

PLANNING COMMITTEE MEETING: 9 July 2009

PLANNING APPLICATION FOR DETERMINATION BY THE LTGDC

REPORT OF THE DIRECTOR OF PLANNING

UDC CASE NUMBER:	LTGDC-08-094-FUL	DATE MADE VALID:	02/06/2008
APPLICATION NUMBER:	U0005.08/LBHG	TARGET DATE:	01/09/2008

APPLICANT:	Thames Water Utilities Ltd
AGENT:	Adams Hendry Consulting Ltd
PROPOSAL:	New sewage sludge advanced digestion facility, including refurbishment of existing digesters. Sludge reception tanks; sludge thickening plant, thermal hydrolysis plant, anaerobic digestion plant, sludge dewatering and storage facilities, gas holders, combined heat and power plant, waste gas burner, odour control plant and associated works and structures; pipework; internal access roads; relocation of leachate reception facilities.
LOCATION:	Riverside Sewage Treatment Works, Ferry Lane North, off Lamson Road, Rainham, Essex RM13 8RL

1. BACKGROUND

- 1.1 This application was previously reported to LTGDC committee on 12 February 2009. A copy of the committee report and addendum report considered by members on 12 February 2009 is provided in Appendix 1 of this report.
- 1.2 At the committee meeting on 12 February 2009 the committee by unanimous vote **AGREED** that the application be delegated to the Director of Planning to **APPROVE** subject to:

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- (1) any direction from the Mayor of London, and
 - 2) the revised conditions listed in full at Section 5 of the addendum report (with any amendment that might be necessary up to the issue of the decision), and
 - (3) the completion of a S106 Agreement:
 - a) to secure land for a potential future footpath open to the public along the eastern boundary of the site from 'Ferry Lane North', south through to the A13;
 - b) to secure a contribution of £10,000 towards a local employment scheme such as Job Net or an equivalent; and
 - c) to ensure recruitment is sought through Job Net or a similar scheme.
- 1.3 The application has since been referred back the Mayor of London and the Mayor of London has advised that he does not wish to direct refusal.
- 1.4 The S106 agreement has not been finalised and therefore no planning permission has been issued.

2. ODOUR CONDITONS

- 2.1 The applicant, Thames Water Utilities Limited, has now requested that the odour conditions imposed on the Riverside STW application be reviewed in light of the Lee Tunnel and Beckton Sewage Treatment Works (STW) application that was reported to LTGDC committee on 11 June 2009.
- 2.2 The Lee Tunnel and Beckton STW application proposed a set of odour conditions focussed around the submission and approval of an Odour Management Plan (OMP) and various agreed detailed protocols to ensure that odour emissions are controlled and in accordance with those projected in the Odour Impact Assessment submitted by the applicant. The revised odour conditions for Riverside STW adopt a similar principle.
- 2.3 It should be noted that the sludge depth figures shown in [] in Condition 28 have been suggested by the applicant. The applicant has also provided sludge monitoring data for the primary settlement tanks at Riverside STW for September 2008 to June 2009. This data was being reviewed by LTGDC's odour consultant at the time of writing of this report in order to confirm that the depths suggested by the applicant are appropriate. Accordingly, suggested final sludge depth figures will be reported at committee.

3. NON-ODOUR CONDITIONS

- 3.1 The applicant has also proposed changes to what were originally Conditions 5, 11, 12, and 16.
- 3.2 The wording of Conditions 5, 11, and 12 have now been revised as set out in the conditions below. Planning Officer's from the London Borough of Havering and the LTGDC consider that the revised wording of these conditions is acceptable. The originally numbered Condition 16 has now been deleted as it was considered to duplicate Condition 8.

4. S106 AGREEMENT

- 4.1 The S106 Heads of Terms considered on 12 February 2009 are still considered relevant and should be secured.
- 4.2 Because of the way the suggested conditions now work, and in line with the proposed terms of the Beckton STW S106 agreement, it is proposed that two further S106 Heads of Terms should also be secured, as set out below:
- Thames Water shall keep their business case for the removal of odour from the STW under review in light of OMP / Protocol Audits. If an independent auditor advises that odour issues need to be addressed through capital works, including works to enable the Primary Settlement Tanks to operate with shallower depths of sludge, Thames Water shall make such application to Ofwat for Funding Authorisation for those works; and
 - Provisions for Thames Water Utilities Limited to pay for experts to approve the OMP and Protocols, and any amendments thereto initiated by them, and for an annual audit.

5. CONCLUSION

- 5.1 The combination of changes to the conditions and the S106 Heads of Terms since the committee on 12 February 2009 has resulted in the need for committee members to reconsider this application.

