North Wales
Regional Aggregates Working Party

Annual Report - 2009

CYNGOR Sir y Fflint Flintshire COUNTY COUNCIL

Llywodraeth Cymru
Welsh Government

North Wales Regional Aggregates Working Party

Annual Report 2009

This Annual Report covers the calendar year 2009. 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, 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.

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.

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.

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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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 2009, and where appropriate (e.g. permitted reserves) relates the position at 31 December 2009. In 2009 there was a major “in depth” four yearly survey which was collated by the NWaRAWP and the sales, and distribution information was published by the BGS. 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 2009 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.

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 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 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).

Membership

2.2. The membership of the NWaRAWP is drawn from officers of the MPAs, the aggregates extraction industry via 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 2009, Andrew Farrow of Flintshire County Council chaired the RAWP and Roger Bennion of Flintshire County. A full list of members at the end of 2009 can be found in Appendix 1.

2.4 The Chairmanship and Secretariat to the NWaRAWP changed during 2009, previously Chaired by Gareth Jones of Gwynedd Council with Secretariat services provided by Ian Thomas of the National Stone Centre. In terms of the Local Authorities, operator companies and other agency and government representations there was no 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.

NWales RAWP Meetings in 2009

2.5 In 2009 the North Wales RAWP met on 12th November in the Llandudno Business Centre. The main topic of discussion was the draft 2008 Annual Survey. Slate has been 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, however there was a general consensus that slate cannot fully substitute for sand and gravel, and the report should be modified to reflect this.

2.6 Industry representatives noted that there was a 27% downturn in sales in Wales, and considered that sales are likely to decline until mid 2010, with a very gradual recovery.

2.7 Other items discussed included the consultation on planning fees in Wales for Mineral Reviews, with differences of opinion expressed between industry representatives and the mineral planning authorities. The QPA considered that the impact of fees could be devastating for small companies. The Welsh Assembly Government had carried out a full consultation with consultations issued to some 200 individual companies.

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.

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 continued to be reported on a North Wales basis now.

2.10 The Chair announced that progress was being made to develop joint working for minerals and waste planning across North Wales with broad support of Chief Officers and Planning Officers.

3. SURVEY RESULTS 2009

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 significant contribution. whereas in the North East, limestone is the main source of crushed rock of which a high proportion is exported from the region. In this report the crushed rock figure includes, for the first time, 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 – 2009 (,000 tonnes)

	SAND&GRAVEL			CRUSHED ROCK			TOTAL
Year	NW Wales	NE Wales	Total N Wales	NW Wales	NE Wales	Total N Wales	Aggregate Sales
1999	261	1420	**1681**	1065	6931	**7996**	9677
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

Figures combined for confidentiality. Crushed rock includes slate and shale. Sand & gravel includes marine dredged.

3.2 Figures 1 and 2 also show the contribution of the sub-regions to crushed rock and sand and gravel sales respectively. The increase in the contribution of NW Wales to crushed rock aggregate can be attributed to the inclusion of all slate aggregate in this survey.

3.3 Crushed rock sales in 2009 suffered a significant fall in aggregate sales due to the economic and construction slump in activity, falling by 37% compared with 2008 sales. The regional difference is a fall in sales of 29% in NW Wales, and a fall in sales of 39% NE Wales. This difference is explained by a greater fall in exports to NW England and other regions from NE Wales as demand within NW England was met from quarries within that region, and consolidation of operating units to the major sites.

3.4 Sand and gravel sales also showed a decrease in sales of 34% when compared with 2008 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.

