

**POLLUTION INCIDENTS
REPORT - 1998
LOWER TRENT AREA**

ANNEX 4

KEY FACTS:

- Total of 1115 substantiated pollution incidents occurred in Lower Trent in 1998. This represents 27% of the regional figure, and a 13% drop on the 1997 area total.
- 4 category 1 incidents in 1998
- Fuel and oil caused 372 (33%) of the total substantiated pollution incidents in the Lower Trent area. This accounts for 29% of the regional oil pollution incidents in 1998.
- The construction industry was responsible for 26 incidents in 1998 in Lower Trent, 23% of the regional total of 111.
- Sewage and Water WSPic incidents experienced a 12% decrease from 260 in 1997 to 229 in 1998.



Foreword

The Pollution Incident Statistics Report provides a graphical representation of water pollution incident information for Lower Trent Area in 1998. The data comes from the Region's Pollution Incident database. All the graphs and tables can be obtained in electronic format from Water Quality at Regional Head Office.

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Water Pollution Incidents – Lower Trent Area 1998

Incident Statistics

There were 5376 reported pollution incidents in the Midlands Region in 1998, of which 1471 (27%) were reported in the Lower Trent Area. A total of 1115 incidents were substantiated in 1998 (1286 in 1997), which accounts for 27% of the regional figure (4061). Table 1 gives a breakdown of 1998 and 1997 substantiated incidents by category.

Table 1: Total number of substantiated incidents in Lower Trent Area, 1997-98

Category	1997	1998	Change	% Change
1	7	4	-3	-43
2	32	28	-4	-13
3	1247	1083	-164	-15
Total	1286	1115	-171	-13

Major Incidents

There were 4 major incidents in Lower Trent Area in 1998 compared to 7 in 1997. Of these, 2 originated from "industrial" sources, 1 from "transport" and 1 from "other" sources. When classified by "type" of pollutant, 2 of the incidents were caused by "organic wastes", 1 by "chemicals" and 1 by "fuel and oil".

Organic Wastes

River Erewash

On the 19th August a major incident occurred at Kirby in Ashfield. Waste beer from a bottle and can crushing operation, infiltrated the ground and entered a culverted section of the River Erewash via a disused storm overflow pipe. This resulted in a significant growth of sewage fungus in a section of the river as it flowed through public open space.

Markeaton Brook

On the 18th February a road traffic accident at the junction of the A38 and A5111 in Derby caused 1200 pints of milk contained in glass bottles to be spilt onto the carriageway. Most of the milk entered the brook running alongside the road via highway drains. By damming the brook and the pumping the milk to the foul sewer, the environmental damage was greatly reduced.

Chemical

Quorn Brook

A report of foam and a chemical smell on the Quorn Brook, Leicester, was received on the 9th May. The source was traced to premises where deliberate disposal to drain of a dishwasher cleaning chemical had taken place. This resulted in the death of over 100 coarse fish and significant media interest. The brook has now been restocked mostly with minor species.

Fuel and Oil

Gypsy Brook

On the 12th June, a tributary of Gypsy Brook at Horsley Woodhouse, Derbyshire, was polluted with a large quantity of red diesel. The source was traced to a damaged underground pipe on the site of a metal works, which had caused oil to enter the watercourse via a surface water drain. A large clean up operation took place, however the incident resulted in a significant invertebrate mortality and long-term contamination of the sediment.

Sources and Types

Figure 1 shows the breakdown of substantiated pollution incidents in Lower Trent Area by source. The figures for 1997 and 1998 are compared in Table 2.

Table 2: Substantiated incidents by source for Lower Trent Area, 1997-98

Source	1997	1998	Change	% Change
*Sewage & Water Ind.	325	306	- 19	- 6
Transport	156	148	- 8	- 5
*Industry	252	226	- 26	- 10
Agriculture	96	99	+ 3	+ 3
Domestic/Residential	36	21	- 15	- 42
Other	421	315	- 106	- 25
Total	1286	1115	- 171	- 13

* The total for 'Sewage & Water Ind' combines incident numbers from the source categories 'WSPIC', 'sewage & water-private' and 'sewage & water-other'. The total for 'Industry' includes incidents from the source category 'Mining'

With the exception of the "other" source category, the most frequent source of pollution was from the "sewage & water WSPIC" category, responsible for 21% (229) of incidents. However, this total does represent a 12% reduction on the number of incidents in 1997 (260). Notably, within the category, 27% (62) incidents were from surface water outfalls, 25% (58) from foul sewers.

Industry was responsible for 18% (203) of incidents in 1998, with the construction and food sectors each responsible for 13% of industrial incidents. The chemical and engineering sectors were both responsible for 9% of industrial incidents.

