

LONDON THAMES GATEWAY DEVELOPMENT CORPORATION**PLANNING COMMITTEE MEETING: 14th September 2006****Planning Application for LTGDC's Determination****Report of the Director of Planning****CASE NUMBER:** LTGDC-06-050-PP **DATE MADE VALID:** 08/05/2006**APPLICATION NO:** U0004.06/LBHG **TARGET DATE:** 07/08/2006**APPLICANT:** Novera Energy Limited PLC**AGENT:** RPS Planning, Transport and Environment**PROPOSAL:** Construction of sustainable energy facility comprising the erection of gasification power generation plant and associated building and plant.**LOCATION:** Land west of the Fairview Industrial Park off Marsh Way, within the Ford Motor Co site, Rainham**1. SUMMARY**

1.1 This application is for the development of a power generation facility on land adjacent to the Fairview Industrial Estate on the River Thames frontage. The proposed plant would use a process known as gasification to convert a fuel derived from waste processing operations at the nearby Frog Island site into a gas that can be used generate electricity. The application includes the option of a conveyor link between the two sites to transport the fuel material as an alternative to road transport. The plant would produce energy for the adjoining Ford works and for the National Grid.

1.2 The proposal raises issues relating to waste management, sustainable energy provision, regeneration and environmental impact. The main policy considerations are set out in government guidance for waste management (PPS10); Sustainable energy (PPS22); and the Thames Gateway Planning Framework (RPG9a); the London Plan and UDP policies, EMP1 (Rainham Employment Area), ENV1/MWD1 (environmental impact), MWD13 (recovery & recycling), and ENV25 (Thameside development). The interim planning guidance (IPG) 'An urban strategy for London Riverside' and full council resolution 61 'investment opportunities' of 2/2/05 are also relevant.

1.3 A number of consultees, including the Environment Agency and Havering Primary

Care Trust have not raised any objection to the application. The Mayor of London fully supports the proposals as being in accordance with the London Plan and government policies for sustainable waste management and sustainable energy generation. However, LB Havering, local residents, and the local MP have objected to the proposals.

- 1.4 Taking all the relevant matters into account the report concludes that planning permission should be granted subject to conditions and the developer first entering into a S106 obligation covering the source of fuel material and a financial contribution for environmental and other works. Should members agree the recommendation it would need to be referred to the Mayor of London.

2. SITE AND PROPOSAL

2.1 Background to the Proposal

- 2.1.1 The East London Waste Authority (ELWA) comprises the boroughs of Havering, Barking & Dagenham, Redbridge and Newham. ELWA has entered into a 25-year waste management contract that includes the setting up of new waste management facilities. Two major waste management centres, one at Frog Island, Rainham and the other at Jenkins Lane in Newham have been granted planning permission. The facility at Frog Island is to be fully commissioned over the coming months and it will take municipal waste collected in Havering and Barking and Dagenham.

- 2.1.2 The waste management centres will treat municipal waste by biological and mechanical means through a system known as a Bio-MRF. This seeks to maximise the amount of waste that can be recycled, but does produce a by-product that needs to be treated or disposed of elsewhere. Under the current contract this material is to be taken by rail to Berkshire via the Dagenham Dock Freightliner Terminal, for disposal by landfill. This by-product has a high calorific value and, therefore, has the potential for use as a fuel. That applicant stated his intention to look for opportunities to use the by-product as a fuel once the plant is up and running, although it is not a requirement of the planning permission. This application offers an opportunity to utilise the waste by-product in a more sustainable way to generate electricity, that minimises transportation distances and significantly reduces the amounts that need to go to landfill. However, the proposal is made independently of ELWA and its waste management partner.

2.2 Description of Site & Surroundings

- 2.2.1 The site lies on the northern bank of the Thames and is currently used by the Ford Motor Company Limited as part of its vehicle holding centre. This extends westwards as far as the Beam River; beyond which is the Ford works. To the east is the Flogas LPG bottling depot and the remainder of the Fairview Industrial Park which contains predominately large shed warehousing units. Adjacent to the depot on the east side of the site and approximately 100m away, is the Shanks East London (Bio-MRF) which is due to process waste from the boroughs of Havering and Barking and Dagenham.

- 2.2.2 The proposed site amounts to some 2.95 hectares and lies approximately 1.8 Km (1.1 miles) from the centre of Rainham, with the nearest residential properties at Creekside between Rainham Creek and the sewage works, some 1.4 km away. Between the site and Rainham are industrial areas, the A13, the CTRL and C2C railways, the new CEME building and the sewage works. To

the south across the Thames are the industrial areas of Belvedere in the London Borough of Bexley, beyond which are residential areas some 2.3 km away. Within the Ford car compounds are two wind turbines that supply power to the car plant; these are about 85 metres high. Looking northward from the site the view is dominated by a row of electricity pylons and the elevated A13, with glimpsed views of Dagenham and Rainham beyond, especially the high-rise tower blocks in South Hornchurch.

2.2.3 Access to the site is through the car compound via a private roadway; access can also be gained from Marsh Way, but the entrance is currently obstructed with concrete slabs. Immediately to the south of the site is the Thames earth flood protection embankment that separates the site from the river, this is predominately vegetated by grass, with the occasional shrub. A drainage balancing pond (approximately 30 x 10m) is situated in the south-east corner of the application site.

2.3 Description of Proposal

2.3.1 It is proposed to construct a power generation plant that would utilise a synthetic gas produced from a solid recovered fuel (SRF) using a process known as gasification. The facility is designed to generate about 13 MW of electricity and operate on a 24 hours per day 7 days a week basis. The delivery of fuel by road would be between 08.00 and 18.00 hrs Monday to Friday, and between 9:00 and 14:00 on Saturdays. Other deliveries and export of residuals would be 7 days a week. The proposed facility comprises:

- A gas island comprising the gasifier and gas cleaning plant and associated storage silos;
- Associated process and storage plant including condensers, cooling tower, chemical, gas and water storage tanks, effluent treatment plant, heat exchangers and electrical switch gear;
- Buildings housing a pelletiser, pelletiser storage area, steam turbine and boilers;
- A visitor centre;
- A conveyor system between the development site and the Shanks East London (Bio-MRF) on Frog Island;
- A site office and maintenance building; and
- Operational and visitor parking areas, circulation space and a weighbridge together with the extension of Frog Lane from Marsh Way to the operational area of the facility.

The facility would take between 12 and 18 months to construct, following that there would need to be a period of about 6 months for commissioning.

