

PLANNING COMMITTEE MEETING: 9 December 2010

**PLANNING APPLICATION FOR DETERMINATION BY THE LTGDC
REPORT OF THE DIRECTOR OF PLANNING**

UDC CASE NUMBER:	LTGDC-10-100-WAS	DATE MADE VALID:	02/08/2010
APPLICATION NUMBER:	10/01713/LTGDC/LBNM	TARGET DATE:	Subject to a PPA

APPLICANT:	Thames Water Utilities Limited
AGENT:	Adams Hendry Consulting Limited
PROPOSAL:	Erection of an enhanced sewage sludge digestion facility including relocation of existing workshop building
LOCATION:	Beckton Sewage Treatment Works, Jenkins Lane, East Ham, London IG11 0AD

1. SUMMARY

- 1.1 Thames Water Utilities Ltd (Thames Water) is seeking planning permission for an Enhanced Sludge Digestion Facility at the Beckton Sewage Treatment Works (STW). These works include the construction of new sludge treatment infrastructure, a Thermal Hydrolysis Plant (THP), a Sludge Cake Storage Building and associated plant, and the refurbishment of existing digesters on site. It will also include the relocation of an existing workshop, which is to be moved to a new location to better accommodate the proposed facility.
- 1.2 The need for the development is driven by the statutory requirement to ensure the provision of sufficient sludge treatment capacity at Beckton STW to service the growing requirements of the Beckton STW catchment.
- 1.3 The development will result in improvements to the efficiency and quality of sludge treatment and recycling of sludge to land undertaken at Beckton STW. The development will enable Thames Water to provide sludge treatment capacity both to manage the needs of the existing

population and to service the requirements of the future domestic and business populations. It will also provide sludge treatment capacity whilst the existing Sludge Powered Generator (SPG) undergoes a major overhaul.

- 1.4 One objection has been received from an adjoining resident which raises concern regarding odour. This objection has been considered, along with other material considerations and the development plan consisting of the London Plan (the Strategic Plan for London) and Newham Council's Unitary Development Plan (adopted June 2001 – saved policies).
- 1.5 The impacts of the development in terms of odour have been considered and Officers concur in general with the findings of the submitted Odour Assessment in that implementation of the odour control measures are forecast to lead to a reduction in odour levels compared to the future baseline and that the odour exposure levels experienced off-site are likely to decrease proportionally. A number of odour conditions, including a condition for an Odour Management Plan and associated protocols, are proposed to ensure the applicant adheres to the predicted odour reduction targets.
- 1.6 The application has been assessed in terms of impacts on air quality, transport/traffic, sustainability and energy, land contamination, water resources and flood risk, ecology and biodiversity, landscape and visual, cultural heritage, waste, and noise and vibration. Subject to various conditions, including a condition requiring the applicant to carry out the development in accordance with the environmental standards, mitigation measures, requirements and methods of implementing the development contained in the submitted planning application, the impacts of the development are acceptable and generally in accordance with the relevant policies as set out in Section 6 of this report. Officers are satisfied that the development will not have an adverse impact on the setting of the Grade II Listed Chimney to the east of the development site.
- 1.7 The proposals represent a departure from the London Borough of Newham Unitary Development Plan. The site is within Metropolitan Open Land (MOL) where there is a presumption against inappropriate development (which the proposals constitute) in the absence of very special circumstances. In addition, part of the site is designated as green space, within which only leisure, recreation or nature conservation development will normally be permitted. However, in this instance, the positive effects of these proposals and the underlying and irrefutable need for them are considered, having regard to the lack of other adverse impacts, to represent the very special circumstances required to allow this development to take place. Referral of the application to the Government Office for London is not required.

- 1.8 It is consequently recommended that planning permission is granted subject to referral to the Mayor of London, to the conditions listed in this report, and the completion of a S106 agreement to secure provisions for Thames Water Utilities Limited to pay for experts to approve the Odour Management Plan and Protocols, and any amendments thereto initiated by them, and for an annual audit.

2. SITE AND PROPOSAL

- 2.1 The Beckton Sewage Treatment Works (STW) site is 133 hectares in overall area. It serves the population equivalent of 3.4 million people in London, north of the River Thames from Hammersmith eastwards and is the largest sewage works in the United Kingdom both in terms of population served and area covered. It lies within the tidal floodplain of the River Thames Estuary and as such is low lying and flat. The site is bounded by the tidal Barking Creek to the east (which forms the boundary with the London Borough of Barking and Dagenham) and by the River Thames to the south. Further south, across the River Thames, are the Boroughs of Bexley and Greenwich.
- 2.2 The site of the proposed works is 12.8 hectares in area and is located in the central and south-eastern areas of the STW. The land immediately around the site contains a variety of structures including the visually dominant SPG building (approximately 35 metres in height) and associated flue (60 metres in height) which is located centrally on the site.
- 2.3 The area of land to the east of the development site until recently contained the 'Old engine/pump house' including engine houses, boiler houses, and a chimney. These buildings formed part of the original 19th century sewage works. The chimney within this cluster of buildings became Grade II listed on 4 March 2009. The chimney has been dismantled and stored elsewhere on site (Listed Building Consent Ref. 09/01346/LBC approved 02/12/2009). An application has recently been submitted to re-erect the chimney in the same location in April 2015 (Full Planning Application Ref. 10/02265/FUL), following completion of works on the Lee Tunnel and Beckton Sewage Treatment Works Extension Scheme.
- 2.4 The closest existing residential properties to the STW site are located approximately 350 metres to the north-east of the existing STW boundary, and approximately 600 metres north-east of the planning application site boundary at Westminster Gardens (LB of Barking and Dagenham).
- 2.5 The STW site is affected by the following designations which are illustrated on the proposals map within the adopted London Borough of Newham Unitary Development Plan (UDP):

- Safeguarded as a Waste Management Site (Policy EQ55);
- Metropolitan Open Land (MOL);
- Green Space to be Protected;
- Protected Site of Nature Conservation Importance;
- Green Chain;
- Proposed Recreational Footpath Network;
- Major Opportunity Zone MOZ15 (Beckton Gateway);
- Area Covered By Secretary of State for the Environment, Transport and the Regions' Notification of Intention to Provide or Improve a Trunk or Special Road;
- Safeguarded Wharf ('t22' on Proposals Map).

2.6 The STW site is located within the Environment Agency's Flood Zone 3, an area with a "high" level of flood risk.

2.7 The STW site is also identified as an Archaeological Priority Area within the UDP.

3. THE PROPOSAL

3.1 The applicant (Thames Water) is seeking planning permission for an Enhanced Sludge Digestion Facility at the Beckton Sewage Treatment Works (STW). The development will include the refurbishment of existing anaerobic digester tanks alongside the construction of a number of new structures and associated works.

3.2 The development will comprise a number of buildings and items of plant occupying a total footprint of 6.6ha. It includes the:

- refurbishment of existing anaerobic digester tanks (approximately 0.4ha of the overall footprint);
- new sludge blending tanks;
- strain presses;
- a centrifuge feed tank and pumps;
- Thermal Hydrolysis Process (THP) feed silos and THP plant;
- heat exchangers and recirculation pumps;
- a Combined Heat and Power (CHP) plant and boiler building;
- belt press feed tanks, a sludge cake storage building;
- a waste gas burner;
- a liquor treatment plant;
- polymer preparation silos;
- an odour control unit;
- a siloxane filter;
- a ferric chloride dosing plant;
- limited internal access roads;
- a welfare building;

- a replacement workshop;
 - overhead pipe network;
 - covers to the existing STW settled sewage channels (approximately 1.3ha of the overall footprint); and
 - odour control units for the settled sewage channel covers.
- 3.3 Most of the proposed development will be located on vacant areas to the west and south of the existing SPG and on the site of the redundant gas power generator house and an existing workshop. These areas are located at the centre of the STW. The redundant digester tanks to be refurbished are located in the southern area of the STW and adjoin its western boundary.
- 3.4 Sludge is primarily the organic by-product of the biological treatment of wastewater. Currently, most of the sludge generated from the treatment of wastewater at Beckton STW is treated in the existing SPG. However, the SPG does not have the capacity to deal with all of the sludge produced. Any residual sludge is currently lime treated and recycled to agricultural land.
- 3.5 With population growth and tightening environmental standards the quantities of sludge produced and requiring treatment will increase. The proposed development will provide sufficient sludge treatment capacity for Thames Water to reduce its reliance on sludge liming for typical day to day operations. It will ensure that there is sufficient capacity available to meet the demand for sludge treatment in the Beckton catchment arising from population growth and improvements in the sewage treatment process. The Enhanced Digestion Facility will also ensure that during the planned overhaul of the SPG the sludge treatment capabilities of Beckton STW will be maintained.
- 3.6 The application does not constitute EIA development, and this was confirmed by a Screening Opinion issued by the Corporation on 22 February 2010. The applicant has submitted an Environment Report prepared by Scott Wilson which addresses the following issues:
- Odour Assessment, including ventilation and extraction details;
 - Air Quality Assessment, including ventilation and extraction details;
 - Cultural Heritage Assessment;
 - Landscape Assessment, including Indicative Landscape Plan and Tree Survey;
 - Ecological Assessment;
 - Water Resources and Flood Risk;
 - Noise Assessment;
 - Waste Assessment, including Framework Site Waste Management Plan; and
 - Framework Construction Environmental Management Plan, incorporating Construction Phase Travel Plan.

3.7 Further stand-alone reports have also been submitted as follows:

- Energy Report;
- Land Quality Report;
- Sustainable Design and Construction Statement;
- Flood Risk Assessment; and
- Transport Statement, incorporating operational travel plan arrangements and including parking and access arrangements.

4. RELEVANT SITE HISTORY

- 4.1 Beckton STW is at the end of the Northern Outfall Sewer, which was constructed in the second half of the 19th century. Initially, sewage was discharged untreated into the River Thames. Most of the current STW infrastructure was constructed in the mid 20th century. Over the years a number of different planning permissions have been granted in association with the STW at this site.
- 4.2 Outline planning approval was granted in August 1993 for the construction of a sewage treatment Sludge Powered Generator (SPG) (Application Ref. P/91/0934). It was completed and commissioned in 1998 and operates for the incineration of sludge to generate energy that is sent to the grid.
- 4.3 A planning application (Application Ref. P/04/1002) for the construction of the Thames Gateway Water Treatment Plant (TGWTP) incorporating desalination technology with an intake from the River Thames was allowed on appeal on 16 July 2007.
- 4.4 Planning approval was granted in October 2005 for the construction of a distribution pipeline (Application Ref. P/05/0291) designed to transfer water treated in the Thames Gateway Water Treatment Plant to Woodford Reservoir in the London Borough of Waltham Forest.
- 4.5 Planning approval was granted on 1 December 2009 following the completion of a Section 106 Agreement (Application Refs. 08/01162/FUL, 08/01159/LTGDC and 08/01158/ODA) for construction of a sewage storage and transfer tunnel (known as the Lee Tunnel) between Abbey Mills Pumping Station and Beckton Sewage Treatment Works, and construction of an extension to the Beckton Sewage Treatment Works. Work on this development is currently underway.
- 4.6 Planning approval was granted on 3 September 2009 (Application Ref. 09/01002/FUL) for the erection of a storage building on an area of hardstanding to the east of the existing Sludge Powered Generator (SPG) building.

- 4.7 Listed Building Consent was granted on 2 December 2009 (Listed Building Consent Application Ref. 09/01346/LBC) to dismantle, store, refurbish and re-erect in exactly the same location the Listed Chimney at Beckton Sewage Treatment Works. An application has recently been submitted to re-erect the chimney in April 2015 in the same location it was previously (Full Planning Application Ref. 10/02265/FUL), following completion of works on the Lee Tunnel and Beckton Sewage Treatment Works Extension Scheme.
- 4.8 The applicant submitted a request for a Screening Opinion for this development on 3 February 2010. A Screening Opinion was issued on 22 February 2010 which concluded that an Environmental Statement was not required. The Screening Opinion noted, however, that there were several potentially significant impacts which would need to be addressed within any forthcoming planning application including odour impacts, impacts of construction traffic (particularly cumulative), contaminated land, impacts on ecology and biodiversity, impacts on Metropolitan Open Land (MOL) and the Site of Nature Conservation Importance (SNCI) and Green Chain, noise and vibration, waste, air and water quality, visual impacts and impacts on the Listed Chimney.
- 4.9 There have also been a series of minor applications for telecommunications and other operational plant at the site, as well as developments implemented under permitted development rights. These are not listed in this report.

5. CONSULTATIONS/NOTIFICATIONS

5.1 Adjoining Properties

- 5.1.1 189 adjoining occupiers were sent letters on 12 August 2010. Two responses were received – one objection from Westminster Gardens, Barking and one request for further information from River Road, Barking. The objector raised concerns regarding odour. Odour is addressed in Sections 7.18 – 7.33 below.

<i>Number of Letters Sent</i>	189
<i>Number of Responses Received</i>	2
<i>Number in Support</i>	0
<i>Number of Objections</i>	1
<i>Clarification/more info requested</i>	1

- 5.1.2 The application was advertised in the Newham Recorder on 11 August 2010. The advertisement stated that the application is a major application which affects the setting of a Listed Building and is a departure from the Unitary Development Plan. Five site notices were also posted outside the site on 13 September 2010. These notices stated that the development affects the setting of a Listed Building and

constitutes a departure from the Unitary Development Plan.

5.1.3 Comments from Councillors

Councillor Kellaway (Beckton Ward):

- Would like to see the STW shifted further down the River Thames in the long term.
- Odour is a big issue at the STW and the Council must ensure the best possible odour situation is achieved via the use of suitable planning conditions.

5.2 **Statutory and Non-Statutory Consultation**

5.2.1 Greater London Authority (GLA)

The applications are referable under Categories 2B and 3D of the Town and Country Planning (Mayor of London) Order 2008.

The GLA responded on 6 October 2010 to state that although the application is broadly acceptable in strategic planning terms, on balance it does not comply fully with the London Plan for the following reasons:

- **Transport:** The application provides no written confirmation that Thames Water would comply with its agreement with DLR to take account of future DLR extension plans when proposing any development in the STW site. In addition a Travel Plan, a Construction Logistics Plan, and a Servicing and Deliveries Plan are required.
- **Energy:** The applicant's Energy Strategy fails to explore the feasibility of exporting any surplus heat to buildings within the area or to any of the planned district heating around the site, and it fails to explore the scope to adopt less energy intensive cooling. It also lacks information as to how the low temperature hot water from the CHP engines will be used.
- **Air Quality and Odour Control:** The application lacks information on the combined air quality effects of the CHP engine and boiler emissions. No mention is made of the effect of emissions from the CHP plant on ecological sites (such as Epping Forest Special Area of Conservation).
- **Noise and Vibration:** The submitted details lack clarification on the likely noise impacts of the development during peak construction activity due to heavy goods vehicles.

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Noted that the following changes may remedy the above-mentioned deficiencies:

- Transport: The submission of a written commitment to comply with the safeguarding requirements specified in the comments provided by TfL, together with a Travel Plan, a Construction Logistics Plan, and a Servicing and Deliveries Plan.
- Energy: The applicant should respond to the requirements for additional information as requested in the Stage 1 Report.
- Air Quality: Thames Water should provide the information requested in the Stage 1 Report.
- Noise and Vibration: Additional information should be provided on construction noise by heavy goods vehicles during peak construction times.

5.2.2 Design for London (DfL)

No response received to date.

5.2.3 Natural England

Natural England responded in an e-mail dated 23 August 2010 advising that they are aware of the proposals to enhance and increase the facilities of the STW and that they have commented on previous applications relating to the site. They noted that this scheme is in line with previous development proposals and therefore refer to previous comments with regards to enhancements and improvements to the overall site in line with the Landscape and Ecology Management Plan (LEMP). No objection subject to the above-mentioned conditions and measures.

5.2.4 English Heritage – GLAAS

Recommended a condition for archaeological work prior to commencement of works.

5.2.5 English Heritage – Historic Buildings and Areas Advisor

Responded in an e-mail dated 15 November 2010 to state that they have considered the application and do not wish to offer any comments.

5.2.6 Transport for London

TfL responded in an interim letter dated 9 September 2010. A summary of TfL's comments is as follows:

Further work is required to align the development proposals with TfL and London Plan standards, as follows:

- *The applicant should comply with the terms of the land safeguarding arrangement with Docklands Light Railway (DLR), regarding the safeguarding of land for a future DLR extension. The safeguarding for the Thames Gateway Bridge (TGB) also needs to be taken into consideration.*
- *A Travel Plan covering both the operational and construction phase should be submitted.*
- *A Construction Environmental Management Plan (CEMP) should be submitted and be secured by Section 106 agreement.*

The applicant responded to TfL's comments by letter dated 13 September 2010.

