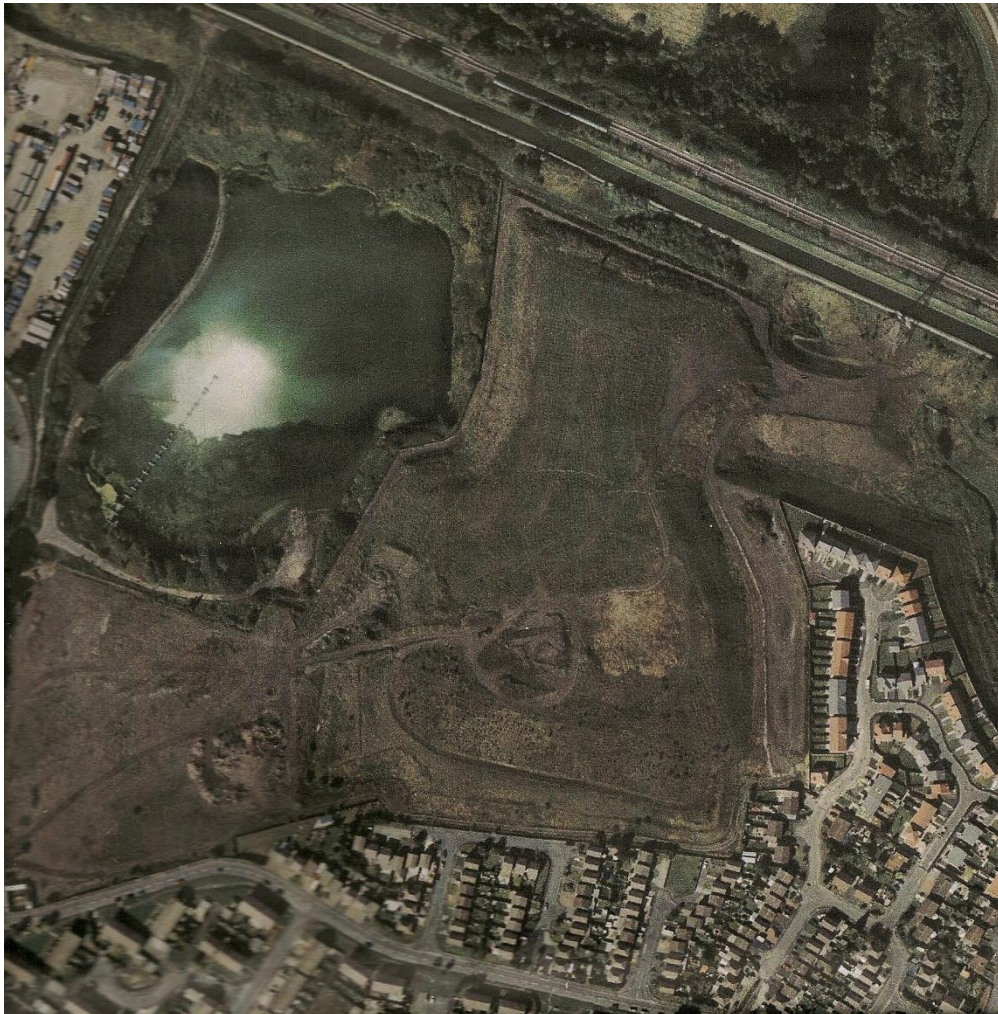


**MATTER 5- REGENERATION CORRIDORS/SITE SPECIFIC LOCATIONS ISSUES 5 AND 3  
REPRESENTATION NUMBER 14P REPRESENTOR MR IAN CARROLL**



# **A TALE OF TWO TIPS**



1.0 "It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness...."

1.1 it was the age when waste management licences were issued with few questions asked, it was the age when tipping and playing the planning system for all it was worth made a mint. It was the epoch when the regulators "monitored closely", it was the epoch when they looked the other way.....

## MATTER 5

### 2.0

**ISSUE 5 . “The Environment Agency has concerns about some sites e.g. H9.3 (Rattlechain) because of contaminants and ground conditions and H9.4 Vaughan Trading Estate because of flood risk. How realistic is it to rely on such sites coming forward?”**

### 2.1

**It is vital to note that the two sites proposed in the plan H9.3 (Rattlechain) belong to two different landowners and have site histories containing chemical wastes which are incompatible, i.e any proposal to “fill in the hole with a great mound to level out the wastes” is practically flawed.**

### 2.2

The Environment Agency are correct in their assessment of the Rattlechain site being undeliverable because of the ground condition constraints and that “it conflicts with Policy SAD DC 4 – Pollution Control, as it cannot currently be proven that the siting of residential development at this location would not have a detrimental impact on the health or amenity of future occupiers.”

