secretary. A full list of members at the end of 2010 can be found in Appendix 1.

2.4 In terms of the Local Authorities, operator companies and other agency and government representations there was no significant change, but there was variation in both the individuals attending on behalf of the member bodies and the number of non attendees compared with previous meetings.

North Wales RAWP Meetings in 2010

2.5 In 2010 the North Wales RAWP met on 11th June 2010 in the Llandudno Business Centre. The main topic of discussion was the economic downturn and general fall in aggregate production across England and Wales. It was noted that production was down by about 19% for sand and gravel, and 21% for crushed rock for Wales, with significant drops in North Wales, 12% in England overall, but 25% drop in North West England. This reflected cancellation of construction projects and a fall in completions. Indications from the draft NWaRAWP collation are that there was a continued regional effect, but that there was an improvement in production compared with the 2009 period, with a 35% improvement on 2009 figures for sand and gravel and 44% increase for crushed rock.

2.6 Slate will continue to be included in the crushed rock data to reflect the fact that it is being used as an aggregate irrespective of whether it is primary won for aggregate, a 'by product' of slate production, slate waste or recovered slate waste. This was accepted at the 2009 meeting for crushed rock aggregate. The use of slate materials as a sand and gravel substitute was not supported by the NWaRAWP.

2.6 Industry representatives agreed that the downturn in figures was correct and all indications are that there would be little improvement in production during 2011 due to cuts in public sector spending and infrastructure projects, and continued lack of confidence in the house building sector.

2.7 Other items discussed included the introduction of legislation to deal with stalled ROMPs in Wales.

2.8 A report by Capita Symonds on an Evaluation of RAWPs in Wales concluded that the status quo of the structure and MASS should continue. Welsh Assembly Government has made a commitment to support the RAWPs in Wales and has entered into two new 4 year contracts for Bridgend and Flintshire to manage the RAWPs and produce Reports until 2014. In England the situation is more uncertain, and whilst DCLG appear to acknowledge the value of MASS and the RAWPS, funding has been terminated and it is not known if a new funding structure will be provided. The 'Regional' prefix has been dropped in England to make 'Aggregate Working Bodies'. In the meantime, voluntary arrangements and local agreements will have to be negotiated for the running of the AWPs. Local agreement on apportionment will be difficult in some instances, with no apparent mechanism to bring agreement. This is seen as a threat by Industry and DCLG for longer term continuity of supply, and risks new minerals capacity being subject to 'planning by appeal'. This has implications for North Wales, as any shortfall in capacity in NW England will increase pressure for capacity elsewhere in NW England, and North Wales to make up for any shortfall.

2.9 The Secretary explained continued difficulties in reporting sales and reserves at a Mineral Planning Authority level, which is undermining the value of the Annual Reports. This is due to consolidation of operating units within a diminishing number of organisations, closure of sites and the confidentiality rules. This is particularly the case for sand and gravel, which is being reported on a North Wales basis now.

2.10 The MPA advised that whilst they accepted openness, there were a number of issues concerning their members about confidentiality, and that for the meantime the status quo would have to remain.

2.11 A presentation was given by Mr Ian Simpson on the progress of developing the North Wales Shared Minerals and Waste Planning Service. It has broad support of Chief Officers and Planning Officers. A number of models are being explored with a view to establishment in October 2010. Funding to assist establishing this was provided by the Welsh Government under the Making the Connections programme, which is promoting joint and collaborative working.

3. SURVEY RESULTS 2010

Sales

3.1 Table 1 shows the total aggregate sales from the region and sub-divided into North West Wales and North East Wales sub-regions. The sub-regional figures are included because, in general terms, both sub-regions exhibit individual characteristics in terms of rock type and market profile. North West Wales traditionally relies mainly on igneous rock for crushed rock aggregate, largely for use within the region, however, slate has established a significant contribution, capable of meeting specification standards for construction and highways projects. In North East Wales, limestone is the main source of crushed rock of which a high proportion (about 65%) is exported from the region. In this report the crushed rock figure continues to include all slate aggregate products, that is, both primary won slate quarry aggregate and aggregate produced from waste arising from the working of slate for building materials; the purpose of this is to try to give a better understanding of the overall aggregate market in the region.

Table 1: Aggregates Sales – North Wales Region 1999 – 2010 (,000 tonnes)

	SAND&GRAVEL			CRUSHED ROCK			TOTAL
Year	NW Wales	NE Wales	Total N Wales	NW Wales	NE Wales	Total N Wales	Aggregate Sales
2000	371	1157	**1528**	1270	6743	**8013**	9541
2001	216	1170	**1386**	702	6496	**7198**	8584
2002	213	1141	**1354**	651	5869	**6520**	7874
2003	231	1040	**1271**	656	5641	**6297**	7568
2004	243	904	**1147**	738	5767	**6505**	7652
2005	250	985	**1235**	565	5530	**6095**	7330
2006	154	1017	**1171**	597	5689	**6286**	7457
2007	138	926	**1063**	573	5725	**6298**	7361
2008	*	*	**957**	1295	4890	**6185**	7142
2009	*	*	**631**	919	2970	**3889**	4520
2010	*	*	**696**	1162	3219	**4481**	5177

***** figures combined for confidentiality. S&G includes marine. CR includes slate & shale.

3.2 Figures 1 and 2 show the contribution of the sub-regions to crushed rock and sand and gravel sales respectively.

3.3 Crushed rock sales for 2010 saw a 13% increase on 2009 sales. Sand and gravel sales also showed an increase in sales of 10 % when compared with 2009 but has not been possible, for reasons of confidentiality, to disclose whether this was across the region or reflects a decrease in one of the two sub-regions.

Figure 1. Sub–regional Aggregate sales 2000-2010 - Crushed Rock

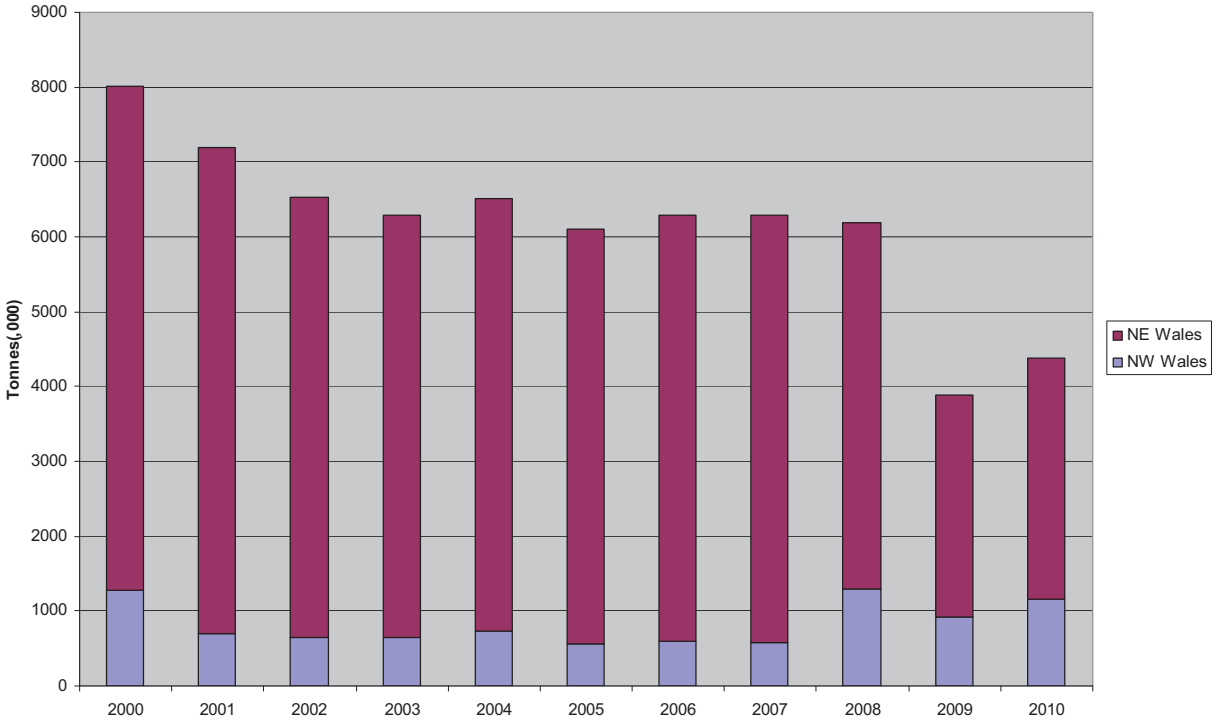
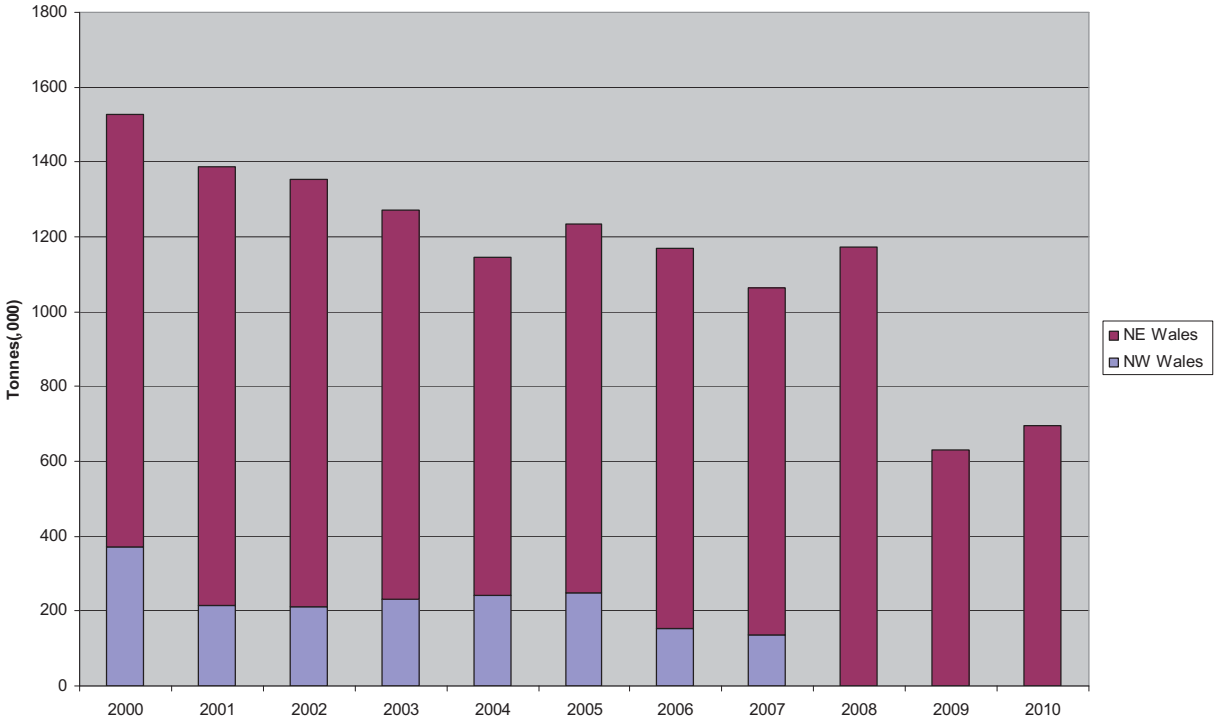