Figure1. Sub–regional Aggregate Sales 1999-2009 - Crushed Rock

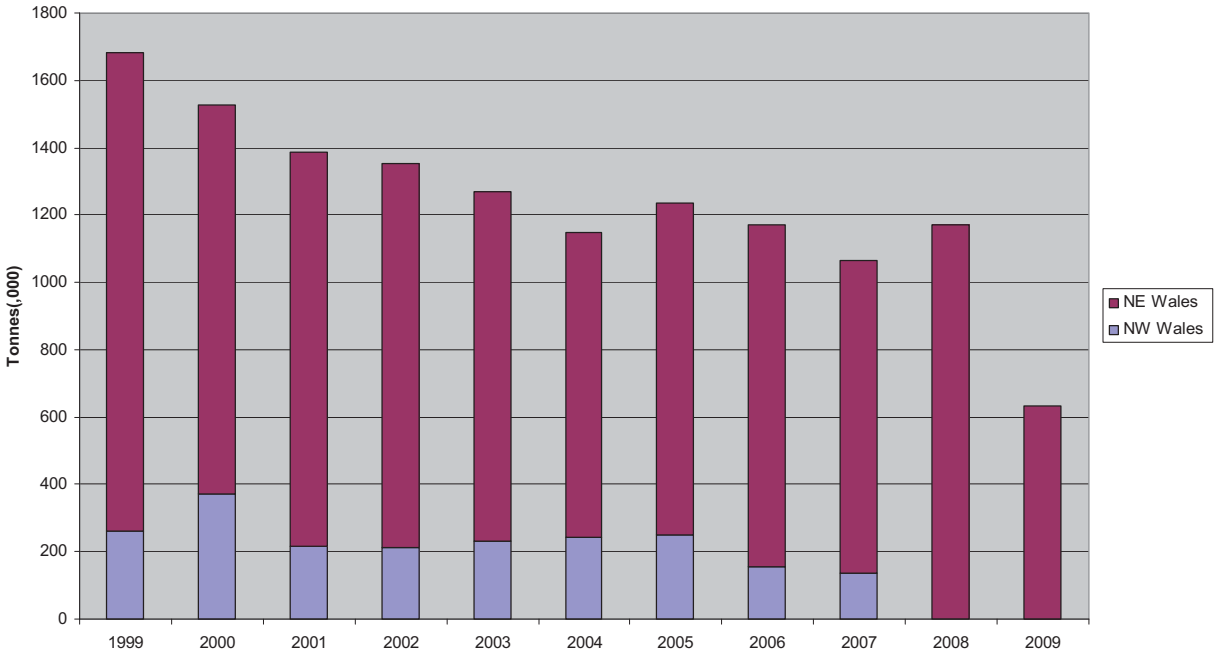
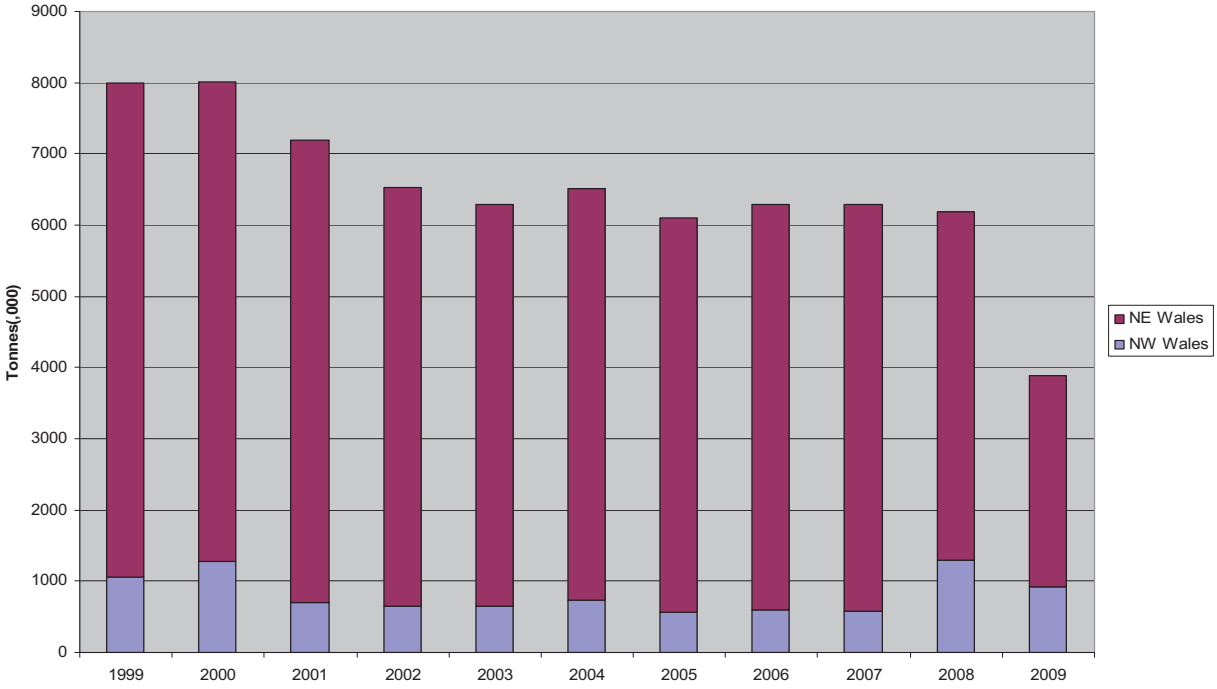


Figure 2. Sub-regional 1999-2008 Sand and Gravel Sales



Unitary Authority Production

3.5 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. It is evident that 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. The biggest decline was in Flintshire and Conwy. Conwy experienced a 51 % fall, which is attributable to changes in national markets. Flintshire experienced a 43% fall in aggregate sales, indicating a general fall in construction activity and decline of export markets to NW England, and a switch to consolidate production at units outside of Flintshire.

Table 2.1: Aggregate Sales by MPA 1999 – 2009 Sand & Gravel (tonnes)

Year	Anglesey	Gwynedd	Snowdonia	Conwy	Flintshire/ Denbighshire	Wrexham	Flintshire/ Denbighshire / Wrexham	Flintshire/ Denbighshire / Wrexham/ Gwynedd	Total N Wales
1999	0	261310	0	0	793036	627036	0		1681382
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

Table 2.2: Aggregate Sales by MPA 1999 – 2009 Crushed Rock (tonnes)

Year	Anglesey	Gwynedd	Anglesey/ Gwynedd	Snowdonia	Conwy	Denbighshire	Flintshire	Wrexham	Total N Wales
1999	911111	144874	0	9076	1637307	2615243	2678418	0	7996029
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

* From 2008 includes slate and shale

3.6 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 47% of the regional output, compared with 60% in 2008. Wrexham continues to be the largest producer of sand and gravel.

Figure 3: Unitary Authority Sales - Crushed Rock Sales 1999-2009 (tonnes)