Although the numbers involved are small, there was a notable increase in the number of mining related incidents from 13 in 1997 to 23 in 1998. There were no incidents from abandoned mines in 1997, however in 1998 there were 6 incidents.

Figure 3 shows the distribution of substantiated incidents by "type" of pollutant for Lower Trent Area. Table 3 below compares the incident data for 1997 and 1998.

Table 3: Substantiated incidents by type for Lower Trent Area, 1997 and 98

Type	1997	1998	Change	% Change
Organic Wastes	118	117	- 1	- 1
Chemicals	137	110	- 27	- 20
Sewage	274	252	- 22	- 8
Fuels & Oils	398	372	- 26	- 7
Suspended Solids	74	68	- 6	- 8
Other	285	196	- 89	- 31
Total	1286	1115	- 171	- 15

In 1998, there were reduced numbers of incidents across all pollution 'type' categories. Incidents caused by sewage represented 23% of the total, with majority of these, 59% (148), caused by crude sewage.

Organic wastes and chemicals both caused 10% of incidents. Of the chemical incidents, paints and dyes were the most common pollutants, responsible for 17% (19) of incidents. Of the incidents caused by organic wastes, 32% (37) involved animal carcasses.

Oil and Construction

There were 26 incidents from the construction industry in Lower Trent Area in 1998, representing a 37% decrease on the 1997 figure (41). Construction incidents in Lower Trent Area represented 23% of the regional total (111). All were classed as category 3, or minor incidents in terms of their environmental impact. Silt or inert suspended solids are a pollutant commonly associated with the construction industry. In 1998 there were 68 incidents involving silt, representing 6% of the Lower Trent total.

In 1998, fuel and oil was the most common pollutant type, responsible for 33% (372) of incidents in Lower Trent Area. This represents a 7% decrease on the 1997 total (398) and accounts for 29% of the regional figure (1291). 1 incident was recorded as a category 1 incident, 11 as category 2 and 360 as category 3 incidents. Diesel (DERV) was responsible for the highest proportion causing 30% (110) of incidents, followed by unknown oils which caused 27% (99) of incidents.