6. RECOMMENDATION

That the application be delegated to the Director of Planning to APPROVE subject to:

- (1) any direction from the Mayor of London, and

- (2) the full list of conditions listed below (with any amendment that might be necessary up to the issue of the decision), and
- (3) the completion of a S106 Agreement:
 - a) To secure land for a potential future footpath open to the public along the eastern boundary of the site from 'Ferry Lane North', south through to the A13; and
 - b) To secure a contribution of £10,000 towards a local employment scheme such as Job Net or an equivalent; and
 - c) To ensure recruitment is sought through Job Net or a similar scheme; and
 - d) Thames Water shall keep their business case for the removal of odour from the STW under review in light of OMP / Protocol Audits. If an independent auditor advises that odour issues need to be addressed through capital works, including works to enable the Primary Settlement Tanks to operate with shallower depths of sludge, Thames Water shall make such application to Ofwat for Funding Authorisation for those works; and
 - e) Provisions for Thames Water Utilities Limited to pay for experts to approve the OMP and Protocols, and any amendments thereto initiated by them, and for an annual audit.

7. CONDITIONS / INFORMATIVES

CONDITIONS:

- 1 The development to which this permission relates must be commenced not later than three years from the date of this permission.

Reasons: To comply with the requirements of Section 91 of the Town and Country Planning Act 1990 (as amended by Section 51 of the Planning and Compulsory Purchase Act 2004).

- 2 All works are to be completed in accordance with the following Drawing Numbers:

Figure 1 - Location Plan

Figure 2a - Riverside STW Ownership Area and Planning Application Plan

Drawing No. 9RTG-YY-02001 REV A - Existing Site Plan and Environs

Drawing No. 9RTG-YY-02000 REV A - Existing Site Plan

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Drawing No. 9RTG-YY-02006 REV B - Proposed Site Plan
Drawing No. 9RTG-YY-02005 REV A - Contractors Working Area
Drawing No. 9RTG-YY-02010 REV B - Site Plan Sludge Digestion
Drawing No. 9RTG-YY-02011 REV B - Sludge Digestion Plant Sheet 1 of 2
Drawing No. 9RTG-YY-02012 REV B - Sludge Digestion Plant Sheet 2 of 2
Drawing No. 9RTG-YY-02015 REV A - Relocated Leachate Reception
Facilities and Odour Control Unit Number 2
Drawing No. 9RTG-YY-02007 REV B - Planning Application - Sections 1
Drawing No. 9RTG-YY-02008 REV B - Planning Application - Sections 2
Drawing No. 9RTG-YY-02061 REV B - CHP Building External Elevations
Drawing No. 9RTG-YY-02060 REV B - CHP Building Plan and Sectional
Elevations
Drawing No. 9RTG-YY-02032 REV B - Dewatering and Sludge Storage
Building External Elevations
Drawing No. 9RTG-YY-02031 REV B - Dewatering and Sludge Storage
Building Plan and Elevations
Drawing No. 9RTG-YY-02030 REV B - Dewatering and Sludge Storage
Building Plan
Drawing No. 9RTG-YY-02055 REV A - Digester MCC
Drawing No. 9RTG-YY-02080 REV A - Leachate Reception Facilities
Office
Drawing No. 9RTG-YY-02090 REV A - Typical Detail of Odour Control
Units 1 & 2.

No further drawings apply, unless otherwise approved in writing by the
Local Planning Authority.

Reasons: The Local Planning Authority consider it essential that the
whole of the development is carried out and that no departure whatsoever
is made from the details approved, since the development would not
necessarily be acceptable if partly carried out or carried out differently in
any degree from the details submitted. Also, in order that the development
accords with Policy DC61 (Urban Design) of London Borough of
Havering's Development Control Policies Development Plan Document
and Policy 4B.1 (Design Principles for a Compact City) of the London Plan
(adopted February 2008).

- 3 No development shall commence until the developer has submitted for the
written approval of the Local Planning Authority:
 - (a) A Phase I (Site Investigation) Report. If the Phase I Report confirms
the possibility of a significant risk to any sensitive receptors, a Phase
II (Site Investigation) Report shall be submitted to and approved in
writing by the Local Planning Authority. This Phase II (Site
Investigation) Report is an intrusive site investigation including factors
such as chemical testing, quantitative risk assessment and a
description of the sites ground conditions. An updated Site
Conceptual Model should be included showing all the potential

pollutant linkages and an assessment of risk to identified receptors.

- (b) A Phase III (Risk Management Strategy) Report if the Phase II Report confirms the presence of a significant pollutant linkage requiring remediation. The report will comprise of two parts:

Part A - Remediation Scheme which will be fully implemented before it is first occupied. Any variation to the scheme shall be agreed in writing with the Local Planning Authority in advance of works being undertaken. The Remediation Scheme is to include consideration and proposals to deal with situations where, during works on site, contamination is encountered which has not previously been identified. Any further contamination shall be fully assessed and an appropriate remediation scheme submitted to the Local Planning Authority for written approval.