### 2.3

The claim by RPS that they are “not aware of any site specific constraints which demonstrate the site’s unsuitability in principle for residential purposes” is complete nonsense- or demonstrates how little they have been told about the site by either their clients or Rhodia. The site cannot be in any way compared to another Mintworth landscaping project involving a lagoon in Shidas Lane, with a completely different set of chemical contaminants and which was not landscaped with foundry sand for residential end use.

### 2.4

In short Mintworth have no proven track record for a scheme of this scale- indeed I believe that they require the Rhodia site only for tipping and foundry sand storage use purposes with no realistic intention of ever removing any of the 60+ years of the highly toxic chemicals and drummed waste and machinery deposited in the sediment for off site disposal. This proposal is merely an attempt to link the two rattlechain sites to “kill two birds with one stone”, by filling in a hole with a large unstable mound. **It is a toxic marriage doomed to end in irreconcilable differences.**

### 2.5

- The Rhodia landfill site still has an active permit attached to it- THIS IS A LEGAL CONSTRAINT TO DEVELOPMENT on this part of the site.

### 2.6

- THERE HAS BEEN NO REMEDIATION TO THE SITE- ANOTHER LEGAL CONSTRAINT. Given that the Environment agency have yet to allow Rhodia to even lay a capping barrier on top of the sediment, no practical attempts to even address safe end use of the site can be made. We sincerely hope that they never give Rhodia the go ahead to lay this thin carpet which will be used a disingenuous excuse to allow years of back filling operations on top to “stabilise the waste”- most likely by Mintworth.

### 2.7

- The banks of the lagoon are highly unstable, contaminated and cross contamination from the Duport's site (Mintworth land) has been identified by Rhodia in their closure plan for the site -these are more constraints to the principle of residential development. Unsanctioned liquid waste and also asbestos known to have been deposited on the mintworth site, as was all the waste from the sewage works site containing phytotoxic heavy metals - this has not been forgotten, and should not be now or in the future.

### 2.8

- The biggest constraint is the limitation of the best available technique to deal with both sites following the decision to build houses on the former sewage works site. This argument was ignored by the planning inspectorate at appeal when these houses were built. It is clear to see now that this decision was a very short sighted one indeed. The issue surrounding the past history of the lagoon is the key to why this proposal is unrealistic and it important to understand this.

## 3.0 UNSATISFACTORY RISK OF HARM TO THE ENVIRONMENT AND WILDLIFE.

### 3.1

Sandwell swanwatch, of which I am coordinator have campaigned since 1999 concerning the lagoon after several dead birds were seen dying on the lake after short term exposure. White phosphorus exposure has now been confirmed in seven birds tested, fully vindicating our certainty that this lagoon was posing an unacceptable threat to wildfowl landing on the lake. We have compiled the evidence that the authorities did not want to investigate and have sought the relevant expertise from experts in the field in another country because there are none in this country though several Government agencies may like to think that they are.

### 3.2

Marianne Walsh is a US army chemical engineer and analytical chemist who was involved with both the clean up and identification of white phosphorus toxicity at Eagle River Flats a US army firing range. She has viewed all of the white phosphorus tests on the birds, including the first crucial test on a swan. Her key observations from this issue are

### 3.3

- **“There is no doubt that this swan ingested a lethal dose of white phosphorus.”**

### 3.4

- **“I disagree with the statement that ‘the amount detected is very small’. The lab had to dilute the sample 100 times prior to analysis. The mass found in the gizzard tissue is the mass not absorbed by the swan.”**

## 3.5

- **“...in ducks found at Eagle River Flats, we collect the gizzard contents that generally consists of sandy grit material. We detect variable amounts of WP(microgram to milligram quantities)”**

## 3.6

- **“ Bottomline, white phosphorus is extremely toxic by ingestion. Any white phosphorus found in a swan is evidence that white phosphorus poisoning is the likely cause of death.”**

## 3.7

The latest bird confirmed to have had white phosphorus exposure from the lagoon is recorded in the assessment from the AHVLA in appendix1