**Substantiated pollution incidents by source
Lower Trent Area, 1998**

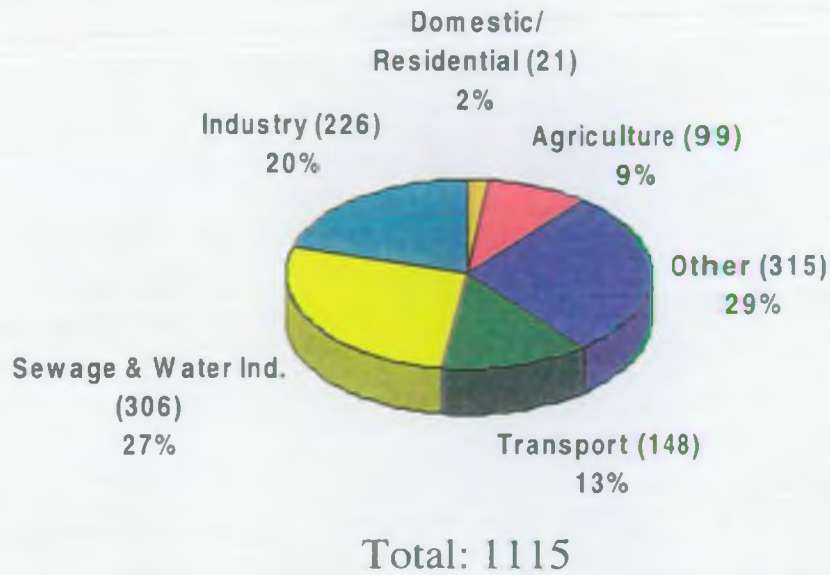


Fig 1

**Substantiated Category 1 pollution incidents
by source Lower Trent Area, 1998**

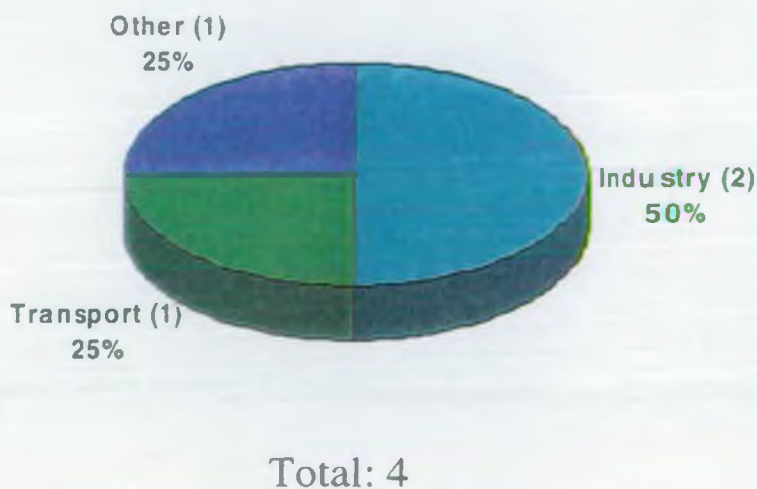
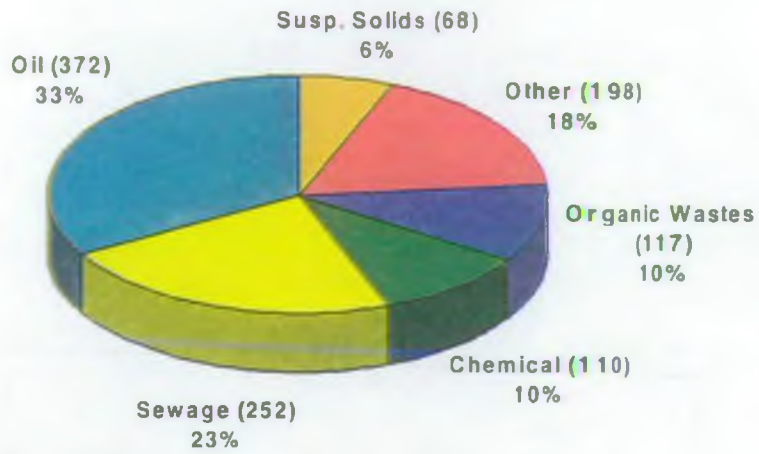


Fig 2

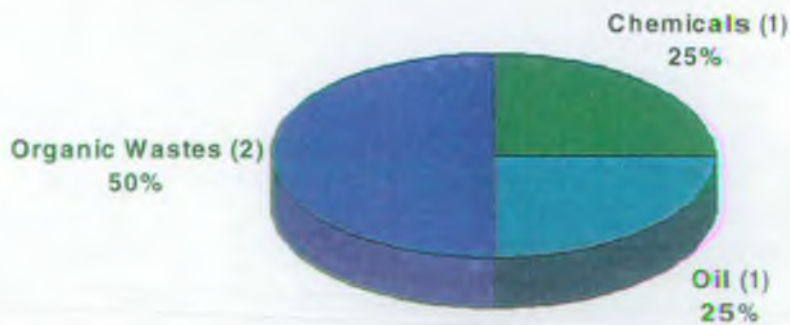
Substantiated pollution incidents by type Lower Trent Area, 1998



