

Version: Update 2

<b>Incident location</b>	Stourport Rd, Kidderminster, DY11 7QE <b>Grid reference:</b> Easting: 382065; Northing 273730 <b>Site name:</b> Lawrence Skip Hire <b>Type of site:</b> Permitted waste site <b>Local authority:</b> Wyre Forest Local Authority
<b>Report date</b>	<b>Report time</b>
18/06/2013	14.20

*[All subsequent updates to the Summary Report are to be entered in **BOLD text** in addition to previous entries, which should remain on the summary report in plain font, presenting a consolidated picture based on current data and 6hr, 12 hr and 24hr forward looks ]*

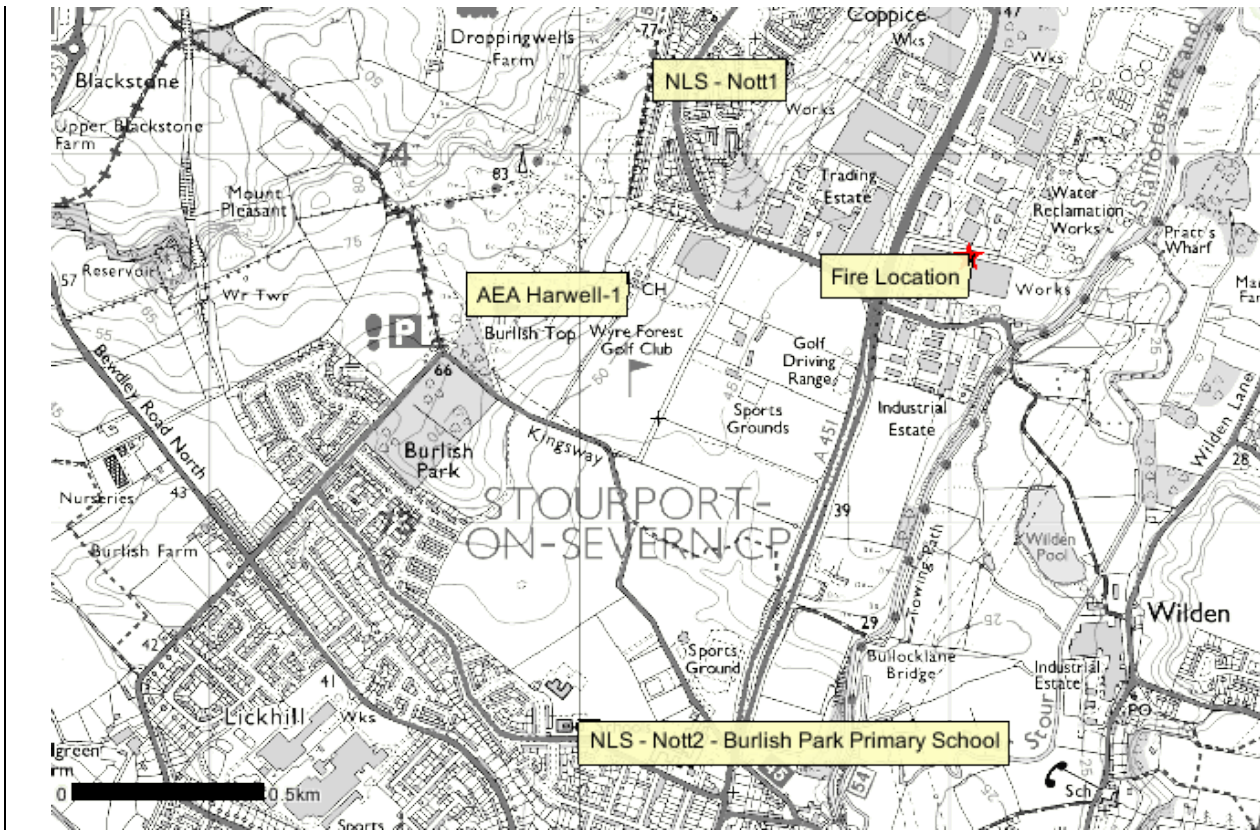
## 1. Summary of incident and Air Quality monitoring data available - prepared by EA

