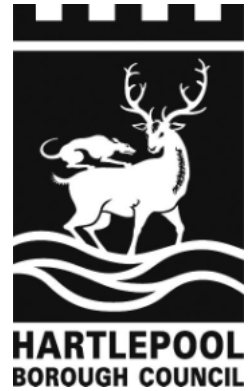


HEALTH SCRUTINY FORUM

AGENDA



Tuesday, 27 October 2009

At 6.30 pm

in the Borough Hall, Headland, Hartlepool

MEMBERS: HEALTH SCRUTINY FORUM:

Councillors Barker, Brash, S Cook, A Lilley, G Lilley, Plant, Sutheran, Worthy and Young

Resident Representatives:

Jean Kennedy, Linda Shields and Mike Ward

Also invited to attend:

The Mayor, Stuart Drummond

Councillors Aiken, C Akers-Belcher, S Akers-Belcher, Allison, Atkinson, R W Cook, Coward, Cranney, Fenwick, Fleet, Fleming, Flintoff, Gibbon, Griffin, Hall, Hargreaves, Hill, Jackson, James, Laffey, Lauderdale, London, A Marshall, J Marshall, McKenna, Dr. Morris, Payne, Preece, Richardson, Rogan, Shaw, Simmons, Thompson, Tumilty, Turner, Wallace, Wistow, and Wright

Resident Representatives: Christine Blakey, Ronald Breward, John Cambridge, Liz Carroll, Bob Farrow, Mary Green, Ray Harriman, Ted Jackson, Rose Kennedy, Evelyn Leck, Alan Lloyd, Brenda Loynes, John Lynch, Brian McBean, Mary Power, Julie Rudge, Iris Ryder, Bob Steel, Joan Steel, Sally Vokes and Maureen Waller

- 1. APOLOGIES FOR ABSENCE**
- 2. TO RECEIVE ANY DECLARATIONS OF INTEREST BY MEMBERS**
- 3. MINUTES**

No items

4. **RESPONSES FROM LOCAL NHS BODIES, THE COUNCIL, EXECUTIVE OR COMMITTEES OF THE COUNCIL TO FINAL REPORTS OF THIS FORUM**

No Items

5. **CONSIDERATION OF REQUEST FOR SCRUTINY REVIEWS REFERRED VIA SCRUTINY CO-ORDINATING COMMITTEE**

No Items

6. **CONSIDERATION OF PROGRESS REPORTS / BUDGET AND POLICY FRAMEWORK DOCUMENTS**

No Items

7. **ITEMS FOR DISCUSSION**

7.1 Dust Deposits on the Headland:-

- (a) Covering Report – *Scrutiny Manager*;
- (b) Dust Deposits on the Headland - *Director of Regeneration and Neighbourhoods*; and
- (c) Presentation – *Director of Public Health*.

8. **ISSUES IDENTIFIED FROM FORWARD PLAN**

9. **FEEDBACK FROM RECENT MEETING OF TEES VALLEY HEALTH SCRUTINY JOINT COMMITTEE**

No Items

10. **ANY OTHER ITEMS WHICH THE CHAIRMAN CONSIDERS ARE URGENT**

ITEMS FOR INFORMATION

Date of Next Meeting: Tuesday, 10 November 2009 at 3.00 pm in the Council Chamber, Civic Centre, Hartlepool

HEALTH SCRUTINY FORUM

27 October 2009



Report of: Scrutiny Manager

Subject: DUST DEPOSITS ON THE HEADLAND –
COVERING REPORT

1. PURPOSE OF REPORT

- 1.1 To introduce evidence for consideration by the Forum during its exploration of residents concerns regarding any possible health implications of dust deposits on the Headland, and surrounding areas.

2. BACKGROUND INFORMATION

- 2.1 It has been brought to the attention of the Chair of the Health Scrutiny Forum that residents have serious concerns regarding the possible health implications of dust deposits on the Headland and surrounding areas. Given the strength of feeling in relation to this issue, the Chair of the Health Scrutiny Forum agreed that the matter should be considered through the Overview and Scrutiny process. In order to facilitate this, a meeting of the Health Scrutiny Forum is being held today.
- 2.2 At today's meeting evidence is to be provided by officers from the Regeneration and Neighbourhoods Department and the Director of Public Health. The aim of this evidence being to:-
- (i) Provided background information in relation to dust complaints on the Headland and details of work undertaken by Environmental Protection Officers as part of the investigation into 'Dust on the Headland'; (*As outlined in the report attached at 7.1(b) of this agenda*); and
 - (ii) Outline the Director of Public Health's findings in relation to the health implications of dust deposits on the Headland (*As shown in the presentation attached at 7.1(c) on the agenda*).
- 2.3 In addition to this, Peter Jackson (Transport and Neighbourhoods Portfolio Holder) and Gerard Hall (Adult and Public Health Services Portfolio Holder) are also to be in attendance at today's meeting to participate in discussions. Invitations have also been extended to representatives from the organisations / companies detailed overleaf:-

- (i) Environment Agency;
- (ii) Health Protection Agency;
- (iii) Van Dalen;
- (iv) Heerema; and
- (v) PD Ports.

- 2.4 The Health Scrutiny Forum, in formulating its views / recommendations on this issue, will utilise all of the evidence provided at today's meeting. A key part of this process will be the contribution made by residents and representatives from the organisations (as outlined above).

3. RECOMMENDATIONS

- 3.1 That the Forum:-

- (i) Notes the content of the report and presentation, seeking clarification on any relevant issues where felt appropriate; and
- (ii) Formulates its views / recommendations in relation to the issue.

Contact Officer:- Joan Wilkins – Scrutiny Manager
Chief Executive's Department
Hartlepool Borough Council
Tel: - 01429 284142
Email:- joan.wilkins@hartlepool.gov.uk

BACKGROUND PAPERS

No background papers were used in the preparation of this report.

HEALTH SCRUTINY FORUM

27th October 2009



Report of: Director of Regeneration and Neighbourhoods

Subject: DUST DEPOSITS ON THE HEADLAND

1. PURPOSE OF REPORT

- 1.1 The purpose of this report is to provide Members of the Health Scrutiny Forum with background information relating to dust complaints on the Headland and provide details of work undertaken by Environmental Protection Officers as part of the investigation into 'Dust on the Headland'.

2. BACKGROUND INFORMATION

- 2.1 There are two sets of regulatory powers covering pollution issues in and around the port:-
- (i) Any nuisance from general port activities including the majority of the loading and unloading of cargoes is regulated by the Local Authority under the provisions of the Environmental Protection Act 1990.
 - (ii) There are processes on the docks that are regulated under the provisions of the Environmental Permitting Regulations 2007. Section 79(10) of the Environmental Protection Act 1990 prevents the use of the nuisance provisions where an environmental permit is in place. In these cases the regulation has to be undertaken through the conditions on the permit and the nuisance provisions can only be used with a derogation from the Secretary of State.
- 2.2 There are 2 permitted operations on the Port:-
- (i) Van Dalens - which is a permitted waste operation and therefore now regulated by the EA and:
 - (ii) The coal and coke deliveries handled by PD Ports which HBC as a Local Authority regulate.
- 2.3 On occasions in the past there have been problems with dust emanating from Port activities. When complaints have been received they have been investigated and the issues resolved.

- 2.4 There were problems in the 1990's concerning noise and dust from the Port and in particular around activities on Irvine's quay and the scrap operation at that time operated by the Hartlepool Steel Company. This resulted in a liaison group being set up with representatives from the Port Authority, Hartlepool Borough Council (HBC) and residents from the Headland and Town Wall. This group held regular meetings for a couple of years and agreements and changes in practices were achieved to the satisfaction of all parties. The group was disbanded in the mid 1990's as it had achieved all its aims.
- 2.5 At the end of February and beginning of March 2008 a number of complaints were received from residents of the Town Wall concerning alleged dust nuisance from the scrap operation on the Port. Their windows were covered in a fine layer of black dust. Some of this dust was magnetic indicating that it contained metals. HBC officers spoke to Van Dalen, the operator on the port in order to resolve the current problems. As it was recognised that there was a problem with dust from Van Dalen's operations and from the Port it was decided that the best way to pursue this was to set up another liaison group with all interested parties.
- 2.6 The first meeting of the liaison group was held on 6th March 2008 and was attended by the local Ward Councillors, residents from the Town Wall and representatives from Van Dalen, HBC, the Health and Safety Executive (HSE) and the Environment Agency (EA). It was decided at this meeting that the main aim was to resolve the dust problems without causing any further environmental complications. The residents raised a number of concerns at this meeting about the health effects of the dust as a number of them suffer from respiratory problems and dermatitis.
- 2.7 It was agreed by the liaison group that the regulatory bodies should meet further and report back to the group. As a result, officers from HBC, the HSE and the EA attended a meeting on 8th April 2008.
- 2.8 A further three liaison meetings were held up until 8th September 2008. Representatives from the Primary Care Trust (PCT) and Health Protection Agency (HPA) were in attendance. The main points arising from these meetings were:-
- (i) It was agreed that a dust management plan was needed and that PD Ports should be looking to provide dockside sweepers to help prevent dust accumulations.
 - (ii) PD Ports had produced working procedures for loading shipments and hosing down.
 - (iii) Envoy Environmental (Consultants employed by Van Dalen Ltd) agreed to undertake outline monitoring and a study on emissions from loading activities. They also agreed to take dust samples from the residents and analyse them. On production of the resulting report, the monitoring had highlighted the presence of Titanium Dioxide in the dust samples. There was a suggestion that there may be some contamination of the

scrap from the routine operation on the dock. The report concluded that the dust levels were now below the regulated limits for personnel monitoring and insignificant for environmental monitoring.

- (iv) Councillor Marshall stated that the situation was in two halves - the historical and the present. He said we need to draw a line under the historical issues and focus on the situation now. He said that he wanted the health implications for the whole area to be looked at including such areas as Spion Cop, Central Estate as well as the Headland and not just concentrating on Van Dalen.
- (v) The representative from the HPA stated that issues around health are very complicated and that pinning down the cause of health implications is extremely difficult. He thought it would be beneficial to find out if the Headland is statistically worse off for conditions such as asthma and that the PCT would be the better organisation to deal with this survey. He reiterated that even if a study was carried out and was able to prove there was a health problem he was not sure of the benefit because the causing factor was so difficult to prove, especially as there is a strong link between poor health and deprivation.
- (vi) It was agreed that members of the public need to contact Van Dalen or the Port if there are problems and also notify HBC and the EA. The residents were reminded of the importance of letting the regulators know immediately if there were issues so action could be taken and not supplying information weeks after the event.
- (vii) Residents expressed concern about the health effects of routine sand. The Health Protection Agency informed the meeting that the data sheets confirm that routine has no major health effects and is a nuisance dust only.
- (viii) The PCT explained that lots of analysis has been carried out regarding the substances from the port and the analysis had found nothing that could cause any significant health implications. At present the problems at the Headland cannot be linked to the environment.
- (ix) Councillor Marshall was keen on disseminating a leaflet to residents. A draft leaflet/newsletter was sent to residents for comments.

2.9 Minutes of all liaison and officers meeting are available.

3. RECENT PROGRESS/ACTIVITY

3.1 Major improvements at the dock side including hoppers cleaning etc have been implemented.

3.2 No complaints were received at HBC between September 2008 and January 2009. On 20th January 2009 a complaint was received from a resident of Sea

View Terrace re brown spots on windows. The windows had been replaced by Heerema last year. An HBC Officer visited premises and found small orangey brown spots but only on the first floor front window sills and nowhere else. This is some distance away from the docks and the affected windows are on the opposite side of the property. The source of this is unlikely to be from the port.

- 3.3 A complaint was received at HBC on 20th February 2009 from a resident on Town Wall concerning limestone dust on his car and property. A further complaint about the same incident was received from another resident who had just returned from holiday on 23rd February 2009.
- 3.4 In April 2009 the decision was made to undertake a monitoring exercise around the Headland and Central Estate. Equipment was ordered and the exercise started in June 2009.
- 3.5 The Dust Monitoring Exercise involves samples of UPVC and two sets of petri dishes (daily and weekly samples) coated in fine layer of petroleum jelly located at sites all around the Headland, Central Estate and the Marina. The following locations are used for the samples:

Telford Close
Commercial Street (Small Crafts Pub)
18 Thorpe Street
9 Seaview Terrace
8 Town Wall
127 Northgate

Daily weather reports are logged, including wind speed and direction.
Daily records are collected of all shipping and cargoes loaded and unloaded in the port.
Visual monitoring of port activities has been undertaken along with photographic evidence.

- 3.6 The sampling programme is ongoing and a selection of the daily and weekly further 29 samples are currently with the analyst and the results are expected on 31st October 2009. The summary of the results are attached (**Appendix1**)
The results of the samples show no heavy metals to be present and only trace levels of iron oxide and titanium dioxide. The analyst's opinion is that these levels are consistent with the levels found in general dust and dirt.
- 3.7 Unfortunately due to staffing changes and workloads the final newsletter which it had been agreed to distribute had not been produced. Councillor Marshall rang HBC in June 2009 asking about the final copy. On realising the omission, an apology was given and officers offered to have the leaflet updated and distributed. Councillor Marshall did not want this to be done as he said it had not been agreed with the residents.
- 3.6 A telephone call was received from Councillor Marshall informing that he had set up a public meeting for the 23rd June 2009 in the Borough hall and that no

officer from the local authority or any of the other agencies were invited and that if we turned up we would be pointed out and removed from the meeting.

- 3.7 A detailed chronological report of activity related to the issue is available.

4. ADDITIONAL INFORMATION

- 4.1 Under the provisions of the Environment Act 1985 and The Air Quality Regulations, the Council has to continually review and assess the air quality in the Borough. There is a requirement to assess a number of specified pollutants which have set objectives which must be met. A full review and assessment was initially undertaken in 2000. A progress report has to be prepared annually and every 3 years we have to undertake an updating and screening assessment. As part of this process one of the pollutants we have to assess are PM10 particulates. These are the particulates that are less than 10 microns in diameter which can enter the lungs. The objective that has to be met is an annual mean of $40\mu\text{g}/\text{m}^3$ and a 24 hr mean of $50\mu\text{g}/\text{m}^3$. These are the levels at which there is a potential risk to health. HBC undertook ambient monitoring on the Headland at a site in Union Street in 2001 and the verified results which were accepted by DEFRA were an annual mean of $24\mu\text{g}/\text{m}^3$. This is comfortably within the target objective
- 4.2 When complaints have been received they have been investigated and the issues resolved. No guarantees can ever be given that there will not be recurrences of problems or new problems that arise due to changes
- 4.3 There have been major improvements at the dock side including hoppers cleaning etc; HBC officers have a legal duty to investigate complaints however at present there is no evidence available to initiate legal action.
- 4.4 Consideration has been given to undertaking ambient particulate monitoring in the area subject to securing the necessary finance. Quotations have been obtained for replacement of monitoring equipment (approx £30,000) and a bid has been submitted to SCRAPT.

5. RECOMMENDATIONS

That Members of the Forum note the content of the report and where appropriate seek clarification.

6. CONTACT OFFICER

Adrian Hurst, Principal Environmental Health Officer (Environmental Protection)
Department of Regeneration and Neighbourhoods
Tel: 01428 523323
Email: adrian.hurst@hartlepool.gov.uk

BACKGROUND PAPERS

The following background paper was used in the preparation of this report:-

- (i) Minutes of Liaison and officer meetings.
- (ii) Detailed chronological list of events
- (iii) Copies of Environmental Permits
- (iv) Copy of “Review and Assessment of Air Quality 20023 - Update and Screening Report

Appendix 1

Results of Samples

| |
|----------------|
| Weekly Samples |
| Daily Samples |

| | | Iron | Titanium | Cadmium | Lead | Chromium | Arsenic | Mercury |
|------------|-------------------|--------------|--------------|---------|------|----------|---------|---------|
| 27/07/2009 | 9 Seaview Terrace | 100-200mg/kg | 100-200mg/kg | None | None | None | None | None |
| 28/07/2009 | 9 Seaview Terrace | Trace | Trace | None | None | None | None | None |
| 17/08/2009 | 18 Thorpe Street | Trace | Trace | None | None | None | None | None |
| 17/08/2009 | 18 Thorpe Street | Trace | Trace | None | None | None | None | None |
| 17/08/2009 | 9 Seaview Terrace | Trace | Trace | None | None | None | None | None |
| 17/08/2009 | 127 Northgate | Trace | Trace | None | None | None | None | None |
| 20/08/2009 | 9 Seaview Terrace | Trace | Trace | None | None | None | None | None |
| 20/08/2009 | 8 Town Wall | Trace | Trace | None | None | None | None | None |
| 20/08/2009 | 127 Northgate | Trace | Trace | None | None | None | None | None |
| 20/08/2009 | 18 Thorpe Street | Trace | Trace | None | None | None | None | None |
| 09/09/2009 | 9 Seaview Terrace | Trace | Trace | None | None | None | None | None |
| 09/09/2009 | 8 Town Wall | Trace | Trace | None | None | None | None | None |
| 09/09/2009 | 18 Thorpe Street | Trace | Trace | None | None | None | None | None |
| 09/09/2009 | 127 Northgate | Trace | Trace | None | None | None | None | None |

Appendix 1

Samples At Analysts Awaiting Results For (31/10/09)

| | 3 telford Close | 18 Thorpe Street | 9 Seaview Terrace | 8 Town Wall | 127 Northgate | Small Crafts |
|------------|-----------------|------------------|-------------------|-------------|---------------|--------------|
| 30/06/2009 | | | | | | |
| 06/07/2009 | | | | | | |
| 13/07/2009 | | | | | | |
| 20/07/2009 | | | | | | |
| 27/07/2009 | | | | | | |
| 04/08/2009 | | | | | | |
| 10/08/2009 | | | | | | |
| 17/08/2009 | | | | | | |
| 24/08/2009 | | | | | | |
| 01/09/2009 | | | | | | |
| 07/09/2009 | | | | | | |
| 14/09/2009 | | | | | | |
| 21/09/2009 | | | | | | |
| 24/09/2009 | | | | | | |
| 09/09/2009 | | | | | | |
| 20/08/2009 | | | | | | |
| 28/09/2009 | | | | | | |

Weekly
Daily

(i) Minutes of Liaison and Officer meetings.

**Multi-Agency Liaison Meeting
Port Authority Conference Room, Cleveland Road, Hartlepool
Corrected minutes of 6 March 2008 at 2.30 pm**

PRESENT

| | |
|--------------------|---------------------------------|
| Ian Baxter | Van Dalen |
| Nigel Boothby | Van Dalen |
| Dave Ashby | Van Dalen |
| Adrian Hurst | Hartlepool Borough Council |
| Stephanie Landles | Hartlepool Borough Council |
| Zoe Feather | HSE |
| Cllr John Marshall | Elected Ward Member, St Hilda's |
| Cllr Steve Allison | Elected Ward Member, St Hilda's |
| Sean Beach | Port Authority |
| Nathan Atkinson | Environment Agency |
| Stan Rennie | Resident |
| John Graham | Resident |
| Peter Mathwin | Resident |
| Alan Cook | Resident |

APOLOGIES

| | |
|------------|----------|
| Peter Cook | Resident |
|------------|----------|

1. Brief Updates on Activities/Issues

Adrian Hurst supplied a brief background on the issues that are the subject of the meeting.

Historically there have always been problems and regular resident meetings took place up until 6-7 years ago. A petition regarding the dust was received by HBC on the 2nd March 1995 and passed to the Environmental Committee and minutes of the Liaison Group regarding dust stated that sprinkling was considered but not an easy option and also there was no evidence that the dust was of a toxic nature.

Mr Hurst informed the meeting that the Council started receiving its latest complaints about dust affecting Town Wall around 2 to 3 weeks ago. The houses in that vicinity are on the prevailing wind and the paintwork and windows become covered by dust, often containing fine filings.

The Council have spoken to Van Dalen to try to resolve the situation, hence the reason for today's meeting. As it is recognised that there is a definite

problem, different agencies were represented to cover specific issues: HSE for the health and safety aspect, The Environment Agency for waste management and Hartlepool Borough Council regarding the nuisance problem caused by dust.

The main aim is to resolve the dust problem without causing further environmental complications.

John Graham pointed out that the resident meetings stopped around 6/7 years ago. However, Sean Beach said that the Port Authority held regular meetings with Van Dalen, EMR and previous companies and residents were informed of the ship movements.

Stan Rennie, as a resident representative, was in possession of a pack put together by the residents' group, which contained photographs and documents.

Photographs were passed around. These included pictures of 1 day's build up of dust, both externally and internally; pictures of the scrap heap and of the sprinkler system in action.

Whilst Mr Rennie appreciated Van Dalen's efforts in trying to put some measures into place to control the problem, he felt that the photographs showed that damping down made no difference and the residents feel that it is not only Town Wall suffering from prevailing winds and the dust carried on it.

Ian Baxter tried to determine which day the photographs were taken because, whilst the hoses had been turned on and ran all day on the Thursday, they hadn't been running on Friday morning until they'd been asked to be put on. The photos were taken to demonstrate lack of spray affect and that there was still run-off going into the docks.

Mr Rennie reiterated that the damping down measures didn't make much of an impact on the dust. Residents had watched the operation and, although the hoses were on, they could still see clouds of dust. He added that the sprinkler system may have seemingly stopped the dust coming off the stockpile but there was no reduction at Town Wall.

Mr Rennie then drew attention to the health concerns of the residents and produced documents outlaying symptoms that can occur if the dust is inhaled or ingested. Due to dust being an irritant to the respiratory tract, it can cause coughing, chest and muscle pain and flu-like symptoms. Swallowing may cause liver damage, pain, nausea, diarrhoea and shock. The source of this information is a Material Safety Data Sheet. Mr Rennie then asked members of the meeting to turn to the International Chemical Safety Cards document and quoted from it the inhalation risk of ferric oxide as being "a nuisance-causing concentration of airborne particles can be reached quickly when dispersed, especially if powdered." The effects of short-term exposure are

that it may cause mechanical irritation and long-term or repeated exposure can result in siderosis.

A document from the Environment Agency (Monitoring of Particulate Matter in Ambient Air around Waste Facilities) was then referred to and discussion ensued as to who is responsible for monitoring and whether there is a legislative framework regarding air quality and whether it is being met.

Sean Beach said that Van Dalen lease the site from the Port Authority in order to carry out their operations. The HSE have noted the dust issues and the Council wish to ensure that residents don't endure nuisance.

The meeting was told that an application had been lodged by Van Dalen for a Waste Management Licence, which would, hopefully be issued within the next 2 to 3 weeks. The licence does not contain specific limits in relation to dust but will contain general conditions in relation to controlling dust.

There was concern by the residents as to whether or not Van Dalen were operating with a licence and whether planning permission was needed in order for a licence to be granted. It emerged that the delay in obtaining a licence was due to a question surrounding whether Van Dalen's activities involved waste or not and whether a license was required. It was a national issue whereby an argument raised as to whether scrap was waste. The High Court was of the opinion that as scrap was being processed, then waste was being processed. Van Dalen have a lease with the Port Authority allowing them to export scrap from the quay which has recently been extended.

Mr Baxter explained that at the moment there are two operations in process; shipping steel and loading ships but processing scrap. The main process was loading ships.

Adrian Hurst said that the port has planning permission to carry out Port related activities and that Van Dalen's activities would fall within this remit.

John Graham was concerned that no licence had been in place since the early 1990s, to which Van Dalen responded by saying that they hadn't need one then.

Ian Baxter wondered how many monitoring positions should be brought in and said that the company had used spray systems to try to alleviate the problems.

Sean Beach added that whatever measures should be in place were in the process of being put in place. He considered it important that the right questions were being asked and that each agency familiarised itself with the relevant information to take away from the meeting.

John Graham pointed out that the Environmental Health had been asked to monitor the problem in 1990. However, on the day they carried out the

monitoring there was no wind and therefore concluded there wasn't a problem. John Graham added that the residents had taken a video at the time, footage of which has now been lost, which showed clouds of red dust. The residents informed the meeting that it was a 24/7 problem and so bad that cars and windows needed to be washed daily. The nearest houses are 100 – 150 metres away and had been bombarded with dust for 20 years.

The discussion returned to the health effects of air inhalation and dermal contact of general particle matter exposure and Mr Baxter asked whether any of the residents suffered any of these problems, to which Cllr Marshall responded that his grand-daughter suffered from asthma and dermatitis.

The Port Authority was asked whether it could demonstrate monitoring measures and responded by saying that when they had been contacted, the calls had concerned noise problems. When this was the case, Van Dalen reduced the hours and no longer loaded at night, only from 8am until 8pm. Mr Rennie stated that this was not really monitoring but only reducing the loading hours.

Mr Baxter tried to assure the residents that Van Dalen were willing to try to alleviate the problems suffered and pointed out that they were an inherited legacy. He informed the meeting that the company would take professional advice on air monitoring and make this advice available and also that an effort would be made to clear out all the scrap which had gone rusty. The company would initially try hosing and use specialised equipment to see how it worked in combating the problem. Stan Rennie asked the Environment Agency if they would be happy with Van Dalen spraying the scrap without proper bunding to protect the dock waters.

The residents did not feel that this would stop the environment issue with regards to dirty water contaminating the harbour and Sean Beach felt it advisable to tackle the dust issue first and then water.

Discussion then turned to Risk Assessments and whether they are required by law and who is responsible for putting them in place. It was felt that Van Dalen are responsible as they are leasing the site from the Port Authority.

Stan Rennie then read out an email which he'd written to Sean Beach and which contained photograph attachments. Mr Beach had not received this. However, it had been copied and seen by Stephanie Landles and Mr Rennie agreed to send it again. The email concerned questions the residents had as to what legislations the Local Authority stipulated risk assessments should have, whether the Port Authority had any responsibility in making sure risk assessments were in place, whether they should be in place before a licence is granted and, if they're not, whether the company should be allowed to operate.

There were questions as to whether the Borough Council had done any tests and the residents were informed that their involvement was mainly from a dust aspect.

Mr Rennie returned to the health issue and felt that it would be beneficial for a survey to be carried out to find out what symptoms are being suffered by inhabitants of the area. He himself suffers from a brown substance in his lungs and has had x-rays and lung function tests done for 7 years. Doctors assume, in his case, that he must work with dust. Other neighbours suffer from sore eyes and liver dysfunction. Other residents also suffer from asthma and dermatitis.

Mr Rennie then showed the meeting dust samples from 1 day's collection. Houses within closer proximity to Van Dalen's operations contained bigger particles.

It was suggested that only a small amount of dust was needed to analyse for content and that prevailing wind conditions are very significant in the problem. However, Cllr Marshall stated that there are 2 junior schools in the area and that these should be taken into consideration. He said that health problems are not uncommon in the area.

The residents called upon the HSE for a prohibition notice to stop operations. Zoe Feather, the HSE representative, informed all present that this was the first the HSE had heard about the issue and therefore further investigations and facts would be needed before they could issue anything like that.

Mr Rennie stressed the scale of damage the dust caused to property, saying that it was not just a case of washing dust from window; residents were having to scour dust off. Mr Cook added that his brother had had new windows fitted within the last fortnight and these were already severely damaged.

A question was directed towards Zoe Feather as to whether the HSE would investigate the environmental impact and impact on residents' lifestyles. Again, the representative agreed to take all the information back to her office to discuss with her colleague and assured that the HSE would stay involved.

Peter Mathwin asked whether, when granting a licence, the close proximity of residents would be taken into consideration and the response was that it would automatically be taken into consideration.

Nathan Atkinson from the Environment Agency said that the concern of the residents had only fairly recently been drawn to the attention of the Environment Agency. He was asked whether there was any possibility of a licence being refused to which the reply was that this would be unlikely, however there would be stipulation to consider the effects of operations on the environment. He said that the Environment Agency would work with Van Dalen with regards to finding out what controls they will take.

Mr Atkinson was asked whether a clause could be written into the licence to ask the company not to load ships in certain, adverse conditions, to which he responded that there was a possibility but that it was not likely.

Adrian Hurst then told the meeting that he had been on site the day before when it was not windy and there was no ship in. He observed that every time the grabber dug into the stockpile there was dust everywhere. He then went to Town Wall to see the tipping, where he saw a cloud of dust. He said that there were no controls in place or watering down occurring to lessen the problem and questioned what it must be like during days of severe weather.

Mr Baxter said that that had not been a normal situation and would not normally happen. He also stated that the company were down to the last 2 ships to get rid of old stock, that they had started last week with hoses and were now looking at equipment to hire. He also asked of the residents what would happen to the scrap if Van Dalen didn't use it and pointed out that the company were exporting for the economy.

Stan Rennie asked would Mr. Baxter be able to put a sprinkler system into the holds of the ships as spraying had not made any difference to the stockpile.

At 3.40pm, Cllr Allison left the meeting to attend another.

Nigel Boothby assured the meeting that the primary aim of Van Dalen was to use a misting system which used little water, in order to minimise pollution into the harbour. It was very much trial and error, though if it was found that the misting system was not working, something else would be introduced.

Mr Rennie was worried that the residents had endured the problem for so long that they were now building up intolerance to the dust.

Mr Baxter assured him that the stockpiles were being reduced and that they wouldn't have them on a long-term basis.

Mr Rennie felt that doctors should be aware of the health problems and side effects the dust was causing and Councillor Marshall suggested taking the information to the PCT for their involvement.

Nathan Atkinson stated that at the moment there is no proof of any link.

It was agreed that the agencies and Van Dalen would work together on this problem now that it had come to a head.

Cllr Marshall summed up that the meeting was a starting point where risk assessments had been discussed and there was a willingness for further meetings to be held.

Sean Beach said that the residents group had found out a lot of information recently and presented their case well, though he felt that their concerns had risen since obtaining information from the Internet. He agreed, however, that there was a serious problem in relation to the dust and said that a licence needed to be issued which would say what regulations needed following, including control measures. Stan Rennie wanted to make the statement that

the information from the internet was not exasperating the public's concerns but informing them of possible links to their ill health and living arrangements.

Mr Baxter told the meeting that Van Dalen was a Dutch family business, established 60 years ago. He assured that the company was a caring one, which was willing to work with people and willing to listen and to respond. He said that the problem was aggravated by wind and was perhaps not a 24/7 problem. Mr Rennie responded that it had the potential to be. Mr Baxter said that the monitoring station would be in place all the time, on both windy and non-windy days, taking consideration of all aspects.

Zoe Feather felt that the residents should not perhaps lay great store in all the documents they read on the Internet as things can sometimes be exaggerated.

Stephanie Landles added that the meeting had brought together the appropriate people to tackle the problem and felt that positive steps could now be taken. She agreed to act as a representative to liaise between agencies and residents in order to make sure that information is transferred to everyone. She appreciated the residents limiting themselves to a small group to keep the meeting under control.

4. Action Plan and Future Progressions

(a) Stephanie Landles to organise a meeting between Hartlepool Borough Council and regulatory bodies, i.e. EA and HSE, as soon as possible, in order to determine roles and actions.

(b) A full meeting to be arranged with all attendees of today's meeting, to take place within 5 weeks.

5. Feedback Requirements

To distribute the minutes to all involved.

6. Any Other Business

7. Date of Next Meeting

Date to be agreed within 5 weeks.

Proposed date of next meeting

2:00pm on the 15th April 2008 at the PD Ports Offices Conference Room.

OFFICER MEETING

MINUTES OF MEETING HELD 8th April 2008

Attendance

| | |
|-------------------|-----|
| Adrian Hurst | HBC |
| Stephanie Landles | HBC |
| Chris Gillies | HSE |
| Zoe Feather | HSE |
| Graham Hull | EA |
| Nathan Atkinson | EA |

Action

1. **Apologies**

All Present

2. **Minutes of Previous Meeting**

N/A as first meeting

3. **Matters Arising**

N/A as first meeting

There was a round of introductions and SL passed all present a copy of the monitoring plans provided by Van Dalen UK's consultant from envoy, Mr Paul Baines. There was a general discussion around the proposed monitoring issue and GH asked why monitor? What were they expecting to get from monitoring? especially as all parties around the table were aware that there was a problem.

SL stated that the present feeling was that this situation could be a reoccurring Statutory Nuisance and the only holding back from service of notice was that Van Dalen were around the table working to help solve the situation.

CG stated that the HSE was able to look at monitoring figures for the work force (Workforce Exposure Limits) but these had no relation to the exposure allowances for members of the public. GH asked if the WEL onsite was low, would that automatically mean the exposure to the public was lower. CG stated that it could not be determined that if

it was safe for a worker to work onsite for 8hrs per day that it would be safe for a member of the public to live in the vicinity.

AH raised the issue that previous air quality monitoring had shown the Headland location to have low PM10 figures, but that he was not expecting the monitoring to show a high level of particulates as the material itself was heavy and not able to travel great distances.

AH gave a brief history to the site and how the complaints for dust and noise were dealt with in the past.

GH stated that the Waste Management License was pending but eminent and that it would have some conditions within it but there would be limitations.

GH asked whether Van Dalen were open to recommendations for action at this stage and SL stated after conversations with the area manager and the Environmental Consultant that she felt they were and that was the only reason for none Service of Notice.

All parties were in agreement that a Dust Management Plan was needed to prevent dust rising at source rather than just at the boundary.

It was thought that monitoring to establish the activities causing the dust would be better.

It was suggested that water dosing of the stock piles both before and during any activity would benefit the solution and that water run off needed to be taken into consideration when doing so. If water supply was to be a problem in this location the EA would investigate an application for an Abstraction License and water could then be removed directly from the docks.

The general consensus was that PD Ports should not take a back seat during this situation and should be looking to provide dockside sweepers to help prevent dockside dust accumulation.

SL was asked to approach Van Dalen and envoy to work towards a Dust Management Plan and ask them

- What are the current control techniques?
- What additional techniques are planned?
- What is the timescale for the additional controls to be in place?

SL

CG will take the monitoring proposal to his Occupational Hygiene expert for further comments. The comments are to be reported back to the main group.

CG

In conclusion it was agreed there was a dust problem coming from the Van Dalen site and that action was required. The proposed monitoring was a good start but action plans would be better at this stage rather than monitoring.

Any other business

The minutes of this meeting will be taken to the next multi agency meeting for an update of the members of the public and elected members. SL to have minutes checked by attendee.

SL

ZF will not be able to attend the next meeting so CG will try to cover, GH will attend and so NA will not be required.

Date and Time of Next Meeting

Full Meeting 22nd April 2008 at 2:00pm
PD Ports Conference Room,
Cleveland Road,
Hartlepool.

Multi-Agency Liaison Meeting
Port Authority Conference Room, Cleveland Road, Hartlepool
Draft minutes for meeting on the 22nd April 2008 at 2.00 pm

Present

| | |
|--------------------|---------------------------------|
| Ian Baxter | Van Dalen UK Ltd |
| Nigel Boothby | Van Dalen UK Ltd |
| Dave Ashby | Van Dalen UK Ltd |
| Adrian Hurst | Hartlepool Borough Council |
| Stephanie Landles | Hartlepool Borough Council |
| Cllr John Marshall | Elected Ward Member, St Hilda's |
| Sean Beach | Port Authority |
| Graham Hull | Environment Agency |
| Stan Rennie | Resident |
| John Graham | Resident |
| Peter Cook | Resident |
| Jamie Bond | Health Protection Agency |
| Peter Atchison | Health Protection Agency |
| Paul Bain | envoy environmental consultants |

Apologies

| | |
|----------------------|---------------------------------|
| Peter Mathwin | Resident |
| Cllr Stephen Allison | Elected Ward Member, St Hilda's |

1. Corrections to last minutes

Corrections to the last minutes were made. **SL to correct and re-circulate.**

2. Brief Updates on Activities/Issues

The draft minutes from the officers meeting were passed to all present at the meeting and Stephanie Landles apologised to the officers for not having them checked before distribution but lack of time due to ill health made this impossible. If any corrections are required please contact SL as soon as possible for there correction and update.

Ian Baxter then updated the meeting of the actions currently undertaken to progress the complaint. They have had 3 shipments which have had the stockpiles sprayed before loading to ship and 2 shipments which were carried out in ideal weather conditions. Sean Beach has produced working procedures for loading the shipments and hosing the stockpiles.

Stan Rennie requested what was meant by ideal weather conditions and stated that just because the wind was blowing off the sea and not causing the town wall a problem didn't mean that it wasn't causing a problem to someone else in the other direction.

Ian Baxter had taken some photographs of the loading procedures and found that even though there was some dust produced it was staying within the ship's hold.

John Marshall requested clarification that the on site monitoring was that of a visual nature rather than an actual monitored issue.

Paul Bain from envoy then updated the meeting with his involvement, he has visited the site and the Headland to evaluate for monitoring points and procedures. It was agreed that the waste criteria needed to be improved and the amount of loose material present needed to be reduced. Training the staff on site to monitor the supplies and 4 loads have been refused on the grounds of extra dusty material present. Suppliers have also been informed that dirty waste will no longer be accepted. The regulation will fall within the Waste Management License by the Environment Agency and the reporting requirements and rejected loaded are then recorded in the site diary.

The Waste Management Application has been made presuming the issue of technical competency and the management interview is cleared the permit can then be issued. Transfer notes can then be checked against EA records and regulated further.

Site controls segregate new & old stock with an ongoing preference for the old stock to clear it from site. It is thought that there is only one shipment of old stock left on site and following its removal a full stock rotation system will be maintained to help reduce the accumulation of old dusty materials on site. This will all help with the reduction of dust produced. **SL to distribute the envoy monitoring proposal.**

Paul Bain continued to discuss the monitoring system proposed and was saying that he would be looking to work towards MR17 Guidance on monitoring Particulates produced by the EA, but he would need to modify the proposal slightly as there is an issue with land to sea transfer. MR17 does state that monitoring can be ongoing with more sites, but community monitoring is difficult due to vandalism. Peter Cook stated he would be happy for monitoring equipment to be put at his property.