Total: 1115

Fig 3

Substantiated Category 1 pollution incidents by type Lower Trent Area, 1998



Total: 4

Fig 4

Substantiated agricultural pollution incidents by source Lower Trent Area, 1998



Fig 5

Substantiated industrial pollution incidents by source Lower Trent Area, 1998

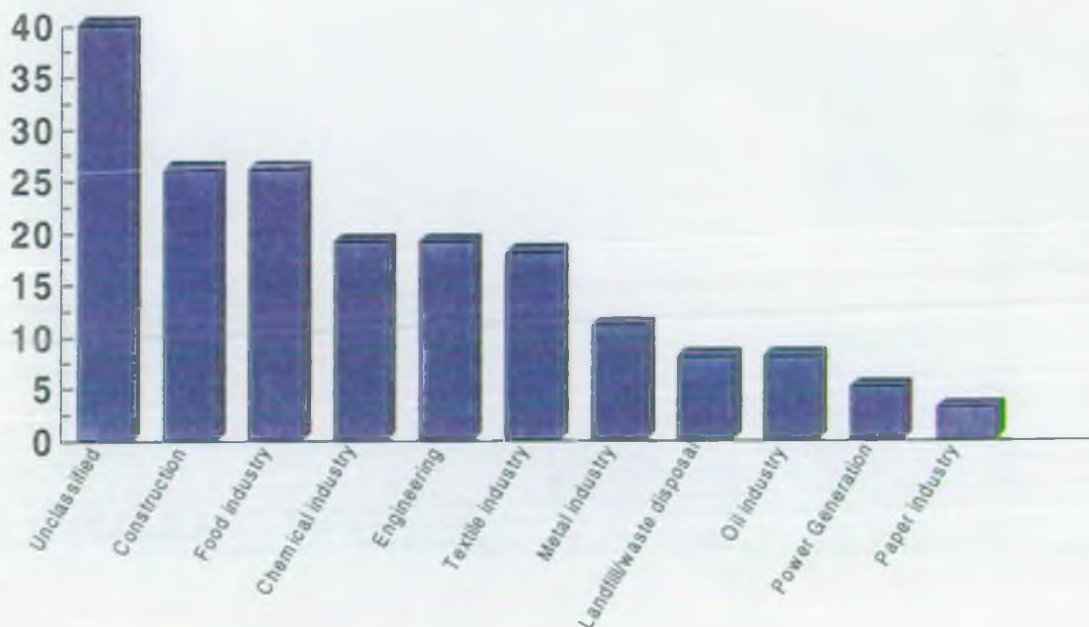
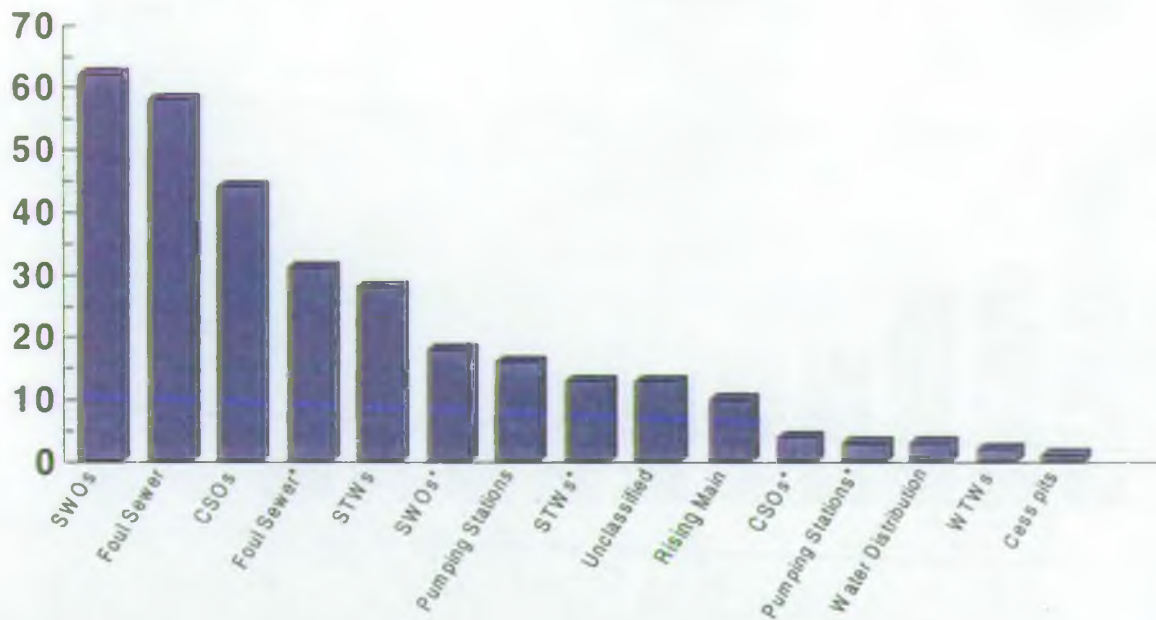


Fig 6

Substantiated sewage and water industry related pollution incidents by source Lower Trent Area, 1998



