Lee Tunnel & extension to Beckton Sewage Treatment Works
in the London Borough of Newham
planning application numbers 08/01158/ODA; 08/1159/LTGDC;
and 08/1162/FUL

Strategic planning application stage II referral (new powers)
Town & Country Planning Act 1990 (as amended); Greater London Authority Acts 1999 and 2007;
Town & Country Planning (Mayor of London) Order 2008

The proposal

- Works at Abbey Mills Pumping Station to facilitate interception of the combined sewer overflows and transfers into the River Lee.
- Construction of underground wastewater storage and transfer tunnel from Abbey Mills to the Beckton Sewage Treatment Works (the ‘Lee Tunnel’).
- Extension of Beckton STW by the erection of, a pumping station, related shafts, additional sewage and sludge treatment facilities, odour control units, a wind turbine, underground connection pipelines; and associated land remediation, habitat creation and landscaping.
- The formation of temporary construction compounds, including material storage, handling areas and tanks; parking areas, temporary portable site offices and welfare accommodation at both Abbey Mills and Beckton sites; the manufacture of concrete tunnel and shaft segments, and the erection of a jetty bridge for construction purposes.

The applicant

The applicant is Thames Water Utilities Ltd, and the engineering consultants are Adams Hendry and Scott Wilson.

Strategic issues

The outstanding issues are a need to maximise waterborne transport of excavation spoil from and construction materials to the site, seek clarification of some energy provisions of the scheme, make adequate access provisions to the Thames Path/Cross River Park to meet strategic urban design objectives, and address the issues previously raised by Transport for London.

Recommendation

That Newham Council, the ODA and LTGDC be advised that the Mayor is content for them to determine the applications themselves, subject to any action that the Secretary of State may take, and does not, therefore, wish to direct refusal or direct that he is to be the local planning authority.
Context

1. On 1 August 2008, the Mayor of London received documents from Newham Council (acting in its own right and also on behalf the Olympic Development Authority) and the London Thames Gateway Development Corporation (LTGDC), notifying him of three closely related planning applications of potential strategic importance to develop the above sites for the above uses. These were referred to the Mayor under Categories 2B and 3D of the Schedule to the Order 2008:

   2B- (1) “Waste development to provide an installation with capacity for a throughput of more than (a) 5,000 tonnes per annum of hazardous waste; or (b) 50,000 tonnes per annum of waste; produced outside the land in respect of which planning permission is sought. (2). Waste development where the development occupies more than one hectare.”

   3D- (1) “Development—(a) on land allocated as Green Belt or Metropolitan Open Land in the development plan, in proposals for such a plan, or in proposals for the alteration or replacement of such a plan; and (b) which would involve the construction of a building with a floorspace of more than 1,000 square metres or a material change in the use of such a building”.

2. On 23 September 2008, the Mayor considered planning report PDU/2027, 2027a, 2027b/01, and subsequently advised Newham Council, the ODA and the LTGDC that the application did not comply with the London Plan, for the reasons set out in paragraph 124 of the above-mentioned report; but that the possible remedies set out in paragraph 126 of that report could address these deficiencies. A copy of the above-mentioned report is attached.

3. The essentials of the case with regard to the proposal, the site, case history, strategic planning issues and relevant policies and guidance are as set out therein, unless otherwise stated in this report. Since then, the application has been revised in response to the Mayor’s concerns (see below).

4. On 3 June 2009, Newham Council resolved to grant planning permission for the development within its authority and that of the ODA, and to make representations to the LTGDC in respect of development within the Thames Gateway area. On 11 June 2009, the LTGDC also resolved to grant permission for the development in its territory, and on 18 June 2009 both the Council and the LTGDC advised the Mayor of their decisions.

5. Under the provisions of Article 5 of the Town & Country Planning (Mayor of London) Order 2008 the Mayor may allow the draft decisions to proceed unchanged, direct Newham Council and the LTGDC under Article 6 to refuse the application, or issue a direction to Newham Council under Article 7 that he is to act as the Local Planning Authority for the purposes of determining the application and any connected application within the Council’s jurisdiction. He cannot, however, issue directions to the LTGDC or the ODA that he is to act as the Local Planning Authority for purposes of determining applications within their respective authorities. The Mayor has until 1 July 2009 to notify the Council and the LTGDC of his decision and to issue any direction.

6. The environmental information for the purposes of the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999 has been taken into account in the consideration of this case.

7. The decision on this case, and the reasons will be made available on the GLA’s website www.london.gov.uk.
Update

8 At the consultation stage, Newham Council and the LTGDC were advised that the applications did not comply with the London Plan, for the reasons set out in paragraph 124 of the above-mentioned report; but that the possible remedies set out in paragraph 126 of that report could address these deficiencies:

Blue Ribbon Network

9 It was considered that the lack of a firm commitment to remove shaft spoil from the Abbey Mills site, despite being adjacent to the navigable Channelsea River; or to remove excavated material and deliver the construction materials (sand, aggregates and cement) to Beckton STW by barge along the Thames, were out of line with the requirement of London Plan policy 4C.8 (Freight Uses on the Blue Ribbon Network) to make the maximum use of water transport.

10 The issue is addressed in the ‘waste management’ sections of the Council and LTGDC committee reports, which refer to the reuse, recycling and disposal options Thames Water intends to use to divert construction waste away from London’s limited landfill capacity. Those waste management options include two land restoration schemes for nature conservation at Hoo Island and Wallasea Island, both of which provide opportunities for access and transportation of spoil by barge.

11 The applicant has confirmed that the preferred Hoo Island option is the subject of a Memorandum of Understanding with the owners of that site. The environmental impact assessment of that option concludes that it would be amongst the best performing schemes in terms of sustainable transport (i.e. barge), the creation of new habitat and avoiding the need to treat chalk arising from excavation of the Lee Tunnel.

12 The Port of London Authority and British Waterways Board raise no objection to the proposals subject to a planning condition requiring the removal of shaft arising by barge. Accordingly, the draft approval notices include two related conditions:

- Excavations arising from the tunnel and shaft works shall be disposed of by waterborne modes of transport unless specifically agreed in writing by the Local Planning Authority.
- Transportation of bulk materials to and from the site shall not commence until details of a strategy to seek to maximise the use of the River Thames and the River Lea for the transport of construction and waste materials to and from the construction sites, both during the construction period and following completion of the development, has been submitted to and approved 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.

13 These provisions would reduce a substantial number of potential trips by heavy goods vehicles from the road network, address the Mayor’s earlier concern and meet the objectives of the London Plan (policy 4C.8).

Energy issues

14 The applicant’s energy proposals were consistent with London Plan policies on energy. As such, there were no objections in principle, subject to clarification of the points queried in the energy section (paragraphs 71 to 88) of the initial GLA report.
GLA officers have since met with the energy representatives of Thames Water and the outstanding issues have been satisfactorily clarified.

**Design for London’s comments**

Another outstanding issue was that insufficient consideration had been given to the implementation of the Cross River Park proposals within the vicinity of the site, thereby failing to comply with policies 3D.8 and 5C.1 of the London Plan. (See paragraphs 90–98 of the initial GLA officers’ report to the Mayor.)

This issue has not been fully resolved by discussions between Thames Water, Newham Council, LTGDC and Design for London. Outstanding points include:

- Paths along Barking Creek and Thames Waterfront – no clear timetable has been set for opening up the public access (despite Design for London’s letter to Thames Water dated 9 April 2008).

- Provision of a wide, publicly accessible green route along the Eric Clark Lane boundary. (Paragraph 97 of the initial GLA report and the letter from Design for London).

- Provision of a wide, publicly accessible green route that runs parallel to Royal Docks Road.

Negotiations are still taking place between Thames Water and Newham Council concerning the opening of riverside paths around the Beckton STW site. The Council, LTGDC and Design for London require the paths to be opened to public access at the earliest opportunity, in line with the terms of a legal agreement (Section 106) dating back to 1993.

The Beckton Loop masterplan provides a sound basis for the protection and delivery of the East Beckton green spaces and routes, and aims to support the aspirations set out in the Newham UDP for walking and cycling routes in the area.

The masterplan is a project identified within the Cross River Park (north) and East London Green Grid Area Framework 4. Delivery mechanisms identified in the approved Cross River Park Feasibility Study 2007 require landowners to provide strips of publicly accessible green spaces along the site boundaries as developments come forward. As such, these applications represent not only a key opportunity to deliver the aspirations of Cross River Park, but to set a precedent relevant to the wider Cross River Park project boundary.

These issues should be resolved through the drafting of the new s.106 agreement, the draft Heads of Terms of which are set out in paragraph 30. The GLA fully supports the Council and LTGDC’s intention to secure these aspirations in the final document.