Part B - Following completion of the remediation works in accordance with the Remediation Scheme a Validation Report must be submitted demonstrating that the works have been carried out satisfactorily and remediation targets have been achieved.

- (c) If during development works any contamination should be encountered which was not previously identified and is derived from a different source and/or of a different type to those included in the contamination proposals then revised contamination proposals shall be submitted to the Local Planning Authority; and
- (d) If during development work, site contaminants are found in areas previously expected to be clean, then their remediation shall be carried out in line with the agreed contamination proposals.

For further guidance see the London Borough of Havering's leaflet titled, 'Land Contamination and the Planning Process'.

Reasons: To protect those engaged in construction and occupation of the development from potential contamination in accordance with Policy DC53 (Contaminated Land) of London Borough of Havering's Development Control Policies Development Plan Document and Policy 4A.33 (Bringing Contaminated Land Into Beneficial Use) of the London Plan (adopted February 2008).

- 4 No development shall commence until a scheme has been submitted to and approved in writing by the Local Planning Authority making a provision for a Construction Method Statement to control the adverse impact of the development on the amenity of the public and nearby occupiers. The Construction Method statement shall include details of:

- (a) parking of vehicles of site personnel and visitors;

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- (b) storage of plant and materials;
- (c) dust management controls;
- (d) measures for minimising the impact of noise and, if appropriate, vibration arising from construction activities;
- (e) predicted noise and, if appropriate, vibration levels for construction using methodologies and at points agreed with the Local Planning Authority;
- (f) scheme for monitoring noise and, if appropriate, vibration levels using methodologies and at points agreed with the Local Planning Authority;
- (g) siting and design of temporary buildings;
- (h) scheme for security fencing/hoardings, depicting a readily visible 24-hour contact number for queries or emergencies;
- (i) details of disposal of waste arising from the construction programme, including final disposal points. The burning of waste on the site at any time is specifically precluded.

And the development shall be carried out in accordance with the approved scheme and statement.

Reasons: To protect residential amenity in accordance with Policy DC61 (Urban Design) of London Borough of Havering's Development Control Policies Development Plan Document and Policy 4B.1 (Design Principles for a Compact City) of the London Plan (adopted February 2008).

- 5 No development shall commence on a proposed building or buildings until samples of all materials to be used in the external construction of the relevant building or buildings have been submitted to and approved in writing by the Local Planning Authority and thereafter the development shall be constructed with the approved materials.

Reasons: To ensure that the appearance of the proposed development will harmonise with the character of the surrounding area in accordance with Policy DC61 (Urban Design) of London Borough of Havering's Development Control Policies Development Plan Document and Policy 4B.1 (Design Principles for a Compact City) of the London Plan (adopted February 2008).

- 6 Prior to the occupation of any part of the development, the renewable energy system shall be installed in strict accordance with the agreed details and operational to the satisfaction of the Local Planning Authority and maintained in good working order. The development shall achieve a minimum 20% carbon savings through the use of renewable energy technologies.

Reasons: In the interests of energy efficiency and sustainability in accordance with the London Borough of Havering's Interim Planning

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Guidance on Sustainable Design and Construction and Policies 4A.4 (Energy Assessment) and 4A.7 (Renewable Energy) of the London Plan (adopted February 2008).

- 7 No development shall commence until details of the flood storage compensation scheme have been submitted to and approved in writing by the Local Planning Authority. The scheme shall be completed in accordance with the approved plans.

Reasons: To prevent the increased risk of flooding to the site and third parties in accordance with Policy DC51 (Water Supply, Drainage and Quality) of London Borough of Havering's Development Control Policies Development Plan Document and Policy 4A.14 (Sustainable Drainage) of the London Plan (adopted February 2008).

- 8 No development shall commence until a surface water drainage scheme for the site, based on sustainable drainage principles and an assessment of the hydrological and hydro geological context of the development, has been submitted to and approved in writing by the Local Planning Authority. The scheme shall subsequently be implemented in accordance with the approved details before the development is completed. Such scheme shall include details of how surface water run-off from the roofs of the buildings hereby permitted will be directed to the new wetland feature in the western lagoon.

Reasons: To reduce the risk of flooding to the proposed development, future occupants and elsewhere in accordance with Policy DC51 (Water Supply, Drainage and Quality) of London Borough of Havering's Development Control Policies Development Plan Document and Policy 4A.14 (Sustainable Drainage) of the London Plan (adopted February 2008).