Paul Bain then clarified the Health Information Data Sheets were for industrial chemical industries where the substances were artificially dried and becoming good at extracting moisture from the environment. However hydrite material would never be found on the weathered dockside.

A general discussion was made around the table for the type of substances that the samples should be analysed for. It was discussed that the sample size of the dust collected to date was very small and this may cause a very limited analyse list. It was thought that laboratory analysis for size, chemical composition, organic carbons, mineral oils, phenols, formaldehydes and total PCB's may be considered.

Stan Rennie then wanted to clarify that by reading information from the internet he had not jumped to conclusions but was concerned as anyone would be for the amount that he was finding applicable to him, his family and friends. Ian Baxter stated that he was looking into health monitoring his staff.

Jamie Bond stated that he would tend to look at the material as general particulate (PM10) under the Air Quality Standards. Adrian Hurst stated that the air quality of the headland was monitored in 2003 and was way below any requirements. The location was best fit as to power supply, control and access and was finally located behind the Borough Hall. Peter Cook would be happy to see advancement to extra procedure and monitoring systems.

John Marshall stated that this whole situation was in 2 halves, the historical and present. We need to draw a line to the historical issues and focus on the situation now. We want to make the headland a cleaner place to live now. We need to be doing this though a fully open and accessible working plan and although there have been communication problems in the past we need to ensure the future is sustainable. Looking at the health implications for the area may need to be enhanced and monitored, including areas such as Spion Cop and other areas not just Van Dalen.

Peter Atchison then stated that issues around health are very complicated, the plans will improve the dust issues. The problem is with pinning down the cause of health implications is extremely difficult. Would it be beneficial to find out if the headland is statistically worse off for the likes of asthma, what would come from information of that type. If that information was thought to be of benefit then the PCT would be the better organisation to deal with the survey.

Stan Rennie then updated that he suffered from lung function problems and after the last meeting he was able to give his doctor better information and therefore receive better treatment with an inhaler to help his health problems.

Peter Atchison then reiterated that even if a study was carried out and was able to prove that there was a health problem he was not sure of the benefit because the causing factor was then so difficult to prove, especially as there is a strong link between health and deprivation. The PCT have been approached but the timing for them is not good as they have just got a new director and he may need some time to settle in to his post.

Paul Bain did then state that dust is not just being blown from the Van Dalen site and it can be coming from anywhere on the dock land. He thought that outline monitoring would depend on boat activity and weather but he thought the total report could be achieved and ready within 4 weeks. **Paul Bain to email an updated monitoring action plan to SL for distribution.**

Adrian Hurst stated that general port land was cleaned regularly with bowzers and sweepers and in dry spells equipment is hired in. The port have a lot of material going through the docks, dolomite from hart quarry, sand, talc for Omya and Coal. These materials can be difficult to remove as they cake when wet and then dust when they dry out.

Sean Beach stated that when the port carried out its emergency procedures checks, Diesel spills were identified as the highest risk and fires were not identified as a risk.

Paul Bain is to take the samples for analysis to see if there is enough to get appropriate results from.

Ian Baxter then discussed how the general housekeeping and stock rotation will improve both the quality of the product and the dust issues from the Van Dalen site and how the changes that have been made have a cost implication for Van Dalen. The new procedure means that the ship takes up to 4hours longer to fill and the water now being used is an additional charge.

It was decided that members of the public need to initially contact Van Dalen or the ports if there is a problem but ensure that the regulators are made aware of the complaint to ensure notification and actions are recorded. The EA needs also to be informed and it was recommended that the hotline number was used as it was recorded and available 24hrs a day.

John Marshall was interested in disseminating the information to all members of the public perhaps by the means of a leaflet drop with the contact numbers. **SL to look in to forming a small liaison group to take this further.**

3. **Action Plan and Future Progressions**

- (a) SL to look at creating a leaflet.
- (b) PB to look at monitoring plan and sample analysis.
- © IB to look at dust control action plan

4. **Feedback Requirements**

SL to distribute the corrected minutes of 6/3/8 meeting
 Draft minutes of 22/4/8 meeting
 envoy's monitoring proposal
 copies of PD Teesport procedures
 Updated contact lists

5. **Any Other Business**

None raised

6. **Date of Next Meeting**

**Proposed date of next meeting
4:00pm on the 2nd June 2008
at the PD Ports Offices Conference Room.**

Multi-Agency Liaison Meeting
Port Authority Conference Room, Cleveland Road, Hartlepool
Draft minutes for meeting on the 2nd June 2008 at 4.00 pm

Present

| | |
|----------------------|-----------------------------------|
| Ian Baxter | Van Dalen UK Ltd |
| Dave Ashby | Van Dalen UK Ltd |
| Stephanie Landles | Hartlepool Borough Council |
| Cllr John Marshall | Elected Ward Member, St Hilda's |
| Sean Beach | Port Authority |
| Graham Hull | Environment Agency |
| John Graham | Resident |
| Jamie Bond | Health Protection Agency |
| Peter Acheson | Health Protection Agency |
| Paul Bain | envoy environmental consultants |
| Peter Mathwin | Resident |
| Cllr Stephen Allison | Elected Ward Member, St Hilda's |
| Madeleine Johnson | Hartlepool Primary Care Trust/HBC |

Apologies

| | |
|--------------|----------------------------|
| Adrian Hurst | Hartlepool Borough Council |
| Stan Rennie | Resident |
| Peter Cook | Resident |

1. Corrections to last minutes

None

2. Brief Updates on Activities/Issues

Paul Bain distributed a copy of his monitoring report and continued to discuss the major issues raised and the concluding findings. The monitoring was carried out on the 2nd of May 2008 on the ship THE BLUE BAY. The monitoring point locations were established to be worst case scenario and best environmental collection, so the locations were two monitor's ship side and one downwind. Paul also explained that apart from the environmental monitoring that was carried out, the staff also wore personal sampling monitors. The initial monitoring highlighted the presence of Titanium Dioxide. The whole monitoring process was carried out in an 11hr period and a timetable found on Page 11 of the report shows the monitoring diary. Paul continued to conclude that his findings were under regulated limits for personnel monitoring and insignificant for environmental monitoring.

Cllr Marshall then asked if the health implications have been monitored and analysed as insignificant, what about the damage to property. There followed

a general discussion about chemical attacks on uPVC windows and property and the general agreement was that once the material becomes oxidised it would then become chemically inert. There did follow another round of debates about life expectancy of cars and windows and how natural coastal weathering can also have an affect.

SL explained the process of investigation of dust complaints under the Environmental Protection Act 1990. Where the issue is how dust is affecting the person making the complaint, the evidence required is not physically sampling the dust but to look at the whole picture, time, frequency, weather conditions, activities within the greater area and environment.

Peter Acheson then reiterated that the monitoring that was carried out was worse case and that under no circumstances could it get worse.

SB then raised a new issue, that the photographs showing the dust raising activities on the docksides should have been reported to get the activities stopped or in the case of the leaking grab, an explanation of the task being undertaken. The grab was being used to demonstrate to the manufacturers that the grab was not working to its specification and would need alterations to be made.

Cllr Marshall reiterated that contact should be continued and everyone had a role to keep the evidence fresh and actions appropriate for the current situation. SL confirmed that reported incidences weeks later were totally unusable.

SB went on to state that the sweeper was not paid for his work as the quality of the job was not satisfactory.

Cllr Marshall then recommended that the envoy monitoring report was to be taken away by everyone and any queries or feedback to be sent to SL for future dissemination to the group. He also took the opportunity to thank PB for all his hard work and help with the monitoring report and its explanation.

It was decided that the resident reps need to initially contact Van Dalen or the ports if there is a problem but if they don't feel happy to do so they can contact SL and the other regulators of the complaint to ensure notification and actions are recorded.

John Marshall was interested in disseminating the information to all members of the public perhaps by the means of a leaflet drop with the contact numbers. SL proposed that if anyone was interested in being on the working group to contact her by Friday 6th June so that an invitation could then be sent for the working party attendance to meet.

Following general discussion around the table of where the tasking group was going it was decided that the full group should meet on a 6 monthly basis unless an issues was raised but the working group would meet more appropriately depending on the actions and activities given.

3. **Action Plan and Future Progressions**

- (a) SL to establish a working group to look at creating posters and leaflets.
- (b) IB to look at dust control action plan.
- (c) Resident reps to report any incidences witnessed on the dockside.

4. **Feedback Requirements**

SL to distribute the draft minutes of 02/06/08 meeting
Updated contact list

5. **Any Other Business**

None raised

7. **Date of Next Meeting**

**Proposed date of next meeting
4:00pm on Monday the 8th September 2008
at the PD Ports Offices Conference Room.**

Multi-Agency Liaison Meeting
Port Authority Conference Room, Cleveland Road, Hartlepool
Minutes of meeting on the 8th September 2008 at 4.00 pm

Present

| | |
|--------------------|-----------------------------------|
| Ian Baxter | Van Dalen UK Ltd |
| Dave Ashby | Van Dalen UK Ltd |
| Stephanie Landles | Hartlepool Borough Council |
| Adrian Hurst | Hartlepool Borough Council |
| Shirley Jones | Hartlepool Borough Council |
| Stan Rennie | Resident |
| Peter Cook | Resident |
| Cllr John Marshall | Elected Ward Member, St Hilda's |
| Sean Beach | Port Authority |
| John Graham | Resident |
| Peter Acheson | Health Protection Agency |
| Peter Mathwin | Resident |
| Madeleine Johnson | Hartlepool Primary Care Trust/HBC |

Apologies

| | |
|----------------------|---------------------------------|
| Graham Hull | Environment Agency |
| Jamie Bond | Health Protection Agency |
| Paul Bain | envoy environmental consultants |
| Cllr Stephen Allison | Elected Ward Member, St Hilda's |

1. Corrections to last minutes

PM and JG had not received a copy of the last minutes or a letter notifying of meeting, SL apologised and will send addition copies with next minutes

2. Brief Updates on Activities/Issues

Draft copy of newsletter leaflet was distributed to the table by SL. SL asked for comments on the leaflet and any comments or changes to be made to the leaflet to be passed to SL within one week.

- Cll. Marshall wants the leaflet to link health to environmental issues, and then talk about peoples own health and how they can have an impact.
- Cll. Marshall, wants the public to be given easy accessible contact details of relevant personnel, were they can direct their concerns.
- MJ suggested focusing on people tackling their own health and health of the community.

- Cll. Marshall would like all interested parties to make a statement in the leaflet stating that in their opinion there is no problem with the environment and health of the community.

PM distributed a sample of a UPVC windowsill, he went on to explain that he had used a new sample of UPVC windowsill and sprinkled it with 'dust' which had been collected previously from windowsills in the area. He then put the windowsill outside and placed it on his own windowsill and left it for seven days, after washing the sill it can be seen that orange discolouration had occurred, which Cllr Marshall said had burnt into the UPVC sill.

SL explained that we should not say at this stage that the dust had burnt into the UPVC sill, however the sill was discoloured.

Cllr. Marshall stated that the Envoy report said that the dust was inert but he said that looking at the sill example it does not appear to be. Cllr. Marshall wants an expert to clarify the cause of the discolouration.

AH stated that he was unsure what could be done with the sample by the Environmental Protection Team. However he will attempt to get the plastic analysed, finding out why the material discolouration/burning could have occurred.

There followed general discussion about inert materials, and finding out what is causing the problems with window frames in the area, with questions on possible health effects of the rutile sand.

PA said that data sheets state that rutile sand has no major health effects.

AH explained that there had been no significant health implications from rutile. SR had previously mentioned Natural Occurring Radioactive Materials (NORM) Regulations. However AH confirmed that he was unable to find any reference to these Regulations.

Cllr Marshall was insistent that we find out what the dust is, and where it is coming from, and also if there are any health implications, as young people on the Headland are suffering from asthma and dermatitis. He queried whether there were any links and asked whether the high incidence of asthma is related.

PA said the Headland is a deprived area and there are links with the health of the people with regards to the deprivation in the area. PA also explained that the HPA can identify the health effects of any chemical and exposure limits; however he did state that the public is exposed to a much lower level than the workforce actually working on site.

General discussion followed re workforce PPE and levels of exposure.

Cllr Marshall says we need to find out if there are other links to the poor health rather than just saying it's a deprived area.

MJ explained that lots of analysis has been carried out regarding the substances from the port and the analysis had found nothing that could cause any significant health implications. At present the problems at the Headland cannot be linked to the environment.

Cllr Marshall would like to see statements to that effect put into the newsletter leaflet, to alleviate residents concerns in the area.

PA said that working with companies to reduce the dust is only one of the ways forward and approves the joint working of PCT and HBC to improve the general health and the environment.

SB would like to know what the report actually achieved.

PA said the report had achieved what was intended to be studied and was reassuring.

Cllr. Marshall questioned the integrity of the report insisting that the report did nothing to alleviate the concerns of the residents.

Cllr.Marshall however pointed out that the report pointed a way forward, as work had been carried out to improve the situation, although it did not identify health implications or problems with the materials.

SL and AH pointed out that there had been major improvements at the dock side including hoppers cleaning etc, SL also went on to explain that she has a legal duty to investigate complaints, however at present there is no evidence available to initiate legal action, if that was the way forward.

All interested parties have agreed to make a statement, which will be passed on to SL to be put into newsletter leaflet.

SR would like contact details to report incidents occurring at the dock.

Cllr Marshall thinks that it would be a good idea to include, 'out of hours' telephone numbers of Council, ASBU and police.

AH said that incidents of anti-social behaviour should be reported to the police etc. as the calls are logged and the hot spots can be identified by looking at the statistics.

3. **Action Plan and Future Progressions**

- (a) SL to establish a working group to look at creating posters and leaflets.
- (b) IB to look at dust control action plan.
- (c) Resident reps to report any incidences witnessed on the dockside.

4. **Any Other Business**

None raised

5. **Date of Next Meeting**

To be arranged

Detailed Chronological list of events

20th June 2008

- HBC Officer visited Irvines Quay to observe unloading operations of Routile shipment. Problems observed with leakage around the grabs and dust emissions from the hoppers and from wagons carrying routile to the warehouses.
- Officer forwarded copies of photographs to Sean Beach at PD Ports and asked for his comments. Officer spoke to him on the phone and he said he would look to carrying out further improvements to the hoppers and also that they would ensure that in future all the wagons used to ferry the routile will be well sealed. They had sent a number of wagons away because they were leaking.

3rd July 2008

- HBC Officer observed dust being emitted from Irvine's Quay. Routile delivery emitting clouds of dust from hoppers. Contacted the dock office. They have been trying different set ups in the hoppers to see if they can improve the situation. One of the hoppers had been set fully open and the dust was just blowing straight back out.
Hopper taken out of action until gate closed back down again.
Officer had meeting with Sean Beach and he agreed to contact their engineers and get more work carried out on hoppers.
- Van Dalen were using sprinkler systems and new loading procedures throughout the rest of 2008 and we did not observe any problems or receive any reports from residents of any dust problems.

20th January 2009

- Call received from a resident of Sea View Terrace re brown spots on windows. These had been replaced by Heerema last year. HBC Officer visited premises and found small orangey brown spots but only on the first floor front window sills and nowhere else. This is some distance away from the docks and the affected windows are on the opposite side of the property. The source of this is unlikely to be from the port.

20th February 2009

- Call from a resident of the Town wall re limestone dust all over cars and property.
- HBC Officer spoke to Sean Beach at the port. Limestone had been unloaded on part of dock not normally used for this product. They have cleared all the limestone away and cleaned area up.

23rd February 2009

- Call from another resident of the Town Wall. He had come back from holiday to find his property covered in dust. Explained that we were aware of this incident and it had been dealt with.

4th March 2009

- Annual Environmental permit inspection undertaken for Coal and Coke deliveries. During inspection had a discussion with Sean Beach about work carried out on hoppers.

2nd July 2009

- HBC Officers visited Irvine's quay with and observed routine delivery. Still clouds of dust emanating from top of hoppers and around the wagons in the base of the hoppers. We took a number of photographs. The weather was dry and sunny with a very light SW breeze. Although there were dust emissions from the hopper they were being contained within the port due to the weather conditions.

Officers spoke to Sean Beach and he accepted that there are still problems with the hoppers. The routine being unloaded this time is the natural routine which is less dense than the normal shipments. He informed me that he currently has difficulty in obtaining any funding due to the current financial climate. Officers explained to him that we are continuing to monitor and that if we get evidence that any of the material being loaded or unloaded is getting off the port then we will take formal action. He said he will forward the details of our conversation to his superiors and try to get funding to do more work to the hoppers.

20th August 2009

- 16:30: Officer received phone call from Town Wall Resident to say that scrap was being unloaded from the ship and was creating a lot of dust. An Officer visited Town Wall at 17:00. The unloading process was nearly complete and not much dust could be seen. The Officer was informed that the dust had been much worse during the afternoon. The Officer took some photo's and drove to the other side of the port to capture some more photo's. Unfortunately the process had ceased by the time the Officer arrived at the other side of the port.

8th September 2009

- 14:45: Call received from a resident of the Town Wall to say that there was large amounts of dust blowing off the 4 or 5 piles of material that is stored around the buildings at Van Dalen's and wanted us to take photographs. The wind was extremely strong and gusty and the officer explained that considering the severe weather conditions it would be difficult for anyone to stop dust blowing around but that we would visit.

Officers visited the site at 15:00hrs. There was no evidence of any dust blowing off the stock piles that the resident was referring to. There were considerable amounts of dust blowing off all road surfaces, off the dock surfaces, off the surfaces in Hoggs Fuels etc. The wind was extremely strong and gusty and very warm. There was no loading or unloading taking place in the Port. Officers visited Town Wall. There was some evidence of dust blowing off Irvine's Quay, and also considerable amounts of sand and dust blowing off Middleton Beach and the Banjo Pier opposite Town Wall, there was no obvious dust blowing off any of the piles of scrap metal. The port had their bowser operating damping down the surfaces but this was drying out very quickly in the wind. Officers spoke to a resident on the Town Wall. He informed the officers that the Port had been running the Bowser all day.

The officers took a number of photographs during our visit.

14th September 2009

- HBC Officer had telephone conversation with Sean Beach at PD Ports re the Hoppers. Sean confirmed that they had carried out modifications to one of the hoppers and that this had resulted in improvements to any dust emissions from the hoppers. They are going to undertake the same modifications to the other hoppers. The Officer also raised the issue of the holes in the sheds around the rutilite store to the rear of Van Dalen's site. Sean said that although the brickwork is damaged the rutilite is stored within another bund inside the building and is contained within the bunding.

22nd September 2009

- Telephone call received from a resident of the Town Wall about Van Dalen's tipping scrap from wagons at 7:00am and 7:30am. He was referring to an agreement that was negotiated between the residents and THPA and Hartlepool Steels some years ago. He was informed by the officer that this was an informal agreement that had been made with previous operators and not with Van Dalen and that it had no legal standing. The Officer informed him that he would contact Van Dalen and see what he could sort out for them.

The Officer spoke to Ian Baxter at Van Dalen's. He said that if a delivery arrives then they have to tip it as the vehicle has to move on to other jobs. He said nothing has changed in all the years they have been on Irvine's quay, they have always started at 7:00am and do load ships as early as 6:00am on occasions. He said they do stick by the previous agreement and only load Girder and Plate between 8:00am and 8:00pm. He said he would see what he could do to move scrap deliveries to a later time. The Officer rang the resident back and explained the action taken. The resident was not too happy and said that he would ring every time there was an early delivery.

HBC officer rang the Environment Agency and asked them if they would also raise this issue with Van Dalen during their next inspection.

creating a better place



Environment
Agency

Our Ref: WML 570

Date: 2 February 2009

Hartlepool Borough Council
Commercial Waste Team
Civic Centre
Victoria Road
Hartlepool
TS24 8AY

1 CHURCH STREET

11 FEB 2009



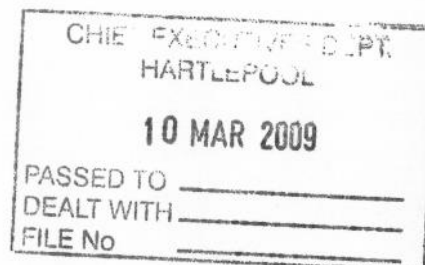
Dear Sir/Madam

**Environmental Protection Act 1990
Waste Management Licensing Regulations 1994 (as amended)**

Please find enclosed a Waste Management Licence EAWML 100226 issued to:

Van Dalen UK Limited

For Site At: **Irwins Quay
Hartlepool Export Terminal
Hartlepool
Cleveland
TS24 0UZ**



On 28 January 2009

Should you require any further information please contact NPT officer, Judith Ford on 01925 542 773.

Yours faithfully

**Louis Wood
Permitting Support Centre**



Licence Number EAWML100226

with Introductory Note

**Facility Type: Metal Recycling Site and
Storage of Furnace Ready Scrap Metal for
Recovery**

Environmental Protection Act 1990

Van Dalen UK Limited

Irvin's Quay
Hartlepool Export Terminal
Hartlepool
Cleveland
TS24 0UZ

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Introductory note

This introductory note does not form a part of the licence.

This licence permits the holder to operate a storage site for scrap metal and furnace ready scrap metal. This licence does not permit the burning of any wastes, either in the open, inside buildings or in any form of incinerator. The licence does not permit any treatment of wastes.

This licence does not allow any emission into surface waters or groundwater. However:

- Liquids may be discharged into a sewer subject to a consent issued by the sewerage undertaker.
- Liquids may be tankered off-site for disposal or recovery.
- Clean surface water from roofs, or from areas of the site that are not being used in connection with the storage of waste, may be discharged directly to surface waters, or to groundwater by percolation through the soil via a soakaway.

Operational requirements specified in regulations

Some aspects of the activity are not controlled by the conditions of this licence, because the controls are specified in the Waste Management Licensing Regulations (WML) Regulations¹, or other legislation.

These include:

- Regulation 4 of the WML Regulations describes the qualifications required by a technically competent person at a waste management facility.
- Section 33 (1)(c) of the Environmental Protection Act 1990 prohibits the treating, keeping or disposal of controlled waste in a manner which causes or is likely to cause pollution of the environment or harm to human health.
- Section 85 of the Water Resources Act 1991 under which it is an offence to cause or knowingly permit polluting matter to enter controlled waters, (which include both surface and groundwaters), unless the emission is specifically allowed in a licence.
- The Oil Storage Regulations² require oil storage tanks to be bunded.

Public Registers

The public registers in Agency offices contain information relating to licences including the application and monitoring results. Certain information may be withheld from public registers where it is commercially confidential or contrary to national security. Some information is also available on the Agency's website (see below).

Appeals against the conditions in the licence

The licence holder may appeal to the Secretary of State against any of the conditions imposed by this licence, within 6 months of the date of issue.

Licence modifications, transfers and surrender

The Agency may modify the conditions of this licence in the future. If the licence holder wishes to modify the conditions, transfer the licence to another person or surrender the licence then he must submit an application to the Agency.

Licence

Environmental Protection Act 1990
Waste Management Licensing
Regulations 1994



**Environment
Agency**

Waste Management Licence Number EAWML100226

**Facility Type: Storage of Furnace Ready Scrap Metal
for Recovery and Scrap Metal.**

The Environment Agency ("the Agency") in exercise of its powers under Section 36 of the Environmental Protection Act 1990, hereby authorises:

Van Dalen UK Limited ("the licence holder"),

whose registered office is:

**8 Grangemill Lane
Sheffield
South Yorkshire
S9 1HW**

Company registration number 04031206


to carry out the keeping of waste at:

**Irvins Quay
Hartlepool Export Terminal
Hartlepool
Cleveland
TS24 0UZ**

the boundary of which is shown on the site plan at schedule 1 to this licence
to the extent authorised by and subject to the conditions of this licence.

Signed

Date

| | |
|---|-----------------|
|  | 28 January 2009 |
|---|-----------------|

Kelly Bailey

Authorised to sign on behalf of the Agency

Other permits at this location

There may be other environmental permits at this location, issued to different operators/licence holders or to the same operator/licence holder for different activities. There may also be permits issued by another regulator such as the local authority. For information on any other Agency-issued permits please contact the Agency (see below).

This waste management licence does not remove the licence holder or operator from their obligations under any other legislation.

Talking to us

Please quote the licence number if you contact the Agency about this licence.

In the event of an incident the Agency may be contacted using the Incident Hotline telephone number (0800 80 70 60). Calls are free and the hotline operates 24 hours a day, 7 days a week.

For routine enquiries during office hours, the Agency contact telephone number is 08708 506 506.

Alternatively you can write to the Agency local office (at the address given in the phone book) or go to the Agency website at www.environment-agency.gov.uk where you can: complete an enquiry form on-line, look up the site under "what's in your backyard", or search for other information.

¹ - The Waste Management Licensing Regulations 1994 (SI 1994 No. 1056), (as amended).

² - The Control of Pollution (Oil Storage) (England) Regulations 2001 (SI2001 no. 2954)

End of Introductory Note.

1 - MANAGEMENT

1.1 General management

- 1.1.1 The activities shall be managed and operated:
- (a) in accordance with a management system, which identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents and non-conformances and those drawn to the attention of the licence holder as a result of complaints; and
 - (b) by sufficient persons who are competent in respect of the responsibilities to be undertaken by them in connection with the operation of the activities.
- 1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.
- 1.1.3 Any persons having duties that are or may be affected by the matters set out in this licence shall have convenient access to a copy of it kept at or near the place where those duties are carried out.

1.2 Accident management plan

- 1.2.1 The licence holder shall:
- (a) maintain and implement an accident management plan;
 - (b) review and record at least every 4 years or as soon as practicable after an accident; (whichever is the earlier) whether changes to the plan should be made;
 - (c) make any appropriate changes to the plan identified by a review.

1.3 Site security

- 1.3.1 Site security measures shall prevent unauthorised access to the site, as far as practicable.

2 – OPERATIONS

2.1 Licensed activities

- 2.1.1 The licence holder is authorised to carry out the activities specified in schedule 2, table 2.1 ("the activities").

2.2 Waste acceptance

- 2.2.1 Wastes shall only be accepted if:
- (a) it is of a type and quantity listed in schedule 2, table 2.2; and
 - (b) it conforms to the description in the documentation supplied by the producer and holder.
- 2.2.2 Records shall be maintained of all waste accepted onto the site.

3 – EMISSIONS AND MONITORING

3.1 Emissions to air, water, or land

- 3.1.1 There shall be no point source emissions to air, water or land.

3.2 Transfers off-site

- 3.2.1 Records of all the wastes sent off site from the activities, for either disposal or recovery shall be maintained.

3.3 Fugitive emissions of substances

- 3.3.1 Fugitive emissions of substances (excluding odour and noise) shall not cause pollution. The licence holder shall not be taken to have breached this condition if appropriate measures have been taken to prevent or where that is not practicable, to minimise, those emissions.
- 3.3.2 The operator shall:
- (a) if notified by the Agency that the activities are giving rise to pollution, submit to the Agency for approval within the period specified, a fugitive emissions management plan;
 - (b) implement the approved fugitive emissions management plan, from the date of approval, unless otherwise agreed in writing by the Agency.
- 3.3.2 Litter or mud arising from the activities shall not cause pollution. The licence holder shall not be taken to have breached this condition if appropriate measures have been taken to prevent or where that is not practicable, to minimise, the litter and mud.
- 3.3.3 Litter and mud arising from the activities shall be cleared from affected areas outside the site as soon as practicable.
- 3.3.4 All liquid wastes, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless the licence holder has used other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container.

3.4 Odour

- 3.4.1 Emissions from the activities shall be free from odour at levels likely to cause annoyance outside the site, as perceived by an authorised officer of the Agency, unless the licence holder has used appropriate measures to prevent or where that is not practicable, to minimise, the odour.

3.5 Noise

- 3.5.1 Emissions from the activities shall be free from noise at levels likely to cause annoyance outside the site, as perceived by an authorised officer of the Agency, unless the licence holder has used appropriate measures to prevent or where that is not practicable, to minimise, the noise.

3.6 Pests

- 3.6.1 Scavenging animals, scavenging birds and other pests shall not cause pollution. The licence holder shall not be taken to have breached this condition if appropriate measures have been taken to prevent or where that is not practicable, to minimise, such pollution.

3.7 Monitoring

- 3.7.1 This licence does not require any monitoring of the activities, emissions or the environment.

4 – INFORMATION

Records

- 4.1.1 All records required to be made by this licence shall:
- (a) be legible;
 - (b) be made as soon as reasonably practicable;
 - (c) if amended, be amended in such a way that the original and any subsequent amendments remain legible, or are capable of retrieval; and
 - (d) be retained, unless otherwise agreed by the Agency, for at least 6 years from the date when the records were made, or in the case of the following records until licence surrender:
 - (i) off-site environmental and health effects; and
 - (ii) the condition of land and groundwater.
- 4.1.2 Any records required to be made by this licence shall be supplied to the Agency within 14 days, where the records have been requested in writing by the Agency.

4.2 Reporting

- 4.2.1 All reports and notifications required by the licence shall be sent to the Agency using the contact details supplied in writing by the Agency.
- 4.2.2 A summary report of the waste types and quantities accepted and removed from the site shall be made for each year. It shall be submitted to the Agency within one month of the end of the year, and shall be in the format required by the Agency.

4.3 Notifications

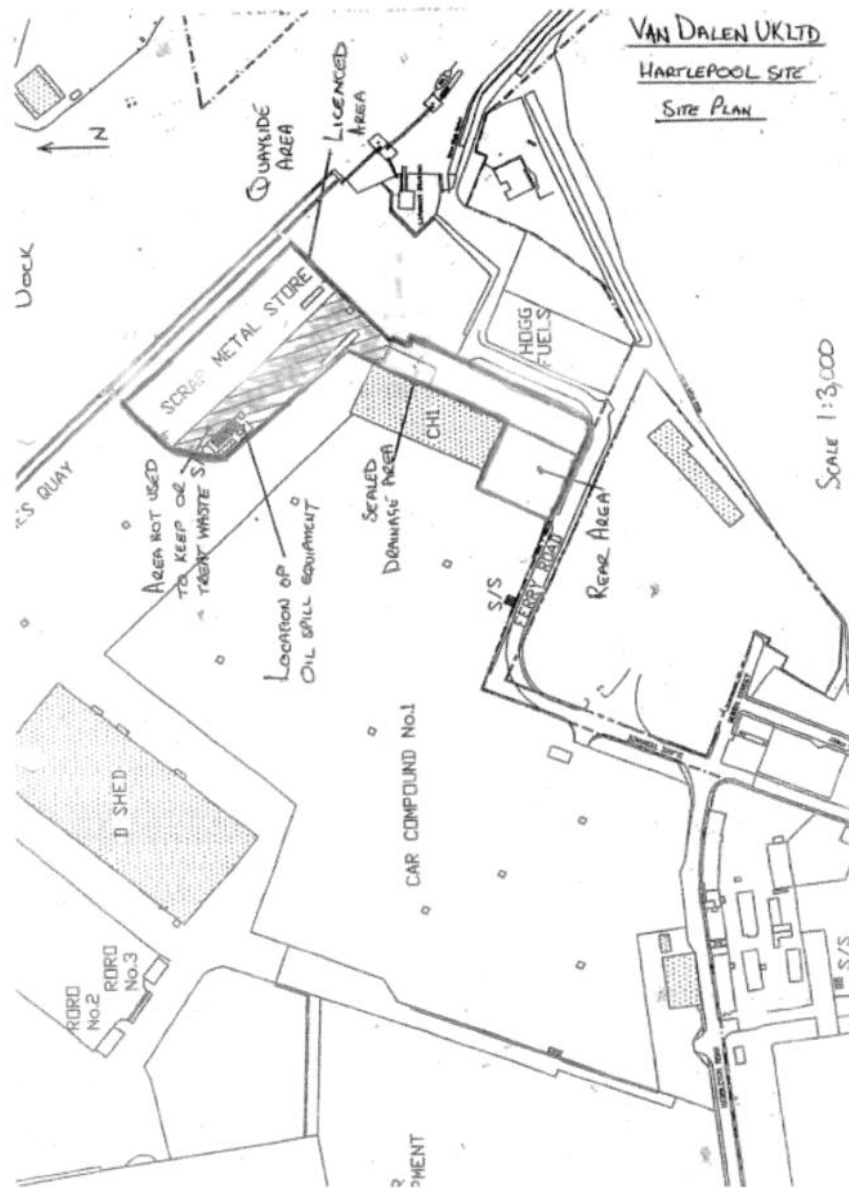
- 4.3.1 The Agency shall be notified without delay following the detection of:
- (a) any malfunction, breakdown or failure of equipment or techniques, accident or fugitive emission which has caused, is causing or may cause significant pollution;
 - (b) the breach of a limit specified in this licence; and
 - (c) any significant adverse environmental and health effects.
- 4.3.2 Written confirmation of actual or potential pollution incidents and breaches of emission limits shall be submitted within 24 hours.
- 4.3.3 Prior written notification shall be given to the Agency of the following events and in the specified timescales:
- (a) as soon as practicable prior to the permanent cessation of any of the activities;
 - (b) cessation of operation of all or part of the activities for a period likely to exceed 3 months;
 - (c) resumption of the operation of all or part of the activities after a cessation notified under (b) above

- 4.3.4 Where the Agency has requested in writing that it shall be notified when the licence holder is to undertake monitoring and/or spot sampling, the licence holder shall inform the Agency when the relevant monitoring is to take place. The licence holder shall provide this information to the Agency at least 14 days before the date the monitoring is to be undertaken.
- 4.3.5 The Agency shall be notified within 7 days of any changes in technically competent management and the name of any incoming person together with evidence that such person has the required technical competence.
- 4.3.6 The Agency shall be notified within 14 days of the licence holder and/or any relevant person being convicted of a relevant offence, (unless such information has already been notified to the Agency), with details of the nature of the offence, the place and date of conviction, and the sentence imposed.
- 4.3.7 The Agency shall be notified within 14 days of the licence holder and/or any relevant person lodging an appeal against a conviction for any relevant offence and of the outcome when the appeal is decided.
- 4.3.8 The Agency shall be notified within 14 days of the occurrence of the following matters except where such disclosure is prohibited by Stock Exchange rules:
- a. Where the licence holder is a registered company:
 - any change in the licence holder's trading name, registered name or registered office address
 - any change to particulars of the licence holder's ultimate holding company (including details of an ultimate holding company where a licence holder has become a subsidiary);
 - any steps taken with a view to the licence holder going into administration, entering into a company voluntary arrangement or being wound up; and
 - if the licence holder is not the operator: any change in the operators trading name; address; registered name or registered office address.
 - b. Where the licence holder is a corporate body other than a registered company:
 - any change in the licence holder's name or address;
 - any steps taken with a view to the dissolution of the licence holder; and
 - if the licence holder is not the operator: any change in the operators trading name; address; registered name or registered office address.
 - c. In any other case:
 - the death of any of the named licence holders (where the licence holder consists of more than one named individual);
 - any steps taken with a view to the licence holder, or any one of them, going into bankruptcy, entering into a composition or arrangement with creditors, or, in the case of them being in a partnership, dissolving the partnership; and
 - if the licence holder is not the operator: any change in the operators trading name; address; registered name or registered office address.
- 4.3.9 The Agency shall be notified at least 7 days in advance of the commencement of any of the activities.

4.4 Interpretation

- 4.4.1 In this licence the expressions listed in schedule 3 shall have the meaning given in that schedule.

Schedule 1- Site plan



Schedule 2 - Operations

Table 2.1 Licensed activities

| Description of activities | Limits of activities |
|--|---|
| R13: Storage of waste pending any of the operations listed in paragraphs 1 to 12 of Part IV of Schedule 4 of the Waste Management Licensing Regulations, but excluding temporary storage, pending collection, on the site where it is produced. | <p>All furnace ready scrap metal waste that may contain or be contaminated with potential polluting material shall be stored on an impermeable surface with sealed drainage. All other furnace ready scrap metal waste shall be stored on hardstanding or an impermeable surface with sealed drainage.</p> <p>No furnace ready scrap metal shall be stored at the site for longer than 3 years prior to recovery</p> <p>Uncontaminated ferrous metals or alloys and uncontaminated non-ferrous metal wastes must be stored on hardstanding or an impermeable surface. All other wastes must be stored on an impermeable surface with sealed drainage system.</p> <p>No waste shall be stored in the area coloured green on the site plan in schedule 1 to this licence.</p> <p>Maximum storage time of 3 years prior to recovery.</p> |

Table 2.2 Licensed waste types and quantities

Maximum Quantities

The total quantity of wastes listed below, accepted at the site shall be less than 150,000 tonnes a year.