Sandwell council have ignored concerns about the problems concerning this lagoon and now that remediation will encompass. **COULD THIS STUMBLING APPROACH TO CONTAMINATION NOT BE CONSIDERED DANGEROUSLY NEGLIGENT?**

## 3.8

The Chemical hazards and identification risk surveillance group commented in minutes dated 12/09

**“5. The Chair commented that as P4 probably caused the death of the swan the investigation confirms current environmental contamination with P4 and suggests the levels of contamination in or around the lagoon could poison wildlife or humans. “**

## 3.9

Rhodia in response to this Freedom of Information request being made publically available on the website Whatdotheyknow.com, **and only after my appeal for the information which was originally refused**, have approached the HPA to undertake a “human health impact assessment” of the lagoon to appease local residents- that is to try to “quell the public concern”. This report has not yet been put in the public domain having been delayed by Rhodia themselves for failing to promptly provide the HPA with further data sets that they requested. It should be noted that these data sets are not independently verified.

### 3.10

It should also be noted that the HPA in their contract clearly state that **the report does not focus on potential end land uses, nor remediation options** which would alter the human health impact assessment completely. The worst aspect of this is that residents on this estate have already been misinformed about the uses of both sites and are now on the precipice of decades of tipping operations taking place which will devalue their homes and financial security.

### 3.11


In short we believe that whatever Rhodia have told RPS or their clients in their “discussions” is totally unrealistic and that Rhodia want to unload this poison chalice to someone else to clear up their toxic mess. The polluter has so far yet to pay- and there is little doubt that Mintworth do not have anywhere near the financial capital nor the relevant expertise to remediate both of these sites, AND EQUALLY UNLIKELY TO FIND A DEVELOPER WHO WOULD WANT TO TAKE THE RISKS ON FOR SUCH LITTLE GAIN.

### 3.12

The Cremer and Warner report to which the EA refer noted

The retention of the lagoon without remedial measures is not considered to be a viable option, due mainly to the requirement to prevent public access to contaminated ground, water and sediments. Additional hazards are also presented by the steep and unstable bankings. Any minor environmental gains would have to be compared with the potentially significant liabilities.

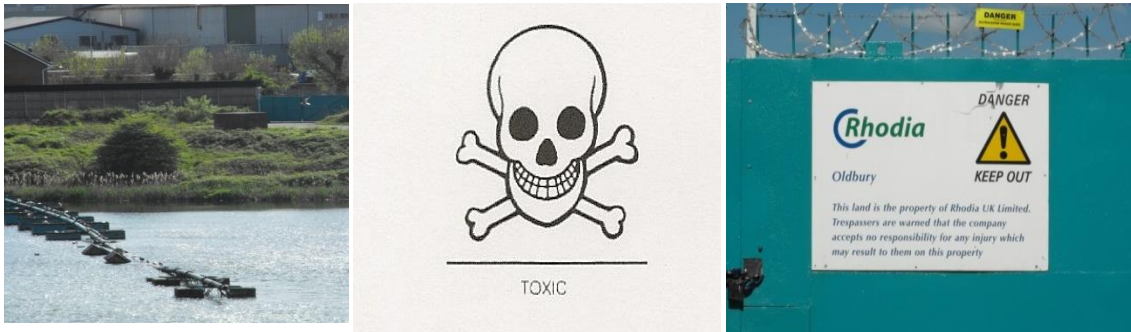
### 3.13



**SET AGAINST THIS ASSESSMENT THIS SITE IS NOT VIABLE FOR RESIDENTIAL DEVELOPMENT. IT IS NOT VIABLE BEFORE THE END OF THE PLAN IN 2021 AND UNLIKELY TO EVER BE SO IN THE DISTANT FUTURE. WHO WILL BE LIABLE IF THIS CONTAMINATED MATERIAL ENTERS THE RIVER TAME AND SHEEPWASH NATURE RESERVE, GIVEN THAT ONLY THEORETICAL “MODELLING” HAS BEEN UNDERTAKEN ON GROUNDWATER- NO ASSESSMENTS HAVING BEEN MADE OF WHAT CONDITIONS WOULD BE LIKE AFTER HUNDREDS OF TONNES OF FOUNDRY SAND AND BUILDINGS WERE BUILT ON TOP?**



