

**WEST SUSSEX MINERALS AND WASTE  
DEVELOPMENT FRAMEWORK**

**WHARVES AND RAILHEADS STUDY**

**FEBRUARY 2008**

**A Study by Land & Mineral Management Ltd. on behalf of  
West Sussex County Council**

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- 3 BGS (Commissioned Report CR/03/041/N) – The Role of Imports to the UK Aggregates Supply (extract only)
- 4 London Plan Implementation Report (LPIR) – Safeguarded Wharves on the River Thames (extract only)
- 5 WSCC Minerals Local Plan (July 2003) – relevant policies

## **REFERENCES**

- 1 Draft Document (07.12.92) - Port of Shoreham and other Ports of East Sussex and West Sussex
- 2 Mott McDonald report (March 1997) – Encouraging Rail Freight Review in West Sussex
- 3 AEA Technology report (June 2005) for West Sussex - Feasibility of Disposing of Waste by Rail
- 4 Land & Mineral Management Ltd report (February 2006) – A Study of Aggregate Imports into Kent and Medway
- 5 AEA Energy & Environment report (October 2007) – Waste Forecasts for WSCC 2007-2021
- 6 WSCC (Dec. 2007) – Annual Monitoring Report on Minerals and Waste
- 7 South East England Regional Assembly (report March 2004) - Proposed Alterations to Regional Minerals Strategy

# **1. INTRODUCTION AND BACKGROUND**

## **1.1 Introduction**

1.1.1 West Sussex County Council (WSSC) is currently undertaking a statutory obligation to prepare a Minerals and Waste Development Framework (MWDF). This process will lead to the establishment of robust policies on future minerals and waste development proposals for a plan period to 2026.

1.1.2 Part of the MWDF process involves the need for WSSC to review the current and future potential of existing and new facilities for the importation and exportation of minerals and waste, including their transportation by non-road means within the County.

1.1.3 WSSC commissioned Land & Mineral Management Ltd to carry out a study of wharves and railheads in the County to provide the necessary background information as an integral part of the MWDF process.

1.1.4 The study herein needed to take into account the current national and regional guidance and policy statements on these issues (see section 1.2). The study will also assist the County in the identification of strategic sites to be safeguarded from inappropriate development through their development plan documents.

1.1.5 Matters included in the study are:-

- Capacity of existing wharves and railheads – including associated activities/facilities
- Likely future demand for wharves and railheads
- Possible constraints to continued use or expansion at these sites
- Potential need to retain existing unused preferred sites and identification of potential new and/or replacement sites

1.1.6 The study included making contact with existing wharf and railhead operators/landowners. Questionnaires were prepared and subsequently sent out to them and site meetings/visits arranged wherever possible. LMML and WSSC are therefore grateful to the following operators/landowners who were able to contribute to the completion of the questionnaires and/or allow site visits during the preparation of this study:-

- Solent Aggregates Ltd
- Hanson Aggregates
- Tarmac Ltd
- Cemex South East
- Kendall Bros (Portsmouth) Ltd
- Minelco Specialties Ltd
- Yeoman Asphalt
- Shoreham Port Authority (SPA)

## **1.2 National and Regional Policy Background affecting Wharves and Railheads for Imports/Exports of Minerals and Waste**

1.2.1 In December 2004, the ODPM published a Panel Report from its Examination in Public on the new RPG9 – Review of Waste and Minerals. This document contained proposals to amend national waste and mineral policies – in particular, to strengthen policy on wharves and rail depots by requiring Mineral Planning Authorities (such as WSSC) to:-

*“...assess needs and to identify sites to be safeguarded in LDFs”.*

1.2.2 By June 2006, the ODPM published new policies – including a revised policy (Policy M5) for the safeguarding of mineral reserves, wharves and rail depots which Mineral Planning Authorities are obliged to take into account. This Policy is set out below:-

*“Mineral planning authorities should assess the need for wharf and rail facilities for the handling and distribution of imported minerals and processed materials, and identify strategic sites for safeguarding in their minerals development frameworks. These strategic facilities should be safeguarded from other inappropriate development in local development documents”*

1.2.3 In November 2006, the Department of Communities and Local Government produced the first (MPS1 – entitled ‘Planning and Minerals’) of several new Minerals Policy Statements that are to be introduced in following years as replacement guidance documents to the current Minerals Policy Guidelines. MPS1 is important to this West Sussex study in respect of the following National Objective (under paragraph 9):-

*“...to promote the sustainable transport of minerals by rail, sea or inland waterways”*

1.2.4 Furthermore, MPS1 expands upon this objective in later paragraphs under the headings of *Safeguarding* and *Bulk Transportation* as follows:-

**Safeguarding:**

- *“safeguard existing rail heads, wharfage and associated storage, handling and processing facilities for the bulk transport by rail, sea or inland waterways of minerals, particularly coal and aggregates, including recycled, secondary and marine-dredged materials”*
- *“identify future sites to accommodate the above facilities and reflect any such allocations in the LDDs of district councils in two-tier planning areas. District councils in these areas should not normally permit other development proposals near such safeguarded sites where they might constrain future use for these purposes”*
- *“safeguard existing, planned and potential sites including rail and water-served, for concrete batching, the manufacture of coated materials, other concrete products and the handling, processing and distribution of substitute, recycled and secondary aggregate material. Where appropriate, identify future sites for these uses and reflect any such allocations in the LDDs of district councils in two tier planning-areas”*

**Bulk Transportation:**

- *“seek to promote and enable the bulk movement of minerals by rail, sea or inland waterways to reduce the environmental impact of their transportation”*
- *“Promote facilities at ports and rail links that have good communications inland, so that bulk minerals can be landed by sea and distributed from ports, as far as is practicable, by rail or water”*
- *Safeguard and promote rail links to quarries where there is potential to move minerals by rail” - (see more in section 7).*

1.2.5 Prior to the Panel Report on PPG9 and the arrival of MPS1 above, WSCC was already in an advanced stage of completing its new Structure Plan. As WSCC was quite aware of its established facilities for the import/export of minerals and waste, it needed to ensure that new planning policies would not conflict or adversely affect them where they are demonstrably needed to meet existing and future requirements - particularly for their own area and also in the regional/national context.

- 1.2.6 The WSCC Structure Plan was adopted in October 2004 and it contained two new policies regarding minerals and waste – both of which incorporated policy elements reflecting the importance attached to giving priority wherever possible to the movement or transfer of bulk minerals and waste by rail or water within West Sussex:-

Structure Plan Policy ERA6 (b) (3)

*“..where appropriate, opportunities are taken for the transport of aggregates by rail or water”...*

Structure Plan Policy ERA8 (b) (4)

*“..facilities are located as close as possible to the point at which the waste is generated and that they integrate with rail and water-based transport systems wherever practicable:”...*

- 1.2.7 Under the Planning and Compulsory Purchase Act 2004, the policies of the adopted West Sussex Structure Plan were due to expire on 24 October 2007 unless the Government decided that they should be saved for a longer period. The Government decided that six of the 46 policies should not be saved including Policy ERA8 (Waste) which no longer forms part of the statutory ‘development plan’ for West Sussex.

### 1.3 **Background to West Sussex Minerals and Waste**

- 1.3.1 WSCC has had a long history of mineral/waste operations. Such operations, together with their associated means of transportation, have created significant issues for WSCC to deal with in terms of imports, exports and consumption within the County boundaries.

- 1.3.2 The vast majority of **mineral** demand/consumption in West Sussex (as evident in the following sections of this report) is principally based on construction material needs in the form of **sand & gravel or hard rock aggregates**. Such aggregate demand arises from consumer requirements for housing, schools, hospitals, commercial premises, roads and many other related construction and infrastructure projects. Essentially, demand for construction materials will rise or fall depending on the numbers and wealth/mobility requirements of the people living and working in West Sussex.

- 1.3.3 Other imported **minerals into West Sussex** include:-

- Marble and dolomite are currently imported by sea to an existing operators wharf at Shoreham for non-aggregate uses, but in much smaller quantities than the primary aggregates. A wharfside factory mills these materials into powders for onward sale/transport by road in tankers and then mainly to customers outside of West Sussex;
- Power station ash is currently imported by sea to an existing operators wharf at Shoreham and transferred by road (without further wharfside treatment) to blockmaking facilities outside of West Sussex;
- Pumice/rock salt is also imported occasionally by sea through Shoreham Port Authority’s own operating arrangements at the port and then transferred by road; and
- Mica and talc were also once imported to Shoreham, but these material imports ceased in recent years.

From discussions with the existing operators, most of these minerals are likely to be delivered by road to customers outside of West Sussex.

- 1.3.4 Significant volumes of coal were once imported into Shoreham by sea for the old power stations before they were replaced by the existing gas fired power station. Coal was probably

also imported at Littlehampton Port and West Sussex railheads for other commercial/domestic uses. However, coal imports by rail/sea to West Sussex now appear to be minimal.

- 1.3.5 A similar demise in the exports of cement from West Sussex also occurred following the closure of the rail connection from Shoreham Cement Works at Upper Beeding Quarry to Railway Wharf at Shoreham Port many years ago. The old line/connection at the port has since been taken out and cannot realistically be reinstated. This closure effectively closed the only rail link to the port.
- 1.3.6 Much of the **sand & gravel aggregate** consumed in West Sussex had (until the 1980s) traditionally been generated from West Sussex land-won extraction sites (particularly from the sand only quarries based on the outcrop geological outcrop of Folkestone Bed formation) and then transported by road to consumers. Most consumers would usually be within West Sussex boundaries due to the commercial reality of pricing/competition on what are generally low-value consumer goods.
- 1.3.7 The latest Annual Monitoring Report (AMR2007<sup>1</sup>) for WSCC identifies that land won sand and gravel production fell from over 1 m. tonnes in 2001 to an estimated 573,000 tonnes in 2006. Furthermore, most of the land-won production (estimated at 80%) was based on building or soft sands from quarries that mainly produce fine/medium sands (i.e. from the Folkestone Beds) and very little coarse concreting aggregate (i.e. from the gravel pits in the Chichester area). If this trend were to continue, West Sussex would be entirely dependent upon imports for concreting aggregate within a few years.
- 1.3.8 West Sussex also consumes other **aggregate** (sand & gravel, hard rock) imported into the County by sea and rail from established facilities at the main ports (Shoreham/Littlehampton) and railheads (Crawley, Ardingly and recently, Chichester). These import facilities were probably established to compete with or supplement shortfalls expected from WSCC and other nearby quarries. **Aggregates** from these sites are transported by road to consumers in West Sussex and neighbouring areas as there are no means of inland waterway transfers and no realistic opportunity of rail transfers.
- 1.3.9 The collection, treatment, and subsequent recycling/disposal of **wastes** generated in the County are also very much the result of consumer driven factors similar to the preceding paragraphs - although waste issues are complicated by much legislation and best practice/environmentally safe methods which are needed to deal with and then dispose of the many different **wastes** arising.
- 1.3.10 Much of the **waste** generated in West Sussex has historically been collected and transported by road for onward treatment or disposal at West Sussex landfill sites, and occasionally to neighbouring County sites. Indeed, West Sussex has also received waste from its neighbouring Counties and London by road - although the London imports ceased by the end of September 2006 (AMR 2007 & AEA 2007<sup>2</sup>).
- 1.3.11 It is understood that no waste from/to West Sussex has been transported by rail, and no inland waterways exist as an alternative transport mode (excluding the eastern arm of the Canal at Shoreham Port which is mainly in Brighton & Hove Borough Council area).

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<sup>1</sup> WSCC (Dec. 2007) – Annual Monitoring Report on Minerals and Waste

<sup>2</sup> AEA Energy & Environment (October 2007) – “Waste Forecasts for West Sussex 2007-2021

- 1.3.12 In a recently commissioned report for WSCC on the feasibility of disposing of waste by rail (2005 - AEA Technology<sup>1</sup>), it was concluded that although rail haulage was operationally feasible to two potential waste treatment sites (in Warnham Brickworks area and at Shoreham Cement Works (Upper Beeding) - see Figure 1), it was not a viable alternative to road transport of waste. This was principally due to other investment being necessary elsewhere in West Sussex to facilitate the loading of waste onto the trains for the relatively short train transshipments involved.
- 1.3.13 However, two waste transfer/export operations do exist at Shoreham wharves. Both of these are scrap metal recycling operations and are based at:-
- Railway Wharf – where the current operator has a temporary planning permission; and
  - Fishergate Terminal – where the Port of Shoreham facilities are used to assist the current operator to load vessels for export (although the operation may be relocated to the eastern end of the Canal in the near future i.e. outside West Sussex).

Both operations are understood to involve the transshipment in modest quantities of recycled scrap metal by sea to foreign destinations.