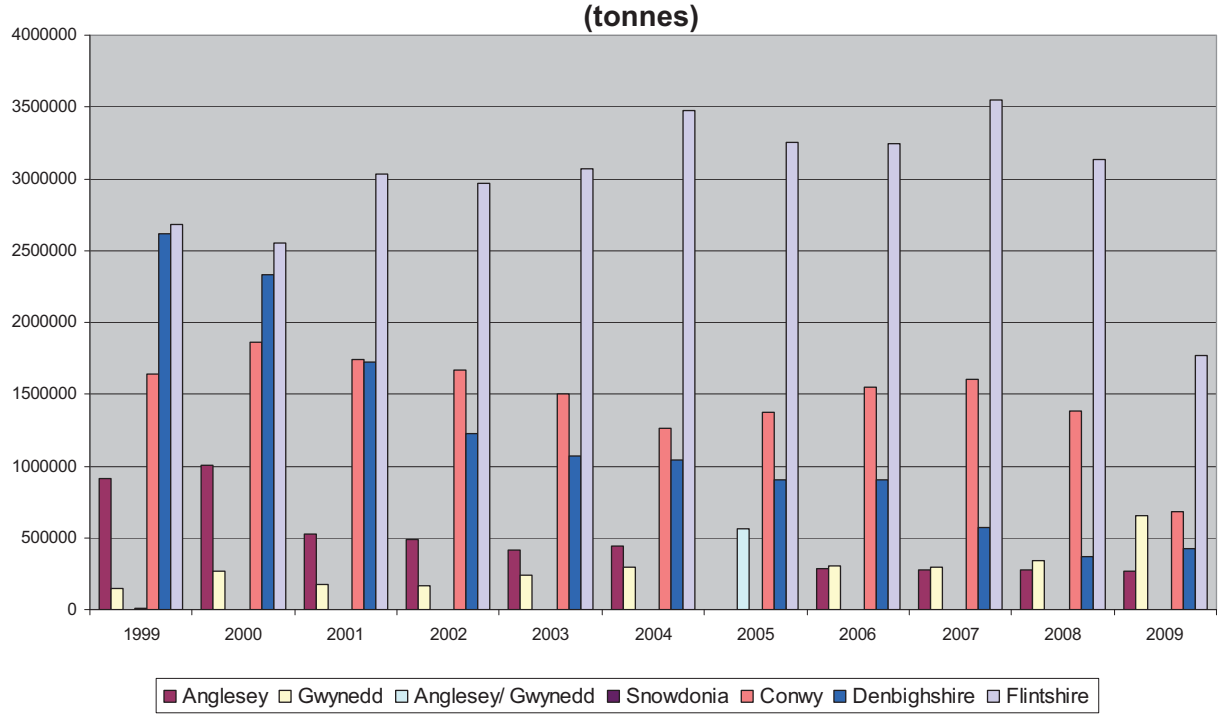
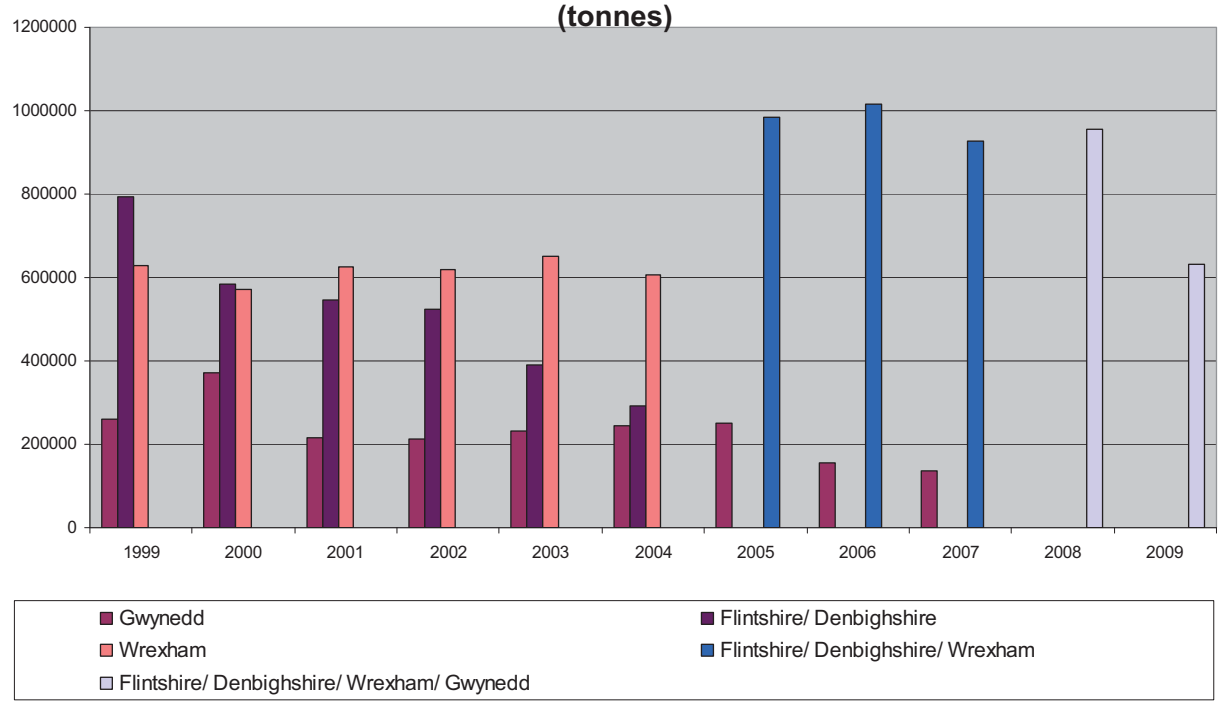


Figure 4: Unitary Authority Sales - Sand and Gravel 1999-2009 (tonnes)



Aggregate End Use

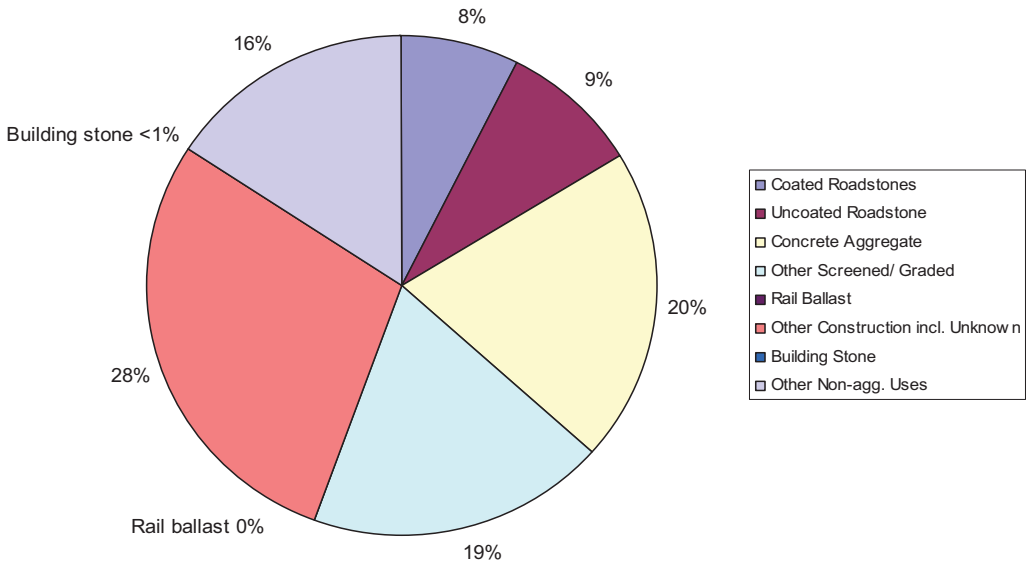
3.7 Tables 3 and 4 set out the end uses of the primary aggregate sales. In the case of crushed rock, a full breakdown of end uses was provided by most but not all operators. Sales with an unknown end use have therefore been combined with sales for other constructional uses. With regard to sand and gravel sales, a complete breakdown of end uses was provided. As with previous years primary won aggregates provides the largest contribution, particularly limestone, which accounted for 68% of crushed rock sales, with igneous and metamorphic at 17%, Slate at 12%, and others at 3%.