**Transport for London’s comments**

In its initial comments, TfL raised concerns about the interface between the development, the proposed Thames Gateway Bridge (TGB) and the now abandoned East London Transit (ELT) Phase 2 projects; its construction-phase traffic generation on the highway network, particularly on the A13; and the proposed level of car parking at the Beckton site. Further clarification was sought to address those issues and the issue of maximising the use of water transport, in order to promote sustainable freight and reduce potential adverse impacts on the highway network. Further assurance that the development would not impact adversely on bus operations and planned bus service improvements was also sought, together with a request for further information on the trip generation assessment, walking and cycling conditions.
23 TFL raised concern that the construction programme for the development would potentially overlap with that of the Thames Gateway Bridge. Given that the TGB project will not now be taken forward under the 2009/10-2017/18 TfL Business Plan, that concern is now resolved. However, until the Safeguarding Direction made by the former Secretary of State for TGB is revoked, the strip of land to be secured remains safeguarded. TfL therefore welcomes clause 17 in the Heads of Terms of the LTGDC committee report restricting development (other than temporary works and landscaping) in the safeguarded area for the duration of the safeguarding. This clause should also secure that all temporary and landscape use of the safeguarded area be agreed with Newham Council, in consultation with TfL.

24 Whilst ELT Phase 2 will also not be pursued through the 2009/10-2017/18 TfL Business Plan, no clash of construction timescales with the development is anticipated. TfL and the LTGDC are currently undertaking a feasibility study to investigate the possible different options for providing a transport corridor between Barking town centre and the Royal Docks area, which might require land within the TGB safeguarded corridor. TfL therefore welcomes clause 19 in the Heads of Terms, which safeguards land for a transport corridor within the TGB safeguarded area to be made available at TfL’s nomination.

25 Further information has been received from the applicant in relation to car parking provision for the construction period. It was accepted that the proposed 424 staff spaces at the Beckton site would be necessary to ensure a smooth handover of tunnelling operations. The applicant was, however, still encouraged to effectively reduce and control car parking provision, whilst promoting the use of sustainable modes of transport to the site during the construction phase. TfL therefore welcomes conditions 30, 49 and 65 in the revised draft decision notice dated 22 June 2009, which secure the production of a Construction Phase Travel Management Plan for all three application sites, to be agreed in consultation with TfL. This plan will specifically include a car parking management strategy and Construction Phase Travel Plan to be implemented, monitored and reviewed following completion.

26 The draft construction phase travel plan has been revised by the applicant and is now considered to be acceptable to TfL with specific targets and measures, such as minibus services and a car sharing scheme now proposed. TfL also welcomes conditions 32, 51 and 67 securing operational phase travel plans for all three sites, to ensure that the transport impact is reduced as far as possible and to promote the use of sustainable transport modes to the sites.

27 To ensure that the level of construction traffic, particularly to the Beckton site, is acceptable, TfL requested a review of the traffic flow analysis. This has since been provided to the satisfaction of TfL. It is however stressed that the Construction Phase Travel Management Plan should include an assessment of the cumulative impacts of construction, which is to be undertaken in consultation with TfL.

28 In order to promote sustainable freight, and in turn reduce the number of trips generated on the road network, TfL welcomes conditions ensuring waterborne transport of tunnel and shaft arisings (condition 20), and in addition, a separate strategy to maximise the use of both the River Thames and River Lea for the transportation of construction and waste materials to and from the sites during the construction period and following completion of the development (condition 21).

29 The applicant has also provided further information in response to TfL’s concern over the potential adverse impacts of the site on bus operations. Confirmation that the gate to the Beckton site would be configured to ensure that traffic queuing to enter the site would be accommodated off the highway is welcome, as the operations would not impact adversely on bus journey times. Further information was also received on the trip generation assessment and modal share. TfL requires the construction and operational phase travel plans to promote sustainable travel, with the aim of providing safe walking and cycling routes to the application sites. Additionally, TfL accepts that the development would not have an adverse impact on The Greenway (part of the strategic...
walking and cycling networks), as there would be no works above ground along this route, which is welcomed.

30 In summary, whilst the development is expected to generate high levels of traffic during its construction phase, TfL is satisfied that its transport impacts have been addressed and mitigated appropriately, subject to the planning conditions and S106 agreement being enforced. The LTGDC is, therefore, strongly encouraged to further consult TfL on finalising the legal agreement, particularly in relation to clauses 17 and 19 of the Heads of Terms.

The proposed legal agreement

31 The Council and LTGDC committee resolutions to grant permission are subject to planning conditions and the satisfactory completion of a legal agreement. The agreement was still under negotiation at the time of writing, but the Heads of Terms seek to secure the following:

- A Landscape and Ecology Masterplan to ensure that there is no net loss in ecology/habitat, and the provision of off-site initiatives in the event that the measures cannot be secured on site.

- A scheme (Northern Lagoon Restoration Scheme) of restoration works to the Northern Lagoon to be submitted to the local planning authority for approval, by prior to commissioning the development. The approved scheme shall be implemented in full.

- A scheme (Barking Creekside Scheme) of works to the Barking Creekside area of the site to be submitted to and approved by the local planning authority prior to commissioning of the development. The approved scheme shall be implemented in full.

- A programme (Riverside and Thames Walkway Opening Programme) containing the date for the opening of those walkways to be submitted to the local planning authority for approval within 4 weeks of the grant of the permission.

- A scheme (Riverside Walkway Scheme) setting out proposed works to the Riverside Walkway to be submitted to the local planning authority for approval prior to commissioning of the development and implemented in full.

- A scheme (Thames Walkway Scheme) setting out proposed works to then Thames Walkway to be submitted to the Local planning authority for approval prior to Commissioning of the development and implemented in full.

- The Thames Walkway, Riverside Walkway, Northern Lagoon Access and Creekside Walkway to be open to the public in accordance with Access Conditions.

- The developer to apply for funding authorisation from OFWAT to carry out additional odour control works (to cover and provide odour control of the existing primary settlement tanks) and, subject to obtaining planning permission for those works or those works being permitted development, carrying out those works in accordance with an agreed programme.

- The developer to keep the local planning authority informed about major new proposals at the site especially where further odour control measures may be required.

- Recruitment of local labour, input into school based diplomas within Newham, and a financial contribution towards workplace training initiatives.

- Use of local good and services
• Financial contributions towards a feasibility study on the potential location of sailing facilities and towards the provision of such facilities.

• Development to achieve 20% reduction in carbon emissions from renewable sources.

• A contribution towards groundwater monitoring.

• Financial contribution towards the cost of review and agreement of the OMP and protocols and subsequent auditing of compliance with the terms of those documents and the standards set out in conditions relating to odour mitigation.

• A section 106 monitoring contribution.

• Safeguarding of the Thames Gateway Bridge: Restriction on development (other than temporary works and landscaping) in the safeguarded area for duration of safeguarding.

• East London Transit 2: Land for ELT2 (or a replacement scheme) to be made available at TfL’s nomination at no cost.

• Transport Corridor: Land for a transport corridor within the area safeguarded by the Thames Gateway Bridge safeguarding Direction dated 4/5/2001 to be made available at TfL’s nomination at no cost to TfL.

• Docklands Light Railway: No development to take place within the [area to be shown on plan] without TfL’s approval, in order to protect proposed route of DLR extension.

Response to consultation

32 The applications involve a departure from the development plan, development affecting the setting of listed buildings at both Abbey Mills and the Beckton STW, and development requiring the submission of an Environmental Impact Assessment. The proposals were, therefore, advertised extensively by press and site notices, and by 17,000 individual letters to surrounding occupiers.

33 In addition, all initial respondents were notified on the receipt of additional information provided in response to a Regulation 19 request for details to supplement the environmental impact assessment.

34 There were 33 responses to the initial consultation, of which 2 were in support, 26 objected, and 5 requested clarification or additional information. A further 5 replies were received following the re-consultation, all of which objected to the development.

35 The principal issues of concern were:

• Construction nuisance, especially to residents of The Greenway.

• Loss of mature trees, particularly along The Greenway.

• A worsening of the existing odour problem from the extended STW.

• The tunnelling would cause subsidence to properties along The Greenway.

• Noise and vibration due to tunnelling.

• An increase in traffic nuisance.
• The works would give Beckton a negative image, divert inward investment for future regeneration of the area and reduce local property values.

• Flaws in the odour assessment.

• The applications do not accord with PPS23 (Planning and Pollution Control) or London Plan policy 3A.20 (Health Objectives).

Article 7: Direction that the Mayor is to be the local planning authority

36 Under Article 7 of the Order the Mayor could take over the applications submitted to Newham Council, but not the LTGDC or ODA applications, provided the policy tests set out in that Article are met. In this instance, the Council has resolved to grant permission with conditions and a planning obligation that satisfactorily addresses those matters raised at stage I; therefore, there are no sound planning reasons for the Mayor to take over the application.