Exclusions

Notwithstanding the specification of waste types below, wastes shall not be accepted at the site which have any of the following characteristics:

- Consisting solely or mainly of loose dusts, powders or fibres
- Wastes that are in a form which is either sludge or liquid

| Waste Code | Description |
|--------------|---|
| 02 | WASTES FROM AGRICULTURE, HORTICULTURE, AQUACULTURE, FORESTRY, HUNTING AND FISHING, FOOD PREPARATION AND PROCESSING |
| 02 01 | wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing |
| 02 01 10 | waste metal |
| 10 | WASTES FROM THERMAL PROCESSES |
| 10 02 | wastes from the iron and steel industry |
| 10 02 01 | wastes from the processing of slag |
| 10 02 02 | unprocessed slag |

| Table 2.2 Licensed waste types and quantities | |
|--|---|
| 10 09 | wastes from casting of ferrous pieces |
| 10 09 03 | furnace slag |
| 10 10 | Wastes from casting of non-ferrous pieces |
| 10 10 03 | furnace slag |
| 12 | WASTES FROM SHAPING AND PHYSICAL AND MECHANICAL SURFACE TREATMENT OF METALS AND PLASTICS |
| 12 01 | wastes from shaping and physical and mechanical surface treatment of metals and plastics |
| 12 01 01 | ferrous metal filings and turnings |
| 12 01 02 | ferrous metal dust and particles |
| 12 01 03 | non-ferrous metal filings and turnings |
| 12 01 04 | non-ferrous metal dust and particles |
| 15 | WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED |
| 15 01 | packaging (including separately collected municipal packaging waste) |
| 15 01 04 | metallic packaging |
| 16 | WASTES NOT OTHERWISE SPECIFIED IN THE LIST |
| 16 01 | end-of-life vehicles from different means of transport (including off-road machinery) and wastes from dismantling of end-of-life vehicles and vehicle maintenance (except 13, 14, 6 06 and 16 08) |
| 16 01 06 | End-of-life vehicles containing neither liquids nor other hazardous components |
| 16 01 17 | ferrous metal |
| 16 01 18 | non-ferrous metal |
| 16 02 14 | discarded equipment other than those mentioned in 16 02 09 to 16 02 13 (ferrous and non-ferrous metal waste only) |
| 16 02 16 | components removed from discarded equipment other than those mentioned in 16 02 15 (ferrous and non-ferrous metal waste only) |
| 17 | CONSTRUCTION AND DEMOLITION WASTES (INCLUDING EXCAVATED SOIL FROM CONTAMINATED SITES) |
| 17 04 | metals (including their alloys) |
| 17 04 01 | copper, bronze, brass |
| 17 04 02 | Aluminium |
| 17 04 03 | Lead |
| 17 04 04 | Zinc |
| 17 04 05 | iron and steel |
| 17 04 06 | Tin |
| 17 04 07 | mixed metals |
| 17 04 11 | cables other than those mentioned in 17 04 10 |
| 19 | WASTES FROM WASTE MANAGEMENT FACILITIES, OFF-SITE WASTE WATER TREATMENT PLANTS AND THE PREPARATION OF WATER INTENDED FOR HUMAN CONSUMPTION AND WATER FOR INDUSTRIAL USE |
| 19 01 | Wastes from incineration or pyrolysis of waste |
| 19 01 02 | ferrous materials removed from bottom ash |
| 19 10 | wastes from shredding of metal-containing wastes |
| 19 10 01 | iron and steel waste |
| 19 10 02 | non-ferrous waste |
| 19 12 | wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified |
| 19 12 02 | ferrous metal |
| 19 12 03 | non-ferrous metal |
| 20 | MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS |
| 20 01 | separately collected fractions (except 15 01) |
| 20 01 40 | metals |

Schedule 3 – Interpretation

“accident” means an accident that may result in pollution.

“authorised officer” means any person authorised by the Agency under section 108(1) of The Environment Act 1995 to exercise, in accordance with the terms of any such authorisation, any power specified in Section 108(4) of that Act.

“emissions to land”, include emissions to groundwater.

“fugitive emission” means an emission to air, water or land from the activities which is not controlled by an emission limit.

“groundwater” means all water, which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.

“Impermeable surface” means a surface or pavement constructed and maintained to a standard sufficient to prevent the transmission of liquids beyond the pavement surface, and should be read in conjunction with the term “sealed drainage system” (below).

“notify/notified without delay” means that a telephone call can be used, whereas all other reports and notifications must be supplied in writing, either electronically or on paper.

“pollution” includes pollution of the environment, harm to human health and serious detriment to the amenities of the locality, resulting from the licensed activities.

“quarter” means a calendar year quarter commencing on 01 January, 01 April, 01 July or 01 October.

“relevant person” and *“relevant offence”* shall have the meaning given to them in the Environmental Protection Act 1990.

“Sealed drainage system” in relation to an impermeable surface, means a drainage system with impermeable components which does not leak and which will ensure that:

- (a) no liquid will run off the surface otherwise than via the system;
- (b) except where they may lawfully be discharged, all liquids entering the system are collected in a sealed sump.

“sewer” means sewer within the meaning of section 219(1) of the Water Industry Act 1991.

“technically competent management” and *“technical competence”* shall be as prescribed under Section 74 of the Environmental Protection Act 1990.

“waste code” means the code specified in The List of Wastes (England) Regulations 2005 (SI 2005 No. 895) as amended, or The List of Wastes (Wales) Regulations 2005 (SI 2005 No.1820) (W.148) as amended. Codes marked with an * are hazardous waste, as defined in those regulations. Licence conditions apply to those wastes listed with a six-digit code.

“Waste Management Licensing Regulations”, means The Waste Management Licensing Regulations 1994 (SI1994 No. 1056) (as amended).

“year” means calendar year commencing on 01 January.

HARTLEPOOL BOROUGH COUNCIL

POLLUTION PREVENTION & CONTROL ACT 1999

ENVIRONMENTAL PERMITTING (ENGLAND AND WALES) REGULATIONS 2007

| Provenance | Date |
|---|-----------------------------|
| Application for Authorisation (EPA 90) | 31 st March 1992 |
| PPC Permit transferred automatically to EP Permit | 6 th April 2008 |

Ref EP2008/05

PD Teesport, Queens Square, Middlesbrough TS2 1AH is hereby authorised to carry out a mineral process as described below, in accordance with the following conditions.

Address of Permitted Activity:

PD Teesport
Dock Office,
Cleveland Road,
Hartlepool
TS24 0UZ

Description of Permitted Activity:

The discharging of coal of various sizes and petroleum coke by ship's cranes and/or quayside cranes from ship's hold to quay and/or direct to road transport at Victoria Harbour. The process falls within the definition contained in Section 3.4 (Part B) of Schedule 1 of the Environmental Permitting (England and Wales) Regulations 2007

Conditions:

Monitoring, Sampling and Measurement of Emissions

1. The supervisor responsible for the loading/discharging of cargo shall, where any visible escape of dust is observed to be blowing off-site, or when any malfunction or breakdown likely to lead to such an emission is found, shall:
 - a) carry out investigation into the cause
 - b) take prompt corrective action to prevent any further emission
 - c) record the result of all such investigations and details of action taken in the logbook required by condition 3.
2. Weather forecasts relevant to the time of loading/discharge shall be obtained, including forecast wind speed and direction and made available to the supervisor responsible for the discharge of the vessel. All such details shall be recorded in the logbook.
3. The results of all monitoring and inspections, and any other information which may be required by any condition in this authorisation, shall be recorded in a logbook. The logbook shall be retained by the operator for a minimum of two years and made available for examination by the local authority at all reasonable times.
4. Cargoes arriving at the Port shall be monitored for free moisture content where practicable. Test results provided by the shipper will normally be acceptable provided they are traceable to the cargo and that it can be demonstrated that no deterioration has taken place during the voyage. Where a cargo is found to have a low free moisture content and it could give rise to emissions of particulate matter, consideration shall be given to the practicability of wetting the cargo in the ship's hold after the ship's survey.

Materials Handling

5. Cargo shall only be discharged from the ship's hold by means of sealed grabs.
6. Crane operators shall ensure that the grab is fully closed prior to emerging from the ship's hold. If material is still observed to be spilling or overflowing from the grab as it emerges from the hold, the operator shall pause the operation until such time as the material stops spilling or overflowing.

7. When cargo is being discharged into a quayside hopper, the grab shall be lowered as far as is practical into the hopper before the grab is opened. The grab shall not be opened until the base of the grab is at or below the top of the hopper.
8. Quayside hoppers shall not be overfilled such that the product protrudes above the top of the hopper.
9. When cargo is discharged directly to the quay, this shall be done by the creation of a temporary stockpile of sufficient size to ensure that loading shovels are not constantly clearing the entire pile to the road vehicle. Temporary stockpiles shall be maintained in clearly defined areas and loading to road vehicles shall be designed to keep pace with discharge operations from the ship.
10. No grab shall be permitted to discharge cargo direct to the quayside or a temporary stockpile until the grab has been lowered to a height of not more than one metre above any surface beneath the point of discharge.
11. Cleaning of ships' decks and the quay shall be undertaken during and after discharge of each cargo consignment, by vacuum or wet methods.
12. The sweeping up of any cargo residues from the working areas and the re-incorporation of the residue into temporary stockpiles shall be carried out during every lull in operations and at the end of each working period.
13. Loading of vehicles shall be undertaken in such a manner that there is no overloading leading to peaks of cargo above the sides of vehicles or over spill from the vehicle to the quay or road surface.
14. If the nature of the cargo or weather conditions are such that materials can be seen to be blowing from wagons, then arrangements shall be put in hand to ensure remedial action is taken before they leave the site.
15. In the event of the vessel's cargo not being worked during any extended period of time, e.g. one full working shift, all stockpiles shall be cleared from the quay unless specific arrangements have been made for dust control of the stockpiles.
16. The applicant shall give the local authority prior notice of the date, time and location of all local handling operations.

General Operations

17. There shall be designated routes of access and exit from the quayside.
18. All roadways and areas where there are regular movements of vehicles shall be kept in a clean and damp condition throughout the operation.

19. Any coal or coal products deposited beyond the stockpiles shall be cleaned by vacuum or wet methods.
20. A supervisor, who is a member of the process management personnel, or an appointed representative, shall be present and easily identifiable on site at all times when the process is in operation. Any person designated as being in charge of operations shall be vested with sufficient authority to suspend operations or take any other action necessary to ensure compliance with all conditions contained in this authorisation.
21. All staff shall be made aware of the requirements of this authorisation and be given sufficient instruction to ensure their compliance.
22. Suitable means for dispensing water to all parts of the application sites, including the tops of any stockpiles, shall be provided and maintained in a working condition at all times. The system so provided shall be capable of delivering water in sufficient quantity to maintain the whole site in a damp condition where necessary.
23. On completion of the discharge operation the quay shall be cleaned of all residues of cargo using either vacuum methods or wet sweeping. This shall be carried out without delay at the end of the discharge operation.
24. At all times when this authorisation is in force a copy of the said authorisation shall be made available to all persons who have duties which are or may be affected by the matters set out in this authorisation.
25. In the event of adverse weather conditions when dust can be observed blowing off-site and dust suppression measures have proved ineffective all operations, with the exception of dust suppression measures, shall be suspended until such time as dust emissions are brought under control.
26. The discharging of petroleum coke shall only be permitted at the northern end of Irvine's Quay as indicated on Annex 1 of the original authorisation, and within the North Basin.
27. The discharging of any cargo that has attained a temperature in excess of 50 degrees Centigrade shall not be permitted.
28. The discharge of washed, screened petroleum coke only shall be permitted at the southern end of the Deep Water Berth.

.....(Signature).....(Date)

Head of Procurement Property and Public Protection

Hartlepool Borough Council
The Pollution Prevention Control Act 1999
Environmental Permitting (England & Wales) Regulations 2007

EXPLANATORY NOTE

These notes are provided for the operator of an installation or mobile plant to assist in the interpretation of their duties under the provisions of the above-mentioned legislation, with particular reference to the permit issued by Hartlepool Borough Council. These notes do not form part of the Permit or conditions attached to it.

1. BAT CONDITION

Article 2(11) of the IPPC Directive defines “best available techniques” as follows:

“Best available techniques’ shall mean the most effective and advanced stage in the development of activities and their methods of operation which indicate the practical suitability of particular techniques for providing in principle the basis for emission limit values designed to prevent and, where that is not practicable, generally to reduce emissions and the impact on the environment as a whole.

- **BEST** shall mean most effective in achieving a high general level of protection of the environment as a whole.
- **AVAILABLE** techniques shall mean those developed on a scale which allows implementation in the relevant industrial sector, under economically and technically viable conditions, taking into consideration the costs and advantages, whether or not the techniques are used or produced inside the Member State in question, as long as they are reasonably accessible to the operator,
- **TECHNIQUES** shall include both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned.

The installation and mobile plant should be operated such that -

- (a) all the appropriate preventative measures are taken against pollution, in particular through application of the best available techniques; and
- (b) no significant pollution is caused.

In relation to the Permit you should be aware that, amongst other aspects of the installation operation and management, this residual duty will apply to:-

- the control of emissions to ensure that offensive odours are not caused beyond the installation boundary,
- maintenance, service and repair of equipment,
- keeping of spares and consumables,
- the training of installation operators, and supervision of workers
- management of the installation in relation to maintenance of a high standard of housekeeping.

2. STATUTORY REQUIREMENTS

This Permit does not detract from any of the following statutory requirements where applicable:-

- (a) The requirement to obtain Planning Permission for the installation and any new construction.
- (b) The requirement to obtain discharge consent from the Environment agency.
- (c) The requirement to obtain Building Regulation approval for any construction work.
- (d) The requirement of a Waste Disposal Licence.
- (e) The requirement to comply with the Health and Safety at Work etc Act 1974.

3. PUBLIC REGISTER

Local authorities are required by EP regulation 46 to maintain a Public Register containing information on all the LA-IPPC and LAPPC installations and mobile plant they are responsible for. The register is available for inspection by the public free of charge during office hours (Monday to Friday 9.00am to 5.00pm) at

**Hartlepool Borough Council,
Neighbourhood Services Department
Public Protection & Housing
Victoria Road
Civic Centre
Hartlepool
TS25 8AY**

Subject to exclusions of commercially confidential information and information affecting national security, registers will contain the following:

- a. Applications for a permit;
- b. Notices asking for information and responses to such;
- c. Advertisements and representations in response to such (unless requested not to by the person responding)
- d. In the case of c) above, a statement to the effect that representations were made but have been omitted – must not identify the person making the representation;
- e. Statutory consultee responses to applications or applications for variations;
- f. Permits;
- g. Notifications of changes in the operation of installations;
- h. Applications for variations, transfers or surrenders of permits;
- i. Variations, transfers and surrenders granted;
- j. Revocations;
- k. Enforcement or suspension notices;
- l. Notices withdrawing enforcement and suspension notices;
- m. notice of an appeal including the grounds of the appeal, relevant correspondence between the appellant and the regulator, and the decision/notice which is the subject of the appeal;
- n. Representations in response to appeal (unless requested not to by the person responding);
- o. In the case of n) above, a statement to the effect that representation were made but have been omitted – must not identify the person making the representations;
- p. The appeal decision and any accompanying report;
- q. Convictions, formal cautions; to include the name of the person, date of conviction/caution, and (where appropriate) penalty and name of court. This requirement does not override the Rehabilitation of Offenders Act 1974 regarding spent conditions, and authorities must take care to remove relevant entries at the appropriate time;
- r. Monitoring data obtained by the authority from its own monitoring, or sent to the authority on accordance with a permit condition or regulation 28(2) notice;
- s. If any monitoring information is omitted because it is commercially confidential, the authority must put a statement on the register indicating whether relevant permit conditions are being complied with, based on the withheld information;

Commercial Confidentiality

An operator may request certain information to remain confidential i.e. not be placed on the public register. The operator must request the exclusion from the public register of commercially confidential information at the time of supply of the information requested by this notice or any other notice. The operator should provide clear justification for each item wishing to be kept from the register. The amount of information excluded from the register should be kept to the minimum necessary to safeguard the operator's commercial advantage.

The general principle is that information should be freely available to the public. An operator may request certain information in relation to a LA-IPPC or LAPPC permit to remain confidential, i.e. not be placed on the public register. The onus is on the operator to provide a clear justification for each item he or she wishes to be kept from the register. EP regulation 45 defines 'commercial information' as "information that is commercially or industrially confidential in relation to any person".

Local authorities will also take into account whether the information at issue could be obtained or inferred from other publicly accessible sources.

The local authority will determine this request within 28 days of the date of such an application and will issue a Determination Notice detailing their decision. The notice may specify a time period over which the information is to remain commercially confidential (if not specified, it will be four years beginning with the date of the determination). The operator may appeal to the Secretary of State within 21 days of the notification of the decision.

If the application is granted the local authority will place a statement on the public register stating that certain information has been withheld and stating the reasons why, plus whether this information is relevant to a permit condition, and whether the permit condition has been complied with.

Further guidance on commercial confidentiality can be found in Chapter 8 of the LA-IPPC and LAPPC manual.

National Security

EP regulation 47 allows for information to be kept from public registers for reasons of national security. For this to happen, the Secretary of State/Welsh Ministers must determine that placing the information on the register would be contrary to the interests of national security. An operator who believes any information meets this test may apply to the Secretary of State/Welsh Ministers.

The operator must notify the local authority that he or she has asked for this determination, but must not exclude the information from any submission to the authority, such as a permit application. The Secretary of State/Welsh Ministers may direct the authority on what information, if any, to exclude from the register.

Any such applications must be made to either:

Secretary of State for Environment,
Food and Rural Affairs
Nobel House
17 Smith Square
LONDON
SW1P 3JR

and should be marked "application under the Environmental Permitting Regulations".

4. UPGRADING PROGRAMMES

The following information does not comprise part of the Permit, but contains guidance, which should be noted when considering the upgrading programme.

Aim of Upgrading Programme

To identify the areas where the existing installation does not meet the required standards ("new process" standards), as detailed in the relevant Secretary of State's Process Guidance Note, the steps to be taken to meet these standards, and the time-table of dates by which these steps are to be implemented. (You are advised to refer to the Department of Environment, General Guidance Note 4 - Interpretation of terms used in Process Guidance Notes (available from H.M. Stationery Office)).

Content of Upgrading Programme

There is not a specified format for an upgrading programme but, wherever possible, it should identify reasonably precise actions to be taken and the dates on which these actions will be instigated. If abatement plant is to be installed technical specifications and schematic drawings along with operational procedures should be detailing in the upgrading plan.

Council Action upon receipt of Upgrading Programmes

It is an offence not to submit the upgrading programme by the date specified in the Permit.

The Council will assess the adequacy of the submission and if satisfied with the content, will place it on the Public Register (operators may apply for matters which are considered to be commercially confidential to be excluded from the Register).

The Council will bring the upgrading programme within the terms of the Permit by issuing a Variation Notice to add the programme as a condition to the initial Permit. This will ensure that commitments given are made into enforceable conditions (this may not preclude changes to the programme where there are sound reasons for such a change).

5. FEES

(EP regulation 65).

Operators must pay an annual subsistence charge to cover local authorities' continuing regulatory costs once a permit has been issued. It will cover such things as checking monitoring data or carrying out inspections. The level of subsistence charge is contained in the relevant charging scheme and will become due on 1st April each year. The operator is liable for the full subsistence charge for the year of operation. You are advised that if you fail to pay the fee due promptly, the Council may revoke the Permit.

The risk-based charging scheme was introduced in 2006/7 for all standard activities. The risk-based method applies a low, medium or high risk rating to activities operating at an installation. The resulting subsistence fees are proportionate to the risk rating. This risk-assessment method uses a "point

scoring” approach which combines the indicative environmental impact assessment (EIA) of the activity itself and the Operator Performance Assessment (OPA) covering the operational aspects of the installation. This is outlined in the Risk-Based Inspection Methodology which is available on the PPC web pages

6. TRANSFER OF PERMITS

LA-IPPC and LAPPC installations may change hands through normal business transactions. EP regulation 21 therefore allows for permit transfers either for the whole installation, or for one or more parts of it through partial transfer arrangements. New operators should have the appropriate management systems and the competence to run installations properly in compliance with the conditions of the existing permits.

When an operator wants to transfer all or part of a permit to someone else, he/she and the proposed transferee must make a joint application and also pay a fee. They must both sign the application form. The joint application should contain their telephone numbers and addresses plus any additional correspondence address. The application should be accompanied by the current permit document and must include the appropriate transfer fee.

7. PROCESS VARIATIONS

A local authority may decide that the existing permit conditions require amendment without receiving any notification or application from the operator (EP regulation 20(1)). This is most likely to occur when the authority decides that the conditions need varying having conducted a periodic review in accordance with EP regulation 34, or in the light of revised guidance from Defra/WAG, or because of the transfer of a permit to another operator. Other instances could be the revision of a relevant environmental quality standard, the declaration of an area as an air quality management area, or (in the case of LA-IPPC) a requirement from the Environment Agency to revise a water-related condition.

If there is no such condition included in their permit, operators should be aware that there are risks to them should they fail to notify the relevant local authority of a change. The risks are that the authority decides that the change means that the operator is either carrying on the activity beyond the extent authorised by the existing permit, or is doing so in contravention of an existing permit condition. Both are offences under EP regulation 38. On the positive side, some changes could result in a lowering (as well as, potentially, raising) of an installation's risk rating. These could include alterations to management or training practices, or technical changes such as the use of less toxic chemicals.

Many changes will not have consequences for the environment and notification will be unnecessary; although there may be cases where it is nonetheless good practice for an operator to do so in order to keep the authority informed. It is also good practice to notify authorities of any administrative changes, such as the name or address of the operator (where the installation has not changed ownership), and authorities can simply amend the permit without going through any formal procedures.

The IPPC Directive definition of ‘substantial change’, which is incorporated by the EP Regulations, is “a change in operation which, in the opinion of the regulator, may have significant negative effects

on human beings or the environment". For installations subject to the Solvent Emissions Directive, further criteria may be relevant.

If an operator has any doubt over whether a particular change is substantial, he/she should ask the opinion of the relevant local authority.

8. APPEALS

Under EP regulation 31 operators have the right of appeal against the enforcing authority in the following circumstances:

- 1 refusal or deemed refusal to grant a permit;
- 2 refusal of an application to vary a permit;
- 3 if the operator disagrees with the conditions imposed by the authority as a result of a permit application or an application for a variation notice;
- 4 refusal of an application to transfer a permit, or if the operator disagrees with the conditions imposed by the authority to take account of such a transfer;
- 5 refusal of an application to surrender a permit, or if the operator disagrees with the conditions imposed by the authority to take account of the surrender;
- 6 the service of a variation notice (not following an application by the operator), a revocation notice, an enforcement notice, or a suspension notice on the operator;
- 7 the deemed withdrawal by a local authority of a duly-made application because the operator has not provided further information (paragraph 4 of Schedule 5 to the EP Regulations).

Under EP regulation 53(1) operator has the right of appeal against a decision that information will not be withheld from the public register for reasons of commercial confidentiality.

The rights to appeal listed in 1-6 above do not apply where the decision or notice implements a direction given by the Secretary of State or Welsh Ministers. There is also no right of appeal if a revocation notice has been served for non-payment of subsistence fees (EP regulation 31(3)).

Appeals under 3-6 above do not stop the conditions coming into effect. Appeals against variation, enforcement and suspension notices do not stop the notices coming into effect. However, appeals against revocation notices suspend the operation of the notices coming into effect until the appeal is decided or withdrawn.

Notice of appeal against the conditions attached to the permit must be given within six months of the date of the notice, which is the subject matter of the appeal. The Secretary of State may in a particular case allow notice of appeal to be given after the expiry of this period, but would only do so in the most compelling circumstances.

How to appeal

There are no charges for appealing and there is no statutory requirement to submit an appeal form. However, an appeal form has been prepared and is available for use at <http://www.planning-inspectorate.gov.uk/pins/environment/environment/index.htm>. For an appeal to be valid, appellants (the person/operator making the appeal) are legally required to provide all of the following (see EP Regulations Schedule 6, paragraph 2(2)):

- written notice of the appeal
- a statement of the grounds of appeal
- a statement indicating whether the appellant wishes the appeal to be dealt with by written representations procedure or at a hearing - a hearing must be held if either the appellant or local authority requests this, or an appointed person or the Secretary of State/Welsh Ministers decide to hold one (appellants must copy the above three items to the local authority when the appeal is made)
- a copy of any relevant application
- a copy of any relevant permit
- a copy of any relevant correspondence between the appellant and the regulator
- a copy of any decision or notice, which is the subject matter of the appeal.

Appellants should state whether any of the information enclosed with the appeal has been the subject of a successful application for commercial confidentiality under EP regulation 49 and provide relevant details. Unless such information is provided all documents submitted will be open to inspection.

Where to send your appeal documents

Appeals should be despatched on the day they are dated, and addressed to:

**The Planning Inspectorate
Environment Team, Major & Specialist Casework
Room 4/04 Kite Wing
Temple Quay House
2 The Square
Temple Quay
Bristol BS1 6PN
Tel: 0117 372 8726
Fax: 0117 372 8139**

On receipt of an appeal and during the appeal process both main parties will be informed by the Inspectorate about the next steps, which will explain the procedures and submission timetable for representations. To withdraw an appeal – which may be done at any time - the appellant must notify the Planning Inspectorate in writing and copy the notification to the local authority who must in turn notify anyone who has expressed an interest in the appeal.

Costs

The operator and local authority will normally be expected to pay their own expenses during an appeal. Where a hearing or inquiry is held as part of the appeal process, by virtue of paragraph 5(6) of Schedule 6, either the appellant or the authority can apply for costs. Applications for costs are normally heard towards the end of the proceedings and will only be considered if the party claiming them can show that the other side behaved unreasonably and put them to unnecessary expense. There is no provision for costs to be awarded where appeals are dealt with by written representations.

Following an application for costs, the Inspector or the Secretary of State/Welsh Ministers will act in the spirit of DOE Circular 8/93 – The Award of Costs in Planning and Other Proceedings. Schedule 6, paragraph 5(6) of the EP Regulations applies section 250 (as modified) of the Local Government Act 1972 to hearings and inquiries. Under section 250, persons may be summonsed to appear to give evidence, the appointed person may seek recovery of his or her certified costs from either party and may make a costs order so that one party pays part of the other side's costs.

9. Secretary of State's Guidance

This permit is covered by Secretary of State's Guidance:

| | |
|---|---|
| PG3/5 (05) Secretary of State's Guidance for Coal, Coke, Coal Product and Petroleum Coke | www.defra.gov.uk/environment/index.htm |
| Pollution Prevention and Control Act 1999 | www.defra.gov.uk/environment/index.htm |
| Environmental Permitting (England & Wales) Regulation 2007 | www.defra.gov.uk/environment/index.htm |
| General Guidance Manual on Policy and Procedures for A2 and B Installations | www.defra.gov.uk/environment/index.htm |

10. Reporting Requirements and Contact Details

Where a Permit condition imposes a requirement to forward documents to the Local Authority or to report a specified occurrence the following address and telephone number shall be used:

By Post

**Hartlepool Borough Council,
Neighbourhood Services Department
Public Protection & Housing
Victoria Road
Civic Centre
Hartlepool
TS25 8AY**

By Telephone

During office hours: 01429 254143

Facsimile No.: 01429 523169



HARTLEPOOL BOROUGH COUNCIL

REVIEW AND ASSESSMENT OF AIR QUALITY 2003

UPDATING and SCREENING REPORT

PUBLISHED BY HARTLEPOOL BOROUGH COUNCIL - MAY 2003

(iv) copy of 'Review and assessment of air quality 2003' - USR

HARTLEPOOL BOROUGH COUNCIL

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Review and Assessment of Air Quality 2003

SUMMARY of Updating and Screening Report

This report is the second in the series of air quality Review and Assessments carried out in the Hartlepool Borough Council area under the Environment Act 1995.

The first, Review and Assessment of Air Quality 2000, was submitted to Government in December 2000, and was based on a comprehensive review of pollutant emission and monitoring data between 1996 and 1999. The report concluded that air quality in the Hartlepool Council area, judged against Government objectives, was generally good, and there was no need to declare any Air Quality Management Areas.

This second Review and Assessment is an Updating and Screening process, recording significant emission data changes to the end of 2001 / 2002, updating monitoring data to end 2002, and identifying any areas of concern where further, more detailed, analysis is required.

Government objectives for air quality currently cover seven pollutants:

- Nitrogen dioxide
- Particulate PM10
- Sulphur dioxide
- Carbon monoxide
- Benzene
- 1,3-butadiene
- Lead

The main sources of these pollutants are domestic / commercial heating emissions, road traffic fuel and exhaust emissions, and industrial combustion and process emissions.

Within the Hartlepool Council area, domestic / commercial heating is largely fuelled by natural gas, which gives low levels of emissions compared with other carbon based fuels. There are 12 large industrial processes within the Council area, and many more in the Tees Valley Council areas to the South. This is, however, no significant change over the earlier detailed review, and none have been found to have a major impact on ground level pollutant concentrations. It is road traffic fuel and exhaust emissions that remain the largest source of air pollution at ground level.

While, in general, improved fuels, engines, and exhaust systems are having a major impact on reducing road traffic emissions, the sheer volume of traffic and low point of discharge can still give rise to high kerbside concentrations of nitrogen dioxide and particulate PM10. This is particularly so where there are very heavily congested roads with tall buildings creating a 'canyon' effect and limiting dispersal, such as can be found in older city centres. The Hartlepool Council area does not have roads of this type, even in the main urban area of Hartlepool town. Buildings are generally low level, and set back from the roadside. New commercial development is in the marina area, to the North and East of the old town. While the busy main A689 / A179 route acts as the main through-route and feeder to the old town and the new developments, it now runs well away from potential target group areas. The north – south A19 trunk road passes well to the west of the town, through rural areas.

Government guidance shows that the road traffic emission factors for the first Review and Assessment have been too optimistic, and understated emissions by around 10 %. However, the updated traffic flow forecasts show lower levels of traffic on many of the urban roads. Overall, the extensive modelling work carried out for the first review and assessment is still likely to be a fair representation of future air quality, with no exceedances of objectives shown.

Most importantly, continuous monitoring carried out within the Hartlepool Council area has shown that there is no exceedance of government objectives from traffic or from industry. Further support is provided by the results from continuous monitoring carried out elsewhere in the Tees Valley area.

It is concluded that all Government objectives will be met by the due date within the Hartlepool Council area, and there is no need to declare any Air Quality Management areas.

The proposed particulate PM10 objectives for 2010 are, however less certain to be met without significant reductions in particulate emissions. In view of this, and on-going concern about transport-related emissions, discretionary modelling of certain road areas with slow moving traffic and a higher than average bus flow will be carried out for PM10 and nitrogen dioxide, and reported as a separate study.

1. INTRODUCTION TO LOCAL AIR QUALITY MANAGEMENT

LAQM

The National Environment Act 1995, and subsequent regulations, has required local authorities to review and assess air quality in their area from time to time, against a range of air quality objectives. If the review and assessment process shows that an objective is unlikely to be met by the due date, local authorities are obliged to declare an Air Quality Management Area (AQMA), and prepare an action plan to reduce air pollution within the defined area. This process of review and assessment and subsequent action is Local Air Quality Management (LAQM).

LAQM covers seven air pollutants as shown below, but further air pollutants will be added in the future.

Review and assessment will be carried out to a three year timetable. The first, and most detailed, review and assessment was required for December 2000. Subsequent reviews and assessments are in a more simplified form as an updating and screening report for end May 2003 (then 2006 and 2009), with any more detailed work to be completed by end May 2004 (2007 and 2010).

| Pollutant Objectives | Pollutant | Objective | Due Date |
|-----------------------------|--|--|------------|
| | Nitrogen Dioxide | 1. 40 µg/m³ as an annual mean, with no exceedances | 31.12.2005 |
| | | 2. 200 µg/m³ as a 1 hour mean, with up to 18 exceedances | 31.12.2005 |
| | Particulate PM10 (gravimetric) | 1. 40 µg/m³ (g) as an annual mean, with no exceedances | 31.12.2004 |
| | | 2. 50 µg/m³ (g) as a 24 hour mean, with up to 35 exceedances | 31.12.2004 |
| | two further particulate PM 10 objectives are proposed (but not yet regulated) for 2010 : | | |
| | Sulphur Dioxide | 3. 20 µg/m³ (g) as an annual mean, with no exceedances | 31.12.2010 |
| | | 4. 50 µg/m³ (g) as a 24 hour mean, with up to 7 exceedances | 31.12.2010 |
| | | | |
| | Carbon Monoxide | 1. 125 µg/m³ as a 24 hour mean, with up to three exceedances | 31.12.2004 |
| | | 2. 350 µg/m³ as a 1 hour mean, with up to 24 exceedances | 31.12.2004 |
| | | 3. 266 µg/m³ as a 15 minute mean, with up to 35 exceedances | 31.12.2005 |
| | Benzene | 1. 10.0 mg/m³ as an 8 hour running mean, with no exceedances | 31.12.2003 |
| | | | |
| | Benzene | 1. 16.25 µg/m³ as a running annual mean, with no exceedances | 31.12.2003 |
| | | 2. 5.00 µg/m³ as an annual mean, with no exceedances | 31.12.2010 |
| | 1,3-Butadiene | 1. 2.25 µg/m³ as a running annual mean, with no exceedances | 31.12.2003 |
| | | | |
| | Lead | 1. 0.5 µg/m³ as an annual mean, with no exceedances | 31.12.2004 |
| | | 2. 0.25 µg/m³ as an annual mean, with no exceedances | 31.12.2008 |

Future Pollutants

Pollutants under consideration within the EU and UK are Ozone, Cadmium, Arsenic, Nickel, Mercury, and Polycyclic Aromatic Hydrocarbons (PAHs). These are not part of this 2003 Review and Assessment.

Target Groups

The air quality objectives only apply to areas where target group members of the public are likely to be present. The definition of these depends on the averaging period of the objective, with a short 15 minute averaging period affecting a wider range of the public than an annual average.

Government guidance is as follows

| Averaging Period | Objectives should apply at : | Objectives should generally not apply at : |
|------------------------------|---|--|
| Annual Mean | All locations where members of the public might be regularly exposed. Building facades of residential properties, schools, hospitals, libraries etc. | Building facades of offices or other places of work where members of the public do not have regular access. Gardens of residential properties Kerbside sites (as opposed to locations at the building façade), or any other location is expected to be short term. |
| 24 hour mean and 8 hour mean | All locations where the annual mean objective would apply. Gardens of residential properties, in particular around seating or play areas. | Kerbside sites (as opposed to locations at the building façade), or any other location is expected to be short term. |
| 1 hour mean | All locations where the annual mean and 24 hour and 8 hour mean objectives would apply. Kerbside sites (e.g. pavements of busy shopping streets). Those parts of car parks, bus stations and railway stations etc., which are not fully enclosed, where the public might reasonably be expected to spend 1 hour or more. Any outdoor locations to which the public might reasonably be expected to spend 1 hour or longer. | Kerbside sites where the public would not be expected to have regular access. |
| 15 minute mean | All locations where members of the public might reasonably be exposed for a period of 15 minutes or longer. | |

2. HARTLEPOOL BOROUGH COUNCIL BACKGROUND

Hartlepool Council area Hartlepool Borough Council is one of five unitary Councils forming the general area known as the Tees Valley. As shown below, it is the most northerly of these Councils, and is fourth largest in area, with a long coastline to the East.



Hartlepool Borough has a densely populated area to the East, but is otherwise largely rural. It has a covered shopping centre in the older part of the town, but most new commercial development is around the marina area, nearer the coast. There is no significant rail traffic, and the port area is relatively small compared with the Tees to the South. There are a number of large industrial processes within the Council area, but many more are located in other Tees Valley Councils to the South. They do not significantly impact on Hartlepool air quality.

The main A19 trunk road runs North / South through the Borough, but is mainly in rural areas. Within the urban area, A689 / A179 dual carriageway runs North / South nearer to the coast, past the town centre and marina development.

The majority of the Hartlepool area is subject to Smoke Control Orders, and natural gas is the main source of heating in all but a few rural villages. This means that air pollution from domestic and commercial sources are low. Industrial emissions are also low, leaving road transport as the most significant air pollution source.

| | |
|---|---|
| Tees Valley Environmental Protection Group | <p>The Tees Valley Environmental Protection Group (TVEPG) is a joint committee of the five Tees Valley Councils which looks at a range of environmental issues of mutual concern. Air pollution matters are an important part of the work of the Group, drawing together a better understanding of the sources of pollutants, and their impact across the Tees Valley.</p> <p>There is a wide range of air pollution monitoring carried out between the five Councils. This data is collated and published annually, and forms a key part of review and assessment for each of the Councils.</p> <p>Of the five Councils, Hartlepool is one of the two which are coastal. There are significant areas of light industry, but relatively little heavy industry. Air quality in Hartlepool is therefore a measure of emissions from domestic, light industry and road traffic sources, and provides an indication of coastal influences on air pollution.</p> |
| Hartlepool 2000 Review and Assessment | <p>Stage 1 of the first Review and Assessment was a joint report published by the TVEPG in December 1998. A more detailed 2nd / 3rd stage Review and Assessment, which included work from consultants commissioned to undertake advanced air quality modelling (AAQuIRE 2000), was published by Hartlepool Council in December 2000. This confirmed that road traffic was the main source of air pollution at ground level in the form of nitrogen dioxide and particulate PM10, but that there was no need to declare any Air Quality Management Areas. The report was accepted in full by the Department for Environment, Food and Rural Affairs (Defra).</p> |
| Principal Changes for 2003 Review and Assessment | <p>There has been no significant change to domestic, commercial or industrial sources within, or close to the Hartlepool Council area.</p> <p>Road traffic flows have been updated and extended, based on 2001 / 2002 traffic count data, and projected forward using the latest traffic growth factors (Appendix 2). Where a direct comparison is possible, forecast traffic flows show a reduction for many of the urban roads compared with the first Review and Assessment, and there are no areas identified of particular concern.</p> <p>The projected emission factors for traffic provided by Defra have changed, and are less optimistic than earlier thought by around 10%. It is unlikely that this will cause any areas of Hartlepool to show any exceedance of objectives, particularly with reduced forecast traffic flows.</p> |
| Pollutant Monitoring Update | <p>A continuous monitor for nitrogen dioxide, particulate PM10, sulphur dioxide and carbon monoxide has been located in the Seaton Carew suburb since year 2000. This is a coastal location and is positioned to detect emissions from industrial sources within the Council area, and from the larger industrial complexes in neighbouring Council areas to the South. Hartlepool has also shared a mobile continuous monitor with three other Tees Valley councils since 1999, and to the end of 2002, the monitor has been sited at two locations for 3 to 6 month periods.</p> |

**Monitoring Data
Ratification and
Validation**

The Hartlepool fixed continuous monitoring station (NO_x, PM₁₀, SO₂, CO), and the jointly owned mobile continuous monitoring station (NO_x, PM₁₀, SO₂, CO) are modern installations, operated under a comprehensive service contract with the supplier, in both cases Casella. Operators of the site have received supplier training.