3.8 Table 3.1 and figure 5 illustrates limestone crushed rock end use. Limestone sales for aggregates have declined by 36% from 2008 sales. Roadstone accounts for 17% of sales, concrete aggregate 20%, graded screened aggregate accounting for 19 % and other/unknown sales 28%. Industrial and non aggregate used account for 16% of sales, the bulk of which is for cement manufacture.

Table 3.1 Crushed Rock Sales, Limestone: N Wales 2009
(tonnes)

Product	Conwy/ Denbighshire	Flintshire	TOTAL NE WALES
Coated Roadstones	52,924	186,993	239,917
Uncoated Roadstone	41,152	237,213	278,365
Concrete Aggregate	194,434	450,357	644,791
Other Screened/ Graded	43,043	558,505	601,548
Rail Ballast			
Other Construction incl. Unknown	535,649	335,231	870,880
Total Aggregates	**867,202**	**1,768,299**	**2,635,501**
Building Stone	52	301	353
Other Non-agg. Uses	11	499,201	499,212
Total Non-agg. Uses	63	499,502	499,565
Total	**867,265**	**2,267,801**	**3,135,066**

Figure 5: Crushed Rock Limestone – End Use



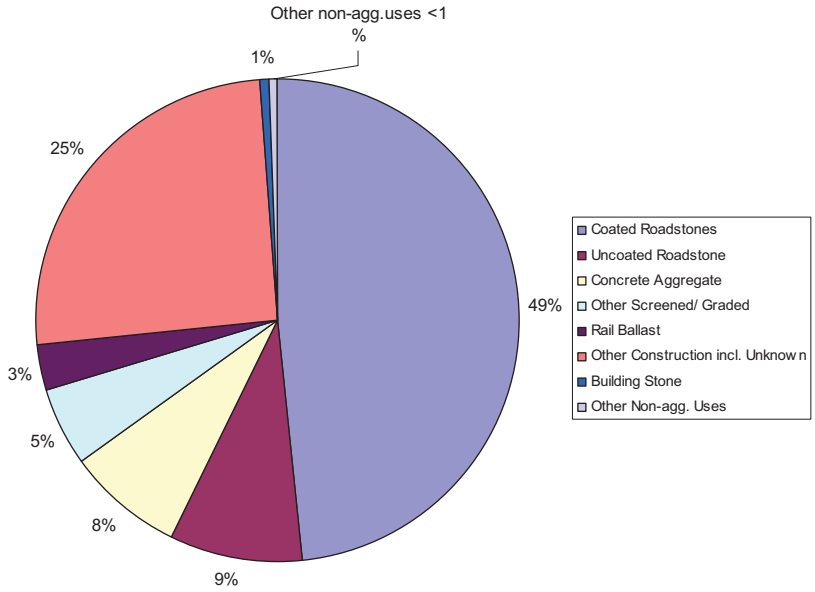
3.9 Table 3.2 and figure 6 illustrates igneous and metamorphic crushed rock sales for 2009. Sales in this category have fallen by 15% compared with 2008 sales. Roadstone accounted for 49% of sales, with rail ballast sales falling to 3% compared with a 30% share in 2008.

Table 3.2 Crushed Rock Sales, Igneous and Metamorphic: N Wales 2009

(tonnes)

Product	Anglesey	Gwynedd/ Conwy	TOTAL NW WALES
Coated Roadstones	140,000	190,180	330,180
Uncoated Roadstone	0	61,168	61,168
Concrete Aggregate	20,000	33,512	53,512
Other Screened/ Graded	16,000	20,819	36,819
Rail Ballast	0	21,348	21,348
Other Construction incl. Unknown	21,200	153,047	174,247
Total Aggregates	**197,200**	**480,074**	**677,274**
Building Stone	0	4,504	4,504
Other Non-agg. Uses	3,000	95	3,095
Total Non-agg. Uses	3,000	4,599	7,599
Total	**200,200**	**484,673**	**684,873**

Figure 6: Crushed Rock Igneous & Metamorphic – End Use



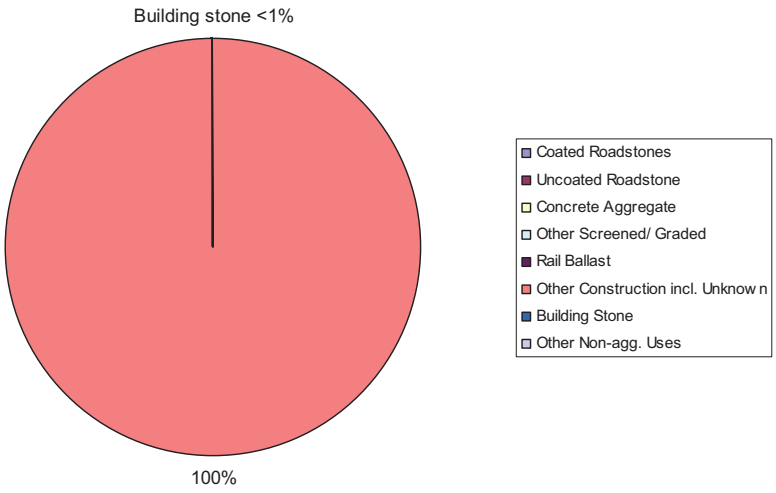
3.10 Table 3.3 illustrates slate sales. There was insufficient detail to break down end use. Slate represents some 12% of the total crushed rock sales, and sales have fallen 23% compared with 2008.