- Fire at Lawrence Skip Hire, Kidderminster – Grid Ref: 281999,373675
- Large fire at a permitted waste site. RDF waste, including recycled plastics, mixed waste and canisters.
- Fire-fighting activities – 14 tenders currently not likely to extinguish the fire for several hours or days
- Current position – appears to be stable expecting additional monitoring information to inform future approach from the AQ Cell
- Estimated remaining duration of release or plume – fire likely to burn for several days;
- Air quality monitoring data – two monitoring locations both have been sampling from approximately 6AM:
  - Gold Avenue (GR381200,274258) – low particulate results so far. Strategy is to move this monitor to Burlish Park Primary School (GR382055,273716).
  - Zortech Avenue - 381140,273678 – results being reviewed by PHE
- **After reviewing the monitoring data and other evidence, the AQ Cell is recommending that there is no added value in continuing to monitor emissions from this fire in spite of ongoing and potentially aggressive fire-fighting techniques. The view was supported by the Cell Members; Environment Agency; Public Health England; Met Office; Food Standards Agency and the Local Authority.**
- **Fire-fighting activities – initially 14 tenders now reduced to six. We are advised that the FRS is contemplating some highly aggressive fire-fighting techniques. The recommendation from the AQ Cell is that this will lead to very localised and short-lived deterioration in local air quality but the likelihood of significant pollution remains low.. Monitoring of any significant concerns can be progressed by the Local Authority in any monitoring they wish to undertake as part of the “recovery phase”.**

- Fire at Lawrence Skip Hire, Kidderminster – Grid Ref: 281999,373675
- Large fire at a permitted waste site. RDF waste, including recycled plastics, mixed waste and canisters.
- Current position – after a period of dark smoke emissions with a buoyant plume the smoke is no longer dark and more wispy with less buoyancy. The plume has been observed as grounding at both monitoring locations during 18/06/13. It is still estimated to burn for more than 48 hours with ongoing firefighting using reduced numbers of tenders
- Air quality monitoring data – three monitoring locations have been used: both have been sampling from approximately 6AM :
  - NLS Location 1 - Gold Avenue (GR 381200,274258) approximately 6AM 17/06/13 to 14:00 17/06/13 – low particulate results so far.
  - NLS Location 2 - Burlish Park Primary School (GR 380999, 272478) 14:00 17/06/13 to current.
  - Zortech Avenue – (GR 381140,273678) - approximately 6AM 17/06/13 to current
  - All results have been reviewed by PHE and advise that despite firefighting activities (that can lead to short-term increased emissions), measured levels are little above ambient background levels.



Old locations



## Updated locations

### 2. What is the worst case scenario? Coordinated by EA

- As the fire progresses, lower hear release could result in the plume grounding close to the local housing.
- If the roof of the building contains asbestos, potential to release asbestos particles into the environment.
- As the fire has progressed, a reduced plume buoyancy has not resulted in high PM10 pollution despite fire-fighting efforts reducing the heat released from the fire.
- Concern over the asbestos content of the building roof has been addressed by the cell by taking asbestos samples at AEA Harwell 1 and NLS Nott 2 monitoring locations.
- The fire has the potential to cause an enhanced impact although based on evidence the risk of this is low. However contact has been made with the Local Authority to assist in any future monitoring they may wish to undertake outside the remit of the AQ Cell.

### 3. Information from similar incidents - Prepared by PHE

Currently no information about similar incidents

### 4. Meteorological situation - prepared by Met Office

**0 – 6 hours ahead:** Wind direction remaining northeasterly (between 040 and 070) through the period, (towards the southwest between 220 and 250), with around 10mph (20km/hr). Further outbreaks of light rain, gradually petering out.