* Private sewage and water industry sources

Fig 7

Substantiated transport related pollution incidents Lower Trent Area, 1998

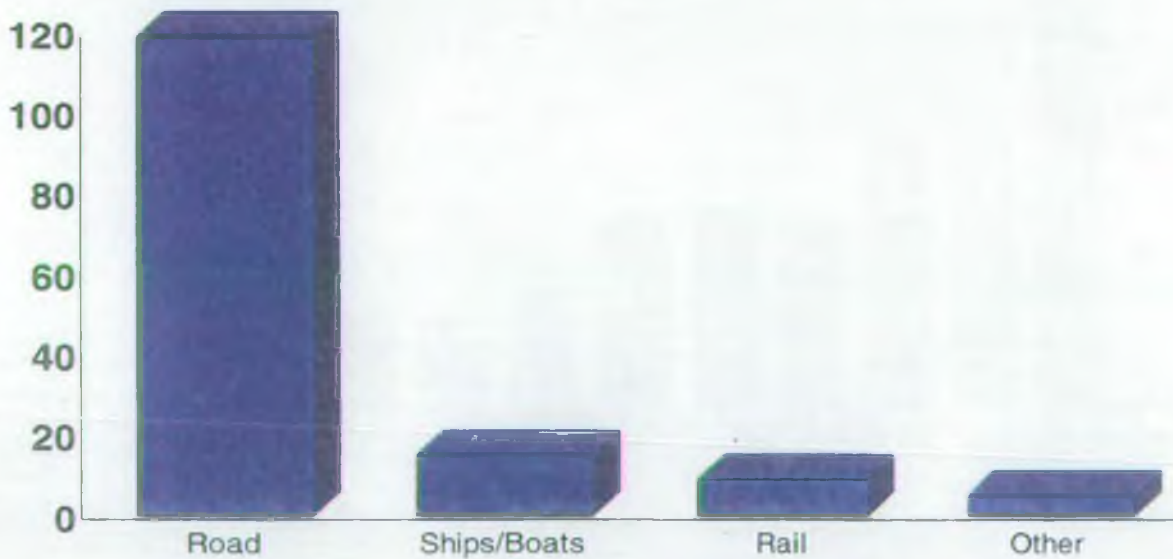


Fig 8

**Substantiated other sources of pollution incidents, where classified,
Lower Trent Area, 1998**

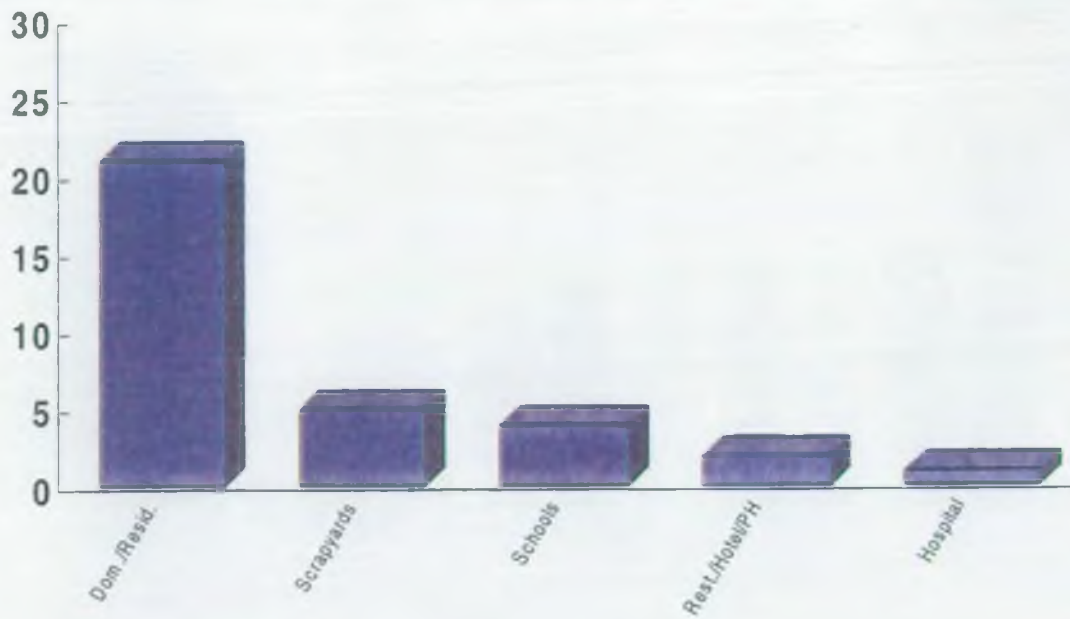


Fig 9

**Substantiated fuel & oil pollution incidents
Lower Trent Area, 1998**

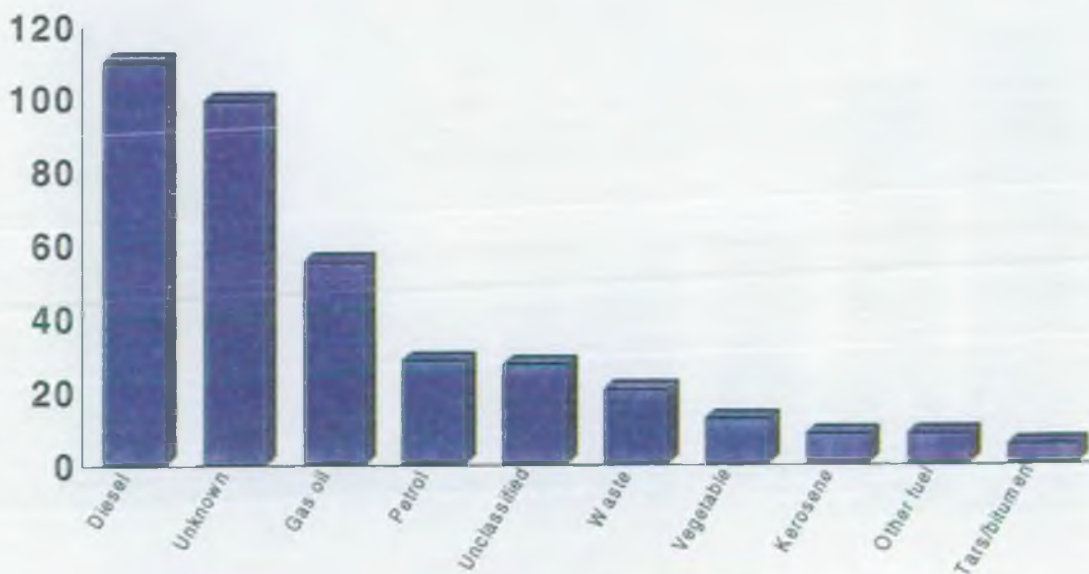


Fig 10

Substantiated chemical pollution incidents (where classified) in Lower Trent Area, 1998