Table 3.3 Crushed Rock Sales, Slate: N Wales 2009

(tonnes)

Product	TOTAL
Coated Roadstones	
Uncoated Roadstone	
Concrete Aggregate	
Other Screened/ Graded	
Rail Ballast	
Other Construction incl. Unknow n	577,199
Total Aggregates	**577,199**
Building Stone	100
Other Non-agg. Uses	0
Total Non-agg. Uses	100
Total	**577,299**

Figure 7: Crushed Rock Slate - End Use



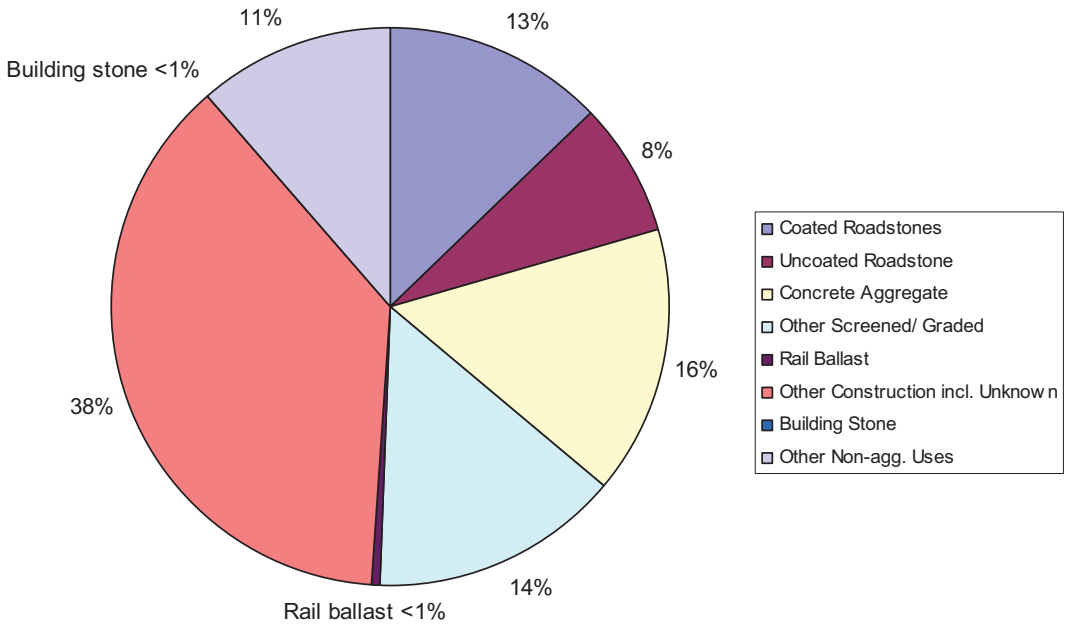
3.11 Table 3.4 and figure 8 illustrate total crushed rock sales. Total aggregate sales have declined by 33% on 2008 sales, whereas expressed as total sales of all crushed rock the fall is 44% due to a significant fall in sales of industrial mineral. Total rock aggregate sales about 21% of crushed rock was used as roadstone with a slightly higher proportion being used for coated applications. Aggregate for concrete accounted for 16% of sales, with graded screened stone accounting for 14%. Other constructional uses (including unknown uses) accounted for 38% of sales. Sales for non-aggregate purposes amounted to 11% 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 2009

(tonnes)

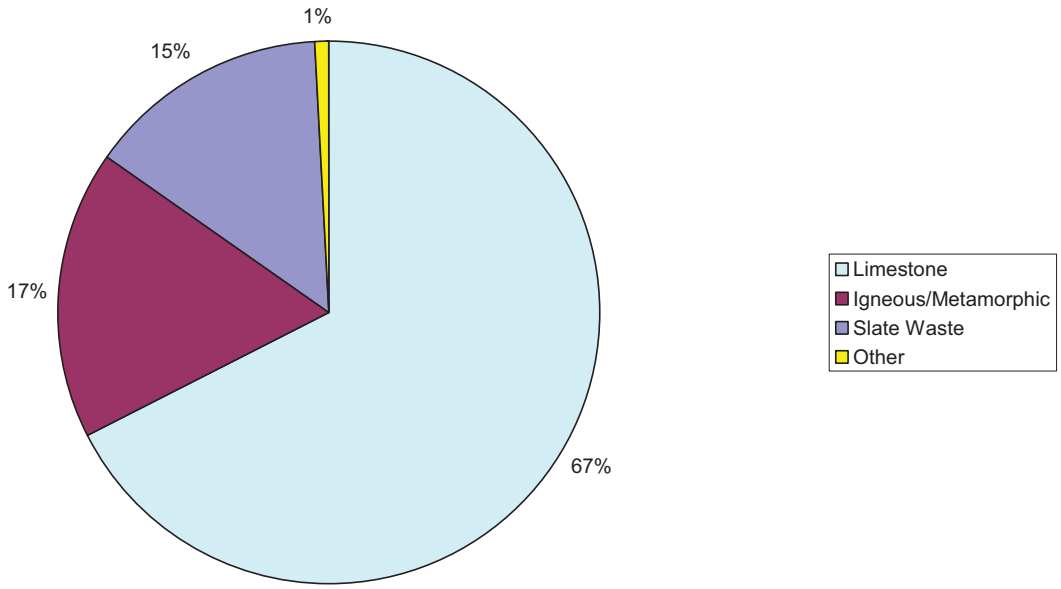
Product	TOTAL
Coated Roadstones	570,097
Uncoated Roadstone	339,533
Concrete Aggregate	698,303
Other Screened/ Graded	638,367
Rail Ballast	21,348
Other Construction incl. Unknown	1,622,326
Total Aggregates	**3,889,974**
Building Stone	4,957
Other Non-agg. Uses	502,307
Total Non-agg. Uses	507,264
Total	**4,397,238**