**Wind, mainly from the east at first (towards the west), gradually veering through the afternoon, expected to be from the southwest later (towards the northeast), staying light at 10mph or less. Chance of showers, but not expected to be heavy.**

**6 - 12 hours ahead:** A slow backing of wind direction but, at the same time, a decrease in speeds. Directions, mainly 020 - 050, towards 200 – 250, decreasing to around 5mph (10km/hr). Generally dry, variable cloud but becoming more stable late in the period.

**Wind, expected to continue to veer from southwest (towards northeast), to blow from a northerly direction by the end of this period (towards the south), remaining around 10mph or lighter. A chance of a shower but generally dry.**

**12 – 24 hours ahead:** Wind speeds will remain light, around 5mph (10km/hr). Directions are expected to be predominantly from the northeast (020 - 050, towards 200 – 250), but may be more variable. Showers are forecast to move northwestwards across the area around midday Tuesday, perhaps heavy for a time. However, there is some uncertainty on that detail. If showers move through, this would give washout.

**Winds expected to continue to blow from the north or northwest through this period (towards the south or southeast), with an increase in strength, 10 to 12mph, perhaps occasionally 15mph later. Staying dry but becoming warm and humid.**

## **5. Forward look – potential impacts on the environment - prepared by EA**

### **0 – 6 hours ahead:**

Due to meteorological forecast, continue to monitor at Zortech Avenue as representative of likely local exposure. Review the data to consider the public health risks (PHE). Move the Gold Avenue monitoring team to Burlish Park Primary School. Not currently likely to be in the plume but the wind directions may change to a more northeasterly overnight and so monitoring here will be precautionary and advise on impacts a sensitive receptors.

### **6 - 12 hours ahead:**

As above. Monitoring results from Burlish Park School likely for 9AM.

### **12 – 24 hours ahead:**

To be informed by PHE appraisal of monitoring results and other observed evidence.

### **0 – 6 hours ahead:**

**Continue to review monitoring data until such time as Silver provides feedback on the AQ Cell's recommendation to stand down and remove the monitoring equipment. We are programming a potential final download of data at 16:00 subject to approval.**

### **6 - 12 hours ahead:**

**We recommend that unless the monitoring data changes significantly for the worst, the AQ Cell will stand down at 17:00 on 18/06/13**

### **12 – 24 hours ahead:**

## **6. Forward look – prepared by PHE**

### **Comparison of pollutant concentrations with health based standards.**

**Additional air quality data was received from the monitoring teams at Zortek**

Avenue (AEA team) and from Burlish Park Primary School (NLS team – relocated from Gould Avenue at approximately 14.00). Data sets were down provided to PHE at approximately 11.30 and 16.00 on 17 June 2013, at 07.00 and 11.30 on 18 June 2013

### Particulates

Data has been received from both locations at these three time points.

At Zorteck Avenue PM10 levels have averaged below  $70\mu\text{g}/\text{m}^3$  since monitoring began at 06.33 on 17 June 2013 though there has been some variability over the recording period, especially in the morning period on 17<sup>th</sup> June. Lower average PM10 levels (averaging  $30\mu\text{g}/\text{m}^3$ ) have been recorded over the past 24 hours

Similarly at Burlish Primary School monitoring site similar levels averaging under  $100\mu\text{g}/\text{m}^3$  were recorded (between approximately 14.00 on 17 June and 04.35 on 18 June 2013), although short duration spikes (lasting for around a minute) of higher particulate concentrations were observed on a number of occasions overnight. These were considered to be consistent with increased fire fighting/fire management activities at the site by FRS and were not considered to be a public health concern. Fire service have been contacted by PHE and asked to minimise these activities as much as possible at school arrival and dispersal times (ie 08.00 to 09.00 and 15.00- 16.00) and over the evening rush hour period 17.00 – 18.00.