TfL responded to the applicant's letter on 1 October 2010 with the following comments:

- *TfL welcomes the applicant's intention in the letter to not undertake any development within the DLR and TGB area. It is noted that there already is a legal agreement with DLR and Heads of Terms for TGB but for the avoidance of doubt TfL requires this safeguarding intention to be secured by S106 agreement.*

(Officers do not consider that such a S106 is justified as no part of the development site encroaches on the TGB safeguarded area and, whilst part of the development encroaches on the DLR safeguarded area, the excavation depth will not impede the development of the DLR extension, which is proposed to be underground at this point (see paragraphs 7.15 and 7.46 below).

- *TfL notes that the applicant is currently without useful construction phase information to be included in their Construction Phase Travel Plan as a contractor has not yet been appointed. To ensure that the transport generated in the construction is managed sustainably, TfL will advise that a S106 condition, stipulating that construction works shall not commence prior to production of a Construction Phase Travel Plan, should be secured. Likewise for the Operational Travel Plan, TfL requires that a S106 condition, stipulating that the development must not be occupied prior to production of an Operational Phase Travel Plan, should be secured.*

(Construction and operational phase travel plans are proposed to be secured by condition – see suggested Conditions 18 and 19).

- *Although the design specification for the development is not yet finalised, TfL recommends the developer should propose to maximise the use of the river for the transportation of construction materials. TfL notes that the applicant intends to investigate the possibility of transporting pre-mixed concrete, piling materials and reinforced steels through a strategy which will be expected to be approved by the Local Planning Authority. In line with PLA advice, TfL would however suggest the following condition in place of the wording at Paragraph 7.136 of the planning statement:*

“Transportation of bulk construction materials, including but not limited to concreting and other aggregates; piling materials; and reinforced steelwork to the site shall not commence until details to seek to maximise the use of the River Thames for the transport of those materials to safeguarded wharves during the construction period has been submitted to and approved in writing by the Local Planning Authority. The construction and operation of the development hereby approved shall not be carried out other than in accordance with the approved strategy and to the satisfaction of the Local Planning Authority.”

(A condition to that effect is recommended at Condition 23 below).

- *To ensure that the water strategy to be prepared by Thames Water for this application is effective in promoting the sustainable delivery of constructions materials, TfL would recommend that Thames Water, in consultation with TfL and the PLA, agree the scope of this strategy and also prepare a feasibility assessment prior to the appointment of a contractor for this development. This scoping study and feasibility assessment report will then form/inform the contractor tender documents for this development.*
- *TfL supports the intention to secure a CEMP by S106 condition. TfL will suggest the development works should not commence until a CEMP has been submitted and approved by the Local Planning Authority.*

(In fact, it is proposed that the CEMP be secured by condition – see suggested Condition 20).

5.2.7 London City Airport

No response received to date.

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5.2.8 The National Grid Transco

National Grid originally responded on 24 August 2010 to raise some concerns regarding the development as it is located in close proximity to National Grid's Transmission Assets, including high pressure gas pipelines and medium pressure mains.

Responded again on 19 November 2010 to confirm that they have no objections to the development. They did, however, make a number of observations relating to proposed development within the vicinity of National Grid Assets. These will be included as informatives on any planning permission granted.

5.2.9 Health & Safety Executive (HSE)

The HSE were originally consulted, however it has since transpired that the site is not located within the consultation distance of any identified major hazards. As such, it is not necessary to utilise HSE's online PADHI land use planning consultation resource.

5.2.10 Olympic Delivery Authority (ODA)

The ODA responded in a letter dated 7 September 2010 to confirm they have no objection.

5.2.11 Port of London Authority (PLA)

The PLA responded in a letter dated 22 September 2010 which stated that they have no objection to the application subject to a condition to maximise the use of the River Thames for the transport of construction materials during the construction period.

(See suggested Condition 23).

5.2.12 British Waterways

British Waterways confirmed in an e-mail dated 6 September 2010 that they have no comments on the application.

5.2.13 Docklands Light Railway (DLR)

No response received to date.

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5.2.14 Environment Agency (EA)

The EA responded in a letter dated 14 September 2010 which stated that they have no objections subject to a number of planning conditions regarding flooding and contamination. The EA also recommended an informative regarding waste management legislation and noted a number of points of advice to the Local Planning Authority regarding planting proposals, waste and contaminated soils.

(These conditions and informative are among those recommended below).

5.2.15 London Borough of Tower Hamlets

LB of Tower Hamlets responded in a letter dated 12 October 2010 which stated that they have no objection.

5.2.16 London Borough of Greenwich

LB of Greenwich initially responded in a memo dated 9 September 2010 with a note that they would expect LB of Newham to regulate the site in terms of odour.

LB of Greenwich subsequently responded in a letter dated 8 October 2010 which stated that they have no objections.

5.2.17 London Borough of Barking and Dagenham

LB of Barking and Dagenham responded in a letter dated 13 September 2010 which stated that while they are pleased with the potential reduction in odour, they do have some concerns regarding localised odour impacts and air quality.

The applicant sought to address the concerns of the LB of Barking and Dagenham and provide further clarification by letter dated 13 October 2010. This response was sent to the LB of Barking and Dagenham on 14 October 2010. No response has been received to date.

5.2.18 Crossrail

No response received to date.

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5.2.19 Consumer Council for Water

No response received to date.

5.3 Consultation with LB of Newham Internal Departments

5.3.1 Landscape Section

LB of Newham Landscaping responded that there appears to be an adequate provision for new trees, woodland, screening, native species, shrubs and grass mix. They noted that no numbers or planting densities are shown on the plan at this stage, but presumed that these would be provided later.

5.3.2 Arboricultural Officer

No objections, as although 116 trees will be lost, they are of low amenity value and will be adequately compensated for by the proposed landscaping scheme which will include the replacement of trees lost.

5.3.3 Energy Officer

No response received to date.

5.3.4 Environmental Health

No objection subject to stringent odour conditions. As plant breakdowns can cause serious odour problems the Odour Management Plan (OMP) covering the proposed works is an important document and should be conditioned in a robust and enforceable way. Also requested conditions for a Construction Environmental Management Plan (CEMP), an acoustic report, to prevent temporary housing on the construction site, and to prevent impact piling. Recommended informatives relating to contamination, explosive ordinance, and gas susceptibility.

(These conditions and informatives are among those recommended below).

5.3.5 Forward Planning – Transportation

Access

Beckton STW is accessed from the wider highway network via Jenkins Lane, and the eastbound/westbound slip roads onto the A406/A13

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junction. The main access to the STW is off Jenkins Lane. New access arrangements are to be constructed in association with the STW extension/Lee Tunnel project which have moved the access point to the north of the previous position to enable set up of a processing area for inbound construction traffic. There will be no change in arrangements for the works covered in this application. There are internal roads/routes through the site to access the various parts of the works.

With regards to public transport access for the workforce and visitors to the site, the closest bus stop is approximately 500 metres from the site access from which services 366 and 325 can be accessed. Gallions Reach DLR station is 1777 metres away, which enables access onto Canning Town and Poplar DLR interchanges. The site is quite remote in public transport accessibility terms and has a low PTAL value of 2. Cycle and pedestrian access from the highway/footway network is afforded from Jenkins Lane. A condition for a Construction Phase Travel Plan is recommended which seeks to maximise use of sustainable transport to the site. (See suggested Condition 18).

Construction Vehicle Routing

The routing to and from the site for construction related vehicles will be as for the STW extension/Lee Tunnel works, using the A13/A406 and Jenkins Lane. As has been set up for the current Lee Tunnel and Beckton STW extension works, vehicles coming from the A13 westbound will leave the A13, travel north up the A406 to turn around at the A124/A406 junction, and then access the off-slip to Jenkins Lane via the segregated left turn lane from the A406 southbound onto the A13 eastbound. Doing this removes the requirement to cut across the eastbound on-slip if coming directly from the A406 junction and is therefore safer.

Construction Phase Impacts

It is assumed that there will be 69 staff during the construction phase (based on the assertion there will be 55 staff trips, and car sharing will be for 8 vehicles per 10 staff). There is also a prediction of the volume of total movements to the site, including both Large Goods Vehicles (LGV)/staff movements and construction related movements. It is assumed the staff numbers are inclusive of both technical and supervisory staff. This will need to be clarified within the Construction Phase Travel Plan.

The peak months for the sludge treatment works are detailed as being June 2011 with a total of 6072 two-way trips during the month/256 two-way trips a day, consisting of the 110 staff trips and 146 construction trips. The other busiest months in terms of vehicle movements will be

between July and December 2012 with 4400 – 5400 two-way trips per month. The breakdown for June 2011 details that whilst the staff trips are 0700 – 0800 and 1800 – 1900, the construction off-peak trips will average out at around 14 two-way trips an hour.

Given the proportionally small volume of movements generated by this application, they have been considered as part of the cumulative impact of both the sludge plant works and the STW extension/Lee Tunnel works. The analysis in the Transport Statement details that overall the sludge plant construction works will add around 15% extra daily movements in the busiest construction month of July 2012 (being the busiest month for the overall project rather than the sludge treatment works). The biggest increase is in the morning peak 0700 – 0800 with an additional 71 traffic movements arising from the sludge treatment works. This is little more than one additional movement per minute so overall is not considered an issue.

Consideration of the junctions using ARCADY for all construction traffic visiting the site has detailed that there will be some queuing (5 car lengths) in the morning peak (0700 – 0800) at the Jenkins Lane/Spur Road mini roundabouts. However this should not have any knock-on effects on the adjacent A13 slip roads. With the additional transport note provided following the previous application the overall impacts have been considered and are considered acceptable by both TfL and Newham. Jenkins Lane and the spur roads are Newham's and the A13/A406 are part of TfL's TLRN.

Car Parking Provision

The Transport Statement details that 30 (LGV) parking spaces will be provided for these works for the construction phase. No additional parking is proposed for the operational phase as the existing car parking at the sludge powered generator will be able to be used. For clarity, the background to this level of provision needs to be provided. Based on trip information in the Transport Statement it appears that there will be 69 staff at the site. Given the location of the works within the site it is not anticipated there will be any issue with parking over-spill affecting any local roads.

Potential for Use of Water Freight in the Construction Period

With the previous application for the Lee Tunnel and Beckton STW Extension Works, Thames Water's contractor will be taking all the tunnelling arisings off-site using water borne transport and the adapted 170 metre long jetty at the site. The Transport Statement comments on the opportunities for utilising water borne transport for this aspect of the overall Beckton STW works and concludes that the opportunities are

limited, given the position of the sludge plant within the site, the logistics of the on-going tunnelling muck away, and the respective programme/timescales for the different works on the site. The Transport Statement does, however, identify that there are opportunities to import some construction materials to local wharves (pre-mixed concrete, reinforcement steel and piling materials). With the previous application, the contractors appointed carried out a detailed feasibility and logistics planning exercise in relation to the use of water borne transport and a condition is recommended to ensure this exercise is carried out again with a requirement to provide a Construction Water Transport Logistics Plan or similar that seeks to maximise the use of water borne transport for the import of construction materials. This must be submitted and agreed before commencement of the works on site. (See suggested Condition 23).

Operation Mode

The transport impact from this part of the overall Beckton STW site will be negligible once constructed. There will be 2 to 3 vehicles a day visiting for operational and maintenance trips, and 7 to 8 one-way trips to take digested sludge cake to agricultural land. There does not appear to be any information on the numbers of staff working at this part of the STW once operational but it is assumed to be very low. The sludge treatment plant will be assumed to be incorporated into the whole site for travel plan purposes once all works are completed.

East London Transit

The East London Transit project (Phase 2) is being promoted by TfL and is also an aspiration of the Borough. There is a safeguarded route (included in Newham's UDP) which progresses along Jenkins Lane, through Thames' land and into the Gallions shopping park, where the alignment was intended to pass centrally between the shopping buildings. TfL have been working up proposals for an alternative alignment taking into account Thames Water's concerns relating to security of the route passing across operational land, and this is to run parallel to Royal Docks Road. This proposal will have no implications for this project.

Construction Phase Travel Plan

A condition for a Construction Phase Travel Plan (CPTP) is recommended, as was provided for the larger STW/Lee Tunnel works, to detail means of reducing the numbers of private vehicle journeys and increasing the use of sustainable transport. There are CPTP's for the other works at the site and it may be that there will be efficiencies for

transport to and from this site related to operation of these travel plans. Reference is made in the application to preparation of the CPTP by the contractor once appointed. The main features of this plan are included in the Transport Statement. The Construction Phase Travel Plan must be submitted for approval prior to commencement of the site works. (See suggested Condition 18).

Conclusion

Whilst this is a construction project of some magnitude, it is within the Beckton STW site and will be constructed within the timeframe of both the STW extension and the Lee Tunnel. In terms of transport impact this project is smaller; however it does have an impact over the three year construction period. This has been considered in the Transport Statement and it is concluded that the project will result in around 15% additional vehicle movements to the STW site. The junctions used to access the STW have been analysed and in the busiest construction period during July 2012, there may be some queuing at the spur road mini roundabouts on Jenkins Lane however it is not expected that these will impact on the operation of the A13 slips or the A13/A406 junction.

A Construction Phase Travel Plan must be provided and approved prior to commencement of the works, so that construction related vehicle journeys are reduced as much as possible and sustainable means of transport maximised. A Construction Materials Water Transport Logistics Plan (or similar) must also be provided to realistically appraise the options for the use of water borne transport for the import of construction materials, in order to maximise the use of water borne transport and reduce the highway impact of the project.

5.3.6 Highways

Questioned whether the development will exacerbate the odour problems at the STW.

5.3.7 Forward Planning – Policy

No response received to date.

5.3.8 Regeneration Projects

No response received to date.

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5.3.9 Design and Conservation Officer

Satisfied that the proposals will not have an adverse impact on the setting on the Listed Chimney on the STW site.

5.3.10 London Borough of Newham Strategic Development Committee

The application is due to be reviewed by London Borough of Newham's Strategic Development Committee on 30 November 2010. The recommendation of Newham's Committee to LTGDC will be reported in an addendum report.

