

Petrol Stations
Asda
Danum Auto Centre
Esso Doncaster Road
Fuel Force Brigg
Fuel Force Ltd Normanby Road
Jordan & Co Rix Grange Lane North
M J Neal Ltd
Malhurst (A180)
Murco Grange Lane South
PH & S Barret
Refinery Filling station Killingholme
Riddings Service Centre
Ridgewood Motors
Shell UK Brumby Corner
Shell Westcliffe
Spencers Garage
Tesco Brigg
Tesco Scunthorpe
Total Fina Doncaster Road
W Morrison

Table A29: Petrol Stations regulated by North Lincolnshire Council.

Progress Report 2008, North Lincolnshire

Permit Number	Operator Name	Installation name	Issue Date	Activity Description	Address	Grid Reference
BT4648IG	A. M. Borrill & Son	Slate House Farm	20/07/2007	Intensive farming >40,000 poultry	Brigg, DN20 9NN	SE97650107
EP3733UM	Elsham Linc Limited	Worlaby Farms	27/09/2007	Intensive farming, >2000 pigs (production pigs)	Wooton Road, Brigg, DN20 0NU	TA02511292
FP3133UW	Elsham Linc Limited	Firtree Farm	07/02/2008	Intensive farming, >2000 pigs (production pigs)	East Marsh Road, Goxhill, DN19 7NQ	TA13172355
PP3539UQ	Ermine Farms Limited	Sandhouse Farm	30/08/2007	Intensive farming, >2000 pigs (production pigs)	Broughton Lane, Appleby, DN15 0DA	SE95641265
DP3933UG	Hook2sisters Ltd	Sheffield Farm	17/10/2007	Intensive farming >40,000 poultry	Bagmoor Lane, Normanby, DN15 9BG	SE90281679
HP3733UG	Hook2sisters Ltd	Castle farm	19/10/2007	Intensive farming >40,000 poultry	Broughton, DN20 0BZ	SE98720865
XP3530UZ	Hook2sisters Ltd	Winteringham Farm	29/02/2008	Intensive farming >40,000 poultry	Ferriby Road, Scunthorpe, DN15 9LZ	SE95142145
UP3830UV	Hook2sisters Ltd	Wrawby Farm	14/09/2007	Intensive farming >40,000 poultry	Star Carr Lane, Wrawby, DN20 8SG	TA00510959
TP3733UR	Hook2sisters Ltd	Kettleby Farm	21/09/2007	Intensive farming >40,000 poultry	Kettleby, DN20 9HG	TA03330785
QP3533UC	Hook2sisters Ltd	Maltby Farm	11/09/2007	Intensive farming >40,000 poultry	Holmes Lane, Winterton, DN15 9UF	SE95541808
NP3030UW	Hook2sisters Ltd	Killingholme Farm	20/09/2007	Intensive farming >40,000 poultry	The Aerodrome, DN40 3JY	TA12691726
MP3230UD	Hook2sisters Ltd	Ruskington Farm	19/10/2007	Intensive farming >40,000 poultry	Fen Road, Ruskington, NG34 9TH	TF09815132
HP3933UF	Hook2sisters Ltd	Kebwood Farm	26/10/2007	Intensive farming >40,000 poultry	Ermine Street, Appleby, DN15 0DD	SE90241216
DP3633UB	Hook2sisters Ltd	Mickleholme Farm	21/09/2007	Intensive farming >40,000 poultry	Ermine Street, Appleby, DN15 0AD	SE95541654
FP3733UU	Hook2sisters Ltd	Bagmoor Farm	27/07/2007	Intensive farming >40,000 poultry	Bagmoor Lane, Normanby, DN15 9BG	SE89141551
HP3633UU	Hook2sisters Ltd	Gokewell Farm	26/10/2007	Intensive farming >40,000 poultry	Ermine Street, Broughton, DN20 0BQ	SE94911008
FP3533UB	Hook2sisters Ltd	Barrow farm	21/09/2007	Intensive farming >40,000 poultry	East Hann Lane, DN19 4HD	TA09182238
HP3433UB	Hook2sisters Ltd	Hibaldstow Farm	24/09/2007	Intensive farming >40,000 poultry	Carr Lane, Hibaldstow, DN20 9PE	SE98890376
HP3533UL	Hook2sisters Ltd	Howsham Farm	12/10/2007	Intensive farming >40,000 poultry	Kettleby, DN20 9HN	TA03760672
TP3633UW	Mere Pigs	Cornhill Farm	29/10/2007	Intensive farming, >2000 pigs (production pigs)	Barrow Mere, DN18 6DA	TA04522173
UP3239UJ	H.Barker & Sons	Poplars Farm	31/01/2008	Intensive farming, >2000 pigs (production pigs)	Crowle, DN17 4BW	SE75121080
ZP3530UE	Hook 2 Sisters Ltd.	Low Road Farm	05/10/2007	Intensive farming >40,000 poultry	Scotter, DN21 4JN	SE91550131
FP3933UT	Hook2sisters Ltd	Blenheim Farm	22/08/2007	Intensive farming >40,000 poultry	Gainsborough Road, Northorpe, DN21 4AR	SK88669623
DP3833UU	Hook2sisters Ltd	PARK FARM	01/10/2007	Intensive farming >40,000 poultry	Stather Road, Flixborough, DN15 8RR	SE87291399
DP3533UQ	Hook2sisters Ltd	Quarry Farm	31/01/2008	Intensive farming >40,000 poultry	Cleatham, DN21 4JS	SE93770140
UP3933UP	Jackson Pigs	Triplling Howe Farm	22/10/2007	Intensive farming, >2000 pigs (production pigs)	Messingham, DN17 3PS	SE86750578
JP3136UL	P D Hook (Breeders) Ltd	Jackson Farm	14/12/2007	Intensive farming >40,000 poultry	Messingham, DN17 3PS	SE86750577
VP3836UU	P D Hook (Breeders) Ltd	Hollywood Farm	14/12/2007	Intensive farming >40,000 poultry	Messingham Common, Susworth, DN17 3AU	SE85200454
VP3536UQ	P D Hook (Breeders) Ltd	Sandtoft Farm	14/12/2007	Intensive farming >40,000 poultry	Sandtoft Road, Belton, DN9 1PW	SE76220859
HP3736UZ	P D Hook (Breeders) Ltd	Hatfield Farm	21/12/2007	Intensive farming >40,000 poultry	Sandtoft Road, Thorne, DN8 5TG	SE73300900
HP3136UB	P D Hook (Breeders) Ltd	Ealand Farm	21/12/2007	Intensive farming >40,000 poultry	Outgate, Ealand, DN17 4JE	SE78391189
RP3436UW	P D Hook (Breeders) Ltd	Tripllinghows Farm	14/12/2007	Intensive farming >40,000 poultry	Tripllinghows Road, Messingham, DN17 3PS	SE87460571
ZP3631UR	P D Hook (Rearing)	Rainsbutt Farm	14/01/2008	Intensive farming >40,000 poultry	Brewery Lane, Crowle, DN17 4BJ	SE77001540
GP3031UC	P. D. Hook (Rearing) Ltd.	Mason Farm	21/12/2007	Intensive farming >40,000 poultry	Eastoft Road, Crowle, DN17 4LR	SE78511378