- 9 No development shall commence until a scheme for the provision and management of a buffer zone alongside the Havering New Sewer has been submitted to and approved in writing by the Local Planning Authority. Thereafter the development shall be carried out in accordance with the approved scheme and any subsequent amendments shall be agreed in writing with the Local Planning Authority. The scheme shall include:

- plans showing the extent and layout of the buffer zone
- details of the planting scheme (for example, native species)
- details demonstrating how the buffer zone will be protected during development and managed/maintained over the longer term
- details of any footpaths, fencing, lighting etc.

Reasons: Development that encroaches on watercourses has a potentially

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severe impact on their ecological value. This is contrary to Government policy in Planning Policy Statement 1 (Delivering Sustainable Development) and Planning Policy Statement 9 (Biological and Geological Conservation), and to the UK Biodiversity Action Plan.

- 10 Details of any floodlighting shall be submitted to and approved in writing by the Local Planning Authority before any of the buildings are first occupied and the works shall be carried out in accordance with the approved details.

Reasons: To ensure that light spillage does not adversely affect amenity and nature conservation interests.

- 11 Within 12 months of the date of planning permission being granted a scheme of hard and soft landscaping must be submitted to and approved in writing by the Local Planning Authority. The scheme shall include indications of all existing trees and shrubs on the site, and details of any to be retained, together with measures for the protection in the course of development. All planting, seeding or turfing comprised within the scheme shall be carried out in the first planting season following completion of the development and any trees or plants which within a period of 5 years from completion of the development die, are removed or become seriously damaged or diseased shall be replaced in the next planting season with others of a similar size and species, unless otherwise agreed in writing by the Local Planning Authority.

Reasons: In accordance with Section 197 of the Town and Country Planning Act 1990 and Policy DC61 (Urban Design) of London Borough of Havering's Development Control Policies Development Plan Document, and to enhance the visual amenities of the development.

- 12 No goods or materials, other than temporary storage reasonably required during construction, shall be stored on the site in the open above a height of 4 metres without the prior consent of the Local Planning Authority in writing.

Reasons: To protect the visual amenity of the local area in accordance with Policy DC61 (Urban Design) of London Borough of Havering's Development Control Policies Development Plan Document and Policy 4B.1 (Design Principles for a Compact City) of the London Plan (adopted February 2008).

- 13 No development shall commence until details of wheel scrubbing/wash down facilities to prevent mud being deposited onto the public highway during construction works have been submitted to and approved in writing by the Local Planning Authority. The approved facilities shall be

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permanently retained and used at relevant entrances to the site throughout the course of construction works.

Reasons: In order to prevent materials from the site being deposited on the adjoining public highway, in the interests of highway safety and the amenity of the surrounding area, and in order that the development accords with Policies DC32 (The Road Network) and DC61 (Urban Design) of London Borough of Havering's Development Control Policies Development Plan Document.

- 14 Before the development hereby permitted is brought into use, a scheme for any new plant or machinery associated with the development shall be submitted to the Local Planning Authority for their written approval, to achieve the following standard. Noise levels (expressed as the equivalent continuous sound level, {L_{Aeq} {1hr}}) when calculated at the boundary with the nearest noise sensitive premises shall not exceed L_{A90} -5dB.

Reasons: To protect local amenity in accordance with Policy DC55 (Noise) of the London Borough of Havering's Development Control Policies Development Plan Document and Policy 4A.20 (Reducing Noise and Enhancing Soundscapes) of the London Plan (adopted February 2008).

- 15 No construction works or deliveries into the site shall take place other than between the hours of 08.00 to 18.00 on Monday to Friday and 08.00 to 13.00 on Saturdays unless agreed in writing with the Local Planning Authority. No construction works or deliveries shall take place on Sundays, Bank or Public Holidays unless otherwise agreed in writing by the Local Planning Authority.

Reasons: To protect residential amenity, and in order that the development accords with Policy DC61 (Urban Design) of London Borough of Havering's Development Control Policies Development Plan Document.

- 16 No soakaways shall be constructed in contaminated ground.

Reasons: To prevent pollution of the local water environment in accordance with Policy DC51 (Water Supply, Drainage and Quality) of London Borough of Havering's Development Control Policies Development Plan Document and Policy 4A.14 (Sustainable Drainage) of the London Plan (adopted February 2008).

Provision of an Odour Management Plan and Protocols

- 17 The Riverside Digestion Plant shall not be brought into operation until the developer has submitted:

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- i. an Odour Management Plan (OMP) to the Local Planning Authority for approval and obtained the written approval of the Local Planning Authority for the OMP. The OMP shall deal with the management of odour at the Riverside STW. The developer shall not amend the approved OMP without first:
 1. Giving the Local Planning Authority no less than 28 days to comment on the proposed amendments; and
 2. Taking any comments received into account.

The Developer shall provide the Local Planning Authority with a copy of the amended OMP within 21 days of the OMP being amended.