#### 4.0 HISTORICAL INFORMATION CONCERNING RATTLECHAIN LAGOON AND ASSOCIATED CONTAMINATION



### **ALBRIGHT AND WILSON AND RHODIA – 60 YEARS OF PHOSPHORUS DUMPING- the STORY of RATTLECHAIN MERE**

**4.1 c1942 The UK's only phosphorus manufacturer** Albright and Wilson, of Langley, Oldbury, use and subsequently “acquire” a clay pit at the former Rattlechain brickworks for disposal of effluent waste. **No licence, regulation, waste limit, health and safety or conditions attached.** Most importantly no records exist of what they dumped for the next 32 years. Waste was carried by canal barge contractors Alfred Matty of Coseley and tipped into pool manually and in barrels.

**4.2 c1940's** Albright and Wilson were producing white phosphorus weapons direct for the Ministry of Supply including experimental weapons and Molotov cocktail style grenades in the millions at their Oldbury factory for WW2 as they did in WW1. The Home Guard were issued these weapons but conveniently no official records “exist” of where they were disposed of.

**4.3 1950/60's** Children reported playing in this unfenced dangerous site, “lighting sticks” dipped in phosphorus which caught fire when oxidising. Many eye witnesses recall skimming stones in “blue lagoon” which produced sparks across the water when thrown. This was white phosphorus (P4) reacting. Gravity fed pipe and then electric pipe added to pool for convenient dumping. Eye witness recalls seeing dozens of dead birds on embankment. British Waterways Board also using site as a dredging tip for canal areas polluted by Albright and Wilson operations on a pay as you tip basis.

**4.4 1963** Site boundary changes creating a subsidiary lagoon to operate a canal discharge **within the contaminated lagoon area.**

**4.5 1970** Waste disposal switches to road tanker, large discharge pipes added to south of site

**4.6 1974** First “claimed” records of what Albright and Wilson dumped. Site boundary change to add concrete panel fencing, and change to the existing subsidiary lagoon and pumping equipment.

**4.7 1978** Waste management licence SL31 granted by West Midlands County Council. Licence allowed them to dump

- **EFFLUENT TREATMENT SLUDGE- 140 TONNES PER DAY**
- **WASTE CONTAMINATED WITH WHITE PHOSPHORUS- 500 TONNES PER YEAR**
- **WATER CONTAMINATED WITH WHITE PHOSPHORUS, SULPHUR AND PHOSPHORIC ACID -1000 GALLONS PER YEAR**
- **“SOLID WASTES” -10 TONNES PER WEEK**

**4.8 1983** documented disposal into pool of a cache of their manufactured WW2 grenades containing benzene and white phosphorus Albright and Wilson claim to have disposed of these weapons from time to time after the war, but not how many or when. No authority from regulator given.



**4.9 1989** Large phosphorus fire on site after consignment of barrels containing p4 in sediment is emptied by contractor onto side of pool. Works management try to calm people’s fears with talk of “myths” and “legends” concerning pool. They fool no-one- as Rhodia do not today with their own myth that it contains “harmless calcium phosphate.”

**4.10 1990-91** Cremer and Warner report carried out on behalf of BCDC. Only tests carried out on information given by Albright and Wilson. White phosphorus confirmed in pool.

**4.11 1999** first properly documented reported deaths of wildfowl on site, swans dying from violent convulsions. AW and Rhodia do not inform us of the toxic rat poison that is contained in sediment.

**4.12 2001** Albright and Wilson bought by Rhodia. Meetings held to discuss Rattlechain bird deaths. Health and safety manager does not reveal what is contained in pool or its toxic effects. Claims that the site offers “a safe haven” to wildfowl made by works manager! Barrels attached to ropes are put on pool to deter birds landing, which does not work.

**4.13 2003** Planning permission granted on appeal for Houses on site adjacent to lagoon. Rhodia objected on grounds it could undermine their operations and limit remediation options, but withdraw their objection at last minute, destroying Sandwell Council’s case. What discussions did they have with Mintworth?

**4.14 2008** After dozens of bird deaths and inconclusive post mortems, research by swanwatch uncovers link with white phosphorus and wildfowl deaths from papers published at Eagle River flats in Alaska- a US Army firing range. Clinical signs of dying swans are exactly the same as at Rattlechain. Experts here confirm similarities in symptoms after viewing our footage. Rhodia undertake a report into “bird deterrence”, but do not say why they want to deter birds from landing on the pool.

