

Planning Committee

18 February 2009

**Applications to be determined
by the County Council**



Report of Rod Lugg, Head of Environment and Planning

Purpose of the Report: To enable the Committee to determine applications for planning permission which have been received in accordance with the requirements of the Town and Country Planning Act 1990.

Easington District: Proposed provision of a dewatering facility involving the erection of a centrifuge container, lime silo, sludge screen and control kiosk at Horden Sewage Treatment Works, Horden for Northumbrian Water Limited.

Introduction

- 1 As part of a continuing commitment to developing beneficial disposal routes for sludge remaining after sewage treatment, Northumbrian Water Limited (NWL) is seeking to erect a permanent dewatering facility at Horden Sewage Treatment Works (STW). A temporary facility was installed at the Horden site in February 2007 but odour control proved problematic and it was subsequently removed in July 2008. This did not require formal planning consent. NWL is now seeking planning permission for permanent plant and equipment with associated improvements to odour control, in order to dewater the sludge from Horden and Seaham STW's prior to off site removal and further treatment at a new plant at Bran Sands near Redcar.

The Site

- 2 The Sewage Treatment Works site (2.32ha) lies immediately to the north of Horden adjacent to a civic amenity site and a railway line, approximately 250m to the south of residential properties at Grants Houses (see attached plan). The existing works was constructed in the late 1990's and contains a range of plant and equipment including settlement tanks, buildings and areas of hard standing.

The Proposal

- 3 The proposed plant would be installed on an area of hard-standing towards the centre of the site (see attached drawing). The centrifuge container would be located on a steel framed base and would measure 12.1m by 3m, a maximum height of 4.1m. Lime would be stored in a silo immediately to the south of the proposed centrifuge container and this would have a maximum height of 12.2m and a diameter of 3m. This is required in cases of emergency, where the dewatered sludge is treated with lime, allowing it to be spread on agricultural land. The dewatering of sewage sludge is intended to provide material that can be accepted at NWL's advanced digestion facility that is currently under construction at Bran Sands, Redcar. This is intended to receive dewatered sludge from a range of other STWs in the region that will also be upgraded in a similar way to the development at Horden. On arrival at Bran Sands it would be subject to thermal drying that reduces the volume of sludge and converts the green waste into power. This would reduce current emissions of CO₂ by 25,000 tonnes per year and reduce the volume of sludge by 12%.
- 4 At Horden associated equipment would include a sludge cake silo, (12.1m in length 3.4m in width, maximum height of 4.1m), located to the south of the lime silo that would be used to store dewatered sludge until it is transported from the site by tanker. A control kiosk (2.5m long, 2.5m wide, maximum height of 3.4m and constructed in Glass Reinforced

Plastic) and sludge screen (3.2m long, 6.0m wide, maximum height of 2.5m and constructed from mild steel with a stainless steel gantry) would be located to the south of the sludge cake silo and north of the centrifuge respectively. All proposed apparatus would be drab olive green with the exception of the sludge screen which would have a galvanised steel finish.

- 5 Sludge would be fed into the sludge screen then passed through the dewatering centrifuge. The liquid removed would be returned to the aeration lanes for further treatment. The produced solid (cake) would be transferred via conveyor for storage in the sludge cake silo before its removal via tanker.
- 6 There are currently 64 vehicle movements per week (32 in/32 out) in connection with the removal of sludge from the site and as part of the proposal this would be reduced to 36 movements per week (18 in/18 out). The proposed equipment has been designed to operate during normal NWL working hours and no night time working is proposed.

Consultations and Representations

- 7 Easington District Council notes that the avoidance of any nuisance caused by the emission of smells from the plant should be central to the County Council's consideration of the proposal.

Comment: See paragraphs 15-19.

- 8 Horden Parish Council (consulted 07 August 2008) has not commented.

- 9 The Environment Agency originally objected to the proposals as no Preliminary Risk Assessment was submitted with the planning application. However, the applicant has since submitted the required assessment and the Environment Agency has deemed this sufficient to formally remove the objection, subject to the inclusion of conditions to any planning permission in relation to contaminated land, in particular the submission of a site investigation scheme, options appraisal, remedy strategy and a verification plan.

Comment: The suggested planning conditions could be attached to any planning permission granted.

- 10 The application has been advertised on site, in the press and nearby residential properties were notified by letter. Five letters of objection have been received from local residents. The objections raised are summarised below:
 - The site has a history of odour nuisance which has in the past caused people to be physically sick, and required doors and windows to remain closed because of the unbearable nature of the odour. Between 14 July 2008 and 07 August 2008, 25 separate instances of odour nuisance were recorded by a local resident. Assurances made that odour would not cause a nuisance at the time the STW was provided, have not been kept.

Comment: The proposed scheme would replace the temporary dewatering kit which was previously used at the site and gave rise to odour emission detectable at nearby residential properties and the neighbouring civic amenity site. Issues of odour control are addressed in detail in paragraphs 15-19.

- Past and possible future odour problems at the site would affect property values to nearby residential dwellings.
- Consultation letters were only sent to a small 'nub' of residents in the Grants Houses area of Horden.