Table A30: Pig and poultry operations (regulated under PPC) in North Lincolnshire.

Town	Road Number	Road name	NGR	Predicted Daily Vehicles (2006)	% HV	Predicted Daily Vehicles (2008)	% HV	% change in vehicles.	Change in % of HV.	
Belton	M180	M180 from Jnc 2 to River Trent		43000	29.2	43800	29.2	1.9	0.0	
Broughton	M180	M180 from Jnc 4 to Jnc 5		37000	27.4	38100	27.4	3.0	0.0	
<b>Scunthorpe</b>	A18	Mortal Ash Hill		35000	10.8	33200	10.4	-5.1	-0.4	
Croxtion	A180T	A180T from M180 to A160T		31000	29.6	31900	29.6	2.9	0.0	
Holme	A18	Mortal Ash Hill		28000	10.9	28700	10.9	2.5	0.0	
<b>Scunthorpe</b>	C16	<b>Ashby Road</b>	<b>489238 / 410367</b>	<b>24000</b>	8.5	23400	5.8	-2.5	-2.7	
<b>Scunthorpe</b>	C16	<b>Howdens Hill</b>	<b>489196 / 410836</b>	<b>24000</b>	9	23900	7.4	-0.4	-1.6	
Elsham	A15	A15 from Elsham Wold Jnc to M180		21000	12.4	21500	12.4	2.4	0.0	
Guiness	A18	Doncaster Rd		21000	9.9	21400	9.5	1.9	-0.4	
<b>Scunthorpe</b>	A18	<b>Queensway</b>	<b>490366 / 409171</b>	<b>21000</b>	5.8	19800	5.3	-5.7	-0.5	
Barton	A15	Humber Bridge		20000	8.9	20700	8.9	3.5	0.0	
Burningham	M181	M181 from M180 to A18		20000	23	19900	21.4	-0.5	-1.6	
Broughton	A15	A15 Link between A18 and M180		20000	17.2	20100	17.2	0.5	0.0	
<b>Scawby (Scawby Brook)</b>	A18	<b>Scawby Road</b>	<b>499091 / 406920</b>	<b>19000</b>	5.4	19600	5.4	3.2	0.0	
Scurthorpe	A1029	Brigg Road		19000	12.3	17900	12	-5.8	-0.3	
<b>Brigg</b>	A18	<b>Barnard Ay</b>	<b>499881 / 407427</b>	<b>18000</b>	5	17800	4.9	-1.1	-0.1	
Brigg	A18	Ancoahme Way		18000	4.9	18000	5	0.0	0.1	
Brigg	A18	Ancoahme Way		18000	4.9	18000	5	0.0	0.1	
Scurthorpe	A18	Kingsway		17000	7.6	16100	7.2	-5.3	-0.4	
Scurthorpe	C221	Scotter Rd		16000	5.2	16400	4.9	2.5	-0.3	
<b>Scunthorpe</b>	A159	<b>Ashby Road</b>	<b>489127 / 409375</b>	<b>16000</b>	4.3	16500	4.2	3.1	-0.1	
<b>Brigg</b>	A18	<b>Bridge St</b>	<b>499596 / 407071</b>	<b>16000</b>	5.5	19200	5.4	20.0	-0.1	
Scurthorpe	C221	Scotter Rd South		16000	5.3	15800	4.6	-1.3	-0.7	
Melton Ross	A18	A18 Spur to M180		14000	13	14400	13.0	2.9	0.0	
South Killingholme	A160T	Ulceby Road		14000	45.3	14700	44.1	5.0	-1.2	
<b>Scunthorpe</b>	B1501	<b>Grange Lane South</b>	<b>490560 / 408098</b>	<b>14000</b>	4.9	14100	4.9	0.7	0.0	
Scurthorpe	C16	Oswald Road		14000	5.4	11800	5.7	-15.7	0.3	
Scurthorpe	A159	Burringham Rd		13000	3.5	13400	3.5	3.1	0.0	
Flixborough	A1077	A1077 from A18 to C221		13000	24.4	12100	23.9	-6.9	-0.5	
<b>Scunthorpe</b>	C13	<b>Glebe Road</b>	<b>489710 / 411781</b>	<b>13000</b>	4.1	12100	4.1	-6.9	0.0	
Broughton	A18	A18 From A15 to B1206		13000	6.8	12700	6.8	-2.3	0.0	
<b>Scunthorpe</b>	C16	<b>Frodingham Road</b>	<b>489112 / 411736</b>	<b>12000</b>	6.9	12100	4.4	0.8	-2.5	
South Killingholme	A1173	Manby Road		517404 / 4116370	11000	26.7	11500	26.7	4.5	0.0
South Killingholme	A160T	Humber Road		515482 / 4116146	11000	40.3	12400	42.5	12.7	2.2
Botteford	A159	Messingham Road		11000	4.7	10200	4.3	-7.3	-0.4	
Scurthorpe	C13	Normandy Road		11000	6.6	10700	6.6	-2.7	0.0	
Scurthorpe	A1077	Phoenix Parkway		11000	16.3	10700	16.3	-2.7	0.0	
Scurthorpe	C173	Station Road		11000	3.8	10600	3.8	-3.6	0.0	
Botteford	C221	Scotter Road South		10000	5.1	11400	4.8	14.0	-0.3	
<b>Wrawby</b>	A18	<b>Wrawby Road</b>	<b>500742 / 407769</b>	<b>10000</b>	5.6	10300	5.6	3.0	0.0	
Scurthorpe	B1501	Grange Lane North		10000	11.4	10300	11.4	3.0	0.0	
Barton	A1077	Holydyke		10000	7.3	10100	7.3	1.0	0.0	

Table A31: Roads within North Lincolnshire with an AADT&gt;10000, the percentage change from 2006 to 2008 is also shown.

