(Ports and) Logistics sector

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An examination of the Ports and Logistic sector's health and safety standards is not a straightforward task. Ports and Logistics fall within the Transport and Storage sector, as defined by the Standard Industry Classifications (SIC) 2007. The specific industries within this general sector are not clear-cut, particularly since the storage and warehousing aspect of work is treated separately from the water transport and logistics work. They are broken down as follows (each accompanying number refers to the relevant industry code):

49: Land transport and transport via pipelines (this includes passenger rail transport, freight rail, other land transport, freight transport by road and transport via pipeline)

50: Water transport (including sea and coastal passenger and freight transport, and inland passenger and freight transport)

51: Air transport (passenger air transport and freight air and space transport)

52: Warehousing and support activities for transportation (warehousing and storage, ervice activities incidental to transport, and cargo handling)

53: Postal and courier activities (postal activities, licensed and unlicensed carriers)

It is possible to be more specific within these sectors – for example, looking only at freight transport by road within code 49 – but the above structure demonstrates that to examine a sector such a ports and logistics involves incorporating a number of different parts within the above industries.

This paper has been divided into two sections – injuries and general employment structures (including how these employment structures could potentially affect health and safety standards).

Injuries

An interesting place to start is to look at the rate of injuries within the transport sector as a whole, and how these compare with other industries. In order to avoid issues with one-off annual fluctuations, an average of 3 years of data has been used spanning the period 2008/09 to 2010/11p wherever possible.

In Table One, the Transport and Storage sector has been highlighted in red. At all levels of severity the sector exhibits a rate of injury that is considerably higher than the all industry rate, and has the second highest rate of total injuries only slightly behind the Water Supply, Sewerage and Waste Management sector.

It is interesting to note that although the fatality rate is more than double the all industry average, it is the fourth highest overall behind Agriculture, Mining and Quarrying, and Water Supply and Waste Management.

Table One

Reportable Injury Rates per 100,000 Employees, based on a 3 year average 2008/09-2010/11p		Injury Severity			
		Fatal injuries	Non-Fatal Major Injuries	Over 3 day injuries	Total
SIC 2007 Industry	A - Agriculture, Forestry And Fishing	7.4	254.0	417.4	678.8
	B - Mining and Quarrying	4.3	148.4	462.6	615.4
	C - Manufacturing	0.9	144.6	556.8	702.3
	D - Electricity, Gas, Steam And Air Conditioning Supply	0.4	78.3	189.5	268.2
	E - Water Supply; Sewerage, Waste Management And Remediation	3.5	328.8	1233.7	1566.1
	F - Construction	2.1	185.6	392.0	579.8
	G - Wholesale And Retail Trade; Repair Of Motor Vehicles And Motorcycles	0.3	87.9	340.1	428.3
	H - Transportation And Storage	***1.1***	***237.7***	***1297.5***	***1536.3***
	I - Accommodation And Food Service Activities	0.1	89.6	348.3	438.1
	J - Information And Communication	-	27.9	94.3	122.2
	K - Financial And Insurance Activities	-	24.6	64.1	88.7
	L - Real Estate Activities	0.3	176.9	702.3	879.5
	M - Professional, Scientific And Technical Activities	0.1	23.8	61.2	85.1
	N - Administrative And Support Service Activities	0.2	152.3	417.6	570.1
	O - Public Administration And Defence; Compulsory Social Sec	0.3	112.2	482.7	595.2
	P - Education	0.0	71.0	179.7	250.7
	Q - Human Health And Social Work Activities		87.7	434.1	521.8
	R - Arts, Entertainment And Recreation	0.3	122.7	228.5	351.5
	S - Other Service Activities	-	33.9	91.9	125.9
	All industry	**0.5**	**104.4**	**387.0**	**491.9**

Source: RIDDOR

However, a number of key organisations within the Transport sector have particularly strong RIDDOR reporting levels (eg Royal Mail, BAA airports, large scale freight transport companies) that could be seen to produce a misleading comparison with other, less comprehensively reported sectors. Therefore, in order to provide further evidence of the high injury rates for this sector, we can examine the findings of the Labour Force Survey. This survey is a self-completion sample survey, and is therefore not prone to issues of differing reporting levels as found in RIDDOR.

It is important to appreciate the correct context for Table Two – the data looks at workers rather than employees (therefore including the self-employed). It also looks at all reportable injuries – therefore similar to the totals column in Table One. Finally, because it is a sample survey, some of the smaller industries do not produce enough cases to be considered reliable, and have therefore been replaced with a star (*). Unfortunately this means that only the larger industries are available for comparison.