Legal considerations

37 Under the arrangements set out in Article 5 of the Town and Country Planning (Mayor of London) Order 2008 the Mayor has the power under Article 6 to direct the local planning authority to refuse permission for a planning application referred to him under Article 4 of the Order. He also has the power to issue a direction to Newham Council under Article 7 that he is to act as the local planning authority for the purpose of determining the application and any connected application. The Mayor may also leave the decision to the local authority. In directing refusal the Mayor must have regard to the matters set out in Article 6(2) of the Order, including the principal purposes of the Greater London Authority, the effect on health and sustainable development, national policies and international obligations, regional planning guidance, and the use of the River Thames. The Mayor may direct refusal if he considers that to grant permission would be contrary to good strategic planning in Greater London. If he decides to direct refusal, the Mayor must set out his reasons, and the local planning authority must issue these with the refusal notice. If the Mayor decides to direct that he is to be the local planning authority, he must have regard to the matters set out in Article 7(3) and set out his reasons in the direction. The Mayor must also have regard to the guidance set out in GOL circular 1/2008 when deciding whether or not to issue a direction under Articles 6 or 7.

Financial considerations

38 Should the Mayor direct refusal he would be the principal party at any subsequent appeal hearing or public inquiry. Government guidance in Circular 8/93 (‘Award of Costs in Planning and Other (including Compulsory Purchase Order) Proceedings’) emphasises that parties usually pay their own expenses arising from an appeal.

39 Following an inquiry caused by a direction to refuse, costs may be awarded against the Mayor if he has either directed refusal unreasonably; handled a referral from a planning authority unreasonably; or behaved unreasonably during the appeal. A major factor in deciding whether the Mayor has acted unreasonably will be the extent to which he has taken account of established planning policy.

40 Should the Mayor take over the application he would be responsible for holding a representation hearing and negotiating any planning obligation. He would also be responsible for determining any reserved matters applications (unless he directs the council to do so) and determining any approval of details (unless the council agrees to do so).
Conclusion

41 It is clear from the foregoing, that the matters outstanding from the Mayor’s initial consideration of Thames Water’s proposals would be satisfactorily resolved by the draft planning conditions, proposed legal agreement, and the additional information provided elsewhere in this report.

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Lee Tunnel & extension to Beckton Sewage Treatment Works

in the London Borough of Newham

Planning application numbers 08/01158/ODA; 08/1159/LTGDC; and 08/1162/FUL

Strategic planning application stage 1 referral (new powers)


The proposal

Planning applications have been submitted to Newham Council, the London Thames Gateway Development Corporation and the Olympic Delivery Authority for a development comprising:

- Works at Abbey Mills Pumping Station to facilitate the interception of the combined sewer overflows and transfers into the River Lee.
- Construction of underground wastewater storage and transfer tunnel from Abbey Mills to the Beckton Sewage Treatment Works (the ‘Lee Tunnel’).
- Extension of Beckton STW by the erection of, a pumping station, related shafts, additional sewage and sludge treatment facilities, odour control units, a wind turbine, underground connection pipelines; and associated land remediation, habitat creation and landscaping.
- The formation of temporary construction compounds, including material storage, handling areas and tanks; parking areas, temporary portable site offices and welfare accommodation at both Abbey Mills and Beckton sites; the manufacture of concrete tunnel and shaft segments, and the erection of a jetty bridge for construction purposes.

The applicant

The applicant is Thames Water Utilities Ltd, and the engineering consultants are Adams Hendry and Scott Wilson

Strategic issues

The London Plan (policy 4A.18) expressly supports the principle of implementing the Thames Tideway Tunnel project, sewage treatment and associated infrastructure. The relevant details to consider are its contribution to the regeneration of the Lee Valley and Thames Gateway; its design, layout/impact on Metropolitan Open Land; the issues of air quality/odour, noise, biodiversity and the Blue Ribbon Network; and its implications for transport, waste management, climate change and sustainable development, especially energy.

Recommendation

That both Newham Council (also on behalf of the Olympic Delivery Authority) and the London Thames Gateway Development Corporation be advised that the application does not comply with the London Plan, for the reasons set out in paragraph 124 of this report; but that the possible remedies set out in paragraph 126 could address these deficiencies.
**Context**

1. On 1 August 2008, the Mayor of London received documents from Newham Council (in its own right and on behalf the Olympic Development Authority and the London Thames Gateway Development Corporation), notifying him of a planning application of potential strategic importance to develop the above site for the above uses. Under the provisions of The Town & Country Planning (Mayor of London) Order 2008 the Mayor has until 23 September 2008 to provide the Council with a statement setting out whether he considers that the application complies with the London Plan, and his reasons for taking that view. The Mayor may also provide other comments. This report sets out information for the Mayor’s use in deciding what decision to make. The development lies wholly within the London Borough of Newham, but would straddle three local planning authorities - Newham Council, ODA and the LTGDC - hence the submission of three planning applications.

2. The applications are referable under Categories 2B and 3D of the Schedule of the Order 2008:

   2B- (1).“Waste development to provide an installation with capacity for a throughput of more than (a) 5,000 tonnes per annum of hazardous waste; or (b) 50,000 tonnes per annum of waste; produced outside the land in respect of which planning permission is sought. (2). Waste development where the development occupies more than one hectare.”

   3D- 1.”Development—(a) on land allocated as Green Belt or Metropolitan Open Land in the development plan, in proposals for such a plan, or in proposals for the alteration or replacement of such a plan; and (b) which would involve the construction of a building with a floorspace of more than 1,000 square metres or a material change in the use of such a building”.

3. Once Newham Council (in its own right or on behalf of the ODA) and the LTGDC resolves to approve the applications, they would be required to refer them back to the Mayor for his decision on whether to direct refusal; take it over for his own determination, where applicable; or allow the Council and the LTGDC to determine the applications themselves.

4. The environmental information for the purposes of the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999 has been taken into account in the consideration of this case.

5. The Mayor of London’s statement on this case will be made available on the GLA website www.london.gov.uk.

**Site description**

6. Permission is sought for development on two of Thames Water’s operational sites, and the construction of a 6.9 km ‘Lee Tunnel’ link between them. The sites are: the Abbey Mills Pumping Station in the east and the Beckton Sewage Treatment Works in the west. The development would be situated in its entirety within the London Borough of Newham.

   **The Abbey Mills site**

7. The Grade II* listed Abbey Mills pumping station is situated along the River Lee, on the north side of the River Thames. It occupies an extensive area east of the junction of the A11 (Bow Road) and the A12 (Northern Approach to the Blackwall Tunnel); south of the A118 (High Street, Stratford); and west of the A1011 Manor Road. The stretch of District and Hammersmith & City underground railway line between Bromley-by-Bow and West Ham stations is situated to the south of the site.
The functional part of the site consists of a series of old and more modern pumping stations (including the main station F, which comprises 16 pumps), bound on the southwest by the Prescott Channel, and on the southeast by the Channelsea River and smaller Abbey Creek. The pumping station extends into a part of the Lee Valley Regional Park, situated to the immediate south of the site. The site is designated in its entirety as a ‘Green Space’ and is covered by a series of amenity restrictions, including nature conservation interests. The site is not accessible to the public, but a strategic walking and cycle route, known as ‘The Greenway’, traverses its north-eastern fringe, following the route of a substantial man-made embankment created by the Northern Outfall Sewer. Access for operational vehicles is from the east side of the A118 (High Street), turning south into Abbey Lane and ultimately into Gay Lane.

The site is surrounded by predominantly industrial uses, with the North Thames Gas Board Works situated to the north; a light industrial/commercial area to the west; another gas works to the south across the Channelsea River and the East London Distribution Centre for the Royal Mail. The nearest residential properties are situated off Abbey Lane, approximately 100 metres northwest of the pumping station.

The route of the Lee Tunnel

Essentially, the tunnel would follow a route close to the existing Northern Outfall Sewer. From Abbey Mills, it would follow ‘The Greenway’ under the East London Cemetery and Crematorium, beneath the A112 in Plaistow, and under the grounds of Newham General Hospital. Further east, it would proceed under a school playing field, a cemetery and small nature reserve, where the A117 intersects the A13 Newham Way. At Beckton, it would continue east under the northern fringe of a manmade dry ski slope (Beckton Alps), under an industrial and commercial area that includes the Beckton Triangle and Gateway retail parks; and finally, into the operational land of the Beckton Sewage Treatment Works.

As its description indicates, the route of the tunnel includes residential areas, public open space, civic amenities, Metropolitan Open Land, a Green Chain and Sites of Nature Conservation Interest. The impacts on these are assessed in subsequent sections of this report.

The Beckton STW site

Beckton STW is situated within the tidal floodplain of the River Thames estuary, adjacent to Barking Creek on the northern bank, and is accessed from the A13 Newham Way on the north via Jenkins Lane. It treats wastewater from a population of 3.5 million, from a 300 sq.km. catchment in North and East London. It is the largest of the three main sewage treatment works serving London and has a vital role in treating sewage and environmental protection.

The area surrounding the STW is extensively developed, with little in the way of open space and is predominantly industrial in character. Surrounding activity comprises a mix of uses, predominantly employment, but also leisure and retail uses. The A13, the main arterial London to Essex trunk road leading out to the M25, is located approximately 400 metres north of the sewage treatment works, and to the west is Royal Docks Road.

