

WEST DUNBARTONSHIRE COUNCIL

Report by the Chief Executive

Corporate and Efficient Governance Committee: 28 November 2007

Subject: Dalmuir Waste Water Treatment Works Odour Improvement Plan

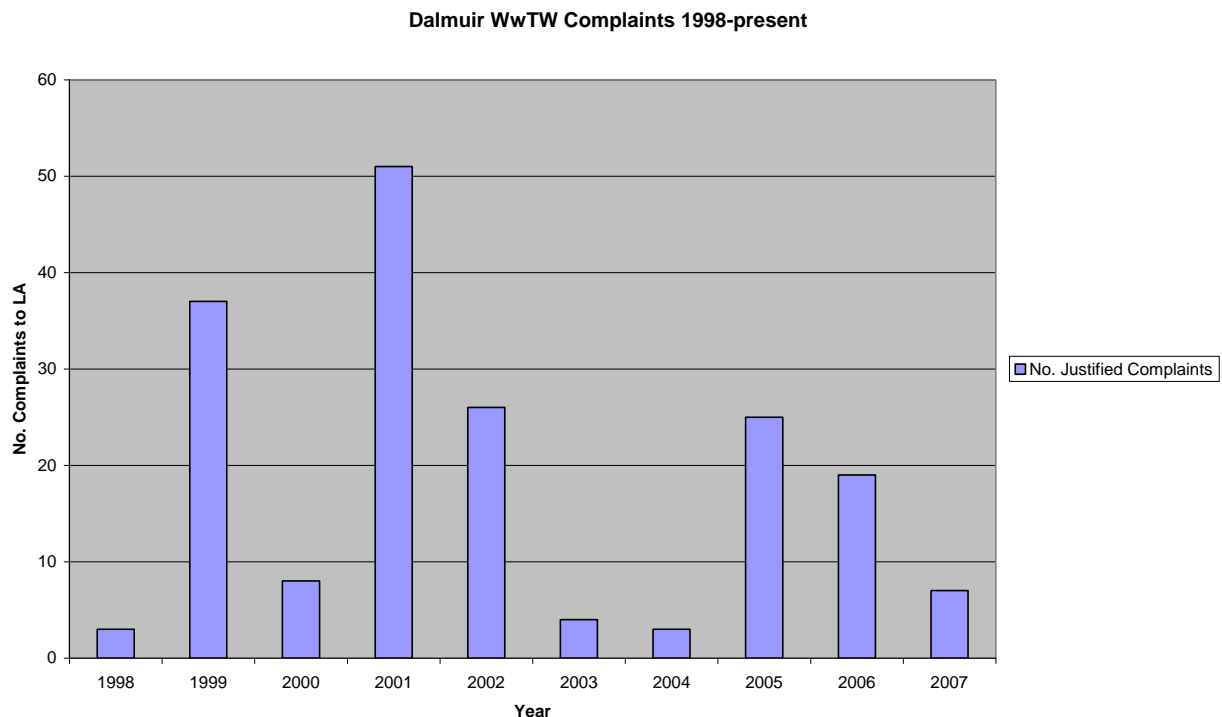
1. Purpose

- 1.1** The Committee is asked to consider approval of the Odour Improvement Plan for Dalmuir Waste Water Treatment Works (WwTW) provided by Scottish Water and Scotia Water Limited as required by the Sewerage Nuisance (Code of Practice) (Scotland) Order 2006.

2. Background

- 2.1** Dalmuir WwTW was built in 1902 and at that time consisted of 8 primary settlement tanks with sludge removal by boat. Within the community of Dalmuir, the sewage works always caused odour problems, mainly in the summer months, when stored sludge went septic and gave off odorous gases.
- 2.2** The works were upgraded in terms of a PFI contract with Scottish Water between 2001 and 2002 in order to comply with EC legislation. Many odour complaints were received by the Environmental Health Section during this period due to the interim arrangements for sludge removal which involved dewatering and chemically treating the sludge with lime, then removal by vehicle. Most of the complaints during this period related to the odour from the lorries which removed the treated sludge from the site.
- 2.3** The PFI company (Scotia Water) began service at this site in February 2002 and it appeared to be operating well for the first 2 years, as very few complaints or incidents were reported between 2003 and 2004. In the summer of 2005 odour returned when a breakdown in equipment used to remove the sludge from the storm overflow tanks caused a prolonged period of complaints. In 2006 there were several events during the summer months, some overlapping, which caused significant odour problems in the Dalmuir area.
- 2.4** The main source of the odour is the storm overflow tanks which are open tanks with a large surface area. The tanks fill during periods of heavy rain resulting in the settlement of sludge at the bottom. This sludge is rerouted into the treatment works for further processing. If the sludge is not moved within 24 to 48 hours, then there is a high likelihood of odour generation.