We are therefore unable to compare rates with the Water Supply and Waste Management industry. However, Table Two provides very similar injury rates for the Transport sector – 1,670 per 100,000 workers compared with RIDDOR's rate of 1,563 per 100,000 employees. Additionally, the Transport sector has the highest rate of injury of all available sectors, being statistically significantly higher than both Construction and Manufacturing.

Table Two

Reportable Injury Rates per 100,000 Workers, based on a 3 year average 2008/09-2010/11p		Rate Central (per 100 000 workers)	Rate 95% CI Lower (per 100 000 workers)	Rate 95% CI Upper (per 100 000 workers)
SIC 2007 Industry	A: Agriculture, forestry and fishing	*	*	*
	B: Mining and quarrying	*	*	*
	C: Manufacturing	990	810	1,160
	D: Electricity, gas, steam and air conditioning supply	*	*	*
	E: Water supply; sewerage, waste management and remediation activities	*	*	*
	F: Construction	1,090	870	1,310
	G,I: Wholesale and retail trade; repair of motor vehicles and motorcycles; accommodation and food service activities	670	560	790
	H: Transportation and storage	***1,670***	***1,350***	***1,990***
	J-N: Information and communication; financial and insurance activities; real estate activities; professional, scientific and technical activities; administrative and support service activities	280	210	350
	O-Q: Public administration and defence; compulsory social security; education; human health and social work activities	780	690	870
	R-U: Arts, entertainment and recreation; other service activities; activities of households as employers; undifferentiated goods-and services-producing activities of households for own use; activities of extraterritorial organisations and bodies	620	430	810
Total		**750**	**700**	**800**

Source: Labour Force Survey

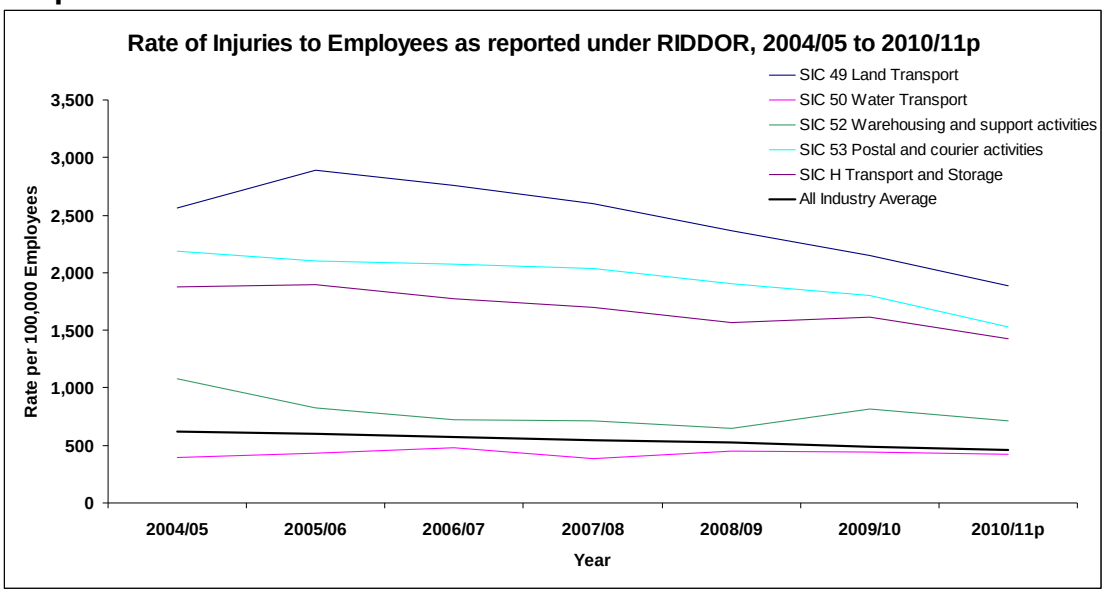
* - Sample numbers are too small to provide reliable estimates

The data above has clearly demonstrated that the transport sector as a whole has a statistically significantly higher than average rate of injury, and one of the highest amongst all sectors.

As discussed, looking at ports and logistics data specifically is more problematic. On the most superficial level, SIC code 50, for Water Transport, is considered to equate to Ports; likewise SIC codes 49 (Land transport) and 53 (Postal and courier activities) cover Logistics. However SIC code 52, which comprises the warehousing and support activities for transport, is a vital part of all transport sectors, and must be incorporated where appropriate to glean the most accurate understanding of the Ports and Logistics sectors.