**4.15 2009** Rhodia remove barrels from pool but do not give reason why. These then catch fire after drying out. **P4 confirmed in gizzard tissue of a dead swan and Canada goose**

**4.16 2010 P4 confirmed in tissues of a dead mallard and coot**

**4.17 2011 P4 confirmed in two dead mallards and Canada goose, two more mallards awaiting testing**

### **5.0 ISSUE 3. "What evidence/experience is there to show there is a reasonable prospect of identified sites being cleared and decontaminated?" "**

#### **5.1 PROBLEMS WITH CONTAMINATED LAND- - SANDWELL COUNCIL'S POOR RECORD**

Contaminated land Ends report 410 March 2009 identified "Exactly nine years after the contaminated land regime came into force, the problems left behind by the UK'S industrial past seem far from solved. While market-driven solutions outside the regime have delivered some successes, the economic downturn has put much development on hold and further progress in this area has been derailed.

#### **5.2**

This places an ever greater focus on the regulatory regime as a means of tackling the UK's legacy of contaminated land. But on the latest evidence, the regime known as Part II A and inserted into The Environmental Protection Act 1990 by The 1995 Environment Act, looks unlikely to pick up the baton."

#### **5.3**

In Sandwell 2012, just **one** site has been identified as "contaminated land" (next to another former unremediated Albright and Wilson tip) which is an extremely poor record. Where there is no question of sites such as those proposed in H9.3 both containing hazardous materials to human health, the current inspection strategy and monitoring of these sites is UNSATISFACTORY.

#### **5.4**

There is No realistic prospect of decontamination of the site by what Rhodia are proposing with a "capping scheme."

#### **5.5**

Costs were seriously underestimated in the Cremer and Warner Report; at another contaminated site owned by Rhodia/formerly Albright and Wilson in Clevedon a figure of £100,000,000 was quoted to remove the contaminated phosphorus material. Early plans to build a hospital on the site were a non starter- the scheme scrapped- a playing field left undeveloped which still has to be monitored over 25 years after capping.

#### **5.6**

What Rhodia are proposing is not an acceptable remediation option on a site for residential end use and has disastrously failed elsewhere, Marianne Walsh and her husband Michael who were directly involved with Eagle River Flats decontamination believe that this method will fail. **" Rhodia really should consider treating the sediment to remove the white phosphorus. Capping should be used when all other option are exhausted."**

#### **5.7**

The Eastern Michaud Flats Contamination NPL site is located west of Pocatello, Idaho (Two manufacturing facilities, FMC Elemental Phosphorus Plant and Simplot Don Plant, are located on the NPL site. **NEITHER OF THEM ARE WITHIN A MILE OF RESIDENTIAL DWELLINGS.**



**5.8**

The EPA began investigating leaks after learning that FMC and its contractors had detected phosphine concentrations at dangerous levels. Greg Weigel, an EPA Superfund coordinator in Idaho has noted "A meter that measured phosphine in the air at breathing height near Pond 15S was "maxed out," *though no cases of sickness or injury were reported.*

**5.9**

"Prior to April, we had no knowledge there was a problem at Pond 15S - or any of the other ponds," Weigel said. "If phosphine gas is being generated, it's collecting under the cap. Once it collects to a high enough concentration, it tends to find the pathway of least resistance to leak out."

**5.10**

Phosphine has a vapor density of 1.2 (slightly heavier than air) and can settle and concentrate in low-lying areas. Phosphine is very flammable, highly reactive, and highly toxic to humans. Inhalation of phosphine gas can adversely affect the respiratory, nervous and gastrointestinal systems, and the heart, liver, and kidneys.

**5.11**

Acute effects resulting from short term exposures to concentrations above 2 ppm include lung irritation, cough and chest tightness, nausea, vomiting, abdominal pain, dizziness, lethargy and convulsions. Edema (fluid on the lungs) and liver and kidney toxicity can follow but is usually delayed. Chronic effects resulting from long-term exposure to concentrations in the range of 0.5 to 1 ppm include bronchitis, gastrointestinal distress, neurological effects, and anemia. In some cases jaw swelling and bone deterioration can develop causing increased risk for bone fracture. Liver and kidney toxicity can develop over time, as well as chemical-induced asthma.

**5.12**

Alkaline conditions exist in Rattlechain lagoon, as they did here. "Lack of evidence" of high phosphine levels at present therefore do not mean that they are not there- as this demonstrates. It is not acceptable that this gas should be allowed to generate- simply to generate money.