#### 1.4 **Significance of West Sussex Wharves and Railheads**

- 1.4.1 **Significance for Minerals:** It is quite apparent from the previous sections that WSCC is aware of the importance of its wharf and railhead facilities for mineral supplies to meet local needs. This significance is made more profound due to a combination of other factors, including the following:-
- The continued concentrations of urban developments (with their associated infrastructure requirements) along the County's southern coastline and around the eastern and north-eastern towns in Crawley, Horsham and Mid Sussex;
  - The strategic routing of the remaining rail network (being mainly north/south orientated) and remaining former goods yards/rail sidings in West Sussex - first established during the Victorian era;
  - The ongoing depletion of land-won mineral reserves (particularly coarse/concrete quality aggregates) which are not being matched in full by replacement mineral planning permissions in either West Sussex or their neighbouring Counties;
  - The likelihood of wharf closures due to redevelopment proposals in the Western Arm of Shoreham Port; and
  - Complete withdrawal of marine aggregate processing facilities/lack of investment at Littlehampton Port.
- 1.4.2 More recently, a number of related reports referring to aggregate imports and their facilities in the South East have been published (see summaries of these reports in Appendices 1 to 4 incl.). These have merely served to enhance strategic planners and commercial operators' views that consideration should be given to the development of a suitable safeguarding strategy for selected existing and potential new sites for such wharf and railhead facilities.
- 1.4.3 From the comments contained in the AEA Technology Report<sup>2</sup> (2005), it may be possible to establish a less expensive single rail siding in the Warnham Brickworks area. On this basis, the area is worthy of further review/consideration to establish whether it can be used as a possible replacement to Horsham sidings for the bulk movements of minerals into West Sussex – see also paragraphs 7.3.4 & 8.11 to 8.13.

<sup>1</sup> AEA Technology (03.06.05) – “Feasibility of Disposing of Waste by Rail” in West Sussex

<sup>2</sup> AEA Technology (03.06.05) – “Feasibility of Disposing of Waste by Rail” in West Sussex

- 1.4.4 **Significance for Waste:** The significance of wharves and railheads for imports and exports of waste to/from West Sussex is much more low key in that:-
- no such waste appears to be transported by rail anywhere into, within or beyond the County boundaries;
  - no waste appears to be imported through the wharves; and
  - very little waste is exported (this being mainly scrap metal – probably derived from sites mainly within West Sussex).
- 1.4.5 The current situation on West Sussex waste movements is likely to remain for many years as WSCC will be expected under national requirements to develop policies and impose procedures to ensure that waste exports for treatment/disposal elsewhere (including ‘exports’ by road beyond the county boundary) will be minimised to negligible amounts by the end of the period to 2026.
- 1.4.6 The national requirement is, therefore, likely to create a disincentive for operators to use waste/water as a means for bulk movements of waste within West Sussex boundaries. This is already partly demonstrated in the findings of two recent reports (AEA 2005<sup>1</sup> & 2007<sup>2</sup>) commissioned by WSCC, wherein the consultants firstly concluded that internal rail movements of West Sussex domestic waste (MSW) would not be viable and, secondly, the consultants had modelled future waste arisings and landfill capacity in West Sussex assuming no exports from or imports to West Sussex – as the London imports had ceased just before completion of their 2007 report.
- 1.4.7 On the basis of this initial evidence, it is very unlikely that substantial volumes of West Sussex waste could be economically transferred internally by rail or water - particularly based on the few sites brought forward as possible waste transfer facilities (even in the Warnham Brickworks area where new rail infrastructure investment was thought to be relatively moderate).

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<sup>1</sup> AEA Technology (03.06.05) – “Feasibility of Disposing of Waste by Rail” in West Sussex

<sup>2</sup> AEA Energy & Environment (October 2007) – “Waste Forecasts for West Sussex 2007-2021”

## 2. PREVIOUS & CURRENT USAGE OF WHARVES & RAILHEADS

### 2.1 Previous Usage of Wharves and Railheads

- 2.1.1 In a recent 2006 study on aggregate imports into Kent through wharves and rail depots, the then current position on such facilities was compared with those facilities identified in a previous (1990) Report of Survey carried by Kent County Council (KCC). The KCC Report of Survey was conducted in advance of their first Minerals Local Plan (produced in 1993) and at a time which coincided with the recognised peak years of aggregate production, importation and consumption in the UK (i.e. during 1989–1990).
- 2.1.2 These peak years are considered to be very relevant to the throughput capability of aggregate or other mineral importation facilities operating at that time. For the purposes of this study a similar comparison of mineral/waste import facilities operating during the same period has been made and is explained herein.
- 2.1.3 A review of WSCC records has not revealed any previous specific surveys on their own facilities – although a draft report was produced for discussion internally in 1992 on land use & traffic issues at Shoreham and other West & East Sussex Ports<sup>1</sup>. It did include sections and comments on the impacts of aggregate import facilities. Although preparation of the first WSCC Minerals Local Plan (MLP) also commenced about this time, it was not adopted until 2003.
- 2.1.4 Therefore, for the purposes of this study a review of known information about such import/export facilities from other sources was made and these are set out in subsequent paragraphs and tables herein.
- 2.1.5 Table 1 below reflects the likely scenario in respect to import/export facilities operating in 1990. They are based on the draft 1992 WSCC/ESCC report<sup>2</sup> and discussions with existing operators.

**Table 1: Probable Import/Export Facilities in West Sussex c.1990**

Wharves		Rail Depots	
Operator/use	Site	Operator	Site
Redland Aggregates Ltd – aggregate imports & coated roadstone	Railway Wharf, Littlehampton	ARC Southern – aggregate imports & coated roadstone	Ardingly Depot, Nr. Haywards Heath
United Marine Aggregates Ltd – aggregate imports, processing & concrete batching	Railway Wharf, Littlehampton	Tarmac Southern Ltd – aggregate imports & concrete batching	Tinsley Goods Yard, Crawley
ARC Southern - aggregate imports and processing	Baltic Wharf, Littlehampton	Foster Yeoman – aggregate imports & coated roadstone	Tinsley Goods Yard, Crawley
Hall Aggregates - aggregate imports, processing & concrete batching	Halls Wharf, Shoreham	Day Aggregates – aggregate imports	Tinsley Goods Yard, Crawley

<sup>1</sup> Draft document (07.12.92) - Port of Shoreham and other Ports of East Sussex and West Sussex

<sup>2</sup> Draft document (07.12.92) - Port of Shoreham and other Ports of East Sussex and West Sussex

Wharves		Rail Depots	
Operator/use	Site	Operator	Site
Hall Aggregates - aggregate imports	Ferry Wharf, Shoreham	Hall Aggregates – aggregate imports & concrete batching	Tinsley Goods Yard, Crawley
Ennemix Aggregates – aggregate imports	Britannia Wharf, Shoreham		
RMC Roadstone – aggregate imports for coated roadstone	Rombus Wharf, Shoreham		
ARC Southern - aggregate imports, processing & concrete batching	ARC Wharf, Shoreham		
Euromin Ltd - aggregate imports & processing	Turberville/Penney Wharves, Shoreham		
United Marine Aggregates Ltd – aggregate imports & processing	Kingston Wharf, Shoreham		
European Metal Recycling Ltd – scrap metal recycling & exports	Railway Wharf, Shoreham		
Fordamin Co. Ltd – speciality mineral imports	Free Wharf, Shoreham		
Tarmac Southern Ltd – aggregate imports & concrete batching plant	Tarmac Wharf, Shoreham		

2.1.6 An analysis of the sites listed in Table 1 above indicates the following features on wharf and railhead operations at that time:-

- 13 wharf facilities were operating and probably handling minerals and waste – 3 aggregate only wharves in Littlehampton (2 on Railway Wharf) and 10 in Shoreham (8 of which were aggregate use only + two in East Sussex/Brighton & Hove);
- 5 aggregate only railhead facilities were operating – all in West Sussex and 4 based at the same goods yard in Crawley;
- 1 wharf in Shoreham was for bulk speciality minerals (then by Fordamin Co. Ltd.- now part of Minelco Specialities Ltd);
- 1 wharf in Shoreham was used for scrap metal waste exports (European Metal Recycling Ltd).

2.1.7 In addition to the above mentioned wharves it is quite likely that other minerals & waste may have been imported and exported periodically through Shoreham by way of the separate handling arrangements with Shoreham Port Authority on their own controlled wharves at that time. It has not been possible as part of this study to obtain specific information on these for either 1990 or even for 2006.

2.1.8 In terms of establishing the level of materials handled in 1990 at these wharves and railheads, it has also not been possible to obtain exact figures for each activity. However, published

information has been available by the Crown Estate over the last 20 years or so for all marine-dredged aggregate landings at UK and other European ports.

2.1.9 Table 2 below is therefore a summary of marine-dredged aggregate landings at Littlehampton and Shoreham since 1986 (derived from figures provided by the Crown Estate):-

**Table 2: Crown Estate Landings of Marine-Dredged Aggregates at Littlehampton & Shoreham Ports from 1986 (tonnes)**

Year	Littlehampton	Shoreham	Annual Totals
1986	229,469	651,585	881,054
1987	259,433	844,127	1,103,560
1988	309,973	1,101,572	1,411,545
1989	Not available	Not available	Not available
1990	253,328	1,467,946	1,721,274
1991*	225,574	1,179,389	1,404,963
1992	166,513	1,025,445	1,191,958
1993	148,279	841,512	989,791
1994	203,620	832,064	1,035,684
1995	198,812	845,025	1,043,837
1996	186,464	687,702	874,166
1997	116,009	766,517	882,526
1998	88,994	770,042	859,036
1999	134,554	708,713	843,267
2000	138,457	604,247	742,704
2001	137,647	663,456	801,103
2002	121,025	652,687	773,712
2003	100,573	646,170	746,743
2004	36,595	683,129	719,724
2005	Nil	815,439	815,439
2006	Nil	768,196	768,196

\* First year that West Sussex imported more marine-dredged aggregate than it produced from land based aggregate operations.

2.1.10 It is evident from Table 2 that both Littlehampton and Shoreham experienced their greatest landings of marine-dredged aggregates during a five-year period from 1988 to 1992 – with 1990 clearly being the busiest year. From discussions with the aggregate operators, this period coincided with the greatest national as well as local demand for these materials. West Sussex also had road major infrastructure projects during this period (e.g. the A27 duelling/Brighton by-pass).

2.1.11 No marine-dredged aggregate landings in any year subsequent to 1992 in Shoreham has exceeded 1 million tonnes (mt), whilst in only one year since 1991 have landings in Littlehampton exceeded 200,000 tonnes.

2.1.12 Indeed, marine-dredged aggregate landings in Littlehampton ceased, probably permanently, in 2005 with the removal of the aggregate processing plant based at that site. This left Shoreham as the only port for marine-dredged aggregate imports in the County.

2.1.13 Some historic information about imports of other aggregate (i.e. crushed rock and land won imports) into the wharves and rail depots is provided in the MLP and also in the Aggregate

Monitoring Reports for the South East (prepared by SEERAWP – see summary in Appendix 2). These are summarised in Table 3 below:-

**Table 3: Imports of Land Won Aggregate by Sea or Rail (tonnes)**

Year	Aggregate Import Type & Facility		Total
	Hard Rock only Imports (UK and foreign origin) by Sea to Littlehampton & Shoreham	Rail Imports (combined UK only crushed rock/land won sand & gravel) to Ardingly & Crawley depots	
1989	N/A	994	c.1mt
1992	45	N/A	c.1mt
1996	111	566	677
1997	86	(c)	?
1998	123	(c)	?
1999	285	(c)	?
2000	365	(c)	?
2001	236	(c)	?
2002	264	(c)	?
2003	223	(c)	?
2004	43*	(c)	?

(c) Confidential due to limited number of operators

? Unknown

\* Figure here is likely to be incorrect and understated from aggregate returns information provided by operators

2.1.14 In addition to the above figures in Table 3, the MLP did report imports of hard rock (from unspecified means) of 814,000 tonnes in 1993 which made up a total construction aggregate consumption in West Sussex of 2.72 m. tonnes.

2.1.15 However, hard rock imports into Littlehampton do still continue to service an adjacent coated roadstone plant based close to Railway Wharf. Although no figures are produced here for hard rock aggregate imports, it is expected that these would have reflected similar highs and lows during the same periods in the preceding paragraphs.

2.1.16 No figures have been obtained for these periods in respect of other minerals imported or for scrap metal waste exported.

## 2.2 Current Usage of Wharves and Railheads

2.2.1 As part of this study, existing operators of wharves and railheads were contacted with the view to completing a questionnaire about their activities and level of imports/exports. These included operators from a contact list provided by WSCC – some of which were not operating in 1990 or in the subsequent few years that followed.

2.2.2 Summary details of the questionnaire responses and site meetings held with participating site operators are outlined in the following sections. However, it was evident from initial enquiries that several site changes had taken place since 1990 due to a number of factors as follows:-

- the emergence of a new site operator (i.e. through either company or site acquisition);
- a permanent site closure (i.e. site 'lost' and not reopened for various reasons);
- new sites have since come forward and are now in operation (i.e. site 'gained').