Figure 2. Sub-regional 2000-2010 Sand and Gravel Sales



Unitary Authority Production

3.4 In terms of production within MPA areas, which is set out in Table 2, it is not possible to provide an analysis of sand and gravel sales based on MPA areas. Sales have recovered from the 2009 all time low, but remain significantly below the 2007&8 levels prior to the economic downturn. Crushed rock sales analysis suggest that as well as an overall decline in sales, slate continues to maintain an impact in the NW Wales sub-region and Conwy in NW Wales at around 12% of total sales, albeit that the share of slate sales in this category has declined from 14% in 2008.

3.5 The biggest decline in crushed rock sales in 2010 was in Anglesey and Flintshire. This is accounted for by the influence of the local economy and the closure or mothballing of quarry sites as industry responds to efficiency and economic drivers and consolidates operations to fewer producing units for both of these areas. In the case of Flintshire, the export market also remains depressed, as operational quarries in NW England and Derbyshire are currently capable of meeting the reduced demand caused by poor levels of construction and infrastructure activity in NW England compared with previous years.

3.6 Improved sales in Denbighshire are as a result of rationalisation of operations and Conwy is afforded some buffering due to the presence of sea and rail transportation options which allow for wider market penetration outside of the North Wales RAWP area. Strong performance in Gwynedd is partially accounted for by the inclusion of slate, which can supply alternative national markets for decorative chippings and gravel markets and by road projects in NW Wales.

Table 2.1: Aggregate Sales by MPA 2000 – 2010 Sand & Gravel

Tonnes

Year	Anglesey	Gwynedd	Snowdonia	Conwy	Flintshire/ Denbighshire	Wrexham	Flintshire/ Denbighshire/ Wrexham	Flintshire/ Denbighshire/ Wrexham/ Gwynedd	Total N Wales
2000	0	370094	0	0	585427	571737	0		1527258
2001	0	216197	0	0	546512	623832	0		1386541
2002	0	212964	0	0	523613	617553	0		1354130
2003	0	230924	0	0	389691	650771	0		1271386
2004	0	245307	0	0	292519	606833	0		1144659
2005	0	250213	0	0	0	0	985074		1235287
2006	0	154131	0	0	0	0	1017008		1171139
2007	0	137622	0	0	0	0	925541		1063163
2008	0	0	0	0	0	0		956694	956694
2009	0	0	0	0	0	0	0	631244	631244
2010	0	0	0	0	0	0	0	696273	696273

Table 2.2: Aggregate Sales by MPA 2000 – 2010 Crushed Rock

Tonnes

Year	Anglesey	Gwynedd	Anglesey/ Gwynedd	Snowdonia	Conwy	Denbighshire	Flintshire	Wrexham	Total N Wales
2000	1006937	262717	0	0	1858172	2332716	2551903	0	8012445
2001	525494	177063	0	0	1743910	1719904	3031829	0	7198200
2002	485026	165480	0	0	1671991	1226523	2970787	0	6519807
2003	419079	236924	0	0	1502975	1066215	3071685	0	6296878
2004	445231	292705	0	0	1258972	1037837	3470501	0	6505246
2005	0	0	564950	0	1370431	905581	3254442	0	6095404
2006	289881	306628	0	0	1546840	898792	3243542	0	6285683
2007	274236	299354	0	0	1604782	567299	3552637	0	6298308
2008	279088	341138	0	0	1385997	372214	3131969	0	5510406
2009	267595	651845	0	0	677544	424691	1868299	0	3889974
2010	197425	965101	0	10264	906160	649471	1753519	0	4481940

3.7 Figures 3 and 4 show the contribution made to aggregates supply by each authority area for Crushed rock and sand and gravel; Flintshire remains the main producer of crushed rock, providing about 37% of the regional output, but is a notable decrease from 60 % in 2008. Wrexham continues to be the largest producer of sand and gravel.

Figure 3: Unitary Authority Sales - Crushed Rock Sales 2000-2010 (Tonnes)