The operational part of the site contains a variety of structures, including the visually dominant sludge-powered generator building (approximately 35 metres in height) and associated flue (60 metres), which is located centrally on the site and adjacent to the sewage treatment works office complex.

The wider area is dominated by the Royal Docks, and by London City Airport, located approximately 2 km south west of the site. Other key features of the area include the former Beckton Gas Works situated south-west of the site and the Roding Barrier, located to the south-
east within the borough of Barking & Dagenham. Beyond the industrial estate to the east is Barking Reach, identified in the London Plan as an ‘Opportunity Area’ for growth of up to 10,000 new homes in the period up to 2016.

16 An outline planning application has also been submitted by National Grid Property Holdings for a mixed-use development on the ‘Beckton Waterfront’ site, located to the immediate south-west of the sewage treatment site.

Details of the proposal

17 Following heavy rainstorms, the combined sewerage system at Thames Water’s Abbey Mills pumping station in Stratford reaches full capacity, as a result of which a large volume of sewage is discharged through the combined system overflow into the River Lee. To reduce this discharge and accommodate both development and population growth within the catchment area, substantial additional capacity is required at Beckton Sewage Treatment Works (STW) to treat additional flows from the tunnel.

18 The proposal is to construct a 6.9 km long and 7.2m internal diameter tunnel, bored to a depth of 55 to 75 metres below ground, and which would capture discharges from the combined system overflow at Abbey Mills pumping station to store and transfer those flows to an upgraded Beckton STW for treatment. The tunnel would prevent up to 90 storm water discharges per year from entering the River Lee, whilst the works at Beckton STW would significantly improve treatment standards. The latter would comprise structures to house the pumping station, a power supply complex and extensions to the treatment plant.

19 The proposal involves the construction of a sewage storage and transfer tunnel (the Lee Tunnel) between Abbey Mills Pumping Station and Beckton Sewage Treatment Works (STW) and a westward extension to the Beckton STW to provide additional sewage treatment capacity to meet the requirements of the Urban Waste Water Treatment Directive, and to provide for growth and the treatment of tunnel drain-down.

20 The four main elements of scheme are:

- Works at Abbey Mills Pumping Station to facilitate the interception of the combined sewer overflows and transfers into the River Lee.
- Construction of underground wastewater storage and transfer tunnel from Abbey Mills to the Beckton Sewage Treatment Works (the ‘Lee Tunnel’).
- A western extension to Beckton STW by the erection of a pumping station, related shafts, additional sewage and sludge treatment facilities, odour control units, a wind turbine, underground connection pipelines; and associated land remediation, habitat creation and landscaping.
- The formation of temporary construction compounds, including material storage, handling areas and tanks; parking areas, temporary portable site offices and welfare accommodation at both Abbey Mills and Beckton sites; the manufacture of concrete tunnel and shaft segments, and the erection of a jetty bridge for construction purposes at the Beckton STW.

21 The works represent the first phase of the 32.2 km Thames Tideway Tunnel project (from Hammersmith to Beckton) for improving water quality in the River Lee and the River Thames.
Case history

22 None relating to the Abbey Mills site or proposed route of the Lee Tunnel; however, in 2005, the previous Mayor directed Newham Council to refuse planning permission for a water desalination treatment plant (the Thames Gateway Water Treatment Plant) on the site of the Beckton Sewage Treatment Works. An appeal by Thames Water Utilities Ltd was subsequently allowed by the Secretaries of State, following a Public Inquiry in 2006. The incumbent Mayor decided not to pursue a High Court challenge mounted by his predecessor to that decision.

Strategic planning issues and relevant policies and guidance

23 The relevant issues and corresponding policies are as follows:

- Regeneration London Plan; the Mayor’s Economic Development Strategy
- Urban design London Plan; PPS1
- Metropolitan Open Land London Plan; PPG2
- Open land London Plan; PPG17; East London green grid network SPG
- Ambient noise London Plan; the Mayor’s Ambient Noise Strategy; PPG24
- Air quality/odour London Plan; the Mayor’s Air Quality Strategy; The Control of dust and emissions from construction and demolition BPG; PPS23
- Biodiversity London Plan; the Mayor’s Biodiversity Strategy; Improving Londoner’s Access to Nature: Implementation Report; PPS9
- River Thames/flooding London Plan; Mayor’s draft Water Strategy; PPS25, RPG3B
- Waste London Plan; the Municipal Waste Management Strategy; PPS10
- Employment London Plan; PPG4; draft PPS4; Industrial Capacity SPG
- Equal opportunities London Plan; Planning for Equality and Diversity in Meeting the spatial needs of London’s diverse communities SPG; Diversity and Equality in Planning: A good practice guide (ODPM)
- Access London Plan; PPS1; Accessible London: achieving an inclusive environment SPG Planning and Access for Disabled People: a good practice guide (ODPM)
- Transport London Plan; the Mayor’s Transport Strategy; PPG13
- Sustainable development London Plan; PPS, PPS Planning and Climate Change Supplement to PPS1; PPS3; PPG13; PPS22; the Mayor’s Energy Strategy; Sustainable Design and Construction SPG

24 For the purposes of Section 38(6) of the Planning and Compulsory Purchase Act 2004, the development plan in force for the area is the 2001Newham Unitary Development Plan and the London Plan (Consolidated with Alterations since 2004).

25 The following are also relevant material considerations:

- Newham Council’s Core Strategy (Issues and Options Stage).

MOL and the principle of development

26 The principle of implementing the Thames Tideway Tunnel project is explicitly supported in policy 4A.18 (Water and sewerage infrastructure) of the London Plan, together with its associated infrastructure and sewage treatment from Hammersmith to Beckton, and the Lower Lee Valley to Beckton. The policy provides that 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.

27 The policy recognises that additional capacity for the management of sewage sludge would be needed during the plan period, to meet the requirements of growth and tighter environmental standards. It therefore commits the Mayor to work in partnership with the boroughs to ensure timely provision of new facilities at existing sewage treatment works within London.

28 There are no landuse policy constraints against the principle of developing the Abbey Mills site in connection with the current application proposals. However, the route of the Lee Tunnel traverses areas of Metropolitan Open Land, and most of the Beckton STW site is designated as such in the Newham UDP. London Plan policy 3D.10 accords MOL the same protection from inappropriate development as land designated as green belt; and essential facilities for appropriate uses will only be acceptable where they do not have an adverse impact on the openness of MOL. The latter is supported in the national planning guidance issued in PPG2 (Green Belts), which provides that inappropriate development is, by definition, harmful to MOL and should not be approved except in very special circumstances. The guidance places the onus firmly on the applicant to show why permission should be granted, stating however, that: very special circumstances to justify inappropriate development will not exist unless the harm by reason of inappropriateness, and any other harm, is clearly outweighed by other considerations.

29 With respect to the Lee Tunnel, the surface characteristics of its route would not be affected by the tunnelling, as the approximate depth of the tunnel would be 55m to 75m below ground level. No structures or enclosures are proposed along the route; consequently the tunnel construction would not have any adverse impact on the openness of those parts of the route designated as MOL.

30 Whilst much of the existing Beckton STW site is in MOL, the site for its extension works is not. Proposals for the existing site are predominantly subterranean and comprise a connection shaft, pumping station shaft, an overflow shaft and discharge outfall culvert, and a related odour control unit in the form of activated carbon filters to treat air displaced in the early stages of each tunnel-filling event. The most prominent structure proposed on the existing site is a pumping station building (43m long, 31.5m wide and 19m high) to house the equipment required to pump out flows stored within the Lee Tunnel. The vent stacks outside the pumping station would also be 20m in height.

31 With regard to the proposed STW extension, the development includes the installation of a fine screen facility and a fat, oils, grease and grit removal plant for processing sewage prior to its transfer to six new primary treatment lamella tanks. The latter would be housed in a new building (55m long, 44m wide and 13m high). For secondary treatment, the plant comprises two settled sewage pumping stations and culvert, activated sludge plant tanks, two blower houses (each 34m long, 17m wide and 10.5 m high), 16 final settlement tanks and a final effluent tunnel connected to the existing effluent discharge channel. A new sludge thickening plant would be housed in an additional new building, (47m long, 21m wide and 10m high), whilst the existing surplus activated sludge building would be extended (13m long, 16m wide and 10m high). To supplement the energy required to power the new infrastructure and plant, a 95m high wind turbine would also be sited within the STW extension area.

32 It is evident from the foregoing that whilst the proposals would have a significant cumulative visual effect on the open character and appearance of Beckton STW, only a small proportion of the works would actually be built on MOL. Policy OS2 of the Newham UDP supports both the national and strategic London policies on MOL, with an additional clarification (in Paragraph 9.27) that the
MOL designation is not intended to restrict potential plans of organisations such as Thames Water in carrying out their statutory functions.

33 More significantly the development is also justified by the very special circumstances of a compelling and urgent need to provide additional sewage treatment capacity to meet the requirements of population growth within Lee Valley, Thames Gateway and other parts of North and East London; to improve the quality and reduce the quantity of sewage discharge into the River Lee and the Thames, in order to maintain and enhance their amenity value; and to comply with the Government’s international obligations under the Urban Waste Water Treatment Directive, the regulatory requirements of the Environment Agency, and the Government’s own national water strategy entitled ‘Future Water’.