2.2.3 Tables 4 & 5 below identify those changes:-

**Table 4: Changes to Site Operators since 1990**

<b>'1990' Site Operator</b>		<b>Current Operator</b>
<b>Wharves</b>		
Redland Aggregates Ltd – aggregate imports & coated roadstone	Railway Wharf, Littlehampton	Tarmac Limited
United Marine Aggregates Ltd – aggregate imports, processing & concrete batching	Railway Wharf, Littlehampton	Tarmac Limited
Hall Aggregates – aggregate imports, processing & concrete batching	Halls Wharf, Shoreham	Cemex South East
RMC Roadstone – aggregate imports for coated roadstone	Rombus Wharf, Shoreham (referred to as RMC Roadstone Wharf in MLP)	Cemex South East
Euromin Ltd - aggregate imports & processing	Turberville & Penneys Wharves, Shoreham	Dudman Aggregates Ltd
ARC Southern - aggregate imports, processing & concrete batching	ARC Wharf, Shoreham (referred to as Brighton Power Station 'A' Wharf in MLP)	Solent Aggregates Ltd
Fordamin Co. Ltd – speciality mineral imports	Free Wharf, Shoreham	Minelco Specialities Ltd
<b>Railheads</b>		
ARC Southern – aggregate imports & coated roadstone	Ardingly Depot, Nr. Haywards Heath	Hanson Aggregates
Hall Aggregates – aggregate imports & concrete batching	Tinsley Goods Yard, Crawley	Cemex South East
Foster Yeoman – aggregate imports & coated roadstone	Tinsley Goods Yard, Crawley	Yeoman Asphalt

2.2.4 The operator changes to Railway Wharf at Littlehampton have effectively combined the previous activities into one site with one operator, thereby causing the 'loss' of one wharf from 1990 – this has been accounted for in Table 5 below:-

**Table 5: Wharves & Railheads ‘Lost’ or ‘Gained’ since 1990**

<b>Wharves ‘Lost’</b>		<b>Wharves ‘Gained’</b>	
ARC Southern – aggregate imports and processing	Baltic Wharf, Littlehampton	Kendall Bros (Portsmouth) Ltd	New Wharf, Shoreham (AKA Fishermans Wharf)
Redland/UMA Aggregates Ltd (2 sites into 1 site for Tarmac Ltd) – aggregate imports	Railway Wharf, Littlehampton (referred to as Tarmac/Redland Wharf in MLP)	Tarmac Topblock – power station ash	LDF Wharf, Shoreham
Hall Aggregates - aggregate imports	Halls Ferry Wharf, Shoreham (within Brighton and Hove)		
Ennemix Aggregates – aggregate imports	Britannia Wharf, Shoreham (within Brighton and Hove)		
United Marine Aggregates Ltd – aggregate imports & processing	Railway Wharf East, Shoreham (referred to as Kingston Wharf in MLP)		
Tarmac Southern Ltd – aggregate imports & concrete batching plant	Tarmac Wharf, Shoreham		
<b>Railheads ‘Lost’</b>		<b>Railheads ‘Gained’</b>	
Tarmac Southern Ltd – concrete batching plant only (site now merged into Day Aggregates area)	Tinsley Goods Yard, Crawley	Dudman Aggregates Ltd	Chichester Sidings

2.2.5 Table 5 can summarised as follows:-

- 6 aggregate wharf operations were ‘lost’ – although 3 or 4 of these losses were as a result of a new joint venture (Solent Aggregates Ltd) between existing wharf operators during that period to base new operations from only one site at Shoreham (ARC Wharf);
- 1 aggregate operator/site gained at a new location in Shoreham;
- 1 mineral importer was gained at a new location in Shoreham (materials required for lightweight block making elsewhere);
- 1 railhead operator was lost to enable material supplies to be collected from the nearby Cemex operation; and
- 1 railhead operator/site was gained at a new location in Chichester.

2.2.6 The locations of all existing wharves and railheads are shown on Figure 1, and a separate site plan for each existing operation is included in this study (Plans W1-4 or Plans R1-4).

### **3. REVIEW OF NEW SURVEY INFORMATION & COMPARISON WITH PREVIOUS LEVELS**

#### **3.1 Questionnaire Responses**

- 3.1.1 As referred to in section 2, this study required known wharf/railhead operators to complete a questionnaire form about their waste & mineral import/export operations etc. Operators were also requested to complete additional forms for any wharf/depot sites which they had control of and wished to be safeguarded for potential import/export operations.
- 3.1.2 Before all questionnaire response forms were returned, site visits were arranged to most of the wharves and rail depots to obtain more information and assist in the understanding of activities and facilities used on each site. This was considered necessary in the event that some questionnaires were not returned or fully completed as requested.
- 3.1.3 The information gained from returned questionnaires was reviewed in conjunction with notes taken from site visits and discussions with site managers/owners (together with some site photographs taken for subsequent reference purposes). Some of the tables/information produced herein have also been based on reasonable estimates where questionnaires were not returned.
- 3.1.4 The combined information has been incorporated into separate individual schedules for each operating wharf and rail depot site. The schedules (site evidence sheets) also contain references to general planning constraints affecting each site.
- 3.1.5 For operators confidentiality reasons the schedules are not reproduced here and are not available separately. However, the following sections of this study should provide a reasonable understanding and background knowledge on the overall size and nature of West Sussex wharf and railhead facilities handling minerals and waste.

#### **3.2. Geographical Spread of Wharves & Railheads**

- 3.2.1 All existing wharves/railheads are shown on Figure 1 (Site Location Diagram). This diagram also provides an indicative size of each facility by means of categorising according to average import/export volumes.
- 3.2.2 The geographical spread of the existing wharf and rail facilities to a large extent reflect West Sussex's own geography, its main population centres and also the strategic position of the south coast wharves. By the early 1990s, the main operators had already determined their preferred transport mode and acquired the necessary sites by which minerals & waste were to be imported into or exported from West Sussex. The operators' choices were probably influenced by the following two main factors:-
- all wharf locations needed to be accessed via navigable waters on the south coast
  - all rail depots have direct/linked access to the main rail network – which consists of the two main rail routes traversing north-south through West Sussex
- 3.2.3 These key factors have not significantly changed for wharves and rail depots since 1990 as there appears to have been little interest in improving existing port or rail infrastructure to aid the movement of minerals & waste into or through West Sussex. This has been mainly due to

the potentially huge cost burden on such infrastructure improvements – as highlighted in the AEA 2005<sup>1</sup> report.

- 3.2.4 From the geographic spread of wharf and railhead locations shown on Figure 1, it is possible to identify three distinct groupings for them and these are summarised as follows:-
- **South West Group** – consisting of one (combined) wharf at Littlehampton and a ‘new’ rail depot at Chichester
  - **South East Group** – consisting of all the Shoreham Port wharves (8 no.) and no rail depots
  - **North East Group** – consisting of the Crawley/Ardingly depots (3 no.) and no wharves
- 3.2.5 In respect of aggregate imports and supplies to West Sussex, there also appears to be a clear correlation in the above groupings with the intended customer market areas for those materials (i.e. the main populated areas).

### 3.3 Current Levels of Throughput at Wharves & Railheads

- 3.3.1 Tables 2 & 3 in section 2 give a good indication of the overall total levels of aggregate imports into West Sussex via the wharves and railheads during the years indicated – up to 2006 in the case of marine-dredged aggregates. Historic and latest information on totals for non-aggregate minerals and waste were either not available or of limited value.
- 3.3.2 For the purposes of obtaining a reasonable estimate of the current levels of throughput of aggregates without compromising confidentiality at each site, operators were asked in the questionnaire to indicate their average annual aggregate throughputs for the last 5 years. The figures for each site have also been combined to provide sub-totals where possible and are produced in Table 6 below:-

**Table 6: Average West Sussex Annual Wharf & Railhead Aggregate Imports by Groupings – 2002/2006 ('000 tonnes)**

Import Type	South West	South East	North East	Sub Totals
Marine Dredged Sand & Gravel	(c)	760 (e)	n/a	(c)
Hard Rock Imports by sea	(c)	140 (e)	n/a	(c)
<b>Wharf Sub Totals</b>	<b>200 (e)</b>	<b>900 (e)</b>	<b>Nil</b>	<b>1,100 (e)</b>
Sand & Gravel rail imports	Nil	n/a	55 (e)	55 (e)
Hard Rock rail imports	40 (e)	n/a	650 (e)	690 (e)
<b>Rail Sub Totals</b>	<b>40 (e)</b>	<b>Nil</b>	<b>705 (e)</b>	<b>745 (e)</b>
<b>Totals</b>	<b>240 (e)</b>	<b>900 (e)</b>	<b>705 (e)</b>	<b>1,845 (e)</b>

Note: Figures above reflect questionnaire responses – including some individual site estimates ('e') where questionnaire response was incomplete/not provided or confidential ('c').

### 3.4 Comparisons of Throughputs at Wharves and Railheads since c.1990

- 3.4.1 Marine-dredged aggregate imports are specified in Table 2. Table 3 provide some overall figures on hard rock imports to the wharves, but information on hard rock imports to the railheads on a county basis are not available.

<sup>1</sup>AEA Technology (03.06.05) – “Feasibility of Disposing of Waste by Rail” in West Sussex

- 3.4.2 It is most likely that total annual hard rock imports into West Sussex between 1990 & 1996 were between 0.7 & 0.9mt. If so, then total aggregate imports during the early 1990s probably exceeded 1.7mt each year and on two occasions exceeded 2.0mt.
- 3.4.3 Comparisons of Table 6 figures with Tables 2 and 3 have revealed the following characteristics:-
- annual marine-dredged aggregate imports in the peak production years around 1990 were on average some 100 to 150% more than in recent years;
  - in 1996 annual hard rock aggregate imports by rail & sea still remained below the volumes of marine-dredged aggregate imports;
  - annual marine-dredged aggregate imports are now averaging 10 to 20% less than the 1996 import figures; and
  - annual hard rock aggregate imports now appear to be averaging about 1mt – some 30 to 40% more than 1996.
- 3.4.4 It would be reasonable to deduce from the above comparisons that current crushed rock imports may be replacing some of the marine-dredged aggregate imports as a preferred choice by some operators (see paragraph 4.1.2 later) – which may also be influenced by the fact that replacement land-won planning permissions for sand & gravel continue to fall in number in West Sussex and the rest of the South East.

### 3.5 **Potential Maximum Throughputs for Existing Wharves & Railheads**

- 3.5.1 It is evident from the Crown Estate statistics set out in Table 2 that almost all of the existing wharves will have significant additional capacity on existing sites to improve throughput of marine-dredged aggregates.
- 3.5.2 Wharves in Shoreham Port are fewer in number than they were in 1990 but there is still much more capacity to handle aggregate materials at the wharves in the 'Canal' basin and the Eastern Arm of the port, provided conflicts do not arise with vessel availability and access to the wharves.
- 3.5.3 Two mineral wharves in the Western Arm at Shoreham Port are unlikely to have any significant increased capacity available, whilst vacant land either side of the scrap metal export operations at Railway Wharf West may not become available for wharf-related imports/exports of minerals or waste due to potential conflicts with nearby new residential/commercial developments on the south side of the River Adur and wider regeneration initiatives. The vacant land may be suitable, however, for temporary uses for minerals or waste.
- 3.5.4 The full potential at Littlehampton for marine-dredged aggregate will only be realised if (a) the operator re-establishes a marine aggregate processing plant and (b) navigation/silting problems on the River Arun can be resolved to allow continued access for the smaller dredgers/other vessels.
- 3.5.5 The situation on additional capacity at existing railheads is less clear in that all but one of the sites could probably improve throughput if more train pathways were available for them to exploit when markets were significantly strong. This is really a matter for train and rail track operating companies to address and hopefully resolve in the near future as improvements in the availability of train pathways and wagons are essential for continued rail freight development.

3.5.6 Table 7 below has been based on a combination of aggregate operators responses to the questionnaire forms regarding surplus capacity and also on the previous 'highs' reached during the 1988 to 1993 period demonstrated in Tables 2 and 3. The figures also include some estimates (denoted as 'e').