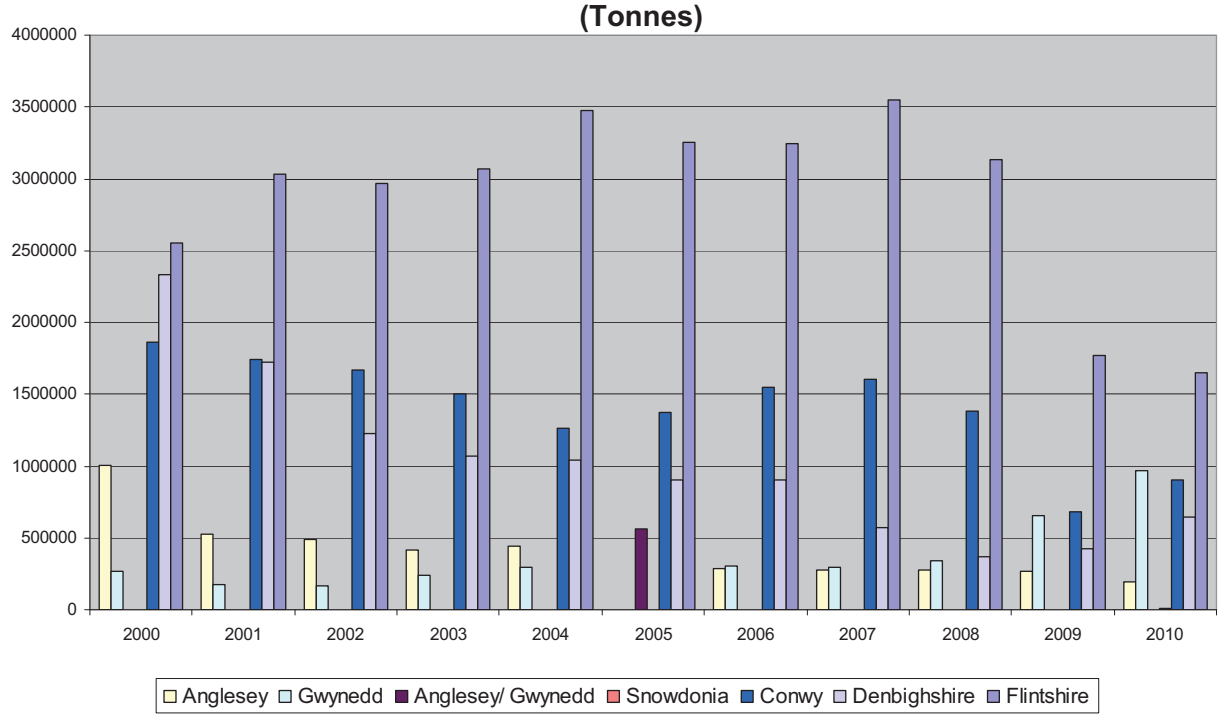
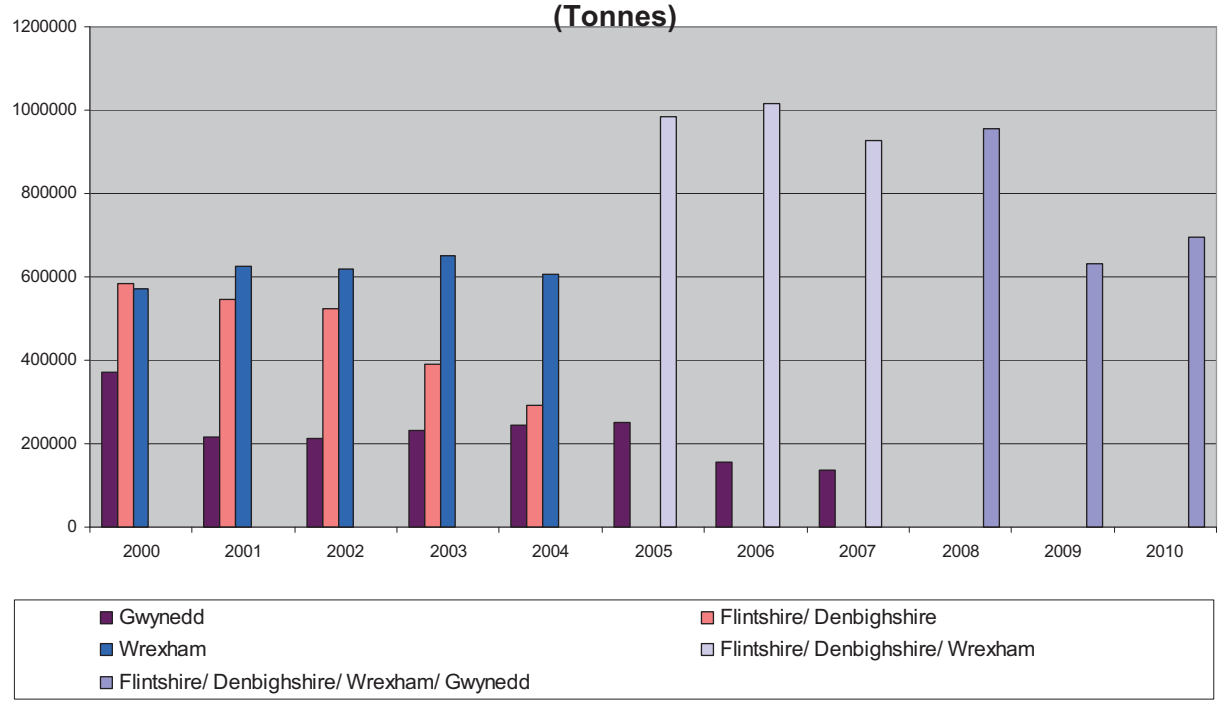


Figure 4: Unitary Authority Sales - Sand and Gravel 2000-2010 (Tonnes)



3.8 Sand and gravel sales by unitary authority are illustrated in figure 4. Overall sales of sand and gravel have improved by 10 % compared with 2009 sales. Due to confidentiality, it is no longer possible to report for individual unitary authorities, or to report at a sub-regional level due to the limited number of operational sites and operating companies. Sand and gravel is now produced only in Wrexham, Flintshire and Gwynedd, with the majority of production in Wrexham. This reduces the effectiveness of the survey analysis, and may lead to incorrect assumptions on capacity, need and markets for sand and gravel.

Aggregate End Use

3.9 Tables 3 and 4 set out the end uses of the primary aggregate sales. In the case of crushed rock, a full breakdown of end uses was provided by the majority of operators. Sales with an unknown end use have been combined with sales for other constructional uses. With regard to sand and gravel sales, a complete breakdown of end uses was provided. As with previous years primary won aggregates provides the largest contribution, particularly limestone, although slate continues to contribute at a level of around 9% of the total North Wales aggregate sales.

Crushed Rock

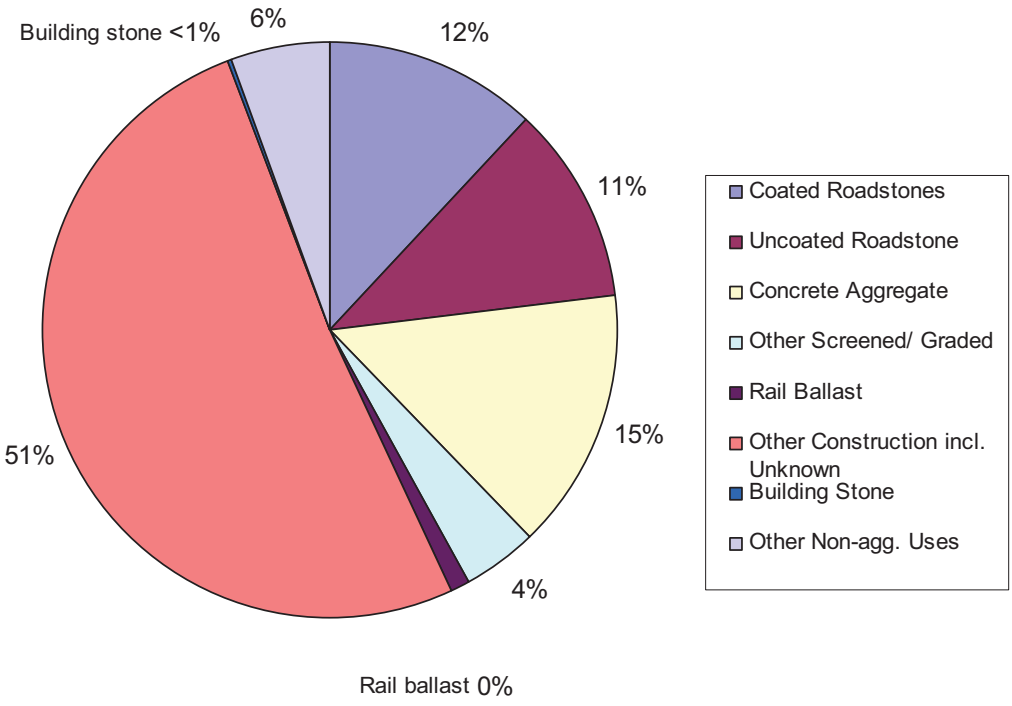
3.10 Table 3.1 illustrates limestone aggregate end use. Limestone sales have improved on 2009 sales by 8% for aggregate uses. Roadstone accounts for 17% of sales, concrete aggregate 15% and graded screened aggregate accounting for 4% of sales. Industrial uses accounted for 6% of total sales. The majority of sales is attributed to other construction and unknown uses at 51% of the total, and is presumed to be used in bulk fill and sub-base applications.

Table 3.1 Crushed Rock Sales, Limestone: N Wales 2010

All figures tonnes

Product	Conwy/ Denbighshire	Flintshire	TOTAL NE WALES
Coated Roadstones	51,060	150,386	201,446
Uncoated Roadstone	134,802	200,015	334,817
Concrete Aggregate	328,461	296,765	625,226
Other Screened/ Graded	59,149	84,567	143,716
Rail Ballast	0	0	
Other Construction incl. Unknow n	661,367	921,786	1,583,153
Total Aggregates	**1,234,839**	**1,653,519**	**2,888,358**
Building Stone	52	30	82
Other Non-agg. Uses	11	238,824	238,835
Total Non-agg. Uses	63	238,854	238,917
Total	**1,234,902**	**1,892,373**	**3,127,275**

Figure 5 Crushed Rock Sales End Use: Limestone



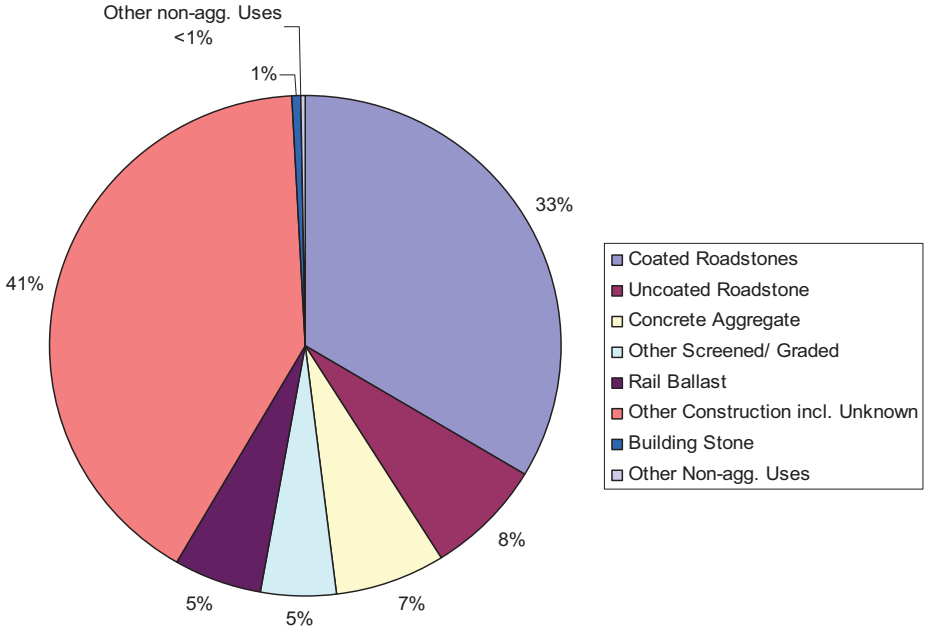
3.11 Table 3.2 and figure 6 illustrates igneous and metamorphic crushed rock sales for 2010. Sales in this category have improved by 37% compared with 2009 sales. Roadstone accounted for 41% of sales.

