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## **ASSESSMENT OF ODOUR EMISSIONS FROM THE STAMBRIDGE SEWAGE TREATMENT WORKS**

### **1 SUMMARY**

- 1.1 Rochford District Council has received a request from Stambridge Parish Council to undertake monitoring for hydrogen sulphide (H<sub>2</sub>S) in the area of the Stambridge Sewage Treatment Works. In addition, the Parish asks whether the District Council would appoint a specialist consultant to investigate odour issues associated with the works.

### **2 BACKGROUND**

- 2.1 Stambridge Parish Council states that the odours from the works are “becoming progressively worse and frequent”.
- 2.2 The Stambridge Works currently receives and dewateres sludge from Southend, the resultant cake being taken to landfill and the supernatant (liquid) piped back to Southend. Anglian Water (AW) have entered into discussions with Southend Borough Council regarding the company’s proposal to transfer the sludge dewatering process from Stambridge to their Southend works. The small sewage works, which serves Stambridge and Rochford, would remain in operation; however, the sludge from this works would be piped to Southend for treatment.
- 2.3 Southend Borough Council will require an Environmental Assessment as part of the planning application process. AW have appointed consultants to carry out this assessment which will consider sludge processing at both Stambridge and Southend sites. The assessment is expected to be completed by February 2004.
- 2.4 AW have recently installed two new odour treatment plants at their Stambridge Works, serving the dewatering building, thickening tanks, works drainage pumping station, centrifuge and supernatant tank. Stack tests carried out during commissioning show a 0% detection for H<sub>2</sub>S. AW staff carry out a monthly stack test to ensure continuing compliance. New, submerged, aeration units were installed in the aeration tanks at the end of last year.
- 2.5 H<sub>2</sub>S has an extremely low odour detection threshold of 0.5 parts per billion (ppb). The World Health Organisation’s Guidance Value set to protect against substantial nuisance is 5,000ppb. Occupational Exposure Limits of 5,000ppb, for long-term exposure, and 7,000ppb, for short-term exposure, have been set in respect of work activities. A generalised background level for rural areas would be 3ppb. AW has detected levels on the open areas of the Stambridge Works of 8ppb, in

the rear garden of a local residence from 2 to 12ppb and upwind of the site of 7 to 11ppb.

- 2.6 Members will recall the difficulties experienced by officers when attempting to carry out a planned, co-ordinated, monitoring assessment of alleged odour emissions from the Works. Officers continue to monitor the situation and respond whenever possible to any complaints received during normal working hours. Officers have not to date detected any significant odours from the works.
- 2.7 A leaflet was distributed to local Stambridge residents by 'a resident' prior to the meeting of the Stambridge Parish Council on 6 October 2003. The leaflet, which is attached for Members' information, is highly emotive and caused concern and anxiety to some local residents. The Castle Point & Rochford Primary Care Trust has been requested to assist in providing specialist medical advice, in a form for public dissemination, regarding the acute and chronic health effects of exposure to H<sub>2</sub>S emissions from sewage treatment works and their response is awaited.

### **3 OFFICER COMMENTS**

- 3.1 Whilst providing data as to the existence or not of H<sub>2</sub>S in the locality, the use of monitoring equipment would not in itself identify the point source for any such emissions and would require significant resources. Castle Point & Rochford Primary Care Trust have been asked to advise on any possible health implications for the local community and their response is awaited.
- 3.2 It would be possible to engage a specialist contractor to carry out an odour survey of the works, including monitoring and dispersion modelling and to provide recommendations as appropriate. The process would obviously require and be dependent on the co-operation of the Parish Council, local community and AW.
- 3.3 Alternatively, the Council could consider employing specialist consultants to review the findings of the Environmental Assessment required by the planning process, once this becomes available.
- 3.4 DEFRA have indicated that they will issue a statement in the near future regarding the statutory controls of nuisances from sewage treatment works. This, together with their proposed voluntary code of practice, will be of significant assistance to all parties when dealing with such issues. However, to date officers have not witnessed odours that would be considered a statutory nuisance.

- 3.5 On balance, it seems prudent to await the findings of the Environmental Assessment and to receive advice on any potential health implications before committing significant resources.

#### **4 LEGAL IMPLICATIONS**

- 4.1 Local Authorities are still awaiting a definitive court judgement as to whether sewage treatment works are 'premises' for the purposes of the statutory nuisance provisions of the Environmental Protection Act 1990. The House of Lords will consider the appeal on this issue within the next three to six months.
- 4.2 The Department for Environment, Food and Rural Affairs (DEFRA) advises that it will issue a statement following their consultation on 'statutory controls of nuisances from sewage treatment works' (Min 162/03), in the near future. A voluntary code of practice for the industry, enforcing agencies and the public will also be issued by DEFRA.

#### **5 RISK IMPLICATIONS**

##### **Reputation Risk**

- 5.1 There is potentially a risk that the Local Authority would not be seen to respond to public concerns.

##### **Regulatory Risk**

- 5.2 Should a problem be identified in the assessment, the regulatory controls available to the Council are currently not clear.

#### **6 RESOURCE IMPLICATIONS**

- 6.1 Rochford District Council does not itself have the resources to carry out the requests of the Parish Council and provision for the works have not been made within existing budgets.
- 6.2 The purchase price for three H<sub>2</sub>S monitors would be in the region of £45,000, plus significant annual calibration and maintenance costs. To hire three units for a period of two months would cost approximately £6,000, plus the cost of data analysis and meteorological data. Officer time for a monitoring period of two months would amount to an estimated 160 man-hours, including out-of-hours working.
- 6.3 The one-off cost of engaging a specialist contractor to undertake an odour survey would, depending on the precise specification and contractual requirements, range from £3,000 to £10,000.