2.3.2 The solid recovered fuel from the mechanical biological treatment plant at Frog Island, which typically would comprise of a mixture of paper, textile, wood and some plastic would be pelletised to form the fuel for the power generation plant. The bulk of the fuel feedstock will be provided by the Shanks East London (Bio-MRF) approximately 100m to the east of the proposed gasification facility with the balance of the fuel supply material being supplied via the Shanks' plant at Jenkins Lane, in Newham. This plant also manages waste collected in the ELWA area and produces SRF of the appropriate technical specification for use as a fuel in the proposed gasification facility. During periods of maintenance at the primary fuel source location it will be necessary to import a greater proportion of the fuel source from the Jenkins Lane facility. In the very unlikely event that both these sources become unavailable for short periods suitable

material would be sought from elsewhere in the ELWA or London to ensure that power generation is not interrupted. The SRF would be transported to the site either by a conveyor system across adjoining land or by road via Creek Way and Marsh Way. Any material from Jenkins Lane would be transported by road via the A13.

- 2.3.3 The process of turning the fuel into electricity can be summarized as follows: The fuel material would be delivered to the plant un-pelletised where it would then be mixed with hydrated lime before pelletising. The pellets would be stored from where there would be a continuous conveyor system to transfer the material to the gasification process. The process transfers heat to the fuel which is turned into a synthetic gas composed of mainly nitrogen, carbon dioxide, carbon monoxide and hydrogen. There would be solid by-product arising from the process, including ash, know as char. The char would be removed from the gas, cooled and stored in silos before being taken off-site for disposal at a suitably licensed landfill site.
- 2.3.4 The synthetic gas would then be cooled and cleaned by a series of processes which would leave a small quantity of surplus liquor that cannot be reused in the process. This would be neutralized and treated biologically before being discharged to sewer. The cleaner gas would then be burned in a boiler plant to generate steam which would be used in a condensing steam turbine to generate electricity. The by-products of the combustion process would be discharged to the atmosphere via a 34 metre high stack.
- 2.3.5 In the event of emergencies or shut down it would be necessary to divert the synthetic gas to a ground flaring system, with the combustion emissions going directly to atmosphere.
- 2.3.6 The facility would comprise a number of buildings and structures, the centre piece being the gasification plant. In response to the riverside setting of the facility the proposed layout ensures that a single building fronts and gives definition to the riverside boundary of the site and presents a single architectural solution to the river rather than a series of fragmented facilities. The architectural treatment and the palette of materials used would be common to all the buildings and structures where possible. The riverside and administration buildings would have rendered block work plinths at ground floor level and be clad on upper levels in stucco embossed mill finish aluminum trapezoidal metal cladding. Windows and louvers would be in gray or aluminium. Roofs would be of a similar aluminium finish to the cladding.
- 2.3.7 Subject to the agreement of the adjoining landowner, an elevated conveyor system would be constructed between the plant and Frog Island in order to transport the SRF from the Frog Island facility. The conveyor would be supported by a series of stilts about 6 metres above ground level and enclosed in a galvanized steel mesh a further 2 metres higher.
- 2.3.8 The environmental statement submitted considers the potential impact of the proposal from the following factors:
- **Surface water flooding:** the existing flood defences are considered to be adequate to protect the site from flooding and can be improved if necessary. A Surface Water and Flood Risk Assessment concludes that the proposed arrangement for the discharge of surface water runoff from the development into the nearby watercourses (the Beam River, the unnamed drainage ditch, and/or the Ingrebourne) will be of negligible impact. (Effluent from the proposed facility will be discharged to sewers, not

released into the River.) The assessment concludes that the flood defences already in place are adequate to protect the site from tidal and coastal flooding that might happen once every 200 and 1,000 years respectively.

- **Landscape and visual appraisal:** The quality of the architectural design of the proposal is considered to have a positive impact upon the appearance of this section of the River Thames waterfront. The Landscape and Visual Appraisal has concluded that the landscape has a generally high capacity to accept development of the kind proposed due to the surrounding heavy industry and utilities' infrastructure. The Facility has been designed to integrate well with the adjoining river bank location. The Visitor Centre will open up visual access to previously inaccessible sections of the northern Thames riverbank. The proposed architectural treatment will have a neutral or slight beneficial impact on existing views in the area.
- **Nature conversation:** The site has very limited value for nature conservation, which will not be significantly impacted upon. The development does not lie within any designated or protected areas of conservation importance and is not considered to impact on any within the surrounding area. The development will result in a loss of habitat that is of very limited nature conservation value, as the proposed layout involves retaining a significant proportion of the grass and scrub banks along the south and east boundaries. The assessment concludes that, the significance of the proposed activities on the site is considered to be low in relation to ecology and nature conservation.
- **Traffic:** The proposed development will have no significant impact on local roads and can significantly reduce vehicle haulage of the Solid Recovered Fuel produced at the Frog Island waste management facility. Without development of the Sustainable Energy Facility approximately 80,000 tonnes per annum of Solid Recovered Fuel would be transported further afield for energy generation or landfill. If the Sustainable Energy Facility was developed the need for a number of these trips would be avoided. Solid Recovered Fuel will be delivered to the Sustainable Energy Facility either by road or by conveyor. Development of the Sustainable Energy Facility will therefore reduce the distance that this fuel will need to be hauled from its source to a location where it can be used. The existing Frog Lane carriageway and junction will be reopened to adopted highway standards keeping its simple priority controlled 'T' junction status. The Traffic Impact Assessment that forms part of the Environmental Statement concludes that the development proposals can be integrated into the transport network without any major mitigation measures and there will be no significant impact on local roads.
- **Air Quality:** Emissions from the Sustainable Energy Facility will comply with the strictest regulatory standards. A detailed Air Quality Assessment has been carried out using a widely accepted computer model to predict the ground level concentrations of emissions from the Sustainable Energy Facility. In order to be conservative, the maximum level of emissions allowed by the Environment Agency has been assessed. The assessment is therefore a 'worst case' scenario and has shown that the output levels from the facility will not cause a breach of the UK Air Quality Standards or other benchmark air quality levels. The facility will be operated within all legislative requirements.

- **Noise:** Assessment of noise conditions during construction and operation of the facility concludes that noise impacts will be of no significance, providing the proposed mitigation measures are incorporated into the final design of the facility.
- **Archaeology:** There are no Scheduled Monuments, Listed Buildings, Registered Historic Parks and Gardens or Registered Battlefield sites present on the proposed site therefore the potential for significant remains to exist is low.
- **Land Contamination Hydrogeology and Geotechnical Issues.** A desktop assessment and site investigation relating to land contamination, hydro-geological and geotechnical conditions have been carried out on the proposed site. The site formed part of a historic landfill site. This will be taken into account in the design of the construction methods and drainage systems for the proposed development.

2.3.9 The Environmental Statement has identified no significant impact from the proposed development. It has shown that the proposed gasification facility will create mostly beneficial environmental impacts and that mitigation measures embodied within the project design, or imposed through planning conditions, will limit any minor impact identified.