6. RELEVANT PLANNING POLICY

London Borough of Newham Unitary Development Plan (adopted June 2001 and saved from 27 September 2007 in accordance with the direction from the Secretary of State):

S2 - Community Benefit/Planning Obligations
S3 - Quality of Development
S4 - Sustainable Development
S9 - S16 - Strategic Policies for Environmental Quality
S24 - S28 - Strategic Policies for Employment
S33 - S38 – Strategic Policies for Transport
S39 - S41 – Strategic Policies for Leisure, Recreation and Open Space
UR26 - Beckton Gateway: Land Use Proposals
EQ1 - Waterway Improvements
EQ2 - Waterside Access
EQ4 - Quality of Waterside Development
EQ9 - Protection of Sites of Nature Conservation Importance
EQ10 - Development of Sites of Nature Conservation Importance
EQ14 - Tree Loss and Retention
EQ15 - Inclusion of Tree Planting in New Development
EQ18 - Promoting Urban Quality
EQ19 - Urban Design Considerations
EQ21 - New Development: Landscaping
EQ25 - Access
EQ26 - Safety
EQ35 - Preservation of Listed Buildings
EQ38 - Planning Applications Affecting the Setting of a Listed Building
EQ43 - Archaeology: Investigation, Excavation and Protection
EQ45 - Pollution
EQ46 - Air Quality Management
EQ47 - Noise Impact Statement
EQ48 - Noise - Sensitive Development
EQ49 - Contaminated Land: Assessment, Remediation and Monitoring
EQ54 - Promoting Sustainable Waste Management

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EQ61 - Recycling
EQ62 - Protection of the Flood Plain and Urban Washlands
EQ63 - Surface Water Disposal
EQ64 - Tidal Defences
EMP1 - Employment Growth
T1 - New Development: Environmental Impact
T2 - New Development: Public Transport Accessibility
T3 - New Development: Highway Capacity
T5 - Preferred Modes of Transport
T7 - Bus Services
T8 - River Transport
T10 - Road Hierarchy: Relation to Development Proposals
T12 - River Thames Crossings
T19 - Improvement of Conditions for Pedestrians
T21 - Recreational Footway Network
T22 - Public Access to the River Thames
T23 - Cycle Network
T24 - Access by Cycle and Cycle Parking
T30 - Restrictions on Development Within the Airport Safeguarding Area
OS1 - Open Space Standards and Proposed New Open Space
OS2 - Green Belt and Metropolitan Open Land: Protection and Enhancement
OS4 - Metropolitan Open Land: Public Accessibility
OS6 - Green Chains: Development and Implementation
OS7 - Green Space: Protection
TM1 - Tourist attractions: improvement of development focal points for tourism

**The London Plan – Consolidated with Alterations Since 2004
(adopted February 2008):**

2A.1 - Sustainability Criteria
2A.2 - The Spatial Strategy for Development
2A.3 - London's Sub-Regions
2A.5 - Opportunity Areas
2A.6 - Areas for Intensification
2A.7 - Areas for Regeneration
3A.28 - Social and Economic Impact Assessments
3A.20 - Health Objectives
3B.1 - Developing London's Economy
3B.11 - Improving Employment Opportunities for Londoners
3C.1 - Integrating Transport and Development
3C.2 - Matching Development to Transport Capacity
3C.3 - Sustainable Transport in London
3C.4 - Land for Transport
3C.11 - Phasing of Transport Infrastructure Provision and Improvements
3C.14 - Enhanced Bus Priority, Tram and Bus Transit Schemes
3C.15 - New Thames River Crossings

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3C.17 - Tackling Congestion and Reducing Traffic
3C.20 - Improving Conditions for Buses
3C.23 - Parking Strategy
3D.8 - Realising the Value of Open Space and Green Infrastructure
3D.10 - Metropolitan Open Land
3D.11 - Open Space Provision in DPDs
3D.12 - Open Space Strategies
3D.14 - Biodiversity and Nature Conservation
3D.15 - Trees and Woodland
4A.1 - Tackling Climate Change
4A.2 - Mitigating Climate Change
4A.3 - Sustainable Design and Construction
4A.4 - Energy Assessment
4A.7 - Renewable Energy
4A.12 - Flooding
4A.13 - Flood Risk Management
4A.14 - Sustainable Drainage
4A.15 - Rising Groundwater
4A.16 - Water Supplies and Resources
4A.17 - Water Quality
4A.18 - Water and Sewerage Infrastructure
4A.19 - Improving Air quality
4A.20 - Reducing Noise and Enhancing Soundscapes
4A.21 - Waste Strategic Policy and Targets
4A.28 - Construction, Excavation and Demolition Waste
4A.30 - Better Use of Aggregates
4A.33 - Bringing Contaminated Land Into Beneficial Use
4B.1 - Design Principles for a Compact City
4B.2 - Promoting World-Class Architecture and Design
4B.3 - Enhancing the Quality of the Public Realm
4B.8 - Respect Local Context and Communities
4B.11 - London's Built Heritage
4B.12 - Heritage Conservation
4B.13 - Historic Conservation-Led Regeneration
4B.15 - Archaeology
4C.1 - The Strategic Importance of the Blue Ribbon Network
4C.2 - Context for Sustainable Growth
4C.3 - The Natural Value of the Blue Ribbon Network
4C.4 - Natural Landscape
4C.6 - Sustainable Growth Priorities for the Blue Ribbon Network
4C.8 - Freight Uses on the Blue Ribbon Network
4C.11 - Increasing Access Alongside and to the Blue Ribbon Network
4C.15 - Safety On and Near to the Blue Ribbon Network
4C.16 - Importance of the Thames
4C.17 - Thames Policy Area
4C.18 - Appraisals of the Thames Policy Area
4C.20 - Development Adjacent to Canals
4C.22 - Rivers, Brooks and Streams
5A.1 - Sub-Regional Implementation Frameworks

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5C.1 - The Strategic Priorities for North East London
5C.2 - Olympic and Paralympic Games
5C.3 - Opportunity Areas in North East London

National Planning Policy Statements / Guidance:

Planning Policy Statement 1 – Delivering Sustainable Development
Planning Policy Statement: Planning and Climate Change – Supplement to Planning Policy Statement 1
Planning Policy Guidance 2 – Green Belts
Planning Policy Statement 5 – Planning for the Historic Environment
Planning Policy Statement 9 – Biodiversity and Geological Conservation
Planning Policy Statement 10 – Planning for Sustainable Waste Management
Planning Policy Guidance 13 – Transport
Planning Policy Guidance 17 – Planning for Open Space, Sport and Recreation
Planning Policy Statement 22 – Renewable Energy
Planning Policy Statement 23 – Planning and Pollution Control
Planning Policy Guidance 24 – Planning and Noise
Planning Policy Statement 25 – Development and Flood Risk
The London Biodiversity Action Plan (2001)

Additional Guidance:

Mayor of London:

SPG - Sustainable Design and Construction (May 2006)
SPG - East London Green Grid Framework (February 2008)
Lower Lea Valley Opportunity Area Planning Framework (January 2007)
Sub-Regional Development Framework: East London (May 2006)

LB of Newham:

SPG - Sustainability Checklist

7. ASSESSMENT OF MAIN ISSUES

7.1 The following issues require assessment:

- Land Use
- Odour
- Air Quality
- Transport/Traffic
- Sustainability and Energy
- Land Contamination

- Water Resources and Flood Risk
- Ecology and Biodiversity
- Landscape and Visual
- Cultural Heritage
- Waste
- Noise and Vibration

Land Use

- 7.2 The Beckton STW site is safeguarded as a Waste Management Site in Newham's UDP. Therefore the principle of an enhanced sludge digestion facility and other STW upgrade works is supported. This part of the STW site is also affected by the following designations which are illustrated on the proposals map within the adopted London Borough of Newham Unitary Development Plan (UDP):

Metropolitan Open Land (MOL)

- 7.3 Most of the site is designated as Metropolitan Open Land (MOL) in the UDP. PPG2 (Green Belts) states that the fundamental aim of green belt policy is to prevent urban sprawl by keeping land permanently open, as the most important attribute of green belts is their openness.
- 7.4 Policy OS2 (Green Belt and Metropolitan Open Land: Protection and Enhancement) of the UDP states that the Council will safeguard the open character of the green belt and MOL by allowing only certain uses. While this proposal does not fall within any of the permitted categories in OS2, and is therefore technically a departure, paragraph 9.27 of the UDP makes clear that: "MOL designation is not intended to restrict potential plans of organisations such as Thames Water in carrying out their statutory functions". Further, it is noted that the proposed works within the MOL at Beckton STW are relatively minor in the context of the whole site, and will reduce the amount of MOL at the site by a relatively small amount. It is also noted that the subject area of MOL is not accessible to the public.
- 7.5 The GLA was consulted on the application and responded to state that the need to site the proposed facility near or within the STW site and the fact there are no other alternative sites constitute 'very special circumstances' justifying the operational development on MOL in accordance with London Plan Policies 3D.9 (Green Belt) and 3D.10 (Metropolitan Open Land).
- 7.6 Given the above points, on balance a departure from the UDP is considered reasonable in this instance given that the development presents exceptional circumstances whereby the overall environmental benefits justify such a departure.

Green Space to be Protected

- 7.7 Part of the site above the Northern Outfall Sewer is designated 'green space to be protected' in the UDP. UDP Policy OS7 (Green Space: Protection) states that the Council will safeguard green space by permitting only development for recreation, leisure, or nature conservation purposes. Therefore the proposal constitutes a departure from the UDP.
- 7.8 PPG17 (Planning for Open Space, Sport and Recreation) states that the recreational quality of open spaces can be eroded by insensitive development or incremental loss of the site. It states that in considering planning applications, either within or adjoining open space, Local Authorities should weigh any benefits being offered to the community against the loss of open space that will occur. It goes on to state that Local Authorities should:
- i. avoid any erosion of recreational function and maintain or enhance the character of open spaces;
 - ii. ensure that open spaces do not suffer from increased overlooking, traffic flows or other encroachment;
 - iii. protect and enhance those parts of the rights of way network that might benefit open space; and
 - iv. consider the impact of any development on biodiversity and nature conservation.
- 7.9 The proposed development will result in significant benefits to the community in terms of increased capacity to treat sewage sludge, and the ability to treat is to a higher standard than at present. When weighed against the continued provision of essential sewage facilities from this strategic site, the relatively small reduction of green space in the context of the whole site, and the fact that the subject area of green space is not presently accessible to the public, on balance a departure from the UDP is considered reasonable in this instance.

Protected Site of Nature Conservation Importance

- 7.10 Part of the site above the Northern Outfall Sewer is identified as a Protected Site of Nature Conservation Importance (SNCI) in the London Borough of Newham UDP. UDP Policy EQ9 (Protection of Sites of Nature Conservation Importance) states that development that would have an adverse effect on the nature conservation value of designated sites of nature conservation importance will not be permitted, and that development of adjoining sites will be considered in the context of their ecological impact and should include measures to protect or enhance local plant and animal communities.

- 7.11 The development will involve the loss of some trees and open land, however ecological enhancements built into the scheme design will result in a net gain in biodiversity value of the site, providing a benefit to locally occurring species including bats. Natural England has responded to state that this scheme is in line with previous development proposals and referred to previous comments with regards to enhancements and improvements to the overall site in line with the Landscape and Ecology Management Plan (LEMP).
- 7.12 Conditions are proposed for full landscaping details and to secure the mitigation set out in the submitted Environmental Report to ensure that the ecological enhancements and mitigation are implemented. Subject to these conditions, the application will result in ecology/biodiversity enhancements and is considered to be consistent with the SNCI designation of the site, London Plan Policies 3D.14, 4C.3, and 4C.4; Policy EQ9 of the UDP; and PPS9.

Green Chain

- 7.13 The land over the Northern Outfall Sewer and along part of the western boundary of the site is identified on the UDP proposals map as a 'green chain'. None of the proposed buildings or structures will be located along this route however and therefore the development would not prejudice the green chain designation.

Rapid Transport Link / East London Transit

- 7.14 The western-most boundary of the STW site is identified as a proposed future rapid transport link for the Thames Gateway Bridge (TGB), however none of the safeguarded area is within the site area for this planning application. The Mayor has announced that, owing to lack of funding, the TGB will not proceed at this point in time, but the safeguarding remains, and the East London Transit (ELT) proposal has been abandoned by Transport for London (TfL). However, the LTGDC with TfL have completed a study into a bus corridor between Barking and the Royal Docks which in this part of the corridor follows the former ELT route.
- 7.15 TfL was consulted and their response stated that they welcome the applicant's intention to not undertake any development within the safeguarded area. They requested that for the avoidance of doubt, this safeguarding intention should be secured by way of a Section 106 agreement. The GLA Stage 1 response also requires the submission of a written commitment to comply with the safeguarding requirements. It is noted that the applicant has provided written confirmation, and it is also noted that none of the subject site is within or even close to the

safeguarded land. For this reason, a Section 106 agreement is not considered necessary.

Proposed Recreational Footpath Network

- 7.16 Part of the western boundary of the site is affected by a designation for a proposed recreational footpath network. None of the proposed buildings or structures will be located along the proposed routes and therefore the development would not prejudice the future development of footpaths.
- 7.17 Given the above points, on balance a departure from the UDP to allow development on green space and MOL is considered reasonable in this instance given that the development presents exceptional circumstances whereby the overall environmental benefits justify such a departure. It is noted that the application does not need to be referred to the Government Office for London.

Odour

- 7.18 The legislation which dictates how odour is dealt with within the planning arena is the Town and Country Planning Act 1990. This enables Local Authorities to impose conditions, or if necessary refuse planning permission, where the impacts of developments (including the release of air borne pollutants and odour) are considered unacceptable.
- 7.19 Planning Policy Statement PPS23 (2004) sets out the Government's core policies and principles on planning and pollution control. PPS23 advises that "any consideration of the quality of land, air or water and the potential impacts arising from development, possibly leading to impacts on health, is capable of being a material planning consideration, in so far as it arises or may arise from or may affect any land use; the planning system plays a key role in determining the location of development which may give rise to pollution, either directly or indirectly, and in ensuring that other uses and other developments are not, as far as possible, affected by major existing or potential sources of pollution."
- 7.20 Policy 4A.18 of the London Plan makes reference to ensuring that improvements to STW's are delivered in a sustainable way and minimise impacts on the surrounding environment.
- 7.21 Policy S15 of the UDP makes reference to tackling nuisances having a harmful impact on the health and well being of the population. Policy EQ45 makes reference to refusing development that will generate unacceptable levels of odour (and other pollutants) beyond the boundary and Policy EQ46 makes reference to refusing or mitigating impacts from proposed development that will be significant in relation to air quality.

- 7.22 There is a history of significant odour problems around the Beckton STW and this has been largely dependent on weather conditions, plant reliability and plant management and various combinations of these.
- 7.23 The application is accompanied by an Odour Assessment by OdourNet UK Ltd, which compares the predicted levels of odour from the proposed development against a future baseline with the consented Lee Tunnel and Beckton Extension project in place. The future baseline also assumes completion of the project to cover the Primary Sedimentation Tanks, which is predicted to result in a reduction in total odour emissions from the STW of over 50%.
- 7.24 The scheme will include the following odour control measures:
- All aspects of the scheme, with the exception of the strain press skips and sludge storage building, will be enclosed and extracted using local exhaust ventilation systems to a dedicated odour treatment system (Odour Control Unit), which will be fitted with a 35 metre stack.
 - All sludge storage and handling operations will be conducted in an enclosed building which will be actively ventilated to two 35 metre stacks to minimise the risk of any fugitive emissions and optimise dispersion of odours on release.
 - The sludge cake storage building is likely to incorporate fast acting roller shutter doors with a vehicle sensor control system. The approaching vehicle will trigger a sensor which opens the roller shutter door. A similar sensor on the inside of the building will cause the door to then close when the vehicle is safely inside the building to ensure that the doors only open when necessary. The ventilation arrangement for the ground floor will result in a negative pressure inside the sludge cake storage building. When the roller shutter doors open, external air will be drawn inside the building which will help to contain any odours produced by the stored sludge cake.
 - The strain press skips, which will be removed from site periodically to dispose of extracted rags, will be fitted with close fitting tarpaulin covers.
 - Heavy Goods Vehicles (HGVs) removing sludge cake from the site will also be fitted with close fitting tarpaulin covers.
 - As part of the scheme, Thames Water also proposes to cover the existing open settled sewage channels and install three associated Odour Control Units.
- 7.25 The Odour Assessment also indicates that although it has been included in the predicted odour emissions, the existing liming plant will only be used as a contingency operation in the future. Furthermore, six redundant primary digesters which are currently used for the storage of sludge will be refurbished and a further two redundant digesters will be demolished.
- 7.26 The Odour Assessment by OdourNet found that emissions from the

additional odour sources introduced by the proposed development will be more than offset by the covering of the settled sewage channels, removal and refurbishment of existing digesters and eventual replacement of the sludge liming plant.

7.27 The Odour Assessment concludes that in comparison to the future baseline conditions, the proposed development will lead to a 23% reduction in the total odour emissions generated from the STW, which is likely to result in an overall reduction in odour exposure levels experienced off-site and therefore a reduction in the risk of harm to amenity from odour in the vicinity of the STW.

7.28 Thames Water has undertaken to include measures for the management of odour associated with the proposed development within the site-wide Odour Management Plan.

7.29 The odour consultant employed by the Council and LTGDC to assess the submitted Odour Assessment sought further information from the applicant as follows:

- Apparent discrepancies in building and stack heights between the drawings accompanying the application and assumptions made in the Odour Impact Assessment;
- How potential leaks of highly odorous digester gas will be monitored and controlled;
- Whether building downwash effects of the proposed sludge cake building been taken account in the odour modelling;
- What steps have been taken to overcome the potentially significant technical challenge of controlling odours arising from thermal hydrolysis;
- What contingencies are in place for breakdowns/failures of the Enhanced Digestion Facility (EDF) during refurbishment of the SPG;
- What contingencies there are for breakdowns of critical plant such as the Combined Heat and Power Plant (CHP), the gas cleaning system, one or both streams of the thermal hydrolysis plant (e.g. implosion of process tanks), gas collection systems and the digesters;
- What assessment has been made of the odour impact of the combustion of digester gas in the CHP and flare stacks;
- What emission velocities have been assumed for emissions from Odour Control Units (OCUs) and the sludge cake storage building stacks;
- What is the basis of calculations to determine extraction rates for sludge tanks and silos and for the sludge cake storage building;
- The basis of the "Time Weighted Average" emissions discussed in section 5.2 of the Odournet Assessment;
- Which odour sources in the EDF, Primary Settlement Tank (PST) OCU and settled sewage channel OCUs have been subject to time weighting, and the basis of these calculations for each of the sources

averaged in this way;

- Which weather data has been used;
- What was the basis for proposing the relatively short dispersion stacks (15 metres) for the PST OCUs; and
- Whether the proposed 15 metre PST OCU stack heights provide adequate contingency dispersion in the event of OCU failure.