Town	Road Number	Road name	Predicted Daily Vehicles (2008)	%HV
Barton upon Humber	A1077	Market Lane	10000	5.9
Scunthorpe	Unclassified	Lakeside Parkway	17800	2.7
Gunness	Unclassified	Access road to Gallagher Retail Park	15900	3.1

Table A32: New roads in North Lincolnshire with an AADT >10000.

## Part 9: Summary of Draft Further Assessment and Action Plan Consultation

The draft Further Assessment and draft Action Plan were sent to the following companies and organisations:

- Appleby Group (now Civil and Marine)
- Banner Contracts,
- Broughton Town Council,
- Carbon International,
- Corus,
- Environment Agency,
- Health Protection Agency,
- Highways Agency,
- Hull and Goole Port Health Authority,
- Multiserv,
- North Lincolnshire Primary Care Trust,
- Tarmac.

### North Lincolnshire Council:

- Planning department,
- Divisional Manager, Environmental Health,
- Service Director, Neighbourhood and Environment,
- Cabinet Member for Neighbourhood and Environment,
- Transport Planning Manager,
- All North Lincolnshire Ward Councillors.

### Neighbouring and other appropriate Councils:

- Bassetlaw Council,
- Doncaster Metropolitan Borough Council,
- East Lindsey District Council,
- East Riding of Yorkshire Council,
- Hull City Council,
- North East Lincolnshire Council,
- Richmondshire District Council, (issue permits for mobile crushers operating on the steelworks site)
- West Lindsey District Council.

The draft Further Assessment and Action Plan have also been available to view by the public on the Council's dedicated Air Quality website, [www.nlincsair.info](http://www.nlincsair.info).

The following responses to the consultation were received:

Defra's appraisal of the Further Assessment:

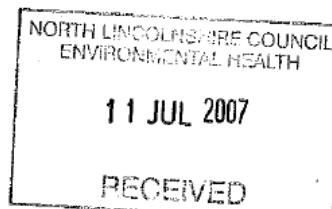
Zone 7/D13  
Down House  
123 Victoria Street  
London. SW1E 6DE

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Website [www.defra.gov.uk](http://www.defra.gov.uk)

Fax 020 7082 8379  
Email [tutu.aluko@defra.gsi.gov.uk](mailto:tutu.aluko@defra.gsi.gov.uk)

Mr Jon Flitney

North Lincolnshire Council  
Church Square House  
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Dear Mr Flitney

**LOCAL AIR QUALITY MANAGEMENT: FURTHER REVIEW AND ASSESSMENT OF AIR QUALITY**

Thank you for consulting the Secretary of State for Environment, Food and Rural Affairs on your air quality Further Review and Assessment for PM10 (24hr objective). Please find comments on the report attached.

The approach to the Further Review and Assessment and the conclusions reached are accepted. The air quality management area, as declared, is still justified. The report has considered to some extent, options for improving air quality and their cost effectiveness. However North Lincolnshire will need to consider these issues further within their Air Quality Action Plan.

Concerning the exceedence of the PM10 annual mean objective in Santon village, we recommend that you establish whether there is relevant exposure in the locality, and continue to monitor to confirm the exceedence area and report as a Detailed Assessment in 2008. Depending on the conclusion of the report North Lincs may have to declare an AQMA for PM10 (annual mean). Since the management effort directed at the 24hour objective will have direct benefits on the annual objective, the AQMA (annual mean objective) could be added to the existing AQMA declaration order (for the 24hr objective) via an amendment action.

If you have any specific queries about the comments contained in the appraisal report, we would advise that you initially contact the help desk funded by the Department and operated by Air Quality Consultants and the University of the West of England. Details on how to contact the help desk can be found in the appraisal report.



Ref: FA-069

## Review & Assessment Appraisal Report

Report Prepared by: North Lincolnshire Council

Date Review & Assessment Report Issued: 16<sup>th</sup> April 2007

The Report covers the Further Assessment of the Review & Assessment process required under the Environment Act 1995 and subsequent Regulations.

It covers **PM<sub>10</sub>** (24-hour objective) and concludes that the air quality management area, as declared, is still justified for **PM<sub>10</sub>**.

The report includes an assessment of the contributions of the various sources to the exceedances and the magnitude of reduction required. Some consideration has been given to options and/or their cost effectiveness. These issues will need to be considered within the Air Quality Action Plan.

The approach to the Further Review & Assessment and the conclusions reached are accepted for **PM<sub>10</sub>**.

Ref: FA-069

### Commentary

The report is well structured and provides most of the information specified in the Guidance.

The following specific items are drawn to the local authority's attention to help inform future work:

1. This is a detailed and thorough analysis of  $PM_{10}$  monitoring data, meteorological information and sources.
2. The commentary in Part 9.3 in relation to TEOMs is noted.
3. In the case of Partisol measurements in the vicinity of High Santon, the location of the monitor should enable a clearer understanding of the spatial extent of the exceedence to be determined.
4. With respect to the process for the determination of an annual  $PM_{10}$  objective exceedence in Santon Village, the actions to take are as follows:
  - Firstly, continue to monitor to confirm the area of the exceedence of the annual objective and to establish that relevant public exposure exists in the locality.
  - Secondly, this should be reported as a Detailed Assessment upon acceptance of which by Defra an AQMA designation for the annual  $PM_{10}$  objective can be made. The Detailed Assessment need not be lengthy and can repeat much of the information already supplied for the locality of Santon. The additional information needed is that relating to the exceedence area for the annual  $PM_{10}$  objective.
  - With the regard to the declaration of an AQMA for the annual  $PM_{10}$  objective, North Lincolnshire Council could declare a separate AQMA encompassing the area of exceedence. Alternatively, given that the sources leading to the exceedences

Ref: FA-069

are broadly similar, and that the management efforts directed at the 24-hour objective will also have direct benefits on annual PM<sub>10</sub> concentrations, then North Lincolnshire Council could add the annual PM<sub>10</sub> objective to their AQMA declaration order via an amendment action by the duly designated process operated by the Council.