Table 3.2 Crushed Rock Sales, Igneous and Metamorphic: N Wales 2010

All figures tonnes

Product	Anglesey	Gwynedd/ Conwy	TOTAL NW WALES
Coated Roadstones	140,000	222,115	362,115
Uncoated Roadstone	0	81,993	81,993
Concrete Aggregate	20,000	54,049	74,049
Other Screened/ Graded	16,000	37,045	53,045
Rail Ballast	0	58,304	58,304
Other Construction incl. Unknow n	21,025	421,653	442,678
Total Aggregates	**197,025**	**875,159**	**1,072,184**
Building Stone	0	5,928	5,928
Other Non-agg. Uses	3,000	91	3,091
Total Non-agg. Uses	3,000	6,019	9,019
Total	**200,025**	**881,178**	**1,081,203**

Figure 6 Crushed Rock Sales End Use: Igneous and Metamorphic



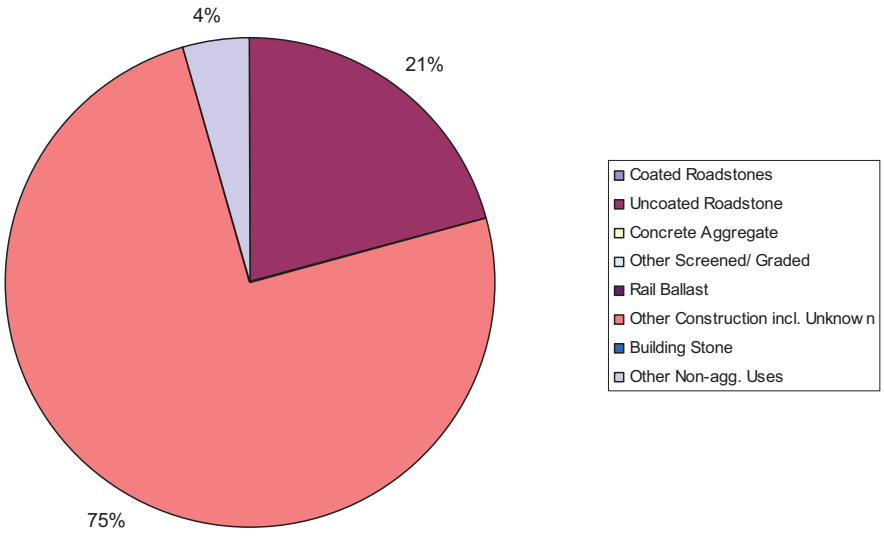
3.12 Table 3.3 and figure 7 illustrate slate aggregate sales. Slate aggregate sales fell by 10% compared with 2009 sales. Roadstone accounted for 21% of sales.

Table 3.3 Crushed Rock Sales, Slate: N Wales 2010

All figures tonnes

Product	TOTAL
Coated Roadstones	0
Uncoated Roadstone	113,408
Concrete Aggregate	0
Other Screened/ Graded	0
Rail Ballast	0
Other Construction incl. Unknow n	407,590
Total Aggregates	**520,998**
Building Stone	0
Other Non-agg. Uses	23,771
Total Non-agg. Uses	23,771
Total	**544,769**

Figure 7 Crushed Rock Sales End Use: Slate



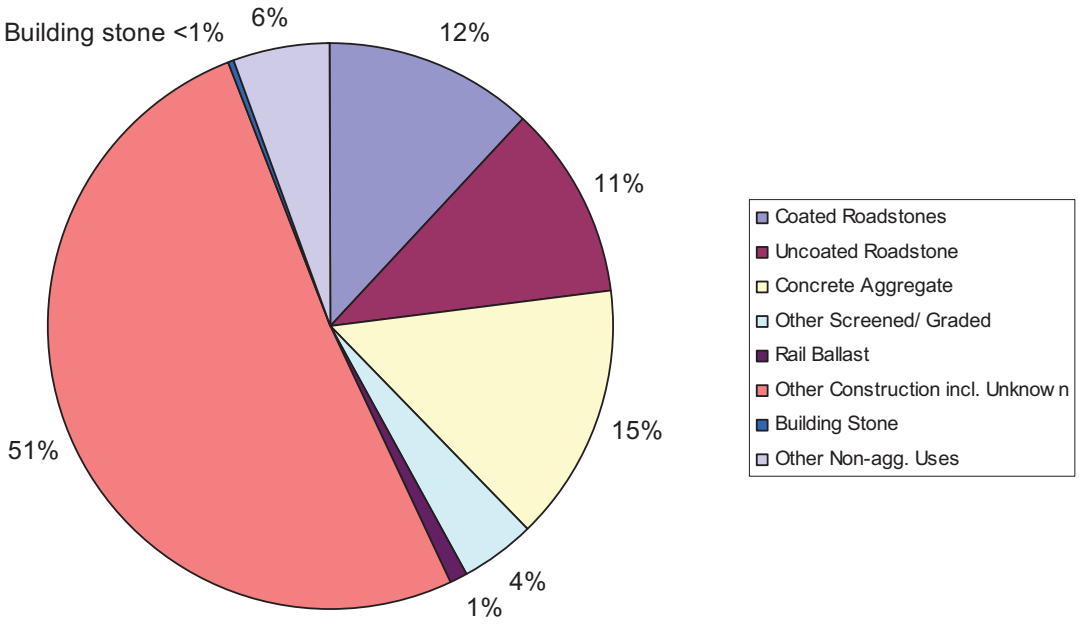
3.13 Table 3.4 and figure 8 illustrate total crushed rock sales. Total aggregate sales have improved by 14 % on 2009 sales, whereas expressed as total sales of all crushed rock the improvement is lower at 7% due to a fall in sales of industrial mineral. Total rock aggregate sales of 23% crushed rock was used as roadstone with a slightly higher proportion being used for coated applications. Aggregate for concrete accounted for 15% of sales. Other constructional uses (including unknown uses) accounted for 51% of sales. Sales for non-aggregate purposes amounted to 6% of total sales of crushed rock, the bulk of which was used in cement manufacture.

Table 3.4 Crushed Rock Sales, Total Aggregate: N Wales 2010

All figures tonnes

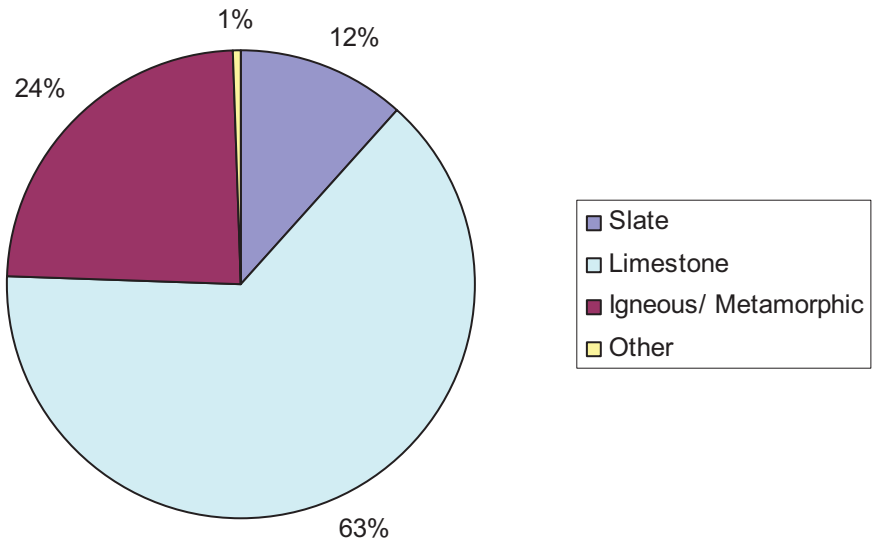
Product	TOTAL
Coated Roadstones	563,561
Uncoated Roadstone	530,218
Concrete Aggregate	699,275
Other Screened/ Graded	196,761
Rail Ballast	58,304
Other Construction incl. Unknow n	2,433,421
Total Aggregates	**4,481,540**
Building Stone	6,010
Other Non-agg. Uses	265,697
Total Non-agg. Uses	271,707
Total	**4,753,247**

Figure 8: Crushed Rock Sales - End Use



3.14 Figure 9 illustrates the rock market share. Limestone is the single biggest contributor, at 63%, with Igneous and Metamorphic accounting for 24% and Slate contributing 12% of sales in 2010.