7.30 The applicant responded to these questions on 11 November 2010.

7.31 The responses have been assessed by officers and the consultant employed by the LTGDC and Council, and on balance they are considered acceptable, subject to a number of odour conditions.

7.32 Provision of an extended Odour Management Plan (OMP) to build upon the OMP provided for the Lee Tunnel and Beckton STW Extension Scheme (Refs. 08/01162/FUL, 08/01159/LTGDC and 08/01158/ODA, granted 1 December 2009) is key to long-term site management and odour control. This OMP, together with agreed detailed protocols covering hydrogen sulphide monitoring and odour emissions, olfactometric testing and performance, sludge treatment capacity, and sludge cake store ventilation will be secured through a series of planning conditions. A S106 agreement will be required to secure 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.

7.33 The impacts of the development in terms of odour have been considered and officers concur with the findings of the submitted Odour Assessment in that implementation of a package of additional odour control measures (see 7.24 above) is likely to result in a reduction in the total emissions generated from the STW of approximately 23% compared to the future baseline and that the odour exposure levels experienced off-site are likely to decrease proportionally. Subject to the odour conditions described above, the odour impacts of the proposed development are considered to be consistent with the key policies being PPS23; London Plan Policy 4A.18; and UDP Policies S15, EQ45 and EQ46.

Air Quality

7.34 Planning Policy Statement 23 (Planning and Pollution Control) identifies national objectives for air quality through the planning process in England. Appendix A of this document sets out matters for consideration in preparing Local Development Documents and taking decisions on individual planning applications. The listed matters include the following, which are of particular relevance to this assessment:

- “the possible impact of potentially polluting development (both direct and indirect) on land use, including effects on health, the natural

environment or general amenity”;

- “the potential sensitivity of the area to adverse effects from pollution, in particular reflected in landscape, the quality of the soil, air, and ground and surface waters...”;
- “the environmental benefits that the development might bring”;
- “the existing, and likely future, air quality in an area, including any Air Quality Management Areas (AQMAs) or other areas where air quality is likely to be poor (including the consideration of cumulative impacts of a number of smaller developments on air quality, and the impact of development proposals in rural areas with low existing levels of background air pollution)”;
- “the need for compliance with any statutory environmental quality standards or objectives”;
- “existing action and management plans with a bearing on environmental quality including: Air Quality Management Area Action Plans (prepared by Local Authorities under Part IV of the Environment Act 1995)”;
- “the possibility that (whether or not some aspects of the development are subject to pollution control), emissions of smoke, fumes, gases, dust, steam, smell, ... from the development might nevertheless be seriously detrimental to amenity in addition to constituting a statutory nuisance under Part III of the Environmental Protection Act 1990”.

7.35 Policy EQ45 (Pollution) of the UDP regarding pollution states that the granting of planning permission will be resisted where it would involve unacceptable levels of air and water pollutants. Policy EQ46 (Air Quality Management) states that the cumulative air pollution impact of existing uses and the proposed development will be a material consideration in the assessment of planning applications.

7.36 Policy 4A.19 (Improving Air Quality) of the London Plan seeks to achieve reductions in pollutant emissions and public exposure to pollution by ensuring that air quality is taken into account at the planning application stage.

7.37 The submitted Environment Report states that emissions from the CHP plant will be primarily controlled through the dispersion and dilution of the plume from a 45 metre stack. Once the current sludge liming operations are ceased there will be an overall reduction in the number of HGV movements associated with the transportation of sludge to agricultural land and accordingly there will be no additional road traffic emissions. The report highlights the fact that the boundary of the proposed development construction site is at least 500 metres from the nearest sensitive residential receptors (including the properties located off Galleons Drive, approximately 1.2 km from the works site to the east; Curzon Crescent, approximately 0.9 km from the site boundary to the north-east; Westminster Gardens, approximately 600 metres to the north; and Oxleas, approximately 1.1 km from the site boundary to the west). Best practice dust mitigation measures will minimise the impact of

construction dust emissions such that there will not be a measurable change at these receptors.

- 7.38 The GLA requested further clarification on air quality within their Stage 1 Report. They sought information on the combined air quality effects of the CHP engine and boiler emissions with those of the sludge energy-from-waste plant at the STW site. They also noted that no mention is made of the effects of emissions from the CHP engine/boilers upon ecological sites in the vicinity, such as Epping Forest.
- 7.39 The applicant responded in detail to these comments on 3 November 2010, and the key points within that response are summarised as follows:
- An assessment of the short term impact of the proposed CHP engine and boiler emissions was provided with the application (Appendix 5.1 of the Environment Report).
 - The impact of the proposed facility on short term NO₂ concentrations would not give rise to significant effects with a 45 metre stack regardless of the presence of other combustion sources in the area.
 - Impacts of the development on ecological sites will be addressed as part of the application for an Environmental Permit for the facility, which in turn needs to be accompanied by a comprehensive dispersion modelling assessment. Given that the closest point of Epping Forest is 8 km from the site, the development is very unlikely to significantly affect that site.

This response is considered adequate, however it is noted that the GLA will provide their own assessment of the response within their Stage 2 Report.

- 7.40 The Council's Environmental Health Section have assessed this aspect of the proposal, and have no objection subject to a condition for a Construction Environmental Management Plan (CEMP), and a condition to ensure all of the mitigation measures proposed are undertaken to the satisfaction of the Council.
- 7.41 The impacts of the development on air quality from construction works and non-odour related development have been considered and officers conclude that overall the air quality impacts of the development will be insignificant, subject to a condition for a Construction Management Plan to ensure the applicants adhere to the practices and targets set out in the Environment Report. The development therefore accords with PPS23, and UDP Policies EQ45 and EQ46.

Transport/Traffic

- 7.42 Planning Policy Guidance (PPG) Note 13 (Transport) encourages more

sustainable transport choices and reducing the need to travel.

- 7.43 London Plan Policies 3C.2 (Matching Development to Transport Capacity), 3C.14 (Enhanced Bus Priority, Tram and Bus Transit Schemes), 3C.15 (New Thames River Crossings), 3C.17 (Tackling Congestion and Reducing Traffic) and 3C.20 (Improving Conditions for Buses) are particularly pertinent to the assessment of this proposal.
- 7.44 The key UDP transport policies are T5 (Preferred Modes of Transport), T8 (River Transport), and T10 (Road Hierarchy: Relation to Development Proposals). Together, the above-mentioned London Plan and UDP policies seek to make the best use of existing roads, to reduce additional road traffic generation, to regulate parking and reduce congestion, to improve road safety and to provide facilities at a level appropriate to everyone, including those without access to private vehicles. They also support the use of the Thames for transport of materials and freight and support safeguarding for river crossing proposals.
- 7.45 The submitted Transport Statement (TS) concludes that additional traffic generated during the construction of the project will be minimal and will not have a material impact on the local road network in terms of highway capacity or safety, even when considered cumulatively alongside the impact of the STW Extension and Lee Tunnel project. The TS states that the additional transport movements resulting from the operational development will be insignificant.
- 7.46 Transport for London has assessed the proposal and has confirmed that they have no objection, subject to the applicant agreeing to comply with the terms of DLR land safeguarding, together with conditions for a Travel Plan (construction and operational), a Construction Logistics Plan and a servicing and Deliveries Plan. They also reminded the applicant of TGB safeguarding and the requirement that this land is not used or built upon. The applicant has responded to state that while some of the proposed structures and works are within the DLR safeguarding area, the project will not have an adverse impact on the positioning, construction, operation or maintenance of the DLR extension due to shallowness and location of proposed piles. The applicant's response is considered satisfactory, however it is noted the GLA will provide their own assessment of the response within their Stage 2 Report.
- 7.47 The Council's Transport Planners have assessed the proposal and have confirmed that whilst this is a construction project of some magnitude, it is within the Beckton STW site and will be constructed within the timeframe of both the STW extension and the Lee Tunnel. They have requested planning conditions for a Construction Phase Travel Plan and a Construction Materials Water Transport Logistics Plan.
- 7.48 The Port of London Authority have no objection subject to a condition for the submission of a strategy which seeks to maximise the use of the

River Thames for the transport of materials to safeguarded wharves during the construction period, to maximise the use of the river and to promote sustainable transport. This condition is considered reasonable and necessary.

- 7.49 The impacts of the development on traffic and transport have been considered and officers conclude that the proposed traffic reduction strategies and associated traffic effects are acceptable and will not result in any adverse traffic and transport impacts, subject to conditions for movement of materials by water, a Construction Phase Travel Plan, an Operational Phase Travel Plan, a Construction Environmental Management Plan, and a Construction Logistics Plan (to include servicing and delivery information). A condition is also proposed to ensure the applicants adhere to all the practices and targets set out in the application. Overall, the application is considered to be consistent with the key London Plan and UDP policies relating to transport as set out in Sections 7.43 and 7.44 above.

Sustainability and Energy

- 7.50 Policy 4A.18 (Water and Sewerage Infrastructure) of the London Plan states "The Mayor will work with Thames Water, the Environment Agency and other relevant organisations to ensure that London's drainage and sewerage infrastructure is sustainable and meets the requirements placed upon it by population growth and climate change." Policy 4A.3 sets out the Mayor's policy on Sustainable Design and Construction. Policy 4A.3 states that the Mayor will, and boroughs should, ensure future developments meet the highest standards of sustainable design and construction.
- 7.51 The Mayor of London's SPG 'Sustainable Design and Construction' (May 2006) sets out guidance to assess the overall environmental sustainability of a development, with particular regard to achieving the requirement of London Plan Policy 4A.3 (Sustainable Design and Construction).
- 7.52 Policy 4A.1 (Tackling Climate Change) of the London Plan states that the following hierarchy will be used to assess applications: 1) using less energy, in particular by adopting sustainable design and construction measures, 2) supplying energy efficiently, in particular by prioritising decentralised energy generation, and using renewable energy. There is no indication that this development would follow the energy hierarchy to make the fullest contribution to the mitigation of, and adaptation to, climate change and to minimise emissions of carbon dioxide.
- 7.53 London Plan Policy 4A.7 (Renewable Energy) states that boroughs should adopt a presumption that developments will achieve a reduction in carbon dioxide emissions of 20% from on-site renewable energy

generation (which can include sources of decentralised renewable energy) unless it can be demonstrated that such provision is not feasible.

- 7.54 The proposed enhanced sludge digestion facility will produce biogas which will be collected and stored in gas holders, and used to feed the proposed CHP for on-site electricity generation and provision of heat to the digestion process.
- 7.55 The application is accompanied by an Energy Report prepared by Scott Wilson, which concludes that the electricity generation from the renewable fuel CHP plant will displace approximately 16,340 tonnes of carbon dioxide per annum. This carbon displacement outweighs the additional loads that are anticipated at the site (7,103 tonnes carbon dioxide per annum) and will allow Thames Water to achieve an overall net reduction in carbon dioxide emissions at the Beckton site.
- 7.56 The GLA Stage 1 Report states that the applicant's energy strategy fails to explore the feasibility of exporting any surplus heat to buildings within the area or to any of the planned district heating around the site, fails to explore the scope to adopt less energy intensive cooling, and lacks information as to how the low temperature hot water from the CHP engines will be used.
- 7.57 The applicant responded to these issues on 3 November 2010 as follows:
- High grade heat from the CHP engines will be used for steam generation within the Thermal Hydrolysis process. Thames Water anticipates that it will be able to make use of the surplus low temperature water within the process and other existing uses within the STW and it is unlikely there will be any residual heat suitable for exportation off-site.
 - Regarding the fans for cooling, there is the potential to adopt less intensive forms of cooling for the product emerging from the Thermal Hydrolysis process. However this requires further investigation at detailed design stage. The contractor will be encouraged to explore other methods of sludge cooling.

This response is considered reasonable and it is noted that the GLA will provide their own assessment of the response within their Stage 2 Report.

- 7.58 The application is also accompanied by a Sustainable Design and Construction Statement prepared by Scott Wilson. The Statement assesses the development against the Mayor of London's SPG 'Sustainable Design and Construction' (May 2006), and in summary makes the following conclusions:
- SPG Objective 1: Maximise Re-use of Land and Buildings – The

proposed development makes efficient use of previously used land through efficient compact design and minimising the extent of linking infrastructure between the current and proposed works. The design also makes use of existing digestion infrastructure.

- SPG Objective 2: Maximise the Use of Natural Systems - Where practicable, design will ensure durability coupled with energy efficiency. Only intermittent occupancy of proposed buildings and plant will be required during the operation of the proposed development. Therefore, heating and ventilation requirements for the development relate to the need to dissipate heat and odour through mechanically assisted ventilation.
- SPG Objective 3: Conserve Energy, Materials and Water Resources - An Energy Demand Assessment (EDA) has been undertaken. The design will specify energy efficiency measures where practicable within the proposed development, particularly for lighting; but also for heating and cooling which will be managed locally. Specification requirements for lighting lux, light spill and insulation material specifications are to be incorporated into the contract tender documentation, where appropriate. The annual electricity generation from the CHP plant will displace approximately 16,340 tonnes of carbon dioxide per annum.
- SPG Objective 4: Reduce the Impacts of Noise, Pollution, Flooding and Microclimatic Effects – The proposed development is relatively remote from residential receptors (approximately 600 metres). The Contractor will be required to ensure that noise levels during operation do not exceed existing levels at the nearest sensitive receptor. A Construction Environmental Management Plan (CEMP) will ensure best practice measures are followed during construction.
- SPG Objective 5: Ensure Developments are Comfortable and Secure - Where practicable, design of the proposed development will ensure that noise levels inside buildings are reduced to under 80dB(A), and that lighting is appropriate for the tasks required and can be locally controlled. The existing site security measures, including fence and gate security, CCTV and security lighting will be extended across the whole site during construction and operation of the proposed development.
- SPG Objective 6: Conserve and Enhance the Natural Environment and Biodiversity – The proposed development is to be located wholly within the existing operational STW site boundary fencing. The proposed development area is covered predominantly by hardstanding, buildings, structures and grassland. Best practice measures during construction and operation will ensure that any effects on ecology are minimised, and measures to enhance the biodiversity of the site are included.
- SPG Objective 7: Promote Sustainable Waste Behaviour - Demolition waste arisings will mainly consist of concrete and road material and will be crushed and re-used on site as piling mat to reduce the need for imported aggregates, where appropriate. Where practical, use of pre-fabricated material (e.g. metalwork, flooring, kiosk structures and

building components) will be used. Where feasible, material excavated on-site will be re-used to provide backfill, ground raising and landscaping. Treated sludge will be re-used on agricultural land. The proposed development incorporates a CHP plant which is to utilise biogas from the digestion of sludge to provide renewable energy for the enhanced sludge digestion facility and the wider STW site.

- SPG Objective 8: Sustainable Construction - The Contractor for the proposed development will be required to produce a Site Waste Management Plan (SWMP) following the principles of sustainable waste management. The Contractor will also be required to produce a CEMP and sign up to the Considerate Constructors Scheme.
- SPG Objective 9: Sustainable Management of Sewage Sludge - The sludge digestion plant has been designed to meet the predicted growth in the area.
- SPG Objective 10: Ensure the Development is Value for Money for Customers and Supports Economic Growth - Local job opportunities during construction will be provided through, for example, local job advertising and sourcing materials in the local area. Job training opportunities will be provided where necessary. Local businesses will not be adversely affected. The design and construction of the proposed development aims to provide a service which is value for money.
- SPG Objective 11: Minimise the Transportation Impacts of the Development on the Road Network – The existing network of rail and bus services, as well as footpath and cycle routes, are located within walking distance of the STW site. Secure bike storage is to be provided during both construction and operation. Where necessary, traffic management measures during construction will be agreed with LTGDC.
- SPG Objective 12: Conserve and Enhance Community Involvement and Facilities – No existing social or community facilities will be lost as part of the proposed development.

7.59 The above measures are acceptable in principle subject to a condition for a Construction Environmental Management Plan.

7.60 Overall the development is acceptable in terms of its commitment to energy and sustainability subject to a condition for a Construction Environmental Management Plan. The development generally accords with Policies 4A.1, 4A.3, 4A.7, and 4A.18 of the London Plan, and the Mayor of London's SPG 'Sustainable Design and Construction'.