**Contribution to regeneration in the Lee Valley/Thames Gateway area**

34 The Beckton STW currently serves a population equivalent of 3.5 million people in a 300 sq km. catchment area with a projected population growth of 300,000 by 2021. The area includes a number of high-profile opportunity areas such as Stratford and the Lower Lee Valley; and is likely to accommodate some of the most important strategic regeneration initiatives in London and an urban renewal challenge of global significance, including the 2012 Olympic and Paralympic Games site and its legacy.

35 This growth in population, business employment and housing would generate additional sewage that needs to be treated to the required standard; it would also significantly extend the impermeable area of London (i.e. the land surface covered by buildings, roads and other development), with a result that less rainwater is able to seep into the ground and surface water run-off into the combined sewer system increases. It is also envisaged that the frequency and intensity of combined sewer overflow events could increase as a result of the changing weather patterns associated with climate change.

36 It follows from this that the need for appropriate sewage treatment capacity is a vital prerequisite for a viable and sustainable regeneration of opportunity areas, especially within the north and northeast London sub-regions. The application proposals therefore aim to increase the maximum flow to full treatment capacity of the Beckton STW from 1420 million litres per day to 2,336 million litres per day.

37 Although the scheme is unlikely to deliver a significant number of permanent jobs during its operational phase, it is expected to create 350 jobs at the peak of the five-year construction period. Many of those jobs would be unskilled or semi-skilled, and some would be of a specialist nature. Thames Water proposes to require contractors to include local labour clauses in the contract documentation to ensure that wherever possible, local labour is utilized. Jobs of a specialist nature are, however, likely to be sourced from areas further afield.

**Air quality and odour control**

**Construction phase assessment**

38 The impact of construction vehicles on local air quality (PM$_{10}$ and NO$_2$ concentrations) has been assessed, using the Atmospheric Dispersion Modelling System (ADMS-Roads dispersion model). The model and assumptions used are generally appropriate. The model results have been verified against local monitoring data. It appears that the method used for model verification may not have strictly followed the guidance stated. From the information provided, it appears that the total measured and modelled concentrations have been used to derive a verification factor, rather than just the road contributions, i.e. total minus ‘background’. However, in this case, this error is unlikely to have significantly changed the conclusions of the report. Model results show that the
impact of construction vehicles upon nitrogen dioxide and PM$_{10}$ concentrations would be negligible.

39 A qualitative assessment of dust impacts during construction has been carried out. The likely impacts during the construction phase are principally associated with the movement of vehicles on haul routes. An appropriate qualitative assessment has been undertaken for construction dust, including identification of the receptors at risk of dust impacts. The assessment is based on criteria derived from the assessment for Thames Gateway Bridge. The assessment criteria provided in the London Councils Best Practice Guidance have not been used.

Operational phase assessment

40 No additional traffic movements are anticipated once the proposed development is complete.

41 An odour assessment has been carried out to determine the impact of the proposals on the local odour environment. Existing odour emission rates have been determined from odour surveys. Future baseline and with scheme emission rates are based on this survey and library emission rates. These emission rates have been used to model odour concentrations using International Safety Components.

42 The model results show that the future baseline odour environment would be much better than the existing situation, as a result of improvements already programmed for implementation. The proposed scheme itself would lead to a very slight improvement in the odour environment, compared with the future baseline.

43 Sludge from Beckton STW would be used in the anaerobic digestion plant at Riverside, leading to a reduction in carbon dioxide emissions. In addition, a wind turbine would be installed at Beckton.

Mitigation

44 A list of mitigation measures, which should be put in place to reduce the risk of construction dust impacts, is set out, and it is recommended that these be implemented through a Construction Environmental Management Plan (CEMP). The CEMP should implement the recommendations of the London Best Practice Guidance: The control of dust and emissions from construction and demolition. No mitigation is proposed for operational air quality impacts.

45 The proposed scheme incorporates odour mitigation measures. Further odour mitigation measures are not required.

Conclusions

46 Construction activity is concluded to be temporary and not significant. A package of mitigation measures is proposed to reduce the impacts. The operational phase impacts on air quality and odour would not be significant.

Noise issues

47 Due to the locations of the main noise sources in this proposal, at some distance from existing noise-sensitive properties, there are no apparent strategic noise concerns arising from the environmental statement. However, in the case of the proposed wind turbine, the environmental statement has made assumptions about the noise levels that will be generated, based on a typical turbine from one manufacturer. It is, therefore, recommended that a condition be imposed to ensure that the actual turbine chosen does not generate noise levels greater than those assumed in the statement.
48 Although unlikely to be of major concern, some consideration should also be given in the specification of the plant and equipment, and the wind turbine at Beckton, to the possibility of future housing developments nearby, including sites not then identified in the Newham UDP of 2001. Residents could, in principle, seek legal action for noise nuisance against the site, if noise levels were to be significant.

49 Noise and vibration arising from the construction works for such a major project inevitably have the potential to cause disturbance to those living and working nearby, although the Environmental Statement does not predict major impacts. Construction noise and vibration are excluded from the scope of the Mayor’s Ambient Noise Strategy by the GLA Act, but Newham Council has powers to control hours of work and to set noise and vibration limits under the Control of Pollution Act 1974. According to the Environmental Statement, the contractor will be required to produce a Construction Environmental Management Plan. However, it is recommended that the contractor should consult Newham to ascertain whether the council would also wish it to apply for consent under s.61 of the Control of Pollution Act 1974.

50 The industry planned for relocation nearby due to the Olympics is unlikely to raise any problems, however, the application proposals should be designed with due care and attention to other potential noise-sensitive receptors, such as existing and future residential development.

51 It is relevant to note, as indicated in paragraph 16 above, that an outline planning application has been submitted for a mixed-use development (including up to 1500 residential units, a hotel and nursing home) on the ‘Beckton Waterfront’ site that adjoins the south and south-western boundary of the sewage treatment works. The application has been referred to the Mayor for consideration, and the applicant, National Grid Property Holdings, would be advised to ensure that the potential noise-sensitive receptors are designed with due consideration to development on the sewage treatment site.

**Biodiversity**

52 The proposed development will impact on several Sites of Importance for Nature Conservation as identified through the adopted procedures for London. These include a Site of Metropolitan Importance (SMI; The River Thames and tidal tributaries), as well as two Sites of Borough Importance (SBI) associated with the existing sewage treatment works. However, the scale and permanence of this impact varies considerably across these sites.

53 Thames Water plc has commissioned an ecological impact assessment of its proposals, including a detailed analysis of impacts on biodiversity interests and a recommended strategy to mitigate and compensate these. This is extremely thorough in scope and depth, and provides the necessary detail to enable evaluation of the scheme against relevant London Plan policy (3D.14).

54 Considering the River Thames SMI, including the Thames foreshore in the immediate vicinity of Barking Reach, the habitat creation and enhancement planned here will more than compensate for the impact of constructing a new effluent discharge pipe and temporary maintenance jetty. The only permanent loss of wildlife habitat appears to affect the small SBI at Beckton Meadows South; elsewhere post-construction habitat creation and restoration will eventually compensate for temporary land-take.

55 It is important to note the purpose of the proposed extension of Beckton SW, ie. to improve the quality of discharges into the River Thames, as this will offer a clear long-term enhancement opportunity to River Thames and tidal tributaries Site of Metropolitan Importance.
In summary, the compensation on offer amounts to a convincing and feasible package. This of course, must be made fully enforceable as a planning condition, series of conditions or secured by legal agreement.

**The Blue Ribbon Network**

**The principle of development**

57 The principle of the development is supported by London Plan Policy 4A.18 and is important to be implemented in London’s strategic interests.

58 The environmental statement indicates that the extension to the Beckton plant has been sized to cope with the London Plan projected population increase to 2021. This appears to be a relatively short time horizon, given that the development itself will not be operational until 2014. The Mayor would like to understand the justification for this.

**Flood Risk**

59 The site is within Flood Zone 3 but is a water compatible use and, therefore, acceptable. The flood risk assessment has considered residual risk issues, including locating essential vulnerable infrastructure, such as electrical installations, at higher levels and identifying the raised Northern Outfall Sewer as an emergency access route.

**Use of the river**

60 The proposal includes the provision of a jetty bridge at Beckton to facilitate barges for tunnel spoil. This is welcomed.

61 However, there is no commitment to remove shaft spoil from the Abbey Mills Site, which is adjacent to the navigable Channelsea River.

62 Furthermore there is no commitment to the delivery of sand, aggregates and cement to Beckton by barge. This is not acceptable. All these materials are readily available from suppliers which utilise the Thames for transport and means that the current proposals fail to meet the requirement in London Plan Policy 4C.8 to make the maximum use of water transport. Consideration should be given to the possible uses of the jetty after the construction works have been completed.