Figure 8: Crushed Rock - End Use



3.12 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

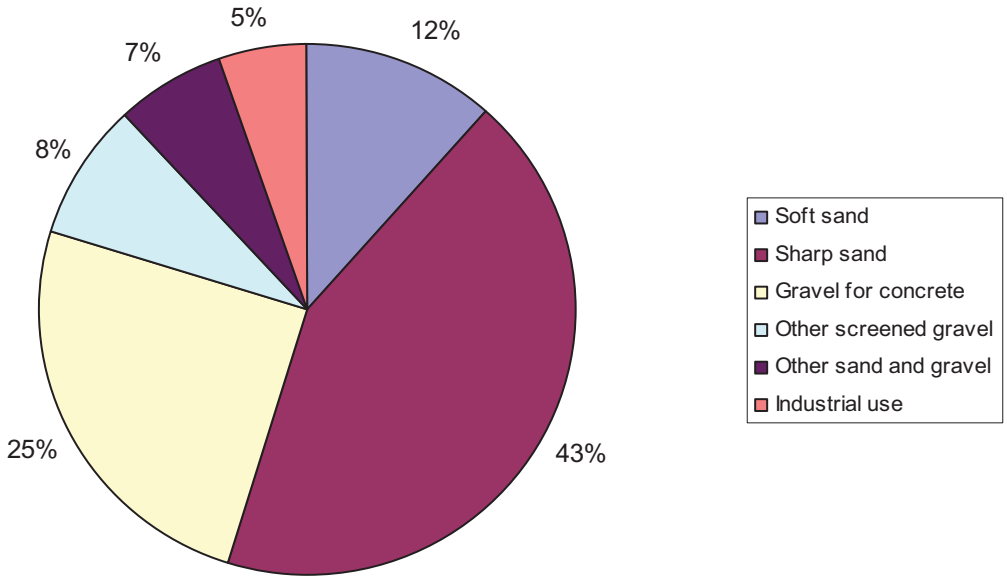


3.13 Table 4 and Figure 10 illustrates end use sales for sand and gravel. Total sales fell 30% when compared with 2008. The breakdown by end use was little changed in that at about 43% of sales were sharp (concreting) sand and 12% were soft sand. Gravel for concrete increased to 25% of sales. About 8% of the remaining supply comprised other screened gravels with the remainder 7% being made up of other unspecified sand and gravel. A very small amount of sand and gravel, 5%, was used for non-aggregate purposes.

Table 4 Sand and Gravel Sales: N Wales 2009
(tonnes)

	Soft sand	Sharp sand	Gravel for concrete	Other screened gravel	Other sand and gravel	Total aggregate	Industrial use	Total
Total	78,412	286,566	165,808	55,836	44,622	631,244	34,958	666,202

Figure 10: Sand and Gravel End Use



Distribution

3.14 The 2009 survey coincides with the collation for the AM 2009 four yearly survey relating to the distribution of aggregates, published by the DCLG &BGS.

3.15 The principle means of transporting aggregate was by road, accounting for 3.7 M tonnes. Rail accounted for 76 Kt, and water transport accounted for 150Kt.

3.16 A total of 1.3 M tonnes of aggregate was exported out of the Region, with crushed rock accounting for 1.2 M t, and sand & gravel accounting for 0.13 M t. The North West of England was the largest export market, responsible for 0.13 Mt sand & gravel, and 0.976 Mt crushed rock, or 1.1 Mt overall. The remaining export markets are 79Kt crushed rock to the East of England, 46 Kt crushed rock to the South East, and 32Kt crushed rock to London. A total of 0.26Mt crushed rock was unallocated.

3.17 A total of 2.0Mt crushed rock and 0.49 Mt sand & gravel sales were to destinations within the N Wales region. The survey also notes that an additional 0.48 Mt slate waste is used as aggregate.

3.18 Total aggregate imports to North Wales were 0.7Mt. The majority was crushed rock at 0.65 Mt, comprising igneous rock (0.4Mt) and sandstone (0.2Mt), with the remaining crushed rock (50Kt) sourced from the East and West Midlands, North West England , and Yorkshire and Humber regions. The majority of the imports from South Wales are higher PSV specification aggregates for roadstone.

3.19 Imports for sand & gravel were 50 Kt North West England accounted for the majority, at 36 Kt, with 16Kt land won, and 20Kt marine dredged. The West Midlands accounted for 13Kt land won sand & gravel.

3.20 The total consumption of aggregates in North Wales was 2.7 Mt crushed rock and 0.5Mt sand & gravel, of which 78% of consumption was from sales within the regions, comprising 2.1Mt crushed rock and the majority of the sand & gravel.

3.21 The picture for aggregate movements is complicated due to onward processing and inclusion in other higher value products. This might be sand and high PSV stone in the manufacture, or gravel to make ballast for ready mixed concrete, for example. The distribution figures for primary won aggregate nevertheless give a good indication of market movements, capacity and spatial occurrence of distribution of aggregate specification.

4. RESERVES AND LANDBANKS

Reserves

4.1 Table 5 below shows the permitted reserves of crushed rock in the North Wales Region at the end of 2009. 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 2009 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 alculation is derived.

Table 5 Crushed Rock Reserves

(000 tonnes)

	Active	Inactive	Total	Dormant
Limestone/ Dolomite				
Angelsey (a)				
Conwy	34,391	250	34,641	
Denbighshire	18,132	4,476	22,608	
Flintshire (b)	74,123		74,123	1,405
Total Limestone	126,646	4,726	131,372	
Igneous/ Metamorphic				
Angelsey/Gwynedd				
Conwy (c)	46,697	750	47,447	
N Wales total	46,697	750	47,447	
N Wales total rock	**173,343**	**5,476**	**178,819**	

(a) Anglesey Limestone with Conwy (b) Flintshire excludes Industrial reserves (c) Combined Anglesey, Conwy & Gwynedd

4.2 The reduction in the number of quarries or operating companies in 2009, 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 the level of permitted reserves of crushed rock contained in active sites for which returns have been made remained at 95%. 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 and Gravel Reserves

(000s tonnes)

	Active	Inactive	Total	Dormant
Gwynedd	570	225	795	
NW Wales Total	570	225	795	
Flints/Wrexham	17,204	2,715	19,919	
NE Wales Total	17,204	2,715	19,919	840
Total Sand & Gravel	17,774	2,940	20,714	840

4.4 Table 6 indicates the permitted reserves of sand and gravel in the North Wales Region at the end of 2009. 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. There are currently no significant permitted reserves of sand and gravel in Angelsey, Conwy, Denbighshire or Snowdonia Mineral Planning Authority Areas.