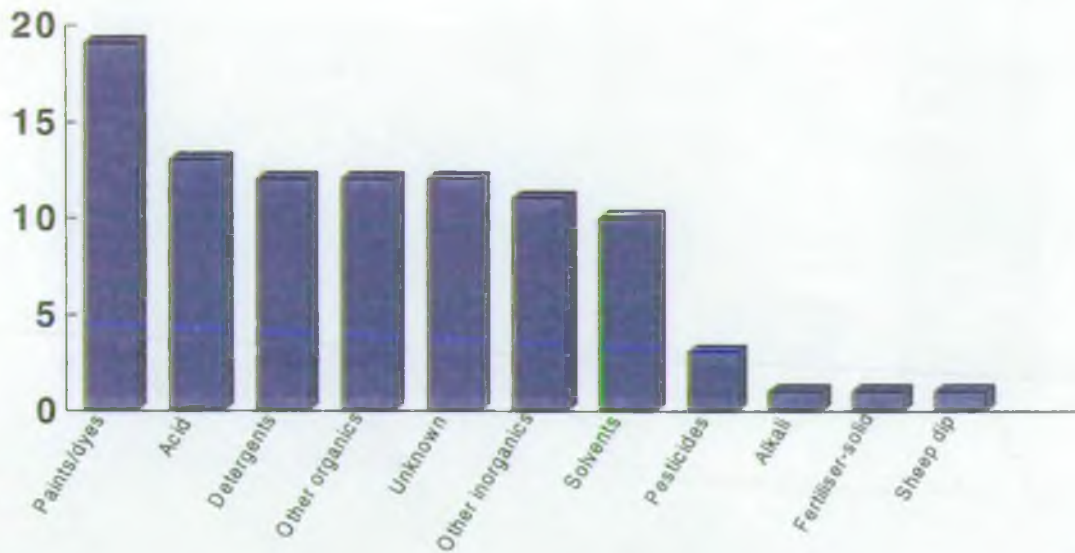


Fig 11

Substantiated other types of pollutant (where classified) in Lower Trent Area 1998