3. MAIN ISSUES

1. Land Use Principle & Accordance with Policy
2. Assessment of Environmental Issues
3. Highways Issues
4. Other Matters

4. RELEVANT SITE HISTORY

4.1 There is an extensive planning history in the vicinity of the application site, the main applications are:

- L/HAV/1369/68 -approved Facilities building, Car Park, Storage Area and Bridge;
- L/HAV/1506/69- approved Outline Application for steam wash building, full application for covered way;
- L/HAV/1131/70 Approved Additional facility building comprising offices & mess room;
- L/HAV/1949/71 Approved Erection of 11000 volt overhead line;
- L/HAV/1068/76 Approved Regrading of river frontage adj. Frog Island in accordance Thames Flood Barrier scheme;
- L/HAV/350/80 Approved Erection of 11000 volt overhead line on wooden poles;
- L/HAV/245/81 Approved Portakabin reception office;
- L/HAV/1604/81 Approved Vehicle storage area, new buildings offices, canteen, inspection bay, gate house & lighting towers;
- P0279.93 Approved Construction of two carriageway roads for internal access within Ford Estate

5. CONSULTATIONS/NOTIFICATIONS

London Borough of Havering

LB Havering objects to the application on two main grounds: i) the likely detrimental impact on the health of local residents arising from the cumulative impact of pollution from the emissions of the gasification plant and others in the area; and ii) the serious detrimental impact on the visual amenities of the riverside. A copy of the Council's full response is appended to the report, at Appendix 4.

Greater London Authority

The Mayor of London supports the scheme and has requested that the applicant ensure that there is provision of a riverside path. A copy of the GLA's Stage 1 report on the application is appended to the report at Appendix 5. Should LTGDC be minded to approve the application it is then referable to the Mayor to decide whether or not to direct refusal.

London Waste Authority

The London Waste Authority has been reviewing its waste strategy in accordance with statutory requirements set out in new legislation to divert more waste from landfill. Two key actions being considered: i) the reduction of the amount of biodegradable waste sent to landfill from the Bio-MRFs, including the recovery of fuel; and ii) examining the possibility of introducing new technology (including advanced thermal treatment) to manage the outputs from the Bio-MRF. The current proposal, if permitted could help to meet these objectives. Therefore, the ELWA waste strategy supports the principle of the proposal as having the potential to meet its waste strategy objectives.

Environment Agency

Has no objections to the proposal subject to conditions and informatives to protect riverside habitats and to prevent pollution.

Havering Primary Care Trust

Has advised that a report by the London Health Commission indicates that Havering has a relatively high hospital admission rate for 1-19 year olds for respiratory disease. The report does not propose any reasons for this, but the Trust suggests that there could be a number of explanations, including the way respiratory conditions are managed by professionals and by parents. Figures show that Rainham and Wennington Ward rank highly in Havering for respiratory disease, including emergency admissions. The Trust has confirmed that general health in Rainham and Wennington as shown by the rate of illness is very similar to the Havering figure overall, indicating that there isn't a particular problem here. The response quotes from its own annual report that '*there is no reasonable scientific evidence to support the idea that asthma is caused by outdoor pollution, but asthma can be exacerbated in some circumstances by ambient air pollution*'. The impact of NO₂ on respiratory illness is highlighted and the need for a community based monitoring system. The response concludes that from the NO₂ levels modelled the proposed facility will not increase levels by any significant amount in terms of health.

English Heritage

EH has no objections subject to an appropriate archaeological condition.

National Grid

There are no high voltage lines in the immediate vicinity of the application site.

Health and Safety Executive

Does not raise any objections on safety grounds against the granting of planning permission.

London Borough of Barking and Dagenham

No objections

London Borough of Bexley

Has raised a number of queries regarding the assessment of emissions from the facility, but has not raised any objections to the principle of the development. The queries have been addressed by the applicant; no further comments from Bexley have been received.

Essex and Suffolk Water

No comments

DEFRA

No objections

London Fire and Emergency Planning Authority (LFEPA)

Has no objections but identifies the need for one fire hydrant within the site. This should conform to the appropriate British Standard. Further details of the buildings would be required before fire fighting access can be approved.

Countryside Agency

Considers that the application does not affect any of its priority interests within Greater London.

Havering Crime Prevention Design Advisor

Recommends that community safety, lighting and CCTV conditions/informatives be included on any planning permission.

LB Havering Environmental Health

No significant impact on air quality.

6. APPLICATION PUBLICITY

6.1 Site Notice Expiry: 09/06/2006

6.2 Press Notice Expiry: 09/06/2006

6.3 Neighbour Notification:

A total of 347 addresses were notified of the application by LB Havering on 11th May 2006.

7. REPRESENTATIONS

7.1 There have been 211 letters of objection received in total. This includes letters from Adamsgate Action Group, Rainham Preservation and Improvement Society, Rainham Friends of the Earth and CPRE North London, Local MP James Brokenshire, and two Rainham Councillors. One letter of support has also been received. The objections raised can be summarised as follows:

Comment

Havering Council has already rejected this proposal reflecting the wishes of local people. This application should be rejected on the same grounds

Response to Comment

LTGDC are the planning authority for this application

The proposed facility would increase pollution levels in the area to the detriment of the health of local residents. The health implications of the scheme have not been properly assessed. Pollutants emitted would be highly toxic and carcinogenic, and in the case of carbon dioxide contribute to impact of greenhouse gases;

These issues are dealt with in section 9.3 of the report

The process involved is unreliable and dangerous and there have been both environmental and economic failures of similar plant elsewhere in the world. The validity of the air quality and pollution assessment and modelling is questioned. The cumulative effect of emissions from the various waste and industrial processes in the area has not been properly assessed.

Further information on the cumulative impact of the proposal have been provided by the applicants. This issue is dealt with in section 9.3 of the report.

The proposal is anti-recycling and composting as the fuel materials could be recovered without burning. The Council could miss recycling targets which would lead to council tax penalties. A less costly 'zero waste management strategy' should be adopted instead

This issue is dealt with in section 9.1 of the report

The proposal does not reflect the vision for the area and is contrary to the community strategy. It should be refused on the ground of the erosion of the well being of the local community by poor neighbour uses with insufficient consideration being given to the additive effects

This issue is dealt with in sections 9.2 of the report

The proposal would undermine the Thames Gateway vision of the riverside for residential, leisure and business enhancement and help to perpetuate the negative image of the Rainham area as a place to invest

The proposal is not considered to conflict with regeneration aspirations for the area, and this matter is dealt with in section 9.2 of the report.

It is likely that waste would be brought to the facility from outside of the immediate area generating additional lorry traffic;

This matter is dealt with in section 9.4 of the report

It is premature to consider the application before the air quality study to be undertaken by Council staff has been completed;

LB Havering's officers have advised that the results of the Air Quality study are not material to the consideration of this application.

The fear of a material impact on public health is a material planning consideration and high level of asthma sufferers in the area is a major source of this fear.