2.5 Figure1 shows the numbers of complaints received by the Environmental Health Section between January 1998 and October 2007.



In 2007 there have been 7 complaints to date. Three of these complaints relate to an event at the works in April 2007 where a blockage in the outlet from the storm tanks into the treatment tanks caused sludge to be retained in the storm tanks longer than usual. This odour caused by this event lasted 3 days. All other complaints so far relate to an event which took place at the end of August where two of the four aeration tanks (secondary treatment) became septic. This was an unusual source of odour and an area of the treatment plant that does not tend to be a source of complaint. The cause has not yet been identified although investigations continue and to date we are awaiting the results of analyses. The operating company took immediate action to bring the odour under control in the short-term by introducing chemical dosing to the affected aeration tanks. This event gave rise to odour which lasted for approximately 18 days. It is likely that additional works will be required to provide a long-term solution to this problem and the operating company has given assurances that these works will be carried out as soon as possible.

3. Main Issues

- 3.1** The Scottish Parliament introduced new legislation to regulate odour release from Waste Water Treatment Works (WwTW). The Water Services (Scotland) Act 2005 gave Ministers the power to introduce a code of practice (CoP) for assessing, controlling and minimising sewerage nuisance from the public sewerage system. The Sewerage Nuisance (Code of Practice) (Scotland) (Order) 2006 came into force on 22 April 2006. This was in response to the lack of success of legal action taken by local authorities against the operators of Waste Water Treatment Works using the Environmental Protection Act 1990.

The local authority is now required to:-

- inspect certain WwTW at least once every year for the purpose of ensuring that the operator is complying with the code of practice.
 - investigate complaints made by residents living within the authority's area regarding odour from WwTW
- 3.2** The objective of the CoP is to apply the best practicable means for assessing, controlling and minimising odour nuisance beyond the boundary of the WwTW. The standards within the CoP are largely management-based controls and there may be occasions when even having applied these controls that an odour nuisance exists.
- 3.3** Where the baseline measures are being met and the odour problems continue the operator must carry out an investigation to identify and evaluate the sources and causes of the odour. Based upon the results of this investigation they must carry out a detailed review of the available options to control the odour release and define the measures that represent the best practicable means for control of odour at the sewage works. This review is to be documented in an Odour Improvement Plan (OIP). The first phase of the OIP must contain a preliminary plan which identifies the likely sources and causes of odour nuisance and a timetable for implementation for the submission of plans for subsequent phases. The OIP must be submitted to the local authority for approval. The control measures identified must be subject to a cost-benefit analysis to ensure that the selected measures are proportionate and represent the best practicable means.
- 3.4** The current enforcement position is that both Scottish Water and Scotia Water are complying with the Sewerage Nuisance (Code of Practice)(Scotland)Order 2006. They have each produced an Odour Management Plan for their areas of responsibility as required by paragraph 6(1) and 6(4) (a). An inspection of the treatment works was carried out in September 2006 by the Environmental Health Section and the relevant documents were provided and viewed by officers.

3.5 It was the inspecting officers' opinion that whilst the operators of Dalmuir WwTW were complying with the relevant legislation, they were also causing sewerage nuisance in the surrounding community. Scottish Water and Scotia Water Limited were advised that they were required to provide a first phase OIP by 1 April 2007 as determined by the timescale in the Code of Practice.

3.6 An OIP is defined in the Code of Practice as:-

'a systematic evaluation of the sources and causes of odour nuisance and a review of all available control options to develop a plan detailing the proposed measures to mitigate the odour nuisance that reflect the best practicable means for control of odour at the particular WWTW.'