**5.13**

**QUITE FRANKLY WHAT GUINEA PIG WOULD WANT TO BUY A HOUSE NEXT TO A PHOSPHINE MONITORING STATION, LET ALONE ON TOP OF A TOXIC DUMP?**

**Veterinary Laboratories Agency Shrewsbury**

Kendal Road, Harlescott, Shrewsbury. SY1 4HD

Telephone: 01743 467621 Fax: 01743 441060

Email: shrewsbury@vla.defra.gsi.gov.uk

**VLA Ref. No. 26-B0061-04-11**

PAUL DUFF VLA PENRITH	<b>Sender.</b>	Veterinary Laboratories Agency
	<b>Sender's Ref.</b>	Not Given
	<b>Date Received</b>	04/04/2011
	<b>Date of Sampling</b>	04/04/2011
	<b>No. in Die Off</b>	Not Given
RICHARD IRVINE VLA LUDDINGTON	<b>Die Off Location</b>	Not Given
	<b>Located In</b>	FALSE
	<b>Sign. Events</b>	Not Given
	<b>County</b>	WMD
	<b>Map Ref</b>	SO1974913
	<b>AI Species / Breed</b>	Not Given
	<b>FF Species / Breed</b>	Goose / Canada Goose
	<b>Responsible S/VIO</b>	Holmes_P
	<b>Samples</b>	Animal Presented Dead x 1
	<b>Autolysis</b>	Not Given

**REPORT 4 (SUPPLEMENTARY)****Comment on analytical results of toxicology carried out at Harlan Laboratories on goose tissues from Rattlechain Lagoon, provided by Jo Payne AHVLA.****Results<sup>‡</sup>**

The total amount of white phosphorus detected in gizzard content was 7.65 mg and in small intestine content 3.22 µg.

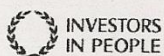
Several tissues were also tested. The concentrations of white phosphorus residue present are shown in the following table.

<b>Tissue sample</b>	<b>White phosphorus residue (mg/kg tissue)</b>
Muscle	< LOD
Fat	0.298
Intestine	< LOD
Liver	< LOD
Kidney	< LOD
Proventriculus/Gizzard	< LOD

The concentration of white phosphorus present in muscle, liver and kidney could not be measured as they were below the analytical limit of detection (LOD) of 5.89 µg/l. The concentration of white phosphorus present in intestine could not be measured as it was below the analytical limit of detection of 1.69 µg/l.

**Comment**

The analytical results show that the goose ingested a significant amount of white phosphorus and also confirms the presence of white phosphorus residue in fat tissue. This indicates that there is systemic exposure. Sparling, Day & Klein (1999) calculated the LD 50 of white phosphorus in swans to range between 1.40 to 4.68 mg/kg bodyweight (BW), with a mean of 3.65 mg/kg BW. The quantity



<sup>‡</sup> - Test subcontracted; opinions given and interpretations of the result are outside the scope of UKAS accreditation.  
<sup>†</sup> - Not UKAS accredited; opinions given and interpretations of the result are outside the scope of UKAS accreditation.  
 For further details of the test methods used, and other terms and conditions, please refer to the VLA Website.



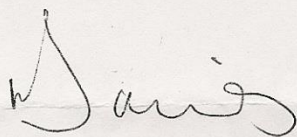
VLA Ref. No. 26-B0061-04-11 continued...  
Date Received : 04/04/2011

detected in gizzard content (1.25mg/kg BW) is close to the LD 50. Geese are similar to swans in size and conformation so I would expect the LD 50 to be similar in both species of bird.

The autopsy failed to identify any other likely cause of death. The quantity of white phosphorus detected in gizzard and the presence of white phosphorus residue in fat tissue is consistent with white phosphorus poisoning as the cause of death of this goose.

Reference: Sparling DW, Day D & Klein P, 1999. Acute toxicity and sub lethal effects of white phosphorus in Mute Swans. Arch. Environ. Contamin. Toxicol. 36, 316-322

Jo Payne, Animal Health & Veterinary Laboratories Agency



I H Davies MRCVS  
Regional Veterinary Manager  
28 October 2011

cc Dr Tom Dutton, HSE Manager, Rhodia UK Ltd, PO Box 80, Trinity Street, Oldbury, B69 4LN

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