It is not considered that there is any evidence that the proposed development will have a significant impact on air quality, this matter is dealt with at section 9.3 of

the report.

8. RELEVANT PLANNING POLICY

8.1 Planning Policy Guidance

PPS1 Delivering sustainable Development
 PPS10 Planning for Sustainable Waste
 PPG13 Transport
 PPS22 Renewable Energy
 PPS23 Planning and Pollution Control
 PPG25 Development and Flood Risk
 RPG9a The Thames Gateway Planning Framework

8.2 The London Plan (Feb 2004)

4A.1 Waste strategic policy and targets
 4A.2 Spatial Policies for waste management
 4A.3 Criteria for the selection of sites for waste management
 4A.7 Energy efficiency and renewable energy
 4B.1 Design principles for a compact city
 4B.2 Promoting world class architecture and design
 4C.21 Design statements

8.3 LB Havering UDP & LDF

Adopted UDP Policies:
 EMP1 Rainham Employment Area
 ENV1 Environmental Impact
 MWD1 Environmental Impact
 MWD13 Recovery & recycling
 ENV25 Thames side development

LB Havering's LDF Preferred Options document includes a section on renewable energy and waste management.

8.4 Other Relevant Planning Policies & SPG's

LB Havering IPG "An urban Strategy for London Riverside"
 Mayor of London Energy Strategy

9. ASSESSMENT OF MAIN ISSUES

9.1. Land Use Principle & Accordance with Policy

9.1.1 Principle of the development: There are two related considerations when assessing whether development of this nature is acceptable in principle in the location proposed. These concern sustainable waste management and renewable energy. Consideration also needs to be given to the appropriateness of the development in terms of policies for regeneration of the area.

9.1.2 Assessment of renewable energy issues: The main guidance on this matter is in PPS22 and in the London Plan, supported by the Mayor's energy strategy. There are no specific policies on renewable energy in the Havering UDP, although the preferred options document does address the issue. The guide that accompanies PPS22 explains what renewable energy is and draws a distinction between the mass burn incineration of waste and gasification schemes. For 'advanced' technologies such as gasification, any municipal solid waste (biodegradable and non degradable) may be used as fuel, but only the biodegradable fraction qualifies as a renewable resource. The waste in this case

would have been processed by heating to reduce its volume and to stabilise it, but it would include both biodegradable (wood and paper) and non-degradable (plastic) fractions. However, biodegradable material would make up the larger fraction of the resultant fuel. In these circumstances it can be considered that the solid recovered fuel derived from the waste would essentially be a renewable resource. The government is particularly keen to encourage the development of new technology, such as gasification which is inherently cleaner than other thermal waste treatments and can be deployed on a smaller scale, and this is reflected by the status of the proposal as a DEFRA demonstration project.

- 9.1.3 PPS22 is particularly clear on the importance that the government attaches to renewable energy and the approach local authorities should take to encourage such developments in appropriate localities. Where the technology is viable schemes should be accommodated where environmental, economic and social impacts can be addressed satisfactorily. Local development documents (DPDs) should promote and encourage, rather than restrict, the development of renewable energy sources. Havering in its preferred options document does not allocate any specific sites for renewable energy, even though this proposal would meet the base criteria in PPS22 for doing so, but does propose a positive approach to standalone schemes. The Government's energy policy, including its policy on renewable energy, is also set out in the Energy White Paper (Our Energy Future – Creating a Low Carbon Economy), published in February 2003. The Government has set a target to generate 10% of UK electricity from renewable energy sources by 2010 subject to the costs to consumers being acceptable. The White Paper sets out the Government's aspiration to double that figure to 20% by 2020, and suggests that still more renewable energy will be needed beyond that date. The Mayor of London supports these proposals through policies in the London Plan.
- 9.1.4 PPS22 provides further guidance on the consideration of applications for renewable energy schemes. In particular planning authorities should consider such proposals in the same way in which they would handle any other industrial scheme. The relevant planning considerations are largely the same. In addition the wider environmental and economic benefits of renewable energy schemes are material considerations that should be given significant weight.
- 9.1.5 PPS22 identifies particular issues in relation to siting which are important, which include the source of the fuel, the economic implications of transporting the fuel, site access and proposed energy use. Where the fuel is waste PPS22 also stresses the importance of having regard to waste management plans for the area; in this case the ELWA strategy. Waste issues will be addressed later in the report, including the importance of this scheme to the sustainable management of Havering's waste.
- 9.1.6 It is clear from the guidance that allocated industrial areas are appropriate locations for renewable energy schemes as they are similar in nature to other industrial developments. Locational and regeneration issues are dealt with in more detail later in the report, but it is considered that in principle this is an appropriate site for this renewable energy use in terms of the criteria in PPS22. The site is close to the source of the fuel which can be transported directly from the Frog Island plant by conveyor or by a very short road journey, mostly on private roadways. There is already an access onto Marsh Way that links to the proposed site. Whilst the applicant has yet to secure a route for the proposed conveyor link, this still remains an option that would take the supply of the fuel off the roads altogether. The proposed site is also very close to the proposed recipient of the energy, Fords at Dagenham. Therefore, in terms of these criteria the proposed site is ideally located.

9.1.7 Assessment of waste issues: Whilst it can be argued that the main purpose of the proposed facility is to generate electricity, it also has a dual role in managing waste materials. Therefore, it is appropriate to consider the waste management implications of the proposal. The main guidance for this is in the London Plan and PPS10 which include the following principles for the location of new waste management facilities:

- To use industrial sites, such as the Preferred Industrial Locations (PILs) identified in the London Plan and sites where waste facilities can be co-located;
- To give priority to re-using previously developed land;

Government guidance and London Plan policies set out the approach that should be taken to achieve sustainable waste management as follows:-

- To aim to manage most of London's waste within its boundaries and to seek to achieve sub-regional self-sufficiency;
- To increase the use of new and emerging technologies to reduce reliance on landfill in accordance with Government and European objectives;
- To move waste management up the waste hierarchy and to landfill as a last resort, and;
- Transporting waste by modes other than road.

9.1.8 The relevant London Plan policies are 4A.1-4A.3. These include a target of managing 85% of London's waste within its boundaries by 2020. This proposal would assist in reaching these targets and also help meet the objective of utilising new technologies to reduce the reliance on landfill. National waste policy reflected in PPS 10 aims to break the link between economic growth and the environmental impact of waste by only accepting the disposal of waste as a last resort. To achieve this aim significant new investment in waste facilities is required. This proposal helps to achieve this aim.