Land Contamination

7.61 UDP Policy EQ49 (Contaminated Land: Assessment, Remediation and Monitoring) states that: "Planning applications for development of a site known to be, or reasonably suspected of being, contaminated or containing landfill gas will be required to be accompanied by an

assessment of the type and extent of contamination, as well as proposals for any necessary remedial measures required to deal with the hazards, before the application can be determined by the Council. In other cases where the Council suspects that there may only be slight contamination, planning permission may be granted but conditions will be attached to make it clear that development will not be permitted to start until a site investigation and assessment has been carried out and that the development itself will need to incorporate all the measures shown in the assessment to be necessary. As developers are liable for the integrity of any remediation scheme required for the lifetime of the development, the Council will, where deemed appropriate, require the developer to undertake a monitoring strategy to prove the effectiveness of the remediation scheme”.

- 7.62 Policy 4A.33 (Bringing Contaminated Land Into Beneficial Use) of the London Plan is relevant and states that the Mayor will work with strategic partners to enhance remediation of contaminated sites and bring the land into beneficial use.
- 7.63 Contamination, predominantly within near surface soils and groundwater, has been previously identified at Beckton STW.
- 7.64 The application is accompanied by a Land Quality Report from Scott Wilson which comprises a Phase 1 Desk Study and Risk Assessment. That assessment states that to mitigate against the significant risk from contaminated soils and dusts potentially present on the site, high hygiene standards must be maintained, appropriate environmental site controls should be implemented, and appropriate Personal Protective Equipment (PPE) should be utilised, as set out below:
- Provision of appropriate Personal Protective Equipment (PPE), including the use of chemical resistant gloves and dust masks when in direct contact with soils.
 - Provision of appropriate hygiene facilities.
 - Gas monitoring within any excavations, and appropriate precautions.
 - Provision of appropriate mitigation measures to minimise the release of contaminants to the environment during site works (i.e. generation of potentially contaminated dust particles, surface water control).
- 7.65 The Land Quality report states that a Construction Environmental Management Plan (CEMP) will be prepared for the scheme by the appointed Contractor in advance of the commencement of on-site works. The CEMP will include mitigation measures relevant to the construction phase of works as outlined above.
- 7.66 The Environment Agency has no objection to the development, subject to a series of conditions which seek to mitigate against contamination of land and water.

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- 7.67 The Council's Environmental Health officers have no objection to the proposal, subject to a condition for a CEMP, and an informative relating to contamination.
- 7.68 Overall, the scheme will have a positive impact on land quality since existing sources of identified contamination will either be treated, removed, or left in place beneath hardstanding. The development therefore accords with UDP Policy EQ49 and London Plan Policy 4A.33.

Water Resources and Flood Risk

- 7.69 Planning Policy Statement 25 (PPS25) (Development and Flood Risk) aims to ensure that flood risk is taken into account at all stages in the planning process. PPS25 states that a Flood Risk Assessment (FRA) must be undertaken for all developments greater than 1 hectare in area.
- 7.70 Planning Policy Statement 23 (PPS23) (Planning and Pollution Control) relates to development on land affected by contamination and provides guidance on how the development of contaminated land can be controlled through the planning process.
- 7.71 Policies which relate specifically to the water environment are set out in Chapter 4, Part C of the London Plan. They state that development will not be permitted if it is likely to lead to the deterioration of the quality of groundwater or surface water, biodiversity or landscape value, or if it will directly affect flood risk.
- 7.72 The specific London Plan policies which are directly relevant to this aspect of the proposed development are:
- Policy 4A.17 (Water Quality): The Mayor will, and boroughs should, protect and improve water quality to ensure that the Blue Ribbon Network is healthy, attractive and offers a valuable series of habitats by: ensuring that adequate sewerage infrastructure capacity is available for developments; refusing, or directing refusal of, proposals that are likely to lead to a reduction in water quality; and using sustainable urban drainage systems to reduce the amount and intensity of urban run-off and pollution (see also Policy 4A.14).
 - Policy 4A.18 (Water and Sewerage Infrastructure): The Mayor expects developers and Local Planning Authorities to work together with water supply and sewerage companies to enable the inspection, repair or replacement of water supply and sewerage infrastructure. The Mayor will work with Thames Water, the Environment Agency and other relevant organisations to ensure that London's drainage and sewerage infrastructure is sustainable and meets the requirements placed upon it by population growth and climate change.
 - Policy 4C.2 (Context for Sustainable Growth): Development and use of the water and waterside land along the Blue Ribbon Network should

respect resource considerations and natural forces in order to ensure that future development and uses are sustainable and safe.

- Policy 4C.3 (The Natural Value of the Blue Ribbon Network): The Mayor will, and boroughs should, protect and enhance the biodiversity of the Blue Ribbon Network.
- Policy 4A.14 (Sustainable Drainage): The Mayor will, and boroughs should, seek to ensure that surface water run-off is managed as close to its source as possible in line with a suggested drainage hierarchy.

7.73 UDP Policy EQ45 (Pollution) is relevant and states that planning permission for any development will be resisted where it would involve unacceptable levels of generation beyond the boundary of the site of one or more of the following: a) Vibration; b) Smell; c) Fumes; d) Dust; e) Grit; f) Air and water pollutants; g) Noise; h) Vehicular or pedestrian traffic; i) Ground/soil pollutants; and j) Light spillage.

7.74 UDP Policy EQ62 (Protection of the Flood Plain and Urban Washlands) requires appropriate flood protection and attenuation measures on site or elsewhere before development is permitted which is likely to increase the risk of flooding. Policy EQ63 (Surface Water Disposal) requires appropriate surface water flow attenuation facilities or mitigation measures as a pre-requisite for development, and Policy EQ64 (Tidal Defences) states that the Council will oppose development which would adversely affect the stability and continuity of tidal defences or impinge on access to tidal defences.

7.75 The submitted Environment Report examines the potential impacts arising as a result of the proposed development on water resources (surface and groundwater) in and around the Beckton STW site. It also presents a summary of the separate Flood Risk Assessment (FRA) which has been prepared and submitted in accordance with Planning Policy Statement 25: Development and Flood Risk (PPS25).

7.76 The Environment Report states that potential contaminants would be prevented from migrating to the Thames Tideway and River Roding due to the presence of raised flood defence walls. It states that by following the best practice construction methods in the Environment Agency's Pollution Prevention Guidelines, the effects of construction on the surrounding water resources (groundwater and surface water) will be minimised.

7.77 The submitted FRA concludes that the site is at negligible risk of flooding from fluvial, tidal, groundwater and overland flow sources; and at low risk of flooding from surcharged sewers. The proposed development does result in an increase in impermeable area, and without mitigation has the potential to result in an increase in flood risk. In order to mitigate against an increase in surface water run-off generated from the site, uncontaminated flows will be attenuated where necessary up to the 1% annual probability event (inclusive of climate change) before joining the

existing drainage system. Where necessary, oil and silt interceptors will be used to reduce the chance of contamination of surface water run-off. Contaminated flows will be re-routed directly back through the STW for treatment prior to joining the existing STW discharge.

- 7.78 The FRA also demonstrates that the development will not increase flood risk elsewhere (or for other Thames Water and non-Thames Water consented and non-consented schemes) as surface water will be collected and treated at the Beckton STW.
- 7.79 The Environment Agency have no objection to the development either in terms of water resources or flood risk, subject to conditions relating to flooding and to mitigate against water contamination.
- 7.80 Overall, the development will not adversely impact on water quality as best practice construction methods will be used. Flood risk is considered to have been taken into account and the development will not increase flood risk as surface water will be collected and treated at the Beckton STW. The proposed mitigation (being practice working methods, and collection and treatment of surface water at the STW site) can be secured through conditions. Overall, the development is considered to be consistent with the objectives of Policies S4, EQ18, EQ19, and EQ63 of the UDP; Policies 4A.3, 4A.14, and 4A.16 of the London Plan; and PPS23 and PPS25.

Ecology and Biodiversity

- 7.81 Policy EQ9 of the UDP (Protection of Sites of Nature Conservation Importance) states: “development which would have an adverse impact on the nature conservation value of designated sites of nature conservation importance ... will not be permitted”. Importantly, the supporting text goes on to say: “With regard to railside land, sewage works and water transport facilities already located on or adjoining Sites of Nature Conservation Importance (SNCIs), applications for improvements or redevelopment necessary for continued operational use of the land will normally be permitted as the Council recognises the primary role of such land in the provision of important public services.”
- 7.82 London Plan Policies 3D.14 (Biodiversity and Nature Conservation), 4C.3 (The Natural Value of the Blue Ribbon Network), and 4C.4 (Natural Landscape) seek to ensure development does not impact adversely on natural landscapes and biodiversity. London Plan Policy 3D.14 requires the planning of new development and regeneration to have regard to nature conservation and biodiversity, and opportunities should be taken to achieve positive gains for conservation through the form and design of development.
- 7.83 Planning Policy Statement 9 (PPS9) (Biodiversity and Geological

Conservation) highlights that 'development proposals provide many opportunities for building-in beneficial biodiversity... as part of good design. When considering such proposals, Local Planning Authorities should maximise such opportunities in and around developments'.

- 7.84 Part of the site (land over the Northern Outfall Sewer) is identified as a Protected Site of Nature Conservation Importance (SNCI) in the UDP. The River Thames is also designated as SNCI. No statutorily-designated sites for nature conservation are located within 2km of the proposed development, and no internationally designated sites are located within 5km.
- 7.85 The application is accompanied by an Environment Report which assesses the development in terms of its impact on ecology and nature conservation. The report states that no features of ecological value were identified on the main development site. The report notes that Pipistrelle bats are known to roost within the wider Beckton STW, and a bat roost has been identified on the water tower located in the proximity of the proposed temporary Contractors' compound. The report concludes that subject to the implementation of appropriate mitigation measures, no significant adverse impact will result to the bat roost located on the water tower.
- 7.86 The Environment Report states that the proposed development will require the loss of some trees, the majority of which are immature and of negligible potential to support roosting bats. A small number of trees present along the south-western edge of the site exhibit features that may hold bat roosting potential. Only one of these trees will require removal and measures are recommended to avoid adverse impacts in the unlikely event that a bat is present.
- 7.87 The report concludes that construction should not have a significant effect on surrounding habitats and species in the wider area, and measures will be put in place to control construction effects and keep any impacts to a minimal level. Overall, the site of the proposed new sludge digestion plant at Beckton STW is considered by the applicant to be of low ecological value, as habitats are of poor biodiversity quality and are common. Ecological enhancements built into the scheme design will result in a net gain in the biodiversity value of the site, providing a benefit to locally occurring species.
- 7.88 Natural England has responded to state that this scheme is in line with previous development proposals which they have commented on. Accordingly, they have referred to previous comments they have made with regards to enhancements and improvements to the overall site in line with the Landscape and Ecology Management Plan (LEMP). In respect of this, it is considered that a Section 106 agreement term securing an on-going LEMP is not necessary given the reasonably small area of the subject site in relation to the wider STW, and the fact that

much of the development site is paved and of little or no ecological value. Off-site ecological incentives are also not considered necessary for this project. Conditions are, however, proposed for full landscaping details and to secure the mitigation set out in the submitted Environment Report to ensure that the proposed ecological enhancements and mitigation is implemented.

- 7.89 Subject to conditions for landscaping and to secure the mitigation set out in the submitted Environment Report, the application will result in ecology/biodiversity enhancements and is considered to be consistent with London Plan Policies 3D.14, 4C.3, and 4C.4; Policy EQ9 of the UDP; and PPS9.

Landscape and Visual

- 7.90 Policy 4D of the London Plan East London Sub-regional Development Framework (2006) seeks to maintain and enhance the existing network of parks, open space, wildlife sites and the Green Belt in the region. Policy 4F of that document seeks to ensure a continuous publicly accessible Thames Path throughout East London.
- 7.91 The East London Green Grid Framework Supplementary Planning Guidance (SPG) has the aim of creating 'a network of interlinked, multi-functional and high quality open spaces that connect with town centres, public transport nodes, the countryside in the urban fringe, the Thames, and major employment and residential areas'. Of relevance to the Beckton STW, the SPG identifies refurbishment of the Greenway, the east-west recreational route along the Northern Outfall Sewer, and improvements along the Roding Valley, which encompasses Barking Creek, enhancing landscape, accessibility and wildlife value of the river corridor.
- 7.92 The UDP identifies part of the development area at the Beckton STW as 'Metropolitan Open Land' (MOL). MOL is open space of strategic significance, either because it forms a green chain or because it contributes to the physical structure of the area by separating built-up urban parts of the Borough and being clearly distinguishable from them. It is, however, noted that the MOL designation in this location is not intended to restrict potential plans of utilities such as Thames Water in carrying out their statutory functions.
- 7.93 The application is accompanied by an Environment Report, which assesses the development in terms of its impact on landscape. The indicative landscaping proposed within this document has been informed by a consideration of the location and scale of the proposed development components, the extent of tree and vegetation loss, and the relationship with the landscape plan for the Lee Tunnel and Beckton STW Extension project.

7.94 The landscape chapter within the submitted Environment Report makes the following conclusions:

- The development proposals will reduce some of the low grade open amenity space which currently exists, however mitigation through tree and scrub planting will create an overall enhancement.
- It is not expected that the proposed development will cause a significant change in the landscape character, given the siting within the central core of the STW and the surrounding existing landscape character.
- An analysis of the trees that will require removal indicates that the development will result in the loss of trees of low quality and value only, or those proposed for removal for reasons of sound arboricultural management. Opportunities for replacement planting have been identified on the Indicative Landscape Masterplan (Figure 7.2 within the submitted Environment Report) and include locations where trees will not conflict with normal site operations or impose any undue management obligations.
- Species selection has been informed by those already growing successfully on the site and those that are recommended for use within the Lee Tunnel and Beckton STW Extension scheme LEMP.

7.95 The Council's Landscape Architect has assessed the application and responded to state that there appears to be an adequate provision for new trees, woodland, screening, native species, shrubs and a grass mix. It was noted that no numbers or planting densities are shown on the plan at this stage, and as such a condition for full landscaping details is recommended.

7.96 The Council's Arboricultural Officer responded to state he has no objections, as although 116 trees will be lost (the species are: Wild Cherry (*Prunus avium*), Bird Cherry (*Prunus padus*), Field Maple (*Acer campestre*), Silver Birch (*Betula pendula*), Common Oak (*Quercus robur*), White Poplar (*Populus alba*), Grey Poplar (*Populus canescens*), Lombardy Poplar (*Populus nigra 'Italica'*), Hybrid Black Poplar (*Populus serotina*), Italia Alder (*Alnus cordata*), Grey Alder (*Alnus incana*), Hawthorn (*Crataegus monogyna*), Elderberry (*Sambucus nigra*), Rowan (*Sorbus aucuparia*), Swedish Whitebeam (*Sorbus intermedia*), London Plane (*Platanus x hispanica*), Sycamore (*Acer pseudoplatanus*), Leyland Cypress (*Cupressocyparis leylandii*), Apple (*Malus sp.*)), they are of low amenity value and will be adequately compensated for by the proposed landscaping scheme which will include the replacement of trees lost. The proposals include the provision of 94 new specimen, standard or woodland trees, the provision of 560m² of woodland planting and 1462m² of shrub mix planting.

7.97 Subject to conditions for landscaping and to secure the tree planting set out in the submitted Environment Report, the proposal is consistent with

policies 4D and 4F of the London Plan East London Sub-regional Development Framework (2006), the East London Green Grid Framework SPG, and the UDP Green Chain and MOL designations of the STW site.

Cultural Heritage

- 7.98 The importance of the historic built environment is detailed in the Government's Planning Policy Statement (PPS5) 'Planning for the Historic Environment'. The underlying principle of this guidance is identifying the importance of Listed Buildings and Conservation Areas. Development proposals should ensure that the historic environment is preserved or enhanced by development.
- 7.99 The application is accompanied by an Environment Report which describes the survival and extent of known or potential heritage assets that may be affected by the proposed development; provides an evaluation of their importance; identifies the impacts of the proposed scheme on the known or potential heritage assets; and recommends appropriate mitigation measures to, where possible, reduce the impacts of the proposed development.
- 7.100 The submitted Environment Report makes the following conclusions and recommendations:

Archaeology

- The assessment has found that there is a low potential for prehistoric and later occupation heritage assets (no mitigation is required) and that archaeological monitoring of the proposed piling works would be appropriate mitigation for the potential for unknown find spots (Palaeolithic to modern).
- Piling /foundation works would also affect directly and indirectly the buried palaeo-environmental sediment. Previous piling in this area has already impacted this resource and the palaeo-environmental potential of the sediment has already been assessed (geoarchaeological investigation for the previous Lee Tunnel and Beckton Extension Scheme).
- Consequently, further analysis of this resource is not considered to be necessary, although monitoring of the piling work would provide clarification on existing below ground conditions in a different area of the sewage works and in the long term would contribute towards a revised deposit model.