**Table 7: Potential Maximum Aggregate Imports Capacity at Existing Wharf and Railheads by Groupings ('000 tonnes)**

Import Type	South West (wharf & railhead)	South East (wharves only)	North East (railheads only)	Sub – Totals
–Marine-Dredged Sand & Gravel	*250 (e)	1,615	nil	1,865
Hard Rock Imports by sea	100 (e)	270	nil	370
<b>Sub - Totals</b>	<b>350 (e)</b>	<b>1,885</b>	<b>Nil</b>	<b>2,235 (e)</b>
Rail imports of Hard Rock**	60 (e)	nil	1,130	1,190
Rail imports of Sand & Gravel**	nil	nil	90	90
<b>Sub - Totals</b>	<b>60 (e)</b>	<b>nil</b>	<b>1,220</b>	<b>1,280 (e)</b>
<b>Totals</b>	<b>410 (e)</b>	<b>1,885</b>	<b>1,220</b>	<b>3,515 (e)</b>
<b>Comparison with average totals from Table 6</b>	<b>240 (e)</b>	<b>900 (e)</b>	<b>705 (e)</b>	<b>1,845 (e)</b>

\* Assumes re-establishment of marine-dredged aggregate processing plant & associated activities at Railway Wharf, Littlehampton

\*\* Assumes reasonable increases in freight train pathways (including night time arrivals) & wagon availability

3.5.7 The South West Group figures above indicate that a near doubling of recent year's average aggregate imports could be achievable should the only Littlehampton wharf operator be prepared to invest in new marine aggregate processing plant, etc. at that site. The Chichester railhead facility could become an important location for hard rock aggregate imports to this group area as the majority of hard rock imports still take place through either Shoreham Port or railheads in Crawley.

3.5.8 The South East Group figures from Table 7 indicate that existing wharves at Shoreham Port could potentially more than double recent year's average aggregate imports without significant further investment. Much of the additional throughput capacity is already factored into existing processing plant designs, therefore increased throughput is achievable if no problems are encountered with marine-dredged aggregate supplies/vessels or with some minor adjustments to permitted plant operating hours.

3.5.9 The North East Group figures from Table 7 indicate that there is significant additional capacity at the Crawley and Ardingly railheads, which could be as much as 73% more than the average aggregate imports over the preceding years. The additional capacity may have been larger if all three Crawley operators had separate sidings, but two operators share one siding and both sidings at Crawley feed from the same connection to the London to Brighton main line. Further capacity may be available should more train pathways become available in the future.

## **4. TRENDS AND FORECASTS FOR MINERAL & WASTE MOVEMENTS AT WEST SUSSEX WHARVES & RAILHEADS**

### **4.1 Overall Aggregate Trends over last 20 Years**

- 4.1.1 It is evident from the Crown Estate figures in Table 2 that marine-dredged aggregate imports increased during the second half of the 1980s and peaked during 1989/1990. This period of growth reflected the national trend for aggregate consumption and was further emphasised in West Sussex by the major new infrastructure improvements to the A27 duelling – including the new Brighton by-pass. Thereafter, imports slowed down quickly to around 850,000 tonnes p.a. in 1996 for several years before falling again to around 750,000 tonnes p.a. in subsequent years to 2006.
- 4.1.2 With regard to hard rock imports the trend is similar for the period up to 1989/1990 in that these were the peak years where imports reached c.1mt p.a. These peak levels also reflected the additional demand arising from the local infrastructure projects at that time. Subsequent years witnessed a gradual decline in hard rock imports to c.675,000 tonnes in 1996, but by 2006 imports nearly reached 900,000 tonnes. The latter trend is partly explained by the increased coated roadstone requirements using hard rock aggregates, but is mainly due to greater demand for hard rock in preference to marine aggregate in concrete production (e.g. for special requirements at Gatwick Airport).
- 4.1.3 Current hard rock imports by sea appear to be sourced mainly from Wales, France and possibly Cornwall.
- 4.1.4 Current hard rock rail imports are mainly from Somerset, although a smaller quantity of high PSV (polished stone value) stone originates from Northern Ireland (shipped to Avonmouth Docks and then transferred by train to a Crawley depot).
- 4.1.5 Current land won sand imports are by rail to a Crawley depot and are sourced from Essex.

### **4.2 Other Aggregate Trends**

It is possible to associate a small number of other trends affecting aggregate imports during the last 20 years with the following factors:-

- since the late 1980s, only partial recovery of marine-dredged aggregate imports into the combined ports of Littlehampton and Shoreham has taken place and may not fully recover for many years ahead;
- Shoreham marine-dredged aggregate imports now exceed those through Shoreham in 1986 (even though there are now probably three fewer aggregate wharves now) – but are still well short of the figures achieved in the late 1980s;
- the impact of ‘superquarry’ hard rock imports on many London, Kent and Essex wharf locations, do not appear to have had any effect on West Sussex. This is probably entirely due to the limited draft/size of aggregate vessels which can berth at Littlehampton and Shoreham Ports and also due to the operators established operations at these ports;
- aggregate imports into Littlehampton Port may not involve marine-dredged imports for several more years – if at all;
- Chichester hard rock rail imports have begun in the wake of Littlehampton’s demise as a marine-dredged import facility;

- two 'new' wharf operators have been established in Shoreham in the last 10 years or so;
- one 'new' railhead operator has been established in recent years at Chichester;
- there is evidence of some substantial further investment at Shoreham wharves for improved facilities/throughput since 1990 (i.e. the erection of a new bagging plant at ARC Wharf in 2004, a new coated roadstone plant at Rombus Wharf, new processing/concrete batching plant at New Wharf and a new concrete batching plant under cover at Turberville Wharf);
- there have been two significant investments in railhead facilities at Crawley for enhanced aggregate production – these are a new coated roadstone plant in 1996/7 and a new high throughput concrete batching plant;
- hard rock imports have been exceeding marine-dredged imports for several years now; and
- exports of aggregates by rail do not exist and exports by sea still only occur in small quantities and then very inconsistently – export destinations for sand & gravels have been to Guernsey & Isle of Wight.

#### 4.3 **Trends for Other Minerals and Waste Throughputs**

- 4.3.1 With the possible exception of coal, all other minerals and waste were not being handled through any railhead. Only three wharves handled these bulk materials – all three at Shoreham Port (two mineral import wharves and one waste export wharf).
- 4.3.2 Due to the limited number of facilities dealing with non-aggregate minerals and waste, it is not possible to detect any trends for such operations.
- 4.3.3 However, two of these wharves are in the Western Arm of Shoreham Port. They have both witnessed the arrival of new residential developments in recent years on the south side of the River Adur and immediately opposite their own operations. Further new regeneration developments on the Western Arm north side have been promoted recently and therefore both operators may face an uncertain future.

#### 4.4 **General Forecasts for West Sussex Imports/Exports of Aggregate and other Minerals and Waste**

- 4.4.1 **Aggregates:** The South East England Regional Assembly's forecasts (SEERA report 2004<sup>1</sup>) on primary aggregate imports into the south east for the period between 2001 & 2016 are expected to be as follows:-
- Marine Sand & Gravel – 120mt (annually @ 7.5mt p.a.)
  - Hard Rock (and other non-marine aggregate) – 85mt (annually @ 5.3mt p.a.)
- 4.4.2 The combined total of aggregate import expectations amount to 12.8mt per annum. Therefore, the regional forecasts of growth in aggregate consumption are now much more modest for the immediate few years ahead – with no return expected to the exponential growth predicted and achieved in the late 1980s.
- 4.4.3 The SEERAWP reported returns for 2004 indicated the following make up of aggregate imports into the south east:-
- Marine Sand & Gravel – 5.70mt (c.800k less than 2003)
  - Hard rock by sea – 3.20mt (c.600k less than 2003)

<sup>1</sup> South East England Regional Assembly (report March 2004) - Proposed Alterations to Regional Minerals Strategy

- Hard rock by rail – 3.70mt (c.400k less than 2003)
- 4.4.4 The combined total of 12.60mt is just below (by 0.20mt p.a.) SEERA’s total forecasts – although hard rock imports of 6.9mt did exceed SEERA forecasts of 5.3mt p.a., whilst marine sand and gravel imports of 5.7mt fell below SEERA forecasts of 7.5mt p.a.
- 4.4.5 The SEERAWP 2004 returns also identify West Sussex as a major beneficiary of aggregate imports in relation to other facilities in the south east. These are made up as follows:-
- Marine Sand & Gravel – 0.72mt (approx.13.0% of south east total)
  - Hard rock by sea – 0.43mt (approx. 1.3% of south east total)
  - Hard rock by rail – 0.75mt (estimated) - (approximately 20% of south east total)
- 4.4.6 The combined total estimated is 1.90mt of imported aggregates by sea/rail into West Sussex in 2004 (note: this figure almost matches the average total in Table 6 above of 1.845mt). The total represents 15.1% of the actual 2004 total SEERAWP imports above, and 14.8% of SEERA’s total annual forecasts. However, as land-won sales of sand & gravel in West Sussex have now fallen (section 1.3.7 above) from 1mtpa in 2001 to 573,000tpa in 2006 (with much of this based on soft or fine sand production) with few new major planning permissions likely to be generated in the next few years, it is likely that West Sussex will see greater emphasis placed on coarse aggregate imports.
- 4.4.7 **Other Minerals:** No information on the forecast of other minerals imported to or exported from West Sussex has been obtained for this study, but has been assumed for now not likely to exceed current levels of activity for imports at only two wharves in Shoreham only.
- 4.4.8 **Waste:** In a recent AEA 2007<sup>1</sup> report on waste forecasts for WSCC covering the period from 2007 to 2021, the projected estimated arisings of controlled waste are expected to be 38.1mt.of which possibly 15.5mt is estimated to be landfilled – assuming no change to current waste management procedures. This report further identifies that landfill capacity for various wastes in West Sussex is already low and likely to become exhausted within a few years unless new permissions are granted. It does explain various options available to WSCC to help it meet national targets for the significant reduction of waste to landfill and these include a requirement to increase recycling and treatment of waste by way of new technologies including:-
- MBT – Mechanical/Biological Treatment;
  - EfW – Energy from Waste.
- 4.4.9 However, as the required facilities based on these new technologies are likely to use only waste produced within West Sussex, it is difficult to see where wharves and railheads will feature in the West Sussex waste strategy for this period. This is already evident in the lack of sites promoted by waste operators in their submissions to WSCC for the recent Waste Local Plan (Revised Deposit Draft July 2004 - see policies/sites in Appendix 6) and subsequent WSCC waste consultation exercises to date.

#### 4.5 **Key Factors on Aggregate Import Forecasts in West Sussex**

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<sup>1</sup> AEA Energy & Environment (October 2007) – “Waste Forecasts for West Sussex 2007-2021”

There are a number of factors which are likely to influence forecasts on future aggregate import volumes into West Sussex and how the county will be able to cope with future demand where needed over the next 15-20 years. Such factors include:-

- West Sussex's ability to tranship imported aggregates within its own boundaries or beyond by sea and rail (note: transhipments of aggregate from sea to rail cannot realistically take place as either a new line or other infrastructure improvements would be required at Shoreham - which are both unlikely);
- Significant road improvements from the A27 into the Port of Shoreham;
- The possibility that Littlehampton Port will never again import marine aggregate for processing due to economic or navigational factors;
- Continued depletion rate of West Sussex's existing land-won aggregate reserves;
- Ability of West Sussex's neighbouring authorities to provide their own mineral resources or aggregate import facilities;
- Continued expansion of foreign aggregate imports by sea;
- Delays in grant of necessary Crown Estate Licences for marine-dredged sand and gravel extraction;
- Potential impact of possible closures of one or more of the existing wharf facilities in the Western Arm at the Port of Shoreham;
- Current priority for improvements to rail freight pathways and rail wagon numbers do not materialise;
- Priority being given in development plan documents or by landowners to alternative developments which will exclude aggregate import facilities;
- Whether other non-port related wharf sites in the Port of Shoreham could be brought back into use for mineral/waste uses; and
- Future investment strategies of major marine aggregate operators – including replacement of existing ageing dredger fleet with larger vessels to 9,000 tonne capacity (Note: these will be too large for navigation into Littlehampton and the wharves in the Western Arm at Shoreham – other wharves at Shoreham may also be too small).

## 5. CLASSIFICATION OF WEST SUSSEX WHARF & RAILHEAD FACILITIES

5.1 Each existing wharf and railhead facility in this study has been classified into various categories according to type & volume of minerals and waste handled. The production ranges selected for each category also reflect the existing site area, expansion possibilities on site and likely ability to increase onward aggregate transshipment facilities. As rail depot facilities do not achieve the full class ranges of wharf facilities, they have been set different ranges for the medium/large classes. The classifications are outlined in Table 8 below and are also identified on Figure 1:-

**Table 8: Classification of Wharf & Railhead Facilities**

Wharves		Railheads		Sites
Class	Range*	Class	Range*	
1	Small - up to 0.1mtpa			LDF, Railway (West), New & Free Wharves (Shoreham)
2	Medium, 0.1 – 0.35mtpa			Halls, Rombus & Turberville Wharves (Shoreham). Railway Wharf (Littlehampton)
3	Large, 0.35 – 0.75mtpa			None
4	Major – 0.75mtpa or more			ARC Wharf, Shoreham
		1	Small – up to 0.1mtpa	Chichester
		2	Medium, 0.1 – 0.25mtpa	Crawley (Days) & Ardingly
		3	Large – 0.25mtpa or more	Crawley (Cemex) & Crawley (Yeoman)
* Based on estimated potential and <b>not</b> current capacity				

- 5.2 Table 9 identifies ‘medium’ as the most common classification of wharf facility – having four wharves (one in the South West & three in the South East).
- 5.3 The next most common category is ‘small’ – also having four wharves (all in the South East).
- 5.4 There are no ‘large’ wharves but one ‘major’ wharf is located in the South East.
- 5.5 The railheads are split more evenly with one ‘small’ (in the South West), two ‘medium’ and two ‘large’ (all four in the North East).
- 5.6 It should be noted that classifications of some of the sites in Table 8 are based on their estimated potential capacity and not just their current throughputs.