9.1.9 The gasification of processed waste is new in the field of waste management. However, it is identified as being important to achieving waste management targets for limiting landfill in PPS10 and the London Plan in particular. Havering Council has accepted the principle of utilising new waste technologies when approving the Frog Island facility. This gasification proposal would provide the next link in the sustainable management of the municipal waste collected in Havering and Barking and Dagenham. The amounts that need to be landfilled would be reduced significantly, with only the residues from the process needing to be disposed of in that way. It is considered that the gasification of the by-product from the Frog Island facility would be a sustainable method of waste management, that would meet government and London Plan objectives. It would also meet the requirements of MWD13 for permitting recycling and recovery facilities.

9.1.10 The alternative to treating the dried waste in the ELWA strategy is to take the material to Bedfordshire for landfilling. Whilst there are other landfill sites nearer to Frog Island this is the option proposed by ELWA's waste contractor. Whilst most of the transport to the landfill site would be by rail, there would also be significant road transport, especially compared with the current proposal. Therefore, from a road transport point of view the gasification proposal would be much more sustainable. Should the developer be able to secure the conveyor link between Frog Island and the site then only residues and a small portion of the waste input (from Jenkins Lane) would need to be transported by road.

9.1.11 Another relevant consideration is the requirements of the Landfill Directive. The Government has set a limit for each local authority on the amount of waste it can landfill. This limit will reduce over time to meet the targets set out in the Directive and Government's waste strategy. Exceeding the limits could result in significant fines or extra costs in purchasing additional landfill allowances. Whilst this is not strictly a planning consideration it does clearly indicate the importance that is attached to reducing reliance on landfill. The current proposal would, if permitted, ensure that Havering's and Barking and Dagenham's municipal waste is managed in a sustainable fashion in accordance with government policy and at the same time avoiding the potential for additional costs or fines.

9.1.12 Objectors have suggested that much of the material to be gasified could be recovered and that the proposal is therefore, anti-recycling. However, it is necessary to bear in mind that the fuel has already been through a materials separation process designed to meet government targets for waste recycling. Havering approved the Frog Island facility in the full knowledge that there would be a residue that could be used as a fuel and that the developer at Frog Island would be seeking such outlets. The Frog Island facility is designed to meet government recycling targets. The alternative to this would be landfilling which is much less sustainable. In these circumstances it is considered that the facility would not undermine Havering's or ELWA's recycling objectives.

9.1.13 Another important potential benefit arising from the proposal would be that the process would be a source of hydrogen which could be extracted from waste gases and used in fuel cell schemes powering public transport. A pilot scheme is currently being run in London for powering buses by this method. The Mayor of London supports the introduction of fuel cell technology as a means of reducing the emission of greenhouse gases and other pollutants such as NO_x (NO₂ and NO).

9.2 Assessment of location and regeneration issues

9.2.1 The site lies within the Thames Gateway, the Rainham Employment Area (Policy EMP1) and the River Thames Area of Special character (Policy ENV25). RPG9a sets out the main planning framework for the Thames Gateway area. The principles of the framework have been further developed with the establishment of London Riverside, one of the Government's 'zones of change' for the Thames Gateway Strategic Partnership. The area is also a priority area for the Mayor and the London Development Agency. The 'Urban Strategy for London Riverside' identifies the site as continuing to play a role as part of Ford's car distribution network, but with opportunities for more intensive development. The document seeks to bring about regeneration in line with sustainable development principles, including the provision of high quality environments with good design and mix of land uses. It seeks a design led approach, which accepts a range of land uses and seeks the highest possible standards of sustainable architecture and urban design. This scheme is considered to meet these objectives and is linked to the Ford's works as a supply of renewable energy. The location of the site within the Ford Estate is determined by two factors; its isolation from other Ford activities and its proximity to Frog island and existing industrial areas.

9.2.2 The Rainham Employment Area is suitable for industrial uses (B1 & B2), storage and distribution (B8) and other employment opportunities that do not conflict with other policies. Whilst legally power generation does not fall into any of these industrial categories, it is an employment generating use where the proposed activities can be considered to be similar in character to a general industrial use (B2) and therefore not necessarily incompatible within an industrial area. The

guidance in PPS22 referred to earlier in this report fully supports this approach. Therefore, in principle the proposal is one that can be considered acceptable in the Rainham Employment Area. However, its location on the riverside requires further consideration in respect of the criteria set out in the appendix to ENV25 and other guidance. This is addressed later in this report.

9.2.3 The proposal is judged to involve imaginative design principles to deliver something that would stand out from its surroundings, but not immediately recognisable as a public service building. This is similar to the approach to the design of the new buildings at the Gerpins Lane Civic Amenity site and on Frog Island that were supported by the GLA. Whilst the standard of design is a matter of judgement it is considered that a high standard would be achieved by this development and would be appropriate for an industrial area. Therefore, it can be considered to meet the requirements of ENV25. It represents a significant investment in an area of generally low quality uses and design standards. It is judged that it would make a significant contribution to the improvement of the environment and character of the area. The London Development Agency, which owns a number of redevelopment sites in the area, is minded to support the proposal as it will help to further develop new energy technologies, thereby contributing to a reduction in London's Carbon footprint and provide a further mechanism for managing London's waste.

9.2.4 Additional issues arise because of the site's location adjacent to the River Thames. There is a common theme throughout the various policy documents that sites adjacent to the river need special consideration. Policy ENV25 in particular sets criteria for such development and these are reflected in later guidance. Generally along the riverside priority should be given to developments that need a riverside setting. Policy TRN26 seeks to encourage the development of proposals for the transport of goods by river. The Ford estate is served by a number of jetties and many of the cars stored in the car compound are brought in by river. There are no safeguarded wharves/jetties in the immediate vicinity of the site and the length of river frontage affected is relatively short. Therefore, in these circumstances it is considered that this development would not prejudice the use of the river for the transport of goods. There would be no opportunities or need to use river transport in relation to the proposed facility given the close proximity of the source fuel. The developer has agreed to enter into a planning agreement to secure public access along the river frontage in line with ENV25 that could form part of a future riverside foot/cycleway.

9.3 Assessment of environmental issues:

9.3.1 Environmental Impacts: The planning application is accompanied by an environmental statement (ES) that considers the main potential impacts of the development. Further details are given at Section 2 of this report. The conclusion of the assessment is that there would be no significant environmental impacts. Subject to the development being carried out in accordance with the statement the development would meet the criteria set out in MWD1 and the guidance in PPS10 and PPS22. The main potential impacts identified would arise from the atmospheric emission from the facility and the visual impact of the facility. The main impact from emission would fall within the industrial areas around the site and not on residential areas either in Rainham or in Bexley. The main visual impacts would be from and across the river, and not so much from residential areas in Rainham.

9.3.2 The potential impact from emissions from the facility has been assessed by the applicant in accordance with current best practice and modelling techniques. This was undertaken using appropriate meteorological data and the government

standards for emissions from such processes. The modelling looked at the worse case situation whereas in practice the actual emissions would be much lower than those modelled. The approach adopted calculated the additional contribution that the new development would have to current air quality; this takes account of the emissions from existing power stations and industrial plant. It is considered that the potential impacts have been assessed in accordance with the guidance in PPS23.