The development shall be operated in accordance with the OMP from time to time in force under the provisions of this condition.

ii. The following Protocols:

- Hydrogen Sulphide Monitoring and Odour Emissions Protocol which shall include the matters set out in Condition 20.
- Olfactometric Testing and Performance Protocol which shall include the matters set out in Condition 22.
- Riverside Sludge Treatment Facility Capacity Protocol for the Sludge Treatment Facility which shall include the matters in Condition 23.
- Sludge Cake Store Ventilation Protocol which shall include the matters set out in Condition 26.
- Primary Settlement Tank Odour Potential and Emissions Protocol which shall include the matters set out in Condition 27.
- Sludge Depth Monitoring Protocol (for the primary settlement tanks) which shall include the matters set out in Condition 28.

The development shall be operated in accordance with the approved Protocols which shall not be changed without the prior written approval of the Local Planning Authority. In the event of a conflict between the OMP and any Protocol the provisions of the Protocol shall prevail.

Reasons: To enable the Local Planning Authority to monitor odour control activities within the development, to comply with Defra guidance, to ensure that the required Protocols are provided and agreed in the OMP, to ensure emissions accord with the prescribed levels and to minimise the risk of off-site odour impact of emissions from the development, to ensure reliable operation of the plant and to ensure compliance with Policy DC52 (Air

Quality) of London Borough of Havering's Development Control Policies Development Plan Document (adopted October 2008).

Odour Control, Mitigation and Abatement Plant

- 18 The Riverside Digestion Plant hereby approved shall not be brought into operation until the following odour mitigation measures (and the ancillary hydrogen sulphide monitors required under Condition 20) associated with those parts and as described in the Odour Impact Assessment ("OIA") dated May 2008 (and updates of October 2008), are installed and are operational as set out below.
1. The existing inlet channels leading from the pumping station to the detritors and the sludge collection chambers serving the primary sedimentation tanks shall be covered and emissions from them extracted to an odour control unit (the "Inlet Pumping Station OCU" in the OIA).
 2. All new odour enclosures, extraction systems and odour control units associated with the new sludge thickening and digestion plant have been installed and commissioned.
 3. The sludge cake store building extract ventilation system and stack have been installed and commissioned.
 4. The existing sludge OCU serving sludge holding and consolidation tanks is operational.

Emissions from these sources shall be discharged through the stacks described in the OIA (and updates of October 2008) and at the heights and discharge air speeds specified in the OIA (and updates of October 2008).

Reasons: To minimise odour emissions from the development and their off-site impact in the local area and to ensure compliance with Policy DC52 (Air Quality) of London Borough of Havering's Development Control Policies Development Plan Document (adopted October 2008).

Operation of Odour Control Plant

- 19 The following parts of the Riverside STW and the Facilities hereby approved shall be used and operated such that the odour emission rates in respect of air released from the odour control units are maintained at or below the predicted levels specified in the OIA dated May 2008 (and updates of October 2008):
1. Cake Store Exhaust Air Stack : 17,750 ouE/s;

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2. New Sludge Odour Control Unit (OCU) : 420 ouE/s;
3. Elevated Inlet Channels (or Inlet Pumping Station) OCU: 280 ouE/s;
4. Existing Sludge OCU : 260 ouE/s;

or such other limits as are agreed in writing by the Local Planning Authority.

Reasons: To minimise odour emissions from the development and their off-site impact in the local area and to ensure compliance with Policy DC52 (Air Quality) of London Borough of Havering's Development Control Policies Development Plan Document (adopted October 2008).

Hydrogen Sulphide Monitoring Equipment and Protocol

- 20 The Riverside Digestion Plant hereby approved shall not be brought into operation until hydrogen sulphide monitoring instruments with a resolution of 0.001 parts per million have been fitted to the exhausts from all odour control units associated with the parts of the development specified in Condition 18, and such instruments are in working order, and the Hydrogen Sulphide Monitoring and Odour Emissions Protocol has been approved in writing by the Local Planning Authority.

The Hydrogen Sulphide Monitoring and Odour Emissions Protocol shall include the following:

- (a) Initial hydrogen sulphide emissions to be agreed for each emission point or OCU listed below which shall be reviewed by the Local Planning Authority in the light of data provided by the developer within 6 months of the commencement of operation of the development:
 - Cake Store Exhaust Air Stack
 - New Sludge Odour Control Unit (OCU)
 - Elevated Inlet Channels (or Inlet Pumping Station) OCU
 - Existing Sludge OCU.
- (b) Procedures for the maintenance and operation of monitoring instruments.
- (c) The frequency of measurements.
- (d) The approach to be taken to any emissions exceedences.
- (e) Procedures and methodology for the calibration of hydrogen sulphide monitoring instruments including the setting of "alarm" hydrogen sulphide concentration levels.