Figure 9: Rock Type Market Share 2010



Sand and Gravel

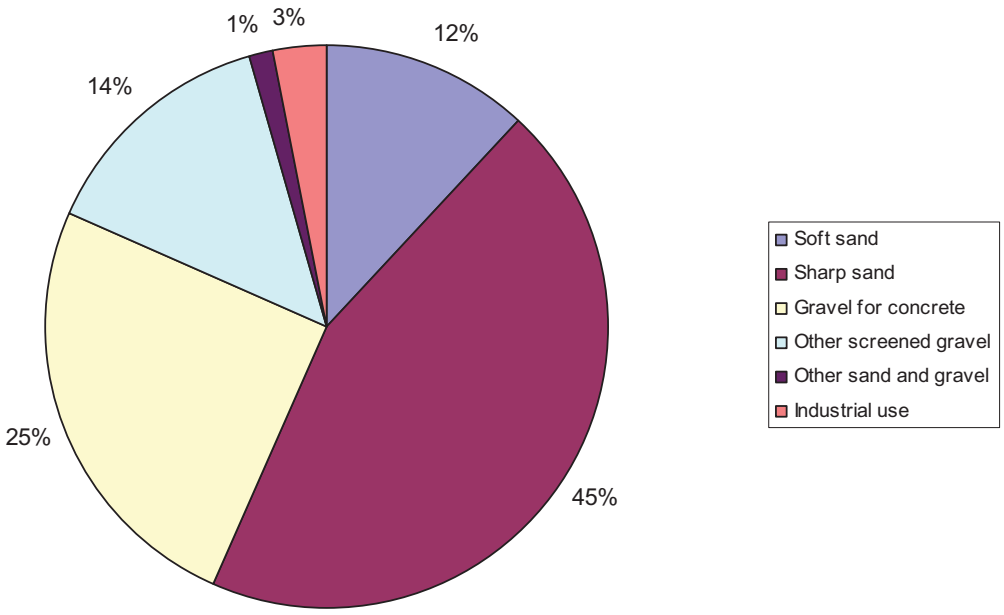
3.15 Table 4 and Figure 10 illustrate sand and gravel sales. Sales of sand and gravel used for aggregate in 2010 have improved 10% compared with 2009 sales. About 45% of sales were sharp (concreting) sand and 12% soft sand. Gravel for concrete has increases to 25% of sales. About 14% of the remaining supply comprised other screened gravels with the remainder being made up of other unspecified sand and gravel. A very small amount of sand and gravel, 3%, was used for non-aggregate purposes.

Table 4 Sand and Gravel Sales: N Wales 2010

All figures tonnes

	Soft sand	Sharp sand	Gravel for concrete	Other screened gravel	Other sand and gravel	Total aggregate	Industrial use	Total
Total	85,960	320,609	181,437	98,814	9,453	696,273	22,657	718,930

Figure 10: Sand and Gravel End Use



Distribution

3.16 As the 2010 survey is an 'intermediate' survey, information relating to the distribution of aggregates was not collected.

4. RESERVES AND LANDBANKS

4.1 Table 5 below shows the permitted reserves of crushed rock in the North Wales Region at the end of 2010. The reserves are shown divided into those in active sites and those in inactive sites, that is site where aggregate is was being worked in 2010 or resumption of working could take place without further consideration by the mineral planning authority. In accordance with MTAN1, paragraph 47, those in dormant sites are shown in a separate category. Material contained in dormant sites whilst having a valid planning permission, cannot be worked until new conditions have been approved and does not therefore contribute towards the permitted reserve from which the landbank calculation is derived.

Table 5 Crushed Rock Reserves

(000s tonnes)

	Active	Inactive	Total	Dormant
Limestone/ Dolomite				
Angelsey (a)				
Conwy	34,028	250	34,278	
Denbighshire	17,595	4,476	22,071	
Flintshire (b)	73,007		73,007	1,405
Total Limestone	124,630	4,726	129,356	
Igneous/ Metamorphic				
Angelsey/Gwynedd				
Conwy (c)	47,349	750	48,099	
N Wales total	47,349	750	48,099	
N Wales total rock	**171,979**	**5,476**	**177,455**	

(a) Anglesey limestone included in Conwy for confidentiality

(b) Flintshire excludes industrial mineral reserves

(c) Anglesey and Gwynedd Igneous and metamorphic included in Conwy for confidentiality

4.2 The reduction in the number of quarries in 2010, particularly in NW Wales, has meant that there has been an increased need to combine Unitary Authorities in the collation. For the purposes of reserve calculation it has been decided to include rock types together rather than geographical areas, for example, Anglesey limestone has been included with Conwy limestone; in previous years it was included with Gwynedd igneous rock. The reason for this is to try to provide some understanding of the availability of the various rock qualities.

4.3 The table shows that 99% of permitted reserves of crushed rock is contained in active sites. The issuing of Prohibition Orders in recent years has reduced the amount of material contained in dormant sites. The process is detailed in the Regional Technical Statement and in earlier Annual Reports. The table does not included slate waste and other rock type waste arising from slate working, this is not meant to reflect on the suitability of the material for aggregate use, much of the material is being used for a range of aggregates, rather the uncertainty surrounding the reserve figures, which could be in excess of 40m tonnes.

Table 6 Sand & Gravel Reserves

(000 tonnes)

	Active	Inactive	Total	Dormant
Gwynedd	471	225	696	
NW Wales Total	471	225	696	
Flints/Wrexham	17,399	840	18,239	
NE Wales Total	17,399	840	18,239	840
Total Sand & Gravel	17,870	1,065	18,935	840

4.4 Table 6 indicates the permitted reserves of sand and gravel in the North Wales Region at the end of 2010. The material is shown divided into active sites, inactive sites and dormant sites. The table shows that the majority of the calculated permitted reserve of sand and gravel is contained in active sites. There are sand and gravel reserves allocated for non-aggregate purposes at a quarry in Denbighshire which could be made available for the aggregate market. The allocation has not allowed for reserves of slate waste; it is known that certain types of slate waste is capable of producing a sharp sand suitable for use in concrete but the information is not available to make an assessment of the potential reserve.

4.5 Table 7 provides details of the aggregate reserves and landbank currently available and does not include rock designated for industrial use, for example cement manufacture, or rock reserves in dormant sites. The analysis of landbank is based on permitted reserves divided by the average of the last 3 years sales. Where possible, reserves and landbanks are shown for each MPA and are also grouped into those authorities falling within North East and North West Wales in order to allow comparison with earlier reports. In contrast to Table 6, all Anglesey rock is included together and not combined with similar rock types elsewhere, to allow an assessment on a Unitary Authority basis of individual apportionment.

4.6 Additional reserves held in dormant sites potentially add to the landbank. Although they cannot be worked without new conditions being approved, they are nevertheless consented.

4.7 It is important to note that although the use of slate waste derived aggregate was included in Section 1 of this report to provide an overall aggregate market picture, slate is not combined with other rock types for the purposes of this landbank. Instead, slate is shown as an indicative landbank based on declared returns, but it is noted that the true permitted reserves figure may be greater. It is perhaps more realistic to present the declared returns data as being indicative of permitted reserves which are not disputed. Accurate information on the reserve potential for this material is unknown, this is an issue that future surveys will need to address.

4.8 Notwithstanding the effect on the collation of having to reconfigure the allocation of sales for reasons of confidentiality, it is clear from the landbank figures that crushed rock reserves throughout most of North Wales are large with landbanks in excess of 20 years in all areas. This is the level stipulated in MTAN 1, above which it is deemed that further provision is not appropriate in most circumstances.

4.9 In terms of sand and gravel, the landbank has increased to 23 years in North East Wales, but stands at only 6 years in North West Wales, below the 7 year minimum recommended in MTAN1. The market picture is complicated by the introduction of a slate waste derived sharp sand in the local market.