Data from the morning monitoring period (04.00 to 11.09 on 18 June) PM10 particulates again averaged under  $100\mu\text{g}/\text{m}^3$ , with several very high peaks being observed (upto  $500\mu\text{g}/\text{m}^3$ ) but for very short periods (few minutes) and again likely to be consistent with FRS activities on site

### Organics

Data has been received from both sites

Monitoring at both sites has indicated the presence of acrolein and phosphine, but at very much lower levels than were reported yesterday. Previous monitoring experience indicates that these results may be unreliable based upon a known interference with the analytical technique due to the limit of detection and the complexity of the plume. Furthermore no symptoms consistent with significant exposure to acrolein or phosphine have been reported by the monitoring team and acrolein levels do not seem to correlate well with the particulate measurements. We will be asking the monitoring teams to keep the AQC updated on any ground observations that might indicate further investigation is required in relation to these results

### Asbestos

Some 20-30 tonnes of asbestos containing material (ACM) are thought be involved in the building structure being affected by the fire and the site owner has been advised to employ specialist contactors to ensure safe removal of this material off site. It may be possible that very small fragments of ACMs may have been lifted by plume and there is a small possibility of off-site dispersal of ACMs, though this type of fall –out has not been observed or reported.

In terms of health impact of asbestos, this is related to the inhalation of asbestos

**fibres capable of penetrating deep into the lung. These fibres will be very small and it is unlikely that many will be released from the collapse or destruction of bonded asbestos materials ; these have been usually used in the construction of buildings, for example corrugated asbestos-cement is commonly used as a roofing material.**

**Larger particles which may have been generated from a collapse are likely to have fallen from the plume in the immediate vicinity of the fire. Any asbestos fibres released to air and which are capable of being taken deep into the lungs (so called “respirable” fibres) will only make up a very small fraction of any material released and atmospheric dispersion and deposition (especially due to rain) will further reduce concentrations. Air samples have been taken for asbestos analysis by the monitoring teams but results will not be available for several days.**

**As a result the potential for the general public to be exposed to significant amounts of asbestos is very low and any public health risk from asbestos released during this incident is therefore more likely to originate from cleaning of debris at the site and degradation of particles scattered around. It is concluded that the long-term health risks are minimal providing appropriate clean up occurs.**

#### **0 – 6 hours ahead**

**Current experience with the behaviour of the plume, even during interventions by FRS indicates that excessive particulate release from the site is not anticipated. Weather conditions forecast to be reasonably constant, and although the wind direction may change the monitoring sites can remain at the same locations**

#### **6-12 hours ahead**

**If the situation remain constant then consideration to be given to discontinuing monitoring**

#### **0 – 6 hours ahead:**

##### **Particulates**

Particulate monitoring has been returned for both sampling locations. The Particulate matter data at Gold Avenue has shown that these are generally below 150ugm<sup>3</sup> (average is 74ugm<sup>3</sup>) over the time period (0748 to 1055). Particulates at Zortek Av have been variable between 0900 and 0947 with a gradual increase to above 150ugm<sup>3</sup>. The PM10 levels remain below 300ugm<sup>3</sup>.

##### **Irritant gases**

Monitoring has indicated presence of acrolein and phosphine at elevated levels. Previous monitoring experience indicates that these results may be unreliable based upon a known interference with the analytical technique due to the limit of detection and the complexity of the plume. Furthermore no symptoms consistent with significant exposure to acrolein or phosphine have been reported by the monitoring team and acrolein levels do not seem to correlate well with the particulate measurements. We will be asking the monitoring teams to keep the AQC updated on any ground observations that might indicate further investigation is required in relation to these results.