Reasons: To enable the emissions from the development to be properly monitored, to ensure that the Hydrogen Sulphide Monitoring and Odour Emissions Protocol is provided and agreed, and to ensure compliance with Policy DC52 (Air Quality) of London Borough of Havering's Development Control Policies Development Plan Document (adopted October 2008).

Odour Emissions

- 21 In the event that any of the monitoring instruments fitted pursuant to Condition 20 shows that hydrogen sulphide concentrations in emissions from any of the odour control units exceeds the concentration limits prescribed in the approved Hydrogen Sulphide Monitoring and Odour Emissions Protocol agreed under Condition 20 for six or more hours, on three or more days within any calendar month then the developer shall notify the Local Planning Authority and shall take appropriate remedial action within a further 30 days to bring odour emissions and hydrogen sulphide concentrations back within the levels specified in the approved Hydrogen Sulphide Monitoring and Odour Emissions Protocol. Within 14 days of such remedial action having been taken, the developer shall provide the Local Planning Authority with monitoring data recorded in accordance with the approved Hydrogen Sulphide Monitoring and Odour Emissions Protocol to demonstrate that the hydrogen sulphide concentration levels have not exceeded the limits specified in that Protocol after the remedial action was taken.

If there are any other deteriorations in performance, or any failures or breakdowns of odour abatement plant, which are not detected by the hydrogen sulphide monitoring instruments, they shall be notified to the Local Planning Authority within 48 hours of the operator becoming aware of them and the plant shall be returned to fully operational conditions, in compliance with the emissions limits set out in the Hydrogen Sulphide Monitoring and Odour Emissions Protocol agreed under Condition 20 as soon as practicable and in any event within 30 days.

Reasons: To enable the emissions from the development to be properly monitored, to ensure that the Hydrogen Sulphide Monitoring and Odour Emissions Protocol is provided and agreed and to ensure compliance with Policy DC52 (Air Quality) of London Borough of Havering's Development Control Policies Development Plan Document (adopted October 2008).

Olfactometric Testing

- 22 The Riverside Digestion Plant shall not be brought into operation until the Olfactometric Testing and Performance Protocol has been submitted to and approved in writing by the Local Planning Authority.

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The developer shall at least annually carry out olfactometric tests of the emissions from all odour abatement or odour control unit stacks within the development in accordance with the methodology in the agreed Olfactometric Testing and Performance Protocol.

The Olfactometric Testing and Performance Protocol shall include the following matters:

- (a) Procedures to ensure the testing of each newly installed OCU within 30 days of the relevant OCU being brought into use.
- (b) Methodology and procedure for monitoring and sampling including the calculation of emission rates for each OCU or stack.
- (c) Provisions to ensure that odour samples are analysed in accordance with BSEN 13725.
- (d) Procedures for reporting of exceedences to the Local Planning Authority.
- (e) Provisions as to actions and remediation measures (including provisions to ensure that such measures are taken within a reasonable time) in the event of exceedences.
- (f) Provision to ensure that the Local Planning Authority is notified not less than 7 days before all testing and is supplied with the results within 30 days.
- (g) All olfactometric tests should be undertaken in accordance with the approved Olfactometric Testing and Performance Protocol.

Reasons: To ensure emissions accord with the prescribed levels and to ensure compliance with Policy DC52 (Air Quality) of London Borough of Havering's Development Control Policies Development Plan Document (adopted October 2008).

Processing of Sludge

- 23 The Sludge Digestion and Thickening (to produce cake) Facilities hereby approved shall not be brought into operation until:
- (a) the Developer has submitted the Riverside Sludge Treatment Facility Capacity Protocol demonstrating to the satisfaction of the Local Planning Authority that the Riverside Sludge Treatment Facilities are capable of treating the sludge being generated in the treatment processes at the Riverside Sewage Treatment Works; and
 - (b) the Local Planning Authority has approved in writing the Riverside

Sludge Treatment Facility Capacity Protocol.

No sewage sludge generated at Beckton Sewage Treatment Works shall be imported to the Riverside Sludge Treatment Facilities until it has been demonstrated to the satisfaction of the Local Planning Authority (such approval to be evidenced in writing) that the Facilities are capable of operating up to the design capacity of 110 tonnes of sludge dry solids per day.

Reasons: To ensure that sludge will not be retained in the Riverside STW, and that additional sludge produced at Beckton (as a result of the proposed developments at Beckton) can be processed as proposed at the Riverside Sludge Treatment Facility and having regard to Policy DC52 (Air Quality) of London Borough of Havering's Development Control Policies Development Plan Document (adopted October 2008).