Table 7 Reserves and Landbanks for Aggregates North Wales

	2008 Aggregate sales	2009 Aggregate sales	2010 Aggregate sales	Average sales	Permitted reserves at 31/12/2010	Landbank (years)
Limestone/ Dolomite						
NW Wales (a)(b)						
Denbighshire	0.37	0.41	0.63	0.47	22.07	47
Flintshire	3.10	1.77	1.65	2.17	74.41	34
North East Wales	3.47	2.18	2.28	2.64	96.48	36
Total North Wales	3.47	2.18	2.28	2.64	96.48	36
Igneous/ Metamorphic rock						
Anglesey (a)	0.280	0.197	0.194	0.22	5.69	25
Gwynedd	0.30	0.26	0.57	0.38	8.51	22
NW Wales	0.58	0.46	0.77	0.60	14.20	24
Conwy (b)	1.40	0.68	0.91	0.99	67.43	68
North East Wales	1.40	0.68	0.91	0.99	67.43	68
Total North Wales	1.98	1.14	1.67	1.60	81.63	51
Sand & Gravel						
NW Wales	0.10	0.13	0.13	0.12	0.70	6
NE Wales	1.00	0.50	0.57	0.69	18.24	26
Total	1.10	0.63	0.70	0.81	18.94	23
Slate/ Secondary						
Total North Wales	0.71	0.48	0.52	0.57	5.41	10
Sandstone/Shale/Grit						
Total North Wales	0.25	0.10	0.10	0.15	3.75	25

(a) Anglesey limestone included with Anglesey Igneous (b) Conwy limestone combined with Conwy Igneous

Note: NE Wales limestone excludes Conwy Limestone. Slate reserves based on delared returns only. Sandstone, shale & grit based on returns only, and generally relates to bulk fill markets. Reserves expressed as million tonnes.

4.10 The landbanks for crushed rock show an increase on the levels in 2007 & 2008. This is entirely accountable by the significant downturn in the construction market over the past two years. In the longer term the landbank is expected to decrease when sales will improve in response to improved market conditions. There are no permitted reserves in Wrexham, and there is little remaining consented crushed rock in Snowdonia.

4.11 The sand and gravel landbank is now at a critical position in NW Wales. BGS mapping has indicated significant high quality resources, albeit that much is within the Llyn Area of Outstanding Natural Beauty. Any improvement in sales will further decline the landbank in NW Wales. There are no operational sand and gravel sites of significance within Anglesey, or Snowdonia NP.

4.12 The landbank is apparently healthy in NE Wales, but again, distribution of sites and capacity is not evenly distributed. The majority of the permitted reserves are located in Wrexham, and there are no permitted reserves in Denbighshire or Conwy. This picture may be further complicated by the distribution of types of sand and gravel, and the issue of subdivisions of landbanks is perhaps an issue for the RTS review.

4.13 Table 7b illustrates a landbank based on the previous 10 years sales. This is not the method of calculation as specified in paragraph 45 of Minerals Technical Guidance Note1: Aggregates. The method of calculating the landbank is under review, however, further analysis and agreement is required and will be presented in the 2011 annual report. A longer period may reduce sensitivity to short term changes to sales patterns.

Table 7b Reserves and Landbanks for Aggregates North Wales 10 year Sales Average

	10 yr Average sales	Permitted reserves at 31/12/2010	10yr landbank (years)
Limestone/ Dolomite			
NW Wales (a)(b)			
Denbighshire	0.88	22.07	25
Flintshire	2.92	74.41	25
North East Wales	3.80	96.48	25
Total North Wales	4	96	25
Igneous/ Metamorphic rock			
Anglesey (a)	0.34	5.69	17
Gwynedd	0.29	8.51	29
NW Wales	0.64	14.20	22
Conwy (b)	1.29	67.43	52
North East Wales	1.29	67.43	52
Total North Wales	2	82	42
Sand & Gravel			
NW Wales	0.17	0.70	4
NE Wales	0.94	18.24	19
Total	1	19	17
Slate/ Secondary			
Total North Wales	n/a	5	n/a
Sandstone/Shale/Grit			
Total North Wales	n/a	3.75	n/a

(a) Anglesey limestone included with Anglesey Igneous (b) Conwy limestone combined with Conwy Igneous Note: NE Wales limestone excludes Conwy Limestone. Rounding of totals figures. Reserves expressed as million tonnes.

5. SECONDARY & RECYCLED AGGREGATES

5.1 In addition to primary aggregates, other materials are important in contributing towards meeting demand in the North Wales Region and in terms of policy, have priority over primary aggregates. The most significant material in this category in the region is slate which is worked both as a by-product of roofing slate production and as a secondary material from waste tips. Aggregates derived by recycling construction wastes comprise another important group of materials and are generally abbreviated to CD+EW (construction, demolition and excavation wastes). Clay and shale are also worked intermittently in the region for aggregate purposes and, depending upon specification, substitute for traditional primary aggregates. Unlike South Wales, there are no arisings (or stockpiles) of pulverised fuel ash (pfa) or furnace slag available in the region and there are only very limited opportunities if any, for the removal of former colliery spoil heaps for use as fill.

Slate

5.2 Where slate has been used as aggregate, whether primary dug or processed waste, it has been included in the total sales; see Table I and 3 above, this is to give an indication of the overall size of the aggregate market served by the region in 2010. Figure 9 shows the relative share of the crushed rock aggregate sales met by slate.

5.3 In this region, the main source of secondary aggregates is waste slate. Although there is one dominant producer, there are now a number of other firms in the business. All uses of slate, including those for decorative and landscape purposes, have been considered as aggregate for the purpose of this report. In 2010 slate aggregate sales as a proportion of all aggregates fell by nearly 10%, and now accounts for 12% of the market.

5.4 The companies involved continued to actively market the material although the shipment by sea started in 2007 did not continue for logistical reasons related to transport.

Table 8: N Wales: Sales of slate for aggregates 2000-2010

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
1,000 tonnes	362	379	593	587	625	549	729	1,033	710	577	521

Source: N Wa RAWP Surveys

5.5 The majority of the material was produced, recovered or recycled in Gwynedd but a small amount came from Denbighshire.

5.6 In terms of reserves of slate waste, although difficult to assess with any precision, it has been estimated that there are about 79Mt of slate waste available to be worked. Of this some 39Mt are known to exist with planning permission in Gwynedd but the true figure may be more than twice this. Reserves in Denbighshire represent a small proportion of those that have been declared.

Clay, Shale, and Colliery Spoil

5.7 In the case of fill grade material from clay/shale sites considered suitable for construction fill, four sites containing an estimated (part by operators/part by MPA) 3.79 million tonnes had planning permission, almost all of which was in Flintshire, the remainder being in Denbighshire. However, the figures are thought to be underestimates of the true reserve. Little information was provided for the 2010 survey but shales and sandtones continued to be used for aggregate in bulk fill uses.

Construction and Demolition Waste

5.8 No survey of this material was carried out for 2010 and the survey of road planings was carried out by only Authority. However it is known anecdotally that C&D waste was being produced and although some of this material did go to landfill sites, mainly for engineering purposes, such as capping and road construction much of the material remained on site and it is reasonable to assume some was used as aggregate substitute. Improvements in data capture by the Environment Agency may allow better analysis, but much data is on arisings of waste, not on end products.

5.7 C&D waste arisings reflect the general downturn in the construction sector Much of this waste no longer leaves the source site, and in N Wales, most is site clearance materials which are cohesive or soils in nature. A better analysis will be sought for AS 2011 and the RTS review.

6: PLANNING APPLICATIONS AND DORMANT SITES

6.1 The following information has been provided by Mineral Planning Authorities in respect of applications and decisions in calendar year 2010.

Anglesey

6.2 There were no major development control matters to report.

Gwynedd

6.3 Dormant sand and gravel sites remain at Tan y Bryn and Cae Efa Lwyd, Penygroes as well as former slate operations at Twll Coed and Dorothea in the Nantlle Valley and at Dinorwic Quarry, Llanberis. Scoping opinion issued for slate extraction at Ty Mawr with planning application in preparation. Scoping opinion issued for Penrhyn application in preparation. ROMP review for Llechwedd slate quarry progressing.

Snowdonia

6.4 There were no development control matters to report. Only one small dormant site remains in the MPA.

Conwy

6.5 There were no applications made or pending in 2010, nor any dormant aggregate sites. Raynes quarry periodic review awaiting outcome of hydrogeological study.

Denbighshire

6.6 No planning decisions were made during the year which had a material impact upon permitted reserves. Work commenced on preparation of EIA for a stalled silica sand site. A section 73 application with full EIA for continuation of working was granted for Denbigh Limestone Quarry. Pentre Uchaf sandpit closed and in restoration.

Flintshire

6.7 Resolution to accept new conditions for Hendre Limestone Quarry periodic review subject to subject to S106 legal agreement. Restoration plans under consideration for Fagl Lane Quarry, which is now formally closed, resulting in the loss of previously declared sand and gravel reserves. Hendre East sand and gravel pit also closed and in restoration and aftercare. Cambrian limestone and silica rock quarry considered to be closed after legthy period of inactivity. Stalled ROMP review EIAs under preparation for Parrys Shale Quarry, and Aberdo/Bryn Mawr Limestone and Chert Quarry. Postponements have been agreed for a number of sites to allow preparation and consideration of EIA. An application is under consideration for the review and consolidation of Cefn Mawr Limestone Quarry.