### **Transport Planning Manager, North Lincolnshire Council**

"I have had a look at both of the consultation documents (detailed assessment 2007 & action plan for Scunthorpe PM10 AQMA)

I don't have any particular comments about either plan relating to the content or the how/when objectives would (or not) be breached. There are however a few areas that will have an impact on air quality that you should be aware of. Apologies if you already have the information.

#### Action Plan

- Highways & Planning do not have a policy of implementing bus gates at new developments and thus far the bus operators have not wanted them installed. It might be better to phrase F2 in the table as 'where appropriate' or 'bus priority measures'.
- The implementation of the UTC is currently under review (although I hope it will be resolved in the next couple of months) and may be delayed. It still remains as a delivery output for the Local Transport Plan.

As a question - is it possible to identify the contribution made by transport as opposed to industry. I suspect the answer is no, but it would provide useful information as to the prioritisation of the measures contained in the table."

#### Response and changes to Action Plan:

Action F2 and F4 have been changed appropriately.

An email and subsequent phone call to the Transport Manager discussed the Further Assessment and the role of the DMRB model.

"Thank you very much for your reply to the consultations, it is appreciated.

Did I include a copy of the Further Assessment on the CD that I sent to you? Pages 56 to 60 are the most relevant, in this report the DMRB model was used to try and take account of how many exceedances are down to road traffic using traffic flow data for those roads closest to each monitoring station. As an example, for Scunthorpe Town (on Rowland Road) the model said there should be just under 4 exceedances due to road traffic and 1 exceedance seemed

most appropriate for bonfire night. In 2006 there were 37 exceedances recorded, thus leaving 32 exceedances. The model is fairly basic but for the purposes of the report is satisfactory. “

**Carbon International:**

“have just read the draft action plan for scunthorpe PM 10 AQMA.

very interesting and well thought out,

just one small point, on page 12 (map), you have got our premises down as

PMC, not Carbon International Ltd.

this may or maynot confuse people,

hope this helps, otherwise eveverything seems very good.”

“just one more small point,

Page 12, section D2, you mention the local industry forum to include those

companies that have the potential to pollute and that the first meeting was

held in july 2007,

Were we not invited ???? , or do you not class us as having potential !!!!,

look forward to your comments,”

**Response and changes to Action Plan:**

PMC was formerly the name of Carbon International, the map showing industrial operations has been changed.

In terms of the second response the plan has been changed to clarify that the Local Industry Forum meetings are currently in relation to those operations in the Santon area, although will encompass other companies in the future.

**Email to Carbon International:**

“Thank you for your message.

We set up the first meeting of the Local Industry Forum to look at the air quality issues in the Santon area to start with - but we forgot to say that in the Action Plan.

We will be expanding the Local Industry Forum to look at the whole of the Air Quality Management Area, and that will include Carbon International. We will certainly be inviting you in the future and I hope you will be able to attend. No date yet, but we will let you know. Thanks “

## Corus:

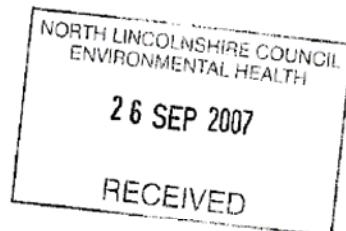
Corus responded to the consultation on the further assessment, a copy of their response and the Council's response follows. As a result some spelling errors and explanations have been changed, other issues are dealt with in the Council's reply.

Our Ref NLC0307\_



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**Paul Whitby**  
**Environment Manager**

Dear Mr Flitney

### Air Quality Further Assessment 2007 – Industry and Regulator Consultation

Thank you, for the opportunity of commenting on the above document.  
Overall we consider it to be a well presented assessment and offer the comments below;

Executive summary;

Add at end of second paragraph, non-ideal location of the Santon instrument and the second instrument to verify data.

Add at end of third paragraph, ...and as such actions to address PM10s would need to cover all sources.

P13. Comment on ongoing debate on the validity of the 1.3 factor.

P18. Remove *waste* before slag as it is not a waste or state *Multiserv process steelmaking slag*.  
In paragraph 3 add *granulated* before blast furnace slag.

P23&112. Although we understand the reasoning we are surprised that NLC have not upgraded the Santon monitor in line with DEFRA guidance.

P32. Based on work carried out by Corus associated with PM monitoring, we now believe that met.data is required at as many sites as practicable, we are still looking into this subject.

P38. What is meant by *coarse PM10*? Suggest delete this sentence.

P39. Comments on figure 4.2. Does it clearly demonstrate? We believe that the data may indicate but not 100% clearly, suggest that the statement is toned down, possibly other references elsewhere could be as well.

No explanation of what Fig 4.3 demonstrates.

P44. We do not consider that wind direction/PM10 levels can be assumed in this fashion.

P45. Fig.4.6. No graph.

P49. Verify if monthly data set also show the same weekday distribution, as it is not as evident in 2007.

Have NLC used the EA's ( M Shutt) method of comparing NO<sub>x</sub> with PM10s generated from vehicle movements for the whole data set?

P84/109. We consider that the evidence supplied gives strong credence to this statement.

P97. We do not understand the box to the right of Fig.8.4a.

P101. Last paragraph should refer to a figure number.

P114. We do not understand the final bullet point.

Please come back to myself if you wish to discuss or clarify any of the points made.

Yours Sincerely

Council response:

"Dear Mr Whitby,

**Air Quality Further Assessment 2007**

Thank you for your response to the Further Assessment. I have made a note of some the points raised and will consider them when making changes to the Draft document. In this letter I will try to go through some of the more general issues that you have raised.