The Council is committed to achieving accuracy, precision, data capture, traceability and long term consistency to ensure that data is representative of ambient air quality. In common with other Tees Valley Councils, Hartlepool has a documented quality assurance and control programme, which includes an established schedule of regular site calibrations, validation of data, and documentation of all procedures. Details are summarised as follows:

Calibration daily 'automatic' calibration with frequent (usually fortnightly) manual checks. Calibration gas obtained from approved gas standard suppliers.

Equipment comprehensive service agreement with the supplier.

Data capture site operators are experienced and trained personnel, monitoring data capture on a daily basis where possible to ensure that faults are detected and corrected quickly.

**Monitoring Data
Ratification and
Validation**

(continued)

Data Processing Appropriate zero and span calibration factors are applied automatically on-site, with regular manual checks.

Ratification data is screened, where possible on a daily basis, to check for unusual measurements. Suspicious data is investigated fully, and if found to be faulty, is deleted from the records. Particular attention is paid to possible environmental changes in the vicinity of the analyser.

Data is recorded monthly and compared with earlier results.

Data is collated quarterly with that from other monitors within the Tees Valley, including AURN stations, as a further check on accuracy.

All data is published annually (reference 1) by the Tees Valley Environmental Protection Group.

The Hartlepool nitrogen dioxide diffusion tube programme is operated through an approved laboratory with formal accreditation to BS standards, and one that participates in the WASP programme. Particular attention is paid to proper installation of the tubes at the site, and reliable exposure duration. From time-to-time, a limited validation alongside an automatic analyser is carried out. Diffusion tube data is only used to identify hot-spots for siting the mobile continuous monitor.

3. POLLUTANT UPDATING and SCREENING PROCESS 2003

| | |
|----------------------------------|---|
| Report Format | This report will look at each of the seven air pollutants in sections 4 to 10, under the following headings : |
| Objectives | A statement of the objectives, and any new proposals for the pollutant. |
| Overview | A general assessment of the sources of the pollutant. |
| Year 2000 R & A | A summary of the conclusions for the pollutant in the year 2000 R & A. |
| Monitoring Data | A record of monitoring data from within the Hartlepool area, and neighbouring Council areas where relevant. Monitoring data is seen as the most important factor in delivering LAQM, and wherever possible is ratified to standards in Government guidance, as recorded in reference 1. |
| Background Concentrations | For most of the pollutants, Defra issue an estimate of expected concentrations in each square kilometre grid of the Council area. This is based on the National Emissions Database for 2001, and is a guide to possible areas of objective exceedance. |
| Road Traffic | This looks at the likely impact of road traffic on pollutant concentrations. |
| Other Traffic | This looks at the likely impact of other transport forms such as rail and sea. |
| Part B Processes | This looks at the likely impact of small industrial processes regulated by Hartlepool Borough Council. |
| Part A Processes | This looks at the likely impact of large industrial processes regulated by the Environment Agency. |
| Other Emitters | This covers any other significant sources not included above. |
| Conclusion | This will record whether air quality objectives will be met, and the extent to which further work will be required. |

NITROGEN DIOXIDE

- Objectives**
1. Maximum 40 µg/m³ as an annual mean with no exceedances, by December 2005
 2. Maximum 200 µg/m³ as a 1 hour mean with up to 18 exceedances, by December 2005

These objectives are provisional, but are equivalent to EU limit values, which are to be achieved by 2010.

Overview

The main source of nitrogen dioxide pollution at ground level in the Hartlepool Council area is from road traffic. Natural gas is readily available for domestic, commercial and some industrial use, and contributes to low background concentrations. Industrial sources in neighbouring Council areas to the South are major emitters, but comprehensive monitoring has shown industrial sources to have minimal impact at ground-level.

Year 2000 R & A

3rd stage Review & Assessment was required to evaluate the extent to which nitrogen dioxide emissions relating to road traffic, affected target groups. Monitoring and modelling work showed that there was no need to declare an Air Quality Management Area.

Monitoring Data
(Reference 1)

A Local continuous monitoring station has been located near the coast at Seaton Carew since July 2000, to the North of the major industrial sources of nitrogen dioxide.

Hartlepool (Seaton Carew) ratified full year data is as follows, all in µg/m³

| | 2002 | 2001 | 2000 | Objective |
|-------------------------------|--------|--------|------|-----------|
| annual mean | 16 | 20 | - | 40 |
| max 1 hour (exceedances) | 82 (0) | 93 (0) | - | 200 (18) |
| 99.8 th percentile | 63 | 68 | - | 200 |

There have been no exceedances recorded at this station, with concentrations well below the National objectives.

A mobile continuous monitoring station has also been used to monitor concentrations alongside the main trunk road into Hartlepool centre over 3 months, and at a background location downwind of an industrial source over 6 months. Results are as follows, all in µg/m³

| | Period Mean | 1 hour max (exceedances) |
|-------------------------|-------------|--|
| Objective | 40 | 200 (18) – 99.8 th %ile = 200 |
| Stockton Road (Q3 1999) | 25 | 91 (0) |
| Headland (H1 2001) | 19 | 86 (0) – 99.8 th %ile = 72 |

Concentrations at both locations are well below National objectives.

Hartlepool also have a nitrogen dioxide diffusion tube monitoring programme for measuring annual mean concentrations at seven locations, three of which are part of the National (N) programme. Results are as follows, all in µg/m³,

HARTLEPOOL BOROUGH COUNCIL

Monitoring Data

(continued)

| Objective 40 µg/m ³ | 2002 | 2001 | 2000 |
|--------------------------------|------|------|------|
| Victoria Road (N roadside) | 35 | 34 | 34 |
| Granville Ave (N Background) | 22 | 21 | 21 |
| Torquay Ave (N Background) | 20 | 29 | 21 |
| Duke St/ Hart Lane (Kerbside) | 22 | 34 | - |
| Stockton Street (Kerbside) | 40 | 46 | 38 |
| Owton Manor Lane (Kerbside) | 35 | 31 | 28 |

The Stockton Street kerbside diffusion tube is located at the busiest town centre traffic-light controlled junction, and clearly demonstrates the traffic influence on ground-level nitrogen dioxide levels. Diffusion tube readings tend to be high compared with continuous monitors, but in any event, there are no target groups present in this area.

There are three relevant AURN continuous monitoring stations situated in the neighbouring Council areas of Middlesbrough, Redcar & Cleveland, and Stockton-on-Tees, to the South of Hartlepool. The Middlesbrough and Redcar & Cleveland stations are close to the main industrial areas, with the Redcar & Cleveland station more on a prevailing wind direction. The Stockton-on-Tees (Yam) station is a roadside station on a congested town centre High street.

Middlesbrough (Breckon Hill) AURN station ratified full year data is as follows, all in µg/m³

| | 2002 | 2001 | 2000 | Objective |
|-------------------------------|---------|---------|---------|-----------|
| annual mean | 26 | 25 | 24 | 40 |
| max 1 hour (exceedances) | 112 (0) | 258 (1) | 112 (0) | 200 (18) |
| 99.8 th percentile | 84 | 95 | 80 | 200 |

This is an urban industrial site, surrounded by busy town centre roads, and will be reflective of the maximum concentrations likely to be seen in Hartlepool. Although there is an occasional exceedance at the 1 hour level, 99.8th percentiles are consistently below the objective level.

Redcar & Cleveland AURN station ratified full year data is as follows, all in µg/m³

| | 2002 | 2001 | 2000 | Objective |
|-------------------------------|---------|---------|--------|-----------|
| annual mean | 22 | 24 | 21 | 40 |
| max 1 hour (exceedances) | 116 (0) | 131 (0) | 89 (0) | 200 (18) |
| 99.8 th percentile | 80 | 86 | 70 | 200 |

This is a suburban site, downwind of some major industrial emitters, and close to the coast. As with Hartlepool, road traffic levels are relatively low, and these results will better reflect nitrogen dioxide concentrations likely to be found in Hartlepool. Again, well below the objective levels.

Stockton-on-Tees (Yam) AURN station ratified full year data is as follows, all in µg/m³

| | 2002 | 2001 | 2000 | Objective |
|-------------------------------|---------|---------|---------|-----------|
| annual mean | 38 | 39 | 34 | 40 |
| max 1 hour (exceedances) | 285 (1) | 171 (0) | 196 (0) | 200 (18) |
| 99.8 th percentile | 120 | 131 | 118 | 200 |

This is a kerbside site, and is included to show the effect of traffic in a busy, but slow moving

Monitoring Data

(continued)

town centre High street. There are no similar locations within Hartlepool.

A further three relevant Local continuous monitoring stations are located in the neighbouring Council areas of Middlesbrough and Darlington. All three record concentrations close to busy roads, and give further indication of levels likely to be found in Hartlepool.

Middlesbrough (MacMillan College) Local station ratified full year data is as follows, all in $\mu\text{g}/\text{m}^3$

| | 2002 | 2001 | 2000 | Objective |
|-------------------------------|---------|---------|---------|-----------|
| annual mean | 25 | 28 | 24 | 40 |
| max 1 hour (exceedances) | 175 (0) | 143 (0) | 135 (0) | 200 (18) |
| 99.8 th percentile | 93 | 103 | 72 | 200 |

This site is at a target group location, and is relatively close to the busiest trunk routes in the Tees Valley. It is unlikely that any target group location in Hartlepool will see concentrations as high as these levels, which are still comfortably below National objectives.

Middlesbrough (Elm Street) Local station ratified full year data is as follows, all in $\mu\text{g}/\text{m}^3$

| | 2002 | 2001 | 2000 | Objective |
|-------------------------------|---------|---------|------|-----------|
| annual mean | 32 | 31 | - | 40 |
| max 1 hour (exceedances) | 135 (0) | 190 (0) | - | 200 (18) |
| 99.8 th percentile | 93 | 95 | - | 200 |

This is a town centre roadside location with slow moving, and is likely to reflect a worst case site off the main A689 in central Hartlepool. The annual means and 99.8th percentiles remain comfortably within the objective levels.

Darlington (St Cuthbert's Way) Local station ratified full year data is as follows, all in $\mu\text{g}/\text{m}^3$

| | 2002 | 2001 | 2000 | Objective |
|-------------------------------|---------|---------|------|-----------|
| annual mean | 35 | 36 | - | 40 |
| max 1 hour (exceedances) | 167 (0) | 118 (0) | - | 200 (18) |
| 99.8 th percentile | 95 | 95 | - | 200 |

This station is at a busy roundabout on the inner ring road. It is likely to reflect a worst case junction on the main A689 in central Hartlepool. Again, the results confirm the impact of slow moving traffic on annual means, but there are no target groups at this type of location. The 1 hour means are well within the objective level.

Overall, the monitoring data shows no sign of traffic related emissions of nitrogen dioxide falling, despite improving engine and exhaust technology. The comprehensive monitoring data available in the Tees Valley area shows that the National objectives are unlikely to be exceeded within the Hartlepool Council area either now, in 2005, or in 2010.

As traffic is clearly the main concern for nitrogen dioxide pollution, further discretionary screening work at selected target group areas will be carried out over 2003 using the DMRB screening model, and the AAQIRE air quality model, and reported as a separate study.

Background Concentrations

(Appendix 1)

Nationally derived background concentrations of nitrogen dioxide as an annual mean for each square kilometre grid across the Council area for 2001, with projections for 2005 and 2010, are as follows :

| | 2001 | 2005 | 2010 |
|----------------------------------|------|------|------|
| maximum $\mu\text{g}/\text{m}^3$ | 28.7 | 29.2 | 23.3 |
| minimum $\mu\text{g}/\text{m}^3$ | 20.5 | 18.8 | 15.7 |

These show that the National annual mean objective is comfortably met, and supports monitoring data.

Road Traffic

(Appendix 2)

Road traffic is the major source of nitrogen dioxide at ground-level. Hartlepool does not have high traffic flows, and there are no road areas with 'canyon' effect. Housing and other target group areas such as schools and hospitals tend to be set well back from the roadside, particularly on the main trunk roads.

There are no major road changes proposed over the next ten years, but the main A689 route through the town centre area has been diverted since the 2000 Review & Assessment as part of the Harbour redevelopment. This has improved traffic flow, and reduced congestion in parts of the old town areas.

Hartlepool does not have any narrow and congested streets with residential properties close to the kerb. In addition there are no busy streets identified where people may spend more than 1 hour or more close to traffic.

There is no bus station as such, and some roads close to the town centre have a high proportion of buses. Other road traffic is relatively low, and residential areas are set well back from the roadside.

Consultants CES (now Faber-Maunsell) carried out detailed modelling of the road system in and around Hartlepool for the 1st (2000) Review and Assessment, using the AAQuIRE air quality model. This showed that, at a few short sections of the main A689 route into the town centre, there was likely to be an exceedance of the annual average nitrogen dioxide objective of $40 \mu\text{g}/\text{m}^3$ by 2005. No target groups were identified in the vicinity of these locations, and there was no need to declare Air Quality Management Areas. The modelling showed that there was no exceedance of the hourly mean, with the 99.8th percentile well below the objective level of $200 \mu\text{g}/\text{m}^3$.

Traffic flow projections have been updated based on 2001/2002 traffic count data, projected forward using the latest TEMPRO factors, and are shown in Appendix 2. Where a direct comparison is possible, a number of town centre roads show a decrease over earlier projections, and need no further consideration. The northern access route, the A179, from the A19 trunk road towards the town centre, is showing a significant increase over earlier projections, but this road runs well away from target group areas and needs no further consideration. Other roads that show an increase in traffic have traffic flows that remain well below those in other areas, and which are known to be below the objective levels. They also need no further consideration.

The extensive monitoring results given earlier have shown that there are no roadside areas within the Hartlepool Council area that have exceeded $40 \mu\text{g}/\text{m}^3$ as an annual mean in 2002. No

Road Traffic

(continued)

target groups are present at this location, and it can be seen as a worst case example.

Technical guidance factors (Page 6-29) show that this highest level can be expected to fall to 36 $\mu\text{g}/\text{m}^3$ by 2005, and 30 $\mu\text{g}/\text{m}^3$ by 2010, comfortably below the annual mean objective of 40 $\mu\text{g}/\text{m}^3$, even where no target groups are present.

This analysis shows that the 2005 objectives for nitrogen dioxide will be met in all areas, and easily met where target groups may be present. However, road traffic is the major source of nitrogen dioxide pollution at ground level, and there is an on going need to further investigate nitrogen dioxide emissions from traffic. Roads within the Hartlepool town centre with the highest traffic flows and / or high heavy goods vehicle and bus flows, will included in more detailed discretionary modelling work using the DMRB screening model, and the AAQuIRE air quality model. The results will be reported as a separate study.

Other Transport

The coastal rail route from Stockton to Sunderland passes through Hartlepool. Although diesel operated, traffic is light and not considered a significant nitrogen dioxide source. The Hartlepool port also has light traffic and is not considered a significant source.

Part B Processes

(Appendix 3)

There are 20 part B small industrial processes and 11 petrol stations registered within the Council area, but none are noted as significant sources of nitrogen dioxide.

Part A Processes

(Appendix 4)

There are 12 part A industrial processes within the Council area, all of which are relatively low emitters of nitrogen oxides. There are also a number of large nitrogen oxide emitters located in the neighbouring Council areas of Redcar & Cleveland and Stockton-on-Tees to the South. Detailed analysis of all monitoring data at the year 2000 R & A across the whole of the Tees Valley showed that industrial emissions had minimal impact on ground-level concentrations of nitrogen dioxide, and this was confirmed by comprehensive modelling work. In particular, the Hartlepool Council area is too far away from the major industrial emitters for any impact to be noted.

Industrial emissions have not increased over the last five years, and with the comprehensive monitoring of nitrogen dioxide across the region, it is not considered necessary to carry out further investigation on industrial emissions within the Hartlepool Council area.

Other Emitters

No other significant emission sources have been identified.

Conclusion

Nitrogen dioxide concentrations across the Hartlepool Council area are, and will continue to be, below the national air quality objectives. As road traffic is identified as the major source of ground-level concentrations of nitrogen dioxide, a more detailed assessment of certain road areas with slow moving traffic and a higher than average bus flow, will be carried out as a discretionary separate study.

PARTICULATE PM10

- Objectives**
1. Maximum $40 \mu\text{g}/\text{m}^3$ (g)* as an annual mean with no exceedances, by December 2004
 2. Maximum $50 \mu\text{g}/\text{m}^3$ (g)* as a 24 hour mean with up to 35 exceedances, by December 2004
- Note that these values are based on gravimetric (g) measurement.

The Government have published proposals to tighten the objectives further for December 2010, but these are not a formal part of the current Review & Assessment process, and are unlikely to be passed into regulation before 2005.. However, an assessment will be made of the likelihood of these objectives being met. The new objectives are :

3. Maximum $20 \mu\text{g}/\text{m}^3$ (g)* as an annual mean with no exceedances, by December 2010
 4. Maximum $50 \mu\text{g}/\text{m}^3$ (g)* as a 24 hour mean with up to 7 exceedances, by December 2010
- Note that these values are based on gravimetric (g) measurement.

Overview

There are a wide variety of sources of particulate PM10, most notably traffic, construction work, industry, quarrying, and all forms of coal burning. There are also natural sources, such as pollen, and near coastal areas, sand and salt. National studies have also shown occasional atmospheric import of particle pollution from the continent.

Within Hartlepool Council area, natural gas is readily available for domestic, commercial and some industrial use, and there is little coal burning. Industrial sources in neighbouring Council areas to the South can be major emitters, but these are normally too far away, and on an infrequent wind direction to have major impact. Road traffic is relatively light, but is likely to be a significant source of ground-level concentrations. The Hartlepool Council area borders the North Sea to the North and East, and around half of the population live within 2.5 km of the coast. During strong easterly winds, which are unlikely to occur more than 10% of the year, it is expected that sand / salt lift-off could be very significant sources of particulate levels.

Year 2000 R & A

3rd stage Review & Assessment was required to evaluate the extent to which particulate Pm10 emissions relating to road traffic and industry affected target groups. Monitoring carried out mainly within neighbouring Council areas, and modelling work, showed that there was no need to declare an Air Quality Management Area.

Monitoring Data
(Reference 1)

All monitoring results included in this section have been obtained using TEOM instruments. The results have been multiplied by the technical guidance factor of 1.3 to estimate the gravimetric equivalent.

A Local continuous monitoring station has been located near the coast at Seaton Carew since July 2000.

Hartlepool Local station ratified full year data is as follows, all in $\mu\text{g}/\text{m}^3$ (g)

| | 2002 | 2001 | 2000 | Objective |
|---------------------------|---------|----------|------|-----------|
| annual mean | 26 | 23 | - | 40 |
| max 24 hour (exceedances) | 87 (26) | 138 (12) | - | 50 (35) |
| 90th percentile | 49 | 42 | - | 50 |

Although the annual mean is well below the current (2004) objective, there are a significant

Monitoring Data

(continued)

number of exceedances of the 24 hour objective, and the 90th percentile in 2002 was relatively close to the objective level. Wind vector analysis of the results show that the high levels are invariably noted on a North to East wind direction, and are most likely to be sand / salt lift-off as there is no industry or traffic sources of note.

A mobile continuous monitoring station has also been used to monitor concentrations alongside the main trunk road into Hartlepool centre over 3 months, and at a background location downwind of an industrial source over 6 months. Results are as follows, all in $\mu\text{g}/\text{m}^3$ (g)

| | period | 24 hour max | |
|-------------------------|--------|---------------|-----------------|
| | mean | (exceedances) | 90th percentile |
| Objective | 40 | 50 (35) | 50 |
| Stockton Road (Q3 1999) | 20 | 57 (3) | 30 |
| Headland (H1 2001) | 24 | 61 (3) | 33 |

The period mean was similar to that seen over a year at Seaton Carew, but the 24 hour max, exceedances, and 90th percentile were much lower. Wind vector analysis of the results showed again that the highest levels were on a North to East wind direction, confirming the Seaton Carew findings above.

Three relevant AURN continuous monitoring stations are situated in the neighbouring Council areas of Middlesbrough, Redcar & Cleveland, and Stockton-on-Tees to the South of Hartlepool. The Middlesbrough and Redcar & Cleveland stations are close to the main industrial areas, with the Redcar & Cleveland station more on a prevailing wind direction. This station is also within 2 km of the coast, although not as close as the Seaton Carew station. The Stockton-on-Tees (Yam) station is a roadside station on a congested town centre High street.

Middlesbrough AURN station ratified full year data is as follows, all in $\mu\text{g}/\text{m}^3$ (g)

| | 2002 | 2001 | 2000 | Objective |
|---------------------------|---------|--------|--------|-----------|
| annual mean | 22 | 21 | 20 | 40 |
| max 24 hour (exceedances) | 85 (10) | 78 (9) | 65 (5) | 50 (35) |
| 90th percentile | 34 | 33 | 33 | 50 |

This is an urban industrial site, surrounded by busy town centre roads. The site is inland from the coast, and while annual means are similar to those at Seaton Carew, levels of 24 hour maximums, exceedances and the 90th percentile are generally significantly lower.

Redcar & Cleveland AURN station ratified full year data is as follows, all in $\mu\text{g}/\text{m}^3$ (g)

| | 2002 | 2001 | 2000 | Objective |
|---------------------------|--------|--------|--------|-----------|
| annual mean | 22 | 22 | 21 | 40 |
| max 24 hour (exceedances) | 62 (9) | 68 (5) | 65 (3) | 50 (35) |
| 90th percentile | 35 | 34 | 34 | 50 |

This is a suburban site, downwind of some major industrial emitters, and within 2 km of the coast. Road traffic levels are relatively low, and while the station is generally downwind of large industrial complexes, it is some distance away. Similarly, the station is more protected from coastal influences than Seaton Carew.

Monitoring Data

(continued)

Stockton-on-Tees (Yarm) AURN station ratified full year data is as follows, all in $\mu\text{g}/\text{m}^3(\text{g})$

| | 2002 | 2001 | 2000 | Objective |
|---------------------------|--------|--------|------|-----------|
| annual mean | 29 | 30 | - | 40 |
| max 24 hour (exceedances) | 77 (1) | 83 (0) | - | 50 (35) |
| 90th percentile | 43 | 42 | - | 50 |

This is a kerbside site, and is included to show the effect of traffic in a busy, but slow moving town centre High street. The site is inland, and is not significantly influenced by industry. The results show the extent to which traffic can elevate particulate PM10 concentrations, although the 24 hour maximums have not been as high as those at Seaton Carew. There are no similar locations within Hartlepool.

A further two relevant Local continuous monitoring stations are located in the neighbouring Council areas of Middlesbrough, and Darlington. Both record concentrations close to busy roads.

Middlesbrough (MacMillan College) ratified full year data is as follows, all in $\mu\text{g}/\text{m}^3(\text{g})$

| | 2002 | 2001 | 2000 | Objective |
|---------------------------|--------|--------|--------|-----------|
| annual mean | 22 | 21 | 20 | 40 |
| max 24 hour (exceedances) | 73 (7) | 61 (3) | 56 (2) | 50 (35) |
| 90th percentile | 34 | 35 | 31 | 50 |

This site is at a target group location, and is relatively close to the busiest trunk routes in the Tees Valley. It is well in-land from the coast. The results are likely to represent the worst case location within Hartlepool, with levels comfortably below the objectives.

Darlington (St Cuthbert's Way) ratified full year data is as follows, all in $\mu\text{g}/\text{m}^3(\text{g})$

| | 2002 | 2001 | 2000 | Objective |
|---------------------------|---------|---------|------|-----------|
| annual mean | 29 | 29 | - | 40 |
| max 24 hour (exceedances) | 73 (25) | 85 (20) | - | 50 (35) |
| 90th percentile | 45 | 46 | - | 50 |

This is an in-land roadside site close to a busy town centre inner ring road roundabout. As with Stockton (Yarm) above, this station shows the effect of heavy slow moving traffic on particulate PM10 concentrations. There are no target groups present at this type of location.

Overall, the extensive monitoring data within the Tees Valley gives a view of the influence of the main sources of particulate PM10. Heavy, slow moving traffic can give high concentrations of particulate PM10 at roadside, but are not enough to cause an exceedance of the objectives, and there are unlikely to be target groups present. At points further away from traffic, concentrations fall markedly. Industry can cause high levels of particulate PM10 concentrations in the local vicinity, but these are less likely to be a problem at distance, unless there is grounding of a tall stack plume. The Hartlepool (Seaton Carew) station suggests that coastal sources, such as sand and salt lift-off can give very high concentrations and exceedances over a short period of time.

The monitoring results show that the proposed objectives for 2010 are going to be difficult to achieve across the whole Tees Valley area.

Background Concentrations

(Appendix 1)

Nationally derived background concentrations of particulate PM₁₀ as an annual mean for each square kilometre grid across the Council area for 2001, with projections for 2004 and 2010, are as follows :

| | 2001 | 2004 | 2010 |
|--|------|------|----------------|
| Objective $\mu\text{g}/\text{m}^3$ (g) | - | 40 | 40 (target 20) |
| maximum $\mu\text{g}/\text{m}^3$ (g) | 19.3 | 18.5 | 16.9 |
| minimum $\mu\text{g}/\text{m}^3$ (g) | 17.3 | 16.6 | 15.5 |

These show that the National annual mean objective is comfortably met in 2004, and the provisional objective planned for 2010. However, monitoring data at Seaton Carew suggest that these background concentrations do not take account of occasional coastal influences.

Road Traffic

(Appendix 2)

Road traffic is a significant source of particulate PM₁₀ at ground-level. Hartlepool does not have high traffic flows, and there are no road areas with 'canyon' effect. Housing and other target group areas such as schools and hospitals tend to be set well back from the roadside, particularly on the main trunk roads.

There are no major road changes proposed over the next ten years, but the main A689 route through the town centre area has been diverted since the 2000 Review & Assessment as part of the Harbour redevelopment. This has improved traffic flow, and reduced congestion in parts of the old town areas.

Hartlepool does not have any narrow and congested streets with residential properties close to the kerb. In addition there are no busy streets identified where people may be exposed for the averaging period close to traffic.

There is no bus station as such, and some roads close to the town centre have a high proportion of buses. However, other road traffic is relatively low, and residential areas are set well back from the roadside.

Consultants CES (now Faber-Maunsell) carried out detailed modelling of the road system in and around Hartlepool for the 1st (2000) Review and Assessment, using the AAQuIRE air quality model. This showed that all road areas in 2004 would be well below both the annual mean objective of $40 \mu\text{g}/\text{m}^3$ (g), and the 90th percentile of the 24 hour mean objective of $50 \mu\text{g}/\text{m}^3$ (g). Traffic flow projections have been updated based on 2001/2002 traffic count data, projected forward using the latest TEMPRO factors, and are shown in Appendix 2. Where a direct comparison is possible, a number of town centre roads show a decrease over earlier projections, and need no further consideration. The northern access route, the A179, from the A19 trunk road towards the town centre, is showing a significant increase over earlier projections, but this road runs well away from target group areas and needs no further consideration. Other roads that show an increase in traffic have traffic flows that remain well below those in other areas, and which are known to be well below the objective levels. They also need no further consideration.

The extensive monitoring results given earlier show that the worst case particulate PM₁₀ concentration in 2002 within the Hartlepool Council area, away from the narrow coastal strip and where target groups may be present, was unlikely to exceed $22 \mu\text{g}/\text{m}^3$ (g) as an annual mean, and $34 \mu\text{g}/\text{m}^3$ (g) as the 90th percentile of the 24 hour mean.

Technical guidance (page 8-10) provides a method to project the 2002 annual mean forward to

Road Traffic
(continued)

2004 and 2010. The method uses the maximum secondary PM10 level of $5.68 \mu\text{g}/\text{m}^3$ (g) in the background tables of Appendix 1 factored forward to a value of 5.6 in 2002, 5.3 in 2004 and 4.5 in 2010 using the supplied correction factors. A constant coarse particle level of $10.5 \mu\text{g}/\text{m}^3$ (g) is used with the secondary element to find the primary PM10 fraction for 2002, as follows :

$$\text{worst case (target groups present)} \quad 22 - 5.6 - 10.5 = 5.9 \mu\text{g}/\text{m}^3 \text{ (g)}$$

This value are then factored forward using the supplied correction factors, as follows :

| | 2002 | 2004 | 2010 |
|------------------------------------|------|------|------|
| worst case (target groups present) | 5.9 | 5.6 | 4.9 |

The total estimated PM10 concentration for the given year is obtained by adding together the fixed coarse element with the secondary and primary elements for that year, as follows :

$$\text{worst case (target groups present) 2004} \quad 10.5 + 5.3 + 5.6 = \mathbf{21.4 \mu\text{g}/\text{m}^3 \text{ (g)}}$$

$$\text{worst case (target groups present) 2010} \quad 10.5 + 4.5 + 4.9 = \mathbf{19.9 \mu\text{g}/\text{m}^3 \text{ (g)}}$$

This confirms that while the 2004 annual mean objective of $40 \mu\text{g}/\text{m}^3$ (g) will be easily met in all areas, the proposed 2010 objective of $20 \mu\text{g}/\text{m}^3$ (g) will be difficult to meet without further reductions in PM10 emissions.

Technical guidance (page 8-41) also provides a graph to estimate the number of exceedances of the 24 hour mean objective from the derived annual means above.

| | annual mean | exceedances |
|---|-----------------------------------|-------------|
| worst case (target groups present) 2004 | $21.4 \mu\text{g}/\text{m}^3$ (g) | 6 |
| worst case (target groups present) 2010 | $19.9 \mu\text{g}/\text{m}^3$ (g) | 4 |

For year 2004, the number of exceedances is well below the maximum objective level of 35 in all areas.

For year 2010, the number of exceedances is predicted to be below the proposed maximum objective level of 7 where target groups may be present.

While this analysis shows that the 2004 objectives for particulate PM10 will be readily met, there is an on going need to further investigate PM10 emissions from traffic. Roads within Hartlepool town centre with the highest traffic flows and / or high heavy goods vehicle and bus flows, will be included in discretionary detailed modelling work using the DMRB screening model, and the AAQURE air quality model. The results will be reported as a separate study.

Other Transport

The only rail route within the Hartlepool Council area is the coastal route from Stockton to Sunderland. Although diesel operated, traffic is light and not considered a significant particulate PM10 source.

The Hartlepool port also has light traffic and is not considered a significant source.

Part B Processes
(Appendix 3)

There are 20 part B small industrial processes and 11 petrol stations registered within the Council area, but none are noted as significant sources of particulate PM10.

Part A Processes
(Appendix 4)

There are 12 part A industrial processes within the Council area, all of which are relatively low emitters of particulate PM10. There are also a number of large industrial processes located in the neighbouring Council areas of Redcar & Cleveland and Stockton-on-Tees to the South. Detailed analysis of all monitoring data across the whole of the Tees Valley shows that low-level (usually fugitive) industrial emissions can have an impact on ground-level concentrations of particulate PM10 in the immediate vicinity, but not at distance. High level emissions from tall stacks are likely to impact over distance if there is plume grounding. The Hartlepool Council area is relatively far away from the major industrial emitters, and being on an infrequent wind direction, there has been no significant impact noted.

Other Emitters

There is one aggregate quarry operating within the Council area, to the south-east of Hart village. While there are target groups present in the range 400 – 1000 metres, background levels are well below guidance values. Technical guidance (page 8-33) advises that it is only necessary to consider receptors at these distances if background PM10 levels in 2004 exceed $27 \mu\text{g}/\text{m}^3$ (g). The background concentration (Appendix 1b) within the grid reference (44705340) is $17.1 \mu\text{g}/\text{m}^3$ (g), and there is no need to proceed further. There have been no dust complaints or visual causes for concern.

There are no landfill sites within the Council area, but two large landfill sites are located at Cowpen Bewley and Seal Sands on the industrial North bank of the river Tees, within the neighbouring Stockton-on-Tees Council area. Both are well away from any residential areas, and there have been no complaints regarding these operations.

No other significant man-made emission sources have been identified.

There is evidence that coastal natural sources such as salt and sand can have a very significant impact in extreme weather conditions. These occurrences are relatively rare, but the monitoring results on the coastal strip at Seaton Carew (where some target groups may be present) have shown an annual mean of $26 \mu\text{g}/\text{m}^3$ (g) in 2002, and a 90th percentile of 24 hour means of $49 \mu\text{g}/\text{m}^3$ (g). These levels are well below the 2004 objectives, but the projected annual mean for 2010 using the technical guidance method (page 8-10) is $23.3 \mu\text{g}/\text{m}^3$ (g), with 9 exceedances. This is above the proposed 2010 objectives of $20 \mu\text{g}/\text{m}^3$ (g) as an annual mean, with a maximum of 7 exceedances.

Conclusion

Particulate PM10 concentrations across the Hartlepool Council area are, and will continue to be, below the national air quality objectives, although there is some uncertainty about the impact of coastal sources. As road traffic is identified as a significant source of ground-level concentrations of particulate PM10, a discretionary modelling assessment of certain road areas with slow moving traffic and a higher than average bus flow will be carried out as a separate study.

It is noted that the planned tighter objectives for 2010 may not be met without significant reductions in particulate PM10 from all sources. This will require a better understanding of

source origin at different locations.

SULPHUR DIOXIDE

- Objectives**
1. Maximum 266 $\mu\text{g}/\text{m}^3$ as a 15 minute mean with up to 35 exceedances, by December 2005
 2. Maximum 350 $\mu\text{g}/\text{m}^3$ as a 1 hour mean with up to 24 exceedances, by December 2004
 3. Maximum 125 $\mu\text{g}/\text{m}^3$ as a 24 hour mean with up to 3 exceedances, by December 2004

Overview Natural gas is readily available for domestic, commercial and some industrial use, and low sulphur diesel fuel widespread. The main source of sulphur dioxide pollution is from large industrial processes using higher sulphur fuels and waste products.

Year 2000 R & A 3rd stage Review & Assessment was required to evaluate the extent to which sulphur dioxide emissions from large industrial processes in neighbouring Council areas to the South affected the south-west region of Hartlepool. There was no need to declare an Air Quality Management Area, and this was confirmed by a supplementary assessment of sulphur dioxide in 2001 using up-dated emission and background concentration data.

Monitoring Data (Reference 1) A Local continuous monitoring station has been located near the coast at Seaton Carew since July 2000, to the North of the major industrial sources of sulphur dioxide.

Hartlepool (Seaton Carew) ratified full year data is as follows, all in $\mu\text{g}/\text{m}^3$

| | 2002 | 2001 | | Objective |
|-----------------------------|---------|---------|---|-----------|
| max 15 minute (exceedances) | 168 (0) | 170 (0) | - | 260 (35) |
| max 1 hour (exceedances) | 145 (0) | 109 (0) | - | 350 (24) |
| max 24 hour (exceedances) | 51 (0) | 48 (0) | - | 125 (3) |

There have been no exceedances recorded at this station.

Two AURN continuous monitoring stations are situated in the neighbouring Council areas of Middlesbrough and Redcar & Cleveland to the South of Hartlepool. Both stations are close to the main industrial areas, with Redcar & Cleveland station more on a prevailing wind direction.

Middlesbrough AURN station ratified full year data is as follows, all in $\mu\text{g}/\text{m}^3$

| | 2002 | 2001 | 2000 | Objective |
|-----------------------------|---------|---------|---------|-----------|
| max 15 minute (exceedances) | 213 (0) | 185 (0) | 277 (1) | 260 (35) |
| max 1 hour (exceedances) | 184 (0) | 149 (0) | 194 (0) | 350 (24) |
| max 24 hour (exceedances) | 72 (0) | 48 (0) | 51 (0) | 125 (3) |

Redcar & Cleveland AURN station ratified full year data is as follows, all in $\mu\text{g}/\text{m}^3$

| | 2002 | 2001 | 2000 | Objective |
|-----------------------------|---------|---------|---------|-----------|
| max 15 minute (exceedances) | 184 (0) | 319 (6) | 322 (2) | 260 (35) |
| max 1 hour (exceedances) | 120 (0) | 245 (0) | 226 (0) | 350 (24) |
| max 24 hour (exceedances) | 67 (0) | 88 (0) | 53 (0) | 125 (3) |

Although some exceedances of the 15 minute sulphur dioxide objective are noted from time to time, the frequency is well below the national objective, reinforcing the results seen at the Hartlepool Local station. There are no exceedances of the 24 hour or 1 hour objectives.