Wrexham

6.8 No significant mineral developments reported.

7: DEVELOPMENT PLANS

7.1 The table below provides information regarding progress with the preparation of development plans in each Mineral Planning Authority and also sets out the extant development plan for each area.

Table 9: Development Plans in 2010

Mineral Planning Authority	Progress in 2010/Current Policy Document	LDP Adoption Date (anticipated)
Anglesey	UDP inquiry August/September 2003. Inspectors report 2004. Minimal modification in respect of aggregates policies. Plan abandoned late 2005 but carries considerable weight. Report approved by Anglesey on a joint/shared LDP with Gwynedd on June 2010. Commencement Order requested November 2010. Anticipated commencement order and subsequent delivery agreement 2011. Adoption 201/16. Current policy; Gwynedd Structure Plan 1993 and Gwynedd SPG – Minerals, 1996-2006, adopted by Anglesey March 1996	2015/6
Gwynedd	The Inspector's report on the Gwynedd Unitary Development Plan was received in 2007 and the authority has provided response to the Assembly. The UDP was adopted July 2009. Report approved by Gwynedd on joint/shared LDP with Anglesey on June 2010. Commencement Order requested November 2010. Anticipated commencement order and subsequent delivery agreement 2011. Adoption 201/16.	2015/6
Snowdonia N.P.	In January 2005 it was resolved to suspend work on the UDP Pre-deposit public consultation on preferred options (Regulation 15) was in February and March 2008. LDP Inquiry for October 2010. Adoption expected 2011. Current policy document; Eryri Local Plan adopted Nov. 1999	2011
Conwy	At the end of 2004 Conwy abandoned its draft UDP and commenced work on an LDP. Deposit LDP 2009. Welsh Assembly objections caused revised delivery agreement, preparation of alternative sites and review. Preparation of SPGs and proposed sites consultation summer 2010. Full Council report 2010 with consultaion of revised plan 2011. LDP Inquiry winter 2011/12, with adoption 2012/13. Current policy documents: Gwynedd 1993 and Clwyd 1999 Structure plans	2012/13
Denbighshire	Deposit consultation 2009 and alternative sites considered 2010. Preparation of final submission for full council anticipated 2011 with submission to Welsh Government in 2011 and LDP Inquiry winter 2011/12. Adoption anticipated 2012/13. Current policy document: UDP, Adopted 2002	2012/13
Flintshire	Post UDP inquiry modifications rejected by Full Council. Work continues to resolve the issues which focus on housing allocations, and a development plans panel has been established to consider further post inquiry modifications and further consultation. Anticipated adoption of UDP in 2011. Current policy; Clwyd Structure Plan 1st Alteration 1991	N/A
Wrexham	The Wrexham Local Development Plan Delivery Agreement was approved by WAG in October 2006. Public consultation on the Deposit LDP took place during 2009 and post consultation modifications prepared 2010. Examination in public expected late 2011, with adoption anticipated 2012. Current policy: Wrexham UDP, adopted February 2005	2012/13

8: REGIONAL DEVELOPMENTS AND OTHER SIGNIFICANT MATTERS

8.1 This Section is intended to provide a general overview of construction and other factors affecting aggregates production and demand in 2010 and in future years. It is not intended to be quantitative.

Anglesey

8.2 Site ongoing at Parc Cybi a strategic industrial development near Holyhead.. Development in general in the county is to be focussed around Holyhead Port and in the Menai-Môn hub, an area bounded by Caernarfon, Bangor and Llangefni. Significant repairs to the A55 across the island are anticipated. A review of electricity generating capacity is considering replacement nuclear power-stations including Wylfa as a candidate site

Gwynedd

8.3 Road infrastructure programme includes the Portmadog bypass.

Snowdonia

8.4 There were other significant construction developments in 2008.

Conwy

8.5 Development of the Gwynt y Môr off-shore wind-farm continued. Major work for the strengthening of flood defences and redevelopment of Colwyn Bay sea front anticipated for 2011.

Denbighshire

8.6 Development of 3ha residential development at Glasdir, Ruthin, including a primary school. Permission was also obtained for the Ocean Plaza development in Rhyl comprising c 230 apartments, retail, leisure, hotel etc.

Flintshire

8.9 Major new development at Airbus complex undertaken in 2010. Development to extend Broughton Retail Park and create new access off A55 undertaken.

Wrexham

8.10 The main recent developments in Wrexham have been the Eagles Meadow Shopping Centre (390,000 sq ft of Floorspace) on an edge of town centre site and housing developments. Major sites were at the former Brymbo Steelworks, Wrexham, Gwersyllt and Ruabon. Out of town developments to commence for major supermarket chain in Wrexham. Anticipated developments include a new link road to the Wrexham Industrial Estate, commenced in 2010.

9. RESEARCH

9.1 A programme was established by the Welsh Assembly Government in 2001 to provide funding for minerals and waste planning related research projects. The research programme aims to support the development of policy and Technical Advice Notes which will assist in achieving the Assembly's goals of sustainable development, economic growth, tackling social disadvantage and promoting equal opportunities. The research funded by the programme is intended to provide sound evidence-based foundation for future policy development.

9.2 The programme is currently funding a five-year programme to complete modern geological mapping to cover Wales by the British Geological Survey. This initially, concentrated on South migrating northwards into Mid Wales and in 2008/9 continued into North Wales. The Mineral Resource Map for Wales was formally launched in 2010, though earlier versions had been made available to planning authorities at an earlier date.

9.3 The BGS is also commissioned to produce mineral safeguarding maps and guidance for Wales, to enable Unitary Authorities to prepare LDP safeguarding policies. It is not known at this stage whether publication of the safeguarding maps will represent national minerals planning policy or guidance.

10. Regional Technical Statement (RTS)

10.1 The Minerals Technical Advice Note 1 (MTAN1) published in 2004 required the production of Regional Technical Statements for North and South Wales respectively. The process in North Wales began towards the end of 2005 and for various reasons mainly related to staffing, detailed work did not get under way until summer 2006. The first technical discussions were held in autumn 2006 culminating in a series of presentations by stakeholders at the end of 2006. The bulk of the RTS drafting was carried out in spring and summer 2007 and included meetings of the RTS Technical Sub Groups (see Section 2). After consideration by the NWaRAWP on 21st November 2007, a proposed draft for public consultation was put to the RTS Members Forum (the latter comprises local authority elected/nominated members) on 11th December 2007.

10.2 A copy was then forwarded to the Minister and made available in English and Welsh for public consultation in early 2008. In summary, the main recommendations of the report were accepted. As the RTS had been endorsed for public consultation by the RAWP and the RTS Members Forum (with some reservations being expressed by certain MPAs), the Welsh Assembly Government regarded it as a material consideration in formulating plans and in particular, in setting out matters to be implemented over the ensuing five years, including apportionment to MPA areas. The Assembly was also anxious to ensure that the process of monitoring began as soon as possible, particularly to make up for time lost in the early part of the RTS preparation process. The need or otherwise for MPAs to make additional provision by means on allocations in LDPs, is described in detail in the RTS. These figures were formally endorsed in early 2009 However, it is evident that rock landbanks are already generally sufficient (see Section 4), but that further provision may be required for sand and gravel.

10.3 In addition to apportionment, general advice was given in the RTS to each MPA on the safeguarding specific aggregate resources, the importance of securing rail routes/depots and wharves and facilitating the greater utilization of secondary and recycled aggregates, notably slate waste.

10.4 At this stage it is too early to assess the effectiveness of the RTS in informing the mineral planning process both in terms of the influence on local plan policy or the content of new planning applications.

Appendix 1. NWaRAWP Membership 2010

as at 31/12/10

Full RAWP

Chair

A Farrow	Flintshire County Council

Technical Secretary

R P Bennion	Flintshire County Council (to Oct 2010)
G Nancarrow	Flintshire County Council (from Nov 2010)

Local Government Representatives

J Williams	Isle of Anglesey County Council
D G Jones	Gwynedd Council
G Lloyd	Snowdonia National Park
C Thomas	Conwy County Borough Council
M.Savage	Denbighshire County Council
G Nancarrow	Flintshire County Council
W Rowlands	Wrexham County Borough Council

Aggregate Industry Representatives

K Hobden	Mineral Products Association (MPA)
I Pearson	Marshalls/British Aggregates Association (BAA)
R Hulse	Tarmac/MPA
T Brown	Hanson/MPA
M Harding	MPA Wales
D Williams	D P Williams Holdings/Independent Companies
K Frost	CEMEX/MPA
G Sloyan	J Doyle (Demolition) Ltd (CDW. Recycling Rep.)
N Brown	Norwest Sand and Ballast/ BMAPA
R DeFigeiuredo	Welsh Slate Ltd

Government / Other Agency Representatives

S Martin	Welsh Assembly Government (WAG)
M Plummer	Communities and Local Government
P Lusty	British Geological Survey
C Warburton	Technical Services Division, WAG
S Williams	WAG (North Wales)
R Roberts	Countryside Council for Wales
M Read	Environment Agency Wales
A Mosquera	North West Regional Aggregates Working Party
S Bool	South Wales Regional Aggregates Working Party
G Bishop	Wales Environment Trust

RTS Sub-Group

There were no meetings of the RTS sub-group in 2010. The group had effectively ceased to be required in 2009 following the formal endorsement of the RTS by the respective Unitary Authority Councils during 2008 &9. New groupings will be established upon the RTS review.