## **6. CONSTRAINTS ON THE DEVELOPMENT OF EXISTING AND POTENTIAL NEW WHARVES & RAILHEADS IN WEST SUSSEX**

### **6.1 Constraints on Existing Wharves and Railheads**

6.1.1 As part of the questionnaire survey, operators were asked to provide the most likely factors to influence the success or otherwise of increasing throughputs at their sites – discounting competition/market forces. A number of relevant factors were raised and some are considered to be significant constraints on the expansion of sites. Some further constraints were highlighted by operational managers during the site visits of mineral operations, but no questionnaire was returned or site visits/discussions held with waste operators at the two wharves identified.

6.1.2 Individual site specific constraints cannot be reproduced here for confidentiality reasons, but the general nature of most constraints are set out below:-

- lack of space as the site/wharf/railhead is too small for large vessels/trains and/or too small for the erection of processing plant with high throughput, material storage or related facilities. Therefore, it is most likely that Class 1 & 2 wharves have limited or no opportunity of achieving the same level of throughputs achieved at Class 4 sites;
- inability for operators to acquire more/adjoining land due to landowners redevelopment aspirations (including land controlled by the Port authorities) or the required land is in competitors' ownership;
- no long-term security for occupation on-site for leaseholders;
- no opportunity for wharves to link into rail network;
- lack of deep water and no opportunity to establish extended wharf/jetty loading facilities into deeper water;
- lack of ongoing riverbed silt clearance operations to maintain navigational access to wharves;
- site not likely to work 24 hours/day for planning/other reasons;
- lack of smaller ships/barges/trains/wagons/train pathways;
- proximity of adjoining residential developments;
- shared access with other wharf/depot facilities;
- access onto public highway and lack of better road routes to site location; and
- proximity of high value nature conservation/landscape interests.

6.1.3 In terms of total mineral/waste handling capacity at West Sussex ports, the most likely factor from the above list which could significantly increase material volumes handled at existing wharves, lies with their ability to carry out onward transshipments. However, major obstacles to transshipments of minerals/waste have been identified:-

- West Sussex may never have transhipped minerals/waste in any significant quantities by water/rail from the Ports to other destinations in West Sussex;
- The Port of Shoreham had its only rail connection (associated with the Upper Beeding Cement Works) removed several decades ago – no opportunity now exists for such a rail connection; and
- Littlehampton Port has a rail siding/terminal in close proximity to Railway Wharf. An overhead conveyor link to this rail terminal may have once been considered, but the siding appears to have been converted for another railway related use. Irrespective of this there now seems to be a lack of interest in re-establishing operations at Littlehampton anyway.

- 6.1.4 It therefore appears unlikely that any existing wharves will be able to connect to the rail network for onward transhipments of imported aggregate and other minerals/waste in the foreseeable future. However, onward transhipment of aggregates by sea for export may be possible at one or two sites not already practising this activity provided at least one of the constraints identified above can be overcome.
- 6.1.5 In addition to the physical/practicable constraints to existing operations identified in sections 6.1.1 & 6.1.2 above, there are two other material factors which have an effect on the expansion at both ports, being:-
- **Port/Harbour Authority Rules/Requirements:** All activities at both ports in West Sussex are monitored/controlled by Port/Harbour Authorities who set their respective guidelines for each port user/occupier. Separate rules and procedures may have to be followed for wharf operations (e.g. limited berthing times) in addition to normal planning and other site regulations. Major expansion may not be possible where such uses may have an adverse impact on other port users
  - **Other Development Pressures:** Since the early 1990s, the Western Arm of Shoreham Port has been under pressure by various landowners/developers/strategic planners to reduce the dependence of old port/industrial uses. New residential developments have emerged on the south side – immediately opposite three existing mineral/waste wharves. There is likely to be more intensive pressure on these existing wharves and their neighbours in the future – particularly if Government backed regeneration proposals gather significant momentum (assisted by/through SEEDA for new and enhanced mixed-use schemes). If this happens then these three wharves are likely to go from the Western Arm at some stage of the redevelopment scheme. Their re-establishment in the Eastern Arm/Canal of Shoreham Port must be considered doubtful unless opportunities arise over the next few years through comprehensive regeneration proposals.

## **6.2 Constraints on Potential New Wharves and Railheads**

- 6.2.1 In the existing MLP, four new railheads/sidings (Chichester, Littlehampton and two at Horsham) were identified for safeguarding. All of these sites appear (from plan, aerial photos and external site visits) to have limited land availability and several other constraints (identified in section 6.1 above) for the necessary processing, storage, transfer and related activities associated with minerals and/or waste to develop as significant facilities/operations.
- 6.2.2 Of these four sites, only Chichester has come forward to date as an operational unit and appears to import only crushed rock by rail for sale by road, with no other related facilities/activities yet developed.
- 6.2.3 The Littlehampton rail siding appears now to have been dedicated for other rail-related use and is most unlikely to be developed for a major minerals/waste facility due to its very limited size, restricted access and other constraints within section 6.1 above. This site is probably no longer worth safeguarding if other land is not available next to it.
- 6.2.4 The Horsham rail sidings have been potentially available for many years prior to the MLP. They may on plan appear to offer two alternatives for railhead facilities, but the lack of real interest in developing either of these sites is indicative of a number of constraints identified above, the sensitivity of the town centre location (residents/access/roads) and the proximity of three established competing aggregate depots at nearby Crawley. It may still be possible to develop a small aggregates depot here on the larger of the two sites, but safeguarding would need to be reviewed in the context of any alternative proposals coming forward to expand

existing capacity at Crawley or development of a new site elsewhere yet to come forward (see potential Warnham site in section 7.3.4)

- 6.2.5 The only new wharf identified in the MLP is located on the west bank of the River Arun at Littlehampton – at the end of Ferry Road. This is a small site and appears to be currently occupied for mobile homes/caravans. Although the site has some river frontage, there is little evidence of previous wharf/jetty facilities and conflicts would probably occur with the adjacent retractable footbridge and other vessels wanting access to the wharf opposite. Many of the constraints identified in section 6.1 would affect this site and it is now very unlikely that it could be developed as a viable mineral/waste facility.
- 6.2.6 There are still some vacant or underused wharves at Shoreham Port – particularly in the Canal basin area. Three of these wharves were once used for aggregate imports – being Kingston, Britannia and Halls Ferry Wharves (the latter two now fall within Brighton & Hove Council area). However, these sites are small and not likely to feature in the future for new aggregate or other minerals/waste wharf operations due to some of the factors identified in section 6.1.5 above.

## **7. ADDITIONAL SITE SAFEGUARDING PROPOSALS AND MEASURES FOR WEST SUSSEX WHARVES & RAILHEADS**

### **7.1 Existing MLP Site Safeguarding Policies and relevant (draft) WLP Policies on Wharves & Railheads**

- 7.1.1 The previous sections of this study have provided a good understanding of West Sussex's historic and current role in meeting its own needs for mineral and waste facilities at wharves and railheads – and also meeting some of its neighbours needs (i.e. Brighton & Hove, East Sussex & Surrey County Councils).
- 7.1.2 The combination of West Sussex's existing wharves and railheads has changed relatively little in overall terms since 1990. Many of the sites that were operational in 1990 remain operational now, although Littlehampton has seen a significant demise in marine aggregate landings and this situation may remain for some years ahead.
- 7.1.3 Previous mineral imports (c.1989/90) have been at much higher throughputs than those achieved in recent years, using much the same existing facilities. This clearly demonstrates significant spare capacity for imports and operators are already well placed to react immediately to any moderate increases in demand. Exports of minerals by sea have always been very low by volume and usually only based on marine aggregate brought into West Sussex wharves and processed for sale/distribution by barge.
- 7.1.4 The situation for waste imports/exports through wharves and railheads is a lot simpler in that no waste imports have been identified (other than pulverised fuel ash (PFA) imports into LDF Wharf, Shoreham), and only two waste operators identified using wharves for exporting scrap metal by sea. There is no evidence to date that this will change in any significant way.
- 7.1.5 In the current MLP, WSCC has already imposed several safeguarding policies (policies 37 to 41 – see Appendix 5) in recognition of the importance attached to their wharves and railheads.
- 7.1.6 These five MLP policies principally seek to protect existing wharves and railheads but not all current operating sites are listed or included on the MLP maps. Safeguarding policies on the potential 'new' sites (i.e. one wharf and three railheads) are also included, but only one railhead has since become an operational unit.
- 7.1.7 In the 2004 (Revised Deposit Draft) of the West Sussex WLP, WSCC have included some policies which are intended to encourage the use of rail/water for the transfer/transport of waste. To date though, this study has identified that no waste is currently utilising the rail network and only scrap metal waste operations take advantage of the wharves – both for export purposes.

### **7.2 Review of Site Safeguarding for Existing Wharves and Railheads**

- 7.2.1 The total figures in Table 7 demonstrate that spare capacity exists in all group areas for aggregate imports. Furthermore, the South East group has more capacity than the other two groups combined. Such features are a positive indicator to WSCC that its ports/railheads are capable of reacting favourably and quickly to significant increases in demand for aggregate imports in the short term.
- 7.2.2 National and regional policy guidelines would tend to favour the safeguarding of all existing operating wharves/railheads and afford protection to other sites which could be used for the

importation/transfer/export of minerals and waste. However, as the extent of spare capacity at each individual wharf/railhead in West Sussex varies considerably based on historic outputs, it could be conceivable that some of the smaller wharf facilities were less crucial to overall West Sussex medium/long term objectives for minerals/waste.

- 7.2.3 The questionnaire responses indicated operators' concerns about general constraints that may affect existing sites and their expansion potential - although no operator identified any specific expansion proposals under current market conditions at any of their sites. The previous 16 years have seen a disappearance of working wharves and their partial replacement with new facilities at three different locations. The creation of new replacement wharves is now considered more difficult than before as potential wharf sites have been lost to alternative developments in the intervening years. Furthermore, the new occupants of the adjacent new developments often become the next complainants/objectors to the ongoing use of remaining wharf & railhead sites.
- 7.2.4 Adjoining land may or may not be under the control of the operators, but if this land is vacant or underutilised, WSCC should consider adopting supplemental policy safeguarding measures to these land areas to ensure the wharves & railheads are not directly affected by any subsequent uses on these sites. Such policies are often referred to as the formation buffer zones in planning terms (see later in section 7.3).

### 7.3 **Further Safeguarding of Potential New Wharves & Railheads**

- 7.3.1 The existing WSCC MLP identified one new wharf and 4 new railheads. These were shown on the Inset maps contained in the MLP. Out of these, only the Chichester railhead has proceeded in the intervening period to become an operational facility.
- 7.3.2 In respect of the remaining sites, this study has previously explained that:-
- the potential new rail siding and wharf at Littlehampton are not likely to be developed or become operational at all for mineral/waste facilities; and
  - the two potential sidings at Horsham are also not likely to be developed in the short term at least, and its long term usage may only ever be as a very low key activity with minimal imports and little opportunity of related facilities.
- 7.3.3 With regard to other potential new sites, it is understood that WSCC have not been approached for any significant new proposals for the importation/transfer/exportation of minerals or waste via wharves/railheads in West Sussex for many years. The sales/production figures previously set out in this study give an important indication that new site investors are unlikely to do this when such spare capacity exists, unless for reasons of replacing depleting land-won operations. This may have been the situation or reason behind the emergence in recent years of new operations at Turberville Wharf and Chichester Sidings by an existing West Sussex-based independent operator.
- 7.3.4 In the course of this study only one new potential site for the importation of aggregate is specifically identified – this being in the Warnham Brickworks area near Horsham (see Figure 1 and Plan R5). It may provide an alternative substitute to Horsham sidings as the brickworks was identified for use in connection with possible rail borne waste transfer operations (AEA 2005 report<sup>1</sup>) on behalf of WSCC and could be capable of establishing new and better importation facilities than the old Horsham sidings. However, as such a proposal may conflict with other redevelopment aspirations of both the landowners and the District Council, it is

<sup>1</sup>AEA Technology (03.06.05) – “Feasibility of Disposing of Waste by Rail” in West Sussex

recommended that WSCC review this potential before any further local planning strategy is adopted for this area.