Landbanks

4.4 Landbanks for each aggregate type are currently calculated by dividing the permitted reserves for a given aggregate type by the average of the past three years sales for any given local authority area, sub-region or region.

4.6 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. 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

4.7 It is important to note that although the use of slate waste derived aggregate was included in Section 1 of this report 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.

Table 7 Reserves and Landbanks for Aggregates in North Wales

(Million Tonnes)

	2007 Aggregate sales	2008 Aggregate sales	2009 Aggregate sales	Average sales	Permitted reserves at 31/12/2009	Landbank (years)
Limestone/ Dolomite						
NW Wales (a)(b)						
Denbighshire	0.56	0.37	0.41	0.45	22.61	51
Flintshire	3.55	3.10	1.77	2.81	74.12	26
North East Wales	4.11	3.47	2.18	3.25	96.73	30
Total North Wales	4.11	3.47	2.18	3.25	96.73	30
Igneous/ Metamorphic rock						
Anglesey (a)	0.270	0.280	0.197	0.25	8.14	33
Gwynedd	0.30	0.30	0.26	0.29	9.09	32
NW Wales	0.57	0.58	0.46	0.54	17.23	32
Conwy (b)	0.42	1.40	0.68	0.83	64.86	78
North East Wales	0.42	1.40	0.68	0.83	64.86	78
Total North Wales	0.99	1.98	1.14	1.37	82	60
Sand & Gravel						
NW Wales	0.14	0.10	0.13	0.12	0.80	6
NE Wales	0.93	1.00	0.50	0.81	20.71	26
Total	1.07	1.10	0.63	0.93	21.51	23
Slate/ Secondary						
Total North Wales	1.03	0.71	0.54	0.76	5.41	10
Sandstone/Shale/Grit						
Total North Wales	0.30	0.25	0.10	0.22	3.85	25

(a) Anglesey Limestone included with Anglesey Igneous (b) Conwy Limestone included with Conwy Igneous

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. In terms of sand and gravel, the landbank is 26 years in North East Wales, but stands at only 6 years in North West Wales, below the 7 year minimum recommended in MTAN1. The total sand and gravel landbank is 23 years, but does not take account of the spatial distribution of reserves. There are currently no permitted reserves in Anglesey, Denbighshire, Conwy, or Snowdonia. This is an issue that needs to be addressed in revisions to the Regional Technical Plan and taken up with emerging Local Development Plans.

4.9 Additional reserves held in dormant sites potentially add to the landbank. Whilst these reserves cannot be worked without new conditions being approved, they are nevertheless consented. The amount of reserves in dormant sites has declined markedly in recent years due to a successful programme of prohibition orders, and will not make a fundamental change to the landbank.

4.10 The landbanks have increased due to the fall in sales, although the reconfiguration referred to above has possibly masked some changes

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 2009. Figure 9 in chapter 3 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 2009 slate aggregate sales declined at around 577,000 tonnes or 15% 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 1999-2009

Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
1,000 tonnes	262	362	379	593	587	625	549	729	1,033	710	577

5.3 The majority of the material was recycled in Gwynedd but a small amount came from Denbighshire.

5.4 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. No reserves were declared in Denbighshire for 2009 but it is estimated that there is potentially around 0.5mtonnes available.

Clay, Shale, and Colliery Spoil

5.5 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) 3.85 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 2009 survey but clay shale and sandstones continued to be used for aggregate in bulk fill uses.

Construction and Demolition Waste

5.6 No survey of this material was carried out for 2009 and the survey of road planings was carried out by only 1 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.

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 2009.

Anglesey

6.2 There were no major development control matters to report. Two permissions for building stone permitted.

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.

Snowdonia

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

Conwy

6.5 An application was submitted for periodic review of conditions for Raynes Quarry. Permission granted for a scalpings tip at Penamaenmawr Quarry. There are no dormant aggregate sites.

Denbighshire

6.6 Periodic review at Graig Limestone Quarry Llanarmon. Periodic review application submitted for Graig Limestone Quarry and a S73 for extension of time. Permission granted to work limestone from under fixed plant at Aberduna Quarry. No planning decisions were made during the year which had a material impact upon permitted reserves.

Flintshire

6.7 Fagl Lane Sand Pit closed and in discussion for restoration. Hendre Limestone Quarry Periodic Review application submitted A consolidating application is being prepared in for Aberdo/Bryn Mawr Limsetone and Chert Quarry.

Wrexham

6.8 No significant developments reported. Modification order public inquiry outcomes awaited at Hafod relating to clay and landfill. Application to remove and recycle Bersham Colliery spoil tip.