Built Heritage

- This assessment has found that there will be no significant impacts arising from the proposed development upon any of the five built heritage assets identified within the study area. It was found that the Grade II Listed Chimney at the Beckton STW and the Locally Listed 'Crooked Billett' public house will experience no impact as a result of the proposals.
 - Because no significant impacts are anticipated in relation to built heritage assets within the study area, no further assessment work or mitigation measures are recommended.
- 7.101 English Heritage GLAAS (Greater London Archaeology Advisory Service) have assessed the proposals and have no objection in principle, subject to a condition to secure the implementation of a programme of archaeological work in accordance with a written scheme for investigation prior to the commencement of works.
- 7.102 The Council's Design and Conservation Officer concurs that the impact of the development on the Listed Chimney is insignificant given that the proposed development will not alter the modern setting of the chimney once it is re-erected. Where the proposals are closest to the site of the re-erected chimney, they represent refurbished and new infrastructure on the site of existing structures, and where they represent new structures they will be at least partly screened by intervening structures within the STW.
- 7.103 Officers concur with the general findings of the Cultural Heritage Assessment that has been submitted, and concur that the impact of the development on the setting of the Grade II Listed Chimney at the STW is acceptable, and that the impact on archaeology is acceptable subject to a condition to ensure that a programme of archaeological work is undertaken. Subject to this condition, the proposed development is consistent with PPS5 and UDP Policies EQ35, EQ38, and EQ43.

Waste

- 7.104 Policy 4A.28 (Construction, Excavation and Demolition Waste) of the London Plan encourages minimisation of construction, excavation and demolition waste and associated environmental impacts. It also states that "Development Plan Documents should require developers to produce Site Waste Management Plans to arrange for efficient materials and waste handling, and require wastes to be removed from the site, and materials to be brought to the site by water or rail transport wherever that is practicable". This policy also requires major developments to recycle construction, excavation and demolition waste by using mobile facilities on site wherever practicable.

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7.105 UDP Policy EQ60 (Recycling) states that “the Council will encourage the recycling and re-use of secondary aggregates.”

7.106 The application is accompanied by an Environment Report which identifies the different types of solid waste that will be produced during the construction of the proposed development at Beckton STW, and the associated waste management options.

7.107 The Environment Report makes the following conclusions:

- The product of the proposed enhanced sludge digestion process is a compost-like friable solid sludge cake which is recycled to land and is valued by farmers for the nutrients and the organic matter that it contains.
- The enhanced digestion process also produces biogas which will be used to feed CHP plant for on-site electricity generation and provision of heat to the digestion / thermal hydrolysis process.
- The proposed enhanced sludge digestion facility will therefore maximise the benefits of sludge treatment through increased recycling of resources and recovery of energy from residual waste. In this respect, the selected technology for this proposal will provide Thames Water with the means of moving their management of sewage sludge up the waste hierarchy through its diversion from thermal management and its treatment through liming.
- The proposed development will generate waste during the construction phase through demolition, construction material wastage and excavated material which cannot be re-used within the construction works. The impacts associated with these arisings will be minimised through a number of measures, including the development of a Site Waste Management Plan (SWMP), and by adhering to the principles of the waste hierarchy and the proximity principle.
- The SWMP, following the waste hierarchy, will be produced by the Construction Contractor upon appointment, and will be submitted to LTGDC as part of a Construction Environmental Management Plan.
- By adhering to the waste hierarchy and specifically through the re-use of demolition materials on site, a reduction in potential environmental impacts associated with construction waste will be realised. Benefits will be achieved in the vicinity of the STW by minimising off-site movements of waste and by minimising the use of landfill capacity.

7.108 The Environment Agency have no objection to the development, however they recommended an informative regarding waste management and noted that waste generated from the construction phase through demolition, construction material wastage, and excavated material which cannot be re-used within the construction works, should be stored and disposed of appropriately. They also noted that construction material and demolition materials produced on site may need an Exemption if it is to be stored or disposed of. These comments have been passed on to the applicant.

- 7.109 The Port of London Authority, British Waterways, and the Council's Transportation Section have no objection on waste management grounds, subject to a condition requiring details of a strategy to seek to maximise the use of the River Thames for the transport of materials during construction. This includes waste materials.
- 7.110 The impacts of waste have been considered and officers conclude that the waste management proposals are acceptable and will not result in any adverse impacts, subject to a condition which seeks to maximise the use of the River Thames for the transport of materials during construction, and a condition to ensure that the recommendations set out in the Environment Report are followed. The development is therefore considered to be consistent with the policy objectives set out in London Plan Policy 4A.28 and UDP Policy EQ60.

Noise and Vibration

- 7.111 Policy EQ47 (Noise Impact Statement) of the UDP states: '...where a proposed development is likely to produce a considerable increase in noise relating to its use, the Council will require an assessment of noise impact to be carried out by a developer for submission with the planning application.' Policy EQ48 (Noise – Sensitive Development) says that in considering planning applications for new noise-sensitive development, the Council will apply the concept of 'noise exposure categories' to assist it in assessing the acceptability of the proposal. Where noise-sensitive development is proposed close to a permanent source of noise generation or vibration, the Council may require the applicant to demonstrate through the submission of an acoustic assessment or an assessment of the transmission of vibrations that: a) the site is suitable for the development proposed; or b) the development will incorporate appropriate acoustic and vibration attenuation measures to achieve a satisfactory environment.
- 7.112 The application is accompanied by an Environment Report which includes an assessment of noise and vibration. Road traffic noise was identified as the dominant source of noise at each of the noise monitoring locations. The report states that consultation with the Council has indicated that the predicted rating noise level (LAr,Tr), as a result of the operation of the proposed sludge digestion plant, should not exceed the existing measured daytime or night time background noise levels (LA90,T) at the closest receptor locations. Based on the background noise measurements, the necessary rating levels that will be required at the identified sensitive receptors are as follows:
- Winsor Terrace - 43dB LAr,Tr (daytime) and 38dB LAr,Tr (night time)
 - Newmarsh Road - 45dB LAr,Tr (daytime) and 35dB LAeq,T (night time)

- Westminster Gardens - 45dB LAr,Tr (daytime) and 39dB LAr,Tr (night time).

7.113 The report states that noise levels will be confirmed once a Contractor is appointed and when information is available regarding specific plant and consequent operational noise levels, and concludes that if current best practice measures are followed then noise levels as a result of construction activities should be reduced to a minimum and to within acceptable levels.

7.114 The GLA Stage 1 Report identifies that the submitted details lack clarification on the likely noise impacts of the development during peak construction activity due to heavy goods vehicles (HGVs).

7.115 The applicant responded to the GLA's comments on 3 November 2010 as follows:

- Peak traffic movements are predicted to occur during the delivery of piling materials, when approximately 128 one-way HGV, car and van movements per day are anticipated.
- The current traffic flows on the main access route (the A13) are considered to be of a level where the additional vehicle numbers will represent considerably less than a 25% increase in total flow, which constitutes the increase required to raise traffic noise by 1dB. There are no noise sensitive receptors on the access route between the A13 and the site.

This response is considered adequate to demonstrate that noise impacts will be acceptable. The GLA will provide their own assessment of the response in their Stage 2 Report.

7.116 The Council's Environmental Health Section have no objection subject to a condition for an acoustic report to ensure that any noise impacts do not cause nuisance to surrounding residential areas.

7.117 The impacts of the development in terms of noise and vibration have been considered and officers conclude that the low levels of noise and insignificant vibration levels during construction are acceptable, subject to conditions to prevent impact piling, to limit hours of operation during construction, and for a Construction Management Plan. Noise and vibration upon completion of works will be negligible and therefore does not require any specific mitigation. Overall, the development accords with UDP Policies EQ47 and EQ48.

8. CONCLUSION AND REASONS FOR APPROVAL

8.1 The need for the development is driven by the statutory requirement to ensure the provision of sufficient sludge treatment capacity at Beckton

STW to service the growing requirements of the Beckton STW catchment.

- 8.2 The development will result in improvements to the efficiency and quality of sludge treatment and recycling of sludge to land undertaken at Beckton STW. The development will enable Thames Water to provide sludge treatment capacity both to manage the needs of the existing population and to service the requirements of the future domestic and business populations. It will also provide sludge treatment capacity whilst the existing SPG undergoes a major overhaul.
- 8.3 One objection has been received from an adjoining resident which raises concern regarding odour. This objection has been considered, along with other material considerations and the development plan consisting of the London Plan (the Strategic Plan for London) and Newham Council's Unitary Development Plan (adopted June 2001 – saved policies).
- 8.4 The impacts of the development in terms of odour have been considered and officers concur in general with the findings of the submitted Odour Assessment in that implementation of the odour control measures are forecast to lead to a reduction in odour levels compared to the future baseline, and that the odour exposure levels experienced off-site are likely to decrease proportionally. A number of odour conditions, including a condition for an Odour Management Plan and associated protocols, are proposed to ensure the applicant adheres to the predicted odour reduction targets.
- 8.5 The application has been assessed with regard to air quality, transport/traffic, sustainability and energy, land contamination, water resources and flood risk, ecology and biodiversity, landscape and visual, cultural heritage, waste, and noise and vibration. Subject to various conditions, including a condition requiring the applicant to carry out the development in accordance with the environmental standards, mitigation measures, requirements and methods of implementing the development contained in the submitted planning application, the impacts of the development are considered acceptable and generally in accordance with the relevant policies as set out in Section 6 of this report. Officers are satisfied that the development will not have an adverse impact on the setting of the Grade II Listed Chimney to the east of the development site.
- 8.6 Whilst the proposal does represent a departure from the London Borough of Newham Unitary Development Plan due to the Metropolitan Open Land (MOL) designation that covers the whole site and the green space designation affecting part of the site, the positive effects of these proposals and the underlying and irrefutable need for them are considered, with the lack of other adverse impacts, to represent the very special circumstances required to allow this development to take place.

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Referral of the application to the Government Office for London is not required.

8.7 It is consequently recommended that planning permission be **granted** subject to:

- 1) referral to the Mayor of London;
- 2) the conditions listed in this report; and
- 3) the completion of a S106 agreement to secure provisions for Thames Water Utilities Limited to pay for experts to approve the Odour Management Plan and Protocols, and any amendments thereto initiated by them, and for an annual audit.

9. CONDITIONS AND REASONS

1. Time Limit

The development hereby permitted shall be commenced not later than the expiration of 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.

2. In Accordance With Plans

All works are to be completed in accordance with the following drawings submitted by Adams Hendry Consulting Ltd:

- 6QWG-B2-02010-EX Rev A - Site Location Plan
- 6QWG-B2-02011-EX Rev A - Existing Site Layout
- 6QWG-B2-02012-EX Rev A - Proposed Site Layout Plan
- 6QWG-B2-02013-EX Rev A - Proposed Site Layout Plan – Showing Elevations
- 6QWG-B2-02015-EX Rev A - Plan Showing Structures to be Demolished
- 6QWG-B2-02020-EX Rev A - Proposed Site Elevation A
- 6QWG-B2-02021-EX Rev A - Proposed Site Elevation B
- 6QWG-B2-02022-EX Rev A - Proposed Site Elevation C
- 6QWG-B2-02023-EX Rev A - Proposed Site Elevation D
- 6QWG-B2-02024-EX Rev A - Proposed Site Elevation E
- 6QWG-B2-02027-EX Rev A - Proposed Site Layout – Settled Sewage Channel Area
- 6QWG-B2-02028-EX Rev A - Proposed Site Layout – Cake Storage Building and THP
- 6QWG-B2-02029-EX Rev A - Proposed Site Layout – Digester Area

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6QWG-B2-02030-EX Rev A - Cake Storage Building – Planning Elevations
6QWG-B2-02031-EX Rev A - Heating Building – Planning Elevations
6QWG-B2-02032-EX Rev A - Relocated Workshop – Planning Elevations
6QWG-B2-02033-EX Rev A - Cake Storage Building – Ground Floor Plan
6QWG-B2-02034-EX Rev A - Cake Storage Building – First Floor Plan
6QWG-B2-02035-EX Rev A - Heating Building – Floor Plan
6QWG-B2-02036-EX Rev A - Relocated Workshop Building – Floor Plan
6QWG-B2-02037-EX Rev A - Typical Thermal Hydrolysis Plant (THP) Plan and Elevations
6QWG-B2-02038-EX Rev A - Typical Odour Control Unit – Plan and Elevations
6QWG-B2-02039-EX Rev A - Typical Motor Control Centre Kiosk Plan and Elevations
6QWG-B2-02040-EX Rev A - Typical CHP and Heat Dump Fans Plan and Elevations
6QWG-B2-02041-EX Rev A - Welfare Building – Floor Plan and Elevations

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

Reasons: To ensure that the development is undertaken in accordance with the approved drawings, and to protect the local amenity with regard to Policy EQ19 of the London Borough of Newham Unitary Development Plan (adopted June 2001 and saved from the 27th of September 2007 in accordance with the direction from the Secretary of State), and Policy 4B.1 of the London Plan (Feb 2008, Consolidated with Alterations Since 2004). The development is acceptable on the basis of the particulars contained within the application and this condition seeks to ensure the development is undertaken in strict accordance with those details as approved.

3. Environmental Mitigation

The development hereby permitted shall be carried out in accordance with the environmental standards, mitigation measures, requirements and methods of implementing the development contained in the submitted planning application; Environment Report; Energy Report; Land Quality Report; Sustainable Design and Construction Statement; Flood Risk Assessment; Transport Statement; and all supporting appendices; and further information submitted (dated 11 November 2010), unless otherwise agreed in writing by the Local Planning Authority.

Reasons: To ensure the development is carried out in accordance with

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the Environment Report and other submitted reports, and the mitigation measures proposed therein, in accordance with Policies EQ18, EQ19, EQ25, EQ26, EQ43, EQ45, EQ46, EQ47, EQ48, EQ49, EQ63 and EQ64 of the London Borough of Newham Unitary Development Plan (adopted June 2001 and saved from the 27th of September 2007 in accordance with the direction from the Secretary of State) and Policies 2A.1, 3A.28, 3C.3, 3C.23, 3D.13, 3D.14, 4A.1, 4A.2, 4A.3, 4A.4, 4A.5, 4A.6, 4A.7, 4A.8, 4A.9, 4A.10, 4A.11, 4A.12, 4A.13, 4A.14, 4A.15, 4A.16, 4A.17, 4A.18, 4A.19, 4A.20, 4B.1, 4B.2, 4B.3, and 4B.10 of the London Plan (Feb 2008, Consolidated with Alterations Since 2004).

4. Provision of an Odour Management Plan and Protocols

The Beckton Enhanced Digestion Facility (EDF) Plant shall not be brought into operation until the developer has submitted to the Local Planning Authority for approval in writing and obtained the written approval of the Local Planning Authority in respect of:

(i) An Odour Management Plan (OMP). The OMP shall deal with the management of odour at the EDF (or by agreement with the Local Planning Authority, the EDF and the Beckton Works as a whole). 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 7.
- Olfactometric Testing and Performance Protocol which shall include the matters set out in Condition 9.
- Beckton EDF Sludge Treatment Facility Capacity Protocol which shall include the matters in Condition 11.
- Sludge Cake Store Ventilation Protocol which shall include the matters set out in Condition 10.

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- Combined Heat and Power Plant Exhaust Emissions Protocol which shall include the matters set out in Condition 17.

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 OMP and Protocols are provided and agreed, 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 EQ45 of the London Borough of Newham Unitary Development Plan (adopted June 2001 and saved from the 27th of September 2007 in accordance with the direction from the Secretary of State).

5. Odour Control, Mitigation and Abatement Plant

The EDF hereby approved shall not be brought into operation until the following odour mitigation measures (and the ancillary hydrogen sulphide monitors required under Condition 7) associated with the EDF and as described in the Odour Assessment ("OA") dated July 2010 are installed and are operational as set out below.

1. All new odour enclosures, extraction systems and odour control units associated with the new sludge thickening, thermal hydrolysis and digestion plant have been installed and commissioned.
2. The Sludge Cake Store extract ventilation system and stack have been installed and commissioned.
3. The three remaining "open" settled sewage channels and associated activated sludge distribution chambers/channels are covered and extracted to the additional odour control units described in the OA dated July 2010.

Emissions from these sources shall be discharged through the stacks described in the OA and at the heights specified in the planning application, or at any other stack locations and stack heights agreed in writing with the Local Planning Authority before the development is brought into use.