**The Thames Path**

63 The application does not make suitable provision around the site for the Thames Path. This is a major flaw in a proposal that affects such a strategic parcel of land.

**Conclusion**

64 Some of the details of the application need to revisited, in order to avoid unacceptable adverse impacts from the development.

**Waste management**

65 The submitted documents make adequate reference to the waste policies and targets in the London Plan and supplementary planning guidance on Sustainable Design and Construction; and the relevant proposals support the waste hierarchy.
66 Most of the excavation waste would be used on site, with some off-site re-use proposed at Hoo Island and Wallasea Island. Barge transport is proposed for on-site recycling and disposal.

67 The applicant has expressed a preference of anaerobic digestion for sludge treatment, but no mention is made of the co-treatment of food waste and sludge via the anaerobic digestion plant. This must be addressed before the application is referred back to the Mayor.

68 The limited use of landfill is welcome, as is the proposal to develop site waste management plans to manage waste streams.

69 In addition, the applicant has considered the cumulative effects of waste arising from the proposed Crossrail, the 2012 Olympic Games site, the Thames Gateway Bridge, Docklands Light Railway and Beckton Gasworks.

**Climate change mitigation**

70 The London Plan climate change policies as set out in chapter 4A collectively require developments to make the fullest contribution to tackling climate change by minimising carbon dioxide emissions, adopting sustainable design and construction measures, prioritising decentralised energy supply, and incorporating renewable energy technologies with a target of 20% carbon reductions from on-site renewable energy. The policies set out ways in which developers must address mitigation of and adaptation to the effects of climate change.

**Energy**

**Be Lean**

71 The applicant states that no statutory maximum in relation to establishing carbon dioxide emissions for the site processes exist (i.e. no equivalent to building regulation standards). However, the applicant states some parts of the process, such as the use of motors – used extensively on site – can be benchmarked against information published by the Government agency the Carbon Trust.

72 The applicant has provided information on the total energy consumption onsite after energy efficiency measures are taken into account. The additional requirement for energy (after energy efficiency measures are taken into consideration) in 2014 for the Lee Tunnel and Beckton STW is estimated as 42,563 MWh (megawatt hours) per annum – roughly equivalent to the energy use of 10,000 semi-detached homes - resulting from the processes including Lee Tunnel Pump out, sludge thickening, and from aeration, blowers and mixing.

73 The carbon dioxide savings relating to the energy efficiency measures proposed on site have also been quantified. These include increasing the depth of aeration lanes, dissolved oxygen control, the use of energy efficient motors, minimizing pipe runs, optimizing pipe diameter, and locating transformers close to main loads to reduce losses. Sufficient information related to the processes to be used on the Beckton STW site, and the level of energy efficiency savings they deliver has been provided.

74 The energy assessment states that “Whilst some of the new infrastructure will be at Abbey Mills, the additional energy for the operational development will be required at Beckton STW and this assessment therefore focuses on this location.”

75 Additional information relating to any energy efficiency measures to be employed at the Abbey Mills site, or in relation to the construction of the Lee Tunnel would be welcome. (the only mention in relation to the tunnel is its slight raising within the chalk to reduce the energy required for tunnel pump-out).
76 Further information on change in use of the sludge-powered generator is required (that is any increase in volume of sludge to be burned, change to the SPG’s fuel input (ie through the use of higher calorific value primary sludge), and clarification if any additional energy consumption is required as a result of this change, and anticipated increase in output from the generator would also be helpful.

Be Clean

77 The assessment states that sufficient local heat demand density is not available to provide usable heat offsite, which is accepted. The applicant has, however, stated in meetings that they would examine opportunities with the LDA to progress the development of the Barking Heat Transmission Offtake project, specifically the extension of the heat network, which is proposed to follow the same route as the Lee Tunnel.

Be Green

78 The London Plan renewable energy policy (4A.7) requires developments to reduce CO2 emissions through on-site technologies. Off-site technologies are allowed where the scheme connects to a decentralised energy system or in exceptional circumstances where there is a direct connection to the technology.

79 This application forms a separate planning application to the Sewage Treatment Works application at Riverside (Report PDU/2198/01 considered by the Deputy Mayor on 23 July 2008, see Appendix 1), but is related by virtue of the transfer of sludge from Beckton to Riverside through an existing sewage pipe. Thames Water has developed a 25-year strategy to manage sludge treatment on all its London sites, and has addressed the principle of energy recovery within this strategy, which the GLA has commented on from an officer level.

80 Beckton currently has a sludge-powered generator on site that handles all of the existing sludge. The proposals to extend the Beckton capacity and Riverside capacity allow the Sludge Power Generator to handle sludge with a higher calorific value, but creates additional sludge that needs managing, but from which energy can be recovered.

81 A wide range of renewable energy technologies have been considered to both meet the additional electricity demand from the facilities and to recover energy from the additional sludge. The preferred technologies are a large wind turbine at the Beckton site and an Anaerobic Digestion at the nearby Riverside site (see Appendix 1).

82 Anaerobic Digestion (AD) is a process that turns organic fractions of waste, in this case sludge, into a biogas. This biogas can be used within Combined Heat and Power engines to generate electricity and heat, and as it is eligible for Renewable Obligations Certificates, can be considered a renewable fuel for the purposes of a planning decision.

83 In terms of the three advanced conversion technologies considered (anaerobic digestion, pyrolysis and gasification), the sludge streams generated by the extended Beckton STW are best suited to anaerobic digestion (AD). The applicant has provided the following rationale for locating the anaerobic digestion plant at the nearby Riverside STW instead of directly at Beckton STW:

Locating the additional sludge disposal capacity at Beckton was considered but rejected in favour of the Riverside proposal. The main reasons for choosing Riverside over Beckton included both operational flexibility and constructability. From a constructability perspective, Riverside is less constrained in the most appropriate operational location for sludge treatment - the equivalent operational location at Beckton STW is already severely congested and will be further constrained by close proximity of the proposed tunnelling works. A third reason supporting development of a
facility at Riverside is that it would treat Riverside’s sludge at Riverside in accordance with the
proximity principle.

Riverside will host a 4MW (megawatt) anaerobic digestion generator with approximately
3.5MW of output used onsite and 0.5MW of electricity exported offsite. The report states:

The power generation process also generates heat, and this heat is used both within the digestion
cycle to maintain the digestion tanks around the optimum temperature for decomposition of the
sludge and also to generate steam for the thermal hydrolysis process. In the absence of the heat
sourced from the CHP plant, additional energy to maintain the sludge temperature and thermal
hydrolysis process would have to be sourced from other (nonrenewable) sources.

The applicant has stated that the sludge output attributable to the Beckton extension project,
which is then processed through the Riverside anaerobic digestion plant, yields CO₂ emission
savings, again attributable to Beckton of 64%.

In addition, the applicant is proposing to install a wind turbine generator onsite. Studies in
relation to noise, impact on telecommunications (microwave and marine radar communication
channels that cross the Beckton site), shadow flicker, and aviation (Beckton is close to City Airport)
have been considered. Given the various constraints indicated by these studies, a turbine of
approximately 1.5MWe capacity is proposed at this stage. The turbine proposed would have a hub
height and rotor diameter of approximately 65m and 60m respectively, and a total height of 95m.

The total emissions offset from a combination of the attributable output of the renewables (AD
plant and the wind turbine) is calculated to be equivalent to 72% of the extension’s annual carbon
emissions in 2014.

The applicant has been asked to respond to questions relating to the Riverside proposal, and
until those are resolved, there remains an outstanding question over the renewable energy CO₂
savings attributable to each site. However, GLA officers consider that the proposed approach is
consistent with London Plan policy as it allows CO₂ emissions to be minimised in line with policy
4A.7 particularly as the use of anaerobic digestion would be constrained on the Beckton site, and
the 25-year strategy identifies a greater opportunity in future. The anaerobic digestion plant is
connected to the Riverside site by virtue of the pipe transferring the sludge from Beckton to the
anaerobic digestion plant.

Conclusion

The proposals are consistent with London Plan policies on energy, however, the applicant
should clarify the points raised above and address the issues outstanding in report PDU/2198/01.

Design for London’s comments

Good design is central to all objectives of the London Plan and is specifically prompted by the
policies contained within chapter 4B, which address both the general design principles and specific
design issues. Policy 4B.1 sets out overarching design principles for London and states that the
Mayor will seek to ensure that new developments maximise site potential, enhance the public
realm, contribute to adaptation to and mitigation of the effects of climate change, provide a mix of
uses, are accessible, legible, sustainable, safe, inspiring, exciting and respect London’s natural and
built heritage. Other policies include general design principles relating to the promotion of world-
class design, maximising the potential of sites, ensuring appropriate development densities,
improving the public realm and creating accessible environments.

Design for London has raised initial concerns regarding the quality of the design of the
proposed buildings at Beckton. In particular DfL considers that any necessary new structure visible
to the general public should be designed to be of high engineering quality, bold in material
treatment, contemporary and standing out proudly, supporting and enhancing the industrial character/image of the area. Further detailed comments will be provided in this regard.