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 2009

Mineral Planning Authority	Progress in 2009/Current Policy document	LDP Adoption Date (Anticipated)
Anglesey	UDP inquiry August/September 2003. Inspectors report 2004. Miinimal modification in respect of aggregates policies. Plan abandoned late 2005 but legal advice is that policies had reached such a late stage that they carried considerable weight. Work continued on the Local Development Plan with a view to pre-deposit consultation in 2008. Discussion taking place with Anglesey for a shared policy approach. Current policy; Gwynedd Structure Plan 1993 and Gwynedd SPG – Minerals, 1996-2006, adopted by Anglesey March 1996	2014/15
Gwynedd	The Inspector's report on the Gwynedd Unitary Development Plan was received in 2007 and the authority has provided response to the Assembly. UDP adopted 2009. Work on LDP to commence, in discussion with Anglesey for shared policy approach.	2014/15
Snowdonia N.P.	In January 2005 it was resolved to suspend work on the UDP During 2007 the Authority was at the stage of community involvement and participation in a range of future options for the Eryri Local Development Plan. A series of meetings of the Statutory Plans Forum took place. Pre-deposit public consultation on preferred options (Regulation 15) was in February and March 2008. Deposit consultation LDP 2009. Current policy document; Eryri Local Plan adopted Nov. 1999	2010/11
Conwy	At the end of 2004 Conwy abandoned its draft UDP and commenced work on an LDP. Towards the end of 2006 the Preferred Strategy of the Conwy Local Development Plan was issued for consultation. In 2007 work began revising the strategy in response to the public consultation. In 2008 work continued on LDP and place on deposit in April 2009, anticipated adoption date 2011 Current policy documents: Gwynedd 1993 and Clwyd 1999 Structure plans	2011
Denbighshire	The Local Development Document was at the Regulation 15 stage in 2007. A Preferred Strategy is expected to be issued for consultation in 2008. LDP Deposit Consultation Oct to Nov 2009. Includes minerals safeguarding, buffer zones and future mineral extraction Current policy document: UDP, Adopted 2002	2011/12
Flintshire	A UDP public inquiry was held during 2007, with adoption expected in 2009. Post Inquiry modifications consultation closed 2nd November 2009. and development plans panel established. Anticipated adoption in 2010. LDP to commence delivery agreement 2010. Current policy; Clwyd Structure Plan 1st Alteration 1991	2015
Wrexham	The Wrexham Local Development Plan Delivery Agreement was approved by WAG in October 2006. Consultation on Issues and Options took place at the end of 2006 with the consultation period extending into 2007. Public consultation on a Preferred Strategy took place during October/November 2007. Public consultation on the Deposit LDP is proposed to take place in 2010 Current policy: Wrexham UDP, adopted February 2005	2011/12

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 2009 and in future years. It is not intended to be quantitative.

Anglesey

8.4 Site work 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

Gwynedd

8.5 Portmadog Bypass and works to the West Highland light railway.

Snowdonia

8.6 There were no significant construction developments in 2009.

Conwy

8.7 Development of the Gwynt y Môr off-shore wind-farm continued. Possible coastal flooding schemes. Land based windfarms may create local demand.

Denbighshire

8.8 In 2007 planning permission was granted for 13ha of a large 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. Land based windfarms may create local aggregate demand.

Flintshire

8.9 Major new development at Airbus complex commenced 2009. Development to extend Broughton Retail Park anticipated for 2009/10. Works to A55 junction with Broughton retail park.

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. Anticipated developments include a new link road to the Wrexham Industrial Estate, due to start 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 continued into North Wales it was anticipated that draft findings would be available for consultation in 2009.

9.3 In May 2008 Capita Symonds presented the final report on the "Evaluation of the Regional Aggregates Working Parties (RAWP) in Wales" the report gave a number of recommendations on the role of RAWPs in the managed supply of aggregates in Wales. It concluded that in most respects the RAWPs had fulfilled their obligations but their efectivenes had been compromised by external factors. A copy of the report can be viewed on the NWaRAWP web site.

9.3 The programme also supports the work of the North and South Wales Regional Aggregates Working Parties.

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 by all Unitary Councils by 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 2009

as at 31/12/09

Full RAWP

Chair

A Farrow	Flintshire County Council

Technical Secretary

RP Bennion	Flintshire County Council

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
J Cawley	Denbighshire County Council
G Nancarrow	Flintshire County Council
W Rowlands	Wrexham County Borough Council

Aggregate Industry Representatives

K Hobden	Quarry Products Association (QPA)
I Pearson	Marshalls/British Aggregates Association (BAA)
R Hulse	Tarmac/QPA
T Brown	Hanson/QPA
R. Millard	QPA Wales
D Williams	D P Williams Holdings/Independent Companies
A Rowley	CEMEX/QPA
G Sloyan	J Doyle (Demolition) Ltd (CDW. Recycling Rep.)
N Brown	Norwest Sand and Ballast/ BMAPA
G. Gibson	Welsh Slate Ltd

Government / Other Agency Representatives

S Martin	Welsh Assembly Government (WAG)
W Mackenzie	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*

Chair.		
	G Jones	Gwynedd Council
Technical Secretary		
	I A Thomas	National Stone Centre
	K Down	Secretariat/National Stone Centre
Members.		
	D G Jones	Gwynedd Council
	G Nancarrow	Flintshire County Council
	C Dobbs	Tarmac/QPA
	R Millard	QPA Wales
	I Pearson	Marshalls plc/BAA
	D Williams	D P Williams Independents
	C Warburton	Welsh Assembly Government (WAG)
	S Martin	Welsh Assembly Government (WAG)
	R Roberts	Countryside Council for Wales

* Group active under previous contractural arrangements with Gwynedd Council Prior to administration of the RAWP by Flintshire County Council

N Wales RAWP RTS Members Forum**

Chair: Cllr R. Hywel Wyn Williams

Anglesey CC
Cllr John Williams

Gwynedd
Cllr R. Hywel Wyn Williams
Cllr Gwilym Williams

Conwy
Cllr Tony Tobin

Snowdonia NP
Peter Weston
Iolo ap Gwyn

Flintshire
Cllr Gareth Williams
Cllr Jim Jones

Wrexham CBC
Cllr Mark Pritchard
Cllr M H R Moysen

Denbighshire
Cllr Bob Barton

** Provision is made for a nominee and a deputy to represent each MPA.

Appendix 2. Sites Producing Aggregates in 2009

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 Strect	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	None	None	-
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 2009 Survey

Unitary Authority	Site	Material	Grid Reference
ANGLESEY	Bwlch Gwyn	Igneous	485730
	Tywyn Trewan	Sand/Ash	321747
	Creigiau	Sandstone	488860
	Dinmor	Limestone/dolomite	631813
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
	Cambrian	Limestone & Silica Rock	321371
	Ddol Uchaf	Sand & Gravel	315371
	Fagl Lane	Sand & Gravel	330359
	Kinnerton Bank	Sand & Gravel	333360
	Hendre East	Sand & Gravel	318368
	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*

* 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