The stack air efflux velocity shall be agreed in writing with the Local Planning Authority before the development is brought into use, and it is expected that a minimum "best practice" discharge air speed of 15 m/s will be required for all stacks.

Reasons: To minimise odour emissions from the development and their off-site impact in the local area and to ensure compliance with Policy EQ45 of the London Borough of Newham Unitary Development Plan (adopted June 2001 and saved from the 27th of September 2007 in accordance with the direction from the Secretary of State).

6. Operation of Odour Control Plant

The following parts of the Beckton EDF and associated odour control improvements 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 OA dated July 2010:

1. Cake Store Exhaust Air Stacks No. 1 and No. 2 total combined emissions: 20,622 ou_E/s (at both “normal” and “peak” ventilation rates if a variable capacity extraction system is installed);
2. New Sludge Odour Control Unit (OCU) : 7,400 ou_E/s;
3. Combined emissions from Settled Sewage Channels OCUs (ASP2A, ASP3a and ASP3b) : 5,908 ou_E/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 EQ45 of the London Borough of Newham Unitary Development Plan (adopted June 2001 and saved from the 27th of September 2007 in accordance with the direction from the Secretary of State).

7. Hydrogen Sulphide Monitoring Equipment and Protocol

The Beckton EDF 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 6, 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 emission concentration limits to be agreed

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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 Stacks (2 stacks)
 - New Sludge Odour Control Unit (OCU)
 - OCU or OCUs serving Settled Sewage Channels ASP2 , ASP3a and ASP3b.
- (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.
- (f) Provision for routine monitoring of potential odour leaks from the digester gas collection, storage, treatment and combustion processes (including CHP plant) using hydrogen sulphide detection/monitoring or some alternative objective method.

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 EQ45 of the London Borough of Newham Unitary Development Plan (adopted June 2001 and saved from the 27th of September 2007 in accordance with the direction from the Secretary of State).

8. Odour Emissions

In the event that any of the monitoring instruments fitted pursuant to Condition 7 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 7 for six or more hours, on three or more days within any calendar month then the developer shall notify the Local Planning Authority. The developer shall also 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

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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 7 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 EQ45 of the London Borough of Newham Unitary Development Plan (adopted June 2001 and saved from the 27th of September 2007 in accordance with the direction from the Secretary of State).

9. Olfactometric Testing

The Beckton EDF 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.

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 as identified in Conditions 6 and 7 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) Procedures to objectively demonstrate to the Local Planning Authority the effectiveness of all odour enclosure and extractions systems in preventing fugitive odour leaks from enclosed plant, processes and buildings hereby approved within 90 days of each OCU system being brought in to use.

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 EQ45 of the London Borough of Newham Unitary Development Plan (adopted June 2001 and saved from the 27th of September 2007 in accordance with the direction from the Secretary of State).

10. Sludge Cake Store Odour Control

The Beckton EDF Sludge Cake Store shall have fast acting roller shutter vehicle access doors and these doors shall be kept closed at all times except for the passage of vehicles. Provisions should be made to ensure that only one vehicle access door can be open at any time, and these measures should include interlocked door opening mechanisms which ensure that only one access door is allowed to be open or opened at any time.

The Beckton EDF 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

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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) extract stack odour emission rate exceeds a total of 20,622 ou_E/s emission limit for the two stack sources combined (or such other limit as agreed under Condition 6) 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 20,622 ou_E/s from both stacks combined (or such other limit as agreed under Condition 6), 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 one or both of the Sludge Cake Store (and sludge centrifuge/pressing) stacks, and if the combined total outlet odour emissions exceed the emission limit of 20,622 ou_E/s for both stacks (or such other limit as agreed under Condition 6) 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 any 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 EQ45 of the London Borough of Newham Unitary Development Plan (adopted June 2001 and saved from the 27th of September 2007 in accordance with the direction from the Secretary of State).

11. Processing of Sludge

The whole digestion process from receipt of the sludge to the digestion process, but excluding digested sludge storage, shall be kept sealed and odour controlled at all times.

The Sludge Digestion and Thickening (to produce cake) Facilities hereby approved shall not be brought into permanent operation until:

- (a) the developer has submitted the Beckton EDF Sludge Treatment Facility Capacity Protocol demonstrating to the satisfaction of the Local Planning Authority that the EDF plant is capable of treating the sludge at an average rate of 100 tonnes of cake dry solids per day over a continuous period of at least 30 days within an agreed three/six month commissioning period; and
- (b) the Local Planning Authority has approved in writing the Beckton EDF Sludge Treatment Facility Capacity Protocol.

Reasons: To ensure that there is adequate sludge treatment capacity at Beckton STW as a result of the proposed development and to help ensure that all sludge treatment carried out at the site is within odour controlled facilities and having regard to Policy EQ45 of the London Borough of Newham Unitary Development Plan (adopted June 2001 and saved from the 27th of September 2007 in accordance with the direction from the Secretary of State).

12. Limits on Processing of Sludge and Sludge Cake

Unless otherwise agreed in writing with the Local Planning Authority, the temporary or permanent processing of sludge/sludge cake associated with the Beckton EDF shall only be carried out within fully enclosed and odour extracted and abated/mitigated facilities and otherwise as described in the application. No sludge or sludge cake treatment associated with the Beckton EDF will be undertaken outside or in the open.

Reasons: To minimise odour emissions from the development and to ensure compliance with Policy EQ45 of the London Borough of Newham Unitary Development Plan (adopted June 2001 and saved from the 27th of September 2007 in accordance with the direction from the Secretary of State).

13. Storage of Sludge and Sludge Cake

Unless otherwise agreed in writing with the Local Planning Authority, the temporary or permanent storage of sludge/sludge cake associated with

the Beckton EDF shall only be carried out within fully enclosed and odour extracted and abated/mitigated facilities and otherwise as described in the application. No sludge or sludge cake storage associated with the Beckton EDF will be undertaken outside or in the open.

Reasons: To minimise odour emissions generally and specifically from sludge treatment and storage operations and to ensure compliance with Policy EQ45 of the London Borough of Newham Unitary Development Plan (adopted June 2001 and saved from the 27th of September 2007 in accordance with the direction from the Secretary of State).

14. Sniffing Ports

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 Officers 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 EQ45 of the London Borough of Newham Unitary Development Plan (adopted June 2001 and saved from the 27th of September 2007 in accordance with the direction from the Secretary of State).

15. Demolition and Refurbishment of Existing Plant

Demolition and refurbishment of existing or redundant plant, including the old digesters, shall be carried out in such a manner as to prevent any odour nuisance from materials that may have been left in the plant. A Method Statement shall be provided to the Local Planning Authority for approval in writing before such work is undertaken.

Reasons: To ensure emissions stay within acceptable limits and to ensure compliance with Policy EQ45 of the London Borough of Newham Unitary Development Plan (adopted June 2001 and saved from the 27th of September 2007 in accordance with the direction from the Secretary of State).

16. Fugitive emissions

There shall be no release of odour to the atmosphere except through the

emission points specified in the planning application.

The capability of all odour enclosure and extraction plant to control fugitive emissions shall be demonstrated by smoke testing or another objective method approved in writing by the Local Planning Authority, as set out at Condition 9.

Reasons: To ensure emissions stay within acceptable limits and to ensure compliance with Policy EQ45 of the London Borough of Newham Unitary Development Plan (adopted June 2001 and saved from the 27th of September 2007 in accordance with the direction from the Secretary of State).

17. Combined Heat and Power Plant Exhaust Emissions Protocol

The Combined Heat and Power Plant Exhaust Emissions Protocol shall include the following matters:

- (a) procedures to allow the developer to objectively demonstrate to the Local Planning Authority, using odour sampling and olfactometry, that exhaust emissions will not make any significant contribution to odour impact without any mitigation or arrestment facility; and/or
- (b) steps which will be used to abate or mitigate (e.g. by the use of a tall stack) potentially odorous exhaust emissions to avoid any off-site impact if the testing required at (a) shows that such measures will be required.

Reasons: To ensure emissions stay within acceptable limits and to ensure compliance with Policy EQ45 of the London Borough of Newham Unitary Development Plan (adopted June 2001 and saved from the 27th of September 2007 in accordance with the direction from the Secretary of State).

18. Construction Phase Travel Management Plan

- (a) The development works hereby approved shall not be commenced until a Construction Phase Travel Management Plan for the development has been submitted to and approved in writing by the Local Planning Authority in consultation with TfL.
- (b) The Construction Phase Travel Management Plan shall include evidence of written approval from, and/or appropriate agreements with, the Highways Authority with regards to construction phase signing, routing, traffic management measures and any temporary measures associated with the highway network. It shall also include a car parking management strategy and Construction Phase Travel

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Plan and provision for the implementation, monitoring and review of such plans.

- (c) The Construction Phase Travel Management Plan as submitted will, if approved, relate only to the development that its details cover.
- (d) The Construction Phase Travel Management Plan shall be implemented for the entire period of the works for the development to which it relates, to the satisfaction of the Local Planning Authority.

Reasons: To ensure the transport impact of the construction phase is reduced as far as possible, to promote the use of sustainable modes of transport to the site during the construction phase and to ensure construction operations are carried out in a safe manner with due regard for the optimum operation of the highway network, in accordance with Policies EQ45, T14, T19, T23, T24 and T26 of the London Borough of Newham Unitary Development Plan (adopted June 2001 and saved from the 27th of September 2007 in accordance with the direction from the Secretary of State) and Policies 3C.3, 3C.17, 3C.25, 4A.3, 4A.19, 4A.20 and 4B.1 of the London Plan (Feb 2008, Consolidated with Alterations Since 2004).

19. Operational Phase Travel Plan

The development hereby approved shall not commence operations until an Operational Phase Travel Plan for the development has been submitted to and approved in writing by the Local Planning Authority. The Operational Phase Travel Plan shall be permanently implemented thereafter, to the satisfaction of the Local Planning Authority.

Reasons: To ensure the transport impact of the operational site is reduced as far as possible, to promote the use of sustainable modes of transport to the site, and in the interest of minimising pollution in accordance with Policies T5, EQ45 and EQ46 of the London Borough of Newham Unitary Development Plan (adopted June 2001 and saved from the 27th of September 2007 in accordance with the direction from the Secretary of State) and Policies 3C.3, 3C.17, 3C.25, 4A.3, 4A.19, 4A.20 and 4B.1 of the London Plan (Feb 2008, Consolidated with Alterations Since 2004).

20. Construction Environmental Management Plan

- (a) The development works hereby approved shall not be commenced until a Construction Environmental Management Plan for the development has been submitted to and approved in writing by the Local Planning Authority.

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- (b) The Construction Environmental Management Plan shall detail all methods of site preparation and construction of the development, including: demolition, clearance, ground works, sourcing of materials, smoke, avoidance of fires, wheel washing, noise, vibration, hours of operation, and implementation and monitoring during construction.
- (c) The Construction Environmental Management Plan as submitted will, if approved, relate only to the development that its details cover.
- (d) The Construction Environmental Management Plan shall be implemented for the entire period of the works for the development to which it relates, to the satisfaction of the Local Planning Authority.

Reasons: In the interests of pollution prevention, residential amenity and to ensure construction operations are carried out in a safe manner, in accordance with Policies EQ45, EQ46 and EQ47 of the London Borough of Newham Unitary Development Plan (adopted June 2001 and saved from the 27th of September 2007 in accordance with the direction from the Secretary of State) and Policies 3C.3, 3C.17, 3C.25, 4A.3, 4A.19, 4A.20 and 4B.1 of the London Plan (Feb 2008, Consolidated with Alterations Since 2004).

21. Site Waste Management Plan and Strategy

The development hereby approved shall not commence until a Site Waste Management Plan and Strategy has been submitted to and approved in writing by the Local Planning Authority. The approved Site Waste Management Strategy shall be implemented at all times during construction of the development, to the satisfaction of the Local Planning Authority.

Reasons: To ensure that waste management issues are fully addressed in accordance with the waste management hierarchy, in accordance with Policies EQ18, EQ19, EQ45, EQ54 and EQ61 of the London Borough of Newham Unitary Development Plan (adopted June 2001 and saved from the 27th of September 2007 in accordance with the direction from the Secretary of State) and Policies 4A.3, 4A.21, 4A.22 and 4A.28 of the London Plan (Feb 2008, Consolidated with Alterations Since 2004).

22. Construction Logistics Plan

Prior to the commencement of works on the development a Construction Logistics Plan shall be submitted to and approved in writing by the Local Planning Authority. The Construction Logistics Plan shall include:

1. An assessment of the cumulative impacts of construction traffic;
2. Details of the likely volume of construction trips and any mitigation

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- measures proposed;
3. Site access arrangements;
 4. Booking systems;
 5. Construction phasing;
 6. Vehicular routes;
 7. Scope for load consolidation to reduce generated road trips;
 8. An investigation of the use of rail during construction; and
 9. A full breakdown of the timing and detail of construction works and their impacts on the public highway and Olympic Road Network (ORN), if any.

The development shall be constructed in accordance with the approved Construction Logistics Plan, unless otherwise approved in writing by the Local Planning Authority.

Reasons: To prevent obstruction of the public highway, avoid accidents, to ensure construction materials are imported in as sustainable a manner as possible to minimise transport impact, to ensure there are no adverse impacts on the Olympic Road Network during the Olympic Games, to safeguard the amenities of the area, and with regard to Policies EQ45, EQ46, EQ47, T5 and T14 of the London Borough of Newham Unitary Development Plan (adopted June 2001 and saved from the 27th of September 2007 in accordance with the direction from the Secretary of State) and Policies 3C.3, 3C.17, 3C.25, 4A.3, 4A.17, 4A.19, 4A.20 and 5C.2 of the London Plan (Feb 2008, Consolidated with Alterations Since 2004).

23. Transportation of Materials by Water

- (a) Transportation of bulk materials, including but not limited to concreting and other aggregates, piling materials, and reinforced steelwork, to and from the site shall not commence until details of a strategy to seek to maximise the use of the River Thames for the transport of those materials to safeguarded wharves during the construction period has been submitted to and approved in writing by the Local Planning Authority.
- (b) The construction and operation of the development hereby approved shall not be carried out other than in accordance with the approved strategy and to the satisfaction of the Local Planning Authority.

Reasons: To maximise the use of the river and to promote sustainable transport, in accordance with Policies EQ4, EQ5 and EQ18 of the London Borough of Newham Unitary Development Plan (adopted June 2001 and saved from the 27th of September 2007 in accordance with the direction from the Secretary of State) and Policies 4A.3, 4B.1 and 4C.8 of the London Plan (Feb 2008, Consolidated with Alterations Since 2004).

24. Archaeology

The development works hereby approved shall not be commenced until a programme of archaeological work for the development has been secured in accordance with a written scheme for investigation which has been submitted to and approved in writing by the Local Planning Authority. The development shall only take place in accordance with the approved scheme. The archaeological works for the development shall only be carried out by a suitably qualified investigating body acceptable to the Local Planning Authority.

Reasons: The development of this site is likely to damage archaeological remains. As important archaeological remains may exist on site the Local Planning Authority wishes to secure the provision of an archaeological investigation and the recording of any remains prior to commencement of development, in accordance with Policy EQ43 of the London Borough of Newham Unitary Development Plan (adopted June 2001 and saved from the 27th of September 2007 in accordance with the direction from the Secretary of State) and Policy 4B.15 of the London Plan (Feb 2008, Consolidated with Alterations Since 2004).

25. Surface Water

No development shall commence until a scheme for the provision and implementation of surface water run-off limitation by means of a sustainable drainage system has been submitted to and approved in writing by the Local Planning Authority in consultation with the Environment Agency.

Reasons: To alleviate the increased risk of surface water flooding and maintain the required standard of protection, in accordance with Policies EQ18, EQ19, EQ62 and EQ64 of the London Borough of Newham Unitary Development Plan (adopted June 2001 and saved from the 27th of September 2007 in accordance with the direction from the Secretary of State) and Policies 4A.12, 4A.13 and 4B.1 of the London Plan (Feb 2008, Consolidated with Alterations Since 2004).

26. Surface Water 2

No development shall commence until information to demonstrate site surface water storage capacity during a 1 in 100 year storm, including climate change conditions, has been submitted to and approved in writing by the Local Planning Authority in consultation with the Environment Agency.