Comment: Statutory planning requirements for the publicity of the application have been complied with. A total of 41 neighbour notification letters were sent to nearby properties and 7 site notices were posted along with an associated newspaper advert.

Planning Considerations

Policy Issues

- 11 Section 38(6) of the Planning and Compulsory Purchase Act 2004 requires that the determination of planning applications should be made in accordance with the Development Plan unless material considerations indicate otherwise. Relevant policies are contained in the County Durham Waste Local Plan (April 2005).
- 12 Policy W52 of the WLP states that new, or existing, sewage treatment works will be permitted where they are required; to improve the treatment of sewage and waste water; or to improve discharge standards; or to provide increased treatment capacity. Prior to the development of new greenfield sites or extensions to existing sites priority should be given, where possible, to accommodating any additional development as infill development within the curtilage of existing STW sites. Additionally, proposals for recovery of sludge to produce beneficial end products will be encouraged where they can be located without significant adverse effects on local communities or the environment.
- 13 Policy W33 requires that suitable mitigation measures be incorporated into development to ensure that any harmful impacts from pollution by various sources including noise, odour, visual intrusion and impacts from traffic and transport are kept to a minimum.

Visual Impact

- 14 The site sits in a depression in the land which falls away to the east and is comprehensively screened in wider views to the north, south and east by raised land, tree planting and the railway embankment. The equipment would not be seen from residential properties to the north although local views from the public right of way (track) adjacent to the southern boundary would be possible. However, the proposed equipment would be partially screened by existing structures of a similar scale and would be coloured olive green to help minimise the overall visual impact. They would therefore relate satisfactorily to the existing STW and the immediate area.

Odour Control

- 15 The Easington District Council Environmental Health Officer (EHO) has confirmed that the temporary dewatering plant gave rise to a number of complaints from local residents and workers at the civic amenity site whilst it was in situ between February 2007 and July 2008 and was the source of odour nuisance.
- 16 A number of operational changes would be implemented as part of the permanent facility to improve odour suppression. These measures include the total enclosure of all raw sewage and encapsulation of sludge when it is transferred between systems within the STW. Dewatered sludge would also be transported to an enclosed storage silo via enclosed conveyors. It is no longer the intention to stabilise the sludge cake on site using lime as this process generates significant odour and this would only be carried out in an emergency (namely in the event that Bran Sands is unable to accept the produced cake).
- 17 At the request of the EHO, NWL produced an *Odour Assessment* report which assessed operations at a dewatering plant at Birtley that is similar to the one proposed at Horden. Based on the performance of that plant it is considered that odour concentrations at all receptor locations at Horden would be below the adopted odour annoyance criterion of $50\mu\text{E m}^{-3}$ (5 times their detection threshold: *Concise Guide*).
- 18 Given the proposed operational changes to the dewatering of the sludge mitigation measures and report findings it would appear that effective odour suppression from this process can be achieved.
- 19 The EHO notes that the odour impact assessment is based on computer modelling of all the relevant data, which is the relevant tool, but questions the accuracy of the outcome. Reference is made to other activities which would add to odour predictions and the likelihood of complaints from nearby residential properties and users of the adjacent civic amenity site and public right of way network. The EHO considers that whilst it may never be possible to establish some complaints as statutory nuisance because the wind direction can change so quickly, it is likely that annoyance complaints would be constant and considers that an alternative site is found.

Traffic and Access

- 20 The STW site is currently accessed via the existing junction onto Sunderland Road that is also used by the civic amenity site to the west. No changes in access arrangements are proposed and it is anticipated that the development would result in 28 fewer vehicle movements per week in connection with the removal of sludge cake as the dewatering process would reduce the volume of the existing sludge removed by 12%.

Recommendation and Reasons

- 21 The proposed plant would be located within the existing STW and would produce a useable final product. The proposal is acceptable in principle and would provide an improvement on previous temporary arrangements that were the source of complaint. NWL have undertaken an odour survey of similar plant at Birtley STW which concludes that the facility should not give rise to odour nuisance that would affect the local community. The proposed equipment would have a minimal visual impact on the locality. Given the design of the plant and proposed mitigation measures it is therefore considered that the proposal incorporates satisfactory environmental safeguards. The scheme would therefore relate acceptably to the surrounding area in visual and residential amenity terms. Subject therefore to appropriate conditions to limit any potential future nuisance impacts and requirements for monitoring of the process, I conclude that the development is acceptable.
- 22 I therefore **recommend** that planning permission be granted for the erection of a centrifuge container, lime silo, sludge screen and control kiosk at Horden Sewage Treatment Works, Horden for Northumbrian Water Limited for the following reason:
- (i) The proposed use of the site would not be unduly obtrusive or adversely impact on local amenity or the surrounding environment. The proposal would accord with Policies W52 and W33 of the County Durham Waste Local Plan relating to extensions to STWs and the implementation of appropriate environmental mitigation measures respectively.

No departure from policies contained in the County Durham Waste Local Plan (2005)

Background Papers

Planning application forms and plans dated 31 July 2008. Consultation letters and responses and other correspondence on the application file CMA/5/24

Contact: John Byers Tel: 0191 383 3408
Local Members: Councillors D Maddison and P Stradling (Horden)

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