92 Design for London is also concerned about the impact of the proposals at Beckton on the implementation of the Cross River Park. Cross River Park is a new metropolitan park opportunity linking East Beckton across the River Thames to Thamesmead. The steering group for this park opportunity includes GLA Group, LTGDC, LB Newham, LB Greenwich, the Port of London Authority and the Environment Agency.

93 A Cross River Park Feasibility Study was completed earlier this year and agreed by the steering group. An early draft of this document was presented to and discussed with Thames Water. The document emphasizes the importance of generous and landscaped north-south links between Barking and the River Thames.

94 Thames Water’s request that TfL realign the East London Transit avoid running through the middle of the Thames Water owned land further complicates the delivery of critical north south connection linking Barking to the Thames. The application as it stands severs the two remaining opportunities for strong green North-South connections. These are desperately needed to make Cross River Park possible and are, links along the River Roding and links along A 1020 Royal Docks Road – the East side.

95 Whilst the link along the Roding has been partly constructed, (and secured as part of the 1993 consent for the incinerator), it has not been opened by Thames Water. Newham Council is looking into a mechanism to ensure this corridor is opened, but Thames Water has concerns about their major infrastructure construction programme that will continue over ten years. The exact nature and quality of the proposed paths is unclear.

96 The only option for a medium term link is a path through Beckton Meadows between the TGB application boundary and Thames Water’s expansion site – current plans would only allow for a narrow path between a steep embankment and a security fence. This would destroy the opportunity of having a metropolitan park here forever and therefore does not comply with 3D.8 and SC.1. TfL’s Thames Gateway Bridge team has negotiated a minimum land take to incorporate East London Transit ramping up to the bridge, including footways; but relying only on this route is would not get across Cross River Park. An opportunity exists to provide more than the currently proposed three metres to create a wide strip of pleasant, green, land adjacent to the current path, road and proposed ELT route.

97 Given the treatment works extension is on land designated in Newham’s UDP as green space to be protected, DfL believe a much wider route must be delivered along the western and northern boundaries of the Beckton application site, and would like to see this being explored by Thames Water. The provision of publicly accessible space to the south of Eric Clarke Lane needs to be increased. This could make an attractive, green feature of the balancing ponds in their proposed location, provide visual interest for users of the proposed public transport links and go further to enhance the transformation of Eric Clarke Lane into an attractive and crucial link between the retail park to the east of Royal Docks Road, the entertainment complex east of Jenkins Lane and the paths through the Northern Lagoon site and along Barking Creek.

98 DfL appreciates the indicated link through the Northern Lagoon site, but would like to see more detail. It is important that any proposed new paths add to the connections agreed in the 1993 Section 106 (Review of Compliance submitted by TWUL 15.8.08 currently under review by LB Newham) and fulfil the ambitions of the UDP (2001) and balance the operational requirements of Thames Water with the recommendations of the Environment Agency, LB Newham, the GLA group
and other stakeholders who have invested in the area, such as the London Cycle Network, whose aspirations are clearly illustrated in the UDP and associated documents.

**London Development Agency’s comments**

99 The London Development Agency supports the principle of development as it would support the development and regeneration initiatives in the Thames Gateway in accordance with London Plan policy 5C.1 “The strategic priorities for North East London”.

**Employment and Training initiatives**

100 The applicant has submitted a proposed Heads of Terms outlining its commitment in hiring local labours, contractors and suppliers. The construction phase of the proposed scheme would run for 55 to 60 months and would generated approximately 350 temporary jobs at peak. The applicant is endeavoured to achieve a target of 25% local employment on site.

101 It is the agency’s opinion that the proposal complies with London Plan policy 3B.11 “Improving employment opportunities for Londoners”.

**Transport for London’s comments**

102 The Abbey Mills site is located approximately 400m from the A118 High Street, which forms part of the Strategic Road Network (SRN); and approximately 1km east from the A12/A11 Bow Roundabout, which forms part of the Transport for London Road Network (TLRN). The Beckton Sewage Treatment Works site is located close to the A13 Alfred’s Way and the A1020 Royal Docks Road, both of which form part of the TLRN.

103 The Abbey Mills site is currently served by five bus routes, with bus stops located on Abbey Lane. Pudding Mill Lane DLR station is also considered to be within an acceptable walking distance of the site. While the local bus network in Beckton is extensive, there are no bus stops located within an acceptable walking distance of the site. Gallions Reach DLR station is located to the southwest of the site, but again, is not considered to be within an acceptable walking distance. As such it is estimated that the sites record a Public Transport Accessibility Level (PTAL) of 2/3 and 1/2 respectively, on a scale of 1-6, where 1 is classed as very poor, however, this should be confirmed by the applicant submitting the necessary calculations.

104 TfL is concerned that the impact of the monthly 25,000 vehicles expected to be generated by the site on the A13, particularly at its junction with Jenkins Lane and the A406 gyratory signalised junction, has not been adequately assessed within the Environmental Statement (ES). Given that the report identifies some arms of the A13/A406/A1020 gyratory in excess of 5% increase in additional demand, during peak periods, as a result from the proposed development, the applicant’s justification for not undertaking any junction capacity assessments is not considered acceptable by TfL. As such, it is requested that a comprehensive assessment of the operational performance of the signalised gyratory junction at the Beckton site be provided, in line with London Plan policy 3C.2. As detailed in TfL’s initial letter to Newham Council, dated 12th August 2008, the methodology presented as part of the transport assessment (TA) in relation to growth factors is questioned and should be addressed. Alongside this, TfL requests the applicant to consider the potential impact of the proposals on the current programme timescale to deliver the major developments planned in the area, including Stratford City, the Olympic Games; as well as the construction of the proposed Thames Gateway Bridge (TGB) and East London Transit Phase 2 (ELT2), currently programmed for late 2012 until 2016/17. TfL would therefore expect the applicant to provide a future year assessment of the network performance by considering the
cumulative impacts of all these schemes and as such, a 2011 assessment year along with sensitivity tests is strongly recommended.

105 The transport assessment states that a minimum of 46 car parking spaces will be required at the Abbey Mills site and a minimum of 424 spaces at the Beckton site. Given the already congested nature of the road network near the Beckton site and at the signalised gyratory junction, TfL considers that this provision is unacceptable because it will encourage car uses and therefore cause a detrimental increase in traffic congestion, which is contrary to London Plan policy 3C.17.

106 Should planning permission be granted, the developer and their representatives are reminded that it does not discharge the requirements under the Traffic Management Act 2004. Formal notifications and approval may be needed for the permanent highway scheme and any temporary highway works required during the construction phase of the development. Further, TfL’s initial comments do not prejudice the subsequent decision on the formal notification.

107 Policy 4C.8 of the London Plan seeks to maximise the use of water transport for bulk materials, particularly during construction phases. Although TfL welcomes the applicant’s investigation and commitments to use water transport as part of the construction management plan at Beckton, TfL believes that its use has not been maximised enough for the movement of materials to and from the Abbey Mills site. This should be addressed as a valuable mitigation to reduce the number of HGV trips generated by the development onto the road network.

108 In line with London Plan policies 3C.14 and 3C.15, discussions have taken place with the applicant regarding the necessary land required for the proposed Thames Gateway Bridge (TGB) and East London Transit (ELT) phase 2 schemes, together with associated surface water drainage connections, access rights through the site and facilities needed to deliver these projects. However, these talks have been inconclusive, with no agreement being reached at the time of writing.

109 At present, the Lee Tunnel and Beckton STW application includes land within the safeguarded corridor for TGB; and section 3.21 of the planning statement identifies that land for temporary use by Thames Water during construction. However, the construction programme identified in the application clashes with that currently proposed for the TGB. A temporary use is, therefore, unacceptable within that timeframe. The application also identifies water features, hibernacula, rubble/logs and other habitat proposals within the safeguarded corridor of the TGB, which, if implemented, would need to be removed for the TGB to be constructed. The applicant is, therefore, requested to provide mitigation measures outside the safeguarded area so that relocation would not be necessary.

110A section of the original safeguarded route for ELT2, through the site, has been secured as part of the Gallions Reach Shopping Park development. However, as TfL will not be able to deliver a continuous alignment through the site after permission is granted, that route is no longer viable. Following representations by Thames Water to the former Mayor in 2007, TfL agreed to investigate an alternative alignment to the initial ELT2 safeguarded route, with the aim of accommodating the Beckton Sewage Treatment Works proposals. An alternative public transport corridor for ELT2, which avoids passing through the Beckton Sewage Treatment Works site, has thus been identified on the western boundary of the site, between Jenkins Lane and Gallions Reach Shopping Park.

111 The application for the proposed development includes land required for the alternative ELT2 safeguarded route and Section 3.21 of the Planning Statement identifies that this land will be used on a temporary basis by Thames Water during construction. However, the construction programme identified by Thames Water coincides with that currently proposed by ELT2. TfL is, therefore, concerned that the applicant has not made active provision for the alternative to the safeguarded transit alignment and thus, has not addressed the policy conflict. This is unacceptable to TfL. In addition, TfL is concerned that in accommodating Thames Water’s request to modify the alignment...
of ELT2, it (TfL) is now required to acquire more land. TfL will, therefore, be seeking a financial contribution to mitigate this, and further discussions with the applicant over the exact level of contribution sought.