- 6.4 Although revised estimates are still being prepared, it is likely that a one-off cost of up to £10,000 can be funded from virements within the 2003/04 estimates.

## **7 PARISH IMPLICATIONS**

- 7.1 This matter was discussed at the Stambridge Parish Council meeting on 6 October 2003, which was attended, following the distribution of the leaflet, by a number of local residents. Local and County Councillors have also made the Stambridge Sewage Works Liaison Committee aware of odour issues.

## **8 RECOMMENDATION**

- 8.1 It is proposed that the Committee **RECOMMENDS to Environmental Services Committee:-**

That the Council awaits the findings of the Environmental Assessment being undertaken for Anglian Water, and information regarding any health implications, before giving further consideration to the request from Stambridge Parish Council.

G Woolhouse

Head of Housing, Health & Community Care

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### **Background Papers:**

None

For further information please contact Fred Laycock on:-

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PROBLEM FOR ANGLIAN WATER

LANDFILL SPACE IS RUNNING OUT, AND THE COSTS OF DISPOSAL OF SLUDGE AND TRANSPORT ARE ENORMOUS, AROUND £3000 A DAY FOR STAMBRIDGE TREATMENT WORKS, ALONE

SOLUTION

A NEW PRODUCT, "NUTRI BIO" A SOIL CONDITIONER FOR USE ON FARMLAND.

PROBLEM

THE SLUDGE IS PUMPED TO STAMBRIDGE FOR TREATMENT CAUSING ODOURS, BUT THIS COMPRESSES THE SLUDGE AND MAKES IT UNSUITABLE FOR "NUTRI BIO", AND ALSO USES AN INORDINATE AMOUNT OF ENERGY, CONTRIBUTING TO THE GREEN HOUSE EFFECT

SOLUTION

BUILD A NEW PLANT IN SOUTHEND TO AVOID COMPRESSING THE SLUDGE, TRANSPORT THE PRODUCT TO TILBURY, AND CONVERT IT TO "NUTRI BIO".

PROBLEM

PLANNING PERMISSION, AND SIR TEDDY TAYLOR'S CAMPAIGN TO MAKE CERTAIN THEY DON'T GET IT PASS A COMMITTEE

SOLUTION

IF THEY DON'T GET PERMISSION, EXTEND THE WORKS AT STAMBRIDGE, AND PUMP SOUTHEND SEWAGE (RAW) OVER, (WHAT OTHER CHOICE HAVE THEY), THIS WILL CONTRIBUTE TO OUR ALREADY CONSIDERABLE ODOURS

PROBLEM

PLANNING PERMISSION, GAS.  GAS.

SOLUTION

ANGLIAN WATER THROWS UP ITS HANDS, AND SAYS WHAT ARE WE SUPPOSED TO DO WITH IT.

OUTCOME

PLANNING GRANTED AT STAMBRIDGE PLANT.

GRAND SCENARIO

CLOSE SOUTHEND'S TREATMENT WORKS, SOLVING THEIR ODOUR PROBLEMS, AND CARRY OUT THE TOTAL OPERATION AT STAMBRIDGE, PACKING ALL PROBLEMS THERE.

LAST PROBLEM

WILL THE SLUDGE, THE PENULTIMATE PROCESS, HANDLE THE JOURNEY TO TILBURY, OR WILL IT COMPRESS UNDER ITS OWN WEIGHT, AS IT BUMPS AND BOUNCES, THE TWENTY ODD MILES THERE,?

SOLUTION

CARRY OUT THE PROCESS AT STAMBRIDGE, IF IT CANNOT TRAVEL.

TO COMPLAIN ABOUT ODOURS PHONE 01702 346366 AND ASK FOR THE ENVIRONMENTAL DEP ASK THEM TO LOG YOUR CALL, WEEKENDS NOTE THE TIMES AND PHONE MONDAY A RESIDENT.

A special meeting of Stambridge Parish Council to discuss the results of the liaison committee meeting regarding problems at  
**Stambridge Sewage Treatment Plant**

It is very important that as many Stambridge residents as possible attend this meeting to protest to Anglian Water via your Parish Council about the unacceptable levels of odour produced by the treatment works.

*This odour is mainly composed of hydrogen sulphide which is a poisonous gas.*

So

- If you are happy for Southend's sewage to be pumped to Stambridge - **don't attend!**
- If you do not want storage tanks capped to trap odours - **don't attend!**
- If you are not concerned for the health of yourself and your family - **don't attend!**

Do you remember asbestosis and thalidomida? *The devastating effects of these were tragically discovered far too late for the victims.*

*The effects of long term inhalation of hydrogen sulphide are unknown and you are constantly breathing it every time the plant produces odours!*

At the last Parish Council meeting residents were given the opportunity to discuss the problems directly with your Councillors  
**only ten people attended!**

Time is fast running out for this village to take positive action to prevent Anglian Water destroying your quality of life and enjoyment of your property.

The apathy has to stop. Turn off the television for a couple of hours and  
**be at the meeting!**

**6<sup>TH</sup> OCTOBER 8-00pm at the Village Hall**  
**TO COMPLAIN ABOUT ODOURS PHONE 546366 ASK FOR ENVIRONMENTAL DEP**

Disclaimer:-  
This publication has been produced by concerned residents. It is not an official document and  
Stambridge Parish Council had no hand in its production.

*A. RESIDENT.*