With regards to an upgrade of the Santon site; we believe the advice stated on p.23 is still current. If this is followed then it is not necessary to upgrade the Santon TEOM as the number of exceedances is a significant breach of the objective rather than being 'close to the objective'. In 2006 even if the raw (uncorrected) TEOM data is used there were 104 exceedances and an annual mean of 43.8 ug m<sup>-3</sup> recorded at Santon.

The Council is satisfied that the Santon TEOM site represents the people who live in that location, the site follows the guidelines laid down in the LAQM Technical Guidance. We by no-means suggest it is a location that represents the whole of North Lincolnshire, but for those Santon residents it is representative.

In terms of the use of the correction factor for TEOM results, 1.3 remains the recommendation from Defra. However, as you known there is a co-located TEOM and Partisol at Scunthorpe Town. There is now a year's worth of results of co-located data during which the Partisol analysis has been conducted in line with EN12341. An initial look at the data has been done, but with many different correction factors possible, the Defra funded 'Helpdesks',

that were set up to assist Local Authorities on Air Quality issues have been asked to give their opinion on this issue. The Council has received a response and is looking at the data, it is likely the report will be appended to the Progress Report due in April 2008 (a statutory report), which will also review the 2007 data.

Your point about the 2007 data is noted, the 2005 and 2006 data clearly show that concentrations are likely to be higher on Monday-Saturdays, whilst 2007 appears to be different. The clear daytime elevation of concentrations is still present. This will be looked at in greater detail in the Detailed Assessment that is due for Santon in early 2008.

In terms of the NO<sub>2</sub> apportionment that Matt Shutt mentioned, this is work that has been conducted by Gary Fuller's team at King's College London. This method was considered, but it was felt that other work was a greater priority for this report. In addition, this work was based on monitoring results from London and southeast UK and so may not be applicable to Scunthorpe, particularly with industrial emissions of NO<sub>x</sub> being relevant to Scunthorpe in addition to road emissions. At this stage the DMRB is a reasonable tool to estimate the tailpipe emission contribution of PM<sub>10</sub> from vehicles on public roads.

With regards to the use of the word 'waste' on p18, the EA have only recently (August 2007) deemed that this is definitely a by-product and not a waste. All future reports will reflect this.

Unfortunately lack of Figure 4.6 was unfortunately due to an Adobe error and a paper copy of the page is enclosed.

Yours sincerely"

## **Environment Agency:**

- **PM10 Action Plan**

### **Regulation of Part A Processes**

As the Regulator of Part A PPC processes, my colleagues and I will continue to work with both Corus and MultiServ on identifying and reducing the significance of sources of PM10s. As well as the Improvement Conditions identified in the Action Plan, we will ensure that we consider the generation of PM10s and the implementation of Best Available Techniques in the planned compliance activity that we undertake.

We will continue to support the Strategic Air Quality Management Meetings and the Local Industry Forum.

In addition, we are currently working with North Lincolnshire Council on the design and implementation of a PM2.5 monitoring exercise at Low Santon. This may involve the Environment Agency hiring or purchasing a PM2.5 monitor. We are also planning the use of one of our Mobile Monitoring Units, to undertake a monitoring exercise for PM10 at a location between Corus' Dawes Lane Coke Ovens and Tarmac's plant. It is hoped that the data produced will increase our knowledge of the generation of particulate matter and help with source apportionment.

### **Trade Waste Burning**

The burning of waste is an activity that breaches the Environment Protection Act and one that is taken seriously by the Environment Agency.

We would be willing to work in partnership with North Lincolnshire Council on the proposed publicity campaign on the burning of trade waste.

We would be interested in developing a joint targeted inspection regime of businesses in the Scunthorpe area. In addition we would welcome discussions that may lead to us providing financial assistance for the production of appropriate literature or media advertising.

### **Changes to Action Plan:**

- The PM<sub>2.5</sub> (TEOM) monitoring at Santon has been included in action A2.
- The Environment Agency have been included in action C2 in relation to burning of commercial waste.

**Defra:**

Defra's appraisal of the report was received by email on the 13<sup>th</sup> December 2007:

"December 2007

**Re: "Air Quality Action Plan Report" North Lincolnshire District Council 2007**

**The air quality issue(s):**

The report contains a summary of the review and assessment work and the need for an action plan in North Lincolnshire. In terms of air quality management the key conclusions are:

- As a result of industrial emissions in Scunthorpe area the daily PM<sub>10</sub> objective is at risk of being exceeded.
- These areas were declared an AQMA as a result.
- A Further Assessment has been completed and accepted by Defra. The action plan provides a brief summary indicating that road traffic emissions and bonfire night emissions have little impact on local PM<sub>10</sub> concentrations. The majority of emissions arise from the local iron and steel industrial sources. However, no data have been provided in the action plan report to indicate the size of the exceedence.

**The proposed AQAP:**

The draft action plan report contains some of the information outlined in the Defra's guidance on Action Plans. The Plan does not include any source apportionment data to show that the options chosen are proportionate and applicable to the size and nature of the problem. The Plan sets out the other stakeholders including the Environment Agency, with which the Council has consulted. Options that have been considered in the Action Plan include air quality monitoring and reporting, public information dissemination, bonfires and non permitted processes, industrial emissions, development control and tailpipe emissions. The evaluation of the action plan options is presented in tabular format and highlights a basic assessment in terms of cost and air quality impact, lead role organisation and timescale for implementation.

Consideration of the following is advised in the completion of the Action Plan.

1. The Council should include in its plan its source apportionment work to indicate that the options chosen are applicable and proportionate to the nature and extent of the problem. This should include emissions from industrial sources, traffic and re-suspended particles. It is noted that part of this work is selected as an option within the Plan (Action A3), but priority should be given to this now to inform the other options and actions.
2. The Council should undertake further detailed assessment of the proposed measures in terms of changes in emissions and any impact on pollutant concentrations in order to determine when compliance with the objective values is likely to be achieved. The Council should encourage private companies e.g. Corus UK Ltd, operating within the AQMA to report such emission impact from the implementation of their own air quality management plans.
3. Targets and key performance indicators\* for each action should be identified where possible. Where appropriate, these should relate to the expected reductions in industrial or traffic emissions from the

implementation of measures from which the air quality impact has been derived. This will clearly focus action and performance success towards meeting the aims of the Action Plan. Where this is not practicable now, a commitment to identifying such should be made.