9.3.3 The cumulative impact of these various processes, including a proposed mass burn incinerator at Belvedere across the river in Bexley, was assessed in a study commissioned by local authorities in the area in the early 1990s. The study concluded that the cumulative impact of the various schemes at that time would not have a significant impact on air quality, in particular from NO_x. Any increase would be insignificant compared with existing levels arising mainly from motor vehicles. A subsequent assessment by the Environment Agency (HMIP) reached similar conclusions. The modelling process in this case took account of those new facilities subsequently constructed as part of the background and reached similar conclusions, although the possible impact of a new incinerator at Belvedere was not considered. This has now been approved by government, but will need to meet stringent air quality emission controls. Therefore, it is considered that the same conclusions can be drawn as reached in the earlier studies, that there would not be a significant impact on air quality. Further information has been submitted by the applicant regarding the cumulative impact on air quality. It is hoped to have comments from LB Havering's Environmental Health Officer on this additional information to report to the meeting.

9.3.4 Nevertheless, one of the main concerns raised by the local MP, local Councillors, the public and other local organisations is the potential impact on air quality from emissions on the health of local residents. This is especially strong given the perceived high incidence of asthma sufferers in the Rainham area, especially amongst the under 15's and the concern that additional pollutants in the atmosphere would exacerbate the situation. Similar concerns were raised in respect of the autoclave proposal at the Cleanaway site. In considering this issue a number of factors relating to this matter need to be taken into account.

9.3.5 As well as making an application for planning approval, the applicants have made an application for a permit to the Environment Agency under the Pollution Prevention and Control Regulations. These regulations incorporate the European Directive on waste incineration, which covers other technologies, such as gasification where waste is used as a fuel. The aim of the regulations is to prevent or limit as far as practicable, negative effects on the environment and the resulting risk to public health. The Directive requires the setting and maintaining of stringent operational conditions, technical requirements and emission limit values for plant. A permit is required from the Environment Agency before any such plant can operate. In considering this issue members will need to consider government guidance in relation to planning decisions where there are other controls. Planning authorities should not seek to stray into areas where there are other statutory controls and it would not normally be appropriate to refuse permission on grounds covered by other controls such as air quality unless the regulating body advises accordingly. Although a permit has not yet been issued the Environment Agency has not objected to the application subject to conditions. In order to address this concern a planning obligation could be sought preventing construction before a permit is in place. This is set out in the recommendation.

9.3.6 From the evidence that has been submitted there is no evidence to suggest that the impact on air quality or public health would be significant. This is demonstrated by the evidence submitted through the ES. The Havering PCT has

not objected to the application on health grounds. In these circumstances it is recommended that there are no grounds to refuse this proposal on the basis of air quality or impact on public health. Due to concerns about respiratory illness in the under 15's in the Rainham area the PCT considers that further monitoring should be undertaken to help to establish the reasons for the high hospital referral levels in Havering and the south of the borough in particular. The applicant has agreed to the principle of making a contribution to such a study, by way of a S106 agreement.

9.3.7 Information in the PCT annual reports indicates that parts of the south of the borough experience relatively poor health compared with other parts of the borough, but with wards in the north being by far the worst. In terms of long-term illness in people of working age the numbers in Rainham and Wennington is average for the borough and below the London and national averages, whereas South Hornchurch is above the Havering and London averages. However, there is no data in these reports that makes a link between illness and air quality. The link that is made in the case of South Hornchurch is with socio-economic factors, such as diet and lifestyle. As far as asthma is concerned the PCT report states that the causes are not well understood, but does point to risk factors such as tobacco smoke, diet and exposure to allergens in early life. There is no evidence in the reports to suggest that exposure to air pollution causes asthma. However, poor air quality can exacerbate asthma both inside and outside of buildings and can also trigger asthma attacks for those who already suffer. Triggers can include airborne particles and dust, but the PCT report suggests that the most common triggers are in the home. Air quality has improved significantly in the Rainham area over the last few decades with the closure of all the main polluting industries (the Ford foundry and Murex being the last) and the construction of the new A13 which takes road traffic, a major contributor to poor air quality, further from residential areas. The PCT are unable to provide any evidence or reasons to explain the elevated levels of hospital referrals of under 15's with respiratory problems in the south of the borough, especially as the figures for those above 15 shows a different pattern. Studies referred to by the PCT suggest that NO_x levels are a short term triggering factor in respiratory illness, but that the interaction with other factors such as allergens, domestic fuel combustion, diet and viral infections needs further study.

9.3.8 Council staff currently monitor NO_x levels throughout Havering having declared the whole area an air quality management area (AQMA). The main concentrations are found by major transport routes and there are monitoring points in Rainham. This monitoring will continue during the period of the operation of the proposed facility, but emissions should not add significantly to background levels. Havering staff are also carrying out dust monitoring in the area, but this is dust that settles out of the atmosphere and not that which has an potential impact on health. The sources of dust to be monitored include that from roads, agricultural and other operations, including landfilling and mineral extraction. However, it will not be possible to monitor the source of the dust, only the amount and composition. The current proposal would produce minimal amounts of such dust and the results of this monitoring would have no bearing on this application. Any possible cumulative effect could not be detected.

9.3.9 The application site has previously been tipped with waste materials and therefore the impact this would have on the development needs to be considered in accordance with the guidance in PPS23. Whilst the site does contain some contaminants as identified in the ES, due to the nature of the development it is considered that the site can be safely developed. An appropriate condition is recommended.

9.4 Highway Issues

- 9.4.1 The proposed conveyor link between the Frog Island facility and the application site crosses land not under the control of the applicant. The owner of that land has indicated that currently no agreement has been reached on such a link. There may be concerns that the environmental benefits that would arise from such a link might not be achieved. However, under current approvals the residue from Frog Island would be transported by road to a depot at Dagenham Dock for onward transmission by rail to Bedfordshire. The current proposals would, therefore, significantly reduce transport distances even allowing for some input from the Jenkins Lane site. Even if the nearest landfill at Rainham were used instead of Bedfordshire, the road journeys would be significantly greater. Therefore, notwithstanding the benefits of a conveyor, it is considered that objections on road transport grounds could not be sustained. The applicant has also agreed to maintain efforts to secure a conveyor link through a clause in the S106 obligation.
- 9.4.2 The proposed lorry route to the site would be mainly over private roads, but there would be a short section of public highway, Marsh Way. This is currently unlit and the applicant has agreed contribute to this on traffic safety grounds through a S106. There is already a bus service to the CEME site which employees of the facility could use. However, there is a need to ensure this is secured for the long term and need to secure this in the long terms and establish extension to it. In these circumstances the applicant has agreed to make a financial contribution. The applicant has also agreed to submit and implement a staff travel plan to help reduce reliance on car transport for employees.