Limits on Processing of Sludge and Sludge Cake

- 24 Unless otherwise agreed in writing with the Local Planning Authority, no temporary or permanent sludge/sludge cake liming, or any other mechanical or chemical treatment involving raw or treated sludge or sludge cake shall be carried out anywhere within the boundaries of Riverside Sewage Treatment Works other than as described in the application and within fully enclosed and odour extracted and abated/mitigated facilities. No such sludge or sludge cake treatments will be undertaken outside or in the open.

No temporary or permanent sludge/sludge cake liming, or any other mechanical or chemical treatment involving raw or digested sludge cake, other than as described in the Application, shall be carried on within the sludge cake store at any time without the written agreement of the Local Planning Authority.

Reasons: To minimise odour emissions from the development and to ensure compliance with Policy DC52 (Air Quality) of London Borough of Havering's Development Control Policies Development Plan Document (adopted October 2008).

Storage of Sludge

- 25 Unless otherwise agreed in writing with the Local Planning Authority, no sludge or sludge cake, whether raw, digested, limed or unlimed, shall be stored within the Riverside STW boundaries on a temporary or permanent basis otherwise than within fully enclosed and odour extracted and abated facilities. No sludge or sludge cake will be stored outside or in the open.

Reasons: To minimise odour emissions generally and specifically from

sludge treatment and storage operations treating both imported sludge and sludge from the Riverside STW, and to ensure compliance with Policy DC52 (Air Quality) of London Borough of Havering's Development Control Policies Development Plan Document (adopted October 2008).

Sludge Cake Store Odour Control

- 26 The Riverside Digestion Plant shall not be brought into operation until both the Sludge Cake Store Ventilation Protocol and the Olfactometric Testing and Performance Protocol have been submitted to and approved in writing by the Local Planning Authority.

The developer shall at least annually carry out olfactometric tests of the emissions from the sludge cake store extract stacks in accordance with the methodology in the agreed Olfactometric Testing and Performance Protocol.

The Sludge Cake Store Ventilation Protocol shall include the following matters:

- (a) Procedures to ensure that the sludge cake store will be maintained under negative pressure at all times other than when vehicles are entering or exiting. The developer shall demonstrate to the Local Planning Authority at least annually that this is the case using an agreed testing and monitoring method.
- (b) Procedures to ensure that the vehicle access doors to the sludge cake store shall be kept closed at all times except when vehicles are entering or exiting the building.
- (c) Initial tests for outlet odour concentrations in the stack within 30 days of the plant becoming operational and thereafter annually in accordance with the Olfactometric Testing and Performance Protocol. These tests shall be conducted whilst the plant is operating with at least 5 days sludge cake throughput stored in the building.
- (d) Provision that if, in the event that the sludge cake store (and sludge press/centrifuge) building extract stack odour emission rate exceeds the 17,750 ou_E/s emission limit (or such other limit as agreed under condition 19) in any test, the developer shall carry out a re-test within 120 days (such test to comprise three outlet odour samples). In the event that such re-test shows an emission rate exceeding 17,750 ou_E/s (or such other limit as agreed under condition 19), then the developer shall identify and agree with the Local Planning Authority abatement or mitigation measures to address the exceedence. The agreed measures will be implemented within 12 months of the initial exceedence or such other period as may be agreed in writing with the Local Planning Authority.

- (e) Provisions such that if abatement plant is installed on the Cake Store (and sludge centrifuge/pressing) building exhaust, and if the outlet odour emissions exceed the emission limit of 17,750 ou_E/s (or such other limit as agreed under condition 19) in any commissioning or annual performance test, then the plant shall be repaired or rectified and re-tested within 60 days of the failed test (or within such other period as is agreed in writing with the Local Planning Authority) unless the 12 month period for installation of an abatement plant has been triggered. Any odour abatement plant fitted will subsequently be subject to annual performance testing as prescribed in the Olfactometric Testing and Performance Protocol.

Reasons: To minimise the escape of odorous air and to ensure compliance with Policy DC52 (Air Quality) of London Borough of Havering's Development Control Policies Development Plan Document (adopted October 2008).

Primary Settlement Tank (PST) Odour Emissions

- 27 The Riverside Digestion Plant shall not be brought into operation until the Primary Settlement Tank Odour Potential and Emissions Protocol has been submitted to and approved in writing by the Local Planning Authority and the approved pre-development phase of the testing programme has been carried out.