Appendix 2. Sites Producing Aggregate 2010

Unitary Authority	Site	Material	Grid Reference
ANGLESEY	Gwyndy	Igneous	395795
	Hengae	Igneous	440687
	Rhuddlan Bach	Limestone	486806
	Nant Newydd	Limestone	481811
	Bryn Engan	Limestone	507814
	Aber Strectrt	Limestone	503 866
GWYNEDD	Garth (Minfordd)	Igneous	259339
	Nanhoron	Igneous	-
	Trefor/Yr Eifl No 2	Igneous	-
	Fferm Graianog	Sand & Gravel	245349
	Port Penrhyn, Bangor	Sand (Marine)	259373
	Penrhyn	Slate Waste	262365
	Oakeley	Slate Waste	269347
	Pen yr Orsedd	Slate Waste	250354
	Llechwedd	Slate Waste	-
	Manod & Graig Ddu	Slate Waste	-
SNOWDONIA	Arthog	Slate Waste	-
CONWY	St. George	Limestone	970373
	Raynes	Limestone	890780
	Penmaenmawr	Igneous	702755
DENBIGHSHIRE	Graig (Llanarmon)	Limestone	320356
	Graig Denbigh	Limestone	305366
	Aberduna	Limestone	320361
	Maes y Droell	Sand & Gravel	322356
	Moel y Faen	Clay/Shale	319348
FLINTSHIRE	Pant	Limestone	319730
	Pant y Pwll Dwr	Limestone	319732
	Trimm Rock	Limestone	319366
	Hendre	Limestone	319368
	Aberdo/Bryn Mawr	Limestone	318372
	Cefn Mawr	Limestone	320363
	Parrys	Shale	327366
	Maes Mynan	Sand & Gravel	311372
	Fron Haul	Sand & Gravel	315370
WREXHAM	Borras	Sand & Gravel	364524
	Ballswood	Sand & Gravel	350563

Appendix 3. Dormant/Inactive Sites included in 2010 Survey

Unitary Authority	Site	Material	Grid Reference
ANGLESEY	Bwlch Gwyn	Igneous	485730
	Tywyn Trewan	Sand/Ash	321747
	Creigiau	Sandstone	488860
GWYNEDD	Cae Efalwyd	Sand & Gravel	246352
	Tan y Bryn	Sand & Gravel	246352
	Gro Sarnau	Sand & Gravel	-
	Pentre Uchaf	Sand and Gravel	-
SNOWDONIA	None	None	-
CONWY	Plas Gwilym	Limestone	880780
DENBIGHSHIRE	Burley Hill	Limestone	320360
	Pant Y Gwlanod	Limestone	320357
FLINTSHIRE	Grange	Limestone	316375
	Ddol Uchaf	Sand & Gravel	315371
	Fagl Lane	Sand & Gravel	330359
	Ruby	Shale	320367
WREXHAM	None	None	-

Appendix 4: North Wales Aggregates Working Party Publications

Interim Report	November 1976	out of print
Regional Commentary Part 1	June 1981	£2.50
Regional Commentary Part 2	July 1981	£2.50
Report on AM85 Survey	June 1987	£2.50
Regional Commentary 1988	October 1988	£2.50
First Annual Report 1989		£2.50
Report on AM89 Survey	April 1991	£5.50
Annual Report 1990	June 1991	£3.50
Regional Commentary	February 1992	£5.50
Annual Report 1991	June 1992	£3.50
Annual Report 1992	July 1993	£5.50
Annual Report 1993	July 1994	£5.50
Report on AM93 Survey		£5.50
Guidelines for Aggregates Provision	March 1995	£5.50
Annual Report 1994		£5.50
Annual Report 1995		£5.50
Annual Report and Statistics 1996-2000 (with revised 1995 data) (single volume)		
Annual Report 2001	March 2002	£15.00
Annual Report 2002	September 2003	£15.00
Annual Report 2003	September 2004	Free
Annual Report 2004	September 2006	Free*
Annual Report 2005	May 2007	Free*
Annual Report 2006	Dec 2007	Free*
Regional Technical Statement	Feb 2008	Free *
Annual Report 2007	Dec 2008	Free *
Annual Report 2008	Nov 2009	Free*
Annual Report 2009	Oct 2012	Free*

* This report is free to download can be viewed on the North Wales RAWP website ie www.nwrawp-wales.org.uk However, a charge will be made if a hard copy is requested; this will reflect the price of copying, administration and postal charges.

APPENDIX 5: GLOSSARY AND ACRONYMS

Active	– A quarry with a current planning permission producing stone in 2009.
Aggregates	– Sand, gravel, crushed rock and recycled or secondary materials used in the construction industry eg. for purposes such as the making of concrete, mortar, asphalt or for road stone, drainage or bulk filling materials.
AMRI	– Annual Minerals Raised Inquiry – an annual survey by the Office of National Statistics (ref PA 1007)
British Aggregates Association (BAA)	– An association formed in 1999 representing over 50 mainly independent and privately owned quarry companies in the UK.
CLG	– Department of Communities and Local Government (ie for England) previously ODPM
Construction Demolition and Excavation Waste (CD&EW)	– Material arising from the demolition of buildings, it can include material that after processing, for example by crushing and sizing, can be re-used as aggregate. (previously referred to as C&DW – excavation waste is now usually included)
Coated Stone	– Aggregate coated with bitumen for road construction.
Crushed Rock	– Stone derived from a solid rock mass, for example limestone, by quarrying and processed, usually by mechanical breaking, for use in construction.
Dormant	– A quarry with a valid planning permission which cannot be lawfully worked or resume working until a scheme of modern planning conditions has been submitted to and approved by a Mineral Planning Authority .
EAW	– Environment Agency (Wales)
Export	– The transport of aggregate from the North Wales region to other areas, including to other parts of Wales as well as England.
Fill	– Aggregate used to fill large voids preparatory to construction, for example for foundations or to form embankments during road construction.
Igneous Rock	– Solidified molten rock, e.g. granite, dolerite
Landbank	– A stock of planning permissions for the winning and working of minerals, usually expressed in years based on recent averaged outputs. Normally reserves in dormant sites are excluded

Limestone	–	A sedimentary rock consisting mainly of calcium carbonate.
NWaRAWP	–	North Wales Aggregates Working Party (nb when in some cases abbreviated to NWRAWP, this can be confused with the North West RAWP in England)
MPA	–	Mineral Planning Authority
MTAN1	–	Minerals Technical Advice Note 1: Aggregates (published by the Welsh Assembly in 2004)
ODPM	–	Office of the Deputy Prime Minister (now Department for Communities and Local Government – CLG)
Permitted Reserves	–	Areas and tonnages of rock with a valid planning permission for extraction which have been defined by survey and or estimation.
Primary aggregate	–	Naturally occurring (as opposed to recycled material) rock, sand and gravel suitable for construction aggregate purposes.
Quarry Products Association (QPA)	–	A trade association which represents over 80 quarry companies which, together, account for 90% of the supply of aggregate materials in the UK.
Rail Ballast	–	Aggregate used to support railway track.
Recycled Aggregates	–	Aggregates previously used in construction, rail ballast, pipe trench excavation etc, recycled for further aggregate use.
Resource	–	Deposits of rock and sand and gravel which are likely to be suitable for working for aggregate but which may need further technical evaluation and will need planning permission before development can commence.
Road Planings	–	Stone recovered during the surface repair of road carriageways. Often this is coated stone which will need to be treated to remove old bitumen if it is to be reused in road construction.
RTS	–	Regional Technical Statement – These have been produced by the North and South Wales RAWPs for their respective regions as a general framework for the preparation of development plans
Sand and Gravel	–	Unconsolidated usually superficial material usually of fluvial or glacial origin overlying the solid geology. However some deposits are bedded and form part of the solid geology. Deposits are usually worked as a source of material for general building and for the manufacture of concrete.

Secondary Aggregate	– Wastes or by-products suitable for aggregate purposes but derived from activities where aggregate production is not the main aim eg, various industrial processes and the extraction of minerals for uses other than for aggregates. These include for example colliery waste, blast furnace slag, slate waste.
Sharp Sand	– Coarse sand suitable for use in making concrete.
Slate Waste	– Waste material arising from the manufacturing of roofing and architectural slate (See Secondary Aggregates).
Soft Sand	– Otherwise known as building sand, fine sand suitable for use in such products as mortar and plaster.
SRAs	– Secondary and recycled aggregates (qv)
WET	– Wales Environment Trust