10 . Conclusions

- 10.1 The report assesses four main issues arising from the application; renewable energy, waste management, location and regeneration and environmental impact.
- 10.2 The proposed development would provide a waste management solution for locally generated wastes in accordance with government guidance in PPS 10 and the London Plan. In particular it would accord with the proximity principle and sub-regional self-sufficiency. It would generate electricity from a renewable resource in a manner on type of locality advocated in PPS22. It would meet the objectives of the Landfill Directive and government policy on waste. It would achieve these objectives in a manner that would be both sustainable and have insignificant environmental impact. The Havering UDP does not address many of the issues of sustainable waste management and renewable energy, but the preferred options document does set the basis for a positive approach to these issues, including self sufficiency for the ELWA sub-region in waste management. It is considered that the proposals would also be acceptable in accordance with UDP policy MWD 13.
- 10.3 The site is located in the Thames Gateway, a strategically important area for regeneration that is recognised in RPG9a as being in need of significant investment and environmental improvement. In the preferred options document and the London Riverside Area the site is identified as having the potential for future industrial development. The Havering UDP identifies the area as suitable for industrial uses (EMP1) and where the highest standards of design and landscaping are appropriate (ENV25). This proposal would provide significant investment in the area and would provide an imaginative design solution to this large public service building. Its location would help to enhance the current run down nature of this part of the river frontage and represent a significant environmental improvement to the area. Although the site could not provide the levels of landscaping that might normally be required a financial

contribution to environmental improvements in the vicinity has been offered as an alternative. In conclusion it is considered that the proposal would not conflict with the objectives of the various regeneration frameworks and would provide an important contribution to the regeneration of the area, by helping in the process of economic uplift and environmental improvement.

- 10.4 The issue of environmental impact arising from the emission from the plant and the impact this could have on public health has raised considerable concern. If it could be demonstrated that there would be a significant impact then there would be grounds for refusing permission under ENV1/MWD1. However, there is no evidence to support this view. In fact the ES demonstrates that the impact would not be significant and would be within the relevant air quality regulations, and the comments of the Environmental Health Officer confirm this. Neither the Environment Agency nor the PCT have raised any objections on health, pollution or safety grounds. Members should give weight to the fact that there is a separate system of regulatory control on such processes designed to ensure that emissions, and their impact on air quality and public health, are within acceptable limits. There is no evidence to suggest that the separate system of regulatory control will not adequately assess and address this issue. Therefore, it is considered that there is no basis for objecting to the proposals on this ground. Nevertheless it is recommended that an appropriate clause is included in the S106 agreement to ensure that the development is not commenced until the relevant permit is issued. In terms of contamination it is considered that the site can be safely developed in accordance with the guidance in PPS23.
- 10.5 In terms of the Havering UDP it can be concluded that the proposals would be acceptable meeting the criteria in policy MWD13, MWD1/ENV1, subject to a planning obligation first being entered into. This is considered necessary to cover additional landscaping (ENV25), to provide improved public access (ENV25/LAR9), Green Travel Plan (TRN15) and other environmental benefits. The development would also be in accordance with the general principles set out in the preferred options document as part of the Havering LDF.
- 10.6 Taking all these factors into account officers consider that no objections to the proposals can be sustained and it is, therefore, recommended that planning permission should be granted subject to the developer first entering into a S106 agreement as set out in the recommendation.

11. RECOMMENDATION AND REASONS FOR APPROVAL

That the application be deferred to the Director of Planning to approve subject to there being no direction for refusal by the Mayor; and subject to completion of an agreement under S106 of the Town and Country Planning Act 1990 to provide for the following:

- a) A total financial contribution of £100,000 towards:
 - i) improvements to public access to riverside areas;
 - ii) environmental improvements and landscaping in the vicinity of the site;

- iii) improvements to public transport provision to the area;
 - iv) improvements to street lighting in Marsh Way in the vicinity of the site entrance;
 - v) a contribution to a base line study to be undertaken by the Havering PCT of the impact of air pollution on respiratory problems within the local population (under 15s) and to monitor impact once plant is up and running.
- b) To implement, review and maintain a green travel plan throughout the life of the development and,
 - c) That no development under the permission is to commence until a contract with the East London Waste Authority (Shanks) for the supply of solid recovered fuel primarily from the Frog Island Bio-MRF (MBT) facility to the power generation plant has been signed and evidence of this provided to the local planning authority;
 - d) That SRF can only be taken from the Jenkins Lane Bio-MRF in circumstances where the Frog Island facility has been closed, totally or partially for maintenance or to maintain the operational capacity of the plant;
 - e) To specify the limited circumstances where SRF can be brought to the site from sources within the ELWA area other than the Frog Island and Jenkins Lane Bio-MRFs to maintain the necessary input for power generation.
 - f) To use reasonable endeavours to secure a conveyor link between the plant site and Frog Island; to regularly review the proposal to secure a conveyor link and to regularly report to the local planning authority with details.
 - g) The planning permission not be implemented prior to the developer providing conclusive evidence to the Local Planning Authority that all of the necessary authorisations issued by the Environment Agency have been secured.

And subject to the following conditions:

Conditions & Reasons:

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

Reason: To comply with the requirements of section 91 of the Town and Country Act 1990 as amended

2. No buildings hereby permitted shall be first occupied until provision shall be made within the site for the approved number of car parking spaces. Thereafter the car parking spaces shall be made permanently available for use for car parking and for no other purpose, unless otherwise agreed in writing by the Local Planning Authority.

Reason: To ensure that adequate car parking provision is made available off street in the interests of highway safety.

3.No development hereby approved shall commence until samples of all materials to be used in the external construction of the building(s) shall be submitted to and approved in writing by the Local Planning Authority. Thereafter the development shall be constructed with the approved materials.

Reason: To ensure that the appearance of the proposed development will harmonise

4. No development shall take place until there has been submitted to and approved by the Local Planning Authority a scheme of hard and soft landscaping, which shall include indications of all existing trees and shrubs on the site, and details of any to be retained, together with measures for the protection in the course of development. All planting, seeding or turfing comprised within the scheme shall be carried out in the first planting season following completion of the development and any trees or plants which within a period of 5 years from the completion of the development die, are removed or become seriously damaged or diseased shall be replaced in the next planting season with other similar size and species, unless otherwise agreed in writing by the Local Planning Authority.

Reason: In accordance with Section 197 of the Town and Country Planning Act 1990 and to enhance the visual amenities of the development.

5. No goods or materials shall be stored on the site in the open without the prior consent in writing of the Local Planning Authority.

Reason: In the interests of visual amenity.

6.The development hereby permitted shall not be carried out otherwise than in complete accordance with the approved plans, particulars and specifications.