The Protocol will set out:

- (a) A means by which the Developer will measure and establish a baseline of current odour potential or odour emissions from the PSTs.
- (b) Proposals by which the Developer will undertake comparative measurements following commissioning of the sludge digestion plant development, so that the effects of any increased odour potential or odour emissions arising from the development, can be assessed.
- (c) An objective means (including the establishment of an agreed threshold - e.g. 120% of baseline) to establish if mitigation measures will be required to control any increase in odour emissions from the PSTs after the development has been completed and is operational, that is as a result of the return of sludge centrate and filtrate from the proposed sludge plant.
- (d) Means by which appropriate mitigation to meet any requirement under paragraph (c) will be discussed and agreed with the Local Planning Authority and then if agreed implemented.
- (e) The Developer shall undertake further sampling to establish to the

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satisfaction of the Local Planning Authority that any mitigation work has been successful.

Reasons: To establish a method of measuring comparative emissions from the PSTs before and after the proposed development so that it can be ensured that odour emissions and off-site impact do not increase significantly as a result of the development, and to thereby comply with Policy DC52 (Air Quality) of London Borough of Havering's Development Control Policies Development Plan Document (adopted October 2008).

Primary Settlement Tank Sludge Depth Monitoring

- 28 No later than 60 days prior to the commencement of the operation of the new sludge processing plant, the developer shall submit a Sludge Depth Monitoring Protocol for agreement with the Local Planning Authority.

The Riverside STW shall be operated in accordance with the approved Sludge Depth Monitoring Protocol at all times.

The Sludge Depth Monitoring Protocol shall include:

- (a) A target limit on sludge depths in open or uncovered Primary Settlement tanks, which shall initially be no more than [50cm] in any tank.
- (b) Provision for required actions in the event of exceedences of set actual limits, which shall initially be: If sludge depth in any tank exceeds [60cm] for more than 3 days; or [75cm] for more than two days; or [90cm] at any time, the Developer is to immediately notify the Local Planning Authority and within a further 48 hours submit in writing remedial measures proposed for the affected tank or tanks and a timescale for their implementation to be approved in writing by the Local Planning Authority.
- (c) Methodology for measuring sludge depth.
- (d) Provisions for recording, keeping and supplying to the Local Planning Authority sludge depth monitoring results.
- (e) Procedures concerning the prompt emptying and cleaning of any Primary or Final Settlement Tanks which break down or are not in use.

Reasons: To ensure reliable operation of the plant and to minimise the risk of odour emissions from the development as a result of retained sludge and to ensure compliance with Policy DC52 (Air Quality) of London Borough of Havering's Development Control Policies Development Plan Document (adopted October 2008).

Sniffing Ports

- 29 All odour abatement plants or OCUs shall be fitted with an odour sniffing port with safe and adequate access to allow routine (weekly) “sniffing” of the treated air off all abatement plants by Thames Water personnel without the need for any specialised access equipment, sampling pumps or other sampling equipment. All sniffing ports should be located and fitted so that they provide a mixed and representative air stream off the odour control unit they serve, and they should be accessible and available for use by Planning or Environmental Health Officers carrying out their normal inspections and other duties.

Reasons: To ensure emissions stay within acceptable limits and to ensure compliance with Policy DC52 (Air Quality) of London Borough of Havering’s Development Control Policies Development Plan Document (adopted October 2008).

INFORMATIVES:

1. 11 No. private fire hydrants are required to be installed for fire fighting purposes. These are detailed in the plan provided by the London Fire Brigade and are to conform to BS 750:1984 and be indicated with a hydrant indicator plate conforming to BS 3251:1976.

The London Fire Brigade has a policy of free annual inspections/tests. Please contact Mark Lyne on 0208 555 1200 for more information.

Access for the fire brigade vehicles should comply with Section 16 of ADB 16.5, Tables 19 and 20. Please call K.E. Davies for more information on 0207 587 2133.

2. There are high pressure gas lines and electricity lines which are in near vicinity / cross the site. Please contact National Grid for information on working in near proximity to these prior to works commencing. Further details are attached to the guidance note provided by National Grid. Please contact Sarah Robinson on 0800 7312961 for more information.

3. Under the Water Resources Act 1991 and the Thames Region Land Drainage Byelaws 1981, the prior written consent of the Environment Agency is required for any works or structures in, over, under or within 8 metres of the top of the bank of the Havering New Sewer, designated a ‘main river’. This is irrespective of any planning permission granted.

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The buffer zone needs to be 8 metres, measured from bank top of the Havering New Sewer, for the whole extent of the site. Bank top is defined as the point at which the bank meets normal land levels / the edge of the wetland as designated on a site plan. This zone should be without structures (except for those shown on the plan 9RTG-YY-02010 Rev B), hard standing, footpaths, fences or overhanging development. The buffer zone needs to be designed and managed to develop this natural character and planted with locally native shrubs and grasses, of UK genetic provenance.

4. The applicant is requested to consult with Design for London in respect of matters concerning Condition 11 (Landscaping).

CASE OFFICER: Adele Williamson

Appendix 1: Committee Report and Addendum Report dated 12 February 2009