### 6 - 12 hours ahead:

Not supplied

### 12 – 24 hours ahead:

Not supplied

## Food Standards Agency Advice

Regarding the query raised at Silver regarding a farmer in the vicinity of the fire asking for advice re: his strawberry crop, FSA advice as follows:

- Advice will depend on whether the plume has ‘grounded’.
- Farmer in this instance is advised to ‘inspect’ his crop. If the crop on inspection looks fine then, provided that the strawberries are washed, there are unlikely to be any food safety implications in this instance and the farmer can sell his crop.
- If however, there has been grounding and the crop is covered in a sticky, black deposit, this will be difficult to wash off and the farmer will probably not be able to sell his crop.
- Our experts have advised that even if the crop is affected (which should be evident from the inspection) the strawberries do not present an ‘acute’ risk.
- Suggest that if the farmer continues to have concerns, on receipt of this advice, that he contacts his local EHO who, in turn, may liaise with the FSA.
- Added that more generally, our standard advice regarding locally grown produce in the vicinity of the chemical fire is, as a precaution, to wash and peel locally grown fruit and vegetables (e.g. in gardens, allotments etc).

## 7. Issues, comments and requests – prepared by EA

The Air Quality Cell discussed the potential to deploy a mobile laboratory capable of real-time measurements. Advised by PHE, the AQ Cell agreed that the lab is not likely to provide added value to the existing monitoring strategy at this point. This decision will be kept under review.

### Log of requests for Air Quality monitoring and sampling timeline/strategy

Request – [organisation/individual]	Monitoring/sampling -pollutants	Frequency of downloads	Location of monitoring/sampling	Timeline for next download
		Since 17/06 6am	Zortech Avenue	
		Since 17/06 PM	Burlish Park Primary School	

## 8. Other sources of information – prepared by EA

### Public Health media statement

**PHE provided a public health message to SILVER control (14.00 on 17 June 2013). It is suggested that future advice refers to individuals within the plume area and not the wider population. PHE to convey this to PHE representative at SILVER**

“17<sup>th</sup> June 2012

Fire at Lawrence Recycling and Waste Management

We are not aware of any reports of any people experiencing ill effects from this fire. The Fire and Rescue Service is on-site dealing with the fire and the other agencies involved will continue to monitor the situation and issue advice to the public, businesses and organisations affected as necessary.

Smoke from any source may contain substances that can irritate the lining of the air passages, eyes and the skin. Respiratory symptoms can include coughing and wheezing, breathlessness, sputum (phlegm) production and chest pain. People with asthma and other respiratory conditions may be particularly susceptible to the smoke and should carry and use their medication (such as their inhalers) as usual. If symptoms occur, people should seek medical advice or call NHS Direct 0845 4647.

Dr David Kirrage, a consultant with the Public Health England’s West Midlands West Health Protection Team, said: 'It’s important that local residents understand that the risks to their health are low, however smoke is an irritant so it can make people’s eyes and throat sore. It may also worsen any breathing or heart conditions they have.

“The general advice remains that people should do all they can to stay out of the smoke. If concerned, staying indoors with the doors and windows closed should provide some protection.”

If residents are affected by smoke they should stay indoors, keep their doors and windows closed, and tune in to the local radio station for advice and information. Motorists who have to travel through the smoke should keep windows closed, turn off air conditioning and keep their air vents closed.

## **9. Log of Local Authority contact - prepared by EA**

**Steve Jordan – Head of Regulatory services (Worcestershire) joined the AQC telecon at 12.30 and has been communicating with AQC chair – Vernon Smith.**

## **10. Next report**

The next:



- **Summary Report** will be produced at
- **Monitoring data update** will be provided

### Version Control

<b>Version</b>	<b>Updated by (name and organisation)</b>	<b>Date</b>	<b>Time</b>
<b>Initial report</b>	<b>Gemma Simpson Environment Agency</b>	<b>17/06/2013</b>	<b>13.50</b>
<b>Update 1</b>	<b>Gemma Simpson Environment Agency</b>	<b>18/06/2013</b>	<b>14.20</b>
<b>Update 2</b>			
<b>Update 3</b>			