4. Closer consideration should be given to the implementation timescales.
5. The Council should include the outcome of the current consultation exercise, in order to convey how consultation has influenced the content of the plan.
6. Further information should be given on the funding of measures and/or where further funding will be sought.

\*A measurable indicator related to the emission source that can be used to monitor progress with implementing the action plan measure.

### **Conclusions**

This is a report which contains some of the information outlined Defra's guidance on air quality action plans. The daily average PM<sub>10</sub> objective is in excess of the objective and the emission reduction likely from the implementation of the action plan requires quantification. An indication of when compliance with the objective is likely to be achieved should be made. The introduction of targets and key performance indicators\* for each action will be beneficial to North Lincolnshire District Council in demonstrating their progress on implementation of this Action Plan.

### **Contact Details for further enquiries**

Issues can be followed up through the Air Quality Action Plan helpdesk as follows:

Action Planning Helpdesk telephone: 0870 190 6050

Action Planning Helpdesk email: lasupport@aeat.co.uk

Action Planning Web-site: [www.airquality.co.uk/archive/actionplan.php](http://www.airquality.co.uk/archive/actionplan.php) “

Following this appraisal the Council wrote (27<sup>th</sup> December 2007) to the Action Plan Helpdesk and Defra seeking further clarification of the points that had been raised in the appraisal.

“Dear Sir/Madam,

### **Appraisal of Draft Action Plan for PM<sub>10</sub> AQMA**

With regards to the appraisal of North Lincolnshire Council's Action Plan, some of the suggestions have been noted and work will be done on them to meet the four-month deadline. However, I have the following questions and points of clarification for your consideration:

The appraisal states:

*'No data have been provided in the action plan report to indicate the size of the exceedance'.*

This was documented in the Further Assessment (FA). Is there a need to state this again in the Action Plan? It appears that the FA has not been read in conjunction with the AP. I would be grateful if you will clarify whether this was done?

Furthermore you write:

*'The plan does not include any source apportionment data...'*

*'...emission reduction likely from the implementation of the action plan requires quantification'*

The first point was again discussed in the FA, with a reasonable quantity of data analysis. However, given that the size of the industrial site (at least 8 square km) with multiple operators and types of sources, it is difficult at this stage to determine how much each source contributes on a percentage basis (and probably never will be). The contribution from each source not only varies significantly on a day-to-day basis but there are numerous sources on site, which are both fugitive and stack in nature. Just to give you a flavour of the number of sources on site, there are:

- 4 blast furnaces on site,
- A BOS (basic oxygen steelmaking) plant,
- Two coke oven sites, which all contribute to making 4 million tonnes of steel a year.
- ~ 150 kms of roads (mostly tarmac but also unmade as well),
- ~ 150 kms of railway track,
- 3 mobile crushers (at the moment), plus other more significant crushing operations,
- Stockpiles of material,
- Significant areas of the site consist of un-made slag,
- Not to mention the 100 years of historical dust that has accumulated on the site.

In order to prepare the Further Assessment the Council spoke to and emailed the various helpdesks about the level of source apportionment needed, one of the responses from the Review and Assessment Helpdesk is quoted below (November 2006);

*"Your FA work should allow you to determine the contributions from local sources compared to background which should allow you to determine to what extent the contributions from local sources are contributing to the exceedences (both for the annual mean and in the case of each daily exceedence). This simple calculation could be used very crudely to estimate the reductions in overall emissions necessary, or with the aid of modelling you can go further and try and establish actual relationships with the different local sources and their contributions."*

*Ideally you should be able to list the relative and actual contributions from all local processes!"*

It has been established that industry is the main source of PM<sub>10</sub> in the area, which is more than reasonable given the resources of a Local Authority, but we have also looked at the data further with regards to pollution roses and how concentrations vary with time. At the December 2007 IAPSC conference the Council, the Environment Agency and Corus gave presentations about the understanding (and lack of understanding) of PM<sub>10</sub> sources from steelworks. The Corus presentation stated that there are many things that are not known about steelworks sources of PM<sub>10</sub>. ([http://www.iapsc.org.uk/presentations/1207\\_N\\_Haines.pdf](http://www.iapsc.org.uk/presentations/1207_N_Haines.pdf)) This is from a company that has an annual turnover of £9.7 billion and thus has significantly more resources

available than a Local Authority. Corus have many staff and PhD students dedicated to looking at air pollution around their sites.

Thus at this stage as Corus do not have a full understanding of their on-site sources, we consider it unreasonable to expect a Local Authority to have done this as well. In addition, we would need to take into account emissions from several other companies on the industrial site.

You state that 'a measureable indicator related to the emission source can be used to monitor progress...'. The whole issue we have in Scunthorpe is that there is not a single emission source. If this were the case, reporting and dealing with emissions from one source would be a lot simpler.

In terms of timescales, no deadlines were stated for the Corus Improvement Programme as Corus are regulated by the Environment Agency. Although we are in constant contact with the EA, for example the deadline for the Corus on-site monitoring was brought forward, we have limited influence on pressurising Corus to meet these deadlines.

I trust you find this information constructive, however, please do not hesitate to contact us if you would like to discuss these issues further."

**Defra subsequently replied (18<sup>th</sup> January 2008):**

**"APPRAISAL OF NORTH LINCOLNSHIRE DC'S ACTION PLAN**

Thank you for your reply to our assessment of North Lincolnshire's Action Plan.

Under the Local Air Quality Management, local authorities are required to consult on their action plans and make the final version of the plan accessible to members of the public. We note that North Lincs has consulted stakeholders on their draft action plan. As you know Action Plans are standalone documents. Also not all readers have immediate access to authorities' Further Assessment reports. It would therefore be beneficial to provide a summary of your Further Assessment within your Action Plan. This would set the context of the action plan more clearly for a wide range of readers.

On your point about source apportionment data and emissions reduction, it is understood that this site is large, complex in nature, and dealing with fugitive emissions can be particularly challenging, however since there is exceedence of the objective we recommend that all parties work together to minimise the pollution. We also accept that it is not reasonable to fully quantify all emissions from the site at this time. We recommend encouraging the Environment Agency (EA) and Corus to use resources available to quantify the emissions from the major release points and all parties work towards setting emission reduction targets for the release points. In this way some measurable emission reduction could be achieved. Emissions from other companies using the site should also be targeted if they are significant emitters.