The graph below shows the rate of reported injuries to Employees in each of the industries that make up Ports and Logistics – the average for All Industry is included, alongside the average rate for the whole of the Transport and Storage sector for comparison purposes. This graph shows change over time but also how each industry in the Transport and Storage sector compares to each other:

Graph One



The graph shows that the Logistics sector (that is, Land transport and Postal and courier services, the dark and light blue lines) has a higher than average rate of reported injury than the Transport sector as a whole (the purple line in the graph), and a considerably higher rate than that of the All Industry average (the black line), though standards have improved over time. Conversely we can see that the rate of injuries to employees as reported to RIDDOR for Water transport, and Warehousing and storage, are more in line with the All Industry average.

Despite these coding difficulties, we can create bespoke groups that will at least estimate these sectors as closely as possible. The following section of the report examines the statistics for road haulage, though it would be possible to replicate similar data for Ports and Postal and courier services.

Road haulage:

49.41 – Freight Transport by Road
52.10 – Warehousing and Storage

Table Three - Injuries to employees in road haulage as reported to all enforcing authorities under RIDDOR during the period 2001/02 - 2010/11p[1]

SIC 2007 by Severity		Year						
		2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11p
49.41 - Freight transport by road	Fatal	10	11	16	11	9	7	9
	Major	1,513	1,542	1,576	1,577	1,508	1,428	1,305
	Over-3-day	6,829	7,795	7,608	7,198	6,830	6,253	5,560
	Total	**8,352**	**9,348**	**9,200**	**8,786**	**8,347**	**7,688**	**6,874**
52.10 - Warehousing and storage	Fatal	1	-	1	1	2	-	-
	Major	312	208	190	188	163	133	157
	Over-3-day	2,017	1,405	1,227	1,028	1,016	725	812
	Total	**2,330**	**1,613**	**1,418**	**1,217**	**1,181**	**858**	**969**
49.41 and 52.10 combined	Fatal	11	11	17	12	11	7	9
	Major	1,825	1,750	1,766	1,765	1,671	1,561	1,462
	Over-3-day	8,846	9,200	8,835	8,226	7,846	6,978	6,372
	Total	**10,682**	**10,961**	**10,618**	**10,003**	**9,528**	**8,546**	**7,843**

Source: RIDDOR

Table Three shows that SIC 49.41 accounts for almost 90% of all injuries in the road haulage sector. However, it is not recommended that rates of injury be based purely on this – this is because some incidents that should have been classed as occurring within the Warehousing and Storage sector may have been wrongly coded into the Freight Transport sector (though it is not possible to be sure of this). To avoid this potential problem it is more appropriate to calculate a rate based on the combined figure. Unfortunately due to a recent change in industry classification system, from SIC 2003 to SIC 2007, it is not possible to

[1] Please note that all RIDDOR data from 2004/05-2009/10 was originally coded to the SIC 2003 industry coding system. It has been mapped into the new SIC 2007 by HSE analysts – therefore there may be consistency errors when looking at time series data.

create rates at a 4 digit level for before 2009/10 – this means that we will not be able to produce a 3 year average rate until later in 2012.

However, it is possible to put rates of injury for the road haulage sector into context by comparing them in 2010/11p with that of the wider Transport and Storage sector (as discussed above) and then with the All Industry average rate.

Table Four demonstrates the fact that while Transport and Storage have a much higher than average rate of injury at all levels of severity, Freight Transport by Road has a higher level still, including a fatality rate that is six times the All Industry average. Additionally, although an annual rate is not enough in isolation to be reliable, data in Table Three indicates that there has been between 7 and 17 fatalities each year since 2004/05 – this rate is therefore not likely to have been caused by a random fluctuation.

Table Four - Injury Rates per 100,000 employees as reported to all enforcing authorities under RIDDOR during the period 2010/11p

	Freight Transport Rate	Transport and Storage Rate	All Industry Rate
Fatal	3.0	1.0	0.5
Major	484.8	227.8	99.0
Over-3-day	2,113.1	1,196.3	363.1
Total	**2,600.9**	**1,425.1**	**462.6**

Source: RIDDOR

Table Five

Key Occupations by 3 Year Average - 2008/09-2010/11p reported to RIDDOR		
Top Three SOC 2000 Occupation Codes	**Annual Number of Reports**	**Annual Rate of Injuries by 100,000 Employees**
9149 - Other goods h&ling & storage occupations n.e.c.	3746	1049.6
8211 - Heavy goods vehicle drivers	2725	1016.2
8219 - Transport operatives n.e.c.	736	3081.8

Source: RIDDOR

The above table shows the three key occupations at particular risk of injury for the road haulage sector. These three occupations account for an annual average of more than 83% of all reported injuries for the sector. Occupation code 9149 includes warehousemen and store-keepers, while code 8219 includes transport supervisors. However, it is worth noting that occupation codes ending in n.e.c. (not elsewhere classified) tend to see higher than expected rates, as they often include occupations that would have been more appropriately classified in RIDDOR within another related code.