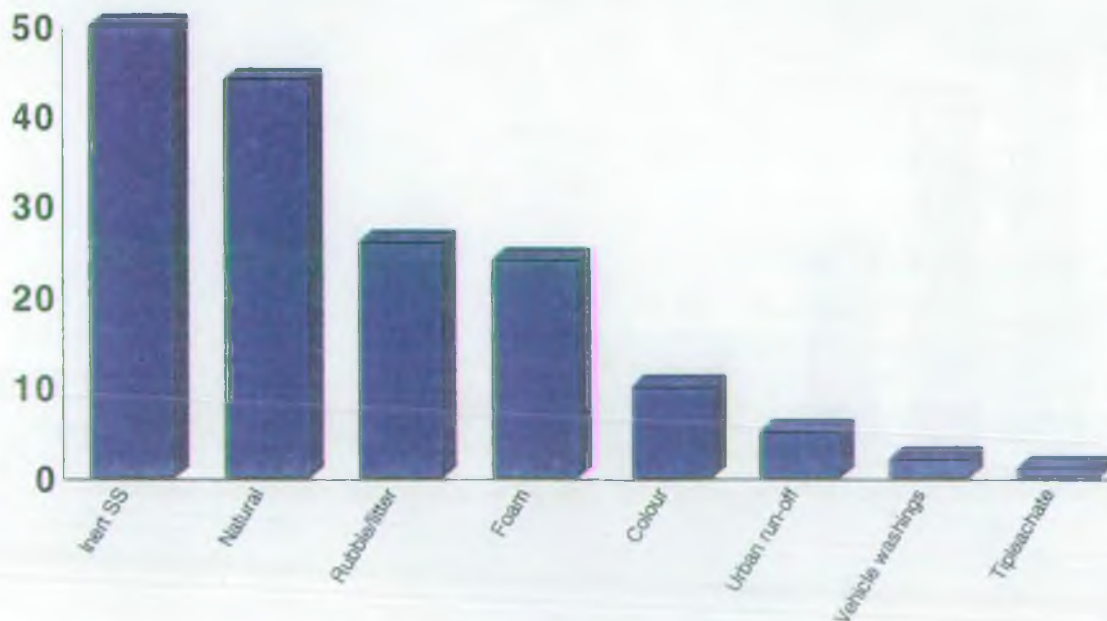


Fig 12

Pollution Incidents - Lower Trent Area 1998

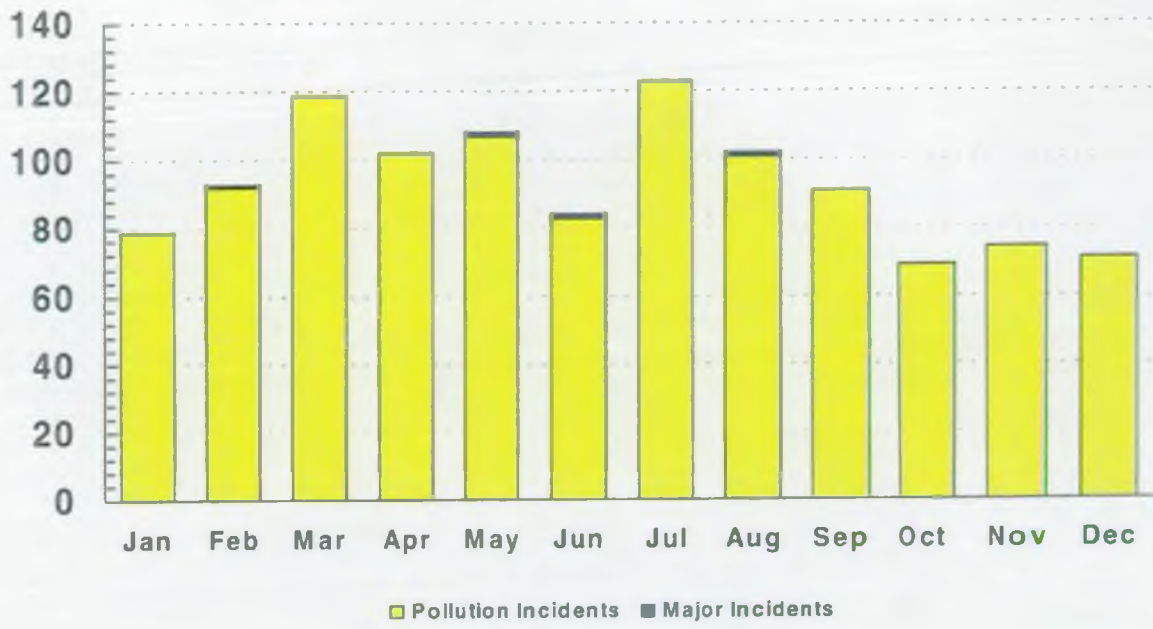


Fig 13

AREA - LOWER TRENT

1998 INCIDENTS BY TYPE

Fuels and Oils	Cat1	Cat2	Cat3	Sub Total
Petrol	0	0	28	28
Diesel (DERV)	0	1	109	110
Gas oil (inc. agricultural)	1	7	47	55
Kerosene	0	2	6	8
Other fuel oil	0	1	7	8
Waste oil	0	0	20	20
Tars/bitumen	0	0	5	5
Vegetable oil	0	0	12	12
Unknown oil	0	0	99	99
Other	0	0	27	27
TOTAL	1	11	360	372

Sewage	Cat1	Cat2	Cat3	Sub Total
Treated effluent	0	0	22	22
Septic tank effluent	0	0	19	19
Crude sewage	0	4	144	148
Storm sewage	0	0	26	26
Sewage sludge	0	0	3	3
Sewage debris/litter	0	0	13	13
Other	0	0	15	15
Unknown	0	0	6	6
TOTAL	0	4	248	252

Chemicals	Cat1	Cat2	Cat3	Sub Total
Pesticides	0	0	3	3
Sheep dip	0	1	0	1
Fertilizer - liquid	0	0	0	0
Fertilizer - solid	0	0	1	1
De-icing	0	0	0	0
Acid	0	0	13	13
Alkali	0	0	1	1
Paints/dyes	0	0	19	19
Detergents	0	2	10	12
Solvents	0	1	9	10
Other organics	0	1	11	12
Other inorganics	0	0	11	11
Unknown	0	0	12	12
Other	1	1	13	15
TOTAL	1	6	103	110