Reasons: To alleviate the increased risk of surface water flooding and

maintain the required standard of protection, in accordance with Policies EQ18, EQ19, EQ62 and EQ64 of the London Borough of Newham Unitary Development Plan (adopted June 2001 and saved from the 27th of September 2007 in accordance with the direction from the Secretary of State) and Policies 4A.12, 4A.13 and 4B.1 of the London Plan (Feb 2008, Consolidated with Alterations Since 2004).

27. Piling

Piling or any other foundation designs using penetrative methods shall not be permitted other than with the express written consent of the Local Planning Authority, which may be given for those parts of the site where it has been demonstrated that there is no resultant unacceptable risk to groundwater. The development shall be carried out in accordance with the approved details.

Reasons: In the interests of residential amenity and to prevent inappropriate foundation solutions from allowing contamination from the site to enter the groundwater beneath the site, and to ensure that risks from land contamination to the future users of the land and neighbouring land are minimised, in accordance with Policies EQ4, EQ9, EQ10, EQ11, EQ12, EQ18, EQ45, EQ47 and EQ49 of the London Borough of Newham Unitary Development Plan (adopted June 2001 and saved from the 27th of September 2007 in accordance with the direction from the Secretary of State) and Policies 4B.1, 4A.20, 3D.14, 4A.3, 4A.17 and 4A.33 of the London Plan (Feb 2008, Consolidated with Alterations Since 2004).

28. Infiltration of Surface Water Drainage

No infiltration of surface water drainage into the ground is permitted other than with the express written consent of the Local Planning Authority, which may be given for those parts of the site where it has been demonstrated that there is no resultant unacceptable risk to controlled waters. The development shall be carried out in accordance with the approved details.

Reasons: The submitted preliminary risk assessment has identified potential contaminants associated with the previous uses and potentially unacceptable risks arising from contamination at the site. This condition is required to protect groundwater from inappropriate drainage allowing contamination to affect the groundwater beneath the site, in accordance with Policies S4, EQ18, EQ19 and EQ63 of the London Borough of Newham Unitary Development Plan (adopted June 2001 and saved from the 27th of September 2007 in accordance with the direction from the Secretary of State) and Policies 4A.3, 4A.14, 4A.16 and 4B.1 of the London Plan (Feb 2008, Consolidated with Alterations Since 2004).

29. Contamination

Prior to the commencement of development approved by this planning permission (or such other date or stage in the development as may be agreed in writing with the Local Planning Authority), the following components of a scheme to deal with the risks associated with contamination shall each be submitted to and approved in writing by the Local Planning Authority:

- (1) A preliminary risk assessment which has identified:
 - all previous uses;
 - potential contaminants associated with those uses;
 - a conceptual model of the site indicating sources, pathways and receptors; and
 - potentially unacceptable risks arising from contamination at the site.
- (2) A site investigation scheme, based on (1) to provide information for a detailed assessment of the risk to all receptors that may be affected, including those off-site.
- (3) The site investigation results and the detailed risk assessment (2) and, based on these, an options appraisal and remediation strategy giving full details of the remediation measures required and how they are to be undertaken.
- (4) A verification plan providing details of the data that will be collected in order to demonstrate that the works set out in (3) are complete and identifying any requirements for longer-term monitoring of pollutant linkages, maintenance and arrangements for contingency action.

Any changes to these components require the express consent of the local planning authority. The scheme shall be implemented as approved.

Reasons: To protect groundwater below the site from the effects of previous land use and to protect the quality of groundwater beneath the site to safeguard the public, the environment, and surface and groundwater, as this site may have, or is known to have been used in the past for activities that are likely to have resulted in it being contaminated with material that is potentially harmful to humans or the environment, and with regard to Policy EQ49 of the London Borough of Newham Unitary Development Plan (adopted June 2001 and saved from the 27th of September 2007 in accordance with the direction from the Secretary of State) and Policy 4A.33 of the London Plan (Feb 2008, Consolidated with Alterations Since 2004).

30. Contamination 2

- (a) If, during construction of the development as hereby approved, contamination not previously identified is found to be present then no further development (unless otherwise agreed in writing with the Local Planning Authority) shall be carried out until the developer has submitted, and obtained written approval from the Local Planning Authority for, an amendment to the remediation strategy detailing how this unsuspected contamination shall be dealt with.
- (b) The approved scheme as set out above shall be implemented prior to any further works on the development as hereby approved.

Reasons: To ensure that any unsuspected contamination is suitably remediated, and to protect the quality of groundwater beneath the site to safeguard the public, the environment, and surface and groundwater, as this site may have, or is known to have been used in the past for activities that are likely to have resulted in it being contaminated with material that is potentially harmful to humans or the environment, and with regard to Policy EQ49 of the London Borough of Newham Unitary Development Plan (adopted June 2001 and saved from the 27th of September 2007 in accordance with the direction from the Secretary of State) and Policy 4A.33 of the London Plan (Feb 2008, Consolidated with Alterations Since 2004).

31. Contamination 3

- (a) Prior to the first use of the development hereby approved, a verification report demonstrating the completion of the works set out in the approved remediation strategy and the effectiveness of the remediation shall be submitted to and approved in writing by the Local Planning Authority.
- (b) The verification report shall include results of sampling and monitoring carried out in accordance with the approved verification plan to demonstrate that the site remediation criteria have been met. It shall also include any plan (a long-term monitoring and maintenance plan) for longer-term monitoring of pollutant linkages, and maintenance and arrangements for contingency action, as identified in the verification plan, and for the reporting of this to the Local Planning Authority.

Reasons: To protect the groundwater below the site from the effects of previous land use, and to protect the quality of the groundwater beneath the site to safeguard the public, the environment, and surface and groundwater as this site may have, or is known to have been used in the past for activities that are likely to have resulted in it being contaminated with material that is potentially harmful to humans or the environment,

and with regard to Policy EQ49 of the London Borough of Newham Unitary Development Plan (adopted June 2001 and saved from the 27th of September 2007 in accordance with the direction from the Secretary of State) and Policy 4A.33 of the London Plan (Feb 2008, Consolidated with Alterations Since 2004).

32. Landscaping

Within 6 months of the date of planning permission being granted a landscaping scheme must be submitted to and approved in writing by the Local Planning Authority. The landscaping scheme shall include the following:

- i. A plan showing hard and soft landscaping works to be carried out on the site;
- ii. A tree replacement scheme for trees lost due to the development. This shall include planting location, common and Latin names for replacement specimens, size and plot height, density or number, tree girth and method of growth (i.e. container or open ground);
- iii. Maintenance schedule and maintenance responsibilities for all areas of landscaping;
- iv. Full details of suppliers and/or manufacturers of all planting and materials;
- v. Guide to construction of all landscaped areas and structures;
- vi. Details of paving/fencing and walls/colours/finishes;
- vii. Full details of any signage and information boards;
- viii. Details of long-term design objectives for all landscaped areas;
- ix. Location and appearance of lighting; and
- x. Details of any boundary treatment.

All planting, seeding or turfing shall be implemented in the first planting season following occupation of the buildings or the completion of the development hereby approved, whichever is the sooner.

Any plants or trees that die or are removed, damaged or diseased within a period of FIVE years from the completion of the development hereby approved shall be replaced to the satisfaction of the Local Planning Authority in the next planting season with others of a similar size and species, unless the Local Planning Authority gives written consent for a variation.

Reasons: To protect and enhance the natural features and character of the area, to ensure satisfactory replacement tree planting, to ensure a satisfactory standard of external appearance of the development, and with regard to Policy EQ4, EQ9, EQ10, EQ11, EQ12, EQ15, EQ18, EQ19 and EQ26 of the London Borough of Newham Unitary Development Plan (adopted June 2001 and saved from the 27th of September 2007 in accordance with the direction from the Secretary of

State) and Policies 4B.1, 4B.2, 4B.3, 4B.6, 4C.3, 4C.4 and 3D.15 of the London Plan (Feb 2008, Consolidated with Alterations Since 2004).

33. Construction Compounds to be Within the Site

All construction compounds for the development hereby permitted shall be erected within the site, unless otherwise agreed in writing by the Local Planning Authority.

Reasons: In order to minimise noise and disturbance, in the interest of residential amenity, and with regard to Policies EQ45, EQ46 and EQ47 of the London Borough of Newham Unitary Development Plan (adopted June 2001 and saved from the 27th of September 2007 in accordance with the direction from the Secretary of State) and Policies 4A.3, 4A.19, 4A.20 and 4B.1 of the London Plan (Feb 2008, Consolidated with Alterations Since 2004).

34. Declaration re Soils / Infill Materials

No soils, or infill materials, are to be brought onto the site unless it has been demonstrated to the reasonable satisfaction of the Local Planning Authority that they are uncontaminated and present no risks to human health, planting or the environment. A declaration to this effect, together with acceptable documentary evidence to confirm the origin of all imported soils and infill materials, supported by appropriate chemical analysis test results, must be submitted to and approved in writing by the Local Planning Authority prior to the use of the approved development.

Reasons: To ensure that risks from land contamination to the future users of the land and neighbouring land are minimised, together with those to controlled waters, property and ecological systems, and to ensure that the development can be carried out safely without unacceptable risks to workers, neighbours and other off-site receptors in accordance with Policies EQ45 and EQ49 of the London Borough of Newham Unitary Development Plan (adopted June 2001 and saved from the 27th of September 2007 in accordance with the direction from the Secretary of State) and Policies 3D.14, 4A.3, 4A.17 and 4A.33 of the London Plan (Feb 2008, Consolidated with Alterations Since 2004).

35. No Caravans / Mobile Homes / Temporary Residential Accommodation

Notwithstanding the provisions of Parts 4 and 5 of Schedule 2 to the Town and Country Planning (General Permitted Development) Order 1995, no part of the site shall be used for the stationing of caravans or mobile homes or any other form of temporary residential accommodation, unless otherwise agreed in writing by the Local

Planning Authority.

Reasons: To maintain planning control and in the interest of residential amenity, in accordance with Policies EQ45, EQ46 and EQ47 of the London Borough of Newham Unitary Development Plan (adopted June 2001 and saved from the 27th of September 2007 in accordance with the direction from the Secretary of State) and Policies 4A.3, 4A.19, 4A.20 and 4B.1 of the London Plan (Feb 2008, Consolidated with Alterations Since 2004).

36. Acoustic Report

- (a) Prior to the commencement of works on the development hereby permitted, an acoustic report shall be submitted to and approved in writing by the Local Planning Authority. Plant operation and activity on site shall not give rise to a BS4142 rating level greater than the background level at the nearest or worst affected property. Where it is considered impractical to meet this noise standard the report should detail mitigation measures taken to reduce noise to a minimum.
- (b) The approved scheme shall be implemented prior to occupation of the development and shall be permanently maintained thereafter. The developer shall certify to the Local Planning Authority that the noise mitigation measures agreed have been installed.

Reasons: To protect the amenity of future occupants and/or neighbours, in accordance with Policies EQ45, EQ46 and EQ47 of the London Borough of Newham Unitary Development Plan (adopted June 2001 and saved from the 27th of September 2007 in accordance with the direction from the Secretary of State) and Policies 4A.3, 4A.19, 4A.20 and 4B.1 of the London Plan (Feb 2008, Consolidated with Alterations Since 2004).

10. **INFORMATIVES**

Environment Agency

1. Waste being taken off site, or contaminated soil that is excavated, recovered or disposed of, is controlled waste. Therefore, its handling, transport, treatment and disposal is subject to waste management legislation, which includes:
- Duty of Care Regulations 1991
 - Hazardous Waste (England and Wales) Regulations 2005
 - Environmental Permitting Regulations 2008.

Environmental Health

Contamination

2. The Local Planning Authority is unaware of any ground contamination on this site. However, during ground works should you find any unexpected materials such as buried barrels or containers, soil or water with an unusual colour or odour, or other evidence of contamination, for example iridescent sheens (like oil or diesel) on soil or water - stop work until the materials have been identified. Do not attempt to take samples yourself unless you have suitable expertise - use a specialist consultant or contractor who can take samples and arrange for them to be tested and provide you with appropriate expert advice.

The actual or suspected presence of contaminants in soil and water has implications for health and safety during construction works. Contact the Health and Safety Executive Infoline Tel: 08701 545500 or Health and Safety Executive London Division Tel: 020 7556 2100 for further information. In addition professional advice should also be sought regarding possible requirements within the Building Regulations 2000 Approved Document C: C1 Site preparation and resistance to contaminants.

The Environment Agency also has a number of relevant duties at sites where contamination may be an issue. These include waste management and the protection of water quality and resources. The Environment Agency General Enquiry Line is 0845 9333111.

If ground contamination is suspected it is recommended that the developer contacts Pollution Control, Housing & Public Protection, Third Floor, West Wing, Newham Dockside, Dockside Road, London E16 2QU, Tel 020 3373 0643 for advice and information. It is in the developer's interests to ensure that appropriate works are undertaken to make the site suitable for its use and that development will not result in designation of the site as 'contaminated land' under Part IIA of the Environmental Protection Act 1990 and thus become liable to a remediation notice under the contaminated land regime.

Explosive Ordnance

3. The property lies within an area of the borough that has been identified as being at potential risk from buried explosive ordnance due to wartime bombing. It is recommended that professional advice is obtained and a risk assessment undertaken to identify and analyse any threat posed by ordnance before works commence.

Gas Susceptibility

4. The property lies within an area of the borough that has moderate to high gas susceptibility resulting from natural alluvial and peat deposits. The construction methods and materials should take account of this possibility and professional advice should be taken to ensure the adoption of appropriate gas protection measures. Professional advice should also be sought regarding possible requirements within the Building Regulations 2000 Approved Document C: C1 Site preparation and resistance to contaminants.

National Grid Observations

5. There is a High Voltage Overhead Line which runs through this land parcel - Barking - West Ham ZR069 - ZR070.

Please consult the Technical Specification EN-43-8 for "Overhead Line Clearances" Issue 3 (2004). You need to be sure that any existing clearances are not infringed. The construction cannot be closer than 5.3 metres to the nearest (lowest) conductor.

National Grid will also need to ensure that our tower access is maintained during and after construction. The overhead line is held under the terms of a permanent easement which grants rights to retain the line in its current position.

The relevant guidance in relation to working safely near to existing overhead lines is contained within the Health and Safety Executive's (www.hse.gov.uk) Guidance Note GS 6 "Avoidance of Danger from Overhead Electric Lines" and all relevant site staff should make sure that they are both aware of and understand this guidance.

The statutory minimum safety clearance is 7.6 metres to ground and 8.1 metres to a normal road surface. Further detailed information can be obtained from the Energy Networks Association's (www.energynetworks.org.uk) Technical Specification 43-8 for "Overhead Line Clearances", Issue 3 (2004).

Plant, machinery, equipment, buildings or scaffolding should not encroach within 5.3 metres of any of our high voltage conductors when those conductors are under their worse conditions of maximum "sag" and "swing" and overhead line profile (maximum "sag" and "swing") drawings should be obtained via the National Grid's Plant Protection Team at Hinckley.

If any changes in ground levels are proposed either beneath or in proximity to our existing overhead lines then this would serve to reduce the available safety clearance to such overhead lines. Safe clearances

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to existing overhead lines must be maintained in all instances and circumstances.

If a landscaping scheme is proposed as part of the works, we request that only low growing and slow growing species of trees and shrubs are planted either directly beneath or immediately adjacent to the existing overhead line, as ultimately they may grow to attain heights that compromise safe statutory clearances to the conductors.

Drilling or excavation works should not be undertaken if they have the potential to disturb or adversely affect the foundations or “pillars of support” of any existing tower. These foundations always extend beyond the base area of the existing tower and foundation (“pillar of support”) drawings can be obtained via the Plant Protection Team at Hinckley.

Flammable or explosive (e.g. fireworks) substances or materials should not be stored near to a tower or beneath an overhead line.

The relocation or under-grounding of existing overhead lines is not normally feasible on grounds of cost, operation and maintenance, and environmental impact and we believe that successful development can take place in their vicinity.

To view the National Grid Policies for under-grounding, please use the link below):

<http://www.nationalgrid.com/uk/LandandDevelopment/DDC/Undergrounding/>

To view the Development Near Lines Documents, please use the link below:

http://www.nationalgrid.com/uk/LandandDevelopment/SC/devnearohl_fin al/

To view the National Grid Policies for our Sense of Place Document, please use the link below:

<http://www.nationalgrid.com/uk/LandandDevelopment/DDC/>

CASE OFFICER: Adele Lawrence

Appendix 1: Site Location Plan and Aerial Photograph

Appendix 2: Existing and Proposed Site Layout Plans

Appendix 3: Proposed Elevations

Appendix 4: Enhanced Digestion Schematic and Thermal Hydrolysis Process Schematic