The above tables have given an introductory summary of injury rates in the road haulage sector. The evidence demonstrates that the road haulage sector has a considerably higher than average rate of injury to employees, though these conditions have been steadily improving over the past seven years.

Employment

The following section gives an overview of the range and type of employment information available on the road haulage sector, and how it is likely to impact health and safety.

Table Six - Number of PAYE and/or VAT registered premises by industry and employment size, IDBR 2010

SIC 2007 Code		Employment size							
		0 - 4	5 - 9	10 - 19	20 - 49	50 - 99	100 - 249	250 +	TOTAL
49.41	Freight transport by road	23,860	3,355	2,015	1,285	480	190	55	31,240
52.1	Warehousing and storage	2,845	935	730	610	300	210	95	5,725
Total		**26,705**	**4,290**	**2,745**	**1,895**	**780**	**400**	**150**	**36,965**
Percentage Spread		**72%**	**12%**	**7%**	**5%**	**2%**	**1%**	**0%**	**100%**
All Industry Percentage Spread		68%	15%	8%	6%	2%	1%	0%	100%

Source: Inter-Departmental Business Register (IDBR)

Table Six above shows the breakdown of industry premises by employment size, alongside information on how this breakdown compares with the UK average. The table shows that businesses within this industry are comprised of a higher than

average proportion of the smallest micro organisations, employing between none (that is, purely the self-employed) and four individuals. This is then balanced out at the five to nine employee level, which is below the UK average. All other premises sizes are in line with UK proportions.

IDBR data also allows us to examine the geographical spread of premises within the industry:

Table Seven: Number of PAYE and/or VAT registered Premises by industry and government office region, IDBR 2010

SIC 2007 Code		Government Office Region (GOR)												
		North East	North West	Yorkshire and The Humber	East Midlands	West Midlands	East	London	South East	South West	Wales	Scotland	Northern Ireland	UK TOTAL
49.41	Freight transport by road	1,055	3,445	3,290	3,285	3,550	3,400	1,725	3,395	2,555	1,745	2,220	1,575	31,240
52.1	Warehousing and storage	170	650	495	490	550	690	620	830	505	210	410	105	5,725
Total		**1,225**	**4,095**	**3,785**	**3,775**	**4,100**	**4,090**	**2,345**	**4,225**	**3,060**	**1,955**	**2,630**	**1,680**	**36,965**
Percentage Spread		**3%**	**11%**	**10%**	**10%**	**11%**	**11%**	**6%**	**11%**	**8%**	**5%**	**7%**	**5%**	**100%**
All Industry Percentage Spread		3%	10%	7%	7%	8%	10%	15%	15%	9%	4%	8%	3%	100%

Source: Inter-Departmental Business Register (IDBR)

Table Seven confirms that the North West, West Midlands, East and South East are each responsible for 11% of all premises in this industry, though this is lower than expected based on the UK average for the South East. The West Midlands and Yorkshire and the Humber are the two regions that are responsible for a significantly higher proportion than expected for the UK (the West Midlands accounts for 11% rather than the expected 8%, and Yorkshire for 10% rather than 7%). Given their central geographical locations this is of little surprise for the road haulage sector.

Table Eight: Number of people working in the road haulage sector in 2010

SIC 2007 Industry	2010 GB Employment Figures	
	Employee	Worker
49.41 Freight transport by road	180,500	203,700
52.10 Warehousing and storage	121,100	122,700
Total	**301,500**	**326,400**

Source: Annual Population Survey (APS)

Table Nine – Breakdown of workers in the road haulage sector by age group, compared to the all industry average, 2010

Industry	Age Breakdown of Workers in the Road Haulage Industry						
	16-24	25-34	35-44	45-54	55-64	65+	Total
49.41 and 52.10 combined	**25,900**	**67,800**	**78,100**	**95,100**	**52,000**	**7,600**	**326,400**
Percentage Spread	8%	21%	24%	29%	16%	2%	100%
All Industry Percentage Spread	13%	22%	24%	24%	14%	3%	100%

Source: Annual Population Survey (APS)

The road haulage industry employs a higher than average proportion of older workers – 47% are over the age of 45, compared to the All Industry average of 41%. Only 8% of workers are under the age of 25 – this may be partly due to the necessary driving qualifications required to be employed as an HGV driver, but it also puts the sector at risk of problems linked to the ageing workforce.