As regards implementation timescales for the improvement of air quality, it is important to have deadlines as it demonstrates to those who are being exposed to air quality objective exceedences that their public health is important. We recommend that you work closely with the EA and Corus and use all reasonable means to ensure improvement programmes are attained within agreed timeframes.

Finally, you mentioned in the conclusion of your action plan that the plan will evolve over time as more study is done and further ideas are proposed. We welcome this approach. The continuous improvement in the action plan will help deliver the air quality improvement necessary for the protection of health. This is particularly important in areas with several sources of exceedence.

If you have further queries, we ask that you contact the AQAP helpdesk on telephone: 0870 190 6050 or email:[lasupport@aeat.co.uk](mailto:lasupport@aeat.co.uk)"

**Changes to action plan:**

- Inclusion of dates (or current status) for all actions, some have been reviewed and changed.
- The Further Assessment has been attached as an appendix to the action plan.
- Actions A4, A6 to A8, impacts have been changed to: 'For Corus to determine, potentially high'. These studies and improvements are being carried out by Corus therefore financial details have not been disclosed and cannot be reported.
- Addition to action D2, to potentially include those involved with other steelworks sites (Council, EA and Corus) in the Local Industry Forum. This is to improve the sharing of ideas and prevent the repetition of work in relation to reducing PM<sub>10</sub> emissions around steelworks sites.
- New action D7, development of relevant measurable indicators.
- New action D8, development of target to reduce the number of receptors within the AQMA (size reduction of AQMA).
- Other changes including better definition maps and improved table of objectives.
- Appleby Group Ltd have changed name to Civil and Marine Ltd.

## Part 10: Responses to the 2007 Detailed Assessment Consultation

The Detailed Assessment was sent to representatives of the following companies and organisations:

- ConocoPhillips Refinery.
- Corus
- Environment Agency  
(2 separate offices as Corus and refineries are in different EA areas).
- Total Lindsey Oil Refinery.
- Highways Agency.
- Hull and Goole Port Health Authority.
- Health Protection Agency.
- North Lincolnshire Primary Care Trust

### Neighbouring Councils

- North East Lincolnshire,
- West Lindsey District,
- Doncaster Metropolitan Borough,
- Hull City,
- East Riding of Yorkshire,
- East Lindsey District,
- Bassetlaw.

### North Lincolnshire Council

- Divisional Manager, Environmental Health,
- Service Director, Head of Neighbourhood and Environment,
- Neighbourhood and Environment Cabinet member,
- Highways Team.

### Parish Councils

- North Killingholme Parish Council,
- South Killingholme Parish Council,
- East Halton Parish Council.

The 2007 Detailed Assessment has also been available to the public via the Council's dedicated air quality website, [www.nlincsair.info](http://www.nlincsair.info).

Three responses to the consultation were received, from: Corus, the Environment Agency and the Transport Planning Team Manager for North Lincolnshire Council.



Mr J Flitney  
North Lincolnshire Council  
PO Box 42  
Church Square House  
SCUNTHORPE  
North Lincolnshire  
DN15 6XQ

Corus Construction & Industria  
PO Box 1  
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Scunthorpe  
North Lincolnshire  
DN16 1BP

NO:	27 DECEMBER 2007
Ref:	IAC
Referred to:	
Comments:	

21 December 2007

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F +44 (0)1724 402618 (Direct)  
[paul.whitby@corusgroup.com](mailto:paul.whitby@corusgroup.com)

Paul Whitby  
Environment Manager

Dear Mr Flitney

**Air Quality Detailed Assessment 2007**

Please find below a few comments on the assessment, particularly the section on lead.

Lead

As a result of the 2006 Updating and Screening Assessment North Lincolnshire Council proceeded to a detailed assessment for lead (Pb) in the Scunthorpe area.

Approximately six months of Partisol filters from the Scunthorpe Town monitoring site and three months of Partisol filters from the High Santon monitoring site were analysed for lead. The mean concentration recorded at Scunthorpe Town was  $0.022 \mu\text{g m}^{-3}$  and at High Santon it was  $0.076 \mu\text{g m}^{-3}$ . These values are below the current (2004) objective of  $0.5 \mu\text{g m}^{-3}$  and the 2008 objective of  $0.25 \mu\text{g m}^{-3}$ .

Although a full year's worth of monitoring was not undertaken, North Lincolnshire Council is satisfied that the objectives are being met and that no further monitoring of lead in the Scunthorpe area need take place. An Air Quality Management Area does not need to be declared. However, emissions from industrial processes in Scunthorpe will continue to be examined as part of the Review and Assessment process.

A small amount of source apportionment work has been carried out. In line with expectations, the wind frequency roses drawn suggest that the highest lead concentrations occur when the wind more frequently originates from the southeast for Scunthorpe Town and the southwest for High Santon. In addition, the weekly  $\text{PM}^{10}$  and lead concentrations at Scunthorpe Town seemed to fluctuate in a very similar manner. This relationship was less distinct at High Santon. The expected source of lead emissions is the Sinter Plant and the wind roses shown support this.

We do not believe that you should quote the sinter plant as the expected source, suggest 'may indicate the industrial site'. Dispersion modelling carried out by Corus Swinden Technology Centre for the PPC application in 2001 and further work (attached) does not support this assertion. We are reworking the modelling as part of an Improvement Condition due in June 2008; we can make the new data available for you.

Some time ago we revised our calculation methodology for lead emissions from the sinter plant. This now uses an emission factor compared to an annual spot sample multiplied up to an annual release. This resulted in the significant increase in mass release.

We have compared Scunthorpe to other areas and attach the data for your comparison.

The appendix mentions fence line measurements and PPC permit implications. We would believe that any limit value should only apply if there is a receptor identified.