112In order to address the above policy conflicts, TfL seeks to enter into a legal agreement with Thames Water, whereby all the necessary land take arrangements can be formally agreed. This is an on-going process and TfL is drafting the Heads of Terms in that respect. Once the legal agreement has been completed, TfL will be in a better position to support these proposals ‘in principle’, with regard to the impact on TGB and ELT.

113London Buses has an aspiration to better penetrate the Abbey Lane and/or Rick Roberts Way area to serve the residential and industrial areas currently remote from the bus network. London Plan policy 3C.20 seeks to improve conditions for buses and as such, confirmation is required that the proposed development will not add any physical constraints which would prevent potential future bus service improvements for the area in the future. This is particularly important given the major developments taking place in the surrounding area. Despite the implementation of ELT2 and TGB, buses will continue to run along Eric Clarke Lane and Jenkins Lane to serve Beckton Showcase Cinema and potentially, the Fresh Wharf Estate development in the future. As such, TfL would request that this access be maintained for buses at all times, including the construction phase.

114TfL requests that the public transport trip generation assessment presented in the report be provided by mode, particularly for buses during peak periods. The impact of construction and on-going operational traffic on the bus network in the Beckton area also needs to be considered. TfL also advises that temporary or permanent disruption or diversions of bus services must be avoided unless absolutely necessary.

115It is understood that a new access gate at the junction of Eric Clarke Lane and Jenkins Lane, for the duration of the construction programme, will be provided. TfL considers that such a proposal is very likely to impact on queuing along Jenkins Lane and/or the A13, and/or the A406, causing subsequent delays to buses and significant impact on passenger journey times. Whilst clarification is therefore required on the likely bus journey time delays, appropriate mitigation measures need to be sought by the applicant and should be further discussed with TfL.

116Additionally, TfL requires that improved and safe conditions for pedestrian and cyclists be provided, to support the additional demand arising from the proposed development and to address the current accident rates. The present footway and cycleway provisions along Jenkins Lane do not meet appropriate standards to encourage sustainable travel, and as such, TfL requests that this be investigated by the applicant, together with consideration and commitment as to how construction workers will be encouraged to walk and cycle to the worksite. TfL also requests more information on walking and cycling than that presented in the TA, given that walking is currently omitted and that there is little detail on cycling. As mentioned previously, TfL remains concerned about potential severance or diversion the proposals may cause on the Strategic Walking Network and London Cycle Network (LCN) at the Abbey Mills site, and expects to see further clarification in the Transport Assessment. The Cross River Park project is also referred in the report, along the route of the proposed TGB between Beckton and Thamesmead, which is welcomed. The applicant needs to be aware, however, that TGB complements the Cross River Park project and has its own landscape proposals, which should also be considered and referred to.

117Docklands Light Railway (DLR) is currently planning an extension from Gallions Reach DLR station to Dagenham Dock National Rail station. The project is in the advanced stages of planning, including the preparation of documents for a Public Inquiry scheduled as part of the submission of the Transport & Work Act (TWA) Order powers. Whilst DLR is, therefore, involved in separate and
on-going discussions with the applicant, it is satisfied that the current application does not raise any major concerns.

Given that the development proposals cross under the Jubilee Line north of West Ham, and the District, Hammersmith and City Lines east of West Ham, London Underground might raise engineering issues regarding the proposed scheme. However, these would be raised directly with the scheme engineers.

A construction travel plan has recently been submitted, therefore, this document is currently under TfL’s consideration and detailed comments would be provided in due course, if necessary. From the information submitted on this matter, the movements of construction freight appear not to have been considered, and should be addressed. Justification is also required as to why a travel plan for the lifetime of the scheme has not been submitted. The proposed traffic reduction measures also lack ambition and are not sufficiently detailed and quantified at this stage. Whilst TfL requests the applicant to impose detailed car and cycle parking provision levels on site, the use of the river and/or buses for workers’ travel, to and from the development sites, should also be considered, in order to reduce impact on the highway network.

To conclude, TfL is unable to give support to the scheme in its present form, due to its expected impact on the TGB and ELT2; and given that the proposals do not comply with London Plan policies 3C.2, 3C.14, 3C.15, 3C.17 and 3C.20. However, TfL looks forward to meeting representatives of Thames Water, with the aim of securing a legal agreement that ensures that the proposals will not prejudice the delivery and operation of the TGB and ELT2.

Local planning authority’s position

At the time of writing, it was not known when Newham Council officers would report these applications to the local planning committee, or what their recommendation was likely to be.

Legal considerations

Under the arrangements set out in Article 4 of the Town and Country Planning (Mayor of London) Order 2008 the Mayor is required to provide the local planning authority with a statement setting out whether he considers that the application complies with the London Plan, and his reasons for taking that view. Unless notified otherwise by the Mayor, the Council (in its own right and on behalf of the ODA) and the LTGDC must consult the Mayor again under Article 5 of the Order if they subsequently resolves to make a draft decision on the application, in order that the Mayor may decide whether to allow the draft decision to proceed unchanged; or direct the Council or the LTGDC under Article 6 of the Order to refuse the application; or issue a direction under Article 7 of the Order, where applicable, that he is to act as the local planning authority for the purpose of determining the application and any connected application. There is no obligation at this present stage for the Mayor to indicate his intentions regarding a possible direction, and no such decision should be inferred from the Mayor’s statement and comments.

Financial considerations

There are no financial considerations at this stage.

Conclusion

London Plan policies on MOL, regeneration of the Lower Lee Valley/Thames Gateway, air quality/odour, noise, biodiversity, the Blue Ribbon Network, climate change and transportation are
relevant to this application. The application complies with some of these policies but not with others, for the following reasons:

- **Principle of development/MOL** - Sub-regional population growth, environmental standards, national and international regulatory requirements and climate change, create an urgent and compelling need for the development. The need provides very special circumstances for operational development on MOL in accordance with policies 3D.9 and 3D.10.

- **Regeneration** - The development would provide up to 350 construction stage jobs over five years, of which 25% is targeted at local people, in line with the objectives of policy 3B.11 ‘Improving employment opportunities for Londoners.’ Additionally, the development is a vital prerequisite for the regeneration, and its implementation would facilitate the objectives of policy 5C.1 ‘The strategic priorities for North East London’.

- **Air quality/odour** - The potential for construction activity to impact on air quality is both temporary and insignificant; and the proposed odour control measures are considered satisfactory. The operational phase impacts on air quality and odour are, therefore, compliant with policy 4A.19 ‘Improving air quality’.

- **Noise** - Although a planning condition is suggested to ensure noise from the proposed wind turbine does not exceed anticipated levels, the development complies with policy 4A.20 ‘Reducing noise and enhancing soundscapes’.

- **Biodiversity** - The measures proposed meet the requirements of policy but should be secured by planning condition or legal agreement to ensure full implementation.

- **Blue Ribbon Network** - The proposals fail to comply with policy 4C.8 ‘Freight uses on the Blue Ribbon Network’ by its lack of commitment to deliver construction materials (sand, aggregates and cement) to Beckton by barge, or to remove shaft spoil from Abbey Mills via the navigable Channelsea River. The proposals also fail to make suitable provision for the Thames Path around the site, as required by policy 4C.11 ‘Increasing access along the Blue Ribbon Network’.

- **Waste** - The waste management proposals are compliant with the London Plan.

- **Climate change** - The proposals are consistent with London Plan policies on energy, however, the applicant should clarify the points raised in this report and address the outstanding issues relating to the Riverside site proposals (report PDU/2198/01 copy attached as Appendix 1).

- **Urban Design** - Cross River Park: Insufficient consideration has been given to the implementation of the Cross River Park in the vicinity of the site, thereby failing and to comply with policies 3D.8 and 5C.1 of the London Plan.

- **Transport** - TfL is unable to give full support to the scheme in its present form, as the proposals do not comply with the London Plan policies 3C.2, 3C.14, 3C.15, 3C.17 and 3C.20. TfL is, however, arranging to meet representatives of Thames Water, with a view to resolving those issues as soon as practicable.

On balance, the application does not comply with the London Plan.

The following changes might, however, remedy the above-mentioned deficiencies, and could possibly lead to the application becoming compliant with the London Plan:

- A commitment from Thames Water Utilities Ltd, preferably secured by legal agreement, to deliver construction materials (sand, aggregates and cement) to Beckton by river barge, and remove shaft spoil from Abbey Mills via the navigable Channelsea River.
• Submit detailed plans that make suitable provision for the Thames Path along relevant parts of the site, where applicable.

• Cross River Park: Discussions should be held with Design for London to investigate the potential to make better provision for Cross River Park.

• Further discussions with TfL with a view to addressing and/or resolving the concern raised in paragraphs 103 to 120 of this report.

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