Background Concentrations (Appendix 1) Nationally derived background concentrations of sulphur dioxide as an annual mean for each square kilometre grid across the Council area for 2001, with projections to 2004 / 2005 using the 0.75 factor in Technical Guidance, are as follows :

| | 2001 | 2004 / 2005 |
|----------------------------------|------|-------------|
| maximum $\mu\text{g}/\text{m}^3$ | 13.1 | 9.8 |
| minimum $\mu\text{g}/\text{m}^3$ | 2.33 | 1.75 |

The 13.1 $\mu\text{g}/\text{m}^3$ maximum relates to one square kilometre grid only, at the south-eastern tip of Hartlepool on the coast, downwind of industrial emitters in the neighbouring Council area of Stockton-on-Tees. The rest of the Hartlepool Council area does not exceed 6.73 $\mu\text{g}/\text{m}^3$ as a 2001 annual mean, or 5.04 $\mu\text{g}/\text{m}^3$ by 2004 / 2005.

Analysis of monitoring data in the Tees Valley indicates that if annual means of sulphur dioxide are below 10 $\mu\text{g}/\text{m}^3$, there will be no exceedances at the 24 hour or 1 hour mean, and less than 5 exceedances at the 15 minute level. The background data suggests that all three National objectives will be easily met throughout the Council area by 2004 / 2005.

Domestic Sources The majority of dwellings within the Hartlepool Council area are covered by smoke control orders, and the principal fuel is now natural gas. Three rural villages, Hart, Dalton and Elwick, are excluded but are not significant coal burning areas. No further action is required.

Road Traffic (Appendix 2) Road traffic is not a significant source of sulphur dioxide, and does not require analysis.

Rail Traffic The only rail route within the Hartlepool Council area is the coastal route from Stockton to Sunderland. Although diesel operated, traffic is light and not considered a significant sulphur dioxide source.

There are no areas where diesel locomotives may be regularly stationary for more than 15 minutes.

Port Traffic The Hartlepool port has light traffic and is not considered a significant source.

Part B Processes (Appendix 3) There are 20 part B small industrial processes and 11 petrol stations registered within the Council area, but none are noted as significant sources of sulphur dioxide.

Part A Processes (Appendix 4) There are 12 part A industrial processes within the Council area, which have in total emitted less than 100 tpa of sulphur dioxide. Modelling work carried out in the year 2000 Review & Assessment showed that this level of release was not a significant factor in ground level concentrations.

There are a number of large sulphur dioxide emitters located in the neighbouring Council areas of Redcar & Cleveland and Stockton-on-Tees to the South. The emissions have been projected forward to 2005 by the Environment Agency, and have been modelled across the Tees Valley, including Hartlepool, using the AAQuIRE air pollution model. The results (reference 3) show that there will be no exceedance at the 15 minute level within the Hartlepool Council area.

Other Emitters No other significant emission sources have been identified.

Conclusion

Sulphur dioxide concentrations across the Hartlepool Council area are, and will continue to be, below the national air quality objectives. Following detailed modelling of sulphur dioxide emissions from large industrial processes in neighbouring Council areas to the South, there is no need to proceed further.

CARBON MONOXIDE

Objective Maximum 10 mg/m³ as an 8 hour running mean by December 2003, with no exceedances

Overview With natural gas readily available for domestic, commercial and some industrial use, the most significant sources of carbon monoxide are road traffic, and one Part A industrial process (Titanium Dioxide manufacture).

Year 2000 R & A There was no need to proceed beyond the 1st stage Review & Assessment

Monitoring Data A Local continuous monitoring station has been located near the coast at Seaton Carew since July 2000, largely downwind of the major industrial source.
(Reference 1)

Hartlepool (Seaton Carew) Local station ratified full year data is as follows, all in mg/m³

| | 2002 | 2001 | Objective |
|-------------------------|------|------|-----------|
| annual mean | 0.22 | 0.22 | |
| max 8 hour running mean | 1.4 | 2.4 | 10 |

A mobile continuous monitoring station operated for the first three months of 2001, close to the main A689 trunk road into Hartlepool.

The maximum 8 hour running mean was 1.7 mg/m³, against an objective maximum of 10 mg/m³.

Two AURN continuous monitors operate in the neighbouring Council areas of Middlesbrough (urban industrial) and Redcar & Cleveland (suburban), both to the South of Hartlepool.

Middlesbrough AURN station ratified full year data is as follows, all in mg/m³

| | 2002 | 2001 | 2000 | Objective |
|-------------------------|------|------|------|-----------|
| annual mean | 0.28 | 0.32 | 0.28 | |
| max 8 hour running mean | 1.5 | 4.1 | 1.3 | 10 |

Redcar & Cleveland AURN station ratified full year data is as follows, all in mg/m³

| | 2002 | 2001 | 2000 | Objective |
|-------------------------|------|------|------|-----------|
| annual mean | 0.29 | 0.35 | 0.35 | |
| max 8 hour running mean | 2.2 | 4.5 | 1.4 | 10 |

All monitoring results are well below the objective of 10 mg/m³.

Background Concentrations

(Appendix 1)

Nationally derived background concentrations for each square kilometre grid across the Council area for 2001 are estimated to lie between 0.24 mg/m³ and 0.35 mg/m³ as an annual mean. These are predicted to fall by 2003 to between 0.20mg/m³ and 0.29 mg/m³ respectively. Although there is no clear relationship between annual mean and 8 hour running mean, typical factors from the continuous monitors for the 8 hour running mean are between 5 to 10 times the annual mean, with the worst case factor in 2001 of 13.5. Using this worst case, background concentrations as an 8 hour running mean will not exceed 4.0 mg/m³, well within the objective level.

Road Traffic

(Appendix 2)

Daily average traffic flows (ADT) for the principal roads have been derived from traffic counts over 2001 / 2002, and projected to 2005 using the latest TEMPRO factors. These 2005 projections are used as the worst case for carbon monoxide in 2003, and compared with technical guidance criteria for possible objective exceedances, as follows :

| vehicles / day | Technical Guidance | Hartlepool |
|--------------------|--------------------|--------------|
| | max ADT | max ADT 2003 |
| single carriageway | 80,000 | 19,000 |
| dual carriageway | 120,000 | 28,000 |
| motorway | 140,000 | 45,000 |

The worst case junction does not exceed 40,000 vehicles / day as a combined ADT, and there are no areas of road with 'canyon' characteristics.

Other Transport

There is a coastal rail route between Stockton and Sunderland passing through Hartlepool which has light traffic and is not a significant factor.

The Hartlepool port also has light traffic, and is not a significant factor.

Part B Processes

(Appendix 3)

There are 20 part B small industrial processes and 11 petrol stations registered within the Council area, but they are not significant sources of carbon monoxide.

Part A Processes

(Appendix 4)

There are 12 part A industrial processes within the Council area, of which one emits 90% of the total industrial emissions. Monitoring data, however, shows that industrial emissions do not contribute significantly to ground level carbon monoxide concentrations.

A number of other part A processes with large carbon monoxide releases are located in the neighbouring Council areas of Redcar & Cleveland and Stockton-on-Tees, to the South. These are too far away and on an infrequent wind direction to have any impact.

Other Emitters

No other significant emission sources have been identified.

Conclusion

Carbon monoxide concentrations across the Hartlepool Council area are, and will continue to be, well below the national air quality objective. There is no need to proceed further.

BENZENE

- Objectives**
1. Maximum 16.25 $\mu\text{g}/\text{m}^3$ as a running annual mean by December 2003, with no exceedances
 2. Maximum 5.00 $\mu\text{g}/\text{m}^3$ as an annual mean by December 2010, with no exceedances

Overview

Road transport is the most significant source of benzene within the Hartlepool Council area. There is one part A industrial process (crude oil storage) within the Council area which has benzene emissions. A number of more significant industrial processes which have benzene emissions are located within Redcar & Cleveland and Stockton-on-Tees Council areas to the South, but are too far away, and on an infrequent wind direction, to have any impact.

Year 2000 R & A

There was no need to proceed beyond the 1st stage Review & Assessment

Monitoring Data

There is no monitoring of benzene concentrations within the Hartlepool Council area.
(Reference 1)

Continuous monitoring of benzene is carried out at a Local station within Redcar & Cleveland Council area to the South, closer to significant industrial emitters.

Redcar (Corporation Road) ratified full year data is as follows, all in $\mu\text{g}/\text{m}^3$

| | | | |
|---|------|------|------|
| Objectives 16.25 / 5.0 $\mu\text{g}/\text{m}^3$ | 2002 | 2001 | 2000 |
| annual mean | 1.29 | 2.93 | 2.03 |
| max running annual mean | 3.12 | 2.93 | 5.59 |

Monitored levels are falling following major process improvements on the industrial units.

Continuous monitoring of benzene was also carried out at a national AURN station within Middlesbrough Council area to the South, also closer to the significant industrial emitters, and more influenced by road traffic emissions. The station was closed at the end of 2000.

Middlesbrough (Breckon Hill) ratified full year data is as follows, all in $\mu\text{g}/\text{m}^3$

| | | | |
|---|------|------|------|
| Objectives 16.25 / 5.0 $\mu\text{g}/\text{m}^3$ | 2000 | 1999 | 1998 |
| annual mean | 2.08 | 2.54 | 2.47 |
| max running annual mean | 2.47 | 2.70 | 3.22 |

The Middlesbrough continuous monitor was replaced by a pumped diffusion tube system in February 2002, as part of a new national benzene monitoring system. Preliminary results for 2002 show an 11 month mean of 1.7 $\mu\text{g}/\text{m}^3$, and confirm on-going reductions in benzene emissions, both from industry and traffic.

Levels of benzene concentrations within the Hartlepool Council area will be lower than those at Middlesbrough due to distance from the industrial sources, a less frequent wind direction, and lower levels of road traffic concentrations.

Background Concentrations (Appendix 1) Nationally derived background concentrations of benzene as an annual mean for each square kilometre grid across the Council area for 2001, and projections to 2003 and 2010, are as follows

| | 2001 | 2003 | 2010 |
|----------------------------------|------|-------|------|
| Objective | | 16.25 | 5.0 |
| maximum $\mu\text{g}/\text{m}^3$ | 0.4 | 0.5 | 0.4 |
| minimum $\mu\text{g}/\text{m}^3$ | 0.3 | 0.3 | 0.2 |

These are well below either benzene objective.

Road Traffic (Appendix 2) Daily average traffic flows (ADT) for the principal roads have been derived from traffic counts over 2001 / 2002, and projected to 2005 using the latest TEMPRO factors. These 2005 projections are used as the worst case for carbon monoxide in 2003, and compared with technical guidance criteria for possible objective exceedances, as follows :

| vehicles / day | Technical Guidance max ADT | Hartlepool max ADT 2003 | Hartlepool max ADT 2010 |
|--------------------|-------------------------------|----------------------------|----------------------------|
| single carriageway | 80,000 | 19,000 | 21,000 |
| dual carriageway | 120,000 | 28,000 | 30,000 |
| motorway | 140,000 | 45,000 | 49,000 |

The worst case junction does not exceed 40,000 vehicles / day as a combined ADT in 2003, or 43,000 vehicles / day in 2010, and there are no areas of road with 'canyon' characteristics.

There are no road changes in the latest 10 year plan which would adversely affect worst case traffic flow estimates.

Other Transport No significant sources.

Part B Processes (Appendix 3) There are 20 part B small industrial processes registered within the Council area, all of which have no sources of benzene.

Petrol Stations There are 11 petrol stations registered within the Council area with a throughput in excess of 500 m^3 per year. All of the stations have stage 1 vapour recovery on underground storage tanks, but, as there is no requirement, they are not fitted with stage 2 vapour recovery at the dispensing pumps.

Technical guidance advises that it is only necessary to consider those petrol stations with a throughput in excess of 2000 m^3 of petrol (2 million litres of petrol per annum), which are close to a busy road with daily traffic flows of more than 30,000 vehicles, and with relevant receptors within 10 metres of the pumps.

There are no petrol stations within the Hartlepool Council area that meet all of these criteria, and no further action is required.

Part A Processes (Appendix 4) There are 12 part A industrial processes within the Council area, of which one is a small (20 tpa) emitter of benzene from crude oil storage tanks, close to the village of Greatham. The nearest receptor is further than 1 km on an infrequent wind direction, and inspection of the nomograms 3.1 – 3.4 in Technical Guidance show that the threshold will not be exceeded at the receptor.

| | |
|--|---|
| Part A Processes (continued) | A number of other part A processes with significant benzene releases are located in the neighbouring Council areas of Redcar & Cleveland and Stockton-on-Tees, to the South. These are too far away and on an infrequent wind direction to have any impact. |
| Other Emitters | No other emission sources have been identified. |
| Conclusion | Benzene concentrations across the Hartlepool Council area are, and will continue to be, well below the national air quality objectives. There is no need to proceed further. |

1,3-BUTADIENE

Objective Maximum 2.25 µg/m³ as a running annual mean by December 2003, with no exceedances

Overview Road transport exhaust emissions are the most significant source of 1,3-butadiene within the Hartlepool Council area, with no industrial emissions.

There is one significant part A industrial process which has 1,3-butadiene emissions located within Redcar & Cleveland Council area to the South, but this is too far away, and on an infrequent wind direction, to have any impact.

Year 2000 R & A There was no need to proceed beyond the 1st stage Review & Assessment

Monitoring Data There is no monitoring of 1,3-butadiene concentrations within the Hartlepool Council area.

(Reference 1)

Continuous monitoring of 1,3-butadiene is carried out at a Local station within Redcar & Cleveland Council area to the South, closer to the significant industrial emitter.

Redcar (Corporation Road) ratified full year results are as follows, all in µg/m³

| | | | |
|----------------------------------|------|------|------|
| Objective 2.25 µg/m ³ | 2002 | 2001 | 2000 |
| annual mean | 0.70 | 1.20 | 0.87 |
| max running annual mean | 1.44 | 1.19 | 1.28 |

Concentrations are falling following major process improvements on the industrial unit.

Continuous monitoring of 1,3-butadiene was also carried out at a national AURN station within Middlesbrough Council area to the South, also closer to the significant industrial emitter, and more influenced by road traffic emissions. The station was closed at the end of 2000.

Middlesbrough (Breckon Hill) ratified full year results are as follows, all in µg/m³

| | | | |
|----------------------------------|------|------|------|
| Objective 2.25 µg/m ³ | 2000 | 1999 | 1998 |
| annual mean | 0.23 | 0.29 | 0.27 |
| max running annual mean | 0.29 | 0.32 | 0.36 |

The Middlesbrough continuous monitor has been replaced by a pumped diffusion tube system in April 2003 as part of a new national 1,3-butadiene monitoring system. Early results indicate lower levels than those above.

Levels of 1,3-butadiene concentrations within the Hartlepool Council area will be lower than those at Middlesbrough or Redcar due to distance from the industrial source, a less frequent wind direction, and lower levels of road traffic concentrations.

Background Concentrations (Appendix 1) Nationally derived background concentrations of 1,3-butadiene as an annual mean for each square kilometre grid across the Council area for 2001, and projections to 2003, are as follows, all in $\mu\text{g}/\text{m}^3$

| | 2001 | 2003 |
|----------------------------------|------|------|
| Objective | | 2.25 |
| maximum $\mu\text{g}/\text{m}^3$ | 0.25 | 0.23 |
| minimum $\mu\text{g}/\text{m}^3$ | 0.13 | 0.11 |

These are well below the 1,3-butadiene objective of $2.25 \mu\text{g}/\text{m}^3$.

Road Traffic (Appendix 2) Road traffic has been a significant source of 1,3-butadiene through petrol-vehicle exhausts, but the introduction of catalytic converters onto the exhaust systems of petrol-engined vehicles has contributed to much lower emission levels. The relatively low levels of traffic flow within the Hartlepool Council area, and absence of 'canyon' effect road locations, means that road traffic emissions for 2003 can be disregarded.

Other Transport No significant sources.

Part B Processes (Appendix 3) There are 20 part B small industrial processes and 11 petrol stations registered within the Council area, but there are no sources of 1,3-butadiene.

Part A Processes (Appendix 4) There are 12 part A industrial processes within the Council area, but there are no 1,3-butadiene emissions.

One part A industrial emitter of 1,3-butadiene is located in the neighbouring Council area of Redcar & Cleveland to the South. This process is too far away and on an infrequent wind direction to have any impact.

Other Emitters No other emission sources have been identified.

Conclusion 1,3-Butadiene concentrations across the Hartlepool Council area are, and will continue to be, well below the national air quality objective. There is no need to proceed further.

LEAD

- Objectives**
1. Maximum 0.5 µg/m³ as an annual mean by December 2004, with no exceedances
 2. Maximum 0.25 µg/m³ as an annual mean by December 2008, with no exceedances

Overview

Following the introduction of lead-free petrol in the early 1990's, and subsequent ban on sales of leaded petrol in the UK from January 1 2000, road traffic is no longer a significant source of lead in the atmosphere. Emissions of lead are now restricted to a variety of industrial activities, including battery manufacture, pigments in paints and glazes, alloys, radiation shielding, tank lining and piping.

There are no industrial processes within the Hartlepool Council area, or in neighbouring Council areas, involved in lead processing.

Year 2000 R & A There was no need to proceed beyond the 1st stage Review & Assessment

Monitoring Data Monitoring of lead is carried out at three locations within the Stockton-on-Tees Council area to the South as part of a heavy metal monitoring programme
(Reference 1)

Full year results are as follows, all in µg/m³ as an annual mean

| Stockton-on-Tees | | 2002 | 2001 | 2000 |
|------------------|-------------------|-------|-------|-------|
| Redmarshall | rural | <0.01 | <0.01 | <0.01 |
| Eaglescliffe | industry boundary | <0.01 | <0.01 | <0.01 |
| Seal Sands | industry boundary | <0.01 | <0.01 | <0.01 |

Concentrations are consistently below the limit of detection.

Annual mean lead-in-air concentrations are also measured at urban background national network sites in Leeds and Newcastle.

Full year results are as follows, all in µg/m³ as an annual mean

| | 2001 | 2000 | 1999 |
|-----------|-------|-------|-------|
| Leeds | 0.031 | 0.027 | 0.039 |
| Newcastle | 0.032 | 0.008 | 0.013 |

Concentrations are well below the National objectives.

Levels of lead-in-air concentrations within the Hartlepool Council area are expected to be below the limit of detection.

Background Concentrations There are no Nationally derived background concentrations of lead-in-air.

Road Traffic Road traffic is no longer a significant source of lead-in-air.
(Appendix 2)

Other Transport No significant sources.

| | |
|---|--|
| Part B Processes (Appendix 3) | There are 20 part B small industrial processes and 11 petrol stations registered within the Council area, but there are no sources of lead. |
| Part A Processes (Appendix 4) | There are 12 part A industrial processes within the Council area, but none are connected with lead manufacturing or processing. There are no lead-related industrial processes in neighbouring Council areas. |
| Other Emitters | No other emission sources have been identified. |
| Conclusion | Lead-in-air concentrations across the Hartlepool Council area are, and will continue to be, well below the national air quality objectives. There is no need to proceed further. |

11. Conclusions

- 11.1 Road traffic remains the major source of air pollution within the Hartlepool Council, and has significant impact on nitrogen dioxide and particulate PM10 concentrations at ground level.
- 11.2 All thirteen current air quality objectives, covering seven pollutants, will be met within the Hartlepool Council area by their due dates. There continues to be no need to declare any Air Quality Management Areas.
- 11.3 The objectives of most concern are the annual mean for nitrogen dioxide, and the 24 hour objective for particulate PM10, both for which further precautionary monitoring is required. The main source of these pollutants within the Council area is traffic, although there are a wider range of other particulate PM10 sources that may have some impact from time to time, in particular coastal sources such as salt particles.
- 11.4 The two proposed objectives for particulate PM10 in 2010 are less likely to be met, based on current continuous monitoring of concentrations within the Hartlepool Council area, and across the Tees Valley area, without significant reductions in source emission. This may prove difficult within Hartlepool if natural coastal sources are shown to be the dominant source.

12. Further Work

Road traffic is recognised as the main source of pollution within the Hartlepool Council area, and it has been decided to carry out a detailed modelling study of pollution concentrations of nitrogen dioxide and particulate PM10. This will be carried out for the most heavily congested traffic areas within Hartlepool Town where target group members of the public are likely to be present.

Sources of particulate PM10 are the most diverse of all the pollutants under consideration. Further analysis of particulate PM10 episodes is required to see how the proposed objectives for 2010 may be met, with emphasis on natural coastal sources.

13. Consultation

External

Secretary of State
 Environment Agency
 Highways Authority – operations department
 NHS
 Air Quality Forum - industry and environmental groups

Internal

Tees Valley Environmental Protection Group
 Corporate Policy and Resources
 Transport Planning / Tees Valley JSU
 Land Use Planning
 Local Agenda 21 and Energy management

This report will be placed on the Hartlepool Council web-site, and copies placed in the main reference library.

APPENDIX 1a
Background Concentrations

| Hartlepool NOx / NO2 Background Concentrations 2001 / 2005 / 2010 - Grid reference X = 441500 to 454500 | | | | | | | | | | | | | |
|---|--------|--------------------------|-------|--------------------------|-------|--------------------------|-------|----------------|-------|----------------|-------|----------------|-------|
| | | NOx 2001 | | NOx 2005 | | NOx 2010 | | NO2 2001 | | NO2 2005 | | NO2 2010 | |
| Grid reference | | as NO2 annual mean | | as NO2 annual mean | | as NO2 annual mean | | annual mean | | annual mean | | annual mean | |
| X | Y | ppb | µg/m³ | ppb | µg/m³ | ppb | µg/m³ | ppb | µg/m³ | ppb | µg/m³ | ppb | µg/m³ |
| 441500 | 527500 | 16.6 | 31.5 | 14.4 | 27.3 | 11.2 | 21.2 | 10.9 | 20.8 | 9.9 | 18.8 | 8.3 | 15.8 |
| 442500 | 527500 | 18.5 | 35.1 | 15.8 | 30.0 | 12.2 | 23.1 | 11.8 | 22.4 | 10.6 | 20.1 | 8.8 | 16.8 |
| 442500 | 528500 | 17.7 | 33.7 | 15.3 | 29.0 | 11.7 | 22.3 | 11.5 | 21.8 | 10.3 | 19.6 | 8.6 | 16.4 |
| 442500 | 529500 | 17.0 | 32.3 | 14.7 | 27.9 | 11.4 | 21.6 | 11.1 | 21.1 | 10.1 | 19.1 | 8.4 | 16.0 |
| 442500 | 530500 | 16.7 | 31.8 | 14.4 | 27.4 | 11.2 | 21.2 | 11.0 | 20.9 | 9.9 | 18.9 | 8.3 | 15.8 |
| 443500 | 528500 | 19.8 | 37.7 | 16.9 | 32.1 | 12.9 | 24.6 | 12.4 | 23.5 | 11.1 | 21.0 | 9.2 | 17.5 |
| 443500 | 529500 | 19.1 | 36.3 | 16.3 | 31.0 | 12.5 | 23.8 | 12.1 | 22.9 | 10.8 | 20.5 | 9.0 | 17.1 |
| 443500 | 530500 | 18.5 | 35.2 | 15.8 | 30.0 | 12.2 | 23.1 | 11.8 | 22.4 | 10.6 | 20.1 | 8.8 | 16.8 |
| 443500 | 531500 | 18.4 | 35.0 | 15.7 | 29.8 | 12.1 | 22.9 | 11.7 | 22.3 | 10.5 | 20.0 | 8.8 | 16.7 |
| 443500 | 532500 | 18.4 | 35.0 | 15.7 | 29.8 | 12.0 | 22.8 | 11.7 | 22.3 | 10.5 | 20.0 | 8.7 | 16.6 |
| 444500 | 528500 | 20.2 | 38.3 | 17.2 | 32.6 | 13.2 | 25.0 | 12.5 | 23.8 | 11.2 | 21.3 | 9.3 | 17.7 |
| 444500 | 529500 | 19.1 | 36.3 | 16.4 | 31.1 | 12.6 | 23.9 | 12.1 | 22.9 | 10.8 | 20.6 | 9.1 | 17.2 |
| 444500 | 530500 | 18.6 | 35.3 | 15.9 | 30.2 | 12.3 | 23.3 | 11.8 | 22.5 | 10.6 | 20.2 | 8.9 | 16.9 |
| 444500 | 531500 | 18.4 | 35.0 | 15.7 | 29.9 | 12.1 | 23.0 | 11.7 | 22.3 | 10.5 | 20.0 | 8.8 | 16.7 |
| 444500 | 532500 | 18.4 | 34.9 | 15.6 | 29.7 | 12.1 | 22.9 | 11.7 | 22.3 | 10.5 | 19.9 | 8.8 | 16.7 |
| 444500 | 533500 | 18.2 | 34.5 | 15.4 | 29.3 | 11.9 | 22.6 | 11.6 | 22.1 | 10.4 | 19.8 | 8.7 | 16.5 |
| 445500 | 526500 | 23.4 | 44.4 | 20.4 | 38.7 | 15.5 | 29.5 | 13.8 | 26.3 | 12.6 | 23.9 | 10.4 | 19.8 |
| 445500 | 527500 | 21.9 | 41.6 | 19.1 | 36.3 | 14.5 | 27.6 | 13.3 | 25.2 | 12.1 | 22.9 | 9.9 | 18.9 |
| 445500 | 528500 | 20.6 | 39.1 | 18.1 | 34.3 | 13.7 | 26.0 | 12.7 | 24.1 | 11.6 | 22.0 | 9.6 | 18.2 |
| 445500 | 529500 | 19.6 | 37.2 | 17.3 | 32.8 | 13.1 | 24.9 | 12.3 | 23.3 | 11.2 | 21.3 | 9.3 | 17.6 |
| 445500 | 530500 | 18.6 | 35.3 | 15.9 | 30.3 | 12.3 | 23.4 | 11.8 | 22.5 | 10.6 | 20.2 | 8.9 | 16.9 |
| 445500 | 531500 | 18.4 | 34.9 | 15.7 | 29.9 | 12.1 | 23.0 | 11.7 | 22.3 | 10.5 | 20.0 | 8.8 | 16.7 |
| 445500 | 532500 | 18.5 | 35.2 | 15.9 | 30.2 | 12.2 | 23.2 | 11.8 | 22.4 | 10.6 | 20.2 | 8.8 | 16.8 |
| 445500 | 533500 | 18.3 | 34.7 | 15.6 | 29.7 | 12.0 | 22.8 | 11.7 | 22.2 | 10.5 | 20.0 | 8.7 | 16.6 |
| 445500 | 534500 | 18.0 | 34.2 | 15.4 | 29.3 | 11.8 | 22.4 | 11.6 | 22.0 | 10.4 | 19.8 | 8.6 | 16.4 |
| 445500 | 535500 | 17.7 | 33.6 | 15.7 | 29.8 | 11.8 | 22.4 | 11.4 | 21.7 | 10.5 | 20.0 | 8.6 | 16.4 |
| 446500 | 526500 | 23.5 | 44.7 | 20.5 | 39.0 | 15.7 | 29.8 | 13.9 | 26.4 | 12.7 | 24.1 | 10.5 | 20.0 |
| 446500 | 527500 | 22.1 | 42.0 | 19.3 | 36.7 | 14.7 | 28.0 | 13.3 | 25.3 | 12.2 | 23.1 | 10.1 | 19.2 |
| 446500 | 528500 | 20.8 | 39.6 | 18.3 | 34.7 | 13.9 | 26.4 | 12.8 | 24.3 | 11.7 | 22.2 | 9.7 | 18.4 |
| 446500 | 529500 | 20.0 | 38.0 | 17.6 | 33.5 | 13.4 | 25.5 | 12.4 | 23.6 | 11.4 | 21.7 | 9.4 | 17.9 |
| 446500 | 530500 | 18.9 | 36.0 | 16.3 | 31.0 | 12.6 | 23.9 | 12.0 | 22.8 | 10.8 | 20.5 | 9.1 | 17.2 |
| 446500 | 531500 | 18.7 | 35.5 | 16.1 | 30.5 | 12.4 | 23.5 | 11.9 | 22.6 | 10.7 | 20.3 | 8.9 | 17.0 |
| 446500 | 532500 | 18.7 | 35.6 | 16.1 | 30.5 | 12.4 | 23.5 | 11.9 | 22.6 | 10.7 | 20.3 | 8.9 | 17.0 |
| 446500 | 533500 | 18.2 | 34.5 | 15.6 | 29.7 | 12.1 | 22.9 | 11.6 | 22.1 | 10.5 | 19.9 | 8.8 | 16.7 |
| 446500 | 534500 | 17.5 | 33.3 | 15.1 | 28.7 | 11.6 | 22.1 | 11.4 | 21.6 | 10.3 | 19.5 | 8.6 | 16.3 |
| 446500 | 535500 | 17.0 | 32.3 | 15.2 | 28.9 | 11.5 | 21.8 | 11.1 | 21.1 | 10.3 | 19.6 | 8.5 | 16.1 |
| 446500 | 536500 | 16.3 | 31.0 | 14.6 | 27.8 | 11.1 | 21.0 | 10.8 | 20.5 | 10.1 | 19.1 | 8.3 | 15.7 |
| 447500 | 526500 | 22.3 | 42.4 | 19.7 | 37.4 | 15.3 | 29.1 | 13.4 | 25.5 | 12.3 | 23.4 | 10.4 | 19.7 |
| 447500 | 527500 | 21.8 | 41.4 | 19.2 | 36.5 | 14.8 | 28.2 | 13.2 | 25.1 | 12.1 | 23.0 | 10.1 | 19.2 |
| 447500 | 528500 | 21.2 | 40.3 | 18.7 | 35.6 | 14.4 | 27.4 | 12.9 | 24.6 | 11.9 | 22.6 | 9.9 | 18.8 |
| 447500 | 529500 | 21.0 | 39.9 | 18.5 | 35.2 | 14.2 | 27.0 | 12.8 | 24.4 | 11.8 | 22.4 | 9.8 | 18.7 |
| 447500 | 530500 | 20.1 | 38.2 | 17.4 | 33.0 | 13.5 | 25.7 | 12.5 | 23.7 | 11.3 | 21.4 | 9.5 | 18.1 |
| 447500 | 531500 | 19.4 | 36.8 | 16.7 | 31.8 | 13.1 | 24.8 | 12.2 | 23.1 | 11.0 | 20.9 | 9.3 | 17.6 |
| 447500 | 532500 | 19.1 | 36.3 | 16.5 | 31.4 | 12.8 | 24.4 | 12.1 | 22.9 | 10.9 | 20.7 | 9.2 | 17.4 |
| 447500 | 533500 | 18.5 | 35.1 | 16.1 | 30.5 | 12.5 | 23.7 | 11.8 | 22.4 | 10.7 | 20.3 | 9.0 | 17.1 |
| 447500 | 534500 | 17.6 | 33.5 | 15.3 | 29.1 | 11.9 | 22.7 | 11.4 | 21.7 | 10.4 | 19.7 | 8.7 | 16.6 |
| 447500 | 535500 | 16.9 | 32.2 | 15.3 | 29.1 | 11.6 | 22.1 | 11.1 | 21.1 | 10.4 | 19.7 | 8.6 | 16.3 |
| 447500 | 536500 | 16.4 | 31.1 | 14.8 | 28.1 | 11.2 | 21.3 | 10.8 | 20.6 | 10.1 | 19.2 | 8.4 | 15.9 |
| 448500 | 526500 | 20.9 | 39.7 | 18.7 | 35.5 | 14.8 | 28.1 | 12.8 | 24.4 | 11.9 | 22.6 | 10.1 | 19.2 |
| 448500 | 527500 | 20.7 | 39.3 | 18.5 | 35.1 | 14.5 | 27.5 | 12.7 | 24.2 | 11.8 | 22.4 | 9.9 | 18.9 |
| 448500 | 528500 | 20.3 | 38.5 | 18.2 | 34.5 | 14.2 | 26.9 | 12.5 | 23.8 | 11.6 | 22.1 | 9.8 | 18.6 |
| 448500 | 529500 | 20.5 | 39.0 | 18.4 | 35.0 | 14.3 | 27.2 | 12.7 | 24.1 | 11.7 | 22.3 | 9.9 | 18.8 |
| 448500 | 530500 | 20.6 | 39.2 | 18.0 | 34.2 | 14.2 | 27.0 | 12.7 | 24.1 | 11.6 | 22.0 | 9.8 | 18.7 |
| 448500 | 531500 | 20.7 | 39.3 | 18.1 | 34.3 | 14.2 | 26.9 | 12.7 | 24.2 | 11.6 | 22.0 | 9.8 | 18.6 |
| 448500 | 532500 | 20.5 | 38.9 | 17.9 | 34.0 | 14.1 | 26.7 | 12.6 | 24.0 | 11.5 | 21.9 | 9.7 | 18.5 |
| 448500 | 533500 | 19.7 | 37.5 | 17.3 | 32.8 | 13.5 | 25.7 | 12.3 | 23.4 | 11.3 | 21.4 | 9.5 | 18.0 |
| 448500 | 534500 | 18.6 | 35.3 | 16.3 | 30.9 | 12.7 | 24.2 | 11.8 | 22.5 | 10.8 | 20.5 | 9.1 | 17.3 |
| 448500 | 535500 | 17.3 | 32.8 | 15.7 | 29.8 | 12.0 | 22.8 | 11.3 | 21.4 | 10.5 | 20.0 | 8.7 | 16.6 |
| 449500 | 526500 | 20.4 | 38.8 | 18.4 | 35.0 | 14.8 | 28.2 | 12.6 | 24.0 | 11.8 | 22.4 | 10.2 | 19.3 |
| 449500 | 527500 | 20.7 | 39.4 | 18.7 | 35.5 | 14.8 | 28.2 | 12.7 | 24.2 | 11.8 | 22.5 | 10.2 | 19.3 |
| 449500 | 528500 | 20.7 | 39.4 | 18.7 | 35.5 | 14.8 | 28.1 | 12.7 | 24.2 | 11.9 | 22.6 | 10.1 | 19.2 |

HARTLEPOOL BOROUGH COUNCIL

| | | | | | | | | | | | | | | | | | | |
|----------------|---------|--------------------------|-------------------|--|--------------------------|-------------------|--|--------------------------|-------------------|--|----------------|-------------------|--|----------------|-------------------|--|----------------|-------------------|
| 449500 | 529500 | 21.6 | 41.1 | | 19.5 | 37.0 | | 15.4 | 29.2 | | 13.2 | 25.0 | | 12.2 | 23.2 | | 10.4 | 19.7 |
| | | NOx 2001 | | | NOx 2005 | | | NOx 2010 | | | NO2 2001 | | | NO2 2005 | | | NO2 2010 | |
| Grid reference | | as NO2 annual mean | | | as NO2 annual mean | | | as NO2 annual mean | | | annual mean | | | annual mean | | | annual mean | |
| X | Y | ppb | µg/m ³ | | ppb | µg/m ³ | | ppb | µg/m ³ | | ppb | µg/m ³ | | ppb | µg/m ³ | | ppb | µg/m ³ |
| | | | | | | | | | | | | | | | | | | |
| 449500 | 530500 | 21.6 | 41.0 | | 19.0 | 36.1 | | 15.1 | 28.7 | | 13.1 | 24.9 | | 12.0 | 22.8 | | 10.3 | 19.5 |
| 449500 | 531500 | 21.9 | 41.7 | | 19.3 | 36.6 | | 15.3 | 29.0 | | 13.3 | 25.2 | | 12.1 | 23.0 | | 10.3 | 19.6 |
| 449500 | 532500 | 24.1 | 45.7 | | 21.1 | 40.0 | | 16.7 | 31.7 | | 14.1 | 26.8 | | 12.9 | 24.5 | | 11.0 | 20.9 |
| 449500 | 533500 | 23.1 | 43.8 | | 20.2 | 38.4 | | 15.9 | 30.3 | | 13.7 | 26.1 | | 12.5 | 23.8 | | 10.6 | 20.2 |
| 449500 | 534500 | 21.4 | 40.7 | | 18.8 | 35.7 | | 14.8 | 28.1 | | 13.1 | 24.8 | | 11.9 | 22.6 | | 10.1 | 19.2 |
| 449500 | 535500 | 20.1 | 38.1 | | 18.1 | 34.4 | | 14.0 | 26.6 | | 12.5 | 23.7 | | 11.6 | 22.1 | | 9.7 | 18.5 |
| 450500 | 526500 | 20.6 | 39.2 | | 19.6 | 37.2 | | 15.7 | 29.8 | | 12.7 | 24.2 | | 12.3 | 23.3 | | 10.5 | 20.0 |
| 450500 | 527500 | 21.0 | 39.9 | | 19.8 | 37.7 | | 15.6 | 29.6 | | 12.8 | 24.4 | | 12.4 | 23.5 | | 10.5 | 19.9 |
| 450500 | 528500 | 21.1 | 40.0 | | 19.9 | 37.8 | | 15.5 | 29.4 | | 12.9 | 24.5 | | 12.4 | 23.5 | | 10.4 | 19.8 |
| 450500 | 529500 | 21.9 | 41.6 | | 20.6 | 39.1 | | 15.9 | 30.3 | | 13.2 | 25.1 | | 12.7 | 24.1 | | 10.6 | 20.2 |
| 450500 | 530500 | 24.4 | 46.4 | | 25.4 | 48.2 | | 18.4 | 35.0 | | 14.3 | 27.1 | | 14.7 | 27.9 | | 11.7 | 22.3 |
| 450500 | 531500 | 24.7 | 46.9 | | 25.6 | 48.6 | | 18.4 | 35.0 | | 14.4 | 27.3 | | 14.7 | 28.0 | | 11.7 | 22.3 |
| 450500 | 532500 | 26.5 | 50.3 | | 27.1 | 51.5 | | 19.6 | 37.3 | | 15.1 | 28.7 | | 15.4 | 29.2 | | 12.3 | 23.3 |
| 450500 | 533500 | 25.4 | 48.3 | | 26.2 | 49.8 | | 18.8 | 35.8 | | 14.7 | 27.9 | | 15.0 | 28.5 | | 11.9 | 22.7 |
| 450500 | 534500 | 23.8 | 45.2 | | 24.7 | 47.0 | | 17.6 | 33.5 | | 14.0 | 26.6 | | 14.4 | 27.4 | | 11.4 | 21.7 |
| 450500 | 535500 | | | | | | | | | | | | | | | | | |
| 451500 | 526500 | 20.5 | 39.0 | | 19.7 | 37.4 | | 16.2 | 30.8 | | 12.7 | 24.1 | | 12.3 | 23.4 | | 10.8 | 20.5 |
| 451500 | 527500 | 20.6 | 39.1 | | 19.6 | 37.2 | | 15.6 | 29.7 | | 12.7 | 24.1 | | 12.3 | 23.3 | | 10.5 | 19.9 |
| 451500 | 528500 | 20.5 | 38.9 | | 19.5 | 37.0 | | 15.3 | 29.1 | | 12.6 | 24.0 | | 12.2 | 23.2 | | 10.4 | 19.7 |
| 451500 | 529500 | 21.3 | 40.4 | | 20.2 | 38.3 | | 15.7 | 29.8 | | 12.9 | 24.6 | | 12.5 | 23.7 | | 10.5 | 20.0 |
| 451500 | 530500 | 23.7 | 45.0 | | 24.8 | 47.1 | | 17.9 | 34.1 | | 14.0 | 26.6 | | 14.4 | 27.4 | | 11.6 | 22.0 |
| 451500 | 531500 | 24.0 | 45.6 | | 25.0 | 47.5 | | 18.1 | 34.3 | | 14.1 | 26.8 | | 14.5 | 27.6 | | 11.6 | 22.0 |
| 451500 | 532500 | | | | | | | | | | | | | | | | | |
| 451500 | 533500 | 24.6 | 46.8 | | 25.5 | 48.5 | | 18.4 | 34.9 | | 14.4 | 27.3 | | 14.7 | 28.0 | | 11.7 | 22.3 |
| 451500 | 534500 | 22.9 | 43.5 | | 24.1 | 45.7 | | 17.1 | 32.5 | | 13.7 | 26.0 | | 14.1 | 26.8 | | 11.2 | 21.2 |
| 452500 | 527500 | 19.7 | 37.5 | | 19.0 | 36.1 | | 15.5 | 29.5 | | 12.3 | 23.4 | | 12.0 | 22.8 | | 10.4 | 19.8 |
| 452500 | 528500 | 19.4 | 36.8 | | 18.7 | 35.5 | | 14.9 | 28.3 | | 12.2 | 23.1 | | 11.8 | 22.5 | | 10.2 | 19.3 |
| 452500 | 529500 | | | | | | | | | | | | | | | | | |
| 452500 | 530500 | | | | | | | | | | | | | | | | | |
| 452500 | 533500 | 23.1 | 43.9 | | 24.3 | 46.1 | | 17.4 | 33.1 | | 13.7 | 26.1 | | 14.2 | 27.0 | | 11.3 | 21.5 |
| 452500 | 534500 | | | | | | | | | | | | | | | | | |
| 453500 | 527500 | | | | | | | | | | | | | | | | | |
| 453500 | 528500 | | | | | | | | | | | | | | | | | |
| 454500 | 527500 | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| | | ppb | µg/m ³ | | ppb | µg/m ³ | | ppb | µg/m ³ | | ppb | µg/m ³ | | ppb | µg/m ³ | | ppb | µg/m ³ |
| | minimum | 16.3 | 31.0 | | 14.4 | 27.3 | | 11.1 | 21.0 | | 10.8 | 20.5 | | 9.9 | 18.8 | | 8.3 | 15.7 |
| | | | | | | | | | | | | | | | | | | |
| | maximum | 26.5 | 50.3 | | 27.1 | 51.5 | | 19.6 | 37.3 | | 15.1 | 28.7 | | 15.4 | 29.2 | | 12.3 | 23.3 |