Table Ten below shows the breakdown of workers by contract status – that is, whether they are employed on a permanent or temporary contract. Those working on temporary contracts tend to carry higher health and safety risks as they often have incomplete training or monitoring – however, the road haulage industry has a higher than average proportion of permanent workers at 85% rather than 80%, and so is likely to be less prone to this issue than other sectors.

Table Ten – Breakdown of workers in the road haulage industry by contract status, compared to the all industry average, 2010

Industry	Contract Status of Workers			
	Permanent	Temporary	N/A	Total
49.41 and 52.10 combined	**276,000**	**25,600**	**24,800**	**326,400**
Percentage Spread	85%	8%	8%	100%
All Industry Percentage Spread	80%	6%	14%	100%

Source: Annual Population Survey (APS)

The available employment and business data therefore demonstrates that the road haulage sector has a higher than average proportion of the smallest micro businesses (which has implications for the ease of reaching these workers), and tends to be centrally based geographically. It has a higher than average proportion of older workers, but less than average proportion of temporary (and therefore more vulnerable) workers.

Table Caveats

RIDDOR

Starting in 2010/2011 HSE data will be collected and, later, published using SIC 2007 rather than SIC 1992 and SIC 2003. Earlier data collected using SIC 1992/2003 may be used in publications after recoding it into SIC 2007 to show trends. There may be errors introduced as a result of such recoding and we will clearly annotate any series which we believe to have been affected by a discontinuity.

General caveats on RIDDOR data

RIDDOR data needs to be interpreted with care because it is known that non-fatal injuries are substantially under-reported. Currently, it is estimated that just over half of all such injuries to employees are actually reported, with the self-employed reporting a much smaller proportion. (Further information on the caveats that should be applied to analysis of RIDDOR data)

1. Counts of non-fatal injuries reported under RIDDOR will almost always underestimate by a considerable amount the total that would have been recorded if there had been 100% reporting.
2. Any comparisons between different subsets within RIDDOR data (e.g. comparisons between one industrial sector and another) need to take account of the possibility of there being markedly different reporting levels in the subsets being compared.

Small Numbers

This output includes counts that are relatively small numbers. (Further information that explains the need for caution when making comparisons that involve small numbers)

A further factor that needs consideration when numbers are small is that the coding of data is by its nature an error-prone process. Miscoding is more likely to occur as the coding becomes more detailed. Thus, for example, when the industrial sector (SIC) or nature of employment (SOC) is coded to a four digit level coding errors may have an important bearing.

Dangerous Occurrences

[1]Reported and defined under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR) 1995. The incidents detailed were recorded as meeting the criteria for reporting under RIDDOR upon their initial notification to the Incident Contact Centre (ICC).

[2]Identified by Standard Industrial Classification (SIC) 2007.

p Provisional

Enforcement

* In Scotland HSE and local authorities investigate potential offences but cannot institute legal proceedings. HSE and local authorities send a report to the Crown Office and Procurator Fiscal Service (COPFS). COPFS makes the final decision whether to institute legal proceedings and which offences are taken. For more information, please see www.hse.gov.uk/statistics/sources.htm#enforcement

** Prohibition notice figures include both immediate and deferred prohibition notices.

p provisional

The above figures exclude enforcement activity taken by the Office for Rail Regulation (ORR)

Labour Force Survey

* Sample numbers too small to provide reliable estimates

The Labour Force Survey (LFS) is a national survey of over 50 000 households each quarter which provides information on the UK labour market. The Heath and Safety Executive commissions annual questions in the LFS to gain a view of work-related illness and workplace injury based on individuals' perceptions.

The LFS survey data is used to make inferences about the whole population. When data obtained from a sample is used in this way, there is an element of sampling error, or uncertainty, about the sample estimate. Confidence intervals (C.I.) represent the range of uncertainty resulting from the estimate being derived from a sample of people, not the entire population. They are calculated in such a way that the range has a 95% chance of including the true value in the absence of bias - that is the value that would have been obtained if the entire population had been surveyed.

One way of increasing the reliability of survey data is to increase the sample size. Three years worth of industry specific data has been pooled to achieve this, 2008/09 – 2010/11 (centred on 2009/10).

Annual Population Survey

The Annual Population Survey (APS) is the source of employment data for this document. For more information please go to:

http://www.hse.gov.uk/statistics/sources.htm#employment