3.7 Scottish Water provided a first phase OIP in April 2007. It was considered by the Environmental Health Section to comply with the minimum requirements of the Code of Practice for a first phase OIP but fell short of the aspirations of the community and their representatives. It did not take cognisance of additional guidance issued by the Scottish Government in March 2007 on the format and content of OIPs. Officers were of the opinion that there would be little point in seeking approval of this document as there were no substantial plans for control of odour within it.

3.8 Scottish Water and their PFI operators were required to provide a more robust OIP which adhered to the Scottish Government guidance in the Scottish Odour Network Information Circular published in March 2007 (SONIC 01/07). It was agreed that they should provide this by the end of July 2007.

3.9 This second version of the first phase OIP has been placed in Members rooms for consideration and requires approval by the Council. Section 10 (6) of the Sewerage Nuisance (Code of Practice) (Scotland) Order 2006 states that:

'The first phase of the OIP should contain-

- (a) a preliminary plan which identifies and evaluates the likely sources and cause of odour nuisance following an investigation and*
- (b) a timetable for the submission of plans for subsequent phases*

and shall be approved by the local authority.'

The guidance in the Scottish Government circular SONIC 01/07 recommends that the OIP is regarded by operational staff as a draft document until it has been approved by the local authority.

3.10 This is not considered to be a final OIP, only a first phase plan. The current OIP states that a final report will be submitted to West Dunbartonshire Council for approval in October 2008 following the review of data provided through the course of the next year. It is dependent on the outcome of the assessment of next year's data regarding odour emissions whether or not the plan submitted at that time is the final OIP. It may be that further odour control measures are required to minimise odour nuisance and that a further plan will be submitted.

3.11 The guidance provided by the Scottish Government states that:

'The control measures selected must be based on costs and benefits to ensure that the selected measures are proportionate and represent the best practicable means. The hierarchy of control options are to be considered in the following order of preference before extending to the next level:

- *Site management and housekeeping*
- *Operational and process changes and optimisation*
- *Containment*
- *Enclosure with end-of-pipe treatment of excess air'*

4. Personnel Issues

4.1 There are no personnel issues.

5. Financial Implications

5.1 Although additional duties have been placed on Local Authority staff in enforcing the provisions of the Sewerage Nuisance (Code of Practice) (Scotland) Order 2006, no additional finance has been provided.

6. Risk Analysis

6.1 Failure to enforce the provisions of the Sewerage Nuisance (Code of Practice) (Scotland) Order 2006 could result in an increased number of complaints from local residents to the Council.

7. Conclusions

7.1 Scottish Water and their PFI contractor have produced an Odour Improvement Plan and submitted the plan to West Dunbartonshire Council for approval as required by the Sewerage Nuisance (Code of Practice) (Scotland) Order 2006.

7.2 Officers of the Environmental Health Section are of the opinion that the plan complies with the requirements of the Order and subsequent guidance published by the Scottish Government in March 2007.

- 7.3** A further report will be provided to West Dunbartonshire Council next year after a period of assessment which will need to include the summer months of 2008.
- 7.4** Should odour continue to be a problem at these works despite the additional control measures proposed in the OIP, there is scope to insist on further improvement works in terms of the new Code of Practice and enforcement powers within the Water Services etc. (Scotland) Act 2005.
- 7.5** The experience of the Environmental Health Section who have investigated odour complaints over the last few years is that the process of desludging the storm tanks is the primary source of odour generation from Dalmuir WwTW. The introduction of a more efficient desludging process such as the one proposed in the OIP should improve the odour climate in and around the Dalmuir area.
- 8. Recommendation**
- 8.1 That the Committee approve the first phase Odour Improvement Plan as required by the Sewerage Nuisance(Code of Practice) (Scotland)Order 2006.**

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Date: 6 November 2007

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Background Papers: Water Services etc. (Scotland) Act 2005.
The Sewerage Nuisance (Code of Practice) (Scotland) Order 2006.
Scottish Odour Network Information Circular Number 01/07 issued March 2007.

Wards Affected: Wards 5 and 6.