APPENDIX 1b
Background Concentrations

| Hartlepool Background Concentrations - PM10 for 2001 / 2005 / 2010; SO2 for 2001; CO for 2001 | | | | | | | | | | | |
|---|--------|-------------------------------|-------------------------------|-------------------------------|--|-------------------------------|--|----------------|-------------------|-------------|-------------------|
| Grid reference X = 441500 to 454500 | | | | | | | | | | | |
| | | PM10 2001 | PM10 2004 | PM10 2010 | | PM10 2001 secondary | | SO2 2001 | | CO 2001 | |
| Grid reference | | gravimetric annual mean | gravimetric annual mean | gravimetric annual mean | | gravimetric annual mean | | annual mean | | annual mean | |
| X | Y | µg/m ³ (g) | µg/m ³ (g) | µg/m ³ (g) | | µg/m ³ (g) | | ppb | µg/m ³ | ppm | mg/m ³ |
| 441500 | 527500 | 17.3 | 16.6 | 15.5 | | 5.68 | | 0.88 | 2.33 | 0.207 | 0.240 |
| 442500 | 527500 | 17.4 | 16.8 | 15.6 | | 5.68 | | 0.95 | 2.52 | 0.217 | 0.252 |
| 442500 | 528500 | 17.4 | 16.7 | 15.5 | | 5.68 | | 0.92 | 2.46 | 0.214 | 0.248 |
| 442500 | 529500 | 17.3 | 16.7 | 15.5 | | 5.68 | | 0.92 | 2.44 | 0.210 | 0.244 |
| 442500 | 530500 | 17.3 | 16.7 | 15.5 | | 5.68 | | 0.92 | 2.44 | 0.209 | 0.243 |
| 443500 | 528500 | 17.6 | 17.0 | 15.7 | | 5.68 | | 0.94 | 2.51 | 0.223 | 0.259 |
| 443500 | 529500 | 17.5 | 16.9 | 15.7 | | 5.68 | | 0.94 | 2.49 | 0.220 | 0.255 |
| 443500 | 530500 | 17.5 | 16.9 | 15.6 | | 5.68 | | 0.93 | 2.47 | 0.218 | 0.253 |
| 443500 | 531500 | 17.5 | 16.8 | 15.6 | | 5.68 | | 0.93 | 2.47 | 0.217 | 0.252 |
| 443500 | 532500 | 17.5 | 16.8 | 15.6 | | 5.68 | | 0.91 | 2.43 | 0.216 | 0.251 |
| 444500 | 528500 | 17.7 | 17.0 | 15.8 | | 5.68 | | 0.96 | 2.56 | 0.226 | 0.262 |
| 444500 | 529500 | 17.6 | 17.0 | 15.7 | | 5.68 | | 0.95 | 2.54 | 0.222 | 0.257 |
| 444500 | 530500 | 17.6 | 16.9 | 15.6 | | 5.68 | | 0.95 | 2.52 | 0.219 | 0.254 |
| 444500 | 531500 | 17.5 | 16.8 | 15.6 | | 5.68 | | 0.94 | 2.51 | 0.217 | 0.252 |
| 444500 | 532500 | 17.5 | 16.8 | 15.6 | | 5.68 | | 0.92 | 2.46 | 0.216 | 0.251 |
| 444500 | 533500 | 17.6 | 16.8 | 15.6 | | 5.68 | | 0.92 | 2.45 | 0.215 | 0.249 |
| 445500 | 526500 | 18.2 | 17.6 | 16.2 | | 5.68 | | 1.02 | 2.72 | 0.250 | 0.290 |
| 445500 | 527500 | 17.9 | 17.3 | 16.0 | | 5.68 | | 1.01 | 2.68 | 0.236 | 0.274 |
| 445500 | 528500 | 17.7 | 17.1 | 15.8 | | 5.68 | | 0.99 | 2.64 | 0.226 | 0.262 |
| 445500 | 529500 | 17.7 | 17.0 | 15.8 | | 5.68 | | 0.98 | 2.62 | 0.222 | 0.257 |
| 445500 | 530500 | 17.6 | 17.0 | 15.7 | | 5.68 | | 0.98 | 2.61 | 0.218 | 0.253 |
| 445500 | 531500 | 17.5 | 16.9 | 15.7 | | 5.68 | | 0.97 | 2.57 | 0.216 | 0.251 |
| 445500 | 532500 | 17.8 | 17.1 | 15.8 | | 5.68 | | 0.95 | 2.53 | 0.218 | 0.253 |
| 445500 | 533500 | 17.8 | 17.1 | 15.8 | | 5.68 | | 0.93 | 2.48 | 0.216 | 0.250 |
| 445500 | 534500 | 17.7 | 17.1 | 15.8 | | 5.68 | | 0.92 | 2.46 | 0.215 | 0.249 |
| 445500 | 535500 | 17.7 | 17.0 | 15.7 | | 5.68 | | 0.92 | 2.46 | 0.212 | 0.246 |
| 446500 | 526500 | 18.2 | 17.6 | 16.2 | | 5.68 | | 1.08 | 2.88 | 0.251 | 0.291 |
| 446500 | 527500 | 17.9 | 17.3 | 16.0 | | 5.68 | | 1.05 | 2.80 | 0.238 | 0.276 |
| 446500 | 528500 | 17.7 | 17.1 | 15.9 | | 5.68 | | 1.03 | 2.75 | 0.228 | 0.265 |
| 446500 | 529500 | 17.7 | 17.1 | 15.8 | | 5.68 | | 1.02 | 2.70 | 0.225 | 0.261 |
| 446500 | 530500 | 17.6 | 17.0 | 15.8 | | 5.68 | | 1.00 | 2.67 | 0.222 | 0.258 |
| 446500 | 531500 | 17.6 | 16.9 | 15.7 | | 5.68 | | 1.02 | 2.71 | 0.221 | 0.256 |
| 446500 | 532500 | 17.8 | 17.2 | 15.8 | | 5.68 | | 0.96 | 2.55 | 0.221 | 0.256 |
| 446500 | 533500 | 17.8 | 17.1 | 15.8 | | 5.68 | | 0.95 | 2.53 | 0.218 | 0.253 |
| 446500 | 534500 | 17.7 | 17.1 | 15.8 | | 5.68 | | 0.94 | 2.51 | 0.215 | 0.249 |
| 446500 | 535500 | 17.6 | 16.9 | 15.6 | | 5.68 | | 0.94 | 2.50 | 0.210 | 0.244 |
| 446500 | 536500 | 17.5 | 16.8 | 15.6 | | 5.68 | | 0.94 | 2.51 | 0.207 | 0.240 |
| 447500 | 526500 | 18.1 | 17.5 | 16.2 | | 5.68 | | 1.35 | 3.60 | 0.248 | 0.288 |
| 447500 | 527500 | 18.0 | 17.4 | 16.1 | | 5.68 | | 1.26 | 3.34 | 0.242 | 0.281 |
| 447500 | 528500 | 17.9 | 17.3 | 16.0 | | 5.68 | | 1.21 | 3.22 | 0.236 | 0.274 |
| 447500 | 529500 | 17.9 | 17.3 | 16.0 | | 5.68 | | 1.18 | 3.14 | 0.236 | 0.274 |
| 447500 | 530500 | 17.9 | 17.2 | 16.0 | | 5.68 | | 1.17 | 3.12 | 0.236 | 0.274 |
| 447500 | 531500 | 17.7 | 17.1 | 15.9 | | 5.68 | | 1.15 | 3.07 | 0.234 | 0.272 |
| 447500 | 532500 | 18.0 | 17.3 | 16.0 | | 5.68 | | 1.06 | 2.81 | 0.234 | 0.271 |
| 447500 | 533500 | 17.9 | 17.2 | 15.9 | | 5.68 | | 1.05 | 2.79 | 0.230 | 0.267 |
| 447500 | 534500 | 17.7 | 17.1 | 15.8 | | 5.68 | | 1.19 | 3.16 | 0.224 | 0.260 |
| 447500 | 535500 | 17.6 | 16.9 | 15.6 | | 5.68 | | 1.06 | 2.82 | 0.216 | 0.251 |
| 447500 | 536500 | 17.5 | 16.8 | 15.5 | | 5.68 | | 1.05 | 2.79 | 0.211 | 0.245 |
| 448500 | 526500 | 18.1 | 17.5 | 16.3 | | 5.68 | | 1.44 | 3.83 | 0.243 | 0.282 |
| 448500 | 527500 | 18.1 | 17.4 | 16.2 | | 5.68 | | 1.31 | 3.49 | 0.241 | 0.280 |
| 448500 | 528500 | 18.1 | 17.4 | 16.2 | | 5.68 | | 1.27 | 3.38 | 0.238 | 0.276 |
| 448500 | 529500 | 18.1 | 17.5 | 16.2 | | 5.68 | | 1.27 | 3.39 | 0.243 | 0.282 |
| 448500 | 530500 | 18.2 | 17.6 | 16.3 | | 5.68 | | 1.26 | 3.36 | 0.253 | 0.294 |
| 448500 | 531500 | 18.1 | 17.5 | 16.2 | | 5.68 | | 1.18 | 3.15 | 0.255 | 0.296 |
| 448500 | 532500 | 18.4 | 17.6 | 16.3 | | 5.68 | | 1.15 | 3.05 | 0.256 | 0.297 |
| 448500 | 533500 | 18.2 | 17.5 | 16.1 | | 5.68 | | 1.09 | 2.91 | 0.250 | 0.290 |
| 448500 | 534500 | 17.9 | 17.3 | 16.0 | | 5.68 | | 1.12 | 2.97 | 0.240 | 0.278 |
| 448500 | 535500 | 17.7 | 17.0 | 15.7 | | 5.68 | | 1.28 | 3.41 | 0.223 | 0.259 |
| 449500 | 526500 | 18.3 | 17.7 | 16.4 | | 5.68 | | 1.55 | 4.13 | 0.240 | 0.278 |

HARTLEPOOL BOROUGH COUNCIL

| | | PM10 2001 | PM10 2004 | PM10 2010 | PM10 2001 secondary | SO2 2001 | | CO 2001 | |
|----------------|---------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|----------------|-------|-------------|-------|
| Grid reference | | gravimetric annual mean | gravimetric annual mean | gravimetric annual mean | gravimetric annual mean | annual mean | | annual mean | |
| X | Y | µg/m³ (g) | µg/m³ (g) | µg/m³ (g) | µg/m³ (g) | ppb | µg/m³ | ppm | mg/m³ |
| 449500 | 527500 | 18.3 | 17.7 | 16.4 | 5.68 | 1.42 | 3.79 | 0.243 | 0.282 |
| 449500 | 528500 | 18.4 | 17.8 | 16.5 | 5.68 | 1.38 | 3.67 | 0.244 | 0.283 |
| 449500 | 529500 | 18.5 | 18.0 | 16.7 | 5.68 | 1.48 | 3.94 | 0.253 | 0.293 |
| 449500 | 530500 | 18.6 | 18.0 | 16.7 | 5.68 | 1.33 | 3.55 | 0.261 | 0.303 |
| 449500 | 531500 | 18.6 | 18.0 | 16.6 | 5.68 | 1.25 | 3.33 | 0.268 | 0.311 |
| 449500 | 532500 | 19.3 | 18.5 | 16.9 | 5.68 | 1.15 | 3.07 | 0.300 | 0.348 |
| 449500 | 533500 | 19.0 | 18.2 | 16.7 | 5.68 | 1.12 | 2.98 | 0.292 | 0.339 |
| 449500 | 534500 | 18.7 | 17.9 | 16.4 | 5.68 | 1.13 | 3.00 | 0.279 | 0.324 |
| 449500 | 535500 | 18.4 | 17.6 | 16.1 | 5.68 | 1.12 | 2.98 | 0.263 | 0.305 |
| 450500 | 526500 | 18.2 | 17.6 | 16.4 | 5.68 | 1.70 | 4.53 | 0.234 | 0.271 |
| 450500 | 527500 | 18.2 | 17.6 | 16.4 | 5.68 | 1.49 | 3.97 | 0.240 | 0.278 |
| 450500 | 528500 | 18.3 | 17.7 | 16.5 | 5.68 | 1.47 | 3.91 | 0.241 | 0.280 |
| 450500 | 529500 | 18.5 | 17.9 | 16.7 | 5.68 | 1.45 | 3.87 | 0.250 | 0.290 |
| 450500 | 530500 | 18.6 | 17.9 | 16.7 | 5.68 | 1.64 | 4.37 | 0.259 | 0.300 |
| 450500 | 531500 | 18.5 | 17.9 | 16.6 | 5.68 | 1.41 | 3.74 | 0.266 | 0.308 |
| 450500 | 532500 | 18.9 | 18.2 | 16.7 | 5.68 | 1.24 | 3.29 | 0.294 | 0.341 |
| 450500 | 533500 | 18.6 | 17.9 | 16.4 | 5.68 | 1.20 | 3.18 | 0.286 | 0.332 |
| 450500 | 534500 | 18.3 | 17.5 | 16.1 | 5.68 | 1.20 | 3.19 | 0.272 | 0.316 |
| 450500 | 535500 | | | | 5.68 | 1.33 | 3.54 | | |
| 451500 | 526500 | 18.2 | 17.6 | 16.5 | 5.68 | 1.86 | 4.96 | 0.230 | 0.267 |
| 451500 | 527500 | 18.1 | 17.6 | 16.4 | 5.68 | 1.67 | 4.45 | 0.234 | 0.272 |
| 451500 | 528500 | 18.2 | 17.6 | 16.4 | 5.68 | 1.59 | 4.24 | 0.235 | 0.273 |
| 451500 | 529500 | 18.3 | 17.8 | 16.5 | 5.68 | 1.65 | 4.40 | 0.243 | 0.282 |
| 451500 | 530500 | 18.4 | 17.7 | 16.5 | 5.68 | 1.60 | 4.26 | 0.252 | 0.292 |
| 451500 | 531500 | 18.3 | 17.7 | 16.4 | 5.68 | 2.08 | 5.52 | 0.258 | 0.299 |
| 451500 | 532500 | | | | 5.68 | 2.26 | 6.00 | | |
| 451500 | 533500 | 18.4 | 17.7 | 16.2 | 5.68 | 1.51 | 4.02 | 0.278 | 0.322 |
| 451500 | 534500 | 18.1 | 17.3 | 15.9 | 5.68 | 2.51 | 6.67 | 0.265 | 0.307 |
| 452500 | 527500 | 17.9 | 17.4 | 16.3 | 5.68 | 2.33 | 6.19 | 0.227 | 0.263 |
| 452500 | 528500 | 17.9 | 17.4 | 16.2 | 5.68 | 2.14 | 5.70 | 0.226 | 0.262 |
| 452500 | 529500 | | | | 5.68 | 2.53 | 6.73 | | |
| 452500 | 530500 | | | | 5.68 | 2.36 | 6.29 | | |
| 452500 | 533500 | 18.0 | 17.3 | 16.0 | 5.68 | 1.49 | 3.97 | 0.263 | 0.305 |
| 452500 | 534500 | | | | 5.68 | 1.75 | 4.65 | | |
| 453500 | 527500 | | | | 5.68 | 4.92 | 13.10 | | |
| 453500 | 528500 | | | | 5.68 | | | | |
| 454500 | 527500 | | | | 5.68 | | | | |
| | | µg/m³ (g) | µg/m³ (g) | µg/m³ (g) | µg/m³ (g) | ppb | µg/m³ | ppm | mg/m³ |
| | minimum | 17.3 | 16.6 | 15.5 | 5.68 | 0.88 | 2.33 | 0.21 | 0.24 |
| | maximum | 19.3 | 18.5 | 16.9 | 5.68 | 4.92 | 13.10 | 0.30 | 0.35 |

APPENDIX 1c
Background Concentrations

| Hartlepool Background Concentrations - Benzene for 2001 / 2003 / 2010; 1,3-Butadiene for 2001 / 2003 | | | | | | | | | | | | | |
|--|--------|--------------|-------|--------------|-------|--------------|-------|--------------------|-------|--------------------|-------|-----|-------|
| Grid reference X = 441500 to 454500 | | | | | | | | | | | | | |
| Grid reference | | Benzene 2001 | | Benzene 2003 | | Benzene 2010 | | 1,3-Butadiene 2001 | | 1,3-Butadiene 2003 | | | |
| | | annual mean | | annual mean | | annual mean | | annual mean | | annual mean | | | |
| X | Y | ppb | µg/m³ | ppb | µg/m³ | ppb | µg/m³ | ppb | µg/m³ | ppb | µg/m³ | ppb | µg/m³ |
| 441500 | 527500 | 0.082 | 0.265 | 0.085 | 0.276 | 0.067 | 0.217 | 0.060 | 0.136 | 0.050 | 0.112 | | |
| 442500 | 527500 | 0.087 | 0.283 | 0.090 | 0.294 | 0.070 | 0.229 | 0.066 | 0.148 | 0.054 | 0.121 | | |
| 442500 | 528500 | 0.085 | 0.275 | 0.089 | 0.288 | 0.069 | 0.225 | 0.064 | 0.143 | 0.052 | 0.118 | | |
| 442500 | 529500 | 0.083 | 0.270 | 0.087 | 0.283 | 0.068 | 0.222 | 0.061 | 0.138 | 0.051 | 0.114 | | |
| 442500 | 530500 | 0.083 | 0.270 | 0.087 | 0.282 | 0.068 | 0.222 | 0.060 | 0.136 | 0.050 | 0.113 | | |
| 443500 | 528500 | 0.090 | 0.293 | 0.094 | 0.305 | 0.073 | 0.237 | 0.069 | 0.156 | 0.056 | 0.127 | | |
| 443500 | 529500 | 0.088 | 0.286 | 0.092 | 0.298 | 0.071 | 0.232 | 0.067 | 0.150 | 0.055 | 0.123 | | |
| 443500 | 530500 | 0.087 | 0.282 | 0.090 | 0.294 | 0.071 | 0.230 | 0.065 | 0.146 | 0.053 | 0.120 | | |
| 443500 | 531500 | 0.086 | 0.278 | 0.090 | 0.293 | 0.070 | 0.229 | 0.064 | 0.145 | 0.053 | 0.120 | | |
| 443500 | 532500 | 0.085 | 0.277 | 0.090 | 0.291 | 0.070 | 0.228 | 0.064 | 0.144 | 0.053 | 0.119 | | |
| 444500 | 528500 | 0.092 | 0.298 | 0.097 | 0.315 | 0.075 | 0.244 | 0.071 | 0.160 | 0.059 | 0.132 | | |
| 444500 | 529500 | 0.089 | 0.288 | 0.094 | 0.305 | 0.073 | 0.237 | 0.068 | 0.152 | 0.056 | 0.126 | | |
| 444500 | 530500 | 0.087 | 0.284 | 0.092 | 0.300 | 0.072 | 0.235 | 0.066 | 0.149 | 0.055 | 0.123 | | |
| 444500 | 531500 | 0.086 | 0.279 | 0.091 | 0.297 | 0.071 | 0.232 | 0.065 | 0.147 | 0.054 | 0.122 | | |
| 444500 | 532500 | 0.085 | 0.275 | 0.090 | 0.292 | 0.070 | 0.229 | 0.064 | 0.145 | 0.053 | 0.120 | | |
| 444500 | 533500 | 0.083 | 0.269 | 0.088 | 0.287 | 0.070 | 0.226 | 0.064 | 0.143 | 0.053 | 0.119 | | |
| 445500 | 526500 | 0.112 | 0.365 | 0.116 | 0.378 | 0.089 | 0.290 | 0.084 | 0.189 | 0.068 | 0.154 | | |
| 445500 | 527500 | 0.100 | 0.324 | 0.104 | 0.339 | 0.080 | 0.261 | 0.077 | 0.173 | 0.064 | 0.143 | | |
| 445500 | 528500 | 0.091 | 0.297 | 0.097 | 0.315 | 0.075 | 0.244 | 0.072 | 0.162 | 0.060 | 0.134 | | |
| 445500 | 529500 | 0.088 | 0.287 | 0.094 | 0.305 | 0.073 | 0.237 | 0.068 | 0.154 | 0.057 | 0.128 | | |
| 445500 | 530500 | 0.086 | 0.280 | 0.092 | 0.299 | 0.072 | 0.233 | 0.066 | 0.149 | 0.055 | 0.124 | | |
| 445500 | 531500 | 0.085 | 0.276 | 0.091 | 0.295 | 0.071 | 0.230 | 0.065 | 0.147 | 0.054 | 0.122 | | |
| 445500 | 532500 | 0.083 | 0.270 | 0.091 | 0.296 | 0.071 | 0.232 | 0.066 | 0.149 | 0.056 | 0.126 | | |
| 445500 | 533500 | 0.081 | 0.264 | 0.090 | 0.291 | 0.070 | 0.228 | 0.065 | 0.147 | 0.055 | 0.124 | | |
| 445500 | 534500 | 0.080 | 0.261 | 0.088 | 0.287 | 0.069 | 0.225 | 0.064 | 0.145 | 0.054 | 0.122 | | |
| 445500 | 535500 | 0.080 | 0.259 | 0.088 | 0.287 | 0.070 | 0.227 | 0.063 | 0.141 | 0.053 | 0.120 | | |
| 446500 | 526500 | 0.114 | 0.370 | 0.117 | 0.381 | 0.090 | 0.292 | 0.085 | 0.192 | 0.069 | 0.156 | | |
| 446500 | 527500 | 0.102 | 0.333 | 0.107 | 0.347 | 0.082 | 0.266 | 0.079 | 0.177 | 0.064 | 0.145 | | |
| 446500 | 528500 | 0.095 | 0.309 | 0.100 | 0.326 | 0.078 | 0.252 | 0.074 | 0.166 | 0.061 | 0.137 | | |
| 446500 | 529500 | 0.093 | 0.301 | 0.098 | 0.318 | 0.076 | 0.246 | 0.071 | 0.160 | 0.059 | 0.132 | | |
| 446500 | 530500 | 0.091 | 0.295 | 0.096 | 0.311 | 0.074 | 0.242 | 0.069 | 0.155 | 0.057 | 0.128 | | |
| 446500 | 531500 | 0.090 | 0.291 | 0.095 | 0.308 | 0.074 | 0.240 | 0.068 | 0.152 | 0.056 | 0.126 | | |
| 446500 | 532500 | 0.087 | 0.283 | 0.094 | 0.307 | 0.074 | 0.240 | 0.068 | 0.153 | 0.057 | 0.128 | | |
| 446500 | 533500 | 0.085 | 0.277 | 0.093 | 0.302 | 0.073 | 0.236 | 0.066 | 0.149 | 0.056 | 0.125 | | |
| 446500 | 534500 | 0.083 | 0.270 | 0.091 | 0.296 | 0.071 | 0.232 | 0.064 | 0.145 | 0.054 | 0.122 | | |
| 446500 | 535500 | 0.081 | 0.263 | 0.090 | 0.291 | 0.071 | 0.230 | 0.062 | 0.139 | 0.052 | 0.118 | | |
| 446500 | 536500 | 0.079 | 0.257 | 0.087 | 0.284 | 0.070 | 0.226 | 0.060 | 0.134 | 0.051 | 0.114 | | |
| 447500 | 526500 | 0.114 | 0.371 | 0.118 | 0.385 | 0.091 | 0.295 | 0.084 | 0.188 | 0.068 | 0.154 | | |
| 447500 | 527500 | 0.108 | 0.351 | 0.113 | 0.367 | 0.087 | 0.283 | 0.081 | 0.182 | 0.066 | 0.149 | | |
| 447500 | 528500 | 0.103 | 0.334 | 0.109 | 0.355 | 0.084 | 0.274 | 0.078 | 0.175 | 0.064 | 0.144 | | |
| 447500 | 529500 | 0.103 | 0.335 | 0.109 | 0.355 | 0.084 | 0.274 | 0.077 | 0.174 | 0.064 | 0.143 | | |
| 447500 | 530500 | 0.104 | 0.338 | 0.110 | 0.358 | 0.086 | 0.278 | 0.076 | 0.172 | 0.063 | 0.141 | | |
| 447500 | 531500 | 0.102 | 0.332 | 0.109 | 0.353 | 0.084 | 0.274 | 0.074 | 0.167 | 0.061 | 0.137 | | |
| 447500 | 532500 | 0.099 | 0.322 | 0.108 | 0.350 | 0.084 | 0.272 | 0.074 | 0.166 | 0.061 | 0.138 | | |
| 447500 | 533500 | 0.097 | 0.314 | 0.105 | 0.342 | 0.082 | 0.266 | 0.072 | 0.162 | 0.060 | 0.135 | | |
| 447500 | 534500 | 0.093 | 0.301 | 0.102 | 0.330 | 0.079 | 0.258 | 0.069 | 0.156 | 0.058 | 0.130 | | |
| 447500 | 535500 | 0.087 | 0.284 | 0.097 | 0.314 | 0.076 | 0.247 | 0.065 | 0.146 | 0.055 | 0.123 | | |
| 447500 | 536500 | 0.083 | 0.271 | 0.092 | 0.300 | 0.073 | 0.238 | 0.062 | 0.139 | 0.052 | 0.118 | | |
| 448500 | 526500 | 0.112 | 0.364 | 0.116 | 0.378 | 0.090 | 0.291 | 0.081 | 0.182 | 0.066 | 0.149 | | |
| 448500 | 527500 | 0.110 | 0.356 | 0.115 | 0.373 | 0.088 | 0.287 | 0.080 | 0.181 | 0.066 | 0.149 | | |
| 448500 | 528500 | 0.108 | 0.351 | 0.114 | 0.370 | 0.088 | 0.286 | 0.080 | 0.179 | 0.065 | 0.147 | | |
| 448500 | 529500 | 0.113 | 0.367 | 0.119 | 0.388 | 0.092 | 0.299 | 0.082 | 0.185 | 0.067 | 0.151 | | |
| 448500 | 530500 | 0.122 | 0.396 | 0.127 | 0.414 | 0.098 | 0.319 | 0.086 | 0.193 | 0.070 | 0.157 | | |
| 448500 | 531500 | 0.124 | 0.402 | 0.129 | 0.420 | 0.100 | 0.324 | 0.086 | 0.194 | 0.070 | 0.157 | | |
| 448500 | 532500 | 0.122 | 0.395 | 0.130 | 0.421 | 0.100 | 0.325 | 0.086 | 0.194 | 0.071 | 0.159 | | |
| 448500 | 533500 | 0.116 | 0.377 | 0.124 | 0.404 | 0.096 | 0.312 | 0.083 | 0.186 | 0.068 | 0.153 | | |
| 448500 | 534500 | 0.107 | 0.349 | 0.115 | 0.375 | 0.090 | 0.291 | 0.077 | 0.173 | 0.064 | 0.144 | | |
| 448500 | 535500 | 0.094 | 0.307 | 0.103 | 0.335 | 0.081 | 0.263 | 0.068 | 0.154 | 0.057 | 0.129 | | |
| 449500 | 526500 | 0.129 | 0.419 | 0.132 | 0.428 | 0.105 | 0.342 | 0.080 | 0.179 | 0.066 | 0.148 | | |
| 449500 | 527500 | 0.113 | 0.367 | 0.120 | 0.390 | 0.093 | 0.301 | 0.083 | 0.186 | 0.069 | 0.155 | | |
| 449500 | 528500 | 0.116 | 0.376 | 0.123 | 0.401 | 0.096 | 0.311 | 0.084 | 0.188 | 0.070 | 0.157 | | |

HARTLEPOOL BOROUGH COUNCIL

| | | | | | | | | | | | | | | | |
|----------------|---------|--------------|-------|--|--------------|-------|--|--------------|-------|--|--------------------|-------|--|--------------------|-------|
| 449500 | 529500 | 0.124 | 0.403 | | 0.132 | 0.429 | | 0.102 | 0.333 | | 0.088 | 0.198 | | 0.073 | 0.164 |
| Grid reference | | Benzene 2001 | | | Benzene 2003 | | | Benzene 2010 | | | 1,3-Butadiene 2001 | | | 1,3-Butadiene 2003 | |
| | | annual mean | | | annual mean | | | annual mean | | | annual mean | | | annual mean | |
| X | Y | ppb | µg/m³ | | ppb | µg/m³ | | ppb | µg/m³ | | ppb | µg/m³ | | ppb | µg/m³ |
| 449500 | 530500 | 0.131 | 0.426 | | 0.139 | 0.451 | | 0.107 | 0.349 | | 0.091 | 0.204 | | 0.074 | 0.167 |
| 449500 | 531500 | 0.133 | 0.431 | | 0.144 | 0.468 | | 0.111 | 0.362 | | 0.094 | 0.211 | | 0.078 | 0.175 |
| 449500 | 532500 | 0.129 | 0.419 | | 0.167 | 0.543 | | 0.129 | 0.419 | | 0.113 | 0.254 | | 0.100 | 0.226 |
| 449500 | 533500 | 0.122 | 0.395 | | 0.161 | 0.522 | | 0.124 | 0.403 | | 0.109 | 0.245 | | 0.097 | 0.219 |
| 449500 | 534500 | 0.110 | 0.357 | | 0.149 | 0.483 | | 0.115 | 0.373 | | 0.102 | 0.229 | | 0.092 | 0.207 |
| 449500 | 535500 | 0.095 | 0.310 | | 0.135 | 0.439 | | 0.105 | 0.342 | | 0.093 | 0.209 | | 0.085 | 0.192 |
| 450500 | 526500 | 0.125 | 0.407 | | 0.130 | 0.422 | | 0.104 | 0.338 | | 0.079 | 0.177 | | 0.066 | 0.148 |
| 450500 | 527500 | 0.111 | 0.361 | | 0.120 | 0.389 | | 0.093 | 0.301 | | 0.083 | 0.186 | | 0.070 | 0.157 |
| 450500 | 528500 | 0.115 | 0.373 | | 0.124 | 0.402 | | 0.096 | 0.312 | | 0.084 | 0.188 | | 0.070 | 0.158 |
| 450500 | 529500 | 0.123 | 0.400 | | 0.131 | 0.427 | | 0.102 | 0.332 | | 0.088 | 0.197 | | 0.073 | 0.164 |
| 450500 | 530500 | 0.130 | 0.423 | | 0.138 | 0.449 | | 0.107 | 0.347 | | 0.091 | 0.204 | | 0.075 | 0.168 |
| 450500 | 531500 | 0.131 | 0.426 | | 0.142 | 0.463 | | 0.110 | 0.358 | | 0.093 | 0.210 | | 0.077 | 0.174 |
| 450500 | 532500 | 0.127 | 0.412 | | 0.163 | 0.529 | | 0.126 | 0.408 | | 0.110 | 0.248 | | 0.098 | 0.220 |
| 450500 | 533500 | 0.119 | 0.388 | | 0.155 | 0.505 | | 0.120 | 0.390 | | 0.106 | 0.238 | | 0.094 | 0.212 |
| 450500 | 534500 | 0.107 | 0.349 | | 0.143 | 0.465 | | 0.111 | 0.360 | | 0.098 | 0.221 | | 0.088 | 0.199 |
| 450500 | 535500 | | | | | | | | | | | | | | |
| 451500 | 526500 | 0.122 | 0.398 | | 0.130 | 0.421 | | 0.104 | 0.337 | | 0.078 | 0.175 | | 0.065 | 0.147 |
| 451500 | 527500 | 0.107 | 0.349 | | 0.117 | 0.380 | | 0.090 | 0.294 | | 0.080 | 0.181 | | 0.068 | 0.154 |
| 451500 | 528500 | 0.110 | 0.356 | | 0.119 | 0.388 | | 0.093 | 0.301 | | 0.081 | 0.182 | | 0.069 | 0.155 |
| 451500 | 529500 | 0.118 | 0.382 | | 0.127 | 0.412 | | 0.098 | 0.320 | | 0.085 | 0.191 | | 0.071 | 0.160 |
| 451500 | 530500 | 0.124 | 0.404 | | 0.132 | 0.429 | | 0.102 | 0.332 | | 0.087 | 0.195 | | 0.072 | 0.161 |
| 451500 | 531500 | 0.125 | 0.406 | | 0.136 | 0.442 | | 0.105 | 0.342 | | 0.089 | 0.201 | | 0.074 | 0.167 |
| 451500 | 532500 | | | | | | | | | | | | | | |
| 451500 | 533500 | 0.113 | 0.367 | | 0.148 | 0.482 | | 0.114 | 0.372 | | 0.102 | 0.229 | | 0.091 | 0.205 |
| 451500 | 534500 | 0.101 | 0.327 | | 0.136 | 0.442 | | 0.105 | 0.341 | | 0.094 | 0.212 | | 0.085 | 0.192 |
| 452500 | 527500 | 0.100 | 0.325 | | 0.110 | 0.359 | | 0.086 | 0.279 | | 0.077 | 0.173 | | 0.066 | 0.148 |
| 452500 | 528500 | 0.101 | 0.328 | | 0.112 | 0.363 | | 0.087 | 0.282 | | 0.076 | 0.172 | | 0.066 | 0.148 |
| 452500 | 529500 | | | | | | | | | | | | | | |
| 452500 | 530500 | | | | | | | | | | | | | | |
| 452500 | 533500 | 0.100 | 0.324 | | 0.135 | 0.440 | | 0.105 | 0.341 | | 0.094 | 0.212 | | 0.086 | 0.193 |
| 452500 | 534500 | | | | | | | | | | | | | | |
| 453500 | 527500 | | | | | | | | | | | | | | |
| 453500 | 528500 | | | | | | | | | | | | | | |
| 454500 | 527500 | | | | | | | | | | | | | | |
| | | ppb | µg/m³ | | ppb | µg/m³ | | ppb | µg/m³ | | ppb | µg/m³ | | ppb | µg/m³ |
| | minimum | 0.079 | 0.257 | | 0.085 | 0.276 | | 0.067 | 0.217 | | 0.060 | 0.134 | | 0.050 | 0.112 |
| | maximum | 0.133 | 0.431 | | 0.167 | 0.543 | | 0.129 | 0.419 | | 0.113 | 0.254 | | 0.100 | 0.226 |