Reason: The Local Planning Authority consider it essential that the whole of the development is carried out and that no departure whatsoever is made from the details approved, since the development would not necessarily be acceptable if partly carried out or carried out differently in any degree from the details submitted.

7.The development hereby approved shall not be commenced until a report on potential contamination of the site has been prepared by an appropriately qualified person and submitted to and approved in writing by the LPA. The report shall include:

- i) a survey of the scale and nature of any contamination;
- ii) an assessment of potential risks to the public, buildings (existing or proposed) or the environment, including adjoining land and the water environment; and
- iii) details of any remedial measures necessary to make the site suitable for the proposed use or development.

The development hereby approved shall not be commenced until remedial measures have been carried out as approved and completed to the satisfaction of the Local Planning Authority.

If during development works any contamination should be encountered which was not previously identified and is either from a different source or of a different type to that identified in the original approved survey then revised remedial measures shall be

submitted to and approved by the local planning authority, and those measures shall be carried out as approved prior to the first occupation of the development.

If during development works any contamination should be encountered in areas previously expected to be free from contamination, remedial measures shall be carried out in accordance with the approved details prior to the first occupation of the development.

Reason: To protect those engaged in construction and the occupation of the development from potential contamination.

8.The development hereby approved shall not be commenced until details of the site surface and foul drainage systems have been submitted to and approved in writing by the local planning authority. The drainage system shall be constructed in accordance with the approved details.

Reason: To prevent the pollution of the water environment.

9.The development hereby approved shall not be commenced until details of the site foundations have been submitted to and approved in writing by the local planning authority. The foundations shall be constructed in accordance with the approved details.

Reason: To prevent the pollution of the water environment.

10.The development shall be carried out in accordance with the environmental standards, mitigation measures, requirements and methods of implementing the development contained in the environmental statement relevant to the development and appendices thereto, submitted with the planning application, the development specification and framework and any Regulation 19 submission documents, unless and to the extent that such standards, measures, requirements and methods are altered by the express terms of this permission and the approved strategies, frameworks, protocols and other documents to be submitted pursuant to it.

Reason: To ensure the development is carried out in accordance with the assessment carried out as part of the environmental statement and the mitigation measures proposed therein.

11.No soakaways shall be constructed in contaminated ground.

Reason: To prevent the contamination of ground water.

12.No development hereby approved shall commence until surface water control measures have been submitted to and approved in writing by the local planning authority before the development commences. The surface water control measures shall be implemented in accordance with the approved details.

Reason: To prevent the increased risk of flooding and to improve water quality.

13.External artificial lighting within 40m of any surrounding sites of interest for nature conservation (including Rainham Creek, Lower Beam River and the Inner Thames Marshes) shall be directed away from the area and shall be focused with cowlings.

Reason: To minimise light spill from the new development into these sites of interest for nature conservation.

14.No development hereby approved shall be commenced until a detailed method

statement for the removal or long term management of giant hogweed present on the site shall be submitted and approved in writing by the Local Planning Authority. The method statement should include proposed measures to prevent its spread during any operations relating to the proposal, such as mowing, strimming or soil movement. Any soils brought to the site shall be free of the seeds/root/stem of any invasive plant covered under the Wildlife and Countryside Act 1981 (as amended). Development shall proceed only in accordance with the approved method statement.

Reason: Giant hogweed is an invasive plant, the spread of which is prohibited under the Wildlife and Countryside Act.

15.No development hereby approved shall be commenced until details of a vegetated Buffer Zone 16 metres wide alongside the Thames, and a vegetated Buffer Zone 5 metres wide alongside the pond to the east of the site and the ditch running in parallel to the Thames has been submitted to and approved in writing by the Local Planning Authority. Thereafter the buffer zones shall be implemented in accordance with the approved details to the satisfaction of the local planning authority. The buffer zones shall be measured from the top of the bank and shall be free of structures, hard standing, car parks and fences in order to avoid problems such as fragmentation of the buffer; the introduction of non-native species into the buffer; and pressure for inappropriate bank retention works.

Reason: To maintain the character and ecology of the watercourses and provide undisturbed refuges for wildlife using the river corridor.

16.No development hereby approved shall be commenced until a watervole survey has been carried out on all riparian and wetland habitats and submitted to the local planning authority for its approval. The survey shall:

- (a) identify presence/absence; population size, etc
- (b) assess the development's impact on the watervole population.
- (c) produce a mitigation strategy if a population is present.

Thereafter mitigation measures shall be carried out in accordance with the approved mitigation strategy.

Reason: The habitat of water voles is protected under the Wildlife and Countryside Act 1981 and therefore development must not impact on their habitat. Any encroachment within this zone should ensure that this species is not present.

17.The construction of storage facilities for oils, fuels or chemicals shall be carried out in accordance with details submitted to and approved in writing by the Local Planning Authority before first occupation of the development pursuant to the use hereby permitted.

Reason: To prevent pollution of the water environment.

18.The development hereby approved shall not be first occupied until details of the surface water drainage system has been submitted to and approved in writing by the Planning Authority. The construction of the surface water drainage system shall be carried out in accordance with the approved details before first occupation of the development.

Reason: To prevent pollution of the water environment.

19 No development approved by this permission shall be commenced until the Local

Planning Authority is satisfied that adequate sewerage infrastructure will be in place to receive foul water discharges from the site. No buildings (or uses) hereby permitted shall be occupied (or commenced) until such infrastructure is in place.

Reason: To prevent pollution of the water environment.

Details, including drawings as appropriate setting out the means by which any groundwater encountered during site construction works is to be disposed of, including any appropriate mitigation methods, shall be submitted to the local planning authority for approval. The dewatering of the site shall be carried out in accordance with the approved details.

Reason: To prevent pollution of the water environment.

21.No works shall be commenced on the site until details and drawings of all works within 16 metres of the River Thames have been submitted to the Local Planning Authority for its prior approval. The works shall be carried out in accordance with the approved details

Reason: To maintain the integrity of the flood defences of the River Thames

22. A horizontal access strip 16 metres wide adjacent to the River Thames, Ingrebourne and Havering New Sewer shall be left free from any permanent development, including fences and other obstructions.

Reason: To retain access to the watercourse for the Environment Agency to carry out its functions and to protect the river environment.

23. No development hereby approved shall commence until a flood management strategy fully detailing flood warning and evacuation plans has been submitted to and approved by the Local Planning Authority. The strategy shall be implemented in full accordance with the approved details before first occupation of the development pursuant to the use hereby permitted.

Reason: To minimise risks from tidal flooding.

CASE OFFICER: Sara Purvis

Appendix 1: Site Location Plan

Appendix 2: Proposed Site Layout Plan

Appendix 3: Proposed Elevations

Appendix 4: LB Havering Consultation Repose

Appendix 5: Mayor of London Stage 1

Appendix 6: RPS Response to LB Havering Comments