Organic wastes	Cat1	Cat2	Cat3	Sub Total
Cattle slurry	0	1	13	14
Pig slurry	0	1	2	3
Other slurry	0	0	1	1
Cattle manure (solid)	0	1	4	5
Pig manure (solid)	0	1	1	2
Poultry (solid)	0	0	1	1
Horse manure (solid)	0	0	2	2
Other manure (solid)	0	0	0	0
Animal carcasses	0	0	37	37
Milk	1	1	4	6
Other organic susp. Solids	0	0	4	4
Silage liquor	0	0	4	4
Yard washings	0	0	7	7
Dairy parlour washings	0	0	0	0
Other	1	0	23	24
Unknown	0	0	7	7
TOTAL	2	5	110	117

Others	Cat1	Cat2	Cat3	Sub Total
Foam	0	0	24	24
Natural	0	0	44	44
Vehicle washings	0	0	2	2
Rubble/litter	0	0	26	26
Inert susp. solids	0	1	67	68
Colour	0	0	10	10
Tip leachate	0	0	1	1
Urban run-off	0	0	5	5
Fire water	0	0	0	0
Filter backwash water	0	0	0	0
Raw water	0	0	0	0
Unknown other	0	1	83	84
TOTAL	0	2	262	264

	Cat1	Cat2	Cat3	Total
TOTAL BY TYPE	4	28	1083	1115

1998 INCIDENTS BY SOURCE

Industry	Cat1	Cat2	Cat3	Sub Total
Chemical industry	0	2	17	19
Oil industry	0	3	5	8
Fuelling station	0	0	0	0
Paper industry	0	0	3	3
Food industry	0	1	25	26
Textile industry	0	2	16	18
Metal industry	1	0	10	11
Engineering	0	0	19	19
Power Generation	0	0	5	5
Landfill/waste disposal	0	0	8	8
Construction	0	0	26	26
Demolition	0	0	0	0
Other	1	4	55	60
TOTAL	2	12	189	203

Mining	Cat1	Cat2	Cat3	Sub Total
Coal	0	1	7	8
Aggregate (sand/gravel)	0	0	2	2
Clay	0	0	0	0
Quarrying - Hard rock	0	0	4	4
Metal	0	0	0	0
Abandoned mine	0	0	6	6
Other	0	0	3	3
TOTAL	0	1	22	23

Sewage and Water WSPic	Cat1	Cat2	Cat3	Sub Total
Sewage treatment works	0	1	27	28
Combined sewer overflow	0	1	43	44
Storm tank	0	0	0	0
Rising main	0	0	10	10
Water treatment works	0	0	2	2
Water distribution system	0	1	2	3
Surface water outfall	0	2	60	62
Pumping station	0	0	16	16
Foul sewer	0	0	58	58
Other	0	0	6	6
TOTAL	0	5	224	229

Sewage and Water - private	Cat1	Cat2	Cat3	Sub Total
Sewage:treatment works	0	0	13	13
Combined:sewer overflows	0	0	4	4
Water:treatment works	0	0	0	0
Water:distribution system	0	0	0	0
Surface water:outfall	0	0	18	18
Pumping station	0	0	3	3
Foul:sewer	0	0	31	31
Other	0	0	5	5
TOTAL	0	0	74	74

Sewage and Water - other	Cat1	Cat2	Cat3	Sub Total
Sewer dykes and village drains	0	0	0	0
Cess pits	0	0	1	1
Others	0	0	2	2
TOTAL	0	0	3	3

Agricultural	Cat1	Cat2	Cat3	Sub Total
Beef cattle	0	0	8	8
Dairy cattle	0	2	20	22
Pigs	0	2	7	9
Poultry	0	0	2	2
Sheep	0	1	15	16
Arable	0	0	10	10
Horticultural	0	0	2	2
Smallholding	0	0	1	1
Stables	0	0	5	5
Kennels	0	0	0	0
Fish farms	0	0	1	1
Mixed	0	0	15	15
Forestry	0	0	0	0
Others	0	0	8	8
TOTAL	0	5	94	99

Transport	Cat1	Cat2	Cat3	Sub Total
Road	1	1	117	119
Rail	0	0	9	9
Ships/boats	0	1	14	15
Airports	0	0	0	0
Pipelines (long distance only)	0	0	0	0
Other	0	1	4	5
TOTAL	1	3	144	148

Others	Cat1	Cat2	Cat3	Sub Total
Hospital	0	0	1	1
Crown exempt	0	0	0	0
Domestic/residential	0	0	21	21
Restaurants/hotels/public houses	0	0	2	2
Contaminated land	0	0	0	0
Schools/educational establishments	0	0	4	4
Scrapyards (metal recycling)	0	0	5	5
Other	1	0	96	97
Unknown	0	2	204	206
TOTAL	1	2	333	336

	Cat1	Cat2	Cat3	Total
TOTAL BY SOURCE	4	28	1083	1115

TOTAL CATERGORY 4 INCIDENT	356
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Compiled by James Carron 05/02/1999