APPENDIX 2
Traffic Flow Projections

| Road | Location | Year | ADT | 2005 proj | 2005 1 st R & A | % + / - | 2010 proj |
|-------|---|------|-------|--------------|-------------------------------|------------|--------------|
| A19 | North of Sheraton Interchange | 2002 | 42055 | 44330 | | | 48280 |
| A19 | North of A689 Interchange | 2002 | 39157 | 41270 | | | 44950 |
| A19 | South of A179 Sheraton Interchange | 2002 | 31513 | 33210 | | | 36180 |
| A689 | Stockton Road | 2002 | 25793 | 27190 | 31235 | -13 % | 29610 |
| A689 | Belle Vue Way, west of Brenda Road | 2002 | 24587 | 25910 | 25816 | +0 % | 28225 |
| A689 | Stockton Street | 2002 | 24111 | 25410 | | | 27680 |
| A179 | Marina Way (new road) | 2002 | 22275 | 23480 | | | 25570 |
| A179 | East of A19 | 2001 | 18407 | 19770 | 15524 | +28 % | 21520 |
| A179 | Hart Village | 2002 | 17970 | 18940 | | | 20630 |
| A179 | Easington Road | 2002 | 17882 | 18850 | | | 20530 |
| C | Catcote Road, north of Brierton Road | 2002 | 17701 | 18660 | 20455 | -9 % | 20320 |
| B1277 | Brenda Road, south of A689 roundabout | 1997 | 14718 | 16720 | 15695 | +7 % | 18190 |
| C | Raby Road, north of Challoner Road | 1997 | 13561 | 15410 | 14865 | +4 % | 16760 |
| A689 | West of Newton Bewley | 2002 | 13293 | 14010 | | | 15260 |
| B1277 | York Road | 2002 | 13033 | 13740 | | | 14960 |
| C | Wooler Road, south of South Road | 1997 | 11810 | 13420 | 12825 | +5 % | 14600 |
| A178 | Coronation Drive, north of Seaton Carew | 2002 | 12293 | 12960 | 12421 | +4 % | 14110 |
| C | Hart Lane, west of Blake Street | 2002 | 10667 | 11240 | 9383 | +20 % | 12250 |
| A1086 | Crimdon | 2002 | 8539 | 9000 | 12614 | -28 % | 9800 |
| A1049 | West View Road | 2002 | 7670 | 8080 | | | 8810 |
| A178 | Cowpen Marsh | 2002 | 6270 | 6610 | 8338 | -20 % | 7200 |

APPENDIX 3
Part B Commercial / Small Industrial Processes

| Process | Company | Location |
|------------------------|--|----------------------------|
| Cement Process | RMC (Northern) Limited | Burn Road |
| Cement Process | Sherburn Stone Company Limited | Cleveland Road |
| Cement Process | Tarmac Northern Limited | Brenda Road |
| Coal Process | Jacksons Fuel Holdings Limited | Baltic Street |
| Coal Process | M & G Fuels Limited | Middleton Road |
| Coal Process | Tees & Hartlepool Port Authority | Cleveland Road |
| Coating Process | BBA Friction | Oakesway Trading Estate |
| Coating Process | BS Ramco Pipeline Services Limited | Brenda Road |
| Coating Process | Corus UK Limited | Brenda Road |
| Coating Process | Corus UK Limited | Brenda Road |
| Coating Process | Industrial Building Components Limited | Longhill Industrial Estate |
| Crematorium | Hartlepool Borough Council | Tanfield Road |
| Galvanising Process | Lionweld Kennedy Limited | Brenda Road |
| Milling Process | Omya UK Limited | Middleton Road |
| Petrol Service Station | Asda Hartlepool Petrol Filling Station | Maina Way |
| Petrol Service Station | FINA plc | Park Road |
| Petrol Service Station | FINA plc | Powlett Road |
| Petrol Service Station | FINA plc | Stockton Road South |
| Petrol Service Station | Malthurst Limited | Belle Vue Way |
| Petrol Service Station | Ron Perry & Son Limited | A19 Services South, Elwick |
| Petrol Service Station | Ron Perry & Son Limited | A19 Services North, Elwick |
| Petrol Service Station | Save Service Station | Mainsforth Terrace |
| Petrol Service Station | Shell Warren Service Station | Easington Road |
| Petrol Service Station | Tesco Stores Limited | Belle Vue Way |
| Petrol Service Station | Thrust Service Station | Wynyard Road |
| Printing Process | Britton Decoflex Limited | Skerne Road |
| Quarry Process | Hart Aggregates Limited | Hart Quarry |
| Reheating Process | Corus UK Limited | Brenda Road |
| Respraying Process | Parsons Truck Centre Limited | Brenda Road |
| Timber Process | FJ Reeves Northern Limited | Brenda Road |
| Timber Process | Industrial Building Components Limited | Longhill Industrial Estate |

20 Processes

11 Petrol Stations

APPENDIX 4
Part A Large Industrial Processes

| File | Company | Site | Comment |
|---------|--------------------------------|-----------------|---------------------------------------|
| AK 8929 | Baker Petrolite Ltd | Graythorp | No significant emissions |
| AK 8937 | Baker Petrolite Ltd | Graythorp | No significant emissions |
| AK 8953 | Baker Petrolite Ltd | Graythorp | No significant emissions |
| AF 3686 | British Energy Generation Ltd | Seaton | No significant emissions |
| AO 0741 | CJC Chemicals & Magnesia Ltd | Hart Warren | Small sulphur dioxide emitter |
| AK 7361 | Eastman Co UK Ltd | Hunter Ind Est | No significant emissions |
| AI 9508 | Oxford Chemicals Ltd | Zinc Works Road | No significant emissions |
| AQ 6333 | Oxford Chemicals Ltd | Zinc Works Road | No significant emissions |
| AK 7701 | Palmer (UK) Ltd | Tofts Ind Est | No significant emissions |
| AF 5590 | Phillips Petroleum Co (UK) Ltd | Greatham | Large VOC emitter with some benzene |
| AA 2305 | Tioxide Europe Ltd | Greatham | Combustion plant, low sulphur dioxide |
| AL 8363 | Tioxide Europe Ltd | Greatham | Large Carbon Monoxide emitter |

Total Processes - 12

References

| | | |
|-------------|---|--|
| Reference 1 | Air Quality in the Tees Valley 1999 – 2002 | published by the TVEPG, May 2003 |
| Reference 2 | Tees Valley Transport Strategy 2001 – 2006 | published by the Tees Valley JSU, 2002 |
| Reference 3 | Impact of industrial sulphur dioxide emissions on the 15 minute objective in the Tees Valley | published by the TVEPG, May 2003 |

Contact :

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Hartlepool Borough Council
Civic Centre
Hartlepool, TS24 8AY

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Our Ref: PA/RR/240909/marshall

Councillor John Marshall
22 St Helens Street
The Headland
Hartlepool
TS24 0EW

24th September 2009

Health Protection Agency

**North East Health
Protection Unit**

**Co Durham & Tees Valley
Health Protection Team**

Durham Office

Appleton House
Lanchester Road
Durham
DH1 5XZ

Tel 0191 333 3372
Fax 0191 333 3228
www.hpa.org.uk

Dear Councillor Marshall,

I am writing in response to your telephone call to our office on 23 September 2009. You asked for a response to a letter sent to me regarding a public meeting you have arranged in Hartlepool. Unfortunately, I have not received any such letter here so I am unable to respond to it specifically. However, we did speak on the telephone previously so I am aware of your intentions to arrange this meeting.

As you know, I have previously attended multiagency meetings on this subject though my last involvement was over a year ago now. I was disappointed to hear that you feel solutions proposed at that time have not been successful, though I was unaware of this until your call. You informed me that Professor Peter Kelly, Executive Director of Public Health for Tees Primary Care Trusts, has agreed to provide some information on health in the Headland area of Hartlepool at this proposed meeting. I have since spoken at length to Professor Kelly on this subject and as he is providing the lead health input in this matter, I do not feel it is appropriate or necessary for me to attend in addition. I have, however, offered to Professor Kelly that should he feel any input is required from the Health Protection Agency (HPA) in future that he can certainly contact us for advice and we will provide assistance where we can within the remit of our organisation.

I would also like to clarify what the role of the HPA is following our conversation. We are an independent organisation who provide impartial advice and authoritative information on health protection issues. We do this by a range of means including supporting and advising other organisations with a health protection role, including our local Primary Care Trusts as outlined

above. I must point out that the HPA is not an enforcing organisation and although we are happy to contribute to any multiagency response, any such matters remain with other partner organisations.

Yours sincerely,

Dr Peter Acheson
Consultant in Health Protection

Cc Professor Peter Kelly, Executive Director of Public Health, Tees PCTs
Dr Roberta Marshall, Acting Regional Director, Health Protection Agency North East

Points for meeting of Health Scrutiny Forum Tuesday Oct.27th 2009

Background Information

The problems for the Town Wall residents began in the late 1980s when the plans for Irvines Quay were first introduced, we had the excavation of the Banjo Pier, 24 hour Dredging of the channel and round the clock tipping of large stones building the replacement pier at the entrance to docks, then we had a visit from the Docks Manager at the time Bill Niblock who met some of the residents in my home and he told us that the scrap would be stored at the west end of Irvines Quay, he later denied he said this, (lie no 1) and he also told us that that the Quay which houses the scrap was constructed specially to hold the weight of the scrap, (lie no2) the residents know because we had to endure the noise, dust, and explosions during the construction, nothing special about this part of the Quay.

When the scrap first arrived they piled it up to mountainous heights we complained to the port authority, the scrap company and Hartlepool Borough Council, nothing was done, ships started to arrive and scrap loading went on all hours, we complained to our ward councilors about the noise and dust and 24 hour working and we were told it involved jobs so I guess we didn't count. This went on for four years, no one to help us so I wrote to the Tees and Hartlepool Port Authority and asked if they would meet with some of the residents, they agreed and the liaison group meetings were set up in 1994 and we met on a monthly occasion, The Liaison groups achieved very little, the only thing of note were the changes in loading times we agreed with the scrap people, the present owners Van Dalen do not adhere to the arrangements we agreed to regarding loading times and H.B.C. have not helped us in this respect, the environment agency did nothing to help the residents during the 1990s and they are still doing nothing to help us now, and for your information the group was disbanded not because it had achieved all its aims, no it was because of the disgraceful behavior of the then Parish council chairman towards Port Authority officers, the Port Authority **stopped** the meetings.

The concessions we agreed to, no night loading, heavy girder to be loaded between 8am and 8 pm. When no ship in scrap not to be moved before 8 am, Van Dalen frequently flout this rule, I have reported this to Adrian Hurst and he contacted Van Dalen who said they know nothing about this rule, the council do but do nothing to help the residents. .

The Headland residents have had to endure these filthy dirty cargoes for twenty years now, but when you complain it appears there are no problems, despite references to the dust problems from T&HPA Officers (Monday 7th March 1994) some forms of scrap created more noise than others.

The same meeting it was stated that (not all dust came from the scrap terminal and there was no evidence that any dust was of a toxic nature this was stated before any tests were carried out) and at all these meetings I constantly asked if any of the materials handled at the port were harmful to health. I was told no!

Ron Lowes Port Authority Officer (October 16th 1995) stated (that T&HPA were constantly looking at ways of reducing dust problems when handling products)

Several methods were considered and new working practices were put in place in the 1990s i.e. damping down, new grabs, lowering into ships hold, nothing worked

In 1995 the managing director Mr W. Andrews of T.&HPA said he would be as pleased as anyone to secure alternative business more appropriate to the value of the quay, and with the plans for the development of Teesport, it may prove possible to transfer the trade to that location in two or three years time when the development is complete- as long as they had customer consent? What happened Mr Beach was this a plan to keep us quiet while we anxiously waited (another lie)

28th Feb. 2008 from Ian Baxter Manager Van Dalen to residents regarding a ship loading, quote (we are arranging to dampen down the material to reduce the dust levels)

There has been lots of references to the noise and dust problems we are experiencing over the years but the environment department don't seem to agree, the Headland residents are supposed to live in a smokeless and dust free environment, we can't light a fire in the garden but we have to live next to a port authority that is polluting the atmosphere, damaging our properties and goodness knows what it is doing to our health, the stress caused by 20 years of dust, noise and wondering whether it is damaging our health is most surely having its toll, I think enough is enough its time it was moved for good

This is a copy of the history of the scrap issue on the Town Wall that was read out at last night's scrutiny forum meeting at the Borough Hall. It is the opinion/evidence of the residents group.

Mr Rennie's address

After years of being ignored by the respective operators of the Scrap Berth/the Port Authority/HBC officers and it's Environmental Department/and our previous MP Mandleson- we as residents have decided that enough is enough!

We are going to pursue whatever actions are needed to rid ourselves of the scrap dust problem that is wrecking our lives, property, but also our health.

We have lived with the contamination and fall out from not just the scrap berth, but the ports filthy cargoes for too long.

We believe we are suffering and dying from breathing and ingesting scrap dust. It is plain to see our property is being seriously damaged by scrap dust- from our homes to our cars to our lungs to our skin- air and noise contamination with all of the ill health side effects and stress brought with it!

As we tonight, take the opportunity as residents to put our worries and position to the health scrutiny forum, we call on those who in the past have ignored us, covered up the problem, provided false reports, not wanted to investigate properly, turned a blind eye, left us to suffer the consequences of breathing this 24/7 contaminated air, to resign!!

Let us make it clear to the relevant authorities, we are not going to accept anymore 1/2 measures.

Whilst in the past we have had liaison meetings attended by the residents trying to protect our community, such as John and Lynn in the 90's - they were fobbed off by everyone, that the problem was either not there or had been resolved.

***note - not to the residents satisfaction. they were treated with contempt!.**

We started liaison meetings again in 2008, we were sick of suffering the nightmare and were desperate or foolish enough to think that someone would listen this time - we were again treated with contempt - the meeting stopped because we stopped them.

We decided to lobby our Ward Councillor for public meetings.

Although some of you at this table think John Marshall has been voice strong over this issue - and have ignored him, hoping he might go away - it is for us, and requested by us, he strives to bring the whole shoddy treatment of residents into the lime light.

Believe me - we are growing stronger as a group and this time - we will not go away!

Never mind your tall ships clean up of the docks and plans to cover or screen the scrap to remove an unsightly area for the visitors-
the tall ships and olympic squad need to be aware of any potential risks to their health.

The Worlds media will at the tall ships- they will be made aware of our plight!

We admire your digital 282 days to go countdown to the tall ships 7 - 10 august 2010, because, believe us- we are also going to be part of it!!!!

We realised that many residents were suffering with similar health problems, we were forever trying to scour scrap dust off the cars and windows and properties, and realised that the link between them all was the dust.

We went on the internet and got the coshh sheets - (controlled substances hazard to health) for iron oxide dust, and realised that a lot of the health symptoms and long term exposure were being suffered by many residents,- yet-
on the 7th march 1994 John and Lynn were told at the THPA liaison meeting that not all dust from the port emanates from the scrap berth - and there was no evidence that any dust was of a toxic nature.

Can PD Ports pass onto us their evidence for this statement?

We through the help of John Marshall -decided we had to protect our health and environment, and that of the future generations, and strive to remove the potential risk of breathing this dust 24/7.

for the 1st meeting 6th march 08 - we, the residents, put together a pack,containing photo's/coshh sheets/evidence of contamination/scrap dust samples off our windows/and concerns that dust inhalation was effecting our health - and including photo's of sputum from our lungs coloured the same as the dust.

Adrian Hurst HBC informed the meeting that complaints had been received before the meeting about the dust.

We said that the COSH documents state that if iron oxide dust is inhaled or it can cause - coughing/chest and muscle pain/flu like symptoms/mechanical irritation.

Ingestion can cause-
liver damage/pain/nausea and diarrhoea.

Skin exposure can cause dermatitis

Long term exposure is quoted by many documents as harmful and can lead to problems such as siderosis.

We produced the Environment Agency document for monitoring of particulate matter in ambient air around waste facilities and asked were they adhering to it.?

We asked who gave Van Dalen their licence- the reply was like something out of a carry on film- everyone was saying it was up to someone else to issue the licence- not them!

We pointed out that they were operating without a licence and had been for all this time!
We asked the HSE to shut the operations down.

We asked PD Ports if they could demonstrate what monitoring measures they had carried out- they couldn't- they could only mention noise complaints

Adrian Hurst HBC told the meeting that he had been on site on a calm day, with no ship in. He

observed that operations resulted in dust everywhere. He came on Town Wall and saw clouds of scrap dust on tipping operations and questioned what it must be like on severe weather.

NOTE-

When Lynn Rennie contacted him recently because of plumes of scrap dust coming off the heaps- he said he couldn't do anything about it because it was so windy. "That's our problem- the dusts everywhere" she told him!

He reported it was blowing off the beach and elsewhere!

TO THIS DAY- AFTER ALL THESE YEARS- WE ARE STILL SUFFERING AND BEING IGNORED!

Zoe Feather HSE- told us not to lay great store on the COSH documents, as they can be exaggerated- Yet we got them from the HSE and associated websites. We asked for them to provide COSH documents for dust breathed in by residents- **BUT WE NEVER RECEIVED ANY DIFFERENT ONES**

We pointed out the damage caused to our properties, not just our health, including the newly fitted PVC Windows across the area- stained soon after installation(with reports off companies to back up the fact)

We said that a health survey should be carried out to find what symptoms are being suffered by the residents in the area.

(postcode -not doctors surgeries)

We pointed out new working practises/damping operations(all tried again and again over the years) did nothing to stop the dust, and as the run off just went into the dock- asked the environment agency/Hse if they were happy about this-polluting the water?. It does this even when it rains

WE NOW UNDERSTAND THAT MEETINGS WERE HELD BEHIND OUR BACKS- BUT NOTHING WAS MENTIONED OF THEM OR THERE OUTCOME!

HBC COVER UP? BUT WE DO KNOW THIS IS MINUTED-

We know that Chris Giles HSE had no monitoring figures for exposure allowance for members of the public, and said that if it was safe for a worker to work 8 hours/day, **IT COULDN'T BE DETERMINED IF IT WAS SAFE FOR A MEMBER OF THE PUBLIC TO LIVE IN THE VICINITY!**

Graham Hull-Environment Agency questioned the proposed monitoring and what did they expect to get from it- as all parties round the table were aware of the problem!

WHAT HAS HBC OR ANYONE DONE ABOUT IT?- ABSOLUTELY NOTHING!

Stephanie Landles HBC said that they were only holding back from service of notice because Van Dalen were round the table working to solve the problem!

Well Stephanie - **OR WHOEVER HAS TAKEN HER ROLE ON HBC- HERE'S ANOTHER YEAR GONE BY WITH THE PROBLEM- IT HASN'T BEEN SOLVED- SO WHERE IS THE SERVICE OF NOTICE HBC?**
(The silence is deafening!)

We weren't aware of any of the meetings held behind our backs- then find they discussed issues, agreed the problem, and DIDN'T BRING IT BACK TO THE LIAISON MEETING!

We were informed that Air monitoring was carried out previously on the Headland in 2001 and results show it was OK-

**Where did HBC put the monitoring equipment-THE BACK OF THE BOROUGH HALL-
WHAT A FLAWED REPORT!**

VAN DALAN had an Envoy dust and monitoring report carried out on the loading of the Ship Blue Bay-
it was a NE wind when operations were carried out-

**Where did Van Dalen put the monitoring equipment- 2 MONITORS ON THE UPWIND SIDE OF THE SHIP AND 1 ON THE NORTH WEST CORNER OF THE SCRAP-ALL UPWIND-
WHAT A FLAWED REPORT!**

HBC have been carrying out monitoring with petra dishes over the summer- where have they put the monitors- on the Headland/Central and Smallcrafts Club-
The summer has given us mainly winds off the sea (we have kept a daily log-and photo'd your dishes)

WE SAID YOU NEED TO MONITOR THE BOUNDARY OF VAN DALEN-ALL ROUND SO WIND DIRECTION DIDN'T MATTER-

HBC- ANOTHER FLAWED REPORT?

THEY DON'T WANT TO GET THE BAD RESULTS!

LOOK AT THE PHOTO'S TAKEN 20th SEPTEMBER BY HBC OFFICER HEATHER. AT 2 TOWN WALL SHE LOOKED AT PETER MATHWINS RUST COVERED WINDOWS AND SHE TOOK A PHOTO OF HER RUST COVERED FINGER AFTER TOUCHING THE WINDOWSILL.

SHE SAW THE CLOUDS OF DUST- we commented you could taste it-

-YET THE PETRA DISH 3 DOORS AWAY WHEN PICKED UP BY HBC FOR SAMPLING CONTAINED NOTHING! (UNLESS IT WAS DEEMED CLEAN AND NEVER SENT IN!)

HBC- ANOTHER FLAWED REPORT ?

In January 2009 HBC received a complaint from a resident in Sea View Terrace regarding brown spots on windows that had been replaced by Heerema the previous year. The HBC officer visited and found small orangey brown spots, but only on the 1st floor front window sills and nowhere else. HBC say this is some distance away from the docks and the affected windows are on the opposite side of the property, and the source is unlikely to be the port-

**HBC- ANOTHER FLAWED REPORT !-
THE WINDOWS WERE CHANGED BY HEEREMA AND
THE SOURCE WAS FROM THE PORT-AND ALL SIDES
WERE AFFECTED!**

**What a load of rubbish HBC- DO AS WE DID AND
VISIT EVERY PROPERTY ON THE HEADLAND- FROM
THE LIGHTHOUSE TO THE KOP, FROM NORTHGATE TO
THE FERRY-THEY ARE ALL STAINED WITH SCRAP
DUST-
ANOTHER FLAWED REPORT!**

We know that Heerema have test windows installed, and weekly independent reports- from when they paid out on the windows in excess of £1m-WE SAY HEEREMA IF YOU HAVE THE EVIDENCE-SHARE IT - OR IS IT FROM YOURSELVES AGAIN- WHY OUR PROPERTIES ARE DAMAGED?

We said that we were concerned that routine sand is blown across our area and was it naturally recurring radioactive material- if so- Did the unloading/storage/loading/transport come under the NORM Regulations?
BUT THEY COULDN'T FIND THE REGULATIONS-

**WE ONLY RECENTLY HAD TO BRING IT TO THE ATTENTION OF ADRIAN HURST THAT
THERE WAS A HOLE ABOUT 20ft LONG IN THE SIDE OF THE BUILDING STORING IT-
SOME MONITORING MEASURES HBC HAVE IN PLACE
ISN'T IT- THE SAND WAS SPEWING OUT BY THE TON
(YES WE HAVE THE PHOTO'S)**

When we mentioned the contaminated run off into the dock from damping operation- Shaun Beech PD Ports said that the concentration should be on the dust issues first, before the run off-
**DUST ISSUES HAVEN'T CHANGED AND WATER RUN
OFF IS STILL INTO THE DOCK-EVEN WHEN IT RAINS-
WITH ITS DETRIMENTAL AFFECT ON MARINE LIFE!**

We are not prepared to live any longer with the risk to our Health and the unmistakable damage to our property

The COSH sheets warn of long term exposure, our recording of events on loading activities taken last week by ourselves- show the authorities for what they really are-

THIS IS AFTER NEARLY 20 YEARS OF LOADING IMPROVEMENTS-

IT IS A DISGRACE AND YOU ARE TO BLAME!

THE DUST HAS RUINED OUR WINDOWS-OR IS IT Heerema who have failed again?

WE WANT VAN DALEN/PD PORTS OR IS IT HEEREMA -TO SEND THE CONTACT DETAILS FOR THEIR INSURANCE TO EVERY RESIDENT IN THE AREA- NOT JUST THE ONE'S WHO ACCIDENTLY FOUND OUT LAST TIME ABOUT HEEREMA.

IF ANY RESIDENT AFFECTED WANTS TO - YOU CAN COPY OUR FOOTAGE TO BACK UP YOUR CLAIM!

WE DEMAND ACTION TO REMOVE THE SCRAP- IT IS GOING ANYWAY IF THE QUEYSIDE DEVELOPMENT COMES OFF!

WE HOLD THOSE RESPONSIBLE FOR THE PROTECTION OF OUR HEALTH, ENVIRONMENT AND PROPERTY TO TASK!

HBC - TAKE THE PETITION- THIS TIME DON'T IGNORE IT-READ DECENT PEOPLES COMMENTS AND CONCERNS- MOVE THE SCRAP AND DO YOUR DUTY TO THE RESIDENTS OF THIS TOWN!

VIEW THE FOOTAGE- VIEW THE TRUTH- REALISE WHAT HAS GONE ON IN THE PAST AND STOP IT FOR THE FUTURE!

SEE WHAT PROGRESS HAS BEEN MADE AND TRY TO DECIDE WHO SAID CHANGES AND PRACTICES WERE ACHIEVED TO OUR SATISFACTION- 'COS WE DIDN'T!

WE WILL NOT WAIT UNTIL YOU DECIDE WHAT IS BEST FOR US, OR DRAG DISCUSSIONS ON PAST THE TALL SHIPS EVENT!!

THE RESIDENTS ACTION GROUP- MADE UP OF

DECENT MEN AND WOMEN- WHO CARE FOR THEIR COMMUNITY, WILL DECIDE THEIR NEXT ACTIONS!

-WE INVITE ANYONE ATTENDING TONIGHT TO JOIN US- PASS ON YOUR DETAILS AND HELP US!

FINALLY, I WOULD LIKE TO ASK EACH INDIVIDUAL AT THE TOP TABLE, IF THEY WOULD VIEW THE FOOTAGE, THEN TELL US-

-IF THEY WOULD LIKE TO LIVE UNDER THE CLOUD OF DEATH AND DESTRUCTION?

AND- DO THEY THINK THE FALL OUT IS JUST GENERAL DUST AND DIRT, CONTAINING NO TRACE METALS, JUST LIKE IN ORDINARY SOIL-

LIKE ADRIAN HURST HAS JUST REPORTED?

WE ARE ONLY JUST BEGINNING OUR FIGHTBACK! WATCH THIS SPACE!

We the undersigned wish to bring to the attention of those that have received a copy of this petition.

The concerns of local People living in the vicinity of operations carried out by Businesses on Hartlepool Docks.

Which results in large amounts of DUST falling on Residents Homes and inhaled by all who live within the Area

The resulting DUST covers our Homes inside and outside.

We believe that Chest problems, Liver Problems and Asthma/ Dermatitis is a growing problem in both young and old.

We call on you as our elected representatives to have this problem removed from our Community.

Making the Environment where we live clean and fit for People to live in without concerns for their Health or there children's Health.

AREA
Hartlepool Docks

COPY.

| NAME | ADDRESS | REMARKS |
|--------------|-------------------------------|----------------|
| Banbridge | 13 VICTORIA PL. HARTLEPOOL | GET RID OF IT. |
| M. B. White | 7 CH. WALL | |
| Daley | 127 NORTHGATE | MOVE IT |
| EASTWOOD | 38 NORTHGATE | |
| M. Donald | 3 FAIRYLOVE RD | GET RID OF IT |
| Dorley | 1 BRADFIELD RD | |
| Simpkins | 16 TOWN WALL | |
| W. in | 11, MARKYATE ST | |
| McKenna | 18, GIBB SQUARE | |
| M. Mary | 6, SEA VIEW RD | GET RID OF IT. |
| McDonald | 44 R. OBY RD | |
| Robinson | 5 R. OBY RD | |
| Wallace | 54 MARINE DRIVE | |
| James | 20 GOLF SQ | |
| James | 65 MARINE DR | |
| James | 41 ROMANE PARK | |
| Vasey | 117 NORTHGATE | GET RID OF IT |
| Masey | 113 Northgate | |
| P. Moseley | 25 PRICK | WANTS MOVING |
| L. Moseley | 25 PRICK | |
| STEWART | 82, NORTHGATE | WANTS ANSWERS. |
| M. Gutterman | 25 Trin Way | |
| Foster | 5 Durham C. | |
| | 93 DURHAM ST | |
| G. Alcock | 28 NORTHGATE | |
| V. Knight | 15 RABY ST. | |

| NAME | ADDRESS | REMARKS |
|-------------|---------------------|---------|
| 1. Bradley | 14 THORPE ST | |
| 1. Smith | 17 Gibb Square | |
| 1. Emphene | 32 Southgate | |
| Hunter | 32 Southgate | |
| 1. Snowden | 11. PRISSEK. | |
| 1 Line | 10 FRIENDSHIP LANE | |
| Line | | |
| 1. Smith | W.V ROAD | |
| 1. Wall | 13 TOWN WALL | |
| Blank | 12 THORPE ST. | |
| 1. Nanley | 3 Anchor Court | |
| 1. Wall | 18 NORTHGATE | |
| Kf. Walla | 5 ROSE ST. | |
| 1. Boagley | 5 RABY ST | |
| 1. Parker | 15 Marquis St | |
| 1. Ryan | 1. THORPE ST. | |
| 1. Rogers | 10. MAINE DRIVE | |
| 1. Fletcher | 14 GLADSTONE ST | |
| Flaming | 3 MORRISON | |
| 1. 21m | Garden | |
| Richardson | 18 Bedford St. | |
| G. Smith | 3 COOP Terrace | |
| J. Dixon | 22 SOUTHGATE | |
| P. Gaudet | 18 Sea View Terrace | |
| 1. 21m | 21 Ibbotson St | |
| 1. RYAN | 30 Sea View Terrace | |
| | 11. MACQUE COURT | |

| NAME | ADDRESS | REMARKS |
|----------------|--------------------|---------|
| E. Harrison | 1. 166 Nelson | |
| E. Harrison | 1. 166 Nelson | |
| John | 33 The Oval | |
| 1 Name | Ocean Road | |
| 7 Hugg | 12 MORISON GO | |
| 11 Sherry | 20 Schenck Rd. | |
| butler | 8. Main Rd | |
| 1. Hunt | 14 Lundy | |
| 1. El | 420 W. V. Blvd. | |
| 1. Jolly | 1 BROADFIELD RD. | |
| 1. Towner | 3 ALFRED ST. | |
| Sanderson | 32 St Catharine ST | |
| 1. J. L. H. H. | 28 FREDERICK ST. | |
| 1. Hoot | FLAT 6 DURHAM ST | |
| 1. Burt | ANCHOR COURT. | |
| 1. Gillison | 13 Beaconfield Sq. | |
| 1. Smith | 14 Millpool Close | |
| 1. Allison | 13 Beaconfield Sq. | |
| 1. Tysman | 96, Northgate. | |
| 1. AN COOK | 60 Northgate | |
| 1. HART | 35 FRERY COURT. | |
| 1. Young | 9. Alliance St | |
| 1. Cowby | 2 Hinford Close | |

| AME | ADDRESS | REMARKS |
|-------------|-----------------------|---|
| lan Vale | 16 Yempest Rd | The port operations are totally disgusting and unacceptable to all residents |
| Graham | 23 Town Wall | AFTER 19 YEARS WE'VE HAD ENOUGH all Health issues to be taken into consideration |
| My Graham | 23 Town Wall | |
| Edridge | 10 ALLIANCE | |
| 11 Hunter | 20 SAEWELL ST | |
| STOTHART | 44 NORTHGATE | |
| Sanderson | 8 Baptist Street | |
| Healey | 73 RICHART ST | |
| Hall | 14 PRIORITY COURT | |
| B Hall | 14 PRIORITY COURT | |
| Swain | 17 Hunter St | |
| Granger | 10 P. SICK ST | |
| Moffat | 24 SOUTHWICK ST | |
| Wemy | 35 FRIENDSHIP LANE | |
| Cooney | 15 Jacques Court | |
| ES H Beha | 34 PRIORITY COURT | |
| Kennedy | 11 Sea View Ter | |
| Foster | 20 ANCHOR COURT | |
| Robson | 1 THE LANS | |
| Hu | 10 JACQUES COURT | |
| Neil Forcer | 2 ST HILDA CROSSING | - Sick of this mess |
| Edridge | 1 BRETSON ST | |

| NAME | ADDRESS | REMARKS |
|------------|-----------------|---------------|
| I. PARKER | 12. TAYLOR D | HEATH CONCERN |
| G. O'Byrne | 22 Gladstone St | same as above |
| A. Bradley | 33 BEANE PARK | " " |

| NAME | ADDRESS | REMARKS |
|----------|----------------|---------|
| 1. Ryan | 11, Jacques Ct | |
| Ryan | " " " | |
| F. RYAN | " " " | |
| Brown | 52 Marine Dr | |
| COOK | 25 MARINE DR | |
| COOK | 25 MARINE DR | |
| HART | 9 Alfred St | |
| Buckle | 1, Northgate | |
| ? BUCKLE | 42, Town Hall | |

| NAME | ADDRESS | REMARKS |
|--------------|--------------------|---|
| KUMAR | 31 NORTHGATE | EFFECT ON BACK WINDOWS SLIGHT EFFECT TO HEALTH. |
| Mayer | 16 Beaconsfield St | Quite dusty, could be cleaner |
| KENNEDY | 43 TOWN WALL. | Health concerns. |
| ARNOLD | 9 TOWN WALL | " " |
| BURDER | 3. LEAS WALK | " " |
| SMART | 2 Frederic ST | HEALTH. " NOISE & DUST CONCERNS. |
| ALLEN | 53 DURHAM ST | " " |
| WRAV | 12 VICTORIA ST | AS ABOVE |
| | | People need to work and Jobs are imperative. The Docks were here before you all moved here. Is it election time again Mr Marshall?? |
| McLean | 1 Vane St. | Health Concern. |
| Pearson | 1 Durham St | a confirmation should be made. |
| Robt Antyk | 13 Albion Ter. | II Agree |
| J.E. Bantph. | 16 DURLAND ST | HEALTH CONCERNS. |
| Garry | 3 Northgate | Health Concern |
| Ellen | 36 SOUTHGATE | HEALTH CONCERN |
| I. Budd. | 10 HAZELWOOD RISE | Same as above |
| Walter | " " | |
| J. Wilson | 16 Hazelwood Rise | " " |
| R. O'Connell | 301 Sandhurst | " " |
| Young | | |
| Bundy | | |

| NAME | ADDRESS | REMARKS |
|-----------|--------------------------|---|
| J. HALE | 7 NORTHGATE | MOVED TO HEADLAND 8 YEARS AGO. MY HEALTHY WIFE DIED 18 MONTHS AGO, NO ONE HAS DETERMINED THE CAUSE. QUESTIONS NEED TO BE ASKED |
| JOHNSON | 20. NORTHGATE | PHOTOGRAPHS SPEAK VOLUMES. WHAT ABOUT ONE HUMAN RIGHT TO LIVE IN A CLEAN ENVIRONMENT? NO CONSULTATION. |
| MALLINSON | 49 DURHAM ST | |
| Leakey | 14 Frederic ST | Dirty Paintwork - Heath Hazard's Garden's <u>Rained</u> |
| Goodwill | 1. Hazelwood Rise | Dirty paintwork rust marks on paintwork Heath hazard |
| Daly | 127 Northgate H Pool. | Remove industry from headland |
| Lambert | 25 Sea View Tce | PLEASE MOVE THIS OPERATION TO TESSOCK |

| NAME | ADDRESS | REMARKS |
|-------------|-----------------------|---|
| CRAWLEY | 27. TOWN WALL | SHIFT THE DIRTY SUEAP & OTHER DIRTY CARGO'S |
| CANLEY | 27 TOWN WALL | FOR ALL OUR HEALTH GET RID OF THE DIRT FROM DECKS |
| Brownless | 28. TOWN WALL | GIVE US A CLEAN PLACE TO LIVE <u>SHIFT THE DIRT.</u> |
| D HARRISON | 121 NORTHGATE | DUST FROM WAGONS CAN'T GET WINDOW CLEANER MORE THAN A COUPLE OF TIMES AND HAVE TO PAY MORE. CLOTHES CANT BE HUNG OUT. THERE IS ALSO BANGING DURING NIGHT, HERRAMS. |
| I Thorsont. | | <u>Apart from damage to property there are serious concerns for health issues on the H/Land.</u> |
| D. Allison | 13 Beaconfield Sq. | Dust on window sills, on woodwork and on tiles is thick. |
| E Kipture | 2 town wall | <u>Dust on windows curtains filtering in yw long windows open. THIS IS NO GOOD for ywz HEALTH SURVEY?</u> |

| AME | ADDRESS | REMARKS |
|----------|------------------|---|
| RENNIE | 26. TOWN WALL. | ITS NOW TIME TO MOVE THIS DIRT CRAIG & GIVE US A cleaner Place to live. |
| Graham | 23, Town Wall | I agree with these comments made by Mrs Rennie. I have health problems so we need to get all this sorted out |
| MARSHALL | 22. St Helens St | I have Liver Problems. we need Voudou 3. PD Pts to stop operations that give Health problems to us. |
| COOPER | 14 OHLUM RISE | DUST & DIRT NOT ONLY FROM SCRAP YARD LOOK AT VICTORIA DOCK SITE |
| HALLER | 8 town wall | WASTE OF TIME COMPLAINING TO DOCKMASTER. HE TAKES NO NOTICE <u>AT ALL</u> |
| STOTHART | 44 NORTHGATE | HERMAN'S NEEDS SORTING OUT STILL WORKING ON A NIGHT DUST & NOISE NEEDS STOPPING. |
| SA Saxon | 78 NORTHGATE | Windows replaced due to imbedded something? All the MARKS BACK AGAIN! NOISE TERRIBLE ALL DAY. <u>CANNOT</u> WATCH ANY TV CHANNEL AT ALL WHILST WORK IS BEEN DONE! |

| NAME | ADDRESS | REMARKS |
|----------|---------------|--|
| Rennie | 26 Town Wall | Get these scruffy Cargoes MOVED! This is the 21 st Century - we demand a clean environment to live in! |
| J CANHAM | 23 Town Wall | AFTER TWO DECADES SMOKE IS SMOKE SMOKELSS AND DUST FROM ENVIRONMENT ITS A JOKE. |
| STEWART | 82, NORTHGATE | THE NOISE LEVELS FROM SCRAP BEING TIPPED EARLY MORNING (6 a.m.) IS HORRENDOUS. THE DUST IS DISGUSTING AND IT MAKES YOU WONDER JUST WHAT WE ARE BREATHING IN. |
| Barfield | 32 Northgate | Peoples health issues are at risk. We have dust inside & outside our windows, H Pool council environmental Health looked at the dust gave us no answers & we havn't heard from them since. I didn't have asthma until I moved to the Headland. |
| KENNEDY | TOWN WALL | OUR UPVC WINDOWS ARE ONLY 3 YRS OLD AND ARE TOTALLY ENGRAINED IN SMALL RUST SPOTS THIS IS NOT ACCEPTABLE. |

| NAME | ADDRESS | REMARKS |
|--------------------|------------------|---------|
| KOLA inttingham | 46 Northgate. | |

| NAME | ADDRESS | REMARKS |
|---------------|---------------------|---------|
| S Gleason | 81 Durham St | |
| Chubb | 6 Burke place | |
| Chutland | 8 Main St | |
| McDay | 107 Northgate | |
| Jones | 1 Lunley Sq | |
| Smurthwaite | 1 Lunley Sq | |
| Webster | 7 Inboken St | |
| Tomlinson | 18 Friendship place | |
| 6 Mues | 6 Trinity St | |
| 5 Mues | 39 Marine Drive | |
| 7 Smith | 17 Gibb Square | |
| 9 Withering | 5 Northgate | |
| Em Bailey | 37 Priory CRT | |
| Thelison Hart | 160 NORTHGATE | |
| AUL McLEOD | 160 NORTHGATE | |
| JAKE McLEOD | 160 NORTHGATE | |
| JAMIE McLEOD | 160 NORTHGATE | |
| OBYN McLEOD | 160 NORTHGATE | |
| SE McLEOD | 160 NORTHGATE | |
| P Allen | 8 TOWN WALL | |
| St. Michael | Perth St | |
| GLASSBY | 9 GIBB SQUARE | |

POOR BEAR JUST INQNO
ANY COMPLAINTS

| NAME | ADDRESS | REMARKS |
|---------|-----------------------|--|
| S. Wood | 5 FRIARAGE GALOGNS | THE SIGHT OF THE DUST BELOW IN "IN THE AIR" REMINDS ME OF A "NEWSNIGHT" type exposé of a THIRD WORLD COUNTRY'S SAFETY PRECAUTIONS. SOME ACTION MUST BE TAKEN TO SOLVE THIS SITUATION |

COPY

(97) Sign

We the undersigned demand:

"A CLEANER ENVIRONMENT ON THE HEADLAND"

| Name | Address | Postcode | Signature |
|-------------------|-----------------------------|-------------|---------------|
| HEATHER STEWART | 82, NORTHGATE HARTLEPOOL | TS24 OLT | H. Stewart |
| ALLAN STEWART* | 82, NORTHGATE HARTLEPOOL | TS24 OLT | Alan |
| Jordan Stewart | 82, Northgate | TS24 OLT | J. Stewart |
| Scott Wallace | 82 Northgate Hartlepool | TS24 OLT | Scott Wallace |
| Craig Wallace | 82 Northgate Hartlepool | TS24 OLT | C. Wallace |
| Leanne Wallace | 82 Northgate Hartlepool | TS24 OLT | L. Wallace. |
| Jean Bates | 94 Northgate | TS24 OLT | J. Bates |
| ALLEN BATES | 94 NORTHGATE | TS24 OLT | A. Bates |
| Carley Wilson | 12 Waver Street | TS24 OLS | C. Wilson. |
| LUCILLE GRIFFITHS | 80 Northgate | TS24 OLT | L. Griffiths |
| John Richardson | 20 Northgate | TS24 OLT | J. Richardson |

Return this form to any of the places below:

Numbers: 3/23/26 or 40 Town Wall, 32 or 82 Northgate,

22 St Helen's Street, 13 Beaconsfield Square,

Chris's Newsagents Northgate, or Croft Shop Newsagents Middlegate

CAMPAIGN FOR A CLEANER ENVIRONMENT

Following a public meeting with our ward councillors, we are now asking for your help to rid the Headland of the dust, dirt and noise pollution that is blighting this part of the town.