#### 7.4 **Future Safeguarding Measures**

- 7.4.1 As stated in the introduction (and following a consultation exercise on proposed changes to the provision of minerals), Regional Planning Guidance for the South East (RPG9) includes revised policies for minerals. Policy M5 directly relates to aggregate imports and it states that:- *“Mineral planning authorities should assess the need for wharf and rail facilities for the handling and distribution of imported minerals and processed materials, and identify strategic sites for safeguarding in their minerals development frameworks. These strategic facilities should be safeguarded from other inappropriate development in local development documents”*
- 7.4.2 Specific guidance on how the Minerals Planning Authority is to achieve the necessary safeguarding from other inappropriate development in local development documents is unfortunately absent from the guidance. The proposals only briefly mention that Mineral, Waste and Local Planning Authorities need to co-operate in the process of safeguarding sites.
- 7.4.3 Quite separate from proposed changes to the mineral policies, RPG9 does require planning authorities to work with Regional Planning bodies, rail & port authorities, Highways Agency etc to identify a strategic freight network which supports the overall freight strategy and promotes the efficient and effective use of road, rail, inland waterways and coastal shipping networks. From this work, a criteria-based assessment framework could be developed which will allow individual authorities to respond to proposals for inter-modal interchange facilities on a consistent basis.
- 7.4.4 Planning authorities are then able to prepare development and/or local transport plans which should include proposals to safeguard sites for rail/wharves/port facilities, and permit development on rail and water freight operations (including associated facilities for modal transfer where these would assist in the development of the strategic freight network.
- 7.4.5 However, due to the nature of existing and future wharves, railheads and related transport links in West Sussex, the County is unlikely to be in a position to handle significant quantities of minerals/waste to the same degree as other planning authorities such as Kent CC. Therefore, West Sussex ports/railheads may not be able to take on a more strategic role intended in RPG9 in terms of being recognised as onward transshipment (or inter-modal) centres in addition to supplying local markets.
- 7.4.6 **Potential Wharf Safeguarding Measures:** In order to establish initial beneficial measures for safeguarding of wharves & railheads, WSCC could adapt safeguarding policies already adopted for wharves, for example, those on the River Thames as part of the London Plan Implementation Report (LPIR). This report was really driven by an identified need to protect all types of ‘London’ wharves (not just aggregate wharves) from irreversible development pressures, as port-related site uses are dependent upon the River Thames being an important artery for freight movements and that port activities are also recognised as being necessary for the continued economic well being of the towns/communities they serve. An extract of the main policies in this plan concerning the safeguarding of wharves is shown in Appendix 4.
- 7.4.7 The LPIR policies relate to a number of issues or key factors to help protect their safeguarded wharves. WSCC could use these factors to assist in the development of its own revised policies for safeguarding wharves in co-operation with the relevant district planning authorities

which contain such wharf facilities. Of particular note is Policy 4C.15 which identifies three main factors as follows:-

1. Redevelopment of a safeguarded wharf should not proceed unless the developer can prove that port-related activities are not viable;
2. Owners/operators of safeguarded wharves which become unviable, should be encouraged to promote permanent alternative uses which are water-based and not irreversible, or temporary uses which can take advantage of the existing port-related facilities;
3. Development proposals on adjacent land (i.e. 'buffer zones') or opposite a safeguarded wharf site should be designed to minimise the potential for conflicts and disturbance, and not compromise the ongoing port-related activities at the safeguarded wharf.

7.4.8 Assessing the Viability of a Safeguarded Wharf: Possible criteria for assessing the viability of wharves are set out in paragraph 4.105 of the LPIR. A summary of the main criteria applicable to West Sussex is set out below (see Appendix 4, paragraph 2.26 for full description):-

The redevelopment of safeguarded wharves should only be accepted if the wharf is no longer viable or capable of being made viable for cargo handling uses. Only exceptional circumstances to this general rule will be permitted. The viability of the wharf will be dependant upon:-

- the wharf's size, shape, orientation, navigational access, rail access, planning history, environmental impact and surrounding land use context;
- the geographical location of the wharf, in terms of proximity and connections to existing and potential market areas;
- the existing and potential contribution that the wharf can make towards reducing road-based freight movements;
- existing and potential relationships between the wharf and other cargo-handling sites or land uses;
- the location and availability of capacity at comparable alternative wharves nearby and the potential loss/impact for onward transshipments to [London] and elsewhere; and
- in the case of non-operational sites, the likely timescale within which a viable cargo-handling operation can be attracted to the site, having regard to the short-term land-use policy, and long-term trade forecasts.

7.4.9 Preferred Redevelopment/Alternative Use Options for Unviable Wharves: Possible criteria for ensuring that developers of a safeguarded wharf try their best to ensure that redevelopment proposals are not completely irreversible, in order to enable a later opportunity to return to port-related activities, are as follows:-

- For permanent alternative uses of the safeguarded wharf, the preferred redevelopments will incorporate water-based passenger transport, leisure and recreation facilities and water transport support facilities. The last preference will be developments which do not need a waterside location.
- For temporary alternative uses of the safeguarded wharf, these should be permitted if the operator/owner can ensure that investment in the wharf is maintained and image problems are minimised for the wider area. Temporary uses must maintain the existing cargo-handling infrastructure to a specified standard, be limited by a temporary permission with a specific end date and priority should be given to uses which require a waterside location.

**7.4.10 Creation of Wharf Buffer Zones and Compulsory Design Features for new nearby developments:** Wharves are increasingly surrounded by different land uses that do not have an industrial or freight handling purpose. Some West Sussex wharves are located close to seaside towns/resorts and are now being overlooked by other permitted developments. The challenge for both the wharf operators and planners is to minimise conflict between the new and the old land uses. This must be met through modifications and safeguards built into new and established developments on land in close proximity to the safeguarded wharves. Examples of the measures wharf operators and planners can deploy:-

- Wharf operators to use latest available technology, equipment and environmental methods to minimise potential impacts on adjoining commercial/residential developments. Some wharf operations could be located within buildings (e.g. at Turberville Wharf).
- Buffer zones adjoining wharf areas could be identified whereby new development within the zone should incorporate designs which take account of the wharf operations to ensure no or minimal potential conflicts. An example of this could be that the design should not display any opening windows facing the wharf.
- Planners (WSCC/District Councils) should ensure that any traffic survey of existing wharves (submitted to support new developments adjacent/close to an existing wharf) are not based on a few weeks only of traffic counts emerging from that wharf, as commercial traffic to/from wharves can vary significantly year on year. Planners would need to consult wharf operators to establish whether greater historic usage had occurred on access routes to their wharf locations. Such information would provide clearer knowledge of potential impacts by new/existing commercial traffic to and from the wharves or on any new adjacent development proposal.

**7.4.11 Potential Safeguarding of Rail Depots:** The potential safeguarding of aggregate rail depot sites would need to follow a similar process described in the preceding sections. However, due to the fewer number of rail depots, their smaller size and that their sites are generally less attractive for redevelopment proposals, it is expected that rail depot safeguarding will generally be less sensitive to local communities, businesses and developers than those for wharves.

## **7.5 Consideration needed for Integration of Transport Modes**

**7.5.1** Irrespective of the indicative comments made in paragraph 7.4.5 above, WSCC may wish to consider (as London did) it's position in respect of promoting the sustainable development of a full range of road, rail and water-borne freight facilities in the County, and seek to improve integration between these modes, including the major rail interchanges and the centres they serve. The development of a preferred rail freight operational/transit system for West Sussex based on safeguarded wharves/railheads could be included in this process. This would require further research and would go beyond the recent waste rail study (AEA 2005 Report<sup>1</sup>) made on behalf of WSCC to date, and involve participation of stakeholders.

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<sup>1</sup> AEA Technology (03.06.05) – “Feasibility of Disposing of Waste by Rail” in West Sussex

## **8. SUMMARY & RECOMMENDATIONS**

- 8.1 Following recent planning guidance, WSCC instructed consultants to carry out a study of wharves & railheads involving minerals and waste to establish their latest features and trends, and then advise WSCC on what measures could be considered to maintain or change the current position for safeguarding these facilities to meet Government guidelines and for the benefit and prosperity of the County and its future generations.
- 8.2 This study has therefore reviewed the existing scenario in West Sussex in terms of sites, material volumes handled, transport modes, planning/environmental constraints etc. and identified trends since c.1990. Further evaluations on the main sensitivities which are likely to affect future operations have also been made.
- 8.3 The overall picture for West Sussex is quite good in that even though there has been a net 'loss' of wharves since 1990, there has still been a slight increase in overall capacity on existing wharves and railheads. This results from the new wharf additions since 1990 and from enhanced throughputs achieved by way of replacement coating/concrete plant investments at Crawley during the 1990s, and a new bagging plant at ARC Wharf, Shoreham.
- 8.4 The geographical spread of the wharf & railhead facilities reflect the main market areas they are intended to serve (i.e. two groups along the south coast and one group in the north east of the County).
- 8.5 Although strategic highway infrastructure improvements have taken place in West Sussex since 1990 (e.g. the A27 duelling/Brighton by-pass), access into several wharf and railhead facilities remains a general cause of local concern if significant expansion to reach full capacity is needed in the future (particularly into the Port of Shoreham and at Ardingly Rail Depot)
- 8.6 Existing facilities are operating at well below their previous best years throughputs. However, to achieve their previous best throughputs, all sales from the facilities will need to be almost entirely by road as existing wharves and railheads have little opportunity to tranship significant materials for onward journeys by rail or sea. For this reason, and the fact that neither Littlehampton Port nor Shoreham can receive vessels much larger than 2,000 & 7,000 tonnes respectively of bulk materials, West Sussex is unlikely to be a major destination for 'Superquarry' aggregate vessels.
- 8.7 West Sussex appears to predominantly serve its own market area and nearby coastal towns into Brighton/East Sussex with imported aggregates into the south coast ports. Hard rock imports into the Crawley/Ardingly rail depots are likely to find more distant markets beyond the county boundary.
- 8.8 West Sussex currently has two wharves importing non-aggregate minerals and two operations exporting scrap metal waste in the Port of Shoreham. This situation is unlikely to increase significantly in the foreseeable future, but one 'waste' wharf and two 'mineral' wharves may be under pressure to close should regeneration aspirations materialise for the Western Arm of the port.
- 8.9 Three of the potential new sites safeguarded in the WSCC MLP have not yet come forward into operational use. Two of these sites (both in Littlehampton) are most unlikely to be developed for a variety of practical or viability reasons. Their continued future safeguarding is,

therefore, no longer considered necessary. Safeguarding at Railway Wharf, Littlehampton could be extended to include the existing roadstone coating plant site shown on Plan W4.

- 8.10 **Therefore, based on the above points, it is recommended that WSCC should (a) review its current MLP safeguarding policy wording and proposals and (b) assess potential safeguarding measures for all existing wharves & railheads (along the guidelines suggested in Section 7 of this Study) subject to:-**
- **less priority status being afforded to the wharves in the Western Arm of Shoreham Port;**
  - **the removal of current WSCC MLP safeguarding to the proposed Littlehampton Sidings site; and**
  - **the removal of current WSCC MLP safeguarding to Site No.11, the proposed wharf on the western bank at Littlehampton Harbour.**
- 8.11 The remaining potential site at Horsham Sidings is also now unlikely to be used as a major site for the importation/processing of aggregate and/or related activities. It could be downgraded to a smaller site activity for low volume aggregate imports only (possibly for smaller trains not requiring major signalling/infrastructure improvements to the sidings), with more modest vehicle movements associated with it. The need for continued safeguarding at Horsham should be reviewed if expanded capacity is achieved at Crawley or an alternative nearby site (e.g. Warnham Brickworks area) could be brought forward through the MWDF process.
- 8.12 Any other sites that may come forward and are considered worthy of inclusion in the MWDF consultation process, should also be considered for safeguarding, initially on a temporary basis.
- 8.13 **Therefore, in the second instance, it is recommended that WSCC should undertake a feasibility study on the suitability of, and need for, a site in the Warnham Brickworks area (or other suitable sites that may come forward) as a railhead to replace the Horsham Sidings allocation in the MLP. WSCC could consider temporary safeguarding measures at Warnham (or other suitable sites) in advance of formal safeguarding through the MWDF process.**
- 8.14 Possible safeguarding measures could be based on the format described in section 7 of this study. However, WSCC should obtain views on the approach to safeguarding measures in the specific areas identified herein.
- 8.15 **Therefore, in the third instance, it is recommended that WSCC should proceed with consultation to establish overall views on future safeguarding measures based on, or as alternatives to, the initial measures outlined in this study.**
- 8.16 Furthermore, section 7.5 herein has identified that WSCC should probably be looking beyond the scope of this study to promote more sustainable development of a full range of road, rail and water-borne freight facilities in the County, and seek to improve integration between these transport modes, including the major rail interchanges and the centres they serve.
- 8.17 The development of a preferred rail freight operational/transit system for West Sussex based on safeguarded wharves/railheads could be included in this process, together with opportunities sought for possible multi-use sites (i.e. mineral and waste) where single use sites are cost prohibitive. Ultimately, new policies could then be established to support any

conclusions made from this process, which could include the use of CPO powers by the County to acquire any necessary land needed for new essential infrastructure associated with suitable sites where proven to be required in the County/public interest.