Yours Sincerely

Paul Whitby, Environment Manager  
Scunthorpe Environmental Services

### **Transport Team Manager (via email)**

"I have had a look at both of the consultation documents (detailed assessment 2007 & action plan for Scunthorpe PM10 AQMA)  
Detailed assessment

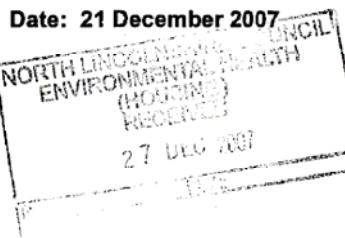
- Highways & Planning are currently looking at a scheme to improve traffic flows at the Lakeside roundabout and remove significant numbers of HGVs from the junction, although we are only in the initial feasibility stage. There is therefore, potential to counteract some of the air quality impact at this junction caused by the full opening of the residential development.
- Humber Road. This area is a significant development area and traffic levels will increase. The predominant vehicles are likely to be for heavy goods. Development of the land is already underway and a large part is subject to an imminent planning application with contracts for development likely to be in place for 18-24 months. A scheme to duel the A160 and improve the junction is also being promoted which will improve traffic flow and attract more business to the area. The ports (ABP & Humber Sea Terminal) also have expansion plans which will lead to an increase in HGVs.
- The Gallagher site to the north of Tesco is likely to see house building commence 2008/2009 (subject to highway & planning requirements being met in the first part of 2008. "

## Environment Agency response (Nottingham Office):

creating a better place



Jon Flitney  
Environmental Protection  
North Lincolnshire Council  
PO Box 42  
Scunthorpe  
DN15 6XQ



Dear Jon

I write in response to the consultation on the Air Quality Detailed Assessment 2007 and the PM10 Action Plan. These comments are on behalf of the Midlands Region East Area PPC Compliance team of the Environment Agency.

- **1,3 Butadiene**

The Killingholme and Lindsey oil refineries fall within our Anglian Region. Comments should be requested from the PPC Compliance team in the Northern Area.

- **Lead**

It is perhaps premature to claim that the Sinter Plant stack emission is the primary source of the lead identified in the monitoring exercise undertaken at Scunthorpe and High Santon. While the Sinter Plant is clearly a relatively significant emission point of lead, the 107m stack will promote dispersion beyond the local vicinity. It is possible that other point source emissions and fugitive releases are contributing to local ground level concentrations.

The relationship between PM10s and lead shown in the report should be given further consideration. It may be an over simplification to state that the PM10 and lead originate from "similar sources". It may be worthwhile investigating the relationship between prevailing weather conditions, i.e. precipitation as well as wind direction, PM10s and lead concentrations together with process conditions such as Sinter start ups. If PM10s and lead are closely associated, careful analysis of the data may help identify the sources of both pollutants. Our programme to identify and reduce the significance of PM10 sources should also bring about a reduction in lead.

In relation to the Sinter Plant itself, I can confirm that the mass release data reported in our Pollution Inventory records is based on two extractive emission tests per year. The sampling method used for lead emissions is BS EN 14385. This is the mandatory method for extractive sampling of metals under the Environment Agency's MCERTS scheme. The sampling method should only change in-line with international standards.

Trentside Offices, Scarrington Road, West Bridgford, Nottingham, NG2 5FA.  
Customer services line: 08708 506 506



Under PPC, Corus report lead emissions from three plant areas, namely the Sinter Plant, BOS Plant and Coke Ovens. Extractive methods are used for the Sinter stack and BOS Plant. An emission value is calculated for coke oven emissions based on the analysis of coal processed at the plant. The results for each plant area is then used together with production data to calculate the mass release data as reported in the Pollution Inventory.

For 2006 the mass release by plant area were calculated as:

Sinter 10.6t  
BOS 0.8t  
Coke 0.8t

This gives a total emission of 12.2 tonnes for the year.

- NOx

The elevated NOx concentrations at the junction of the A18 and Brigg Road are noted. The Environment Agency will provide further assistance if emissions from PPC Permitted activities are found to be causing or contributing to an exceedance due to increasing background levels.

#### Council response:

The Detailed Assessment has been changed to reflect the suggestions of the EA and Corus, i.e. to identify the industrial site as the potential source of lead rather than specifically the sinter plant. In addition, Defra have decided to install two Partisols for the measurement of heavy metals (including lead) at Scunthorpe Town and Low Santon, which will enable monitoring to continue, see Part 3.1.

The potential developments mentioned by the Transport Planning Manager are discussed in Part 2.5.6 and 4.4.

Any requests for information about Air Quality issues within  
North Lincolnshire, or requests to obtain a copy of  
this report should be made to the:

Environmental Protection Team  
Neighbourhood and Environment  
Church Square House  
PO Box 42  
Scunthorpe  
North Lincolnshire  
DN15 6XQ

Telephone: 01724 297617  
Fax: 01724 297898

Email: [environmental.health@northlincs.gov.uk](mailto:environmental.health@northlincs.gov.uk)

On request, this report will be made available on tape, in Braille,  
large type, or in a language other than English.

**No English?**

**For information please call:**

08000 193530 (Arabic) للحصول على المزيد من المعلومات اتصل بـ:

তথ্যগুলি বাংলায় জানতে হলে এই নম্বরে ফোন করুন: 08000 193531 (Bengali)

欲知粵語版的信息，請致電: 08000 193532 (Cantonese)

हिन्दी में जानकारी के लिये 08000 193533 पर फोन करें (Hindi)

. بۆ زانباری بە کوردی سۆرانی تەلەفۇن بۆ ئىمارە 08000 193537 (Kurdish Sorani)

Para mais informação em português contacte-nos através do telefone  
08000 193538 (Portuguese)

ਪੰਜਾਬੀ ਵਿਚ ਜਾਣਕਾਰੀ ਲਈ 08000 193539 'ਤੇ ਫੋਨ ਕਰੋ (Punjabi)

"Warbixinta oo af Soomaali ah wac 08000 193540" (Somali)

08000 193541 (Urdu) اردو میں انفارمیشن کے لیے اس ٹیلیفون نمبر پر رابطہ فرمائیں۔

Nie mówisz po angielsku? Po informacje zadzwoń pod numer 08000 195587 (Polish)

**Не знаете английский? Для информации звоните** 08000 195586 (Russian)

For information in large print, audio, Braille or to request a  
signer to speak to us please contact 01724 296296

**[www.northlincs.gov.uk](http://www.northlincs.gov.uk)**



**[www.nlincsair.info](http://www.nlincsair.info)**

**Draft, April 2008**