We are concerned for the health of Headland residents, their children and future generations and the damage being caused to the properties that we are living in.

If you have any complaints or concerns regarding any of the above, please help us by:

1. Describing your concerns below:

Can this dust be detrimental to our health?

Noise levels, sometimes through the night, early weekend mornings.

2. Getting signatures on the petition overleaf.

3. Logging your complaints and concerns with the Environmental Health Department at Hartlepool Borough Council on the number below.

ENVIRONMENTAL HEALTH 523325 or 523323

The Headland is a beautiful place to live and we are demanding a clean and healthy environment.

THANK YOU, PLEASE GIVE US YOUR SUPPORT.

PLEASE ALSO HELP US BY ATTENDING
ANY FUTURE MEETING.

We the undersigned demand:

"A CLEANER ENVIRONMENT ON THE HEADLAND"

| Name | Address | Postcode | Signature |
|---------------|--------------------|----------|---------------|
| E. J. WRIGLEY | 18 TOWN WALL | TS24 2SQ | E. J. Wrigley |
| H. WRIGLEY | 18 TOWN WALL | TS24 2SQ | H. Wrigley |
| J. STOTHART | 47 FREDRICK STREET | TS24 6EN | J. Stothart |
| M. STOTHART | 2 Anchor Court | TS24 6JA | M. Stothart |
| D. STOTHART | 2 Anchor Court | TS24 6JA | D. Stothart |
| V. FOSTER | 22 Anchor Court | TS24 6JA | V. Foster |
| P. Kennedy | 11 New Year | TS24 6JA | P. Kennedy |
| V. Williams | 91 Chalmers Rd | TS24 6JD | V. Williams |
| S. Addison | 4 FAIRY CODE | TS24 6JA | S. Addison |
| F. Jones | 26 Anchor Court | TS24 6JA | F. Jones |
| M. PERRY | 3 REGENCY DRIVE | TS24 6JA | M. Perry |

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If you have any complaints or concerns regarding any of the above, please help us by:

1. Describing your concerns below:

Damage its causing to the environment
our Health & Properties .

2. Getting signatures on the petition overleaf.

3. Logging your complaints and concerns with the
Environmental Health Department at Hartlepool
Borough Council on the number below.

ENVIRONMENTAL HEALTH 523325 or 523323

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demanding a clean and healthy environment.

THANK YOU, PLEASE GIVE US YOUR SUPPORT.

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ANY FUTURE MEETING.

We the undersigned demand:

"A CLEANER ENVIRONMENT ON THE HEADLAND"

| Name | Address | Postcode | Signature |
|-------------------------------------|----------------|----------|-------------|
| M. STORM 21 Town Wall | 21 Town Wall. | TS9 0JQ. | M. Storm. |
| Li. Yang | 3 Union News | TS14 5J7 | Li. P. 28 |
| St. Hiches | 11 Earl Street | TS24 0JW | St. Hiches. |
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If you have any complaints or concerns regarding any of the above, please help us by:

1. Describing your concerns below:

A cleaner Environment on
the Toon Wall & Headland.

2. Getting signatures on the petition overleaf.
3. Logging your complaints and concerns with the Environmental Health Department at Hartlepool Borough Council on the number below.

ENVIRONMENTAL HEALTH 523325 or 523323

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THANK YOU, PLEASE GIVE US YOUR SUPPORT.

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ANY FUTURE MEETING.

We the undersigned demand:

"A CLEANER ENVIRONMENT ON THE HEADLAND"

| Name | Address | Postcode | Signature |
|--------------|-----------------|----------|-------------|
| L. RENNIE | 26 TOWN WALL | TS24 0TB | L. Rennie |
| S. Rennie | 26 TOWN WALL | " | S. Rennie |
| Sarah Rennie | " " | " | S. Rennie |
| S. RENNIE | 15 ANCHOR COURT | TS24 0DH | S. Rennie |
| T.G. Rennie | 40 MONTAGNE ST | | T.G. Rennie |
| S. Rennie | " " | | J. Rennie |
| M. Rennie | " " | " | M. Rennie |
| S. Rennie | " " | " | S. Rennie |
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If you have any complaints or concerns regarding any of the above, please help us by:

1. Describing your concerns below:

EFFECTS ON HEALTH, DAMAGE TO PROPERTY & VEHICLES.
Dust Airborne must be affecting the Above.

2. Getting signatures on the petition overleaf.

3. Logging your complaints and concerns with the Environmental Health Department at Hartlepool Borough Council on the number below.

ENVIRONMENTAL HEALTH 523325 or 523323

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ANY FUTURE MEETING.

We the undersigned demand:

"A CLEANER ENVIRONMENT ON THE HEADLAND"

| Name | Address | Postcode | Signature |
|-----------------------|--------------------------------------|----------|------------|
| JUDITH TEMPLE | 3 VALLUM RISE HEADLAND | TS24 0LR | J Temple |
| HENRY BRADY/TEMPLE | 3 VALLUM RISE HEADLAND | TS24 0LR | H.B Temple |
| JOHN WARRACE | 16. SOUTHGATE HEADLAND | TS24 0JJ | J. Wallace |
| TRACEY TEMPLE | 16, SOUTHGATE HEADLAND | TS24 0JJ | T. Temple |
| DEEKE ALLISON | 13 BEAUNSFIELD SQUARE HEADLAND | TS24 0PA | D Allison |
| AILEEN ALLISON | 13 BEAUNSFIELD SQUARE HEADLAND | TS24 0PA | A Allison |
| JOAN BIRD | 6 MORRISON C.DNS HEADLAND | TS24 | J Bird |
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ENVIRONMENTAL HEALTH

523325/523323

The Headland is a beautiful place to live and we are demanding a clean and healthy environment.

COMMENTS/CONCERNS.

We the over Signed people on this environment petition despair as our Headland is turning into a.

NEW GRAYTHORPE.
GOD HELP US ALL

Please help us by adding your comments and concerns and signing the petition overleaf

PLEASE HELP US BY ATTENDING ANY FUTURE PUBLIC MEETING.

THE FILTH IN THE AIR IS UNBELIEVABLE

We the undersigned demand:

"A CLEANER ENVIRONMENT ON THE HEADLAND"

| Name | Address | Postcode | Signature |
|-----------------|------------------|--------------|-------------|
| JOHN CAMBRIDGE | 10, HEUGH CHARIE | TS240PY | J Cambridge |
| JEAN CAMBRIDGE | 10, HEUGH CHARIE | TS 24 CPY | J Cambridge |
| FW BOAGH | 5. HEUGH CHARIE | TS240PY | FW Boagh |
| MR G CANNELL | 6 FEAR TERRACE | TS240PF | Mr G Cannel |
| M JUDGE | 7 Heugh CHARIE | TS240PY | M Judge |
| MRS D. ROBINSON | 11. HEUGH CHARIE | TS240PY | D. Robinson |
| | | | |
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If you have any complaints or concerns regarding any of the above, please help us by:

1. Describing your concerns below:

FISH SANDS & BLOK SANDS

ARE AN ABSOLUTE DISGRACE

2. Getting signatures on the petition overleaf.
3. Logging your complaints and concerns with the Environmental Health Department at Hartlepool Borough Council on the number below.

ENVIRONMENTAL HEALTH 523325 or 523323

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ANY FUTURE MEETING.

We the undersigned demand:

"A CLEANER ENVIRONMENT ON THE HEADLAND"

| Name | Address | Postcode | Signature |
|--------------------|---------------------------------|-------------|-------------------|
| LINDA GOODWILL | 1. HAZELWOOD RISE HARTLEPOOL | TS24 0LW | L Goodwill |
| MERIAN GOODWILL | 11 HAZELWOOD RISE HARTLEPOOL | TS24 0LW | M Goodwill |
| ADIELE GOODWILL | 1. HAZELWOOD RISE HARTLEPOOL | TS24 0LW | A Goodwill |
| JASON GOODWILL | 3. TRINITY STREET HARTLEPOOL | TS24 0HA | J. Goodwill |
| ANNE SATES | 34 ADLTHSATE HARTLEPOOL | TS24 0LJ | A. Bates |
| TRACY JOHNSON | 5, CORPORATION H/POOL | TS24 0LH | T Johnson |
| Kath Saxon | 78 NORTHGATE | TS24 0LT | K Saxon |
| LISA SAXON | 78 NORTHGATE HEADLAND | TS24 0LT | Lisa Saxon |
| LGN SAXON | 78 NORTHGATE | TS24 0LT | L. Saxon |
| J. Thompson | 78 NORTHGATE | TS24 0LT | Jonathan Thompson |
| | | | |

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ENVIRONMENTAL HEALTH

523325/523323

The Headland is a beautiful place to live and we are demanding a clean and healthy environment.

COMMENTS/CONCERNS.

Noise, airborne dust (rust) on UPVC windows
effect on peoples health (bad language of workers
which can be heard)

Please help us by adding your comments and concerns and signing the petition overleaf

PLEASE HELP US BY ATTENDING ANY FUTURE
PUBLIC MEETING.

An overview of health on the Headland in Hartlepool

Professor Peter Kelly
Executive Director of Public Health
NHS Tees

Background

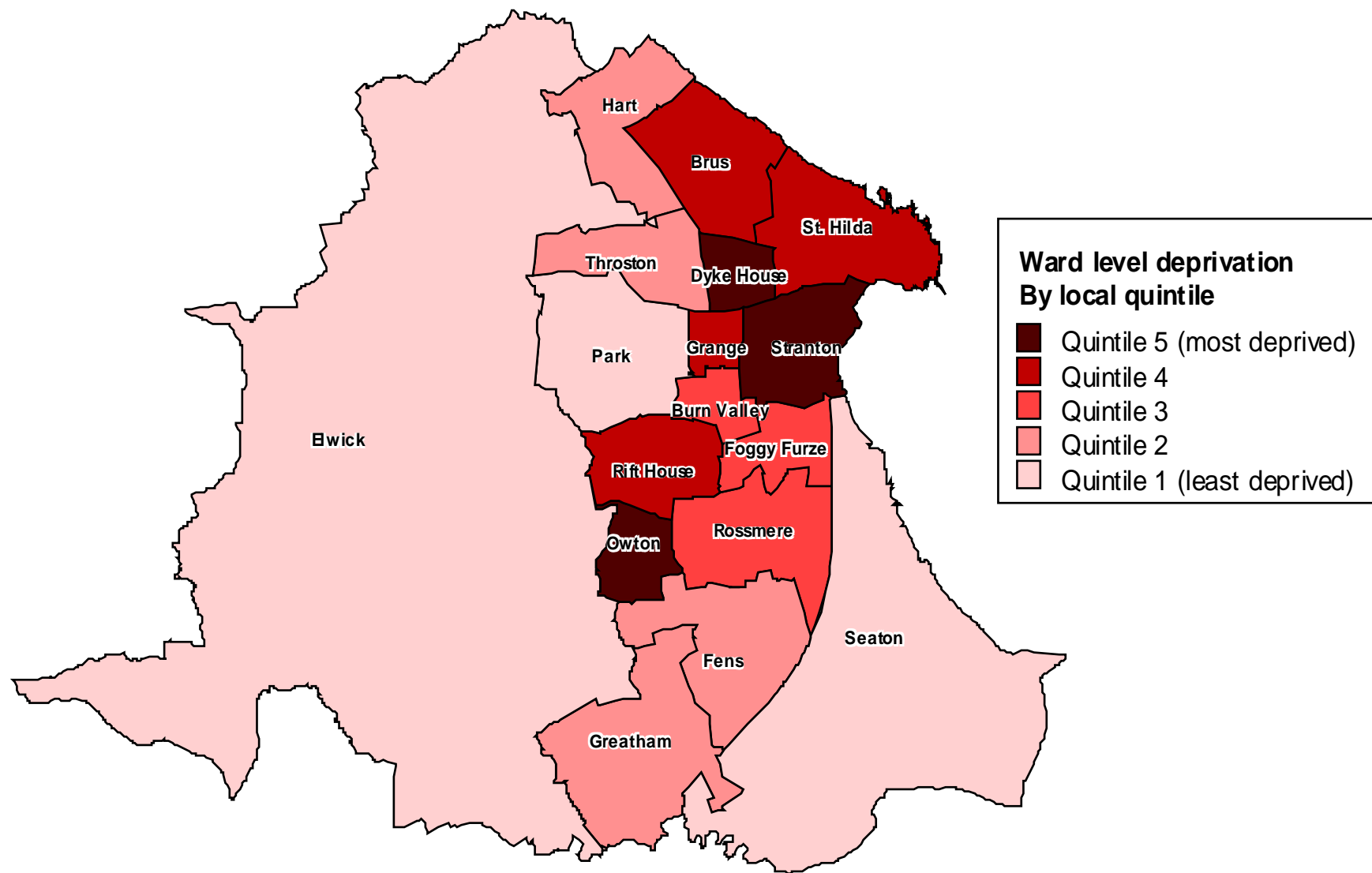
- Long standing local health and environmental concerns due to dust from scrap metal
- Approach to me from local councillor

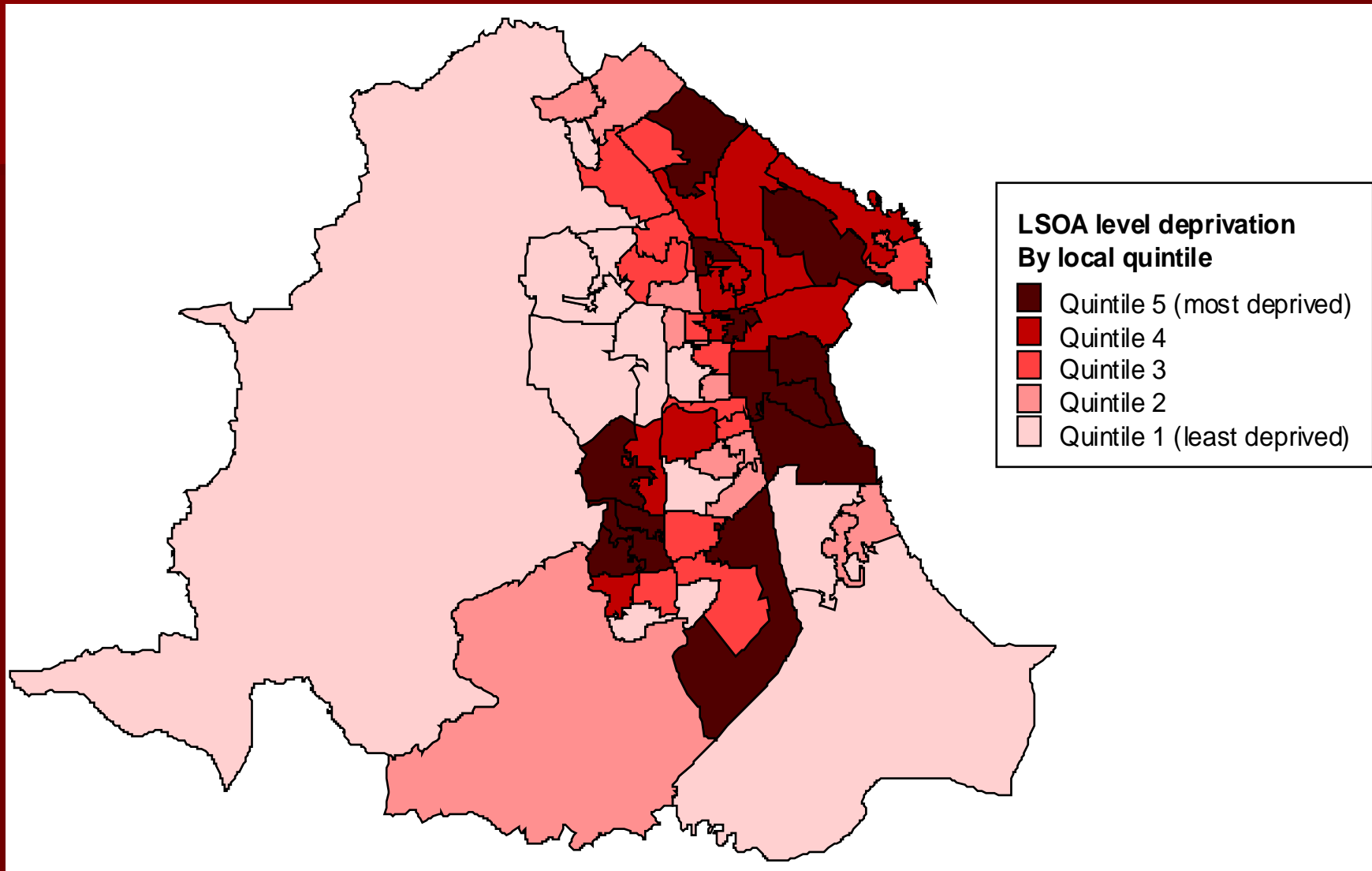
Public Health role

- Responsibility to protect the health of the public
- Initial assessment of the issues
- Lack of health data specific to the Headland
- Independence

Initial question

- How does the health status of the Headland (St.Hilda) population compare to that of neighbouring wards and the rest of Hartlepool?

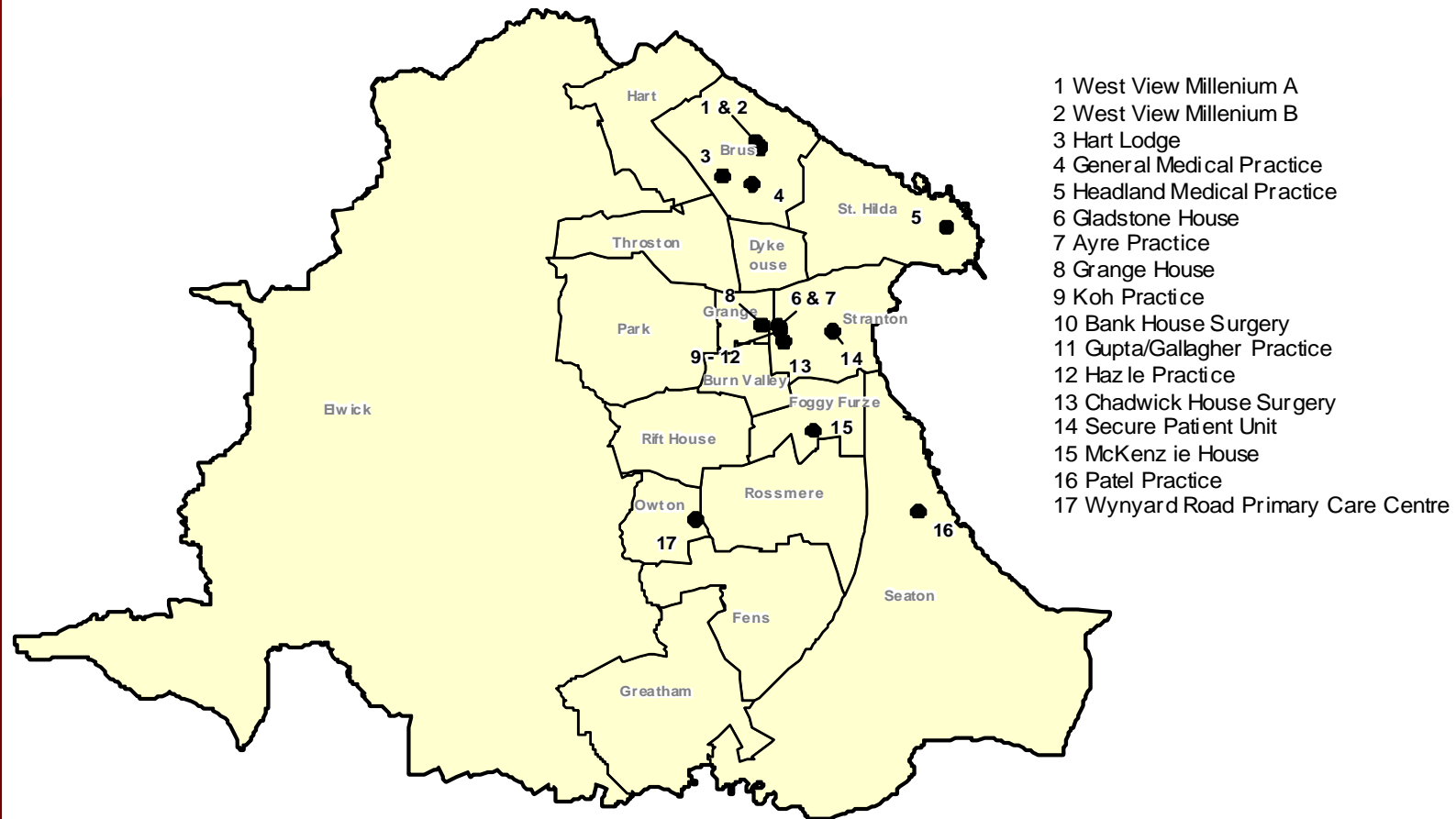




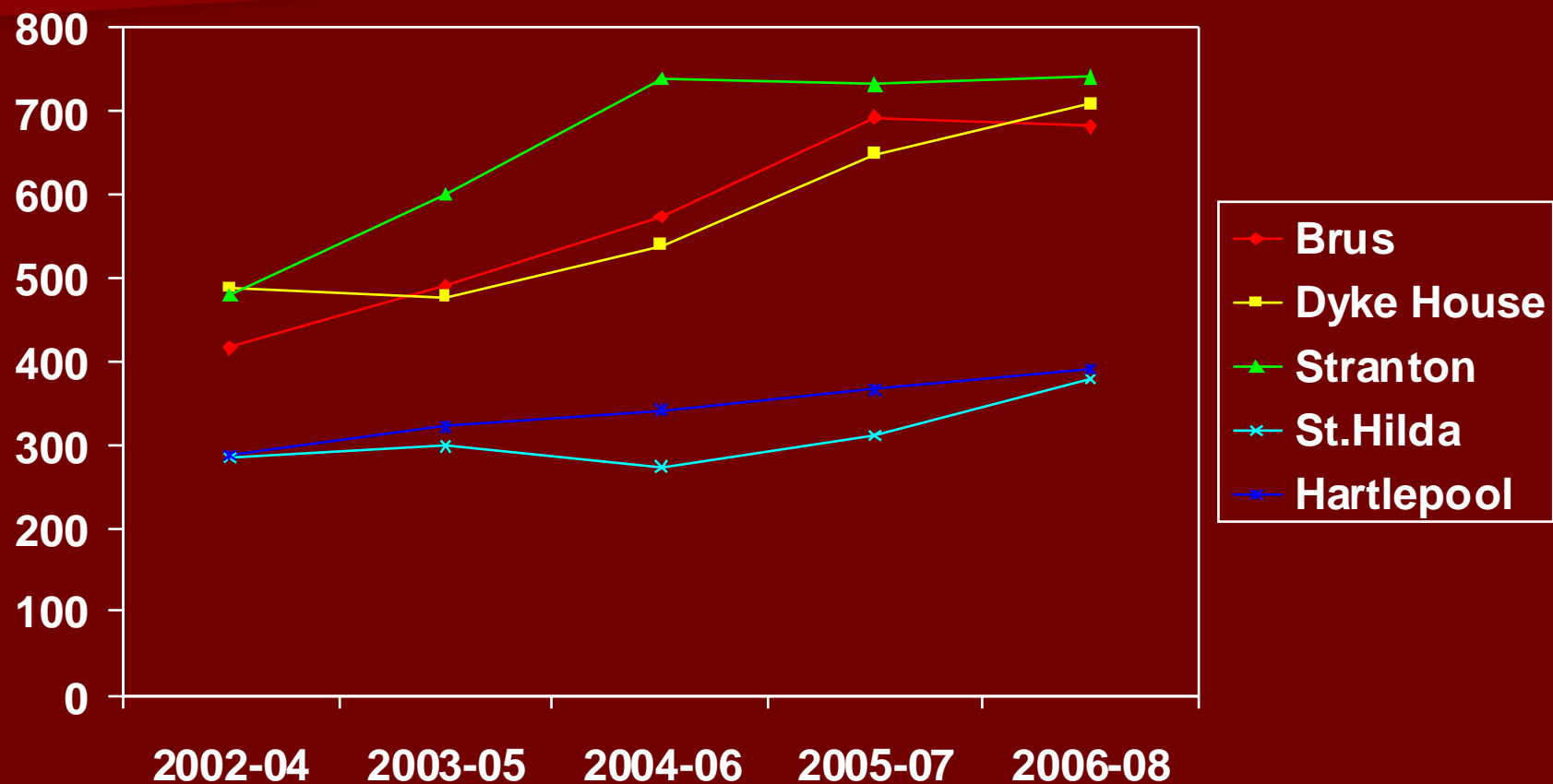
Method and data

- Respiratory, skin and liver disease data
- Hartlepool General Hospital data 2002-2008
- Data from the general practice on the headland

Map showing Hartlepool GP practices and wards



Directly age-standardised hospital admission rate per
100,000 for lower respiratory disease (J40-J45) in
Hartlepool 2002-2008

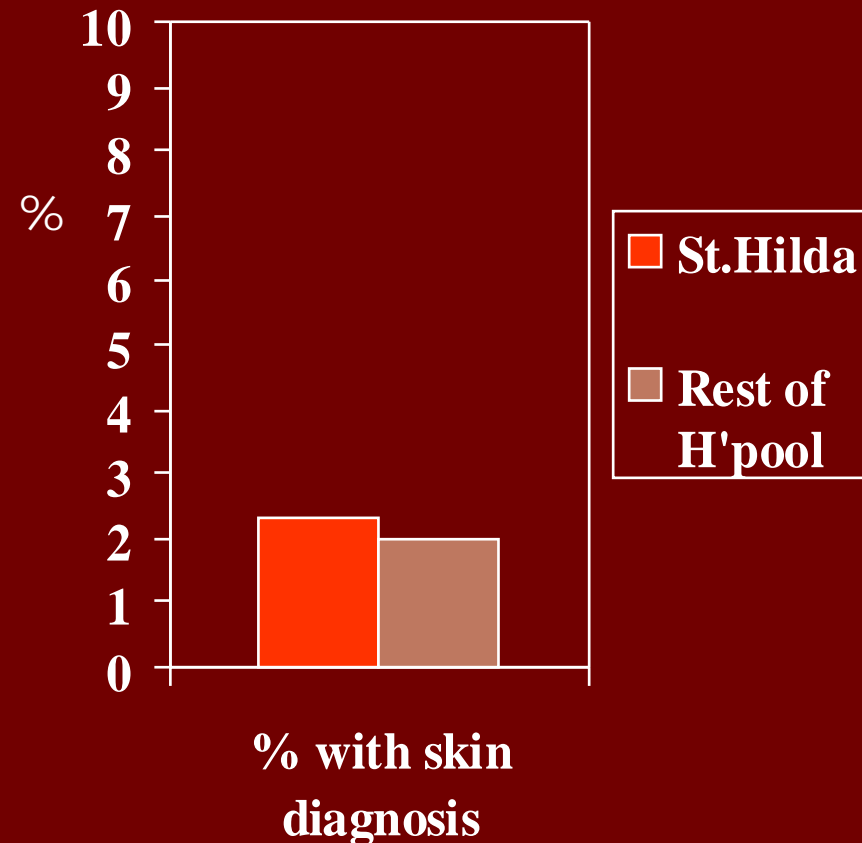


GP data

- 6163 patients currently registered
- 1972 live within the St.Hilda's ward
- Remaining 4191 live in rest of Hartlepool
- Use this as basis for comparison

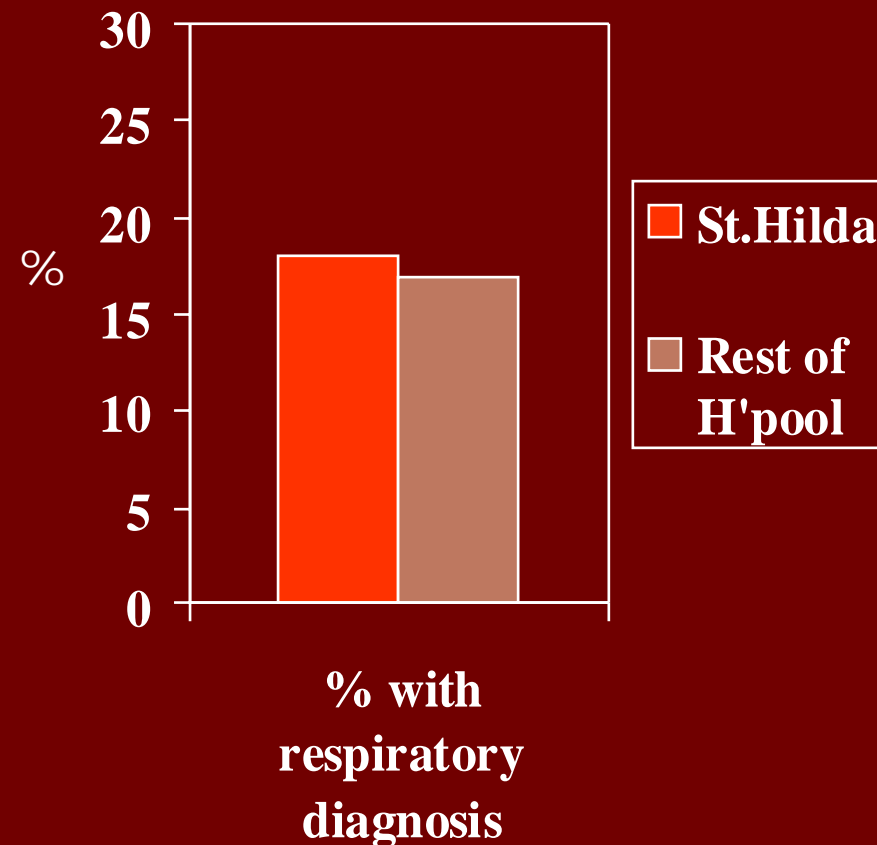
Dermatitis or eczema diagnoses 2008

- 45 out of 1972 St.Hilda patients (2.3%)
- 84 out of 4191 other Hartlepool patients (2.0%)



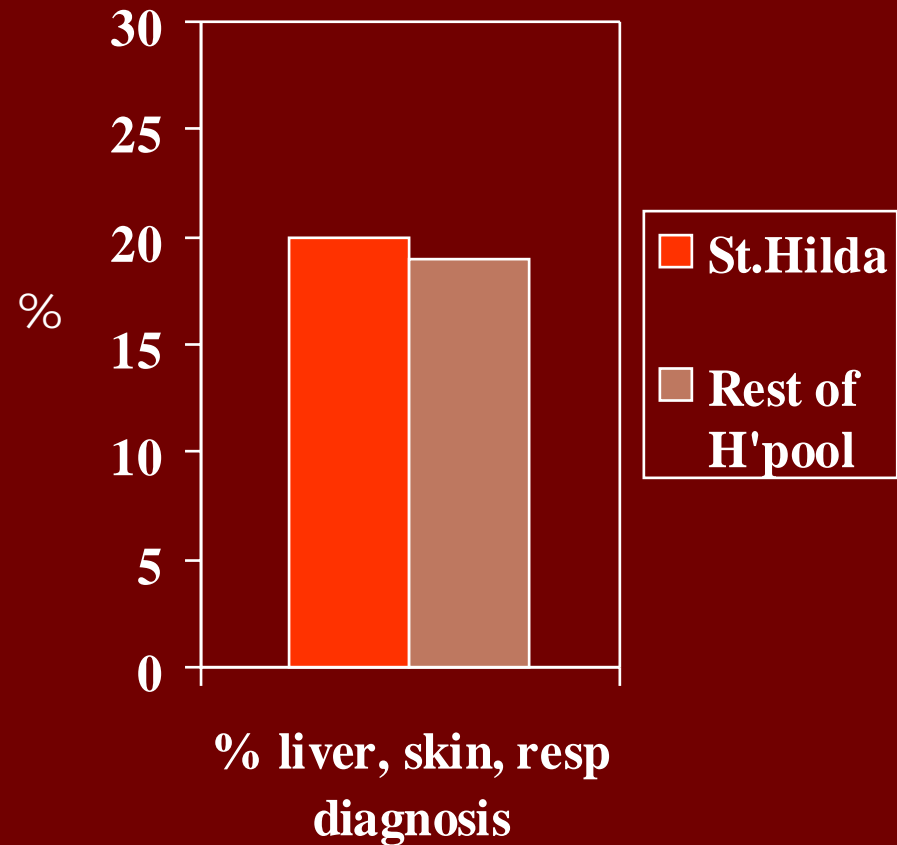
Respiratory disease diagnoses 2008

- 357 St.Hilda patients (18.1%)
- 708 other Hartlepool patients (16.9%)



Liver, skin & respiratory diagnoses 2008

- 403 St.Hilda patients (20%)
- 800 other Hartlepool patients (19%)



Summary

- Using 6 years worth of hospital data and 2008 GP local GP data
- No difference in health status, for these disease measures, between the Headland and either the neighbouring wards or the rest of Hartlepool.