- 8.18 **Therefore, in the fourth instance, it is recommended that WSCC should give further consideration to a more extensive study on the full range of road, rail and water-borne freight facilities in the County. The study should be used to seek a greater understanding of existing relationships and likely future trends so that more opportunities for larger and more efficient systems and sites for freight movements can be considered before such opportunities are lost to other forms of development.**

## **APPENDICES**

### **APPENDICES 1- 4**

#### **Recent Reports Concerning Aggregate Imports into West Sussex**

As stated in the introduction to this study, a number of reports have been completed in recent years which either directly or indirectly refer to aggregate imports into West Sussex. For the purposes of this study, Land & Mineral Management Ltd. have summarised the most applicable sections of these reports as they relate to West Sussex and are shown in chronological order in Appendices 1-4 herein.

- 1 SEERAWP 02/02 – Survey of Marine Wharves & Rail Depots in the South East – their capacity for use by the Aggregates Industry
- 2 SEERA – Aggregates Monitoring Report 2004
- 3 BGS (Commissioned Report CR/03/041/N) – The Role of Imports to the UK Aggregates Supply
- 4 London Plan Implementation Report (LPIR) – Safeguarded Wharves on the River Thames

### **APPENDIX 5**

#### **Principal WSCC Minerals Planning Policies**

- 5 WSCC Minerals Local Plan (MLP2003) – relevant policies

## Appendix 1

### South East England Regional Aggregates Working Party (SEERAWP 02/02) – Summary of “Survey of Marine Wharves and Rail Depots in the South East Region – their capacity for use by the Aggregates Industry” - published December 2002.

This survey was conducted in 2001/02 and in preparation for the review of the impending review of MPG6 (Minerals Planning Guidance: Guidelines for Aggregates Provision in England, April 1994) and the South East region's own aggregate needs in the medium/long term. The region consists of seven counties and twelve unitary authorities.

The purpose of the survey was to provide up to date regional information on wharves and rail depots, their capacities and the difficulties they are facing for the future supply balance to be taken into account between land won minerals and imports by rail or sea.

The data obtained updated a previous survey in 1991 covering a larger south east area with similar objectives (Note: which is not included here though).

The SEERAWP study report does identify a number of important facts, issues and expansion constraints for the future on the South East Regional wharf and rail import facilities. Although the West Sussex area is only part of the overall area covered by the SEERAWP study, the latter does have some important facts/issues which will be equally applicable or of relevance to the new West Sussex study.

The main items from the SEERAWP Survey affecting West Sussex (as viewed by LMML) are summarised below:-

#### Aggregate Wharves (42 in region)

- Wharf Areas – the larger wharves are mainly in Kent & Medway, with most of the smaller wharves along the south coast in this region. The 2 largest wharves are over 40 acres in size and reflect their combined wharf and rail usage with additional facilities for the use of imported aggregates – *neither of which are in West Sussex*
- Equipment/Plant – most responses refer to self-discharging dredgers being used with processing being carried out on the wharf. Higher plant throughputs of 250-400 tonne per hour or more were achieved at the larger wharves – *probably in Kent and Medway*.
- Water Depth – only 6 wharves were identified with more than a 10 metre draught at high water – *neither of which would be in West Sussex*.
- Vessel Size – 20% of wharves could accept vessels up to 7000 tonne capacity (*Note: these are probably mainly in Kent and Medway, but could include one wharf at Shoreham*). Only one wharf is able to accept the largest vessel of 49,000 tonnes (*probably Grain Terminal, Medway*).
- Aggregate landed and transhipped by sea – being 5% from one wharf used (*probably Grain Terminal*).
- Aggregate landed and transhipped by rail – only 3 wharves are served by rail with just 2 of these using rail for exports (*probably Grain Terminal and Cliffe Marshes*), and one of these importing secondary/recycling aggregate by rail (*probably Grain Terminal*). The figures stated for onward transhipment by rail from these two wharves were 0.5 million tonnes and represented 7% of the total volumes handled at wharves.
- Pressure from redevelopment or adjoining land development – operators of wharves which are occupied but not owned by the operator clearly have less long term security. This becomes more apparent when the value of redevelopment becomes more valuable to the landlord or if the local authority wish to re-designate the planning status of the general area in which the wharf is located. One site had been served with a CPO by a local authority (*Note: RMC at Rochester, by Medway Council*), and four other sites were under threat from redevelopment at this time
- Local authority restrictions – One wharf had a temporary permission for use of their wharf. Four wharves experienced weekend working restrictions and two more have other voluntary planning restrictions

- Wharf capacity – the survey returns indicated overall aggregate handling capacity for all wharves was 20% more than the volume of material handled in 2000. Four new wharves were established since 1991 (*probably all in Kent*) and one more planning permission granted (*in Kent*) – the combined total capacity of these 5 wharves would produce another 1.3 million tonnes each year.

#### Rail Depots (24 in region)

- Depot areas – 60% of these were 5 acres or less, 25% less than 2 acres and 25% more than 10 acres in extent (*probably none in West Sussex*)
- Site ownership – few operators own their sites – most being owned by Railtrack and leased to EWSR (English Welsh & Scottish Railways).
- Equipment/plant – 40% of sites have bottom discharge systems and small sites tended to rely on hydraulic excavators or grabs 30% of sites have asphalt plants
- Train load capacity – 60% of sites handle trains with payloads of 1400-1900 tonnes net, 25% at 635 tonnes net, whilst only one site handles trains of 2900 tonnes net
- Access – the availability of train paths was referred to as a problem at a third of the returns. Road access was considered a constraint at 20% of returns.
- Local authority restrictions – 40% of depots refer to constraints on hours of operation – mainly at weekends (*some in West Sussex*). This was becoming a problem to operators as they were increasingly being asked to provide out of hours/night time contracts.
- Present capacity – the returns indicated that only 30% of depot capacity is being used. The two railheads at the wharves (both in Medway) have a combined capacity of 4 million tonnes, but use only 20% of this total.
- Capacity increase since 1991 – a permanent increase of 250,000 tonnes was made at one site (*probably in Kent*)
- Possible future capacity increases – 1 depot planned a 200,000 tonne expansion by 2006. Another operator had a combined potential expansion by 0.5 million tonnes at two sites but no plans to do so. An increase of over 700,000 tonnes was due to be made in 2001 at another site, but for the duration of one contract (*probably in Kent*). Two permissions could be implemented and the outcome of an appeal was awaited on another site (*neither in West Sussex*).

## Appendix 2

### Summary of South East England Regional Assembly Aggregates Monitoring Report 2004 (AM2004)

This is the latest Aggregate Monitoring Report for the South East Region. It has been prepared from return forms (which contain annual sales/production figures on various aggregate etc.) made to Mineral Planning Authorities by operators of quarries, wharves and rail depots. Some of the information therein included estimates where identified. This document therefore has direct relevance to this new study where the information can be attributed to West Sussex

The report presents an opening summary of their findings for the South East, from which the main points (*in the opinion of LMML*) are identified for background use in this West Sussex study as follows:-

#### Landings of Marine-dredged sand and gravel:-

- The Crown Estate figure of 5.7 mt shows a 900,000 tonne fall in the volume of landings compared with the figure for 2003. However, the AM2004 survey recorded 6.6 mt i.e. landings at the same level as 2003.
- The contribution of marine dredged aggregate is maintained at over one third of the South East primary aggregate supply.

#### Landings of Sea-borne crushed rock:-

- Landings of crushed rock at 3.2 mt are some 600,000 tonnes less than last year.
- Over 75% of crushed rock continues to be landed at wharves in Kent and Medway Rail Aggregate Depots.

#### Rail Aggregates Depots:-

- Sales from 18 active depots were the same as for last year, over 4mt in total, of which over 90%, some 3.7mt, was crushed rock imports.

Other notable information in AM2004:-

There were 37 wharves in the region handling aggregates in 2004. Marine dredged sand and gravel was handled at 24 wharves, 19 handled crushed rock, and both aggregates were landed at 6 wharves. Eight wharves handled no aggregates in 2004, but were still capable of being operational, or had not yet become operational. Two wharves closed in 2004, but two other wharves were opened.

#### Wharf Operating Statistics (sea-dredged sand and gravels):-

- Crown Estate annual data (in Table 8) indicate landings of marine dredged sand and gravels between 1995 and 2004 to West Sussex, which have gradually fallen from 1.04 mt to 0.72 mt in the 10 year period. Two years showed modest recoveries but have never exceeded 1 mt since 1995.
- All of this aggregate was sold as construction sharp sand and gravel.
- 230,000 t of the landing figures were in stockpiles at the wharves.
- The vast majority of landings were sea dredged aggregates sourced from either the North Sea or the English Channel.
- Only 63,000 tonnes of sand and gravel landed at the wharves originated from land won sources.

#### Wharf Operating Statistics (sea-borne crushed rock):-

- SEERAWP/AM2004 survey data indicate landings of crushed rock between 1994 and 2003 to West Sussex were not stable as landings more than quadrupled in 2000 (to 365,000 t) from 1997 - when only 86,000 t were landed. The figures have since dropped back to only 43,000 t. for 2004.
- West Sussex imported crushed rock from Ireland, Wales five European countries and China.
- Over 80% of all the regions crushed rock imports were sold for roadstone, railway ballast, concrete aggregate, armourstone, other screened and graded aggregate, construction fill (560,000 t) with some 63,000 t held in stockpiles on site.

Rail Depot Operating Statistics:-

- 17 of the 18 active rail depots import crushed rock.
- Crushed rock sales from rail depots in the region were 3.7 million tonnes in 2004 (the same as for 2003). Some 72% of sales (2.7 mt) were for roadstone, railway ballast, concrete aggregate, armourstone, other screened and graded aggregate, construction fill and some 73,000 t remained in stockpiles.
- Sand and gravel was handled at 5 of the rail depots.
- Sales in 2004 were over 450,000 tonnes – almost all sharp sand and gravel. Stockpiles at the depots were negligible

Secondary/Recycling Aggregate Activities at Wharves and Rail Depots:-

- The AM2004 survey returns show that 6 wharves in the region were recycling aggregates. Three of these were recycling both C&DW and industrial/mineral waste, 1 just C&DW, and 2 just industrial/mineral waste.
- No statistics were given for secondary aggregate handling at wharves or rail depots.

### Appendix 3

#### Summary of British Geological Survey (Commissioned Report CR/05/041N) – The Role of Imports to UK Aggregates Supply

This report was produced by the British Geological Survey for the Office of the Deputy Prime Minister (Minerals and Waste Planning Division). It forms one of a series of reports, leaflets and mineral planning factsheets prepared under the ODPM/BGS Joint Minerals Programme that seeks to present factual and authoritative data on the extent, availability, production, trade and use of minerals that are of economic importance to the UK. The report was prepared on the basis that imported aggregate figures were based solely on those aggregates extracted on foreign soil and transhipped to the UK (*i.e. sea dredged materials extracted from British waters and aggregate from Scottish quarries are not considered 'imports'*).

The report presents an opening summary of their findings, from which the main points for background use in this West Sussex study are as follows:-

- Annual consumption of primary or natural aggregates in Great Britain is about 204 million tonnes (made up of 34% land won sand and gravel, 6% marine-dredged sand and gravel and 60% being crushed rock from various sources)
- The UK is a net exporter of primary aggregates (due mainly to landings of marine sand and gravel in Europe of 6.1 million tonnes in 2003 and exports of Glensanda crushed rock/armourstone amounting to an estimated 3.2 mt, against apparent imports of similar materials estimated at 2.6 mt in 2003 – mainly from Norway)
- Imports were currently estimated to be only 1% of the total aggregate demand in Great Britain
- Preliminary HM Customs & Excise statistics (2004) indicate that UK imports of aggregates have increased to 3.1 mt and total exports have increased to 12.2 mt, of which 4.4 mt was crushed rock

The report excludes much information about sea-dredged aggregates, but does contain other information of relevance to the West Sussex study as follows:-

#### Foreign Aggregate Imports to West Sussex:-

- A breakdown analysis of the 2004 figures (in Table 2 of the report), identified Norway as the principle foreign source of aggregate supplies into the UK – Norway being credited with a total of 1.65 mt (*i.e.* 53 %) out of the total 3.1 mt. In 2002 the respective figures were 0.94 mt (*i.e.* 47%) out of a total 2.0mt. Norwegian aggregate imports are predominantly crushed rock/granites, with some land won sand & gravel
- Table 5 indicates that Norwegian hard rock aggregate imports to Shoreham in 2001 were 18,613 t, nil in 2002 & 27,810 t in 2003
- Crushed rock from Norway is landed by self-discharging vessels of between 10,000-27,000 tonnes, but armourstone is usually landed from barges of between 1,500-20,000 tonnes and then usually direct onto beach defence works/sites (and not established marine wharves). The armourstone is normally included in the Aggregate Monitoring Return statistics but not all armourstone landings are recorded
- Table 5 also produced figures for the landing of sand & gravel aggregates from Norway (*i.e. land won aggregates*) for 2003 only into Shoreham, being 17,692 t
- No figures were provided for other foreign imports into West Sussex from France, Ireland or Denmark

#### 'Inter UK' crushed rock aggregate transhipments from coastal quarries to West Sussex :-

- Glensanda 'Superquarry' provides the majority of crushed rock supplies by sea into the rest of the UK.
- Aggregate is loaded into self-discharging vessels with capacities up to 97,000 tonnes. *However, these vessels and most other vessels over 6,500 tonnes capacity cannot berth at West Sussex wharves.*

- Much of the intended south east destinations for its products are sent by these vessels to the Isle of Grain Wharf in the Medway – this site currently has a capacity to handle 2 million tonnes p.a. through the existing processing facilities which now produce a range of products. The site can also load barges for transshipment of processed aggregates to other smaller wharves mainly upriver on the Thames (*but none to West Sussex*). The site can also tranship aggregates onto rail via the existing rail siding.
- North Wales, Northern Ireland, Cornwall and the Shetlands also import aggregate materials into the South East and London
- Transshipments of crushed rock into West Sussex from these coastal quarries were 223,000 t in 2003, *but no figures for specific destinations in West Sussex were provided.*

Other Aggregate 'Imports' to West Sussex:-

- The report refers to China Clay 'aggregate' imports into the South East from Par into the south east, *but none appears to be landed in West Sussex*
- China Clay aggregate sources are potentially huge but volumes transshipments by sea declined significantly in 2004 (down to 62,000 tonnes for the south east and London combined) due to cost and vessel availability/shortages

## Appendix 4

### Summary of a 2005 London Plan Implementation Report (LPIR) Safeguarded Wharves on the River Thames

This document is the latest in a series of wharf safeguarding strategy measures to be approved by the Mayor of London following extensive consultation carried out with the Port of London Authority and the riparian local authorities over many years.

Wharf operators and users had been expressing their concerns about the disappearance of working wharves for many years prior to the advice given the London Planning Advisory Committee's (LPAC) to Government on Strategic Planning Guidance for London in 1994. This advice identified the need to ensure that existing and potential sites for wharves, maintenance facilities and other essential infrastructure were identified and safeguarded. The need to protect aggregate wharf facilities was a very important part of the overall background advice given.

LPAC and the Port of London Authority were charged with compiling a list of the essential minimum number of sites required to ensure continued and expanding use of the River Thames for the transshipment of cargo.

Since 1994, further documents (including the initial safeguarding document in 1997 of 28 wharves in London) have been prepared and a later Regional Planning Guidance (Note 3) have further progressed and enhanced the wharf safeguarding strategy – culminating in this LPIR which is intended to review the existing 28 wharves and consider safeguarding measures for another 45 sites downstream of the Thames Barrier.

The LPIR focuses on the Mayor's Strategies and new policies contained in the London Plan – which has now superseded the previous relevant parts of Regional Policy and Strategic Planning Guidance for the River Thames. Such new policies (e.g. those contained in Chapter 4C of the London Plan) now enable the Mayor to have direct influence over development proposals affecting the safeguarded wharves – see summary of main policies from the LPIR sections below:-

- (2.25) Policy 4C.15 of the London Plan sets out the approach to Safeguarded Wharves on the Blue Ribbon Network: -  
**'The Mayor will, and boroughs should, protect Safeguarded Wharves for cargo-handling uses, such as inter-port or transshipment movements and freight-related purposes. The Mayor will, and boroughs should, encourage appropriate temporary uses of vacant Safeguarded Wharves. Temporary uses should only be allowed where they do not preclude the wharf being re-used for cargo-handling uses. Development next to or opposite Safeguarded Wharves should be designed to minimise the potential for conflicts of use and disturbance. The redevelopment of Safeguarded Wharves should only be accepted if the wharf is no longer viable or capable of being made viable for cargo-handling'.**
- (2.26) Criteria for assessing the viability of wharves are set out in paragraph 4.105 of the London Plan: -  
**'The redevelopment of Safeguarded Wharves should only be accepted if the wharf is no longer viable or capable of being made viable for cargo handling uses. The only exceptional circumstance to this would be for a strategic proposal of essential benefit for London, which cannot be planned for or delivered on any other site in Greater London. The viability of a wharf is dependant on:**
- **the wharf's size, shape, orientation, navigational access, road access, rail access (where possible), planning history, environmental impact and surrounding land use context**
  - **the geographical location of the wharf, in terms of proximity and connections to existing and potential market areas**
  - **the existing and potential contribution that the wharf can make towards reducing road-based freight movements**

- **existing and potential relationships between the wharf and other cargo-handling sites or land uses**
- **the location and availability of capacity at comparable alternative wharves, having regard to current and projected Port of London and wharf capacity and market demands**
- **in the case of non-operational sites, the likely timescale within which a viable cargo-handling operation can be attracted to the site, having regard to the short-term land-use policy, and long-term trade forecasts'.**

- (2.27) The policy approach to Safeguarded Wharves is further explained by paragraphs 4.106 to 4.108 of the London Plan: -
- **'If a wharf is no longer viable, redevelopment proposals must incorporate water-based passenger transport, leisure and recreation facilities and water transport support facilities first, before non-river-related uses that do not require a riverside location'.**
  - **'Appropriate temporary uses on vacant Safeguarded Wharves can ensure that investment in the wharf is maintained and image problems are minimised for the wider area. Temporary uses must maintain the existing cargo-handling infrastructure to a specified standard, be limited by a temporary permission with a specific end date and priority should be given to uses which require a waterside location as set out in Policy 4C. 12'.**
  - **'Wharves are increasingly surrounded by different land uses that do not have an industrial or freight purpose. Many wharves are in the Opportunity Areas identified in Chapter 5. The challenge is to minimise conflict between the new and the old land uses. This must be met through modifications and safeguards built into new and established developments'.**
  - **'Wharf operators should use the latest available technology, equipment and business practices. New development next to or opposite wharves should utilise the layout, use and environmental credentials of buildings to design away these potential conflicts. Boroughs should ensure that highway access to wharves for commercial vehicles is maintained when considering proposals for development of neighbouring sites'.**
- (2.28) The approach taken in the London Plan to assess the viability of an individual wharf is distinct from that used in this report to periodically review the use of safeguarding directions on a pan-London basis. It is only at the pan-London level that the wider context to this review, e.g. national and regional policy and trade forecasts/wharf capacity, can be taken into account. Assessments on an individual wharf as part of the planning application process or UDP/LDD review mechanism will be expected to follow the criteria-based analysis identified at policy 4C.15 and paragraph 4.105 of the London Plan.
- (2.29) Other policies in the plan (aside from those for the Blue Ribbon Network) are also relevant to the review of Safeguarded Wharves. The use of water transport for freight is encouraged in Policy 3C.24 of the London Plan: -
- 'The Mayor will promote the sustainable development of the full range of road, rail and water-borne freight facilities in London and seek to improve integration between the modes and between major rail interchanges and the centres they serve. The development of a London rail freight bypass route is supported. UDP policies should:**
- **implement the spatial aspects of the freight element of the Mayor's Transport Strategy as developed by the London Sustainable Distribution Partnership**

- **seek to locate developments that generate high levels of freight movement close to major transport routes**
- **ensure that suitable sites and facilities are made available to enable the transfer of freight to rail and water through the protection of existing sites and the provision of new sites**
- **ensure developments include appropriate servicing facilities, off-road wherever practicable**
- **ensure collection and delivery can take place off the main bus and tram routes'.**

(2.30) This approach is further explained by paragraphs 3.216 and 3.217 of the London Plan:-

**The Thames provides significant opportunities for sustainable freight access into the heart of the capital. The Thames is particularly suited to the transport of bulk materials, such as waste and aggregates. There is also potential for extending freight operations on the Lee Navigation and Grand Union canals. A collaborative approach is needed across London to focus, in particular, on encouraging new facilities and protecting, through the planning system, essential existing facilities supporting water-borne freight movement'.**

**The reliable and efficient distribution of goods depends in part upon a vibrant ports industry. London relies on a range of facilities to service its needs, including the Port of London. The Port of London Authority, the UK's biggest port, is a vital gateway for international trade. Although serving London, much of the port is physically located outside London. A regional ports study was undertaken by the South East and East Anglia Ports Local Authority Group (SEAPLAG) and further collaborative work is ongoing between the CLA, SEERA and EELCC to examine the regional implications of port expansion and, from a London perspective, ensure that transport implications for London are fully taken into account. Opportunities to support the development of the Thames Gateway region should be maximised. In addition, similar joint work is being undertaken in relation to strategic rail inter-modal facilities'.**

(2.31) Policy 4A.5 of the London Plan sets out the spatial policies to support the better use of aggregates: -

**UDP policies should:**

- **identify and safeguard aggregate resources suitable for extraction**
- **adopt the highest environmental standards for aggregates extraction in line with National Minerals Policy Guidance**
- **support the development of aggregate recycling facilities in appropriate and environmentally acceptable locations, with measures to reduce noise, dust and visual intrusion to a practical minimum**
- **safeguard wharves with an existing or future potential for aggregates handling and ensure adjacent development is designed accordingly to minimise the potential for conflicts of use and disturbance**
- **protect existing railhead capacity to handle and process aggregates**
- **minimise the movement of aggregates by road'.**

(2.32) Policy 4C.27 of the London Plan supports green industries along the Thames: -

**The Mayor will, and boroughs should, generally welcome the use of waterside sites, especially those within Strategic Employment Locations, for green industries, where the majority of materials transshipment is by water'.**

Developments which affect the nature/viability of cargo handling at the wharf will therefore only be allowed if there are exceptional circumstances and/or overriding needs which match other Plan objectives (e.g. the loss of Delta Wharf at the Greenwich Peninsular during the consultation process in preparing the LPIR).

The LPIR considers the release of 3 of the previously safeguarded wharves and only 25 of the proposed 45 sites for further safeguarding. Many of these sites are or could be used for aggregate handling and importation facilities

#### LPIR references to Aggregate Importation Facilities and Future Needs

- LPIR identifies that Greater London wharves in total have a capacity shortfall of 2.2 million tonnes p.a.
- The shortfall can be offset by a half if at least 3 vacant sites became operational for aggregate use.
- The PLA have identified a doubling of cargo for the Thames by 2020 – other cargos usage could then impact on aggregate wharf availability in the future.
- Eight of the additional proposed wharves for safeguarding are in Bexley London Borough. Four of these are existing operating aggregate wharves, another is planning/about to commence aggregate wharf operations, two are in other use and one is currently vacant.

## **Appendix 5**

### **West Sussex Minerals Local Plan 2003** **Main Policies on Wharves and Railheads**

- POLICY 36:** *Facilities to enable the movement of minerals by rail and water will be approved subject to development plan policies and other material considerations.*
- POLICY 37:** *Existing minerals rail-heads will be safeguarded from other forms of development where appropriate to ensure that adequate facilities for the transportation of minerals by rail are available.*
- POLICY 38:** *Sites offering potential for the provision of rail-heads to facilitate the movement of mineral material by rail will be identified in the minerals safeguarding map issued by the County Council to other planning authorities in West Sussex to ensure that freighting considerations are taken into account in determining applications for conflicting development. The new sites identified for safeguarding are:-*
- *Chichester Sidings (Inset Map I)*
  - *Horsham Sidings (inset Map J)*
  - *Littlehampton Sidings (Inset Map K)*
- POLICY 39:** *Favourable consideration will be given to the improvement of existing railheads provided that such operations would not have an unacceptable impact on the environment and would not cause a significant increase in disturbance due to factors including increases in noise, dust and traffic.*
- POLICY 40:** *Wharves with current or potential mineral use will be safeguarded from inappropriate development. The improvement, modernisation and increase in capacity of aggregate wharves will be encouraged provided that such operations would not have an unacceptable impact on the environment and would not cause a significant increase in disturbance due to factors including increases in noise, dust and traffic.*
- POLICY 41:** *A site for a new wharf is identified at Littlehampton (Site no.11) (Inset Map L).*
- POLICY 42:** *The development of new secondary mineral processing plants within existing mineral extraction sites will be resisted and locations within established industrial areas will generally be preferred. The extension or intensification of existing secondary processing plants which are located within an existing mineral working, will be given favourable consideration only where the proposed operations would not have an unacceptable impact on the environment and would not cause a significant increase in disturbance due to factors including increases in noise, dust and traffic.*